

BUILDING A FOUNDATION WITH

Microsoft®
Office 2019 & 365

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LABYRINTH
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Building a Foundation with Microsoft Office 2019 & 365

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Preface

This textbook is part of our new approach to learning for introductory computer courses. We've kept the best elements of our proven, easy-to-use instructional design and added interactive elements and assessments that offer enormous potential to engage learners in a new way.

Why Did We Write This Content?

In today's digital world, knowing how to use the most common software applications is critical, and those who don't are left behind. Our goal is to simplify the entire learning experience and help every student develop the practical, real-world skills needed to be successful at work and in school. Using a combination of text, videos, interactive elements, and assessments, we begin with fundamental concepts and take learners through a systematic progression of exercises to achieve mastery.

What Key Themes Did We Follow?

We had conversations with dozens of educators at community colleges, vocational schools, and other learning environments in preparation for this textbook. We listened and adapted our learning solution to match the needs of a rapidly changing world, keeping the following common themes in mind:

Keep it about skills. Our content focus is on critical, job-ready topics and tasks, with a relentless focus on practical, real-world skills and common sense. We use step-by-step instructional design to ensure that learners stay engaged from the first chapter forward. We've retained our proven method of progressively moving learners through increasingly independent exercises to ensure mastery—an approach that has successfully developed skills for more than 25 years.

Keep it simple. Our integrated solutions create a seamless experience built on a dynamic instructional design that brings clarity to even the most challenging topics. We focus our content on the things that matter most and present it in the easiest way possible. Concise chunks of text are combined with visually engaging and interactive elements to increase understanding for all types of learners.

Keep it relevant. Fresh, original, and constantly evolving content helps educators keep pace with today's student and work environments. We reviewed every topic for relevancy and updated it where needed to offer realistic examples and projects for learners.

How Do I Use This Book?

Our comprehensive learning solution consists of a print textbook, a groundbreaking interactive ebook, and our easy-to-use eLab course management tool featuring additional learning content, such as overviews and video tutorials, and assessment content. Our interactive ebook contains learning content delivered in ways that will engage learners.

The eLab assessment solution includes Project Grader exercises for most chapters that are automatically graded by the system, in addition to clear feedback and analytics on student actions.

Included with Your Textbook Purchase

Interactive ebook: A dynamic, engaging, and truly interactive textbook that includes elements such as videos, self-assessments, slide shows, GIFs, and other interactive features. Highlighting, taking notes, and searching for content is easy. (Note that the loose-leaf version of this book does not include the ebook.)

eLab Course Management System: A robust tool for accurate assessment, tracking of learner activity, and automated grading that includes a comprehensive set of instructor resources. eLab can be fully integrated with your LMS, making course management even easier.

Instructor resources: This course is also supported on the Labyrinth website with a comprehensive instructor support package that includes detailed lesson plans, lecture notes, PowerPoint presentations, a course syllabus, test banks, additional exercises, and more.

Student Resource Center: The exercise files that accompany this textbook can be found within eLab and in the Student Resource Center, which may be accessed from the ebook or online at: **labyrinthelab.com/Office19**

We're excited to share this innovative, new approach with you, and we'd love you to share your experience with us at: lablearning.com/share

Visual Conventions

This book uses visual and typographic cues to guide students through the lessons. Some of these cues are described below:

Cue Name	What It Does
`Type this text`	Text you type at the keyboard is printed in this typeface.
Action words	The important action words in exercise steps are presented in boldface.
Ribbon	Glossary terms are highlighted with a yellow background.
Note! Tip! Warning!	Tips, notes, and warnings are called out with special icons.
!	Videos, WebSims, and other ebook or online content are indicated by this icon.
Command→Command→Command→Command	Commands to execute from the Ribbon are presented like this: Ribbon Tab→Command Group→Command→Subcommand.
Design→Themes→Themes	These notes present shortcut steps for executing certain tasks.

Display Settings

Multiple factors, including screen resolution, monitor size, and window size, can affect the appearance of the Microsoft Ribbon and its buttons. In this textbook, screen captures were taken at the native (recommended) screen resolutions in Office 2019 running Windows 10, with ClearType enabled.

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OVERVIEW

1 Introducing Microsoft Office and Using Common Features

In this chapter, you will be introduced to Microsoft Office and given an overview of the various versions of the software. Understanding what is offered in each will help you make the best decision about which version meets your needs. You'll also practice using some of the features that are common across the Office suite. Once you learn how to use a feature in one application, you can use the same or similar steps in the others.

LEARNING OBJECTIVES

- Describe similarities and differences between Office 2019 for the desktop, Office 365, and Office Online
- Identify uses of cloud storage
- Identify parts of the Office user interface
- Use the spelling checker and other review features
- Identify Office features available through Backstage view
- Use the Office Clipboard
- Format text in Office applications
- Search for Help within Office applications
- Capture a screen in an Office application

Introduction to Microsoft Office

Microsoft Office is a software suite that enables users to create, format, revise, collaborate, and share files quickly across multiple devices. The Microsoft Office 2019 software suite for Windows includes Word, Excel, Access, PowerPoint, Outlook, OneNote, Publisher, and Skype. A software suite is a collection of applications generally produced by the same manufacturer and bundled together for a better price. Being produced by the same manufacturer also means that each application offers the same user interface. Examples of features shared among the different Office 2019 apps are the Ribbon, Quick Access toolbar, a spelling and/or grammar checker, and collaboration tools.

What Devices Will Microsoft Office Work With?

Microsoft Office works on desktops, laptops/notebook computers, and all-in-one PCs and Macs, as well as Windows, Android, and iOS smartphones and tablets (though some apps, such as Publisher and Access, work only on PCs).

If you are writing a paper or preparing a business plan, you probably want to create it on a desktop, laptop, or all-in-one computer. If you want to open, read, share, or make simple changes to a Word document, you could select any device. This chapter assumes you will be using a desktop, laptop, or all-in-one computer.

To learn more about the operating systems (Windows, Android, macOS, or iOS) and types of devices (all-in-one computer, desktop, laptop, smartphone, or tablet) that will run Microsoft Office, do a web search for *Microsoft Office 2019 products*.

What Storage Does Microsoft Office Provide?

Microsoft OneDrive is the cloud storage location included with Microsoft Office 2019 and Office 365, and it provides a convenient way to save, store, and share files, photos, and videos via your computer, smartphone, or tablet anytime, anywhere, and on any device—provided you have an Internet connection or Wi-Fi access. Depending on the Microsoft Office product you use or purchase, you will receive anywhere from five gigabytes to five terabytes of OneDrive cloud storage.

You may want to use cloud storage as your primary saving method so you can access your files at home, at school, at work, or anywhere. Or you may decide to use cloud storage as a backup for your files located on your computer's hard drive or your flash drive. Instead of emailing files to yourself, use OneDrive as a faster way to store something in the cloud. To learn more about OneDrive, do a web search for *OneDrive*.

Which Microsoft Office Should I Use?

You may have heard others talk about Microsoft Office 2019, Office 365, and Office Online and are not sure which one is right for you. Base your decision on the apps and features you need, in addition to the pricing structure.

- **Office Online:** This version is free and requires a Microsoft account. It includes limited versions of Word, Excel, PowerPoint, and OneNote. No software is installed on your computer, as the apps are accessed and run in a web browser. The apps are not the same as the full-version apps in the other variations of Office and lack many features of those full versions. This version requires an Internet connection. Office Online is great for simple tasks, such as writing a short letter or creating a basic slideshow presentation.

- **Microsoft Office 2019:** This version is software that is purchased once and installed on one PC. It does not require an Internet connection to run. It does not have all the features of Office 365, and you must pay for future major upgrades. Choose from a variety of plans that may include Word, Excel, PowerPoint, OneNote, Outlook, Publisher, Access, and Skype.
- **Office 365:** This version requires users to pay a monthly or annual subscription fee for installing and using the software on one or more devices (PC/Mac and mobile devices). All upgrades are included, so you always have the latest-and-greatest version, and all Office 2019 apps are included. Microsoft says the Office 365 apps can include features not present in the Office 2019 apps, as Office 365 is updated more frequently than Microsoft Office.

While Microsoft Office has three distinct formats—Microsoft Office 2019, Office 365, and Office Online—and the examples provided in this chapter can work in each of the Office formats, this book assumes you are using Office 2019 on the desktop or Office 365 in a subscription-based plan, as well as Windows 10. Remember that Office 365 can change at any time. If you are using Office 365, keep in mind that your screen may not match all the illustrations in this book. Changes made to Office 365 after the publication of this title may result in additional differences between your book and the software.

What Are the Microsoft Office Apps?

In this chapter, you will learn about four of the Microsoft Office applications included in the Microsoft Office suite: Word, Excel, Access, and PowerPoint.

Application	What It Is Used For
Word	Word-processing software used to create, edit, format, and share documents, such as letters, reports, essays, and business plans.
Excel	Spreadsheet software, arranged with rows and columns, used to perform calculations and analyze numerical data. Use Excel to prepare a budget or income statement, or to determine the amount of interest paid on a loan.
Access	Database software that stores and helps you quickly retrieve data. In Access, you create and enter data into a table and then use forms, reports, and queries to display the desired results.
PowerPoint	Presentation software used to create, edit, format, and share slides designed to tell a story; market a product; or explain a concept.

The Microsoft Office suite includes the following additional applications:

Application	What It Is Used For
OneNote	Note-taking software used to organize notes (handwritten or typed), audio recordings, screen captures, or sketches you have collected or created to share with others.
Outlook	Personal information management software used to create, send, and receive emails, record tasks, maintain one or more calendars, schedule meetings and appointments, manage contacts, and take notes.
Publisher	Desktop-publishing software used to design and lay out text and images, often for newsletters or brochures.
Skype	Internet communication software used to share audio, video, text, messages, files, or desktop screens.

Microsoft Accounts

A Microsoft account provides you with access to your Microsoft settings, files, contacts, and more. A valid Microsoft account can include Hotmail, Bing, MSN, Office, OneDrive, Outlook, Skype, Store, Windows, or Xbox Live. Once logged in to your computer, you can log in to your Microsoft account from any Office app. If you do not have a Microsoft account, you can create one for free by doing a web search for *Microsoft account*.

Common Features in Microsoft Office Apps

The Office 2019 applications share some frequently used features. These include the Ribbon, Quick Access toolbar, and common commands.

The Ribbon

Within each application, you will find the Ribbon displayed along the top of the window. The Ribbon contains tabs and commonly used buttons and other icons that are specific to the application. The buttons are arranged in groups within each tab. While the Ribbon changes with each application, some tabs, groups, and commands are common throughout the Microsoft suite. In this chapter, we will look at the Word Ribbon and, specifically, the Home, Insert, Design, Layout, References, Mailings, Review, and View tabs.

View the video "Ribbon Overview."

The Quick Access Toolbar

Each application has a one-line Quick Access toolbar located, by default, in the top-left corner of the application window. This helpful toolbar contains some frequently used commands to help you be more efficient as you work. You can customize the toolbar with the buttons you use most frequently. The settings for each application's Quick Access toolbar work independently; therefore, you need to customize the Word, Excel, Access, PowerPoint, and Outlook Quick Access toolbars separately.

View the video "Quick Access Toolbar Overview."

Undo/Redo

Within any application, you may type text or perform a command or action and then change your mind about what you did. As long as you have not exited the application, you may be able to undo the action.

Note! *Some actions, such as saving or sharing, cannot be undone.*

You may want to redo an action you just undid. Sounds confusing, right? Use the Redo button to undo the undo, or to reapply the action. This puts the command or action you just undid back into effect.

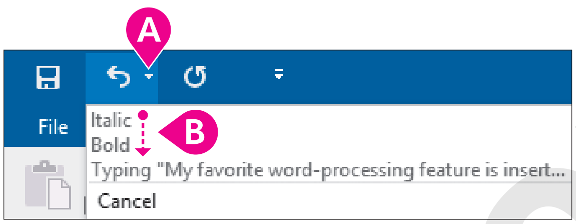
Undo and Redo on the Quick Access toolbar

Quick Access toolbar→Undo *or* Redo

DEVELOP YOUR SKILLS: O1-D1

In this exercise, you will use the Undo and Redo buttons.

1. Log in to your computer, start Word, and tap Enter to accept the default template, Blank Document.
2. Type the following and then tap Enter: **`My favorite word-processing feature is inserting citations.`**
3. Now, type this text: **`I also like how the Quick Access toolbar can be customized with buttons I frequently use.`**
4. Drag with the mouse pointer over the phrase **Quick Access toolbar** to select it.
5. Choose **Home→Font→Bold** B to apply bold formatting.
6. Now apply **Italic** I formatting to the phrase inserting citations.
7. Follow these steps to undo more than one action at a time:



   - (A) Click the **Undo menu** button ▾.
   - (B) Point to the second step, Bold, to select it and everything above it, and then click the mouse button.

8. Click the **Redo** button two times to reapply the bold and italic formatting to the phrases.
9. Click the **Undo** button once to remove the italic formatting from the first sentence.
10. Keep Word open.

    Unless otherwise directed, always keep any files or programs open at the end of an exercise.

Common Features on the File Tab

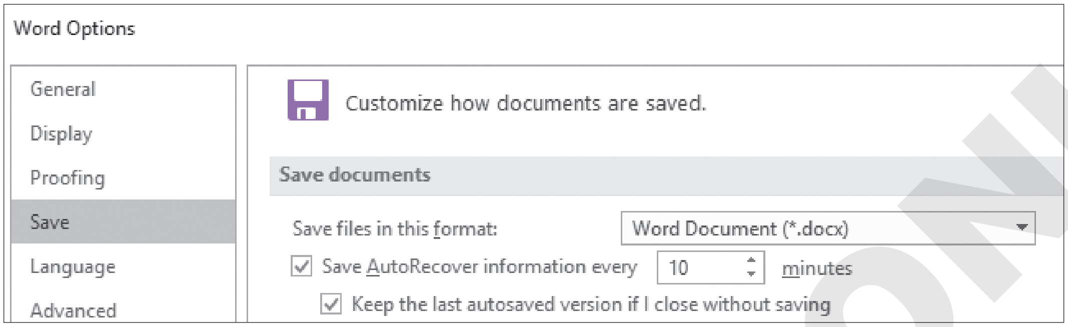
In this section, you will learn about the features on the File tab that are used in a similar manner throughout multiple Microsoft applications, including Word, Excel, and PowerPoint. Here you will use Microsoft Word 2019 to save, close, share, and print a file, and to open a template.

Backstage View

When you are working in your file and open the File tab, the Backstage view displays. Think of your Backstage view as your personal manager for the open file and application. Use the Backstage view to update file information, select account settings, view program options, open new files, save, print, share, export, provide feedback to Microsoft, and recover unsaved files. These are the “big-picture” items you do to your file and not the specific tasks you perform using the other tabs on the Ribbon.

Program Options

Microsoft provides preference settings that you can customize for each application (that is, Word or Excel) so they are automatically applied each time you use the application on your device. To change your preferences, use the Options feature on the File tab. Some custom options include adding your username and initials so they automatically display in some downloaded templates, displaying formatting marks, correcting spelling, and saving files to a default file location.



The Save options allow you to set defaults for the file format and the frequency with which documents are automatically saved.

File→Options

Saving Files

As you work in your file, you should save frequently to prevent data or information loss. Some people prefer to save important files every few minutes, while others save at less frequent intervals.

The saving commands are found on the File tab, and you'll see different options, including Save and Save As. You can use the Save command the first time you save a file, and, when you do, the Save As screen will appear.

View the video "Using Save and Save As."

You may choose to save files to your device (for example, on the hard drive in the Documents folder), to your flash drive, or to the cloud in OneDrive.

View the video "Saving Files to Multiple Locations."

You can even set Word to save your work automatically whenever a specific interval of time has elapsed. A good rule of thumb is to save as often as you can afford to lose data. If you can afford to lose only one minute of data, save your file every minute!

File→Save *or* Save As

DEVELOP YOUR SKILLS: O1-D2

In this exercise, you will use Save As to store a Word document in a new folder.

Before You Begin: *Download the student exercise files from your eLab course or the Student Resource Center (labyrinthelab.com/Office19) and determine your file storage location before beginning this exercise.*

1. In your open Word document, choose **File** to display the Backstage view and then click **Save**.

   The first time you save a file, the Save As screen displays. Otherwise, choosing File→Save updates the file with the same name, location, and file type.

2. Click the **Browse** button and navigate to your file storage location.
3. In the Save As dialog box, click the **New Folder** button.

   The New Folder button is to the right of the Organize button, just under the address bar.
4. Type **`Features`** for the new folder name and tap Enter twice.
5. Click in the **File Name** box and type: **`O1-D2-Features`**
6. Verify that Word Document displays for Save as Type and click the **Save** button.

   If the Save As Type box displays something else, click the arrow at the right end of the box and select Word Document.
7. Close the file.

Finding, Searching, and Opening Files

Files can be opened within an application by using the Open dialog box, choosing from a recently saved files list within the application, using File Explorer, or typing the filename in the Windows Search box. Within Windows 10, as well as previous versions of Windows, you can use File Explorer to locate and manage your files. Located on the taskbar, you can click the File Explorer icon and then search for files located on your PC, flash drive, or OneDrive.

View the video "Opening Files."

Sharing Files via Email and with People

You can share open files directly from the application to either email or OneDrive. Sharing a file directly to email is usually faster than opening an email application, such as Microsoft Outlook, locating the file to send and then attaching it. When someone shares a file with you from an application to OneDrive, you will receive a link (in your email account) to access the file.

View the video "Sharing Files via Email."

If the Automatically Share Changes option is set to Always, once the file is shared, anyone who has editing rights to the file can make changes to it.

Tip! *You can also use the Share* Share *button located in the top-right corner of the application window.*

File→Share→Email

File→Share→Share with People

DEVELOP YOUR SKILLS: O1-D3

Complete this exercise via the online WebSim.

In this exercise, you will share an open Word file by using the Share with People option that saves to the cloud.

1. In your web browser, go to: **`labyrinthelab.com/websims/OV19-01-D3`**

   If your classroom is using eLab, you can complete this exercise in your eLab course.
2. Follow the onscreen instructions to complete this exercise.

Printing

If you are connected and have access to a printer, you should be able to print. Before printing, you should save your file, run Spelling & Grammar (Word) or Spelling (Excel and PowerPoint), proofread your file, verify formats, and review the file to see if you have used the fewest possible number of pages. Use the Print Preview feature to browse the pages in your document before printing so you don't waste time or printing resources, and use the options in the Settings area to adjust elements such as page orientation, paper size, margins, and more.

Keep in mind that you can print to paper or to PDF if you want to be eco-friendly.

View the video "Printing Files."

File→Print

Templates

A template is a document, worksheet, or presentation that has the fonts, paragraph styles, and page layout settings such as margins, orientation, and size already built in. Instead of selecting these settings each time you prepare a similar file, you may opt to use a template to save time when you need to add new text, images, and additional formats specific to the file.

Usually an application includes sample templates that are stored on the hard drive of your computer when you install the software. You can also search for online templates using the Search feature available when you create a new document. Templates are arranged according to categories; for example, by business, personal, and industry.

File→New

DEVELOP YOUR SKILLS: O1-D4

In this exercise, you will open a prebuilt Word template.

1. Choose **File→New**, select the **APA Style Report (6th Edition)** template, and click **Create**.

   Scroll through the Word document to view the types and formats of items that you may want to include in your report.

2. Choose **File→New**, select the **Resume (Color)** template, and click **Create**.

   You may have to scroll down to find the template. Review the document to locate what is automatically filled in based on the Word Options settings, as well as text placeholders that request your input.

3. Choose **File→New** and select the **Welcome to Word** template or another template of your choice.

   Notice the document formatting and review the text contained in the file.

4. Close all open files without saving, and then exit Word.

Common Features on the Home Tab

In this section, you will learn about the features on the Home tab that are used in a similar manner throughout multiple Microsoft applications, including Word, Excel, and PowerPoint. You will use Microsoft Excel to Cut, Copy, and Paste with the Office Clipboard; format text; use the Mini toolbar; and find and replace text. Excel is generally used for keying numbers and performing calculations.

DEVELOP YOUR SKILLS: O1-D5

In this exercise, you will open a file created from an Excel template and become familiar with Excel.

1. Start Excel and click the **Open Other Workbooks** link under the Recent menu at the left side of the window.
2. Click the **Browse** button, navigate to your file storage location, and open the **O1-D5-Clipboard** file.
3. Click **Enable Editing** in the Security Warning bar at the top of the screen, if necessary.

   The Security Warning bar may display the first time you open a file. If you know the file sender and trust the content, always Enable Content.
4. Scroll down to display rows 19–25, if necessary, and then click the **Let's Go** button.
5. Click the various worksheet tabs at the bottom of the Excel window to become familiar with Microsoft Excel.

   In this figure, six worksheet tabs are shown.

The Office Clipboard

Located at the far left on the Home tab, the Clipboard group contains the Cut, Copy, Paste, and Format Painter buttons. Selecting the Clipboard dialog box launcher opens the Clipboard pane, which displays at the side of your application. The Clipboard contains thumbnails (small images) of what you have recently cut or copied from your Microsoft Office file(s) during your Windows session, with the most recent item at the top of the list.

You can use the Clipboard to quickly paste text, pictures, images, or charts into your file. You can paste all items on the Clipboard into your file(s) as many times as desired, and you can clear all items from the Clipboard. The Cut feature in the Clipboard group functions much like a scrapbook in which you cut out information, such as newspaper articles about yourself, and then paste it on the desired page(s). When data is cut, the original selection is removed from the source location and is pasted at the target location. When data is copied, the original selection remains in the source location and a new selection is pasted at the target location.

View the video "Clipboard Overview."

CLIPBOARD FEATURES

Feature	What It Does
Cut	**Cut:** Removes the original selection from the source location and places the selection on the Office Clipboard.
Copy	**Copy:** Creates a duplicate of the original selection, which remains in the source location, and places a copy of the selection on the Office Clipboard.
Paste	**Paste:** Inserts a copy of the most recent item found on the Office Clipboard at the target location, or destination. Depending on the application, there are usually at least three paste choices: Keep Source Formatting, Merge Formatting, and Keep Text Only. **Keep Source Formatting:** Pastes the text and the formatting (bold, italic, underline) of the selection from the source location to the target location. The selection pasted retains the original formatting from the source location. **Merge Formatting:** Pastes the text and formatting (bold, italic, underline) of the selection from the source location to the target location and combines it with any formatting that is already at the target location. The selection pasted has formats from both the source and target locations. **Keep Text Only:** Pastes the selection from the source location to the target location. The selection pasted takes on the formatting of the target location.
Format Painter	**Format Painter:** Applies the character and paragraph formatting from the source selection to any characters or text selected. Double-click the Format Painter to apply formats to multiple selections. Click the Format Painter button to turn it off when you are finished.

Home→Clipboard→Cut | Ctrl+X

Home→Clipboard→Copy | Ctrl+C

Home→Clipboard→Paste | Ctrl+V

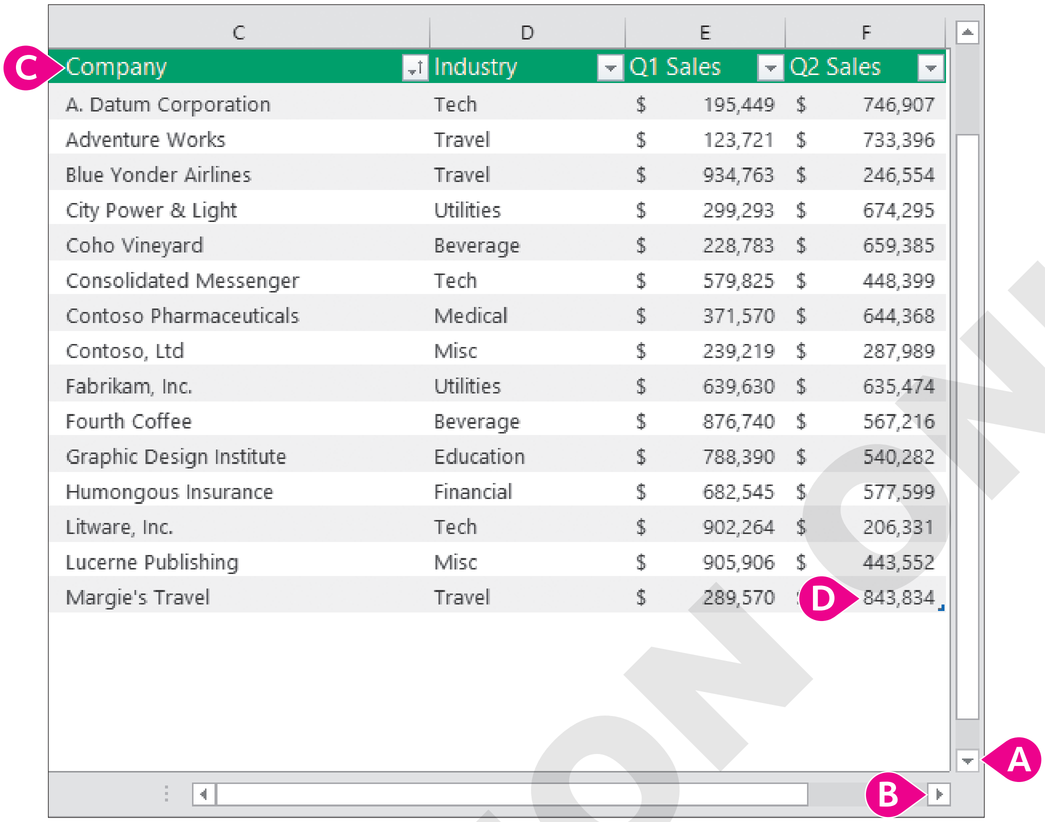
DEVELOP YOUR SKILLS: O1-D6

In this exercise, you will use Excel to copy data from the source destination to the target destination, a new worksheet tab, and cut data from its original location and paste it into the target location.

To begin, you will navigate to the desired tab and locate the range to be copied. Depending on the size of your monitor, you may or may not need to scroll.

1. Click the **2. Analyze** worksheet tab at the bottom of the screen.

2. Follow these steps to view and select a specific part of a worksheet:



C	D	E	F
Company	Industry	Q1 Sales	Q2 Sales
A. Datum Corporation	Tech	$ 195,449	$ 746,907
Adventure Works	Travel	$ 123,721	$ 733,396
Blue Yonder Airlines	Travel	$ 934,763	$ 246,554
City Power & Light	Utilities	$ 299,293	$ 674,295
Coho Vineyard	Beverage	$ 228,783	$ 659,385
Consolidated Messenger	Tech	$ 579,825	$ 448,399
Contoso Pharmaceuticals	Medical	$ 371,570	$ 644,368
Contoso, Ltd	Misc	$ 239,219	$ 287,989
Fabrikam, Inc.	Utilities	$ 639,630	$ 635,474
Fourth Coffee	Beverage	$ 876,740	$ 567,216
Graphic Design Institute	Education	$ 788,390	$ 540,282
Humongous Insurance	Financial	$ 682,545	$ 577,599
Litware, Inc.	Tech	$ 902,264	$ 206,331
Lucerne Publishing	Misc	$ 905,906	$ 443,552
Margie's Travel	Travel	$ 289,570	$ 843,834

- **A** Scroll down to display rows 4–20.
- **B** Scroll right to display columns C–F.
- **C** Click in **cell C4** to select the Company cell.
- **D** Press and hold the Shift key and click **cell F19**.

3. Release Shift and notice that the **range C4:F19** is selected.

	C	D	E	F
4	Company	Industry	Q1 Sales	Q2 Sales
5	A. Datum Corporation	Tech	$ 195,449	$ 746,907
6	Adventure Works	Travel	$ 123,721	$ 733,396
7	Blue Yonder Airlines	Travel	$ 934,763	$ 246,554
8	City Power & Light	Utilities	$ 299,293	$ 674,295
9	Coho Vineyard	Beverage	$ 228,783	$ 659,385
10	Consolidated Messenger	Tech	$ 579,825	$ 448,399
11	Contoso Pharmaceuticals	Medical	$ 371,570	$ 644,368
12	Contoso, Ltd	Misc	$ 239,219	$ 287,989
13	Fabrikam, Inc.	Utilities	$ 639,630	$ 635,474
14	Fourth Coffee	Beverage	$ 876,740	$ 567,216
15	Graphic Design Institute	Education	$ 788,390	$ 540,282
16	Humongous Insurance	Financial	$ 682,545	$ 577,599
17	Litware, Inc.	Tech	$ 902,264	$ 206,331
18	Lucerne Publishing	Misc	$ 905,906	$ 443,552
19	Margie's Travel	Travel	$ 289,570	$ 843,834
20				
21				

4. Choose **Home→Clipboard→Copy** and notice that a moving border displays around the range C4:F19 to indicate that the selection is copied.

   The copied text is placed on the Office Clipboard and is ready to be pasted in a destination location. The copied text also remains in cells C4:F19 on the 2. Analyze *worksheet tab.*

5. Click the **New Sheet** button (located at the bottom of the worksheet) to create a new worksheet to the right of the 2. Analyze tab.

   Verify that cell A1 in the new worksheet is selected. The empty cell A1 is your target location.

6. Choose **Home→Clipboard→Paste**.

   In Excel, when you copy cell contents, you also can copy the format(s) associated with the cells. In this case, you copied only the cell contents. Anytime you see ##### in a cell in Excel, it means the column is not wide enough to display the cell's contents.

Cut and Paste

7. Click the **2. Analyze** worksheet tab at the bottom of the worksheet.

   The moving border displays because the selection is still copied.

8. Tap Esc to remove the moving border.
9. Select the **range C5:F7** and choose **Home→Clipboard→Cut**.
10. At the bottom of the worksheet, click the **Sheet1** worksheet tab and then select **cell A17**.
11. Choose **Home→Clipboard→Paste**.
12. Click the **2. Analyze** worksheet tab at the bottom of the worksheet.

    Notice that the data from the range C5:F7 is no longer there because it was cut, or removed, from the worksheet.

13. Choose **File→Save As** to save the file in your **Overview Chapter 1** folder as: `O1-D6-Clipboard`

Drag and Drop

If you want to cut or copy text and then paste it in a different location on the same page, try using drag and drop. Whether you want to cut or copy text, the first step is always to select the desired text. The difference between cutting and copying in this method has to do with the Ctrl key. That is, to copy, you hold down Ctrl while moving from one location to the next; when cutting, you do not use Ctrl.

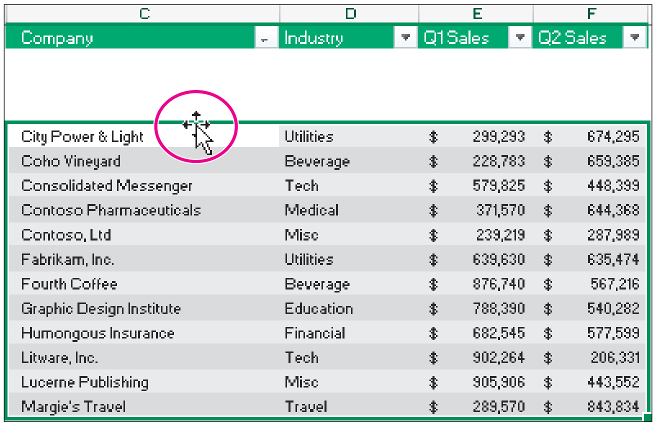
View the video "Using Drag and Drop."

DEVELOP YOUR SKILLS: O1-D7

In this exercise, you will use drag and drop in Excel to cut, or move, data from one group of cells to another location.

1. Choose **File→Save As** to save the worksheet in your **Overview Chapter 1** folder as: `O1-D7-Drag`
2. Click the **2. Analyze** worksheet tab, if necessary.

3. Click **cell C8** and then press [Shift] while clicking **cell F19** to select the range **C8:F19**.
4. Position the mouse pointer over the top border of the selection so the four-headed arrow displays.



Company	Industry	Q1 Sales		Q2 Sales	
City Power & Light	Utilities	$	299,293	$	674,295
Coho Vineyard	Beverage	$	228,783	$	659,385
Consolidated Messenger	Tech	$	579,825	$	448,399
Contoso Pharmaceuticals	Medical	$	371,570	$	644,368
Contoso, Ltd	Misc	$	239,219	$	287,989
Fabrikam, Inc.	Utilities	$	639,630	$	635,474
Fourth Coffee	Beverage	$	876,740	$	567,216
Graphic Design Institute	Education	$	788,390	$	540,282
Humongous Insurance	Financial	$	682,545	$	577,599
Litware, Inc.	Tech	$	902,264	$	206,331
Lucerne Publishing	Misc	$	905,906	$	443,552
Margie's Travel	Travel	$	289,570	$	843,834

5. Click and hold the mouse button, drag up to **cell C5**, and then release the mouse button.

   Using drag and drop to cut removes the range from the original location and pastes it in the new location.
6. Choose **File→Save** to save your changes.

Formatting Text Using Font Group Settings

To make your selection more visibly appealing and easy to read, you may want to use some or all of the font formats available in the Font group or in the Font dialog box. To apply the formats, you must first select a cell or group of cells, words, or phrases.

Use the Font dialog box launcher to open the Font dialog box.

The Format Painter applies multiple formats located in one range to another range within the application. Think of the selected range's original location as your paint can. You apply the formats found in your paint can, the selected range, to another range with the help of the paintbrush, or Format Painter. Whatever cells you click get the formatting. You can use Format Painter to format multiple cells or ranges by double-clicking the Format Painter button. To turn off the multiple-use feature and stop "painting," tap the [Esc] key.

DEVELOP YOUR SKILLS: O1-D8

In this exercise, you will increase the font size, make text bold, remove the bold, change the font color, launch the Font dialog box, and use the Format Painter.

1. Use **Save As** to save the worksheet in the **Overview Chapter 1** folder as: `O1-D8-Format`
2. At the bottom of the worksheet, click the **3. Chart** worksheet tab and then select the **range C5:D16**.
3. Choose **Home→Font→Increase Font Size** [A] two times to increase the font size of the selection to 14 points.

4. Select **cell C9** and choose **Home→Font→Bold** **B**.

   Bold is used to add emphasis to a cell. When a format such as bold is applied, the button on the Ribbon displays a dark-gray background. To turn the format off and remove the dark-gray background behind the button, click the button again. This is known as a toggle format.

5. Select **cell C14** and choose **Home→Font→Bold** **B** to toggle Bold to off.
6. Select **cell D6** and press and hold the Ctrl key and click **cells D8**, **D9**, **D13**, and **D15**.
7. Choose **Home→Font→Font Color** **menu button** ▾ and then select **Red** under Standard Colors.
8. Select **cells C8:D8** and click the **dialog box launcher** at the bottom-right corner of the Font group on the Home tab to open the Font dialog box.
9. Select the **Strikethrough** setting under Effects and click **OK**.
10. With the range C8:D8 still selected, choose **Home→Clipboard→Format Painter**.
11. Select cells **C10:D10**.

    Notice that the strikethrough format found in cell C8 and the red font found in D8 were applied to cells C10 and D10.

12. Save the file.

The Mini Toolbar

The Mini toolbar is a floating toolbar that contains some of the more commonly used formatting buttons found on the Home tab and specific to the application. The Mini toolbar appears at various times in all the Office applications, giving you a convenient way to choose the most commonly used commands. If the Mini toolbar does not display, right-click the mouse.

The Mini toolbar in Word (left) and Excel (right)

File→Options→General→check Show Mini Toolbar on Selection

DEVELOP YOUR SKILLS: O1-D9

In this exercise, you will use the Mini toolbar in Excel to apply formatting.

1. Use **Save As** to save the worksheet in the **Overview Chapter 1** folder as: `O1-D9-Toolbar`
2. Click the **Sheet1** tab and then select **cell C4**.
3. Press and hold Ctrl and then select **cell C19** to select two cells that are not side by side.
4. Right-click **cell C4** to display the Mini toolbar and the context, or shortcut, menu.
5. In the Mini toolbar, click the **Bold** **B** button and the **Fill Color** button to apply a yellow background color to the cells.
6. Click any cell to hide the Mini toolbar again.
7. Save the file.

Find and Replace

Within a document, worksheet, database, or presentation, you may need to locate text quickly. You may also need to substitute one word or phrase, or formatting, for something else. The Find command is used to search for characters, symbols, numbers, words, phrases, or formats that meet the criteria. The Replace command first finds whatever meets the criteria and then replaces it with what you desire.

DEVELOP YOUR SKILLS: O1-D10

In this exercise, you will use the Find command to locate the word Contoso *and then replace each occurrence with* Labyrinth.

1. Use **Save As** to save the worksheet in the **Overview Chapter 1** folder as: `O1-D10-Replace`
2. Choose **Home**→**Editing**→**Find & Select** →**Find**.
3. Type `Contoso` in the Find What box.
4. Click **Find Next** two times.

   The first click finds the first occurrence. The second click finds the next, and final, occurrence.
5. Click the **Replace** tab in the Find and Replace box.

   Verify that the Find What box displays Contoso.
6. Type `Labyrinth` in the Replace With box.
7. Click **Replace All** to change the two occurrences of the word Contoso to Labyrinth.
8. Click **OK** in the Microsoft Excel message box.
9. Close the Find and Replace box.
10. Save your file and then close Excel.

Common Features on the Review Tab

In this section, you will learn about the features on the Review tab that are used in a similar manner throughout multiple Microsoft applications, including Word, Excel, Access, and PowerPoint. You will work with Microsoft PowerPoint to use the Spelling and Thesaurus features.

Spelling & Grammar

Whether you are working in a Word document, an Excel worksheet, an Access database, or a PowerPoint presentation, before you share the file with anyone, you should use the Spelling & Grammar button. The Spelling feature reviews the file for misspelled words or words that do not match the Microsoft dictionary for that computer. A red, squiggly line below a word indicates that the word is not recognized in the Dictionary file on your computer. Right-click the unrecognized word and choose the correct spelling from the context menu or add the word to the Dictionary.

DEVELOP YOUR SKILLS: O1-D11

In this exercise, you will open PowerPoint, create a new presentation, and use the Spelling feature in PowerPoint.

1. Start PowerPoint, locate and select the **Welcome to PowerPoint** template, and then choose **Create** to open the presentation.
2. Preview the various slides at the left of the PowerPoint window, either by clicking each individual slide or by using the scroll bar.
3. Click **slide 1** and then click at the end of the word Welcome.
4. Tap Backspace two times and type: **em**
5. Click a blank area at the bottom of the slide to deselect the text box and then click anywhere in the first line of text to reselect it.

   Notice the misspelling of Welcome *displays with a red, squiggly line below it.*
6. Right-click the misspelled word and choose **Welcome** from the context menu to correct the spelling.
7. Choose **Home→Slides→New Slide**.

   On the new slide, the title placeholder displays at the top and the text box placeholder displays below.
8. Type **Parctice makes prefect** in the text box placeholder and tap Enter.

   Yes, you are deliberately typing misspelled words so you will have a presentation that can be spellchecked in the next few steps!
9. Type **Mispllings are noticable** and then click **slide 1** in the Navigation pane.
10. Choose **Review→Proofing→Spelling** to launch the Spelling pane at the right with the correct spelling of Practice selected.
11. Click the **Change** button to correct the spelling of Practice on the slide and locate the next misspelled word.
12. Continue correcting two more misspelled words (misspellings and noticeable) and then click **OK** in the Microsoft PowerPoint message box.
13. Double-click **prefect** and type: **perfect**

    Because **prefect** *is a word, it is not identified as a misspelled word when running the spelling checker. You must remember to proofread your work!*
14. Use **Save As** to save the file to your file storage location as: **O1-D11-PowerPoint**

Thesaurus

There are times when you end up using a word over and over and over again! Instead of using the same word, you could use a synonym. The Thesaurus provides definitions, word forms, synonyms (words with similar meanings), antonyms (words that are opposite in meaning), and word forms in other languages when dictionaries of other languages are installed on your computer.

DEVELOP YOUR SKILLS: O1-D12

In this exercise, you will use the Thesaurus feature in PowerPoint to replace a word with one of its synonyms.

1. Click **slide 1** and select the word **tips**.
2. Choose **Review→Proofing→Thesaurus**.

3. At the right side of the window, in the Thesaurus pane, click **guidelines** to see a list of synonyms for that word.
4. In the Thesaurus pane, hover the mouse pointer over the word rules, click the **menu** button ▾, and then choose **Insert** to replace tips with rules.
5. Close the Thesaurus pane.
6. Use **Save As** to save the file to your file storage location as: **`O1-D12-Proofing`**

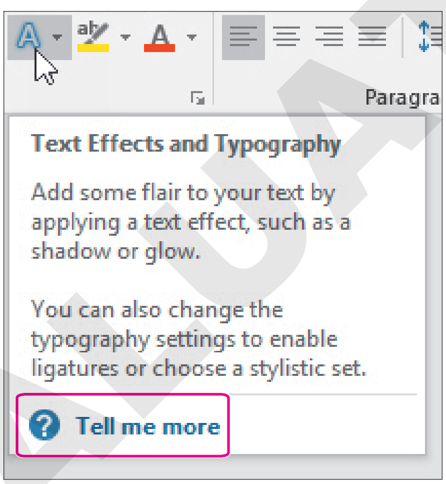
Other Common Features

In the preceding exercises you learned about features found on multiple programs' Ribbons. Here are three additional common features that are available no matter what Ribbon is displayed in Microsoft Office.

Help

When you are working in Microsoft Office, you may need to find out more about a topic as it relates to the application. Located to the right of the last tab on the Ribbon is the *Tell Me What You Want to Do* box. This box provides a quick way to access help or learn more about a feature in the application. When you click the box, suggestions related to the application display. Use the text box to enter words or phrases describing what you would like to do or locate next in the application. You can use the Tell Me... box to research or explain the meaning of a term with Smart Lookup. To view a list of Help topics, tap the [F1] function key on the keyboard.

Another Help feature is the *Tell Me More* link that may display at the bottom of a button's help tip. When you click the link, the Help window displays with more information about the specific feature. Using this method, you learn more about the feature without typing any search text.



Some buttons display robust help tips with a Tell Me More link when you point to them.

Smart Lookup with the Insights Pane

Smart Lookup is available within an application on the context menu. In the Insights pane, you can view and listen to pronunciations, look at word forms and definitions of selected text, and view results of wikis and web searches related to your selected text. Using the Smart Lookup feature can be especially helpful, as it saves you the time of having to retype the same selection in your search engine.

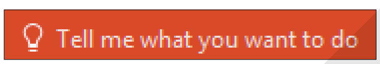
Take a Screenshot

The Take a Screenshot button is used when you want to remain in your Word, Excel, PowerPoint, or Outlook application while capturing a screenshot of the entire window or part of a window. In PowerPoint, once the screenshot is captured, it is temporarily placed as a thumbnail in the Available Windows gallery located with the Take a Screenshot button in your open application. If you open another application, such as Word, the thumbnail displays in the Available Windows gallery. Once you close the PowerPoint application, the screenshot will no longer display in the Available Windows gallery in Word.

DEVELOP YOUR SKILLS: O1-D13

In this exercise, you will use the Tell Me More help link and the Tell Me What You Want to Do box to learn more about the Insights feature. You will then use the Screenshot feature to copy what you found onto a new slide.

1. Save the presentation in the **Overview Chapter 1** folder as: `O1-D13-Help`
2. On the Ribbon, go to **Home→Slides**.
3. Point to the New Slide button to see the name of the button, the keyboard shortcut, a description of the button, and the Tell Me More Help link.
4. Click the **Tell Me More** link to learn about adding, rearranging, and deleting slides in PowerPoint; close the Help window.
5. On the Ribbon to the right of the View tab, click in the **Tell Me What You Want to Do** box and type: `Insights pane`

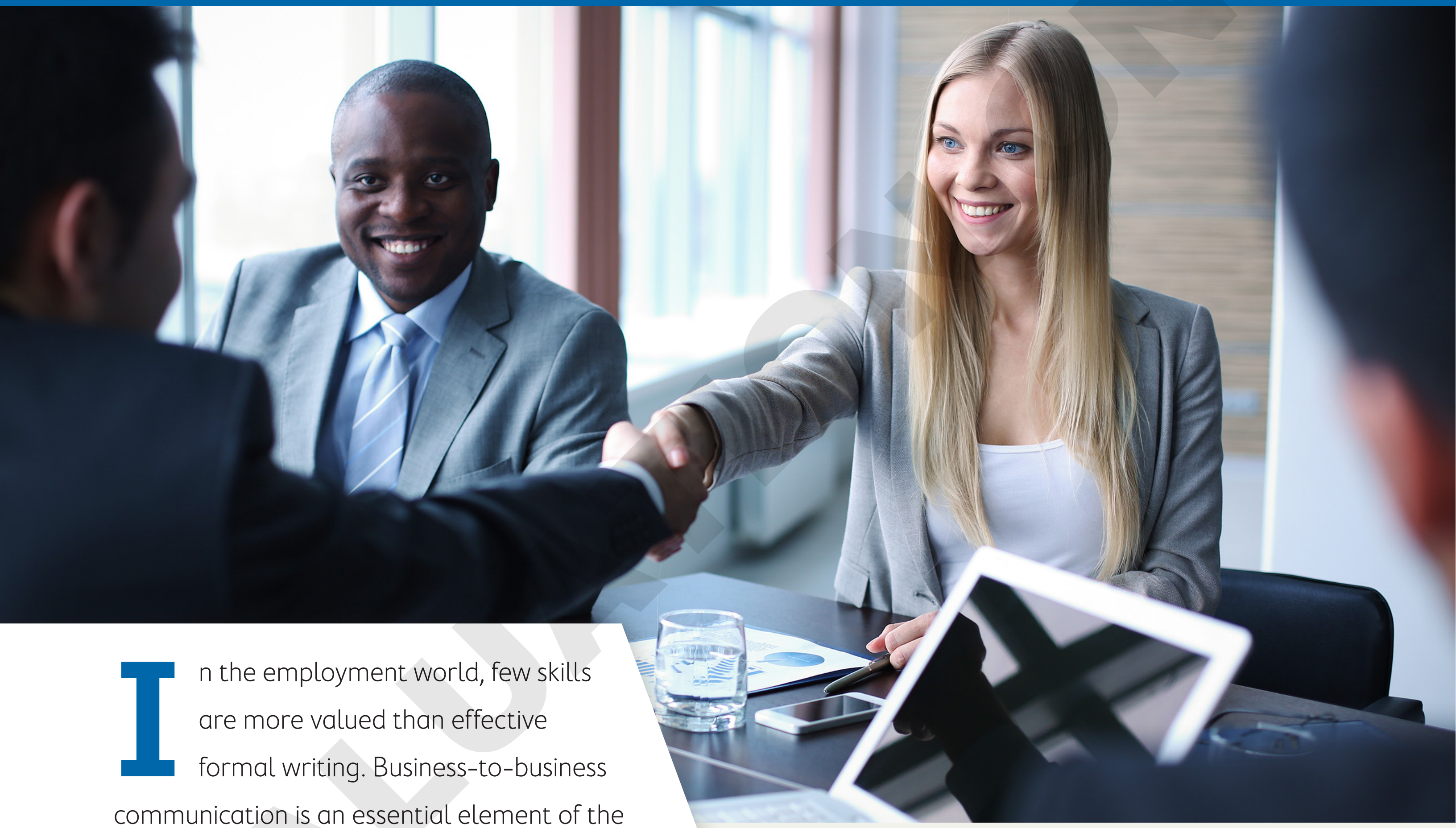
   Observe the options that Microsoft displays in the Tell Me... box.
6. From the displayed list, point to the **Get Help on "Insights Pane"** option to display its suboptions.
7. Click the **Get Insights into What You're Working on with Smart Lookup** or similar option.
8. Read about the Insights pane.
9. Scroll to the bottom of the Help pane and click **Read Article in Browser**.

   Your web browser opens to the Microsoft website and displays the help page.
10. Click the **PowerPoint** button on the taskbar to return to PowerPoint.
11. Choose **Home→Slides→New Slide**.
12. Choose **Insert→Images→Screenshot**.
13. Click **Screen Clipping** to display the browser window and then drag over a portion of the browser window to take a screenshot of it.

    You are returned to PowerPoint and the screenshot is pasted to the new slide.
14. Save the presentation and then close PowerPoint.

WORD

1 Creating and Editing Business Documents



In the employment world, few skills are more valued than effective formal writing. Business-to-business communication is an essential element of the employment network; it's the oil that keeps the whole machine running. You can help further your company's goals by crafting effective business letters that are formal, succinct, and engaging. Of course, in our digital age, simply writing a letter is only half the picture; skills in digital word processing are just as critical. In this chapter, you will create and format a well-crafted business letter that is perfect for the digital age.

LEARNING OBJECTIVES

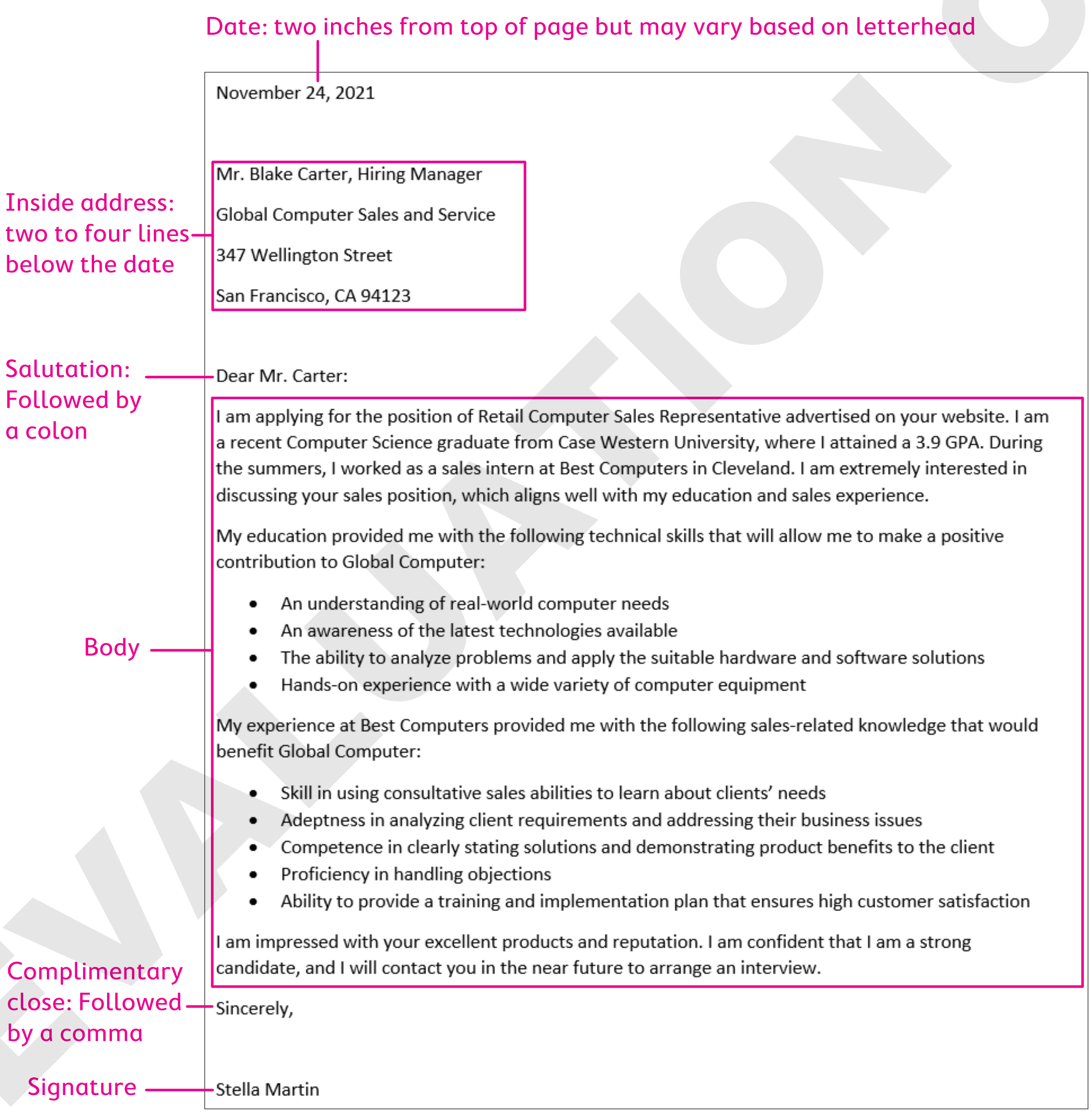
- Navigate in a document
- Enter, select, and edit text
- Create numbered and bulleted lists
- Use document views
- Save documents as different file types

Project: Creating a Well-Formatted Business Letter

School is over, and it's time to line up some interviews. You are seeking a position in the technology field. You've scanned lots of ads and websites, and found a few job openings you're interested in. You know the hiring process will be competitive for most of these positions. To give yourself an edge, you'll need to draft a stellar cover letter—one that will get you noticed right from the start.

Elements of a Professional Business Letter

There are several acceptable styles of business letters. All business letters contain similar elements but with varied formatting. The block style, as shown in this image, is the most common business letter style.



November 24, 2021

Mr. Blake Carter, Hiring Manager
Global Computer Sales and Service
347 Wellington Street
San Francisco, CA 94123

Dear Mr. Carter:

I am applying for the position of Retail Computer Sales Representative advertised on your website. I am a recent Computer Science graduate from Case Western University, where I attained a 3.9 GPA. During the summers, I worked as a sales intern at Best Computers in Cleveland. I am extremely interested in discussing your sales position, which aligns well with my education and sales experience.

My education provided me with the following technical skills that will allow me to make a positive contribution to Global Computer:

- An understanding of real-world computer needs
- An awareness of the latest technologies available
- The ability to analyze problems and apply the suitable hardware and software solutions
- Hands-on experience with a wide variety of computer equipment

My experience at Best Computers provided me with the following sales-related knowledge that would benefit Global Computer:

- Skill in using consultative sales abilities to learn about clients' needs
- Adeptness in analyzing client requirements and addressing their business issues
- Competence in clearly stating solutions and demonstrating product benefits to the client
- Proficiency in handling objections
- Ability to provide a training and implementation plan that ensures high customer satisfaction

I am impressed with your excellent products and reputation. I am confident that I am a strong candidate, and I will contact you in the near future to arrange an interview.

Sincerely,

Stella Martin

What's Important in a Cover Letter?

Now that you know the fundamentals of a proper business letter, you will explore the best approach to creating a cover letter that, along with your résumé, is sure to impress hiring managers. Keep the following points in mind:

- *Purpose:* Use a cover letter to introduce yourself and explain why you fit the job requirements.
- *Application Tracking System (ATS):* The first review of your application documents (cover letter and résumé) is likely to be done by an ATS software program. You may wish to conduct an Internet search to learn how best to write your documents so that they will not be overlooked by an ATS.
- *File Types:* Some file types work better than others relative to an ATS, and some employers may request that you submit your documents using a specific file type.
- *Audience Awareness:* Study the job description and conduct an online search of the company to learn as much as you can.
- *Beginning, Middle, and End:* Introduce yourself and include an attention grabber; highlight, but don't duplicate, outstanding points from your résumé; close the letter expressing your enthusiasm for the company and position.
- *Importance of Fresh Eyes:* An error in your documents could cause an employer to eliminate you. Ask friends or colleagues to proof your documents.

Navigating in a Document

If you are working in a multipage document, it's helpful to know various techniques for moving through it quickly. You can navigate using the scroll bar at the right side of the screen, or you can use keystrokes.

Navigating with the Scroll Bar

The scroll bar lets you navigate through documents; however, it does not move the insertion point. After scrolling, you must click in the document where you want to position the insertion point. There are two ways you can use the scroll bar. You can click the up and down arrows at the top and bottom of the scroll bar to scroll one line at a time, or you can drag the scroll box to move quickly through a multipage document. By clicking in the gray area above or below the scroll box, you'll be able to move up and down the document one screen at a time.

When the mouse pointer is in the text area, it resembles an uppercase "I" and is referred to as an I-beam. The insertion point is positioned at the location where you click the I-beam and it begins flashing. Wherever the insertion point is flashing is where the action begins.

View the video "Using the Scroll Bar to Navigate."

Keyboard Navigation Tips

Whether you use the mouse or the keyboard to navigate is up to you. Navigating with the keyboard always moves the insertion point, so it will be with you when you arrive at your destination. Here are some handy keyboard navigation tips:

- The right and left arrow keys [→] and [←] move the insertion point one character to the right or left, while the up and down arrow keys [↑] and [↓] move the insertion point one line up or down.
- [Ctrl]+[End] moves to the end of the document.

- Ctrl+Home moves to the beginning of the document.
- End moves to the end of the line.
- Home moves to the beginning of the line.

DEVELOP YOUR SKILLS: W1-D1

In this exercise, you will use the scroll bar and keyboard to navigate in a document. When you use the scroll bar, you have to position the insertion point. When you use the keyboard, the insertion point moves with you.

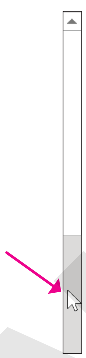
1. Start Word.
2. Click the **Blank Document** template on the Word start screen.
3. Make sure the Word window is **maximized**.

   Next you will open an existing document so you can practice navigating.

4. Choose **File→Open** to display the Open screen in Backstage view (which is another name for the contents of the File tab).
5. Navigate to your **Word Chapter 1** folder and open **W1-D1-MyVirtualCampus**.
6. Move the mouse pointer through the text in the body of the document and notice that it looks like an I-beam.
7. Move the mouse pointer into the left margin area and note that now the white selection arrow is visible.

Navigate with the Scroll Bar and Keyboard

8. Click the gray area below the scroll box to move the document down one screen.

   Notice that the insertion point has not moved.

9. Move the mouse pointer back into the document text and click the **I-beam** anywhere within the text to position the insertion point.

   The insertion point appears where you clicked. If the background is highlighted, you accidentally selected the text by double-clicking. Deselect by clicking the I-beam somewhere else within the text.

10. Drag the **scroll box** down and position the insertion point after the last period at the end of the text.
11. Drag the **scroll box** to the top of the scroll bar and position the insertion point before the word *My* at the top of the document.

12. Tap the down arrow ↓ on your keyboard to move the insertion point down into the top line of the first paragraph.
13. Tap End to move the insertion point to the end of the line and then tap Home to move the insertion point to the beginning of the line.
14. Press Ctrl+End to move the insertion point to the end of the document.
15. Choose **File→Close**, and if you are prompted to save changes, click **Don't Save**.

    The Word interface now shows a blank gray screen.

Entering Text

When you type using the keyboard, the text will appear wherever you've set the flashing insertion point. Therefore, you must position the insertion point at the desired location before typing. When you insert text, existing text moves to the right as you type. Also, text automatically wraps to the next line when you reach the right-hand margin, meaning that you do not need to tap Enter when you reach the end of a line. This feature is known as Word Wrap.

Using the Enter Key

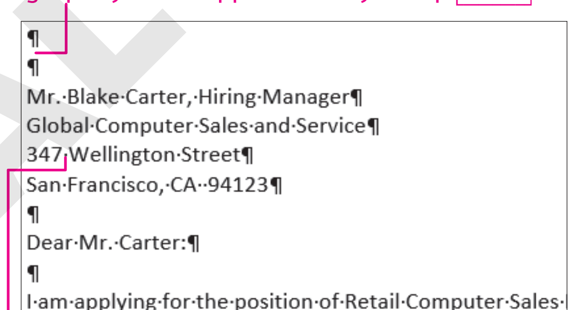
You use the Enter key to begin a new paragraph or to insert blank lines in a document. Anything that ends by tapping Enter is considered to be a paragraph. Thus, short lines such as a date line, an inside address, or even blank lines themselves are considered paragraphs.

Tapping Enter inserts a paragraph symbol in a document. These and other symbols are visible when you show formatting marks.

Showing and Hiding Formatting Marks

Although formatting marks appear on the screen, you will not see them in the printed document. Viewing these symbols can be important when editing a document. For example, you may need to see the formatting marks to determine whether the space between two words was created with the Spacebar or Tab.

Paragraph symbols appear when you tap Enter.


¶
¶
Mr.·Blake·Carter,·Hiring·Manager¶
Global·Computer·Sales·and·Service¶
347·Wellington·Street¶
San·Francisco,·CA··94123¶
¶
Dear·Mr.·Carter:¶
¶
I·am·applying·for·the·position·of·Retail·Computer·Sales·

Dots appear between words when you tap Spacebar.

To toggle the formatting marks on and off, you can use the Show/Hide button.

Home→Paragraph→Show/Hide ¶

DEVELOP YOUR SKILLS: W1-D2

In this exercise, you will turn on the Show/Hide button to show formatting marks. Next you'll type a paragraph, allowing Word Wrap to end lines automatically at the right-hand margin. Then you'll use the Enter *key to end the first paragraph and start another paragraph.*

1. Choose **File→New**.
2. Click the **Blank Document** template to start a new document.
3. Choose **File→Save As** and navigate to your **Word Chapter 1** folder.
4. Name the file **`W1-D2-CoverLtrTips`** and then click the **Save** button at the bottom of the dialog box.
5. Choose **Home→Paragraph→Show/Hide** ¶ to show formatting marks.

   All new documents contain a paragraph symbol directly to the right of the insertion point; you won't see it if you don't turn on the Show/Hide feature. Paragraph symbols carry formatting in them. In this example, the Blank Document template formatting includes the default Calibri font and 1.08 line spacing.

Tip! *Feel free to turn the Show/Hide button on and off as needed.*

6. Type the following text and let Word Wrap do its thing:

   `Your cover letter may be the first impression a company has of you. You want to be certain it's a good impression. Research the company on its website before preparing a cover letter. The more you know about what a company is doing, the better you can explain how you can contribute to the company.`

   If you make a typo, use Backspace *or* Delete *to remove it. Remember to position the insertion point next to the typo.*
7. Tap Enter to create a new paragraph.

   Notice the paragraph symbol ¶*. Also notice the extra space between the end of the paragraph and the insertion point. That is due to the default line spacing of 1.08.*
8. Type the following text:

   `Proofreading is critical. Errors in a cover letter will likely eliminate you. Don't go it alone. Ask others to proof your letter as well.`
9. Save and close the file.

   The document window is blank once again.

Selecting Text

You must select (highlight) text if you wish to perform an action on it. Suppose you want to delete a line. You select the line first and then delete it. Whether you use the mouse or the keyboard to select text is up to you.

The most common way to select text is to click and drag the I-beam through the text you wish to select, but there are more efficient methods:

- To select a single word, double-click that word.
- To select a paragraph, triple-click it.
- To select a single sentence from the first letter to the period, hold Ctrl and click anywhere within the sentence.
- To select single lines of text, hover your mouse in the left margin and click to the left of the line you wish to select.
- To quickly select multiple lines, click and drag.

Note! *The Mini toolbar appears when you select text. It contains frequently used commands. You can choose a command or ignore the toolbar; if you ignore the toolbar, it will fade away.*

View the video "Selecting Text with the Mouse."

Here are some handy mouse and keyboard combinations for selecting text:

- Press click+Shift+click to select awkward amounts of text, such as the end of one line and the beginning of the next. Simply click at the beginning of a text block, hold down Shift, and click at the end of the text block.
- Press Ctrl+click to select a sentence.
- Press Ctrl+A to select the entire document.

Tip! *If you're ever working with the Mac version of Microsoft Office, simply use the cmd key in place of the Ctrl key, and most of the shortcuts will work in exactly the same way.*

DEVELOP YOUR SKILLS: W1-D3

In this exercise, you will practice various selection techniques.

1. Navigate to the **Word Chapter 1** folder in your file storage location and open **W1-D3-CoverLtr**.
2. Follow these steps to select text using the left margin:

(A) Place the **selection arrow** in the margin to the left of the first line of the inside address; click to select the line. The Mini toolbar appears; you can ignore it for now.

(B) Use the **selection arrow** to select this line. (Notice that the previously selected line is no longer selected.)

(C) Select this paragraph by double-clicking the **selection arrow** in the margin to the left of the paragraph; deselect by clicking anywhere in the document text.

3. Using the **selection arrow**, drag down the left margin to select text.
4. Click anywhere in the body of the letter to deselect.
5. Triple-click with the **selection arrow** anywhere in the left margin to select the entire letter, and then deselect it.
6. Double-click any word to select it.
7. Double-click a different word; notice that the previous word is deselected and then deselect the latest selection.

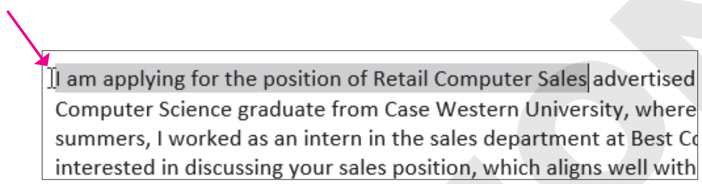
Select Nonadjacent Text

You can select multiple locations simultaneously.

8. Double-click to select one word.
9. Press and hold Ctrl as you double-click another word; release Ctrl.

   Both selections are active. You can select as many nonadjacent areas of a document as desired using the Ctrl *key.*

10. Move the **I-beam** to the start of the first main paragraph, click to position the insertion point, and then hold down Shift and click after *Sales*.


I am applying for the position of Retail Computer Sales advertised
Computer Science graduate from Case Western University, where
summers, I worked as an intern in the sales department at Best Co
interested in discussing your sales position, which aligns well with

11. Click to deselect.

Using Numbered and Bulleted Lists

Numbered and bulleted lists are effective in drawing your reader's attention to items of interest. You can turn them on before you begin typing or apply them after you have typed the list. Numbered lists are automatically renumbered if you insert or delete an item. A good example of when to use a numbered list is when sequence is important, as in a series of steps in a procedure. Items in a bulleted list have no sequence.

Once you've created a list, each time you tap Enter, a new list item will appear. Tapping Tab once you've created this new item will demote the item, indenting it to the right and creating a subitem. Shift+Tab will do the opposite: promote an item by moving it back to the left. Items can be demoted multiple times, allowing the user to create up to eight levels of subitems.

Note! *Be sure to check whether the ATS used by a prospective employer can read numbered and bulleted lists.*

View the video "Promoting and Demoting Lists."

Home→Paragraph→Bullets

Home→Paragraph→Numbering

DEVELOP YOUR SKILLS: W1-D4

In this exercise, you will create and format numbered and bulleted lists. Because correctness is important, you'll also work with proofreading tools.

1. Choose **File→Save As** and save your letter as: `W1-D4-CoverLtr`
2. If necessary, choose **Home→Paragraph→Show/Hide** ¶ to display formatting marks.
3. Position the insertion point at the end of the last line in the first body paragraph.
4. Tap Enter twice and type this text:

   My college education provided me with the following technical skills that will allow me to make a positive contribution to Global Computer: Enter

Type a Numbered List

5. Choose **Home→Paragraph→Numbering** to turn on numbers.
6. Type this text, tapping Enter at the end of each item to generate the next number:

   1. An understanding of real-world computer needs Enter

   2. An awareness of the latest technologies available Enter

   3. The ability to analyze problems and apply the appropriate hardware and software solutions

   Notice the arrow formatting marks following the numbers. They represent tabs, which were automatically generated by the numbering system.

7. Begin typing the last item, purposely misspelling *experience*, but don't tap Spacebar yet:

   4. Tab **Hands-on experence**

8. Now, as you tap Spacebar, watch how AutoCorrect fixes the misspelling for you.

   This proofreading tool makes corrections automatically. It also fixes common punctuation errors and capitalizes the names of days and months if you do not.

9. Finish typing the fourth item: **with a wide variety of computer equipment**.

   4.→ Hands-on·experience·with·a·wide·variety·of·computer·equipment¶

10. Tap Enter three times at the end of item 4: once to generate the next number, once to turn off numbering, and once again to add space between paragraphs.
11. Type this text:

    My experience at Best Computers provided me with the following sales-related knowledge that would benefit Global Computer: Enter

Continue a Numbered List

12. Choose **Home→Paragraph→Numbering**.

    Notice that numbering restarted at 1. The system assumes you are starting a new list. There may be times when you want to continue numbering even though some regular text is entered within the list.

    A smart tag *pop-up appears next to the number.*

13. Click the **AutoCorrect Options** smart tag and then click **Continue Numbering** to continue the previous list with the number 5.

    Another smart tag appears.

14. Right-click where the insertion point is flashing to the right of the number *5*. From the menu that appears, choose **Restart at 1**.

    Remember that numbered lists are typically used when sequence is important. In this example, the items you type are not in sequence, so you will change to a bulleted list.

15. Choose **Home→Paragraph→Bullets**.

16. Type the following list:
    - **Skill in using consultative sales skills to learn about clients' needs** Enter
    - **Adeptness in analyzing client requirements and addressing their business issues** Enter
    - **Competence in articulating solutions and demonstrating product benefits to the client** Enter
    - **Proficiency in handling objections** Enter
    - **Ability to provide a training and implementation plan that ensures high customer satisfaction**

    Because numbering is typically used when sequence is important and in this case the list is not in sequential order, you decide to use bullets for the first list as well.

17. Move the mouse pointer to the left margin next to the first numbered item, press and hold down the mouse button, and drag down through the fourth item.

18. Choose **Home→Paragraph→Bullets** to apply bullets.

19. Click in the body to deselect the bullets and then save your letter.

Editing Text

There are many tools for editing documents, allowing you to insert and delete text. Remember, you must position the insertion point before you begin typing. You can use Backspace and Delete to remove one character at a time. If you select a block of text, you can use Backspace or Delete to remove the entire block, or you can type over the selected text to replace it.

Spell checker and grammar checker automatically help you edit text as you type by placing a squiggly red line under words that might be misspelled and a double blue line under words that may be grammatically incorrect. Right-clicking on underlined words presents options for correcting the potential error. Spell checker and grammar checker are only editing aids; you must use your own good judgment when deciding what action to take.

You can look up synonyms from within the document you are editing in order to enhance your word choice. You can view a list of synonyms by right-clicking a word and choosing Synonyms from the menu. For a more extensive list, choose Thesaurus from the submenu to open the Thesaurus task pane.

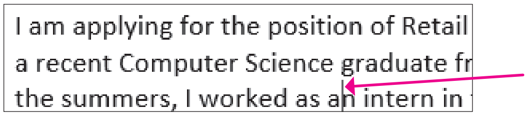
DEVELOP YOUR SKILLS: W1-D5

In this exercise, you will insert and delete text, and you will use the pop-up menu to find synonyms.

1. Choose **File→Save As** and save your file as: **W1-D5-CoverLtr**

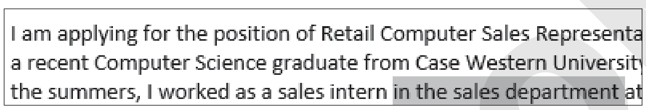
2. In the first line of the first main paragraph, click the **I-beam** [I] in front of *advertised* to position the insertion point.

3. Type **`Representative`** and then tap [Spacebar].
4. In the third line of the first paragraph, position the insertion point between the *a* and *n* in *an*.



5. Tap [Delete] to remove the *n* and then tap [Spacebar].

   The a is underlined in blue indicating a grammar error, but you can ignore it, and it will eventually go away.
6. Type: **`sales`**
7. In the third line of the first paragraph, drag the mouse pointer across **in the sales department** to select (highlight) the words.

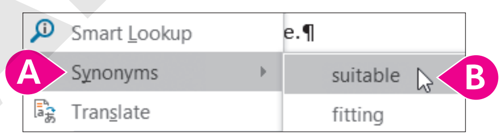


8. Tap [Delete] to remove the selected words.
9. In the first line of the second paragraph, double-click **college** to select it and then tap [Delete] to remove it.
10. In the third bullet point in the second bulleted list, double-click **articulating** to select it.

11. Type **`clearly stating`** in its place.

Work with Synonyms

12. In the third bullet point in the first bulleted list, right-click **appropriate** to display the pop-up menu.
13. Follow these steps to choose a synonym:



   A Hover the mouse pointer over the menu at *Synonyms*.

   B Move the mouse pointer over to the submenu and choose **suitable** from the list of synonyms.

   The word suitable *replaces* appropriate.
14. In the second bullet point in the second list, right-click the word **Adeptness** and then follow the same steps to replace it with the word **Expertise** from the Synonyms menu.
15. Save your document.

Working with Views

You can view your documents in several ways. Each view is optimized for specific types of work. The views change the way documents appear on the screen, but in most cases they do not impact the appearance of printed documents. You can choose views from the View tab or from the status bar at the bottom right of the screen.

DOCUMENT VIEWS

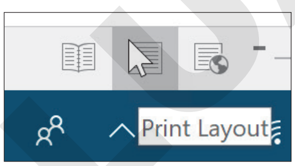
View	Description
Read Mode (View tab) Read Mode (status bar)	This view provides a book-like reading experience with pages laid out side by side. The Ribbon disappears to display more of your document. You navigate horizontally as in a book.
Print Layout (View tab) Print Layout (status bar)	With this default view, your documents look similar to the way they will look when printed. You can see graphics, headers and footers, and multi-column layouts.
Web Layout (View tab) Web Layout (status bar)	This view displays your document as it would look as a web page. It appears as one long page without page breaks.
Outline (View tab)	Outline view is useful for organizing long documents.
Draft (View tab)	This view simplifies page layout by eliminating elements such as headers and footers and graphic elements. This view is useful when you want to focus on content.

View the video "Using Views."

DEVELOP YOUR SKILLS: W1-D6

In this exercise, you will try out various views.

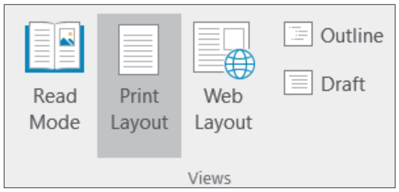
1. Locate and mouse over the View buttons on the status bar at the bottom right of the screen and notice the ToolTips that appear.



2. Click the first button, **Read Mode**, and notice how the look of your letter has changed.
3. Click the **arrow** at the right side of the window to move to the end of the document.

Note! *Depending on your screen's resolution, both pages may already be visible, in which case the arrow on the right side is not active.*

4. Click the **Print Layout** button on the status bar to return to the previous view.
5. Choose **View→Views** on the Ribbon to display all available views.



Notice that additional view options, which do not appear in the status bar, appear in the Views group.

Saving Your Work in a Different Format

You can save a document in many different formats. Prospective employers may ask you to send your application documents in one of several different formats. The format of a file is specified by the extension added at the end of the filename.

Note! *You may or may not see a file extension in your filenames. There is a default Windows option to hide extensions.*

Document Files

Earlier versions of Word saved documents in the *.doc* file format. The current version uses the *.docx* file format. When using *.doc* formats, users may not be able to read files in the *.docx* format. However, you can choose to save your document in the older *.doc* format so users of these earlier versions can read the document.

When you open a document created in earlier versions, the title bar displays *[Compatibility Mode]* next to the title. This means features not compatible with older versions are turned off while working in the document.

PDF Files

Using a PDF file (**.pdf*) is great when sharing files with others. If you're not sure what hardware and software the other person has, save your document as a PDF file; the layout and fonts will look the same on various types of computers, software, and operating systems. A prospective employer may ask you to submit your employment application documents as PDF files.

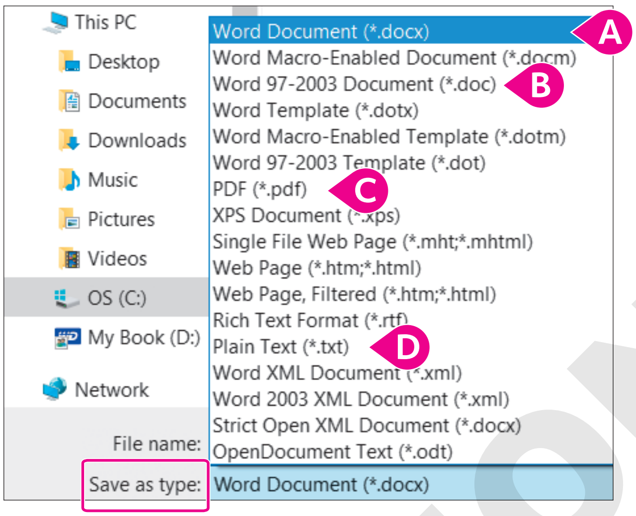
Saving a Document for ATS Analysis

Text files (**.txt*) contain very little formatting, and thus they may be the best format when you are submitting employment application documents that are likely to be scanned into a computer. ATS software can read text files. It's always a good idea to check with prospective employers if they haven't specified a particular file format.

DEVELOP YOUR SKILLS: W1-D7

It's great to have nicely formatted, paper-based documents to hand to an interviewer, if necessary. In addition, many prospective employers may ask to receive your documents electronically. In this exercise, you will assume the employer has asked to receive the document as a PDF file.

1. Choose **File→Save As** and navigate to your **Word Chapter 1** folder.
2. Click the **Save As Type** field toward the bottom of the dialog box to display the list of possible file formats.



- A Default format
- B Older document versions
- C PDF format
- D Plain Text format

3. Choose **PDF (*.pdf)** from the menu.

   Remember, you may or may not see a file extension in your filenames. There is a default Windows option to hide extensions.

4. Change the filename to `W1-D7-CoverLtr` and then click the **Save** button at the bottom of the dialog box.

   Your document now appears in Adobe Acrobat Reader if you have it installed. If not, it may appear in a browser instead, like Microsoft Edge. In addition, you may be prompted to choose how to open the file. If so, choose Adobe Acrobat Reader.

5. Click the **Close** button in the upper-right corner of the Adobe screen or whichever application automatically launched the document.
6. Click the **Close** button in the upper-right corner of the Microsoft Word screen to exit Word. If prompted to save the file before closing, click **Don't Save**.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: W1-R1

Create an Informal Letter

In this exercise, you will create a letter from Kids for Change to local residents, announcing an upcoming recycling pickup. Because this does not have to be a formal business letter, you will use a more casual style. You will also practice selection and navigation techniques.

1. Start Word.
2. Create a new document based on the **Blank Document** template and save it as: **`W1-R1-RecycleLtr`**
3. Type the return address and then tap [Enter] twice.

   `Kids for Change`[Enter]

   `159 Park Boulevard`[Enter]

   `Atlanta, GA 30313`[Enter]

   [Enter]

   [Enter]
4. Type **`Nove`** to begin the date, use **AutoComplete** to finish entering the month by simply tapping [Enter], and then complete the date as: **`November 19, 2021`**
5. Tap [Enter] twice.

6. Complete the letter shown in the following illustration, tapping Enter wherever a paragraph symbol appears.

   Notice when you type the website address in the second paragraph that it is automatically recognized and formatted as a hyperlink.

   Current Resident Enter

   123 Peach Blossom Lane Enter

   Atlanta, GA 30313 Enter

   Enter

   Dear Neighbor, Enter

   Enter

   I am the recycling representative for Kids for Change, and our motto is Think Globally, Act Locally. We know that recycling large objects takes extra effort since they do not fit in your city-provided recycle cans. We would like to give you a hand. Enter

   Enter

   On November 22, we will collect recyclable objects in your neighborhood. Visit http://recycleatlanta.org to ensure you are following the city's recycling guidelines. Please place your recyclables at the curb in front of your house before 9:00 a.m. Enter

   Enter

   Thank you for caring about our planet! Enter

   Enter

   Sincerely, Enter

   Enter

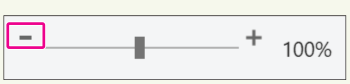
   Enter

   Enter

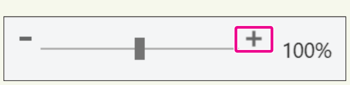
   Tania Tulip Enter

   Recycling Representative

7. Use Ctrl+Home to position the insertion point at the top of the document.
8. Use the **selection arrow** in the margin to select the return address at the top of the page.
9. When the Mini toolbar appears, click the **Bold** B button to bold the return address.
10. Click the **Zoom Out** button enough times to see the entire page.



11. Click the **Zoom In** button enough times to return the screen to 100% and then use Ctrl+End to position the insertion point at the bottom of the letter.



12. Use Ctrl+Home to position the insertion point at the top of the letter.
13. Save and close your letter.

REINFORCE YOUR SKILLS: W1-R2

Edit a Document

In this exercise, you will edit a letter from Kids for Change to local residents, inviting them to celebrate Mother Nature Day at Camp Cuyahoga. The group has planned many exciting activities. In the letter, you will create lists and use proofreading tools. You will then save the letter in an older version of Word.

1. Open the file **W1-R2-CuyahogaCamp** and save it as: `W1-R2-CuyahogaCampRevised`

   You can see the wavy red and double blue lines, indicating typos and grammar errors. The double blue line in the inside address indicates that there are two spaces between the state and zip code. This format is recommended by USPS guidelines.
2. Instruct the grammar checker to ignore the double space by right-clicking the underlined state and zip code and choosing **Ignore Once**.
3. Correct the spelling of *leeding* by right-clicking on it and selecting **leading** from the menu that appears.
4. In the second line of that paragraph, right-click on the word **receiving** and replace it with **be receiving**.
5. In the first line of the next paragraph, replace **convening** with **be convening** using the same tool.
6. Correct the spelling of *buug* using the same tool.
7. In the same line in which you corrected bug, right-click **important** and then select **vital** from the Synonyms list.

Create a Bulleted List

8. In the second line of the first paragraph, delete the comma following *scheduled* and type a colon in its place.
9. Use an **arrow key** to position the insertion point in front of *including* and then tap Enter.
10. Click the **Bullets** button.
11. Delete *including* and the space following it.
12. Delete the *h* in *hiking* and replace it with an uppercase **H**.
13. Delete the comma and space following *Hiking* and then tap Enter.
14. Continue editing the list of activities until it looks like the illustration:

    - Hiking
    - Bird watching
    - Tree planting
    - Bug hunting
15. Display the document in **Read Mode** and then return to **Print Layout** view.

Change Document Format

Some recipients will get the letter as an email attachment. For those who may not have the latest version of Word, you will save the letter in an older format.

16. Choose the **Save As** option in Backstage view and navigate to your **Word Chapter 1** folder.
17. Use the Save as Type field to save the file in the **Word 97-2003 Document (*doc)** format and then click **Save** at the bottom of the dialog box.

    Notice [Compatibility Mode] *in the title bar.*
18. Save and close the letter.

REINFORCE YOUR SKILLS: W1-R3

Edit a Letter and Navigate in a Three-Page Document

In this exercise, you will create a letter for Kids for Change members, announcing a fundraiser to adopt a seal. Donations help to fund research and educate the public about ocean health. In the letter, you will work with lists and proofreading tools. You will save your letter as a PDF file and then you will navigate in a longer document.

1. Start a new document using the Blank Document template and save it as: **`W1-R3-Fundraiser`**
2. Begin typing the letter.

   Remember to use AutoComplete to help with the dates and let Word Wrap do its thing.

   `August 5, 2021` Enter

   Enter

   Enter

   Enter

   `MEMBER NAME` Enter

   `STREET ADDRESS` Enter

   `CITY STATE  ZIP` Enter

   Enter

   `Dear MEMBER:` Enter

   Enter

   `Our local chapter of Kids for Change will hold a car wash fundraiser to collect $300 to adopt a seal at the Center for Seals. We are scheduling the car wash for August 17. The next monthly meeting will be a planning session. Here are some things to think about before the meeting:` Enter

   Enter

   Enter

Use Numbering and Bullets

3. Type the following list using the **Numbering** feature:

   1. **Choose a location. Our options are the parking lots at the following businesses: Jake's Gas Station, Beulah's Diner, or Dick's Grocery Store.** Enter
   2. **What hours can you volunteer on August 17?** Enter
   3. **Let me know if you can supply any of the following: hose, vacuum, soap, brushes, sponges, or rags.** Enter
   4. **Should we set a price or request a donation?** Enter
   5. **Can you design a flyer for the car wash?**

   Now you will demote, or indent, some of the items in the list.

4. In the first item, position the insertion point in front of *Jake's*, tap Enter, and then demote the line by tapping Tab.
5. Position the insertion point in front of *Beulah's* and tap Enter to generate the next item.
6. Continue modifying the list, deleting extraneous punctuation and words as shown.

```
1. → Choose·a·location.·Our·choices·are·the·parking·lots·at·the·following·businesses:·¶
        a. → Jake's·Gas·Station¶
        b. → Beulah's·Diner¶
        c. → Dick's·Grocery·Store¶
```

7. In item 3, position the insertion point in front of *hose*, tap Enter, and then demote the line.
8. Organize the list as shown, deleting unnecessary punctuation and words. If Word automatically capitalizes the words in each line, correct this and make everything lowercase.

```
3. → Let·me·know·if·you·can·supply·any·of·the·following:·¶
        a. → hose¶
        b. → vacuum¶
        c. → soap¶
        d. → brushes¶
        e. → sponges¶
        f. → rags¶
```

   Remembering that numbering is typically used only when sequence is important, you decide to change to a bulleted list.

9. Select all list items, including the demoted lists, and apply **Bullets** to the selected text.
10. Position the insertion point at the end of the last bulleted item and then tap Enter three times to turn off bullets and create a blank line.
11. Type the following sentence, intentionally making the typo as shown:

    We're looking forward to a great planning sassion. See you at the meeting!

Proofread Your Letter

12. Correct the spelling error in the last line.

13. Right-click the word **options** in the first bullet point and choose **choices** from the Synonyms menu.

14. Move the insertion point to the end of the document, tap Enter twice, and then type the letter closing.

`Sincerely,` Enter

`Hobert Chan` Enter

`Kids for Change`

Save the Letter in PDF Format

15. Save the file in PDF format and then close Adobe Acrobat Reader (or whatever program launches to view the PDF once saved).

16. Save and close the Word file.

You've discovered a document that gives some helpful hints on car washing, and you plan to include it with the letter to the members.

17. Open the three-page document named **W1-R3-HowToWashACar**.

18. Using the following notes, navigate through this longer document:
- Use two keystrokes to position the insertion point at the end of the document.
- Use two keystrokes to move the insertion point to the top of the document.
- Use an arrow key to move down one line.
- Use one keystroke to move to the end of the line and then use one keystroke to move to the beginning of the line.

19. Use the following text selection techniques:
- Position the insertion point at the top of the document and use mouse clicks to select **Introduction**.
- With *Introduction* still selected, select **How** and **Wash** in the next heading and then click to deselect.
- Use two keystrokes to select the entire document.

20. Use the following notes to observe the document in various views:
- Position the insertion point at the top of the document.
- Display the document in **Read Mode**, using the status bar button, and then page through the document.
- Display the document in **Web Layout** using the status bar button.
- Switch back to **Print Layout** view using the status bar button.

21. Close the document and exit Word. If it asks you to save changes, click **Don't Save**.

Apply Your Skills

APPLY YOUR SKILLS: W1-A1

Create a Business Letter

In this exercise, you will create a letter from a Universal Corporate Events representative inviting the sales winners at Reukert Enterprises to an orientation meeting for their Paris tour. You will work with proofreading tools and use navigation and text selection techniques.

1. Start Word, create a new document using the Blank Document template, and save it as: **W1-A1-LeeLtr**
2. Create the following letter, using AutoComplete with the dates and intentionally making the spelling and grammar errors indicated.

   Note that the company name, Reukert, is correctly spelled, but it is not in Word's dictionary. You can ignore the red underline in this case.

   September 2, 2021

   Mrs. Suzanne Lee

   Reukert Enterprises

   8445 Princeton Street

   Chicago, IL 60628

   Dear Mrs. Lee:

   Congratulations on your outstanding sales achievement. Universal Corporate Events is orginizing your Paris tour, which will departs October 8 and return October 18.

   Please plan to attend the orientation meeting on September 14 in the Lake View conference room at 10:00 a.m.

   We are looking forward to making your trip a memorable event!

   Best Regards,

   Jack Bell

   Universal Corporate Events
3. Correct the spelling and grammar errors.
4. In the first sentence, use the Synonyms feature to replace *achievement* with **attainment**.

5. Use the following navigation techniques:

Scroll Bar	Keyboard
• Move down one screen. • Move to the top of the document and then position the insertion point at the beginning of the first main paragraph.	• Use two keystrokes to move to the end of the document. • Use one keystroke to move to the beginning of the line. • Use one keystroke to move to the end of the line.

6. Use the following selection techniques:
   - Use the **white selection arrow** to select the first line of the first paragraph.
   - Use the keyboard to select the entire document and then click anywhere in the document to deselect.
   - Use the **white selection arrow** to select three adjacent lines and then click anywhere else in the document to deselect.
   - Select three nonadjacent words simultaneously and then deselect.
7. Save and close your letter.

APPLY YOUR SKILLS: W1-A2

Work with Lists and Make Editing Changes

In this exercise, you will create a letter from a Universal Corporate Events representative to a client, suggesting ideas for side trips during its annual kickoff meeting in San Francisco. You will create a bulleted list and make editing changes. Then you will save the letter in the older version .doc format.

1. Open **W1-A2-SFTours** and save it in the older **.doc** format as: **`W1-A2-SFToursRevised`**
2. Position the insertion point at the end of the letter and type the following bulleted list:
   - **`Yacht Charters`**
   - **`Napa Valley`**
   - **`Sausalito`**
3. Tap Enter twice to turn off bullets and create a blank line.
4. Use cut and paste to rearrange the list in alphabetic order.
5. Position the insertion point after *Napa Valley*, generate a new bullet, and then demote the bullet one level.
6. Add to the list as shown:
   - **`Napa Valley`**
     - **`Napa Wine Train`**
     - **`Hot air balloon rides`**
     - **`Top-ranked restaurants`**
   - **`Sausalito`**
     - **`Ferry boat ride from San Francisco`**
     - **`Docks and marinas`**
     - **`Boutiques and art galleries`**
   - **`Yacht Charters`**
     - **`Sunset cruise`**
     - **`Sail under Golden Gate Bridge`**
     - **`Alcatraz and Angel Island`**

7. Position the insertion point at the end of the document and type the closing:

   `Sincerely,`

   `Geoff Simons`

   `Universal Corporate Events`

8. Make the following changes:
   - In the first line of the first paragraph, select **needs regarding your** and replace it with: **`annual`**
   - In the second line of the same paragraph, insert **`San Francisco`** to the left of *meeting*.
   - In the first bullet point under *Yacht Charters*, insert **`dining`** between *Sunset* and *cruise*.

9. Display your letter in **Read Mode**, page through to the end if your screen resolution allows it, and then return to **Print Layout** view.

10. Save and then close the file.

WORD

APPLY YOUR SKILLS: W1-A3

Edit and Format a Letter

In this exercise, you will draft a letter to a Universal Corporate Events employee, detailing his responsibilities relative to the Vaughn Storage Device's Kauai event. You will use proofreading tools and add a bulleted list to a letter. You will use navigation and selection techniques and save the document in PDF format. Finally, you will work with different views.

1. Open **W1-A3-WilliamsLtr**, save it as **`W1-A3-WilliamsLtrRevised`**, and then correct the spelling error.
2. In the first line of the first paragraph, use the Synonyms feature to change *ambassador* to **representative**.
3. In the same line, select **Hawaiian** and replace it with: **`Kauai`**
4. At the beginning of the second paragraph, insert **`and Martin`** between *You* and *will*.
5. At the end of the second paragraph, change *entertainment* to: **`entertainers`**
6. Move the insertion point to the end of the document and add the following text:

   `The side tours will take place on September 13, 14, 15, and 16. Here's a list of the side tours that attendees will sign up for during the arrival dinner:`

   - **`North Shore Bike Tours`**
   - **`Snorkeling at Salt Pond Beach Park`**
   - **`Catamaran Tour on Na Pali Coast`**
   - **`Surfing at Hanalei Bay`**
   - **`Kehaha Beach Luau`**

   `Sincerely,`

   `Jose Ramirez`

   `Universal Corporate Events`

Save the File in PDF

Bill is on assignment out of the country. To be sure the letter reaches him, you will send it as a PDF email attachment.

7. Save the file in PDF format and close the PDF if it automatically opens.

The .docx *file is still open.*

8. Use the **View** tab on the Ribbon to view the document in **Read Mode** and then use the button on the status bar to switch back to **Print Layout** view.

9. Save and close the file and then exit Word.

Project Grader

This chapter does not include Project Grader exercises. Project Grader content is based on the learning objectives for a chapter, and sometimes those learning objectives cannot be accurately graded by the system. Objectives from this chapter that can be accurately graded may be included in later chapters, if applicable.

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

W1-E1 That's the Way I See It

You have decided to start your own landscaping business, and you are going to conduct online research to see what's involved. Your friend is studying for his MBA. You will send him a letter containing the results of your research and ask him what he thinks of your idea.

Create a business letter, including a list of five landscaping tools that your research shows you will need to purchase. Then research what is involved in becoming a certified landscape professional and explain how you plan to earn your certification. Finally, list three tips for running a successful landscaping business. The letter should include at least three paragraphs (one to give an overview of the business, one or more to discuss certification, and one for the conclusion) and a list of three tips. Save the file in the older version .doc format, naming it: **`W1-E1-NewBusiness`**

W1-E2 Be Your Own Boss

You own Blue Jean Landscaping, a service that helps customers be their own landscapers. You provide the plans and directions and then the customer helps with the labor. A customer would like you to help her landscape her front yard. Use your imagination to decide on your business's location and climate. Conduct online research to determine what plants work well for the climate you envision. Send the client a business letter to propose four plant options that would work well for the location and climate. The letter should contain both an introductory and concluding paragraph, as well as a list of four plant options. Each option should be associated with a sentence or two explaining why it is a good choice. Save the file in PDF format as: **`W1-E2-NewClient`**

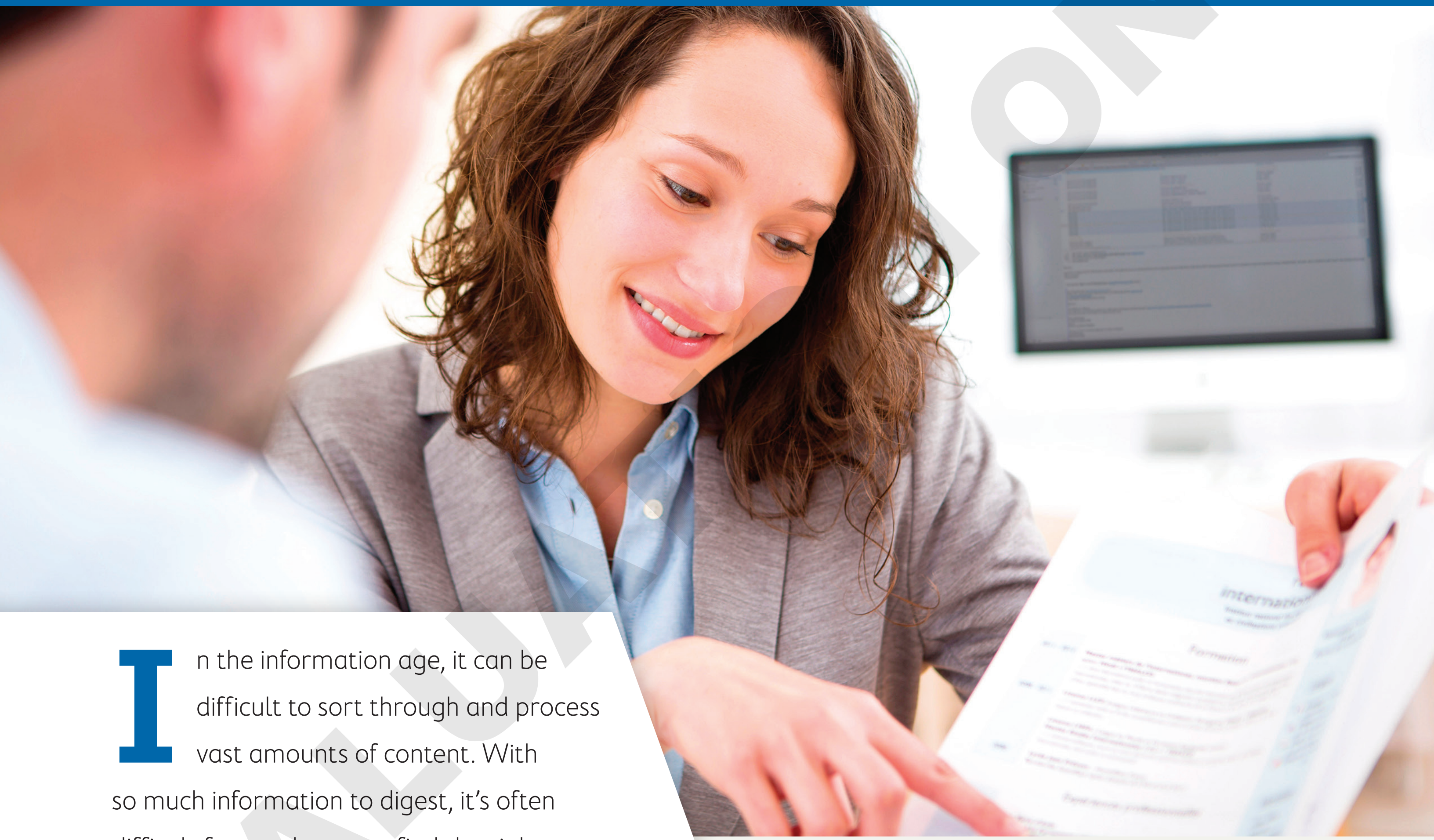
W1-E3 Demonstrate Proficiency

Stormy BBQ is a local BBQ restaurant featuring fresh, locally grown vegetables and local grass-fed pork and beef. As the marketing manager of Stormy BBQ, you've decided to hold a chili cook-off to attract new clients. Use online research to learn how to have a successful cook-off and also research rules for the chefs to ensure that they are competing on a level playing field.

Create a correctly formatted business letter to send to prospective chili chefs listing three important guidelines for a successful cook-off and three competition rules for your chefs. The letter should include both an introductory and concluding paragraph, as well as the rules that have been established. Make up the name and address for the first chef you want to invite. Save your letter in PDF as: **`W1-E3-ChiliChef`**

WORD

2 Creating a Résumé in a Table



In the information age, it can be difficult to sort through and process vast amounts of content. With so much information to digest, it's often difficult for employers to find the right job candidates, so a résumé that stands out is the single best way to secure your dream job. Tables provide a flexible, easy, and effective tool for displaying organized information and making sure you're noticed. In this chapter, you will merge and split table cells; align table text; apply table styles; and insert, delete, and resize rows and columns.

LEARNING OBJECTIVES

- Create a table
- Build an effective résumé in a table
- Select data in a table
- Format tables
- Apply table styles
- Print documents

Project: Landing the Perfect Job

Your cover letter is complete, and now it's time for your résumé. You need to summarize your qualifications and experience, focusing on skills that target the position you are applying for. You also need to demonstrate that your skills fit the needs the employer has expressed. You decide to use a table for your résumé since it will make your résumé easy for a hiring manager to quickly read.

You also intend to make as many professional contacts as possible in the next few months, and using a table to track those contacts will be very helpful. You'll take advantage of the table's Sort feature to organize the data and apply formatting that will make it attractive and, more important, easy to read.

What's Important in a Résumé?

The purpose of a résumé is to win an interview. Many hiring managers will take less than a minute to review a résumé; therefore, your résumé needs to immediately capture the reader. It needs to be dynamic, targeted, and designed to emphasize your experience, qualifications, and skills, particularly those that transfer to the job. Like the cover letter, one page is generally preferred.

There are three primary types of résumé: *chronological*, *functional*, and *combination*. A chronological résumé assumes you are continuing along a career path, listing your most recent position first. It is good for showing your growth within a profession. A functional résumé is skill and accomplishment based. It can be used by those just out of school, career changers, or those with gaps in their employment history. A combination résumé is a combination of chronological and functional, listing your skills and experience first, followed by your employment history.

Introducing Tables

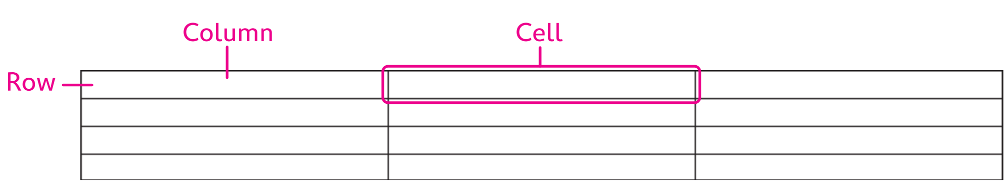
Tables provide a convenient method for organizing and aligning data in an easy-to-read format, and they afford a nice way to break up a text-heavy document. Formatting with table styles adds flair to your documents, and tables draw your reader's attention to key items.

Just as with most actions on a computer, there are multiple ways to insert a table. All of them are located in the Insert tab of the Ribbon, under the Tables group. You can use the Table button, the Insert Table dialog box, and the Quick Tables gallery. You can even convert tabular columns to a table.

Contextual tabs appear in context with the task you are performing. A lot of features use contextual tabs. With tables, contextual tabs appear on the Ribbon when the insertion point is in a table.

Creating New Tables

Tables are organized in columns and rows. Where columns and rows intersect, they form a rectangle known as a cell.



When you create a new table, you can select how many rows and columns you'd like it to have. You can always add or remove rows and columns later if you end up changing your mind.

View the video "Creating Tables."

Navigating and Selecting Data in a Table

You can move the insertion point by clicking in a cell, or you can use keystrokes for navigating. Here are the keystrokes you are likely to use most often:

- Tab for moving to the next cell
- Shift+Tab for moving to the previous cell
- Arrow keys for moving to adjacent cells

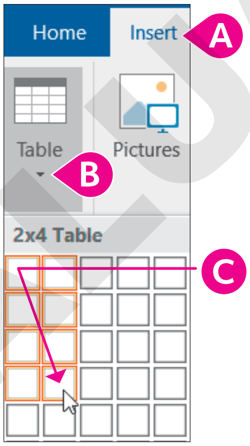
Just as in a regular text document, if you want to format or modify something in a table, you select it first. The mouse pointer changes shape depending on whether you're selecting a cell, row, column, or the entire table. For example, to move a table, you can click the move tool that appears at the top left of inserted tables.

View the video "Selecting Data with the Mouse."

DEVELOP YOUR SKILLS: W2-D1

In this exercise, you will insert a table into a document and use selection and navigation techniques. Then you will enter data into your table.

1. Start Word and create a new document using the **Blank Document** template.
2. Navigate to your **Word Chapter 2** folder and save the document as: `W2-D1-StellaResume`
3. Choose **Home→Paragraph→Show/Hide** ¶ to display formatting marks.
4. Follow these steps to insert a **2×4** table from the Ribbon:



A Click the **Insert** tab.

B Click the **Table** button.

C Drag in the grid and click the fourth cell in the second column.

Notice that the insertion point is in the table and that the contextual Table Tools' Design and Layout tabs appear on the Ribbon.

WORD

Select Table Elements and Navigate in a Table

Remember, the Mini toolbar appears when you select table data, just as when you select regular text. It contains frequently used commands. You can choose a command or ignore the toolbar, and it will fade away.

5. Apply the following selection techniques:
- Hover the mouse over the left margin and use the **selection arrow** to select a row.
- Click the **move handle** in the upper-left corner of the table to select the entire table. (The insertion point or the mouse pointer must be in the table for the move handle to appear.)
- Hover the mouse pointer just above the top border of the table and use the **down-pointing, black mouse pointer** to select a column.

6. Deselect by clicking anywhere in the table and then use the following notes to navigate in a table:
- Use Tab and Shift+Tab to move forward and back one cell at a time.
- Position the insertion point at the end of a row (not the last row) and tap Tab to move to the beginning of the next row.
- Press Alt+Page Up to move to the top of the column.
- Press Alt+Page Down to move to the end of the column.

Enter Data in a Table

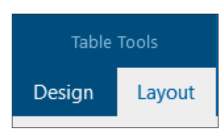
7. Enter the following information:

Stella·Martin¶ 127·Stevens·Street¶ Cleveland,·OH··44113¶ 216-555-1212¶ SSMartin5@yahoo.com¤	¤
OBJECTIVE¤	¤
QUALIFICATIONS¤	¤
EXPERIENCE¤	¤

8. Save the document.

Modifying a Table

Whenever you click in a table or select cells, rows, or columns, the contextual Layout tab appears. All the features you'll need to modify your table's structure are located here. Also, some of these features are available in the pop-up menu when you right-click in a table.



Inserting Rows and Columns

You can insert new columns and rows into an existing table. If you want to insert multiple rows or columns, you must first select the same number of existing rows or columns as you want to insert. For example, to insert two new rows, select two existing rows first. You can also add a row to the bottom of a table with a tap of the Tab key when the insertion point is in the last table cell.

A quick and easy way to insert a single row or column is with the insert control that appears when the mouse pointer is hovered just above or to the left of the table, and between rows or columns.

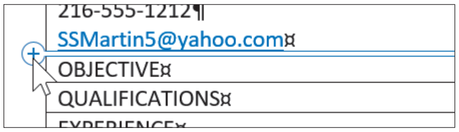


Table Tools→Layout→Rows & Columns | Right-click in the table and choose Insert

Merging/Splitting Cells and Aligning Data

You can merge two or more adjacent cells in the same row or column into a single cell. The merge option is often used to create a heading row that spans the width of the table. You can also split a single cell into multiple cells.

You can split the entire table, if desired. The first step is to position the insertion point anywhere in the row that you want to become the first row of the second table. Then, execute the Split Table command. When formatting marks are visible, you will see a paragraph between the two tables. To rejoin the table, delete the paragraph symbol.

Table Tools→Layout→Merge→Merge Cells *or* Split Cells | Right-click in the table and choose Merge Cells *or* Split Cells

Table Tools→Layout→Merge→Split Table

Aligning Table Data

You can align data horizontally or vertically, and you can change the direction of text. You can also modify the cell margins thereby customizing the spacing between cells.

Table Tools→Layout→Alignment

DEVELOP YOUR SKILLS: W2-D2

In this exercise, you will use several techniques to insert and delete rows. You will also merge cells and align data within cells.

1. Choose **File→Save As** and navigate to your **Word Chapter 2** folder.
2. Name the file: `W2-D2-StellaResume`

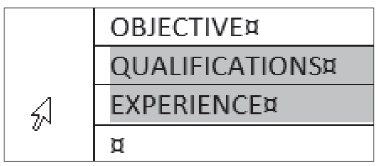
Insert and Delete Rows

3. Make sure the insertion point is in the table.
4. Move the mouse pointer to the left edge of the table between the first and second rows until the insert control appears as shown.

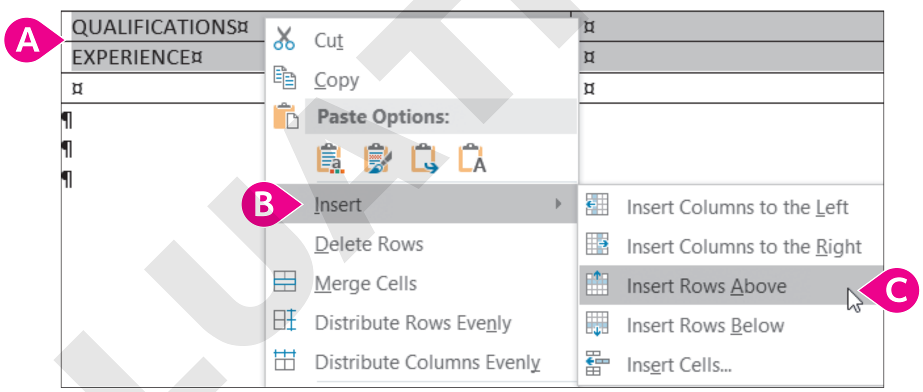
5. Click the **insert control** to add a row to the table.

   You will leave this row blank to add white space between the heading row and the rest of the table.
6. Position the insertion point in the last table cell (last column, last row) and then tap Tab to generate a new row.

   If you want to add several columns or rows at once, you must select the number of columns or rows that you want to add.
7. Use the selection arrow in the left margin to select the **QUALIFICATIONS** and **EXPERIENCE** rows.



8. Follow these steps to insert two rows in the table:



   - A Position the mouse pointer within the selected rows and right-click to display the menu.
   - B Choose **Insert**.
   - C Choose **Insert Rows Above** from the submenu.

   Two rows are inserted because two rows were selected. Now you will delete one of the rows.
9. Select the second blank row, position the mouse pointer in the gray selected area, and right-click to display the menu.
10. Choose **Delete Rows** from the menu.

    Now you will insert another blank row.
11. Use the selection arrow to select the **EXPERIENCE** row and then right-click in the selected row.

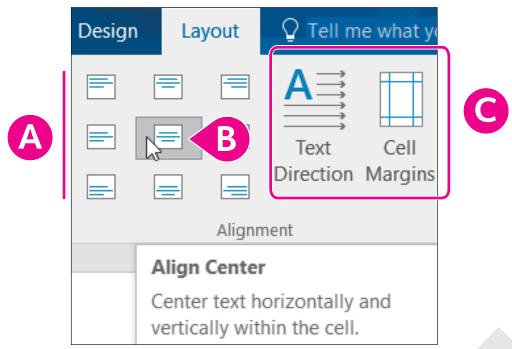
12. Choose **Insert** from the menu and then choose **Insert Rows Above** from the submenu. Click anywhere in the table to deselect the row.
13. Use the **insert control** to insert another row at the bottom of the table.

Merge Cells and Align Data

14. Position the selection arrow to the left of the first row and click to select the row.
15. Choose **Table Tools→Layout→Merge→Merge Cells**.

    Row 1 is now one cell that spans the width of the table.
16. Choose **Table Tools→Layout→Alignment**.

    The alignment options on the left of the Alignment group offer several ways of aligning data within the cells.
17. Follow these steps to center the heading data:



- A Hover the mouse pointer over the buttons in the group on the left and notice the ToolTips that describe the alignment options.
- B Choose the **Align Center** option.
- C Hover the mouse pointer over the two buttons on the right and read the ToolTips.

18. Save the file.

Sizing Columns and Rows

There are a number of techniques for resizing columns and rows. The adjust pointer, which is a double-headed arrow, appears whenever you position the mouse pointer on a row or column grid-line. You can adjust the column width or row height by using the adjust pointer to drag the gridline. The Cell Size group in the contextual Table Tools' Layout tab provides handy tools for precise sizing.

Table Tools→Layout→Cell Size

DEVELOP YOUR SKILLS: W2-D3

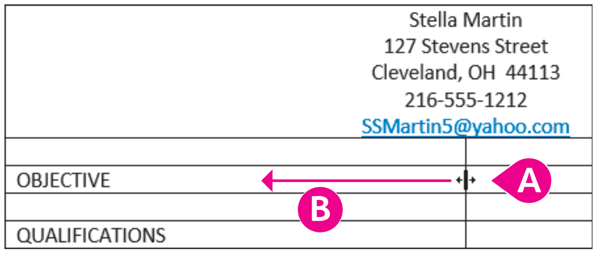
In this exercise, you will continue modifying the table by resizing columns and rows. Then you will finish entering data in the résumé.

1. Save your file as: `W2-D3-StellaResume`

   The left column is wider than it needs to be.
2. Choose **View→Show→Ruler**.

WORD

3. Follow these steps to narrow the left column:

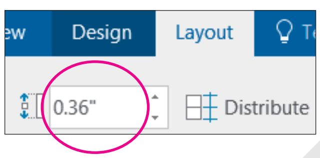


   (A) Position the mouse pointer on the center vertical gridline; it changes to the adjust pointer (a double-headed arrow).

   (B) Drag left until the column is approximately 1½" wide. You can use the ruler at the top of the page as a guide.

4. Position the mouse pointer on the bottom border of the *OBJECTIVE* row and notice the adjust pointer is a double-headed arrow pointing up and down.
5. Drag down a bit to increase the row height and then position the insertion point in the *OBJECTIVE* row.
6. Choose **Table Tools→Layout→Cell Size** and hover the mouse pointer over the buttons to observe their purpose.

   These buttons offer more precise sizing options. Notice the height of the OBJECTIVE *row in the Table Row Height field. (Your measurement may differ.)*



7. Position the insertion point in the next row and notice the default row height is 0.19".

   Now you will resize the OBJECTIVE *row to the same size as the other rows.*

8. Position the insertion point in the *OBJECTIVE* row, then click in the **Table Row Height** field, type `0.19`, and tap [Enter].

Enter Data

9. Position the mouse pointer in the second cell of the *OBJECTIVE* row and type: `Retail Computer Sales`
10. Position the insertion point in the second cell of the *QUALIFICATIONS* row.

    Now you will type a bulleted list of Stella's qualifications.

11. Choose **Home→Paragraph→Bullets**, type `Hardware/Software`, and tap [Enter].

    The next bullet will need to be demoted one level; however, inside a table, you cannot use the [Tab] *key to demote. Remember, using* [Tab] *in a table moves the insertion point to the next cell.*

12. Choose **Home→Paragraph→Increase Indent**.

13. Complete the list, including the last bullet:
    - **Hardware/Software**
        - **In-depth knowledge of computer hardware and peripherals**
        - **Understanding of computer operating systems and end-user applications, including Windows and Microsoft Office Suite**
        - **Maintain hardware and software knowledge via blogs, newsletters, and conventions**
        -

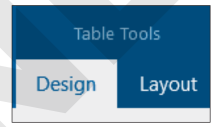
    Now you need to promote the last bullet. This time you will decrease the indent.
14. Choose **Home→Paragraph→Decrease Indent**.
15. Type the following list, remembering to use the **Increase Indent** button to demote:
    - **Sales**
        - **Ability to build good customer relations**
        - **Good presentation skills**
        - **Familiar with sales-proven strategies**
        - **Ability to close the sale**
16. Position the insertion point in the second cell of the *EXPERIENCE* row; type **Sales Intern, Best Computers (Summers, 2013-2016)** and tap Enter.
17. Type the remaining lists, remembering to use **Increase Indent** and **Decrease Indent** to demote and promote bullet points:

    Sales Intern, Best Computers (Summers, 2013-2016)
    - **Presales**
        - **Prepared demonstrations describing hardware and software features and benefits**
        - **Prepared proposals and sales contracts**
    - **Sales**
        - **Sold various brands of PCs, tablets, and notebooks, including IBM, Hewlett Packard, Compaq, and Macintosh**
        - **Recommended software based on customer needs**
        - **Performed follow-up activities necessary to close sales**
        - **Closed difficult deals and exceeded sales goals**
        - **Assisted in promotional events**
        - **Recognized as Intern of the Month on three occasions**
    - **Post Sales**
        - **Scheduled delivery and installation and implemented training schedules**
        - **Followed up with customers to ensure satisfaction**
18. Position the insertion point in the first cell of the last row and type: **EDUCATION**
19. In the second cell of the *EDUCATION* row, type: **Computer Science Graduate, Case Western University**
20. Choose **File→Print** to view your document in the Print screen.

    Notice that the résumé is too high on the page.

21. Click **Back** to return to the Word screen.
22. Choose **Layout→Page Setup dialog box launcher**, click the **Layout** tab, choose **Center** from the Vertical Alignment field, and click **OK**.
23. Save and close the file.

Formatting with Borders, Shading, and Styles



Borders, shading, and styles can enhance the readability of a table, and they add pizzazz. Whenever you click in a table or select cells, rows, or columns, the contextual Design tab appears. The features you need to modify your table's formatting are located here. Among other things, the Layout tab allows you to convert an entire table to text, or you can select specific parts of a table to convert to text.

The Borders and Shading buttons have memory, meaning they reflect the last option chosen in the current session. This is handy if you want to apply the same effect multiple times. You can also remove borders from a table to provide a nice aesthetic effect. Often, gridlines will remain as a guide for you to build out your table, but these gridlines will not show up on a printed page.

Just like regular text, you can also use the formatting tools on the Home tab to format tables. Or, use the Mini toolbar, which provides convenient formatting tools right at your mouse pointer when you select data. When selecting styles, you can hover your mouse over the various options to see a Live Preview of how the table will look should you decide to apply that style.

DEVELOP YOUR SKILLS: W2-D4

In this exercise, you will open a document and convert the existing text into a table. Then, you'll apply formatting using borders, shading, and styles. Finally, you will convert part of the table to text. Stella has started a list of hiring managers she plans to contact. Because she intends to make many contacts, a table is the perfect tool for staying organized.

1. Navigate to your **Word Chapter 2** folder, open **W2-D4-JobContacts**, and save it as: `W2-D4-JobContactsRevised`

   The text in this document looks disorganized. You can convert it into a table to give the content more structure.

2. Use Ctrl+A to select the entire document and then choose **Insert→Tables→Table→ Convert Text to Table**.
3. In the dialog box that appears, leave all default settings and click **OK**.

   Word uses existing tabs and paragraphs from the original text to organize the information.

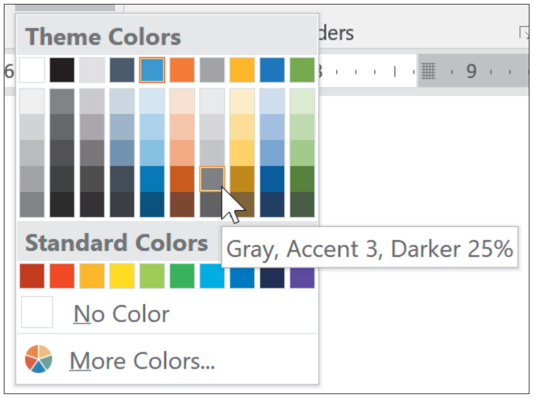
4. If necessary, click the **move handle** in the upper-left corner of the table to select the entire table.

   Remember, the insertion point has to be in the table, or you have to hover the mouse pointer over the table for the move handle to appear.

5. Choose **Table Tools→Design→Borders→Borders menu button ▾** and choose **No Border**.

   You may see gridlines within the table, but they won't print; they are there just to guide you. The Borders menu button ▾ on the Design tab provides the option to turn gridlines on or off.

6. Select the first table row, choose **Table Tools→Design→Borders→Borders** **menu button** ▾, and then choose **Outside Borders**.
7. Keep the first row selected and choose **Table Tools→Design→Table Styles→Shading** **menu button** ▾.
8. Choose **Gray, Accent 3, Darker 25%** and click anywhere else in the table to deselect the first row.

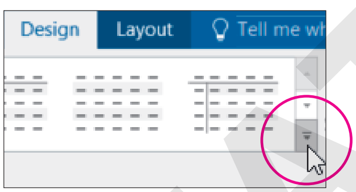


Use Table Styles

9. Make sure the insertion point is in the table, navigate to **Table Tools→Design→Table Styles**, and then hover the mouse pointer over the styles shown.

   Live Preview displays the various styles as they would look on your table, so you can see what will change before you commit.

10. Click the **More** button to display the full gallery of styles.



11. Choose **Grid Table 5 Dark – Accent 1**.

    The style overrides your cell margin spacing, borders, and shading. In turn, you can override Table Styles formatting by applying direct formatting.

12. Select the first row of the table; choose **Home→Font→Font menu button** ▾→ **Century Gothic**. Click anywhere in the table to deselect the row.
13. Save the file but leave it open.

Convert Table to Text

Now you will separate the header information on the résumé from the rest of the table without changing the way it looks.

14. Open **W2-D3-StellaResume** and save it as: `W2-D4-StellaResume`
15. Select the entire top row of the table, where the contact information appears.
16. Choose **Table Tools→Layout→Data→Convert to Text**.
17. In the dialogue box that appears, leave the default *Paragraph Marks* option selected and click **OK** to convert the header row to text. Doing so removes it from the table.

WORD

Remove Table Borders

Now that you know about table borders, you can remove the default borders on the résumé to give it a sleeker look.

18. Click the **move handle** to select the entire table.
19. Choose **Table Tools→Design→Borders→Borders** **menu button** ▾.
20. Choose **No Border** from the menu and then click anywhere inside the table to deselect.
21. Save and close the résumé.

Sorting Data in a Table

When sorting a table, you can choose to sort one or more columns in ascending or descending order and specify whether the first row of the table is a header row. The header row will not be sorted with the rest of the data.

You can sort a table by up to three levels. For example, say you have a table containing column headings for city, state, and zip. You can sort the table first by state, then by city within state, and then by zip code within city.

Second sort level (City)
First sort level (State)
Third sort level (Zip)

Name	Address	City	State	Zip
Laurie Chu	61 Granger Road	Flagstaff	Arizona	86002
Martin Hernandez	45 Priscilla Court	Holbrook	Arizona	86025
Maria Valera	254 Part Street	Colorado Springs	Colorado	80840
Ella Goodspeed	32 Ash Lane	Denver	Colorado	80215
Adam Chaffee	51 Stony Lane	Denver	Colorado	80226

DEVELOP YOUR SKILLS: W2-D5

In this exercise, you will sort data in the Job Contacts file so you can easily locate information as the contacts table continues to grow. In this example, the table will be sorted by city and by company name within the city. You could also sort the table by company name if you're looking for a particular company, or by contact date if you want to locate a company you contacted on a certain date.

Before You Begin: *The W2-D4-JobContactsRevised file should still be open on the screen.*

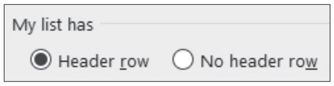
1. Save the file as: `W2-D5-JobContactsRevised`
2. With the insertion point in the table, choose **Table Tools→Layout→Data→Sort** to open the Sort dialog box.

   As the list grows longer, it will be convenient to have the cities sorted together so you can focus on one geographic area at a time.
3. In the Sort By field, click the **menu button** ▾ and choose **City** from the menu.

   Notice the Ascending and Descending option buttons on the right. Because you won't change that option, the cities will be sorted in Ascending (A to Z) order.

4. In the Then By field, choose **Co Name**.

   This will sort the company names alphabetically within each city.



   Notice the Header Row button in the bottom-left corner of the dialog box. This option indicates that the table has a header row, which prevents the header row from being sorted in with the rest of the data.

5. Click **OK** and observe the sorted table.

Tip! *As new rows are added to the bottom of the table, simply execute the sort again to re-establish the sort order.*

6. Save the file and leave it open.

Working with Print and Print Preview

The Print command and Print Preview features are available in Backstage view. Here you can choose various ways to print your document, and you can use the Print Preview feature to see how your document will look when printed. You can also use the printer selection menu to export the document as a PDF file.

File→Print | Ctrl+P

DEVELOP YOUR SKILLS: W2-D6

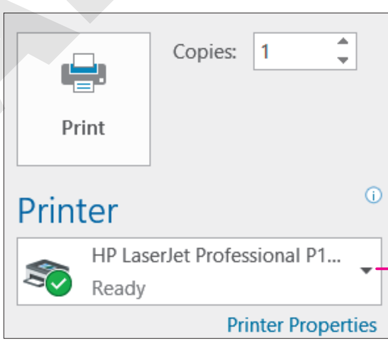
In this exercise, you will work with the Print screen in Backstage view. You will explore printing options, and you will preview the document to see how it will look when it prints.

1. Choose **File→Print**.

   A number of options in the Settings area help you control printing.

2. Take a moment to explore the options by clicking them to see what choices are available.

   Notice the top portion of the Print panel. You can choose the number of copies and any printer properties you want to modify.



You can choose a printer here, which includes an option to print to PDF.

3. If directed, click the **Print** button. If you want to conserve paper and ink and not print a page, you might print to PDF using the Microsoft Print to PDF option under the Printer selection menu button ▾, or simply click the **Back** button.

Note! *If you printed to PDF, be sure to change back to your default printer the next time you print.*

4. Exit Word.

What to Do Before a Job Interview

Many job search sites, such as Monster.com and Careerbuilder.com, offer career advice including interviewing tips. A web search of *interview tips* will also lead you to lots of tips to steer you in the right direction. Here are a few things to keep in mind:

- Anticipate the interviewer's questions and prepare your answers. You can even search for interview questions that are typical for a specific career, such as *interview questions for electrical engineers*.
- Practice, practice, practice. Get a friend or colleague to role play interviews with you. The more you practice, the more confident you will be during the interview.
- Think of questions you would like to ask the interviewer, especially those that demonstrate your interest in the job and company.
- Decide on your wardrobe. Conduct an Internet search for *how to dress for an interview*. Also, it's fine to ask the person scheduling the interview what the company dress code is. When in doubt, err on the side of conservatism.
- What to take with you: driving directions and contact information, folder/briefcase, paper copies of your résumé, pen, and notepad.
- What to not take with you: ear buds, cell phone that is not turned off, baseball cap, chewing gum, food or drink, distracting jewelry.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: W2-R1

Insert Tables and Format Table Elements

Kids for Change is partnering with the local Center for Environmental Health to identify products in the home that present a risk to babies. In this exercise, you will create and enter data in a table. You will resize columns, rows, and cell margins, and you will change alignment. You will use a Quick Table, convert a tabular document to a table, and split and merge cells.

1. Start Word and create a document using the **Blank Document** template saved as: **W2-R1-RiskToBabies**
2. Choose the **Insert→Tables→Table** button and create a **3×6** table.
3. Enter the data shown here; then select the first row and choose **Home→Font→Bold** :

Tip! *Remember, you can add rows to the bottom of a table by tapping* Tab *when you reach the last table cell.*

Member Name	School	Research Assignment
Stacey	Highland	Harmful chemicals
Jacob	Lincoln	Cribs
Noah	Tri-way	Baby slings
Emma	Blue Ridge	Bath seats
Olivia	Springville	Highchairs
Nanda	Arlington	Infant swings

Now you will resize the columns.

4. Position the mouse pointer on the border between *Member Name* and *School*.
5. When the mouse pointer changes to the adjust pointer, drag to the left about ¾".
6. Resize the second and third columns to be just as wide as they need to be to fit the data without allowing any text to wrap within the cell.
7. Position the adjust pointer on the bottom border of the top row and drag down until the row is about twice its original height.
8. Select the first row and choose **Table Tools→Layout→Alignment→Align Center** .

   Next you will insert a calendar Quick Table so you can keep track of meetings with the Center for Environmental Health.
9. Position the insertion point at the end of the document and tap Enter twice.
10. Choose **Insert→Tables→Table** , slide the mouse pointer down to **Quick Tables**, and insert **Calendar 2**.

    Now you will copy a tabular table from another file and paste it into your document.

Convert a Tabular Document to a Table

11. Open **W2-R1-FoodRisk** and then select the entire document.
12. Choose **Home→Clipboard→Copy** and then close the file.

13. Position the insertion point at the end of the **Risk to Babies** document and tap Enter.
14. Choose **Home→Clipboard→Paste** and, if necessary, display formatting marks.

    Notice that the columns in this tabular table are separated by a single tab. Remember, there must be only one tab between columns for the conversion to work properly.
15. Select the entire tabular table and choose **Insert→Tables→Table** →**Convert Text to Table**.
16. Accept the defaults in the dialog box and click **OK**.
17. Use the mouse pointer to select the **Food** and **Risk Factor** columns.
18. Choose **Table Tools→Layout→Alignment→Align Center**.
19. Choose **Table Tools→Layout→Alignment→Cell Margins**.
20. In the Table Options dialog box, change the top and bottom margins to **0.04** and click **OK**.

    This increases the vertical space between cells.
21. Click in the first table row.
22. Choose **Table Tools→Layout→Rows & Columns→Insert Above** and then position the insertion point in the first cell of the new row.
23. Choose **Table Tools→Layout→Merge→Split Cells**.
24. In the Split Cells dialog box, change the number of columns to **4**; click **OK**.
25. Select the first row.
26. Choose **Table Tools→Layout→Merge→Merge Cells**.
27. Click in the new row and type: `Food Risk`
28. Save and close the file.

REINFORCE YOUR SKILLS: W2-R2

Format and Sort a Table

Kids for Change members are planning a demonstration of safe cleaning products at the Community Center. They plan to distribute a table document that lists safe products you can use in the kitchen. In this exercise, you will use table formats to design a professional-looking table that is engaging and easy to read.

1. Open **W2-R2-SafeClean** and save it as: `W2-R2-SafeCleanRevised`
2. Make sure the insertion point is in the table.
3. Choose **Table Tools→Design→Table Styles**, open the **Table Styles** gallery, and choose **Grid Table 4 – Accent 6**.

   Hint: It's a green style.
4. Select the table and choose **Table Tools→Design→Borders→Borders menu button ▾→Outside Borders**.
5. Select the first row and choose **Table Tools→Design→Borders→Borders menu button ▾→Bottom Border**.
6. With the first row still selected, choose **Table Tools→Design→Table Styles→Shading menu button ▾**.

7. Choose **Green, Accent 6, Darker 50%** (last green color in the right column).
8. Select the entire table and choose **Home→Font→Font menu button ▾→Comic Sans MS**.
9. Select in the first column starting at **Clean coffee pot** through the end of the column.
10. Choose **Home→Font→Italic** *I*.
11. Save and close the file.

Sort a Data Table

Dylan, a Kids for Change member, volunteers at a green cleaning supply company so he can become familiar with safe cleaning products. He has been asked to take inventory this month, which is a good way to get to know the products. Dylan plans to sort the inventory list by Category and then by Sub-Category. This will make it easier to locate the items in the warehouse.

12. Open **W2-R2-Inventory** and save it as: `W2-R2-InventoryRevised`
13. Select the entire table and choose **Table Tools→Layout→Data→Sort**; if necessary, choose the **Header Row** option in the bottom-left corner of the Sort dialog box.
14. Choose **Sort By menu button ▾→Category** and then choose **Then By→Sub-Category**; click **OK**.

    It will now be easier for Dylan to inventory the cleaning supplies.

Use Print and Print Preview

15. Choose **File→Print** to display the Print options in the Backstage view.
16. Choose the **Printer menu** button ▾ to see the list of available printers and select **Microsoft Print to PDF**. Leave all other settings as they are.
17. Click the **Print** button and, in the save dialog box that appears, navigate to your student exercise files folder.
18. Save the PDF print as: `W2-R2-InventoryPrint`

    If the PDF file is automatically opened, close it.
19. Save and close the file.

REINFORCE YOUR SKILLS: W2-R3

Insert and Format Tables

This holiday season Kids for Change members are working with the local fire department to collect toys for needy kids. The members will be assigned to different neighborhoods for collecting toys. In this exercise, you will format a table that tracks how many toys each member collects. In preparation for sending out mailing lists and tracking additional donations, you will sort a table, insert a Quick Table, and convert text to a table.

1. Open **W2-R3-Toys** and save it as: `W2-R3-ToysRevised`
2. Select the second and third columns of the first table.
3. Choose **Table Tools→Layout→Alignment→Align Center**.
4. Select the entire table and choose **Table Tools→Layout→Alignment→Cell Margins**.
5. Change the top and bottom margins to **0.06** and then click **OK**.

WORD

Merge Cells, Format the Table, and Sort Data

6. Select the four **Sycamore** cells in the third column.
7. Choose **Table Tools→Layout→Merge→Merge Cells** and then delete three of the *Sycamore* entries.
8. Use the same technique to merge the *Homestead Valley* and *Middle Ridge* cells, and then delete three *Homestead Valley* and three *Middle Ridge* entries.
9. Select the entire table.
10. Choose **Table Tools→Design→Borders→Borders menu button ▾→No Border**.

    Only the gridlines, which do not print, are visible—unless they were turned off. (Remember, you can turn gridlines on and off via the Table Tools' Design tab and the Borders menu button ▾.)
11. Choose **Table Tools→Design→Table Styles→More →Grid Table 4 – Accent 5 style**.

    Hint: It's a blue style.

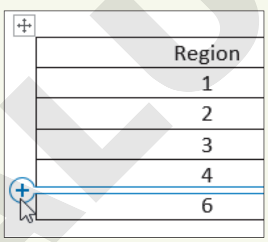
    Several Kids for Change regional directors plan to meet after the toy collection to discuss plans for next year's collection. They compiled a mailing list of directors who will be notified of the meeting. Now you will sort the mail, as presorted mail results in lower postage rates.
12. Scroll to the table on page 3 and position the insertion point in the table.
13. Choose **Table Tools→Layout→Data→Sort**.
14. Ensure that **Header Row** in the Sort dialog box is chosen and then choose to sort first by **State**, then by **City**, and finally by **Zip**. Click **OK**.

    The California cities are sorted in ascending alphabetic order within State, and the Dallas Zip codes are sorted in ascending numeric order within City.

Insert Rows and Resize Columns

15. Scroll to the table on page 4 and click to place the insertion point anywhere inside the table.

    Region 5 was accidentally omitted.
16. Position the mouse pointer to the left of, and between, the last two rows until the insert control appears.



17. Click the **insert control** to insert a blank row between the last two rows and then enter the following data in the new row:

5	1,951	2,543

18. Select the entire table and choose **Table Tools→Layout→Cell Size→AutoFit →AutoFit Contents**.

Insert a Quick Table and Convert Text to a Table

Kids for Change members decided to take up a collection from friends and family to purchase additional toys. You will insert a Quick Table for tracking the donations.

19. If necessary, display formatting marks and then position the insertion point next to the last paragraph symbol on page 4.

20. Choose **Insert→Tables→Table** →**Quick Tables→Tabular List**.

21. Select the **ITEM** heading and type **MEMBER** in its place; select the **NEEDED** heading and type **AMOUNT** in its place.

22. Select the remaining rows, tap Delete, and then enter the new data as shown:

MEMBER	AMOUNT
Ella	$20
Tom	$17
Roger	$32
Stella	$15
Jennifer	$22
Max	$29
Jose	$35
Albert	$40

23. Scroll to page 2 and select the rows in the tabular table.

24. Choose **Insert→Tables→Table** →**Convert Text to Table**.

25. When the Convert Text to Table dialog box appears, click **OK** and then save and close the file.

Apply Your Skills

APPLY YOUR SKILLS: W2-A1

Insert and Modify a Table

Universal Corporate Events is finalizing its schedule for the autumn cruises. You have been asked to complete the September cruise schedule for the Bahamas. In this exercise, you will insert a new table, align data, and resize columns and cell margins.

1. Start Word, open **W2-A1-CorpEvents**, and save it as: `W2-A1-CorpEventsRevised`
2. If needed, display formatting marks and then position the insertion point on the first blank line below *Oceanic Cruise Lines*.
3. Insert a **4×4** table and enter the data shown:

Date	Itinerary	Ship	From
09/02/25	4-night Bahamas Cruise from Miami	Oceanic Star	$560
09/09/25	3-night Bahamas Cruise from Miami	Oceanic Jewel	$600
09/30/25	7-night Bahamas Cruise from New York	Oceanic Odyssey	$1159

You accidentally overlooked the September 22 cruise, so you'll add that now.

4. Use the **insert control** to add a row between the last two rows and then enter this information:

09/22/25	7-night Bahamas Cruise from New York	Oceanic Star	$1120

5. Select the last two columns and then center-align the text.
6. Use the adjust pointer to resize the columns to the approximate width shown in the following figure:

Date	Itinerary	Ship	From
09/02/25	4-night Bahamas Cruise from Miami	Oceanic Star	$560
09/09/25	3-night Bahamas Cruise from Miami	Oceanic Jewel	$600
09/22/25	7-night Bahamas Cruise from New York	Oceanic Star	$1120
09/30/25	7-night Bahamas Cruise from New York	Oceanic Odyssey	$1159

7. Set the top/bottom margins of all cells to: **0.08"**
8. Insert a new row at the top of the table.
9. Merge the cells in the new row and type `Travel Special` as the table heading.

Next, you will convert a table to text.

10. Scroll to page 2 and select the entire table.
11. Choose **Table Tools→Layout→Data→Convert to Text** and then click **OK**.
12. Save and close the file.

APPLY YOUR SKILLS: W2-A2

Format and Sort Tables

A Universal Corporate Events sales rep has asked you to prepare two tables of travel packages that he will present to two different clients. In this exercise, you will format the tables with borders, shading, and table styles, and then you will sort the data.

1. Open **W2-A2-Universal** from your **Word Chapter 2** folder and save it as: `W2-A2-UniversalRevised`
2. Remove the borders from the table on page 1.
3. Select the first row and use the **Borders** **menu** button ▾ to apply a bottom border.
4. Apply a bottom border to the last row of the table.
5. Select the first row and then choose **Table Tools→Design→Table Styles→Shading** **menu button ▾→Gold, Accent 4, Darker 25%**.
6. Select the third row and apply: **Gold, Accent 4, Lighter 60%**
7. Apply the same color you used in the third row to the fifth row.
8. Scroll to page 2, position the insertion point in the table, choose **Table Tools→Design→Table Styles**, and open the Table Styles gallery.
9. Choose **Grid Table 6 Colorful – Accent 4**; it's a yellow style.

Sort Data and Insert a Row

10. Using the page 2 table, specify that the table has a header row and sort by the **Travel Package** column in ascending order.
11. Using the page 1 table, insert a blank row at the top of the table, merge the cells in the first row, and type: `Universal Corporate Events`
12. Use **Align Center** to center the heading and then apply shading, **Gold, Accent 4, Lighter 40%**.

    The black print in the second row is a bit hard to read.
13. Change the font color to white.

Print the File

14. Open the Print window in the Backstage view.
15. Use the **Printer menu** button ▾ to select your printer and print the file.

    If you'd rather stay green and print a digital version of the file, select Microsoft Print to PDF and save the file as a PDF print.
16. Save and close the file.

WORD

APPLY YOUR SKILLS: W2-A3

Create and Format Tables

The Universal Corporate Events marketing manager has asked you to create a list of the day tours from Paris. She also asked that you reformat the list of African trips and modify and reformat the Asian tour table. In this exercise, you will create a table, convert a table to text, and sort and reformat a table.

1. Open **W2-A3-Travel** from your **Word Chapter 2** folder; save it as `W2-A3-TravelRevised` and, if necessary, display formatting marks.
2. Position the insertion point next to the first paragraph symbol at the top of the page.
3. Insert a **4×5** table and enter the data as shown:

Day Tours	From	When	Duration
Versailles	$70	Daily except Mon	4 hrs.
Eiffel Tower	$75	Daily	3 hrs.
Louvre Museum	$65	Daily except Tue	2.5 hrs.
Moulin Rouge Show	$153	Daily	4.5 hrs.

4. Scroll to page 3 and select the table.
5. Convert the table to text; ensure that the Tabs option is chosen in the dialog box.

Sort a Table

6. Scroll to page 2 and position the insertion point in the table.
7. Open the Sort dialog box, indicate that the table has a header row, and sort by the **Destination** column in ascending order.
8. Delete the Discount column and use the **insert control** to add a column between *Dates* and *Duration*.
9. Enter the information as shown:

Departure
San Francisco
Los Angeles
Los Angeles
San Diego
San Francisco

10. Select **columns 2–5** and position the mouse between two of the selected columns until you see the column adjust pointer.
11. Double-click to autofit the columns to the width of the longest entry in each of the selected columns.
12. Insert a row at the top of the table and merge all cells in the row.
13. Type `Universal Corporate Events` in the row and center-align the text.
14. Select the entire table and remove all borders.
15. Select the first row, apply outside borders, and apply the shading color **Blue, Accent 1, Lighter 60%**.
16. Save and close the file; exit Word.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: W2-P1

Formatting a Business Letter

Global Games International has been providing products to Taylor Games for many years. In this exercise, you will create a well-formatted letter to send to customers that introduces some new items they may want to add to their product line.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **W2_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **W2_P1_Start** from your **Word Chapter 2** folder.
2. Replace the word *collection* at the end of the first main paragraph with: `product line`
3. Insert an empty paragraph above the complimentary close, *Sincerely*.
4. Apply **Bullets** formatting to these lines:
   - *Net 30 terms*
   - *90 day returns policy*
   - *No minimum orders*
   - *Free shipping on orders over $50.00*
5. In the Catan table row, change the number *51.00* to: `55.00`
6. Add the following new rows to the table:
   - Add this header row to the top of the table:

Item Name	Category	Your Cost	Suggested Retail

   - Add these rows to the bottom of the table:

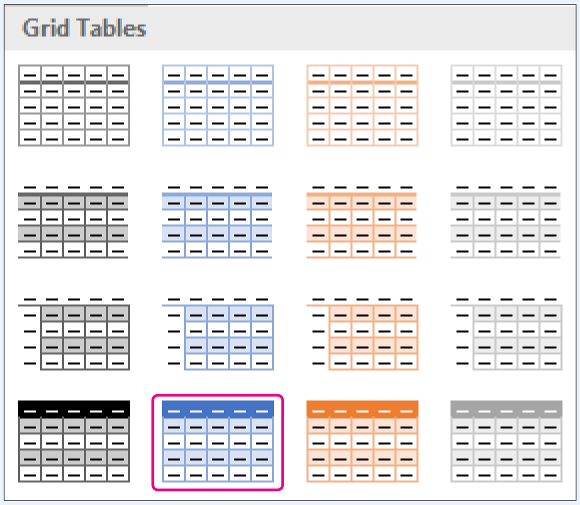
History of Board Games	Books	9.50	15.00
Monopoly Deluxe	Board Games	10.50	18.50

7. In table **columns 3** and **4**, apply **Align Right** paragraph formatting to all cells.
8. Sort the table using these settings:

Setting	Value
Sort by	**Category** in **Ascending** order
Then by	**Item Name** in **Ascending** order
My list has	**Header row**

WORD

9. Apply the table style **Grid Table 4 — Accent 1** to the table.



10. Set these table column widths:

Column	Width
Column 1	**2"**
Column 2	**0.9"**
Column 3	**1.5"**

11. Save your document.
    - *Using eLab:* Save it to your **Word Chapter 2** folder as: **`W2_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Word Chapter 2** folder as: **`W2_P1_Submission`**

PROJECT GRADER: W2-P2

Enhancing a Welcome Letter for New Members

In this exercise, you will enhance a welcome letter for new Classic Cars Club members. The letter needs a table and formatting to organize and present the information in a professional manner.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **W2_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **W2_P2_Start** from your **Word Chapter 2** folder.
2. On the empty paragraph above *Today's Date*, insert a **2 column** by **1 row** table.
3. Enter this text in the new table:

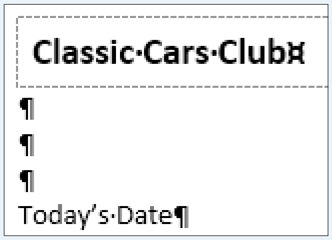
`Classic Cars Club`	`PO Box 6987` `Ferndale, WA 98248`

4. In **cell 1**, apply **14 pt** and **Bold** formatting to the *Classic Cars Club* text.
5. Apply these table cell alignments:

Cell	Alignment
Cell 1	**Align Center Left**
Cell 2	**Align Center Right**

6. Remove all table borders.

7. Insert two more empty paragraphs above *Today's Date*. Feel free to replace the *Today's Date* text with the current date in the format you desire.

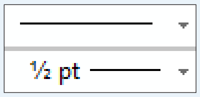


8. Apply **Bullets** formatting to these paragraphs:
   - Free entry to local and regional shows
   - A 30% entry discount on the national show
   - A 25% discount on merchandise purchases
   - A free Classic Cars Club plaque
   - A free Classic Cars Club license plate frame
9. Set these column widths for the three-column table in the center of the document:

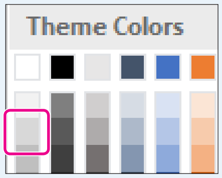
Column	Width
Column 1	**1.5"**
Column 2	**2.25"**
Column 3	**1"**

10. Sort the table using these settings:
    - Sort by: **Locations** in **Ascending** order
    - My list has: **Header row**
11. Insert a new row at the top of the table.
12. Merge all cells in the new row.
13. Enter text in and apply formatting to the merged cell as follows:
    - Enter the text: `Available Partner Discounts`
    - Apply **14 pt** and **Bold** formatting to the text you just entered
    - Apply **Center** paragraph alignment
14. Select all table cells starting with **row 2** (don't include the **row 1** merged cell) and apply these border settings to the selection:

Setting	Value
Line Style	**Solid, single line**
Line Weight	**½ pt**
Borders	**Outside Borders**



15. Apply **White, Background 1, Darker 15%** shading to all cells in **row 2**.



WORD

16. Apply these border settings to all cells in **row 2**:

Setting	Value
Border Line Style	**Solid, single line**
Border Line Weight	**1½ pt**
Borders	**Bottom Border**

17. Apply **Bold** font formatting to all text in **row 2**.
18. Save your document as:
    - *Using eLab:* Save it to your **Word Chapter 2** folder as **`W2_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Word Chapter 2** folder as: **`W2_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

W2-E1 That's the Way I See It

You own a hardware store, and a few building contractors order from you in large quantities. Track their contact information in a ten-row table with column heads for Name, Address, City, State, and Zip. Your business covers four states: Utah, Arizona, New Mexico, and Colorado. Include each state and sort by State, then by City, then by Zip. Add a column at the end of the table for Phone and enter the new data. Add a header row, centering your company name. Apply a table style and then save the file as: **`W2-E1-Contractors`**

W2-E2 Be Your Own Boss

Business is "blooming" at Blue Jean Landscaping; you need to get control of inventory. Decide how many landscapers work for you and the number of items needed to keep them supplied. Create a six-row table listing tools, such as spades and hoes. Note how many you have and how many you need to add. Include headings for Item, Location, Units Needed, Units in Stock, Units to Add, and Price. Add five rows of data, sort by Item, and resize the columns as needed. Add a header row centering the company name. Add borders and shading for readability. Print the file or use Microsoft Print to PDF to create a PDF version. Save the file as: **`W2-E2-Inventory`**

W2-E3 Demonstrate Proficiency

The chef at Stormy BBQ will introduce a new dish. Decide on the dish and then create a document named: **`W2-E3-Order`**.

Set up a table for the food order; include item, price, quantity, and cost and then enter five food items. Sort the table in an order you think most useful. Add a heading row and center the restaurant name. Size the table so it's easy to read and apply a table style of your choice.

WORD

WORD

3 Creating Reports

In this chapter, you will create a simple report. Reports are important documents often used in business and education to distribute information, communicate ideas, and share viewpoints and plans on a variety of topics. You will format your report using tabs, indents, margin changes, and headers and footers. You will also learn about research papers, a requirement for nearly every college student as well as professionally employed individuals. Your paper will include footnotes, citations, a bibliography, and a table of figures. Finally, you will explore Track Changes, a feature that allows for collaborative editing of a document.

LEARNING OBJECTIVES

- Work with columns and set margins
- Format text and apply styles
- Insert headers and footers
- Add footnotes and endnotes
- Insert citations and a bibliography
- Incorporate captions and a table of figures
- Insert comments and use Track Changes

Project: Researching Social Media and Internet Commerce

My Virtual Campus is a social networking technology company. It sells web applications to colleges and universities. Your marketing manager, José Morales, has asked you to look into the latest trends in social media in schools. It is important to understand how the "always connected" generation is using technology in the pursuit of education. Your manager also wants you to download an online article regarding social media in education that he can distribute in the next staff meeting. And he wants you to make the article's dense text more readable by using heading styles, headers and footers, and white space.

You are also working on your masters in marketing, and your professor wants you to write a research paper about the origins and evolution of Internet commerce. You will use many sophisticated features, such as headers and footers, footnotes, citations, and bibliographies in creating this research paper.

Creating a Business Report

When writing a business report, you want it to be easy to read. Dense blocks of text are difficult to read, so break up your report with lists, headings/subheadings, and white space. Use a clear, easy-to-read font, such as Calibri (Word's default font), Arial, or Times New Roman. Here are some principles of communication you may want to keep in mind when writing a report:

- Plan before you write.
- Know your audience.
- Use active voice.
- Avoid wordiness.
- Use plain language; avoid overblown words.
- Don't use clichés.
- Use parallel structure.
- Edit out anything that doesn't add to your meaning.
- Organize your writing into short sections.

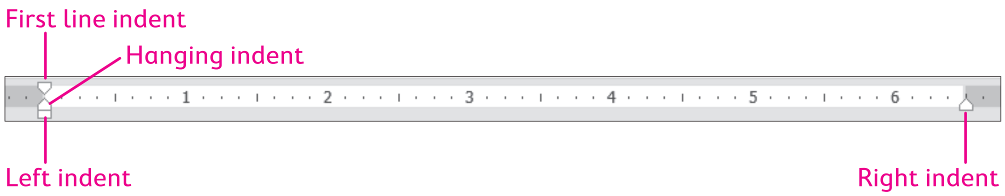
Setting Margins

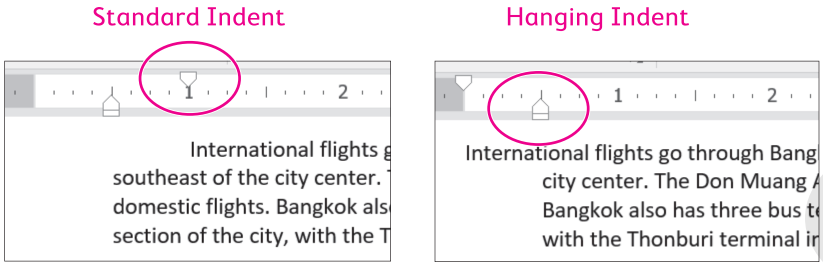
Margins determine the amount of white space around the edges of the page. You can set margins for the entire document, a section, or selected text. The default margins in the Blank Document and Single Spaced (Blank) templates, as well as many others, are one inch all around. You can choose from a gallery of preset margins, or you can set your own custom margins.

Layout→Page Setup→Margins

Indenting Text

Indents offset text from the margins. You can set indents by using the buttons on the Ribbon or by adjusting the indent markers on the ruler. The Increase and Decrease Indent buttons adjust the indent of an entire paragraph (or one or more selected paragraphs) and affect the left indent only. They adjust the indent based on the default tab stops, which are set at every half inch.





View the video "Indent Markers."

Home→Paragraph→Increase Indent *or* Decrease Indent

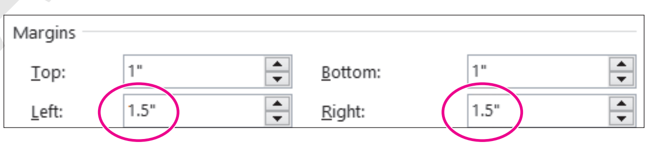
DEVELOP YOUR SKILLS: W3-D1

In this exercise, you will increase the margins in a report to provide a little more white space. You will use the Increase Indent button on the Ribbon to offset quotes in the report, and you will create your own custom indents using the indent markers on the ruler.

1. Open **W3-D1-SocMediaRpt** from your **Word Chapter 3** folder and save it as: `W3-D1-SocMediaRptRevised`
2. If necessary, choose **View→Show→Ruler**.

   Now you will increase the margin width to add more white space to the report.
3. Choose **Layout→Page Setup→Margins** and notice the preset margin settings.

   You want a 1.5" left and right margin, and that is not available in the preset list, so you will customize your own settings.
4. Choose **Custom Margins** at the bottom of the menu.
5. On the Margins tab of the Page Setup dialog box, change the left and right margins to **1.5"** and then click **OK**.

   Notice the gray margin areas at the ends of the ruler; they have increased to 1.5".

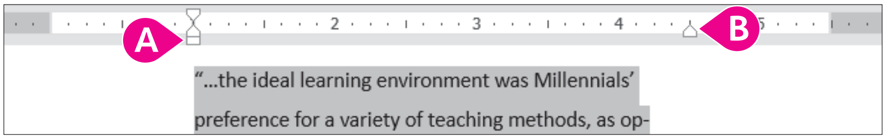
   Now you will use the Increase Indent button to offset quotes in the report.
6. Below *The Net Generation* heading, select the second and third paragraphs, which are inside quotation marks.

WORD

7. Choose **Home→Paragraph→Increase Indent** .

   The paragraphs indent from the left a half inch based on the default tab settings; however, you want to indent the paragraphs from both the right and the left. So, now you will use the indent markers on the ruler to complete the job.

8. Follow these steps to adjust the left and right indents:



   A Position the mouse pointer on the **Left Indent** marker (bottom rectangle) and drag to the **1"** mark.

   B Drag the **Right Indent** marker to the **4½"** mark.

9. Save the report.

Setting Custom Tab Stops

Default tab stops are set every half inch, so the insertion point moves a half inch whenever you tap [Tab]. You can customize tab stops if you want other settings.

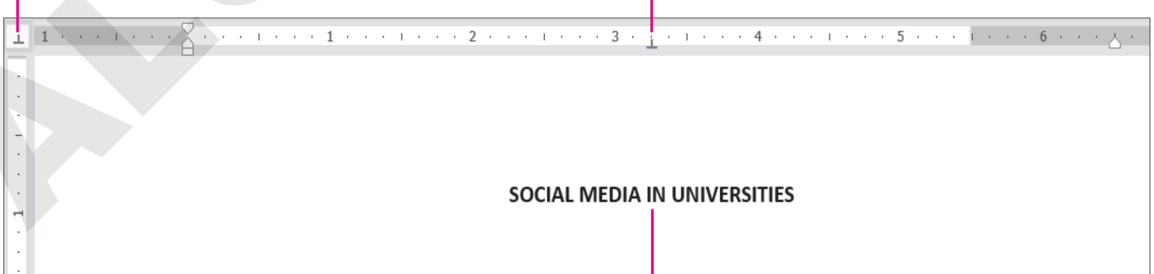
Warning! *Never use the [Spacebar] key to line up columns. Even if it looks right on the screen, it most likely will not print correctly.*

Using the Ruler to Set Custom Tabs

Word has four types of custom tab stops: left, right, center, and decimal. You can set all four types using the horizontal ruler. It is critical that you position the insertion point in the line where you plan to set tabs. Tab settings are carried inside the paragraph symbol to the next paragraph when you tap [Enter].

Use the Tabs box to choose the tab type. (ToolTips describe the symbols.)

You indicate the tab placement by clicking in the desired location on the ruler.

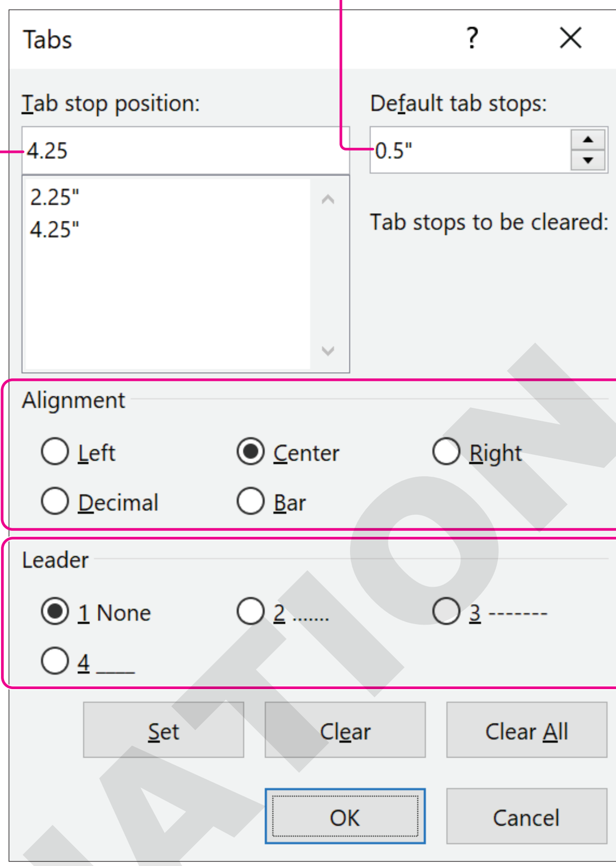


This heading is centered by a center tab.

Tip! *You can delete a custom tab by dragging it off the ruler with your mouse. When you release the mouse button, the tab disappears.*

Using the Tabs Dialog Box to Set Custom Tabs

You can also set custom tab stops in the Tabs dialog box. You can specify precise positions for tabs, choose the type of tab (alignment), clear custom tab stops, and set dot leader tabs. A leader tab generates a row of dots when you tap [Tab]. You often see dot leaders in a table of contents separating a topic from its page number.



Home→Paragraph dialog box launcher →Tabs...

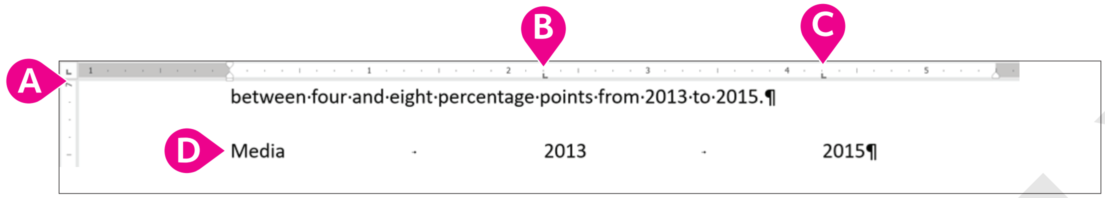
DEVELOP YOUR SKILLS: W3-D2

In this exercise, you will set custom tabs and create two tabbed tables.

1. Save your report as: **`W3-D2-SocMediaRptRevised`**
2. If necessary, display formatting marks.
3. Position the insertion point on the blank line below the section titled *Rapid Increase in the Use of Social Media*.

4. Follow these steps to set tabs for the first table:

Tip! *If you accidentally click the tab in the wrong place, you can drag it to a new location with the mouse pointer, or you can drag it off the ruler and try again.*



- **A** Verify that the Tabs box at the left of the ruler is set to a Left Tab. If not, click the box until it rotates around to Left Tab. (ToolTips describe the tab type.)
- **B** Click the bottom edge of the ruler at the **2¼"** mark to set a tab.
- **C** Click the ruler at the **4¼"** mark for the second tab.
- **D** Type `Media` in the blank line and then type the next two entries, tapping [Tab] where you see the arrows and tapping [Enter] at the end of the line.

5. Type the rest of the table, tapping [Tab] and [Enter] where you see the arrows and paragraph symbols:

Media	→	2013	→	2015¶
Facebook	→	79%	→	84%¶
Twitter	→	35%	→	40%¶
Instagram	→	30%	→	36%¶
Snapchat	→	16%	→	23%¶

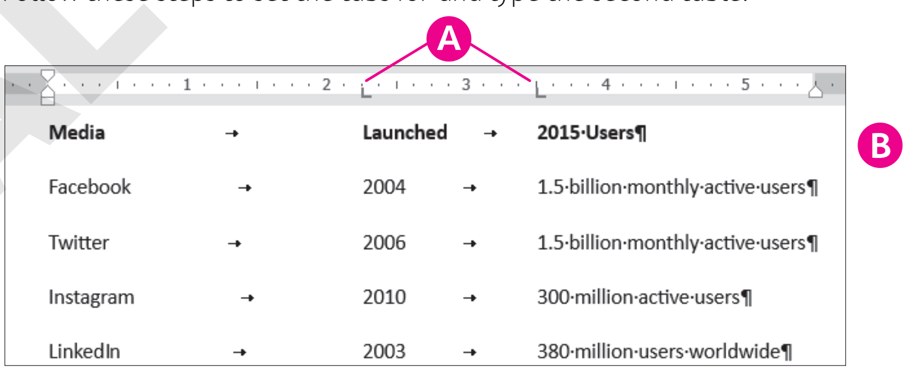
6. Select the first line of the table and choose **Home→Font→Bold** [B].

Now you will type the second table.

7. Position the insertion point on the first blank line below the last paragraph of the document.

Look at the ruler and notice that the tabs you set for the first table have disappeared. The tab settings for the first table are carried in the paragraph symbols for that table only.

8. Follow these steps to set the tabs for and type the second table:



Media	→	**Launched**	→	**2015·Users¶**
Facebook	→	2004	→	1.5·billion·monthly·active·users¶
Twitter	→	2006	→	1.5·billion·monthly·active·users¶
Instagram	→	2010	→	300·million·active·users¶
LinkedIn	→	2003	→	380·million·users·worldwide¶

- **A** Set left tabs at the **2¼"** mark and the **3½"** mark.
- **B** Type the table as shown, applying bold formatting to the first line of the table.

9. Save the file and close it.

Formatting Text and Using Styles

A style is one of the most powerful formatting tools. It is a *group of formats* enabling you to apply multiple formats to a block of text all at once. Styles are based on the current template's theme, which is a set of colors, fonts, and graphic effects. There are styles for document elements, such as headings, titles, and special character formats, providing consistent formatting throughout a document.

Spacing in Letters

The default line spacing in Word 2019 is 1.08 rather than the traditional 1.0 single spacing. It adds an extra 8% more space between lines than regular single spacing. It also adds 8 points of space after paragraphs. Therefore, rather than tapping Enter twice at the end of a paragraph, you just tap Enter once, and Word adds the extra spacing.

When you choose the Blank Document template on the Start screen or on the New screen in Backstage view, you are using the default spacing. Some documents, however, typically require single spacing, such as business letters, reports, and proposals. These methods are available for applying single spacing:

- Single Spaced (Blank) template
- Line and Paragraph Spacing button

Applying Traditional Spacing Using the Single Spaced (Blank) Template

Choosing the Single Spaced (Blank) template from the Start screen or from the New screen opens a single-spaced document. This is a good choice if the majority of your document will be single spaced. If you use single spacing in only part of your document, the Line and Paragraph Spacing button is a good choice.

Changing Spacing Using the Line and Paragraph Spacing Button

If you start a new document using 1.08 spacing and then decide to apply single spacing to a portion of the document, you can choose the 1.0 option in the Line and Paragraph Spacing button menu. You must select (highlight) the text to be single spaced or, at a minimum, position the insertion point in the paragraph before changing the spacing. If you wish to use other spacing such as double or triple spacing, the Line and Paragraph Spacing button is the place to go.

Home→Paragraph→Line and Paragraph Spacing | Right-click in the text→Paragraph→Line Spacing

DEVELOP YOUR SKILLS: W3-D3

In this exercise, you will use the Single Spaced (Blank) template, and you will modify spacing in your cover letter.

1. Choose **File→New** to display the templates.
2. Click the **Single Spaced (Blank)** template to start a single-spaced document.

   A window appears describing the template.
3. Click the **Create** button to start the document.

Tip! *If you double-click the template, the document will open immediately.*

4. Choose **File→Save As**, navigate to your **Word Chapter 3** folder, and save the file as: **`W3-D3-CoverLtr`**
5. Type **`Nove`** but stop typing when AutoComplete displays a pop-up tip.
6. Tap [Enter] to automatically insert *November* in the letter.

   Word recognizes certain words and phrases, such as names of the months and days, and offers to complete them for you.
7. Finish typing the date as: **`November 24, 2021`**
8. Tap [Enter] three times to provide space between the date and the inside address.
9. If necessary, choose **Home→Paragraph→Show/Hide** [¶] to display formatting marks.
10. Type the inside address and salutation as shown.

    If you catch a typo, you can [Backspace] *enough times to remove the error and then continue typing.*

    `Mr. Blake Carter, Hiring Manager`[Enter]

    `Global Computer Sales and Service`[Enter]

    `347 Wellington Street`[Enter]

    `San Francisco, CA  94123`[Enter]

    [Enter]

    `Dear Mr. Carter:`[Enter]

    [Enter]

    [Enter]
11. Type the following body paragraphs.

    Remember, you are using the single-spaced template now and there is no additional spacing when you tap [Enter] *at the end of the paragraphs. You have to tap* [Enter] *twice to create white space between paragraphs.*

    `I am applying for the position of Retail Computer Sales advertised on your website. I am a recent Computer Science graduate from Case Western University, where I attained a 3.9 GPA. During the summers, I worked as an intern in the sales department at Best Computers in Cleveland. I am extremely interested in discussing your sales position, which aligns well with my education and sales experience.`[Enter]

    [Enter]

    `I am impressed with your excellent products and reputation. I am confident that I am a strong candidate, and I will contact you in the near future to arrange an interview.`[Enter]

    [Enter]

    [Enter]

Change Line Spacing

12. Position the insertion point anywhere in the first main paragraph.
13. Choose **Home→Paragraph→Line and Paragraph Spacing** [icon].

14. Slide the mouse pointer over the menu options and notice that Live Preview shows how the selected paragraph will look if the formatting is applied.

Notice the Add Space Before Paragraph and Add Space After Paragraph options. These options add an extra 12 points of space before or after a paragraph.

15. Choose **3.0** (triple space).

Remembering that single spacing is appropriate for a business letter, you decide to change back to single spacing.

16. Choose **Home→Paragraph→Line and Paragraph Spacing** and choose **1.0**.

17. Save your letter.

Aligning Text Horizontally and Vertically

You can control how text aligns horizontally on the page using the paragraph alignment buttons in the Paragraph group on the Home tab. You can determine vertical alignment of text on a page using the Vertical Alignment feature in Page Setup.

TEXT ALIGNMENT OPTIONS

Horizontal Alignment	Vertical Alignment
• Align Left (default) • Center • Align Right • Justify (text distributed evenly between left/right margins)	• Top (default) • Center • Justified (text distributed evenly between top/bottom margins) • Bottom
Home→Paragraph→choose the desired alignment	Layout→Page Setup dialog box launcher→Layout tab→Page→Vertical Alignment

DEVELOP YOUR SKILLS: W3-D4

In this exercise, you will change the horizontal and vertical alignment in your letter.

1. Choose **File→Save As** and save your file as: `W3-D4-CoverLtr`

2. Position the insertion point anywhere in the date line.

3. Choose **Home→Paragraph→Center** to center the date between the margins.

Notice that the Center button on the Ribbon is highlighted, indicating that center alignment is in effect at the insertion point.

4. Choose **Home→Paragraph→Align Right** to place the date at the right-hand margin.

You've decided you prefer to have the date left-aligned.

5. Choose **Home→Paragraph→Align Left**.

Now you will type the close, the signature, and an enclosures notification.

6. Position the insertion point next to the last paragraph symbol in the document.

7. Type the end of the letter as shown, tapping Enter wherever you see a paragraph symbol.

7. Type the end of the letter as shown:

   Sincerely, Enter

   Enter

   Enter

   Enter

   Stella Martin Enter

   Enter

   Enclosure Enter

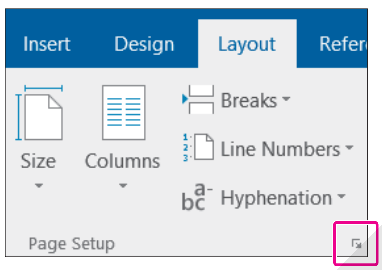
Center the Letter Vertically

8. Scroll down to the end of the page.

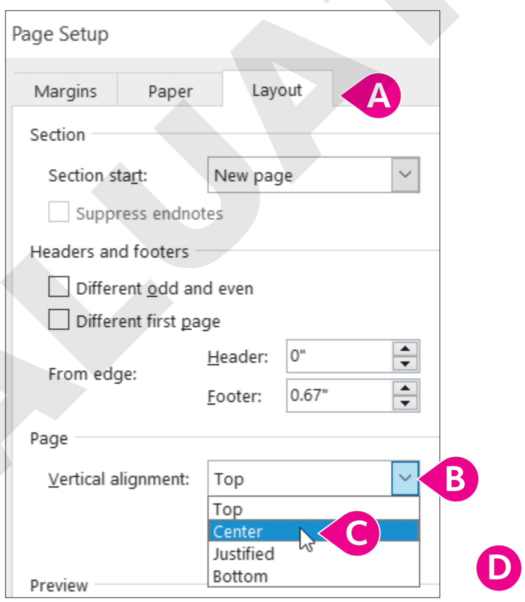
   There is too much white space at the bottom of the letter, so now you will center the letter vertically on the page.

9. Click the **Layout** tab on the Ribbon.

10. Click the **dialog box launcher** in the bottom-right corner of the Page Setup group to open the Page Setup dialog box.



11. Follow these steps to center the letter vertically on the page:



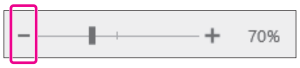
Ⓐ Click the **Layout** tab.

Ⓑ Click the **Vertical Alignment** field to display the menu.

Ⓒ Choose **Center** from the menu.

Ⓓ Click **OK** at the bottom of the dialog box to close it.

Now you will use the zoom controls to zoom out so you can see the entire page.



12. Click the **Zoom Out** button (at the bottom-right corner of the screen) enough times to see the entire page.

    The letter is centered vertically on the page.

13. Click the **Zoom In** button enough times to return to 100%.
14. Save and close the letter.

Types of Styles

There are many built-in styles, and you are always working within a style. There are two basic types of styles: character and paragraph. You can use the Styles gallery and Styles task pane to apply styles.

- Character styles: Character styles are applied to the word the insertion point is in or a selected group of words. Character styles contain only character formats, not paragraph formats. You can apply character styles *within* a paragraph that is formatted with a paragraph style.
- Paragraph styles: Paragraph styles are applied to all text in selected paragraphs or to the paragraph containing the insertion point. You can use any character or paragraph format in a paragraph style. For example, you may want to format a heading with a large, bold font (character formatting) and apply paragraph spacing before and after the heading (paragraph formatting).

View the video "Using the Styles Gallery and the Styles Task Pane."

Home→Styles→Styles Gallery | Home→Styles dialog box launcher

Collapsing Heading Topics

When you apply a heading style and the insertion point is in the heading, a small triangle marker appears at the left (whether formatting marks are displayed or not). You can click the marker to collapse and expand the text below it. In the following illustration, the text below *The Net Generation* is collapsed, allowing you to focus on certain parts of a document.

The·Net·Generation¶

Rapid·Increase·in·the·Use·of·Social·Media¶

A·study·conducted·by·Harvard's·Institute·of·Politics·(iop.harvard.edu)·reports·use·of·

In this illustration, *The Net Generation* content is expanded.

The·Net·Generation¶

In·her·article·appearing·in·The·Teaching·Professor,·August/September·2009,·Dalton·State·College·psychology·professor·Christy·Price·makes·the·following·observations:¶

"...the·ideal·learning·environment·was·Millennials'·preference·for·a·variety·of·teaching·methods,·as·opposed·to·a·"lecture·only"·format."¶

"Respondents·thought·professors·who·involved·them·in·class·with·a·variety·of·methods·(not·just·lecture)·as·more·connected·to·millennial·culture."¶

Rapid·Increase·in·the·Use·of·Social·Media¶

A·study·conducted·by·Harvard's·Institute·of·Politics·(iop.harvard.edu/use-social-

DEVELOP YOUR SKILLS: W3-D5

In this exercise, you will use Live Preview in the Styles gallery to find styles that will give your report a professional, polished look. You will apply the Title style to the report's main heading and the Heading 1 style to the headings within the report.

1. Open **W3-D5-SocMediaRpt** from your **Word Chapter 3** folder and save it as: `W3-D5-SocMediaRptRevised`
2. Click anywhere in the report's main heading, **SOCIAL MEDIA IN UNIVERSITIES**, at the top of page 1.
3. Choose the **Home→Styles→More** **button** to open the Styles gallery.

4. Hover the mouse pointer over the Title style to see its effect on the heading and then click to apply the style.

   Now you'll open the Styles task pane. It includes all the styles that are in the Styles gallery.
5. Click the **dialog box launcher** in the bottom-right corner of the Styles group.

   Next you'll apply the Heading 1 style to the headings in the body of the report.
6. Position the insertion point in **The Net Generation** heading and then click the **Heading 1** style in the task pane to apply that style to the heading.
7. Use the same technique to apply the Heading 1 style to the remaining headings: **Rapid Increase in the Use of Social Media** and **University Recruiting Through Social Networking**.
8. Close the Styles task pane.

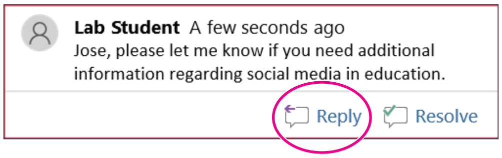
   Now you will collapse and expand the text below The Net Generation heading.
9. Scroll up and position the insertion point in **The Net Generation** heading to display the triangle marker to the left of the heading.
10. Click the **marker** to collapse the text below the heading.

    Collapsing parts of a document allows you to focus on the remaining parts.
11. Click the **marker** again to expand the text.
12. Save the report.

Inserting Headers/Footers, Comments, and Page Breaks

Headers and footers appear at the top and bottom of every page in a document, respectively, above and below the margins. You can place text, page numbers, dates, and other items in the header and footer areas. When you enter information in these areas, it is repeated on every page of the document. There is a variety of built-in header and footer formatting styles, or you can create your own.

The Comment feature is a great collaboration tool. It allows reviewers and originators to communicate about a document by posting comments to each other.



Clicking the reply button in the comments balloon allows threaded conversations between the originator and reviewers.

At times, you may wish to break up portions of your document by adding a page break. For example, you may want a report conclusion, appendix, or bibliography to each appear on separate pages. Word allows you to enter these page breaks with a simple Ribbon command, or by tapping Ctrl+Enter.

- Insert→Header & Footer→Header *or* Footer *or* Page Number
- Insert→Comments→Comment
- Layout→Page Setup→Breaks→Page

DEVELOP YOUR SKILLS: W3-D6

In this exercise, you will add headers and page numbers to the report using the built-in formats. Then you will insert a page break and add a comment to your report.

1. Save your file as: `W3-D6-SocMediaRptRevised`
2. Choose **Insert→Header & Footer→Header** and choose the **Sideline** format from the gallery.
3. Click **Document Title** and type `My Virtual Campus` in its place.
4. Double-click in the document to close the header.
5. Choose **Insert→Header & Footer→Page Number** and select **Bottom of Page**.
6. Scroll down in the gallery and choose **Large Color 3**.
7. Double-click in the document to close the page number footer.

   You can open the header/footer area by double-clicking anywhere in either the header or footer area.
8. Double-click the footer area to open it and then double-click in the document again to close it.
9. Scroll through the report and observe the headers and page numbers.

   It would look better to have at least two lines of the first table at the top of the second page.
10. Position the insertion point in front of *Instagram* in the first table and press Ctrl+Enter to insert a page break.

Add a Comment

Now you will add a comment for your marketing manager. He will see it when he reads your report.

11. Scroll to the top of the document and select the word **Universities** (the anchor point for the comment) in the title.

12. Choose **Insert→Comments→Comment** and type the following in the comment balloon on the right:

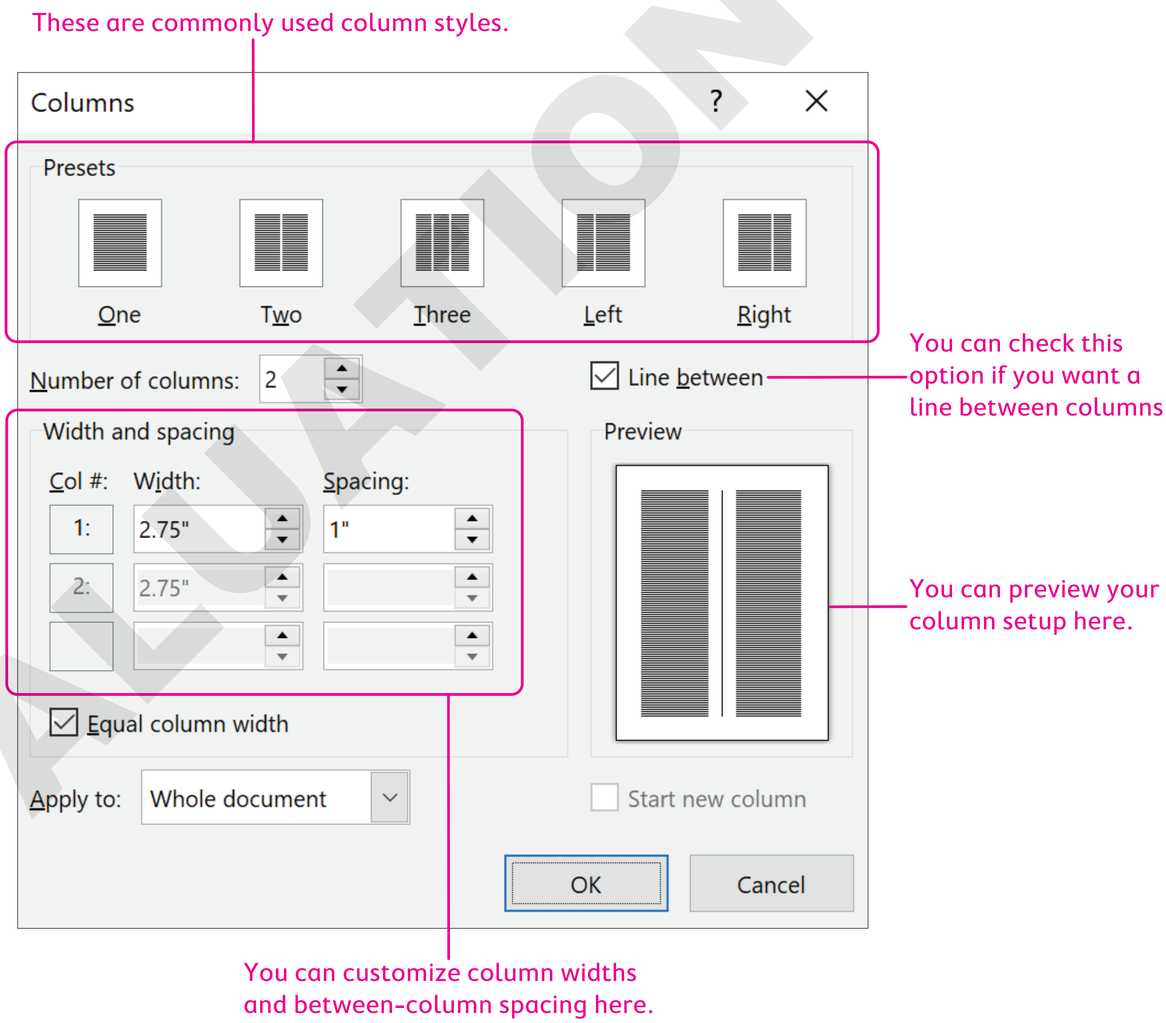
    `Jose, please let me know if you need additional information regarding social media in education.`

13. Save and then close the report.

Arranging Text in Multiple Columns

You can use newspaper-style columns (also known as newsletter-style columns) to arrange text in multiple columns. In newspaper layout, text flows down one column and wraps to the top of the next column, as in a newspaper or magazine. Newspaper columns can enhance readability, as the eye doesn't have to travel far across the page before reading the next line, and they break up dense text with random gaps. Columns are automatically reformatted as you add or delete text during editing cycles.

You can quickly set your text in columns with the Columns button on the Ribbon, or you can open the Columns dialog box where you can set up more sophisticated column layouts. For example, you can insert a line between columns and specify the width of each column.



Layout→Page Setup→Columns

Layout→Page Setup→Columns→More Columns

Column Breaks and Section Breaks

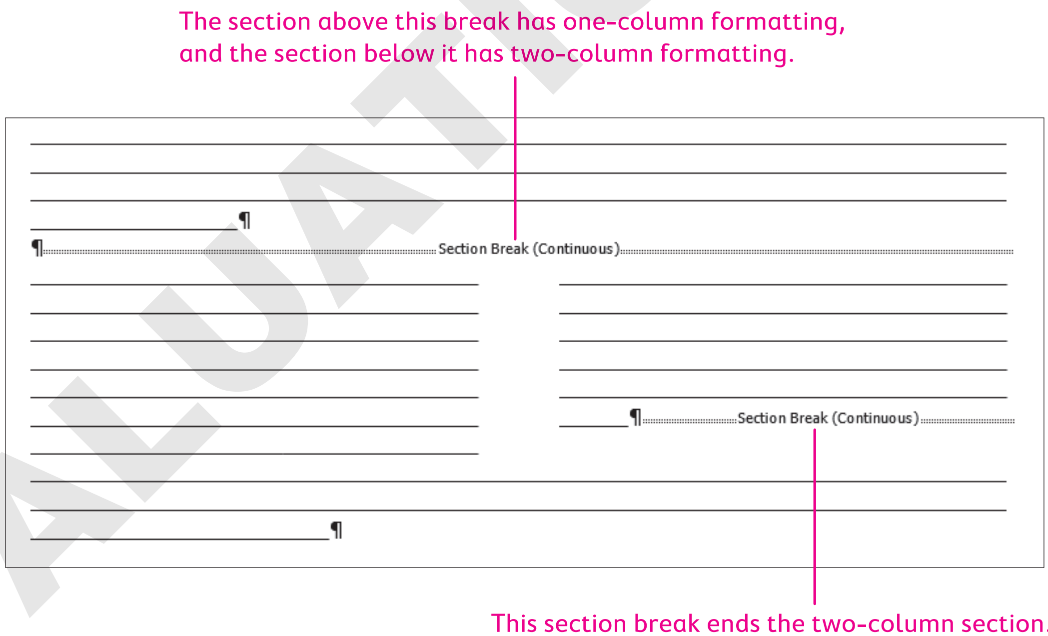
You can manually force a column to end by inserting a column break, thus moving the text at the break point to the top of the next column. This technique is often used to place headings at the top of columns and to balance columns on the last page of a multicolumn document.

Whenever you make a document-level formatting change that doesn't apply to the entire document, you need one or more section breaks to define the portion of the document affected by the change. For example, in a columnar magazine article, you may see a title line that extends across the page and then the body of the article is formatted in two columns. You need a section break to separate the one-column title from the two-column body of the article.

TYPES OF SECTION BREAKS

Section Break	Purpose
Next Page	Inserts a section break and starts the new section on the next page
Continuous	Inserts a section break and starts the new section on the same page
Odd Page	Inserts a section break and starts the new section on the next odd-numbered page; a blank page may be inserted to force the odd-page section break
Even Page	Inserts a section break and starts the new section on the next even-numbered page; a blank page may be inserted to force the even-page section break

The following illustration shows the use of continuous section breaks that are sectioning off the two-column portion of a document:



Layout→Page Setup→Breaks →Page Breaks→Column

Layout→Page Setup→Breaks →Page Breaks and then choose a Section Break type

DEVELOP YOUR SKILLS: W3-D7

Because the article your marketing manager wants to distribute at the next staff meeting consists of dense text, he wants you to set the article in newspaper columns to enhance readability. In this exercise, you will insert a section break after the introduction, and then you will lay out the second section of the document in two columns.

1. Open **W3-D7-SocMedForStaff** from your **Word Chapter 3** folder and save it as: `W3-D7-SocMedForStaffRevised`
2. If necessary, display the formatting marks.

   You want the introductory paragraph to span the page, so you will insert a section break before the social media article and then set the rest of the article in columns.
3. Position the insertion point in the second blank line following the first paragraph.
4. Choose **Layout→Page Setup→Breaks** →**Continuous**.

   This starts a new section on the same page.
5. Delete the blank line at the top of the second section.
6. Position the insertion point in the second section.
7. Choose **Layout→Page Setup→Columns** →**Two**.
8. Scroll to page 2, and you'll see that the columns are not well-balanced.
9. Position the insertion point at the beginning of the last paragraph in the left column beginning with *In the real world*.
10. Choose **Layout→Page Setup→Breaks** →**Column**.
11. Save and close the file.

Writing a Research Paper

There are a number of documentation styles for research papers, each with its own specific formatting requirements. For example, IEEE standards are used for research in computers and electronics; APA is used in psychology research; Turabian style is used for research in literature, history, and the arts; and MLA is primarily used for research in the humanities.

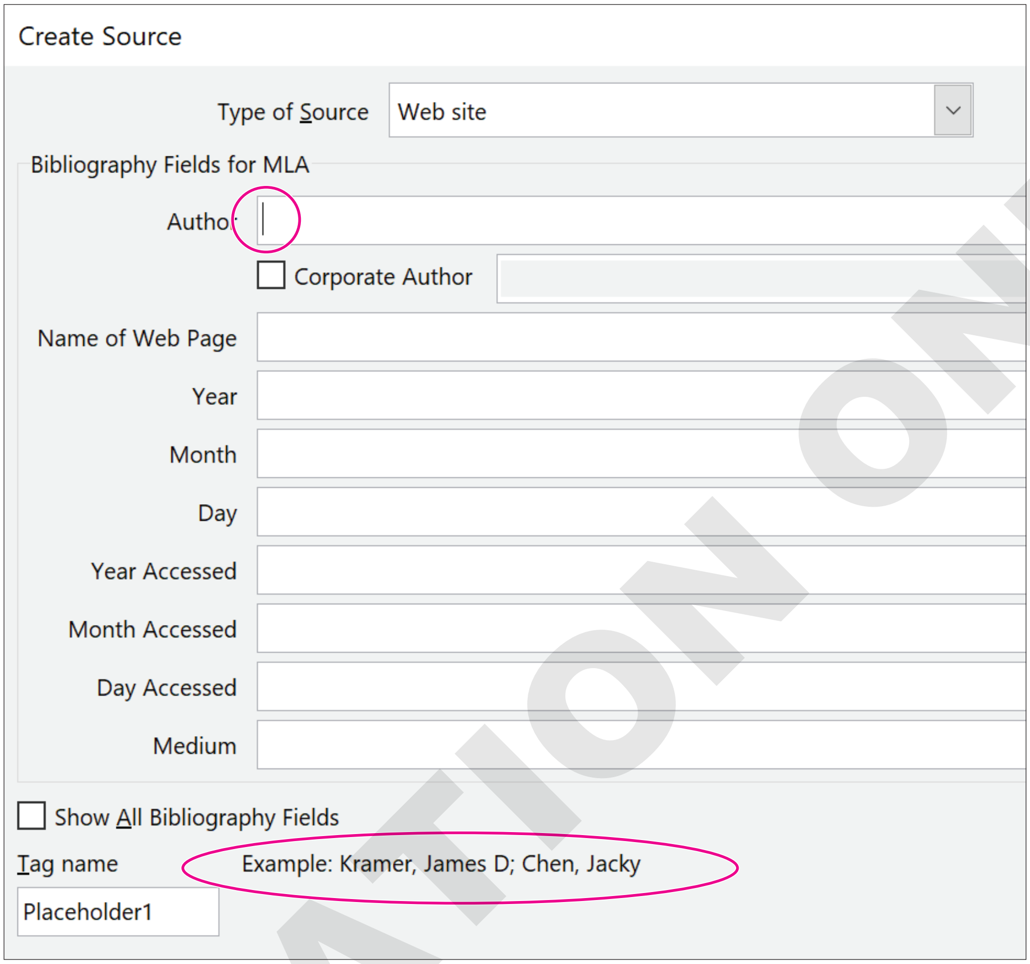
The Modern Language Association publishes the *MLA Handbook for Writers of Research Papers*. The MLA style has specific formatting requirements, *some* of which are already defaults within Word. For example, the default margins of one inch comply with the MLA requirement. However, Word does not comply with *all* MLA guidelines by default.

Warning! *This chapter does not presume to be a resource for MLA guidelines. Refer to the MLA handbook or the MLA website (mla.org) for guidance in complying with MLA requirements.*

Working with Footnotes, Endnotes, and Citations

Footnotes, endnotes, and citations are important elements of most research papers. You use them to comment on, or cite a reference to, a designated part of the text. Footnotes appear at the bottom of pages on which they are inserted; endnotes, as the name implies, appear at the end of a document or section; and citations appear on a separate Works Cited page at the end of the document. Works

Cited is another name for a bibliography. You can enter the source information when you create the citation or insert a placeholder and add the source data later. To help you enter the information correctly, example text appears for each of the various fields in the Create Source dialog box.



View the video "Inserting Footnotes."

View the video "Inserting Citations."

References→Footnotes→Insert Footnote *or* Insert Endnote

References→Citations & Bibliography→Insert Citation

DEVELOP YOUR SKILLS: W3-D8

In this exercise, you will begin the research paper that your marketing professor requested. You will use footnotes and endnotes to clarify information and citations to support your premise.

1. Open **W3-D8-Internet** from your **Word Chapter 3** folder and save it as: `W3-D8-InternetRevised`
2. If necessary, choose **View→Views→Print Layout**.

   Footnotes may differ in appearance depending on the view you are using.

WORD

3. Position the insertion point at the top of the document and type the following four lines of text above the title:

Brian Simpson [Enter]

Professor Williams [Enter]

Marketing 222 [Enter]

May 10, 2021

Notice the paragraph text is double-spaced and the extra space after the paragraphs has been removed per MLA requirements. Now you will insert footnotes.

4. Position the insertion point to the right of the period at the end of the first paragraph.

5. Choose **References→Footnotes→Insert Footnote** AB[1].

The footnote reference mark appears at the insertion point, and a corresponding footnote appears at the bottom of the page.

6. Follow these steps to complete the footnote :

A [1] This is the opinion of many business leaders. B

A Find a separator line and the footnote number.

B Type this text in the footnote area.

7. Use the same process to insert the footnote reference marks and the associated footnotes shown here:

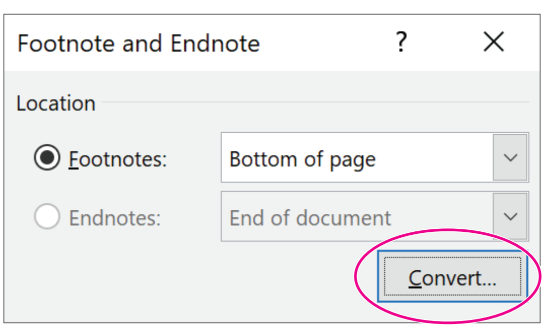
The commercial potential of the Internet stems from the fact that it is a global network with inexpensive access.[2] The Internet is also available 24x7. The multimedia capability to the Internet is important for marketing and advertising. Quick product delivery, automated order-taking, and low overhead are several more factors that are driving Internet commerce.[3]

[1] This is the opinion of many business leaders.
[2] Some nations still have high rates due to limited competition among Internet service providers.
[3] These factors depend upon the capabilities of individual companies.

The default formatting of footnotes in Word does not adhere to MLA requirements. The text should use the same formatting as the body of the document (double-spaced, first line indented). You will format the footnotes later.

Now you will convert your footnotes to endnotes.

8. Choose **References→Footnotes dialog box launcher** and click **Convert**.

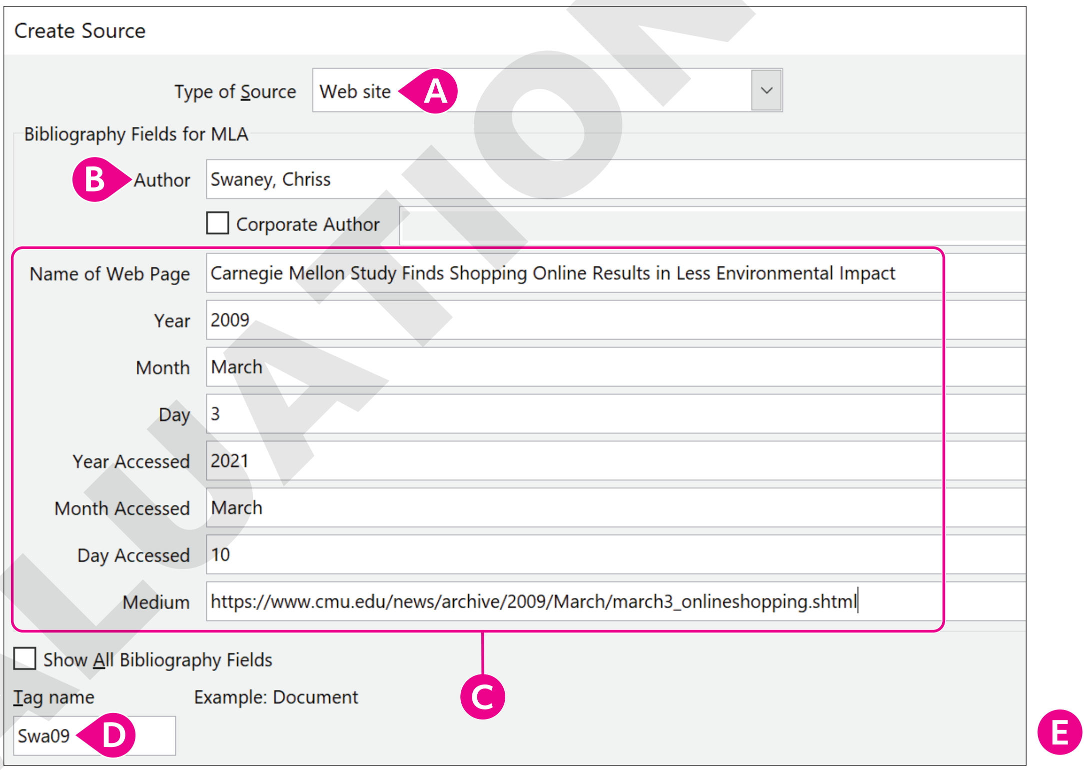


9. When the Convert Notes dialog box opens, click **OK** and then close the Footnote and Endnote dialog box.
10. Scroll through the document and notice that the footnotes are no longer at the bottom of page 1; they now appear as endnotes on the last page.

    You decide that you prefer having the notes on the same page as the material they refer to, so you will convert the endnotes back to footnotes.
11. Choose **References→Footnotes dialog box launcher** and click **Convert**.
12. Click **OK** in the Convert Notes dialog box and then close the Footnote and Endnote dialog box.

    Now you will choose the bibliography style for your paper and insert a citation.
13. Choose **References→Citations & Bibliography→Style menu button ▾→MLA Seventh Edition**.

    A citation should be placed inside the period at the end of a sentence.
14. At the end of the first paragraph on page 2, position the insertion point between the word *online* and the period and then tap Spacebar.
15. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.
16. Follow these steps to create the new source to insert as the citation:



- **A** If necessary, choose **Web site**.
- **B** Type the author's name as shown.
- **C** Enter the remaining information.
- **D** The system uses tags internally to uniquely identify a source. The Tag Name you see may vary from this one.
- **E** Click **OK**.

Note! *Remember, Word does not follow all MLA guidelines. Refer to the* MLA Handbook *or website when writing academic papers.*

WORD

Insert Citation Placeholders

17. On page 2, position the insertion point at the end of the third bullet point between *themselves* and the period and tap Spacebar.
18. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Placeholder**.
19. Type **`Fowler`** in the Placeholder Name box and then click **OK**.
20. Position the insertion point at the end of the document between *years* and the period and tap Spacebar.
21. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Placeholder**.
22. Type **`Mogg`** in the Placeholder Name box and then click **OK**.
23. Save the file.

Editing and Formatting Footnotes and Citations

You can edit footnote text directly in the footnote area. In addition to editing the text of a footnote, you can also:

- Reposition: You can change the position of a footnote reference mark by dragging it to another location in the document.
- Format: You can change various formatting features of footnotes. For example, you can change the numbering scheme, change the starting number, or even replace a footnote number with a special character.
- Delete: You can delete a footnote and its reference number by selecting and deleting the entire footnote, including the number, at the bottom of the page. You can also delete the footnote by deleting the superscript footnote number in the text itself.

You can add source information to a citation placeholder by clicking the placeholder menu button ▾ and choosing the option to edit the source.

View the video "Editing Footnotes and Citations."

DEVELOP YOUR SKILLS: W3-D9

In this exercise, you will format, edit, and delete footnotes and edit citation placeholders and sources.

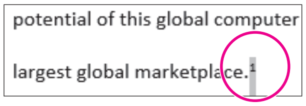
1. Save your file as: **`W3-D9-InternetRevised`**
2. Position the insertion point at the beginning of the second paragraph on page 1 and scroll, if necessary, to see the three footnote reference marks and the footnotes at the bottom of the page.
3. Choose **References→Footnotes dialog box launcher** to display the Footnote and Endnote dialog box.
4. If necessary, at the top of the dialog box, choose **Footnotes**.
5. In the Number Format field, click the **menu** button ▾ and choose **A, B, C ...**, and then click **Apply**.

   The footnote numbers change to alphabetic characters. You use the same technique to change the format of endnotes.

6. Choose **References→Footnotes dialog box launcher** ; change the Number Format back to the first option, numbers; and then click **Apply**.
7. If necessary, choose **View→Show→Ruler**.
8. Select the three footnotes at the bottom of the page and then follow these steps to format them:
   - Change line spacing to: **double-space**
   - Change the font size to: **11 pt**
   - On the ruler, drag the **First Line Indent** marker (top triangle) to the **½"** mark.

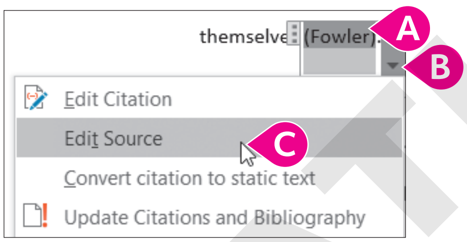
Delete and Edit Footnotes and Edit Citation Placeholders

9. Select the reference mark following *marketplace* in the body of the document and tap Delete.



The reference mark and the footnote are removed, and the remaining footnotes renumber.

10. Click **Undo** to reinsert the footnote.
11. Position the insertion point between the last word and the period of the first footnote, tap Spacebar, and type: **`and economists`**
12. Scroll to the *Fowler* citation at the end of the third bullet on page 2.
13. Follow these steps to open the Edit Source dialog box:



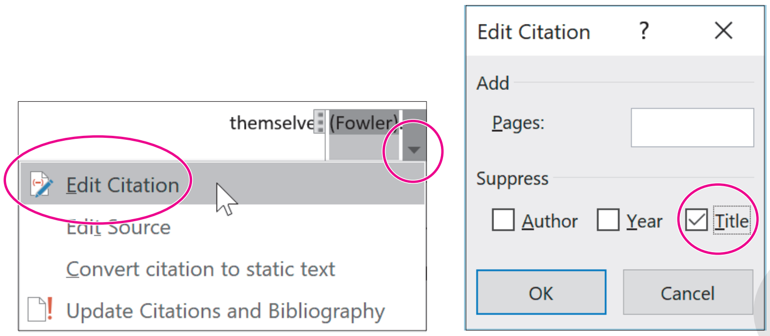
   - A Click the **Fowler** citation placeholder.
   - B Click this **menu** button .
   - C Choose **Edit Source**.

14. Enter the following information in the Edit Source dialog box in the order shown:
   - Type of Source: **Web Site**
   - Author: **`Fowler, Geoffrey`**
   - Name of Web Page: **`The Green Side of Online Shopping`**
   - Year: **`2009`**
   - Month: **`March`**
   - Day: **`3`**
   - Year Accessed: **`2021`**
   - Month Accessed: **`March`**
   - Day Accessed: **`14`**
   - Medium: **`blogs.wsj.com/digits/2009/03/03/the-green-side-of-online-shopping/tab/article`**
15. Click **OK**.

16. Click **Yes** if a message appears asking if you want to update the master list and current document.

    The citation may have picked up the name of the web page (title). If so, continue with step 17; otherwise, skip to step 18.

17. If necessary, click the **menu** button ▾ to the right of the Fowler citation and choose **Edit Citation**; then, check the **Title** box to suppress the title and click **OK**.



Now you will edit the Mogg placeholder.

18. Click the **Mogg** citation placeholder at the end of the document.
19. Click the **menu** button ▾ and choose **Edit Source**.
20. Enter the following information in the dialog box in the order shown:
    - Type of Source: **Web Site**
    - Author: **`Mogg, Trevor`**
    - Name of Web Page: **`Google says its drone delivery service could take flight in 2017`**
    - Year: **`2015`**
    - Month: **`November`**
    - Day: **`3`**
    - Year accessed: **`2021`**
    - Month Accessed: **`March`**
    - Day Accessed: **`14`**
    - Medium: **`digitaltrends.com/cool-tech/google-aiming-to-launch-drone-delivery-service-in-2017`**
21. Click **OK** and then save the file.

Working with Bibliographies

A bibliography is a list of the sources cited in the preparation of a document. Bibliographies are automatically generated based on the source information that you provide in the Create Source dialog box. The bibliography picks up the correct punctuation; however, certain formatting requirements are not defaults and must be addressed separately.

Tip! *The bibliography options may not format references as needed. Use the Insert Bibliography command to create citations more precisely.*

View the video "Bibliography Options."

References→Citations & Bibliography→Bibliography

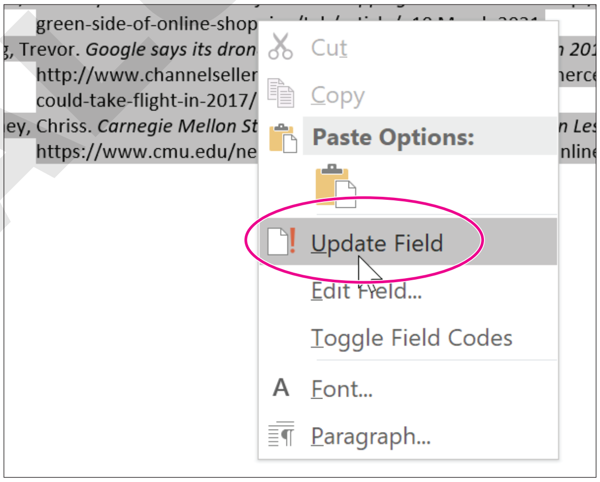
DEVELOP YOUR SKILLS: W3-D10

In this exercise, you will create a bibliography for the citations in your paper. You will title the page as Works Cited, as this chapter is following the MLA documentation style. Finally, you will edit an existing citation, update the bibliography, and format the paragraphs with double spacing.

1. Save your file as: `W3-D10-InternetRevised`
2. Position the insertion point at the end of the document and then press Ctrl+Enter to insert a new page for the bibliography.
3. Choose **Home→Paragraph→Center**, type `Works Cited`, and tap Enter.

Insert and Update the Bibliography

4. Choose **References→Citations & Bibliography→Bibliography**.
5. Choose **Insert Bibliography** at the bottom of the menu.
6. Scroll up to the second page, click the **Fowler** citation, and then click the **menu** button ▾.
7. Choose **Edit Source** to open the dialog box.
8. Change the Day Accessed to `10` and click **OK**.
9. If the citation picked up the name of the web page, click the **menu** button ▾, choose **Edit Citation**, check the **Title** checkbox, and click **OK**.
10. Scroll down to the *Works Cited* page and notice the date has not changed yet in the list.
11. Right-click anywhere in the list and choose **Update Field** from the menu that appears.



Notice the date accessed for the Fowler citation changed to 10 March 2021. Now you will format the list.

12. Select the bibliography list but not the *Works Cited* title.

Note! *If you click the list, it highlights in light gray. You must drag with the mouse to select the list, which then highlights in a darker gray.*

13. Choose **Home→Paragraph→Line and Paragraph Spacing** and then choose **2.0**.
14. Save the file.

Inserting Captions and a Table of Figures

You use captions to insert text associated with images in a paper. The captions then become entries in the table of figures. You can edit captions after you place them by making the changes directly in the caption and then updating the table of figures to reflect the edits. Bibliographies and tables of figures do not update automatically when changes are made to the citation or caption entries. To update these fields, simply right-click inside the field and choose Update Field.

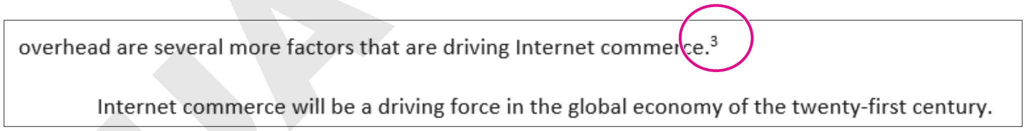
View the video "Inserting Captions."

References→Captions→Insert Caption

DEVELOP YOUR SKILLS: W3-D11

In this exercise, you will insert a file that contains PowerPoint slides from a presentation. You will add captions to the slides in preparation for creating a table of figures.

1. Save your file as: `W3-D11-InternetRevised`
2. Position the insertion point after the third footnote reference mark in the body of the document (not the footnote area) toward the bottom of the first page.

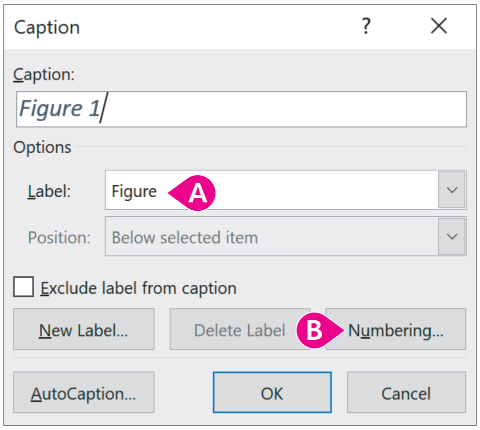

overhead are several more factors that are driving Internet commerce.[3]

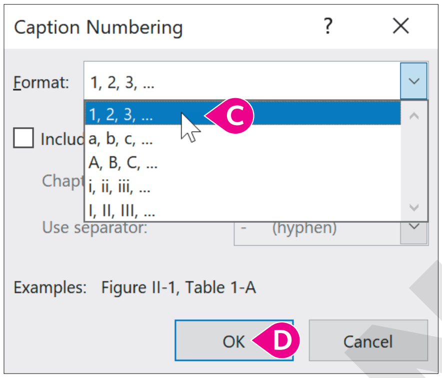
Internet commerce will be a driving force in the global economy of the twenty-first century.

3. Tap Enter and then press Ctrl+Enter to insert a page break.
4. Choose **Insert→Text→Object menu button ▾→Text from File**.
5. In the Insert File dialog box, navigate to your **Word Chapter 3** folder, choose **W3-D11-Evolution**, and click **Insert**.
6. If necessary, display formatting marks and then position the insertion point in the first blank line below the first slide.
7. Choose **References→Captions→Insert Caption**.

   The Caption dialog box should match the left image in the following step.

8. If *Figure 1* does not appear in the Caption text box, follow these steps; otherwise, go to the next step.





- A Click the **Label menu** button ▾ and choose **Figure**.
- B Click **Numbering** to open the Caption Numbering dialog box.
- C Click the **Format menu** button ▾ and then choose the **1,2,3, ...** format.
- D Click **OK**.

9. If necessary, position the insertion point to the right of *Figure 1* in the Caption text box.
10. Tap [Spacebar], type **DOD and ARPANET**, and click **OK** to insert the caption.

    The caption is placed at the left margin.

11. Choose **Home→Paragraph→Center**.
12. Position the insertion point in the first blank line below the second slide.
13. Choose **References→Captions→Insert Caption**.
14. Tap [Spacebar], type **NSF**, and click **OK**.
15. **Center** the caption.
16. Add these captions and center them:

Slide Number	Caption Text
3	**MILNET and TCP/IP**
4	**First Graphical Browser**
5	**Netscape**
6	**Fourteen Years of Evolution**
7	**Delivery Drones?**

Now you will edit a caption.

17. Return to **slide 2**, select **NSF**, and type **National Science Foundation** in its place.
18. Save the file.

Inserting a Table of Figures

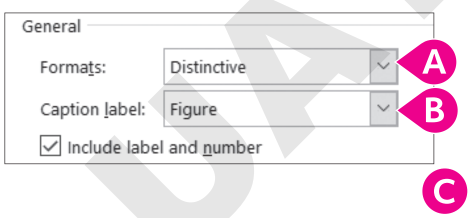
Academic papers often include a table of figures at the front, which guides the reader to illustrations, charts, tables, and other figures. This is particularly helpful in long documents. The table entries conveniently function as hyperlinks if you are reading the document online.

References→Captions→Insert Table of Figures

DEVELOP YOUR SKILLS: W3-D12

In this exercise, you will generate a table of figures from the captions you inserted earlier.

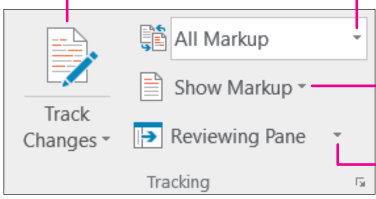
1. Save your file as: **`W3-D12-InternetRevised`**
2. Move the insertion point to the top of the document, before the word *Brian*, and press Ctrl + Enter to insert a page break.
3. Press Ctrl + Home to position the insertion point at the top of the new page, type **`Table of Figures`**, and tap Enter twice.
4. **Center** the heading, add **Bold** B, and set the font size to **16** points.
5. Place the insertion point in the blank line below the heading.
6. Choose **References→Captions→Insert Table of Figures**.
7. Follow these steps to complete the table:



   - A Choose **Distinctive** as the format.
   - B If necessary, choose **Figure** as the caption label.
   - C Click **OK**.
8. Save and then close the file.

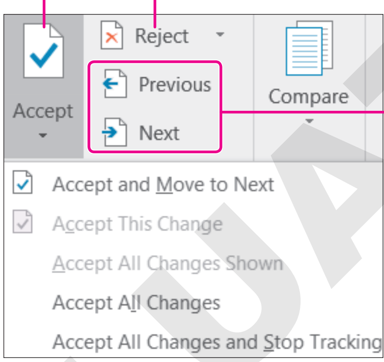
Using Track Changes

The Track Changes feature is a useful tool when working with team members to collaborate on a report or other documents. You can electronically distribute copies to different members, and, with Track Changes, the changes they make are marked. You can merge the changes from all copies into a single document, and then you can review each change and accept or reject it.



Reviewing Tracked Changes

It's easy to find and review changes to a document. When you review changes, you can jump from one change to the next, giving you the opportunity to accept or reject each change in order. You can also accept or reject all changes at once. After you accept or reject a change, the revision marks are removed.



Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

WORD

Reinforce Your Skills

REINFORCE YOUR SKILLS: W3-R1

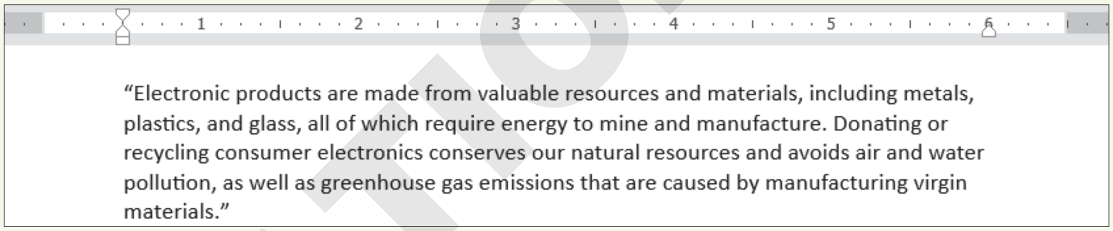
Format a Recycling Report

Kids for Change is planning a recycling fair, and you are creating a recycling report to be distributed during the fair. In this exercise, you will work with margins, indents, tabs, styles, and footers, and then you will format the body of the report into two columns. Finally, you will add a comment to the report.

1. Open **W3-R1-Recyc** from your **Word Chapter 3** folder and save it as: `W3-R1-RecycRevised`

   The document could use a little more white space in the left and right margins.
2. Choose **Layout→Page Setup→Margins** →**Normal**.

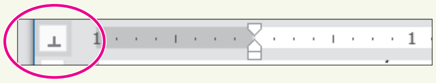
   This widens the left and right margins to 1". Now you'll indent the quote from the EPA to make it stand out on the page.
3. If necessary, choose **View→Show→Ruler**.
4. Position the insertion point in the third paragraph.
5. Place the mouse pointer on the **Left Indent** marker (the rectangle) and drag it to the **½"** mark and then place the mouse pointer on the **Right Indent** marker and drag it to the **6"** mark.


"Electronic products are made from valuable resources and materials, including metals, plastics, and glass, all of which require energy to mine and manufacture. Donating or recycling consumer electronics conserves our natural resources and avoids air and water pollution, as well as greenhouse gas emissions that are caused by manufacturing virgin materials."

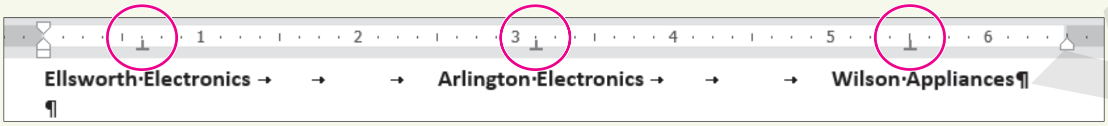
   Now you will set tabs for a table indicating where people can drop off electronics they want to recycle.

6. Position the insertion point at the bottom of the document.
7. Type the following heading line using the default tab grid, tapping Tab where you see the arrows and tapping Enter at the end of the line:

   Ellsworth·Electronics → → Arlington·Electronics → → → Wilson·Appliances¶
   ¶
8. Select the heading line and choose **Home→Font→Bold** B.
9. Position the insertion point in the blank line below the heading line where you will set custom tabs.
10. Click the **Tabs** box as many times as necessary to display the Center Tab. (It looks like an upside-down T.)



11. Perform these actions to set the following tab stops:
- Click the ruler one tick mark to the right of **½"**.
- Click one tick mark to the right of the **3"** mark.
- Click at the **5½"** mark.



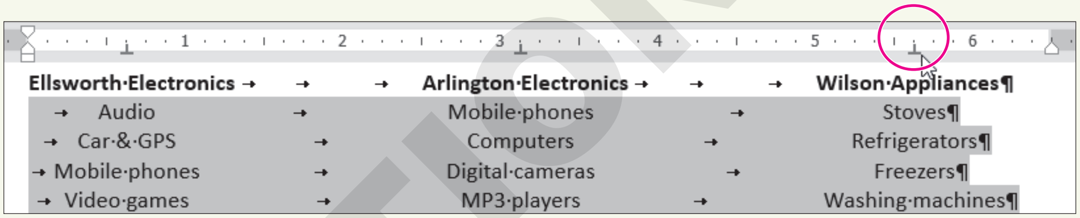
The center tab will cause the text to center around the tabs.

12. Type the following table, tapping Tab where you see the arrows and Enter where you see paragraph symbols:

Ellsworth·Electronics → → →	**Arlington·Electronics → → →**	**Wilson·Appliances¶**
→ Audio →	Mobile·phones →	Stoves¶
→ Car·&·GPS →	Computers →	Refrigerators¶
→ Mobile·phones →	Digital·cameras →	Freezers¶
→ Video·games →	MP3·players →	Washing·machines¶

Now you will adjust the last tab stop so it is better centered.

13. Select all lines to which the tab stop applies and drag the tab one tick mark to the right of **5½"**.



Now you will apply a style to the Report heading.

14. Position the insertion point in the heading line at the top of the page.

15. Choose **Home→Styles** and then click the **More** button to open the Styles gallery.

16. Choose **Title** from the gallery.

17. Place the insertion point anywhere in the line of text above the three columns you've created and choose **Home→Paragraph→Center**.

The line is now centered on the page over the columns.

Add a Footer and a Comment

18. Choose **Insert→Header & Footer→Footer** and choose **Edit Footer** at the bottom of the menu.

19. Type `Kids for Change` at the left side of the footer.

Look at the ruler and notice that there are two custom tab stops: a center tab at 3¼" and a right tab at 6½".

20. Tap Tab twice.

The insertion point is now aligned at a Right Tab.

21. Type `January, 2021` and then double-click in the body of the document to close the footer area.

Set the Document in Two Columns and Add a Comment

22. Select the body of the document from the first paragraph through the last bullet point.
23. Choose **Layout→Page Setup→Columns** →**Two**.

    It might look better to keep the EPA quote together.
24. Position the insertion point in front of the line starting *The EPA provides*.
25. Choose **Layout→Page Setup→Breaks** →**Column**.
26. Choose **Layout→Page Setup dialog box launcher** and change the vertical alignment to **Center** under the Layout tab.
27. Click **OK** to close the dialog box.

    Now you will insert a comment.
28. Move to the top of the document and select **Recycling** in the heading.
29. Choose **Insert→Comments→Comment** and type the following in the comment balloon:

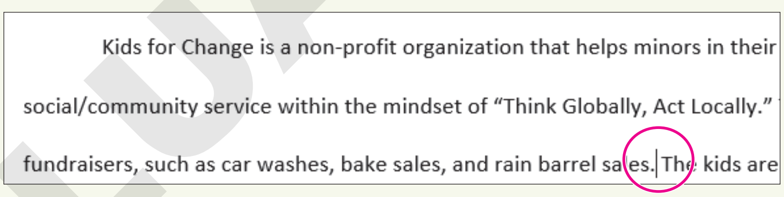
    `Jordan, please review and add any comments. I'll start on the Plastics Recycling section next.`
30. Save and close the file.

REINFORCE YOUR SKILLS: W3-R2

Create a Research Report

A Kids for Change volunteer has asked you to create another handout for the fair with an emphasis on acting locally. In this exercise, you will prepare the handout by inserting endnotes, footnotes, citations, a bibliography, and a table of figures.

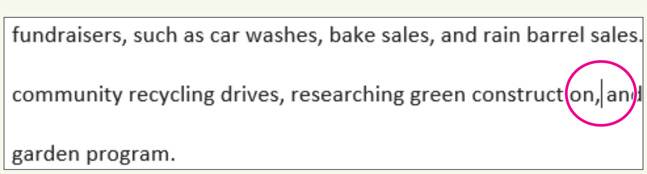
1. Open **W3-R2-GlobalLocal** from your **Word Chapter 3** folder and save it as: **`W3-R2-GlobalLocalRevised`**
2. Position the insertion point after the period following *sales* in the second paragraph.


Kids for Change is a non-profit organization that helps minors in their
social/community service within the mindset of "Think Globally, Act Locally."
fundraisers, such as car washes, bake sales, and rain barrel sales. The kids are

3. Choose **References→Footnotes→Insert Endnote** .

    The insertion point jumps to the end of the document.
4. Type the following endnote text:

    `Proceeds go to organizations such as the local pantry.`
5. Position the insertion point after the comma following *construction* in the second to last line of the second paragraph.


fundraisers, such as car washes, bake sales, and rain barrel sales.
community recycling drives, researching green construction, and
garden program.

6. Choose **References→Footnotes→Insert Endnote** and type the following endnote text:

   `Kids for Change successfully encouraged a local businessman to use green construction in a building addition.`

   You noticed a word is missing in the first endnote, so you will make that change now.

7. In the first endnote, position the insertion point to the left of *pantry*, type **`food`**, and tap [Spacebar].

   You've decided to convert the endnotes to footnotes so they will appear on the same page as the text they refer to.

8. Choose **References→Footnotes dialog box launcher** and then click the **Convert** button.
9. When the Convert Notes message appears, click **OK**; close the Footnote and Endnote dialog box.

Insert Citations

10. Choose **References→Citations & Bibliography** and then, if necessary, choose **MLA Seventh Edition** from the Style menu.
11. At the end of the fourth paragraph that begins with *The slogan*, position the insertion point between the word *activists* and the period, and then tap [Spacebar].

    practices – like environmental stewardship –

    of reference for some far-thinking activists.

12. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.
13. Enter the following information in the Create Source dialog box and then click **OK**:
    - Type of Source: **Web Site**
    - Author: **`Sathian, Sanjena`**
    - Name of Page: **`Think Locally, Act Globally`**
    - Year: **`2011`**
    - Month: **`July`**
    - Day: **`11`**
    - Year Accessed: **`2021`**
    - Month Accessed: **`September`**
    - Day: **`15`**
    - Medium: **`tyglobalist.org/onlinecontent/blogs/think-locally-act-globally`**
14. Position the insertion point following *Fluids* at the end of the fourth bullet point in the Jennifer King quote and then tap [Spacebar].

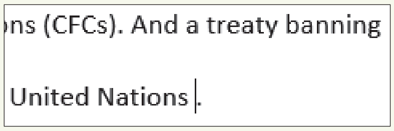
    - Vehicle Fluids

15. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.

16. Enter the following information in the Create Source dialog box and then click **OK**:

- Type of Source: **Web Site**
- Author: **`King, Jennifer`**
- Name of Page: **`How Does Car Pollution Affect the Environment & Ozone Layer?`**
- Year: (Leave blank.)
- Month: (Leave blank.)
- Day: (Leave blank.)
- Year Accessed: **`2021`**
- Month Accessed: **`September`**
- Day: **`15`**
- Medium: **`homeguides.sfgate.com/car-pollution-affect-environment-ozone-layer-79358.html`**

17. Position the insertion point at the end of the document between *Nations* and the period, and then tap [Spacebar].



18. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.

19. Enter the following information in the Create Source dialog box and then click **OK**:

- Type of Source: **Web Site**
- Author: **`Trex, Ethan`**
- Name of Page: **`Whatever Happened to the Hole in the Ozone Layer?`**
- Year: **`2012`**
- Month: **`May`**
- Day: **`23`**
- Year Accessed: **`2021`**
- Month Accessed: **`September`**
- Day: **`15`**
- Medium: **`mentalfloss.com/article/30733/whatever-happened-hole-ozone-layer`**

20. Position the insertion point at the end of the document, tap [Enter] twice, and then press [Ctrl]+[Enter] to insert a new page for the bibliography.

21. Choose **Home→Paragraph→Center**, type **`Works Cited`**, and then tap [Enter].

22. Choose **References→Citations & Bibliography→Bibliography**.

23. Choose **Insert Bibliography** at the bottom of the menu.

24. Select all eight lines of the bibliography and choose **Home→Paragraph→Line and Paragraph Spacing** **menu button ▾ 2.0** to double-space the bibliography.

Insert Captions

Now you will insert a document that contains slides from a PowerPoint presentation, and you will add captions to the slides.

25. If necessary, display the formatting marks, and then position the insertion point on the blank line before the page break at the end of page 2 and tap Enter.

26. Choose **Insert→Text→Object menu button ▼→Text from File**.

27. In the Insert File dialog box, navigate to your **Word Chapter 3** folder and double-click **W3-R2-YouCanHelp** to insert the file in your document.

28. Position the insertion point in the first blank line below the first slide.

29. Choose **References→Captions→Insert Caption**.

30. If *Figure 1* does not appear in the Caption text box, follow these steps; otherwise, go to the next step:
- Click the **Label menu** button ▼ and choose **Figure**.
- Click the **Numbering** button to open the Caption Numbering dialog box.
- Click the **Format menu** button ▼ and choose the **1,2,3, …** format.
- Click **OK**.

31. If necessary, position the insertion point to the right of *Figure 1* in the Caption text box. Then tap Spacebar, type **`Conduct a Home Survey`**, and then click **OK**.

Now you will center the caption.

32. Choose **Home→Paragraph→Center** and then position the insertion point in the first blank line below the second slide.

33. Choose **References→Captions→Insert Caption**.

34. Tap Spacebar, type **`Reduce Car Use`**, and click **OK**.

35. **Center** the caption.

36. Add the following captions and center them:

Slide	Caption
Slide 3	**`Use Used`**
Slide 4	**`Think Before You Toss`**

Insert a Table of Figures

37. Move the insertion point to the top of the document and insert a page break.

38. Move the insertion point to the top of the new page, type **`Table of Figures`**, and tap Enter twice.

39. Center the heading, apply bold, and set the font size as 16 pt.

40. Place the insertion point in the blank line below the heading.

41. Choose **References→Captions→Insert Table of Figures**.

42. In the bottom-left of the Table of Figures dialog box, if necessary, change the format to **Distinctive**, ensure that the Caption Label says **Figure**, and then click **OK**.

43. Save and close the file.

REINFORCE YOUR SKILLS: W3-R3

Create an Organic Gardening Report

Kids for Change will host an organic gardening exhibition in the spring, and the planning is underway. You have already started a report about organic gardening for the exhibition. In this exercise, you will format the layout; apply styles; add a footer; and insert footnotes, endnotes, and citations. Then you will assign gardening duties to volunteers who will work in the Kids' garden starting in the spring. You will also create tabular columns and insert a comment.

1. Open **W3-R3-OrganicFood** from your **Word Chapter 3** folder and save it as: **`W3-R3-OrganicFoodRevised`**

   The left and right margins are a bit too wide in this document.

2. Choose **Layout→Page Setup→Margins** →**Normal**.

   Now you will apply Styles to the title and report headings.

3. Choose **Home→Styles dialog box launcher** to open the Styles task pane.
4. Apply the **Title** style to the document title and then apply the **Heading 1** style to the other two headings: *Plant Production* and *Support Organic Food*.
5. Close the Styles task pane.

   Next, you will format the first two main paragraphs in columns.

6. Select the text from the first paragraph through the *Plant Production* heading and its following paragraph.
7. If necessary, display the formatting marks.
8. Choose **Layout→Page Setup→Columns** →**Two**.

   When you select text and then apply columns, the section breaks are inserted automatically.

Insert Captions and a Table of Figures

9. Position the insertion point on the first blank line below the first picture.
10. Choose **References→Captions→Insert Caption** .
11. Make sure *Figure* is in the Label field and the numbering format is 1,2,3, ...
12. If necessary, position the insertion point to the right of *Figure 1* in the Caption text box.
13. Tap [Spacebar], type **`Build Healthy Soil`**, click **OK**, and then center the caption.
14. Position the insertion point in the first blank line below the second picture.
15. Choose **References→Captions→Insert Caption** .
16. Tap [Spacebar], type **`Keep Chemicals Out of the Air, Water, Soil, and Our Bodies`**, click **OK**, and then center the caption.
17. Follow the same process to place a centered caption titled **`Taste Better and Truer Flavor`** below the third picture.
18. Position the insertion point at the top of the document, press [Ctrl]+[Enter] to insert a page break, and then position the insertion point at the top of the new first page.

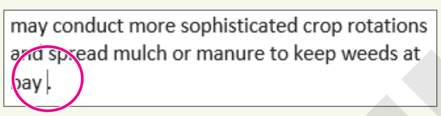
19. Type **`Table of Figures`** and tap [Enter] twice; then center the heading, add bold formatting, and set the font size to 16 points.
20. Position the insertion point in the blank line below the heading.
21. Choose **References→Captions→Insert Table of Figures**.
22. In the dialog box, make sure Distinctive is the format style, ensure that the caption label is Figure, and click **OK**.

Add Footnotes and Citations

23. Position the insertion point to the right of the colon at the end of the first line below the *Support Organic Food* heading.
24. Choose **References→Footnotes→Insert Footnote** and type the following text in the footnote area:

    `See Sustainable Plant Agriculture for details on growing organic plants.`

    Now you will choose the style for citations.
25. Choose **References→Citations & Bibliography→Style menu button ▾** and, if necessary, choose **MLA Seventh Edition**.
26. Position the insertion point between the period and the word *bay* at the end of the second paragraph following the *Plant Production* heading, and tap [Spacebar].



27. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.
28. Enter the following information and then click **OK**:
    - Type of Source: **Web Site**
    - Author: **`Mayo Clinic, Staff`**
    - Name of Web Page: **`Nutrition and healthy eating`**
    - Year: (Leave blank.)
    - Month: (Leave blank.)
    - Day: (Leave blank.)
    - Year accessed: **`2021`**
    - Month Accessed: **`October`**
    - Day Accessed: **`15`**
    - Medium: **`mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/organic-food/art-20043880`**
29. Position the insertion point at the end of the third bullet point below the *Support Organic Food* heading and tap [Spacebar].
30. Choose **References→Citations & Bibliography→Insert Citation** and then choose **Add New Source**.

31. Enter the following information and then click **OK**:
- Type of Source: **Web Site**
- Author: **`Greene, Alan, Scowcroft, Bob, Tawse, Sylvia`**
- Name of Web Page: **`Top 10 Reasons to Support Organic in the 21st Century`**
- Year: (Leave blank.)
- Month: (Leave blank.)
- Day: (Leave blank.)
- Year Accessed: **`2021`**
- Month Accessed: **`October`**
- Day Accessed: **`15`**
- Medium: **`organic.org/articles/showarticle/article-206`**

Insert a Bibliography and Add a Footer

32. Position the insertion point at the end of the document and press Ctrl+Enter to insert a page break.

33. Choose **Home→Paragraph→Center**, type **`Works Cited`**, and tap Enter.

34. Choose **References→Citations & Bibliography→Bibliography** and then choose **Insert Bibliography**.

35. Choose **Insert→Header & Footer→Footer** and then scroll down and choose **Retrospect**.

36. Type **`Kids for Change`** in the author object (you may have to delete default text; print is automatically set in all caps) and notice that the page number appears on the right side of the footer.

37. Double-click in the document to close the footer area.

38. Save and close the file.

Now you will finish creating the document for assigning gardening project duties.

39. Open **W3-R3-GardenProj** from your **Word Chapter 3** folder and save it as: **`W3-R3-GardenProjRevised`**

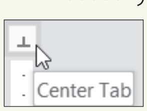
40. Position the insertion point at the end of the document and type the following heading line, tapping Tab wherever you see an arrow and tapping Enter at the end of the line:

Volunteer → →	Vegetable → →	Assigned·Space·in·Feet¶
¶		

41. Add bold formatting to the heading line.

Now you will set center tabs for the body of the table.

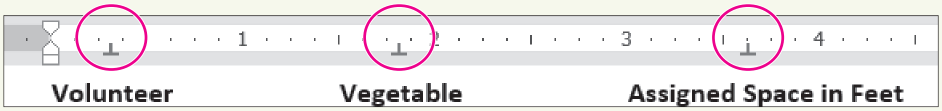
42. If necessary, position the insertion point on the blank line below the heading line.



43. Click the **Tabs** box to display the Center Tab, if necessary.

44. Place tabs in the following locations:

- Between the second and third tick marks from the left margin
- Between the second and third tick marks to the right of 1½"
- The first tick mark to the right of 3½"



Remember, if you click a tab in the wrong position, you can drag it to the correct position or drag it down and off the ruler and try again.

45. Type the body of the table as shown, tapping Tab wherever you see an arrow and tapping Enter at the end of each line:

Volunteer → →	Vegetable → →	Assigned·Space·in·Feet¶
→ Kirk →	corn →	10·x·8¶
→Rachael →	peas →	8·x·4¶
→ Lena →	green·beans →	8·x·3¶
→ Bly →	tomatoes →	10·x·8¶
→Trevor →	cauliflower →	8·x·4¶
→ Neil →	carrots →	6·x·4¶

Now you will accept a suggested change and insert a comment.

46. Right-click on the word **gardening** at the end of the second full paragraph and choose **Accept Insertion** from the menu.

47. Select the word **Change** in the heading, choose **Insert→Comments→Comment**, and type the following in the comment balloon: **`Jeremy, please check the assigned spaces and make sure they are accurate.`**

48. Save and close the file.

WORD

Apply Your Skills

APPLY YOUR SKILLS W3-A1

Complete a Trip Report on Belize

You went on a familiarization trip to Belize for Universal Corporate Events and have written a trip report about the country. In this exercise, you will format the layout of the document, apply styles to headings, and insert footers and a comment.

1. Open **W3-A1-Belize** from your **Word Chapter 3** folder and save it as: `W3-A1-BelizeRevised`

   The text is pretty dense on this page. It needs to be lightened up and better organized to make it more readable. You will start by widening the margin areas.

2. Choose **Layout→Page Setup→Margins** →**Normal**.

   Headings will allow the reader to scan the document for high-level concepts, adding to the document's readability. You will apply styles to the document's headings.

3. Apply the **Heading 2** style to the heading at the top of the document and then apply the **Intense Reference** style to the remaining headings: *Overview, Diving and Snorkeling, Ruins,* and *Artists*.

   Offsetting the text from the headings will also add to the document's readability.

4. Position the insertion point in the paragraph following the *Overview* heading.
5. Choose **Home→Paragraph→Increase Indent** .
6. Use the same technique to indent all the remaining paragraphs except the *Artists* paragraph. (If you select all the paragraphs following the *Ruins* heading, you can indent them all at once.)

   Next you will set the document in columns.

7. Select the text starting with the *Overview* heading through the last paragraph following the *Ruins* heading. (Do not include the *Artists* paragraph.)
8. Format the selected text in a two-column layout.

   The Ruins *heading is at the bottom of the left-hand column. It would look better at the top of the right-hand column.*

9. Position the insertion point in front of the *Ruins* heading and insert a column break to move the heading to the top of the next column.

Insert a Footer

10. Add a footer using the **Ion (Dark)** option.

    You will use the objects in the footer for a different purpose than the labels specify.

11. Type `Universal Corporate Events` in the Document Title object and delete the Author Name object.
12. Close the footer area.

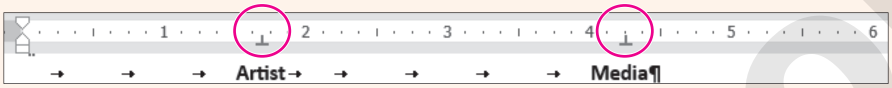
Set Custom Tabs

Now you will add information about some of the talented local artists.

13. If necessary, turn on the ruler and display the formatting marks.
14. Position the insertion point in the second blank line at the end of the document.
15. Type the following heading row, using the formatting marks as a guide; be sure to tap Enter at the end of the heading line:

¶
→ → → **Artist**→ → → → → **Media**¶

16. Add bold formatting to the heading row.
17. Position the insertion point in the line below the heading row and, if necessary, set custom Center Tabs.



18. Type the rest of the table, using the formatting marks as a guide:

¶
→ → → **Artist**→ → → → → **Media**¶
→ Amy·Brown → Ceramic·sculpture·and·oils¶
→ Pamela·Braun → Oil·and·watercolor¶
→ Walter·Castello → Acrylic·on·canvas¶
→ Savanna·Redman → Oil·and·watercolor¶
→ Alissa·Reid → Acrylics·and·oils¶

Now you'll add a comment to the document.

19. Place the insertion point anywhere inside the document heading and center it.
20. Select **Belize** in the document heading, insert a comment, and add the following text to the comment balloon:

    `Arrielle, since this is my first trip report, would you please check it out and add any comments you may have?`

21. Save and close the file.

APPLY YOUR SKILLS W3-A2

Report on Italian Tourist Sites

Because you used to live in Italy, Universal Corporate Events has asked you to create a report detailing some Italian tourist sites and providing tips on train travel in Italy. In this exercise, you will insert footnotes and citations and generate a bibliography for your report. Then you will add captions to pictures and create a table of figures.

1. Open **W3-A2-Italy** from your **Word Chapter 3** folder and save it as: **`W3-A2-ItalyRevised`**
2. Position the insertion point at the end of the first paragraph, after the period following *each*.
3. Insert this footnote: **`Other major attractions are listed on this website`**.
4. In the paragraph beginning *In the article,* position the insertion point after the period following the word *choices*.
5. Insert this footnote: **`This article also offers advice on train schedules, buying tickets, and boarding your train.`**

WORD

Enter Citations and a Bibliography

6. Set the report style to **MLA Seventh Edition**, if necessary. (Hint: Go to the References tab.)
7. Position the insertion point after *Colosseum* in the fourth bullet point at the top of the document.
8. Tap Spacebar and insert a citation with the following source information. Be sure to check the Corporate Author box before entering the Author information.
   - Type of Source: **Web Site**
   - Corporate Author: **Rome Travel Guide**
   - Name of Web Page: **Rome, Italy travel guide**
   - Year: (Leave blank.)
   - Month: (Leave blank.)
   - Day: (Leave blank.)
   - Year Accessed: **2021**
   - Month Accessed: **May**
   - Day Accessed: **23**
   - Medium: **rome.info**
9. Position the insertion point after *Pompeii* at the end of the fourth bullet point under the *Day Trips* heading.
10. Tap Spacebar and insert a citation with the following source information:
    - Type of Source: **Web Site**
    - Author: **Casura, Lily**
    - Name of Web Page: **Daytrips from Rome**
    - Year: (Leave blank.)
    - Month: (Leave blank.)
    - Day: (Leave blank.)
    - Year Accessed: **2021**
    - Month Accessed: **May**
    - Day Accessed: **23**
    - Medium: **tripadvisor.com.au/Guide-g187791-l296-Rome_Lazio.html**
11. Position the insertion point between *more* and the period at the end of the last paragraph.
12. Tap Spacebar and insert a citation with the following source information:
    - Type of Source: **Web Site**
    - Author: **Bakerjian, Martha**
    - Name of Web Page: **Italy Train Travel**
    - Year: (Leave blank.)
    - Month: (Leave blank.)
    - Day: (Leave blank.)
    - Year Accessed: **2021**
    - Month Accessed: **May**
    - Day Accessed: **23**
    - Medium: **goitaly.about.com/od/italytransportation/a/trains.htm**
13. Position the insertion point at the end of the document, tap Enter twice, and insert a page break.

14. Type **`Works Cited`** as the heading and tap Enter twice.
15. Center the heading and then position the insertion point on the second blank line below the heading.
16. Insert a bibliography on the new page using the **Insert Bibliography** command.
17. Select all five lines of the bibliography and choose **Home→Paragraph→Line and Paragraph Spacing menu button ▾→2.0**.
18. Scroll to the top of the document, position the insertion point at the end of the *Colosseum* bullet point, and then tap Enter twice.

    Next, you will insert pictures of Rome's major attractions.
19. Choose **Insert→Text→Object menu button ▾→Text from File**.
20. Navigate to your **Word Chapter 3** folder and insert: **W3-A2-RomePics**
21. Positioning the insertion point on the first blank line below each picture, insert and center the following captions using the **1,2,3, …** number format and the **Figure** label:

Picture	Caption
Picture 1	**`Trevi Fountain`**
Picture 2	**`St. Peter's Square`**
Picture 3	**`Spanish Steps`**
Picture 4	**`Colosseum`**

22. Insert a page break at the top of the document; at the top of the new page, type **`Table of Figures`** and tap Enter twice.
23. Center the heading, apply bold formatting, and change the font size to 16 pt.
24. Position the insertion point on the blank line below the heading and generate the table of figures using the **Formal** format and **Figure** as the caption label.
25. Save and close the file.

WORD

APPLY YOUR SKILLS: W3-A3

Create Travel Reports

Universal Corporate Events is planning a Bangkok getaway for one of its clients, and you've been asked to research travel within Bangkok and interesting sites to see. In this exercise, you will format the layout of your report and add footnotes, citations, a bibliography, captions, and a table of figures. You have also been asked to write a sales report listing Universal Corporate Events' pending deals. You will work with margins and custom tabs, add header text, and insert a comment.

1. Open **W3-A3-Bangkok** from your **Word Chapter 3** folder and save it as: **`W3-A3-BangkokRevised`**

   The document needs some formatting to make it more readable. First you will add some styles to the document.
2. Select the title at the top of the document and apply the **Heading 1** style.
3. At the bottom of the page, apply the **Subtle Reference** style to the bulleted items.
4. If necessary, display the ruler, and then position the insertion point in the second paragraph.
5. Position the mouse pointer on the **Left Indent** marker (the rectangle) on the ruler and drag it to the **½"** mark.

6. Drag the **Right Indent** marker to the **6"** mark.
7. Select text beginning with **Bangkok's Chao Praya Express Boats** down through **Myanmar** and then set the text in two columns.

   Next, you will insert pictures, add captions, and generate a table of figures.
8. Insert the **W3-A3-BNKPics** file at the end of the document.
9. Position the insertion point on the blank line below each picture and then insert and center the following captions using the **1,2,3, ...** number format and the **Figure** caption label:

Picture	Caption
Picture 1	`Chatuchak Market`
Picture 2	`Pak Klong Talat`
Picture 3	`Bangkok Farmers Market`
Picture 4	`Pratunam Market`

10. Insert a page break at the top of the document, and at the top of the new page, type `Table of Figures` and tap Enter twice.
11. Center and apply bold formatting to the heading and then generate the table of figures on the blank line below the heading using the **Formal** format and **Figure** as the caption label.

Insert Footnotes and Citations

12. Position the insertion point in the first line of the first paragraph on page 2, to the right of *markets,* and insert this footnote:

> [1] Floating markets piled high with tropical fruits and vegetables provide an exciting shopping adventure.

13. Position the insertion point in the same line, this time to the right of *temples,* and insert this footnote:

> [2] Don't miss Wat Traimit's Golden Buddha or Wat Po's famous Reclining Buddha.

14. If necessary, choose the **MLA Seventh Edition** style for citations.
15. Insert a citation at the end of the indented paragraph at the top of the document and add the following source information:
    - Type of Source: **Web Site**
    - Author: `Thyberg, David`
    - Name of Web Page: `Bangkok Travel Tips`
    - Year: (Leave blank.)
    - Month: (Leave blank.)
    - Day: (Leave blank.)
    - Year Accessed: `2021`
    - Month Accessed: `September`
    - Day Accessed: `20`
    - Medium: `getawaytips.azcentral.com/bangkok-travel-tips-1945.html`
16. Insert a citation at the end of the second column next to *Myanmar* and add the following source information:
    - Type of Source: **Web Site**
    - Author: `Rowthorn, Chris`

- Name of Web Page: **`Take the boat out of Bangkok`**
- Year: **`2012`**
- Month: **`April`**
- Day: **`13`**
- Year Accessed: **`2021`**
- Month Accessed: **`September`**
- Day Accessed: **`20`**
- Medium: **`bbc.com/travel/story/20120413-take-the-boat-out-of-bangkok`**

17. Insert a citation at the end of the fourth bullet point at the end of page 2, and add the following source information:

- Type of Source: **Web Site**
- Author: **`Hauglann, Maria Wulff`**
- Name of Web Page: **`6 Markets in Bangkok You Should Not Miss`**
- Year: **`2014`**
- Month: **`July`**
- Day: **`15`**
- Year Accessed: **`2021`**
- Month Accessed: **`September`**
- Day Accessed: **`20`**
- Medium: **`nerdnomads.com/6-markets-in-bangkok-you-should-not-miss`**

Now you will generate a bibliography.

18. Insert a page break at the end of the document, type the title, **`Works Cited`**, center it on the page, and then tap [Enter] twice.

19. Generate the bibliography on the first blank line below the title using the **Insert Bibliography** command.

20. Save and close the file.

Create a Sales Report

21. Open **W3-A3-SalesRpt** from your **Word Chapter 3** folder and save it as: **`W3-A3-SalesRptRevised`**

22. Change the margins to the preset **Normal** style.

23. Apply the **Title** style to the **Sales Report** heading.

24. Position the insertion point on the second blank line at the end of the text, type **`Pending Deals`**, and format it with the **Heading 1** style.

25. Position the insertion point on the blank line below the *Pending Deals* heading and tap [Enter].

26. Use the ruler to set Left tabs at **2½"** and **4½"** and then type the following table, bolding the heading line:

Company →	**Destination** →	**Dates¶**
Rogers·Electronics →	Hawaii →	Oct·2·through·7¶
Wilson·Construction →	Miami →	Oct·11·through·17¶
Milltown·Mortgage →	New·York·City →	Oct·20·through·27¶

27. Select the entire table and move the 2½" tab to **2¼"** and the 4½" tab to **4¾"**.

WORD

Insert a Header and a Comment

28. Insert a header using the **Blank** style and type **`Universal Corporate Events`** as the header.

29. Select **Report** in the heading line and insert the following comment: **`Emma, do you have any prospects to add to the list?`**

30. Save and close the file.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: W3-P1

The History of Board Games Research Paper

The Taylor Games management team wants a research paper on the history of board games to use for various promotional activities. In this exercise, you will use appropriate research-paper tools and professional formatting to prepare the research paper.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **W3_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **W3_P1_Start** from your **Word Chapter 3** folder.
2. Set the document's margins to **Normal** (all four margins are 1").
3. On page 1, apply these styles:

Style	Apply To
Title style	**The History of Board Games** title
Heading 1 style	**Introduction** and **History** headings
Heading 2 style	**Ancient Board Games** and **United States** headings
Heading 3 style	**The Mansion of Happiness** heading

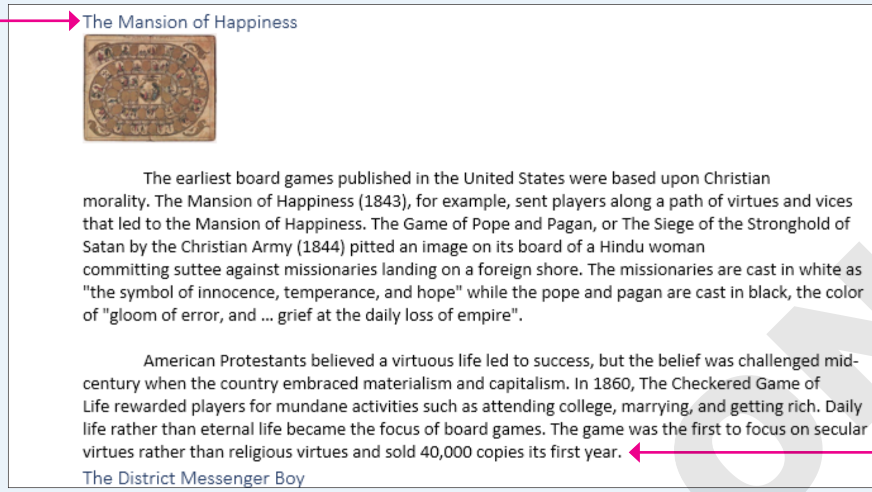
4. Apply these formats to the text paragraph that's below the Introduction heading:

Format	Value
First Line Indent	`0.5"`
Line Spacing	**Single**

5. Near the bottom of page 1, insert a page break in front of *The Mansion of Happiness* heading.
6. At the bottom of page 1, apply 0.5" left and right indents to the large text paragraph (the Thomas Jefferson quotation).

WORD

7. On **page 2**, apply a two-column layout from the start of *The Mansion of Happiness* heading to the end of the second large *Mansion of Happiness* text paragraph. Include the paragraph mark at the end of the second text paragraph in the columns.


The Mansion of Happiness

The earliest board games published in the United States were based upon Christian morality. The Mansion of Happiness (1843), for example, sent players along a path of virtues and vices that led to the Mansion of Happiness. The Game of Pope and Pagan, or The Siege of the Stronghold of Satan by the Christian Army (1844) pitted an image on its board of a Hindu woman committing suttee against missionaries landing on a foreign shore. The missionaries are cast in white as "the symbol of innocence, temperance, and hope" while the pope and pagan are cast in black, the color of "gloom of error, and ... grief at the daily loss of empire".

American Protestants believed a virtuous life led to success, but the belief was challenged mid-century when the country embraced materialism and capitalism. In 1860, The Checkered Game of Life rewarded players for mundane activities such as attending college, marrying, and getting rich. Daily life rather than eternal life became the focus of board games. The game was the first to focus on secular virtues rather than religious virtues and sold 40,000 copies its first year.

The District Messenger Boy

8. Follow these guidelines to insert a new comment on page 2 below the two-column layout:
   - Insert the new comment to the right of *The District Messenger Boy* heading.
   - Enter this comment text: **`My columns are a work in progress.`**
9. On **page 3**, collapse the *Luck, Strategy, and Diplomacy* heading.
10. Follow these guidelines to insert a footnote on **page 1** in the text paragraph below the *Ancient Board Games* heading:
    - Insert the footnote at the end of the text paragraph to the right of the period.

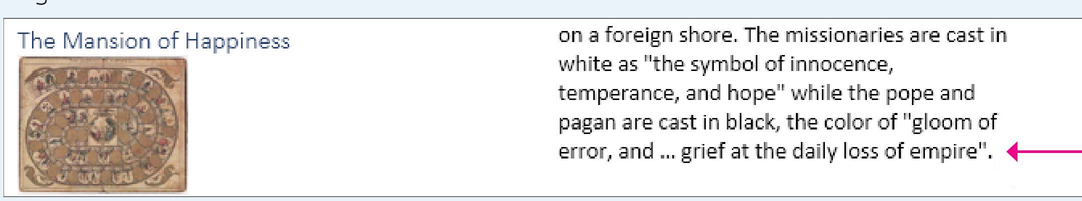

Ancient Board Games

Board games have been played in
important historical sites, artifacts, and dc
civilization gameboards in Iran.

United States

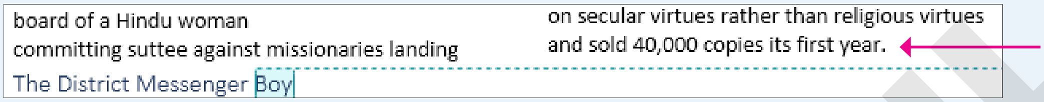
In 17th and 18th century colonial

    - Use this footnote text: **`The earliest known board game was from Egypt.`**
11. On **page 2**, insert a new citation source at the end of the first paragraph in the second column:
    - Type of Source: **Article in a Periodical**
    - Author: **`Fessenden, Tracy`**
    - Title: **`"Culture and Redemption: Religion, the Secular, and American Literature"`**
    - Periodical Title: **`Princeton University Press`**
    - Year: **`2007`**
    - Pages: **`271`**


The Mansion of Happiness

on a foreign shore. The missionaries are cast in white as "the symbol of innocence, temperance, and hope" while the pope and pagan are cast in black, the color of "gloom of error, and ... grief at the daily loss of empire".

12. On page 2, insert a new citation source at the end of the second paragraph in the second column:
    - Type of Source: **Article in a Periodical**
    - Author: **`Hofer, Margaret K.`**
    - Title: **`"The Games We Played: The Golden Age of Board & Table Games"`**
    - Periodical Title: **`Princeton Architectural Press`**
    - Year: **`2003`**



13. Use these guidelines to insert two captions on page 2:
    - For both captions, set the label to **Figure** and include the label in the caption.
    - Caption 1: Insert the caption in the empty paragraph below the Mansion of Happiness picture using this caption text: **`The Mansion of Happiness (1843)`**
    - Caption 2: Insert the caption in the empty paragraph below the Game of the District Messenger Boy picture using this caption text: **`Game of the District Messenger Boy (1886)`**
14. Use these guidelines to insert a bibliography on **page 4**:
    - Insert it in the empty paragraph below the *Bibliography* heading.
    - Use the **Built-In, Works Cited** format.
    - Delete the *Bibliography* heading paragraph.
15. Use these guidelines to insert a Table of Figures on **page 5**:
    - Insert it in the empty paragraph below the *Table of Figures* heading.
    - Accept all default table of figures settings.
16. Insert a footer using the **Built-in, Banded** style to place a page number at the center of the bottom of each page.
17. Save your document.
    - *Using eLab:* Save it to your **Word Chapter 3** folder as: **`W3_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Word Chapter 3** folder as: **`W3_P1_Submission`**

PROJECT GRADER: W3-P2

The History of the Chevrolet Corvette

The Classic Cars Club is hosting a Chevrolet Corvette exhibit at an upcoming show. In this exercise, you will put the finishing touches on a Corvette history report that will be distributed to attendees. You'll make the document shine by adding a cover page and applying formatting.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **W3_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **W3_P2_Start** from your **Word Chapter 3** folder.
2. In the *Eight Generations of Corvettes* heading, accept the tracked change.

WORD

3. Apply the **Heading 1** style to these paragraphs:
   - **Eight Generations of Corvettes**
   - **Introduction**
   - **First Generation (C1; 1953-1962)**
4. Set the document's margins to **Normal** (all four margins are 1").
5. Use these guidelines to create custom tab stops on the empty paragraph below the *Eight Generations of Corvettes* heading:

   Tab Stop 1

Property	Value
Tab Stop Position	`0.5"`
Alignment	**Left**
Leader	**1 None**

   Tab Stop 2

Property	Value
Tab Stop Position	`3.25"`
Alignment	**Center**
Leader	**2**

   Tab Stop 3

Property	Value
Tab Stop Position	`6"`
Alignment	**Right**
Leader	**2**

6. Use your custom tab stops and these guidelines to enter the following text paragraphs.
   - Tab before each column entry so you're using all three of your custom tab stops in each paragraph. So start with a Tab before typing: **`First Generation`**
   - You should see leader dots between columns.

```
First Generation        1953-1962        2
Second Generation       1963-1967        3
Third Generation        1968-1982        4
```

7. Insert this new comment to the right of the page 4 entry: **`I should use the Table of Contents feature.`**
8. Insert a page break before the *Introduction* heading.
9. Set page 1's vertical alignment to **Center**.
10. Insert the **Built-in, Banded** footer so it displays page numbers on all pages except for page 1.
11. Insert the **Built-in, Blank** header, displaying it on all pages except page 1, and use this text: **`History of the Chevrolet Corvette`**
12. Save your document.
    - *Using eLab:* Save to your **Word Chapter 3** folder as **`W3_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Word Chapter 3** folder as: **`W3_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

W3-E1 That's the Way I See It

You are an intern working in the corporate offices of a major grocery store chain. Your manager has asked you to research the pros and cons of reusable shopping bags compared to plastic bags. Start a new document and name it: **W3-E1-ShopBags**

Type a creative title and an original introductory paragraph for the paper and include two footnote comments in the paragraph. Using an Internet search, find two sources who favor reusable shopping bags and two sources who do not. Pull information from these sources and compare the two sides of the issue using a two-column tabular table listing the pros and cons. Insert citations at the end of each source and generate a bibliography from the citations. Add a page number in the footer area. Insert two pictures you find on the Internet representing reusable bags and plastic bags. Add captions to the pictures and create a table of figures. Use styles and indenting, and widen the left and right margins to make your report more readable. Save the file.

W3-E2 Be Your Own Boss

As the owner of Blue Jean Landscaping, you plan to hold a rose-pruning seminar for your customers. Research pruning techniques and create a report of your research results to hand out to customers at the event. Start a new document and name it: **W3-E2-RoseSeminar**

Type a creative title and an original introductory paragraph and include a footnote comment in the paragraph. Cite three different sources in your report and generate a double-spaced bibliography of your citations. Insert a header that includes your company name. Use styles and indents, and increase the margin width to add to the paper's readability. Set the body of the report in a two-column format and insert a column break, if necessary, to balance the columns. Include a comment at the top of the document asking your partner to review the document and make any suggestions she likes. Save the file.

W3-E3 Demonstrate Proficiency

The owner of Stormy BBQ is proud to serve free-range beef. He wants his employees to understand the benefits of using natural, grass-fed beef so they can discuss the idea with customers. He has asked you to prepare a report that he can distribute to all employees. Start a new document and name it: **W3-E3-GrassFed**

Conduct online research on the benefits of using free-range, natural beef. Type a creative title and center it horizontally. Type an original introductory paragraph that includes two commentary footnotes. Cite three sources who favor free-range beef. Generate a bibliography for the citations. Use indents and styles, and adjust the margins to make your paper more readable. Add a footer that includes the company name and page numbers.

Insert **W3-E3-Cattle** as a Text from File object into your report. Insert creative captions for the pictures and generate a table of figures. Create a two-column tabular table listing the disadvantages of feedlot cattle (fossil fuel–intensive, for example) versus the advantages of grass-fed cattle (higher in omega-3 fatty acids, for example). Include at least five rows in the table. Insert a comment at the top of the document asking your admin to look it over for spelling and grammar errors. Save the file.

WORD

4 Creating a Promotional Brochure

A picture is worth *at least* a thousand words. If you need to communicate information quickly and vividly, graphics are the best tool in your toolbox. In this chapter, you will add graphic elements, such as WordArt, to a brochure. SmartArt graphics provide a gallery of predesigned diagrams such as lists, processes, cycles, hierarchies, and relationships that help you communicate your ideas. Borders and page color add a polished look to your brochure. Live preview galleries allow you to quickly test many choices while deciding what looks best for your brochure. All these and more help you create materials that are both dynamic and informative.

LEARNING OBJECTIVES

- Create an eye-catching brochure
- Insert shapes in a document
- Add pictures, text boxes, WordArt, and special effects to a document
- Choose page setup features
- Communicate information with SmartArt
- Format the page background
- Wrap text around a document
- Print part of a document

Project: Promoting an Ergonomics Seminar

As the owner of Ergonomic Office Solutions, you have decided to create a presentation about the benefits of an ergonomic office. Your friend, Tommy Choi, owner of Green Clean, has provided you with his customer database. Knowing Tommy's customers are already interested in the environment, you believe they would be interested in your products. You decide to create a brochure to mail to local businesses promoting a seminar. You will use product pictures as well as shapes, WordArt, and SmartArt to create a brochure that is both informative and visually appealing.

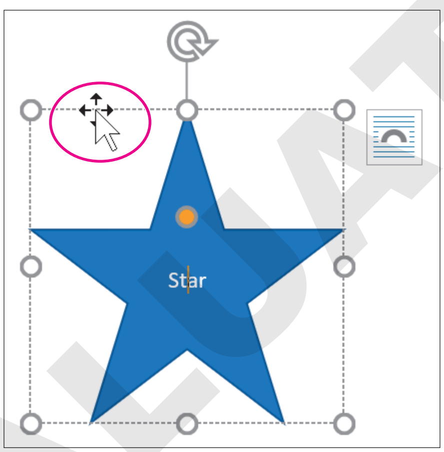
Working with Shapes

There is a large gallery of graphic shapes available to you, including lines, text boxes, rectangles, ovals, and many others. They can add interest to documents, such as flyers and brochures, and you can type text in most shapes. You can also rotate, resize, and move shapes.

Inserting, Resizing, and Moving Shapes

You insert shapes from the Shapes gallery. When a shape is selected (displays round handles), the contextual Drawing Tools and Format tabs appear, where you can choose many styles and designs for your shape.

To select the shape for moving or resizing, you must click along the border of the shape. If you've inserted text, clicking inside the text will not select the shape; it will place the cursor inside the text.



Resizing shapes with the resizing handles does not constrain the proportions by default. If you wish to keep the length and width proportional to the shape as it was originally inserted, hold the Shift key and use the corner handles to resize. The Shift key can also be used to select multiple shapes at once.

View the video "Using Shapes."

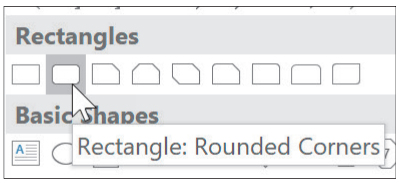
Insert→Illustrations→Shapes | Drawing Tools→Format→Insert Shapes

DEVELOP YOUR SKILLS: W4-D1

In this exercise, you will draw, size, and move shapes. You'll maintain a shape's proportions with the Shift *key when resizing, and you'll see how the mouse pointer changes appearance based on various ways you work with shapes.*

1. Open **W4-D1-Brochure** and save it in your **Word Chapter 4** folder as: `W4-D1-BrochureRevised`
2. If necessary, turn on formatting marks.

   Notice that a number of paragraph symbols are already in the document. It can be easier to work with graphics if some spacing is already set up.
3. Choose **Insert→Illustrations→Shapes** to display the Shapes gallery.
4. Choose **Rectangle: Rounded Corners** from the Rectangles category.

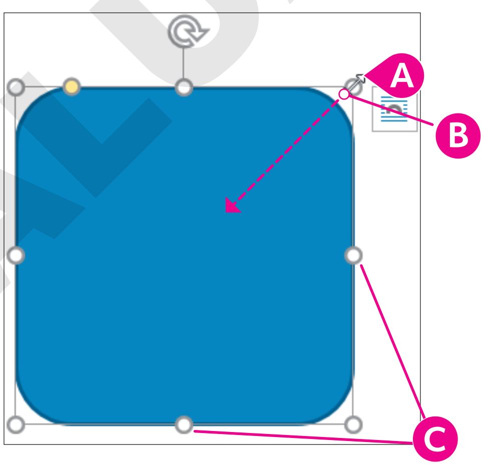


   After you choose a shape, the mouse pointer changes to a crosshair icon resembling a plus sign (+), which you click and drag in the document to create the shape.
5. Click and drag anywhere in the document to draw a rounded rectangle.
6. Choose **Insert→Illustrations→Shapes** and then choose **Rectangle: Rounded Corners** again.
7. Hold the Shift key and drag to draw another rounded rectangle.

   This time you drew a perfect square with rounded corners instead of an elongated rectangle, even though you started with the same shape. Holding down the Shift *key while drawing maintains the proportional relationship between the shape's width and height.*

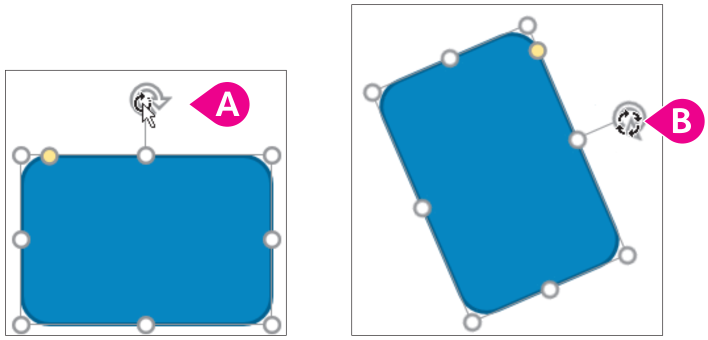
Resize and Rotate Shapes

8. With the square shape selected (displaying round handles), follow these steps to resize the shape:



- A Position the mouse pointer on the top-right corner sizing handle.
- B Hold Shift and drag diagonally toward the center of the shape to resize while maintaining proportions.
- C Drag from a side handle to change only the height or width of the object.

9. Follow these steps to rotate the shape:



A Position the mouse pointer on the rotation handle; the mouse pointer appears as a circular arrow.

B Click and drag to the right about 45 degrees; the mouse pointer appears as four small arrows when rotating.

Tip! *Holding* [Shift] *allows you to select multiple shapes at once. Then you can delete, move, or format them all at once.*

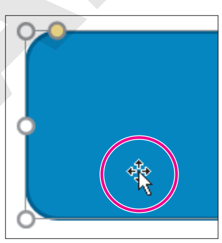
10. If necessary, click one of the shapes to display the handles and then hold [Shift] and click the other shape.
11. Tap [Delete] to remove both shapes.

    You can use the ruler to help align and size shapes and other graphic images. It may or may not be visible on your screen.

12. If necessary, choose **View→Show→Ruler**.

    Notice that there are two rulers: one at the top and one at the side of the screen. The margin areas (1" by default) are the gray areas at the left, right, top, or bottom ends of the rulers. The typing areas are white.

13. Choose **Insert→Illustrations→Shapes** and choose **Rectangle: Rounded Corners** again.
14. Starting about 1" from the top of the page and about 2" from the left of the page (or 1" from the left-hand margin), draw a **1" tall** rectangle that spans the page but remains within the margins.
15. Position the mouse pointer on the shape until the pointer appears as a four-headed arrow.



16. Practice dragging the shape to move it and then return it to its original position.
17. Save the file.

Adding Text and Formatting Shapes

You can add text to shapes you draw. This is handy if, for example, you want to create a flyer announcing an event. Just select the shape and begin typing the announcement. Text is automatically centered horizontally and vertically, and it wraps within a shape as you type.

The contextual Format tab contains many tools you can use to add pizzazz to a shape, including Shape Styles, Shadow effects, and 3-D effects. The contextual Format tab also has its own Shapes gallery in the Insert Shapes group. It contains the same shapes as the Shapes gallery located in the Illustrations group on the Insert tab.

View the video "Adding Text to and Formatting Shapes."

Drawing Tools→Format→Shape Styles

DEVELOP YOUR SKILLS: W4-D2

In this exercise, you will add text to a shape and format the text. Then you will format the shape using the Shape Styles gallery.

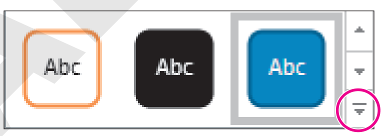
1. Save your file as: `W4-D2-BrochureRevised`
2. If necessary, select the rectangle shape at the top of the page by clicking anywhere on it.
3. Tap Caps Lock, type **ERGONOMIC OFFICE SOLUTIONS**, tap Enter, and type **PRESENTS**. Tap Caps Lock once more to turn it off.

   Notice that the text is automatically centered in the shape.
4. Click the border of the shape, taking care not to drag.

Tip! *Selecting a shape by clicking the border selects everything inside the shape. Thus, the text in the shape is selected, although it is not highlighted.*

5. Choose **Home→Font→Font menu button ▾→Tahoma**.
6. Keep the shape selected, click **Bold**, and make the font **22 pt**.
7. If your shape is not big enough for the larger text, drag a **sizing handle** to enlarge it.

   Next, you will use the Shape Styles gallery to format the shape.
8. Make sure the object is selected so the contextual Format tab is available and then choose **Drawing Tools→Format→Shape Styles→More** to open the gallery.



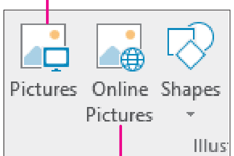
9. Choose **Subtle Effect – Blue, Accent 1**.
10. Save the file.

Using WordArt and Inserting Pictures

WordArt is great for creating smart-looking text objects and special effects, such as logos and headings in newsletters, flyers, and brochures. You can create WordArt by adding your own text to a WordArt object, or you can apply a WordArt object to existing text. You can use the built-in designs as they are, or you can customize them.

You can browse through your computer, or other computers, to locate pictures and other images for your document, or you can search online.

Search for pictures saved as files on a computer.



Search online for pictures and other images.

New! *Word now allows users to insert icons and 3D models. Icons provide simple black-and-white images of various items, while 3D models are dynamic objects that can be rotated in three dimensions.*

- Insert→Text→WordArt
- Insert→Illustrations→Pictures *or* Online Pictures
- Insert→Illustrations→Icons *or* Insert→Illustrations→3D Models

Cropping and Enhancing Pictures

WordArt and pictures can be rotated, resized, and moved like other objects. The cropping tool can be used to remove any unwanted parts of a picture. The Set Transparent Color tool makes portions of the image transparent, allowing anything under it to show through WordArt.

View the video "Enhancing Pictures."

Aligning Objects

You can manually drag and drop objects to align them, but using the Align feature on the contextual Format tab is more precise. Select the objects you want to align and then choose the desired alignment.

Tip! *The terms object and image are both used when referring to graphical elements such as shapes, WordArt, and pictures.*

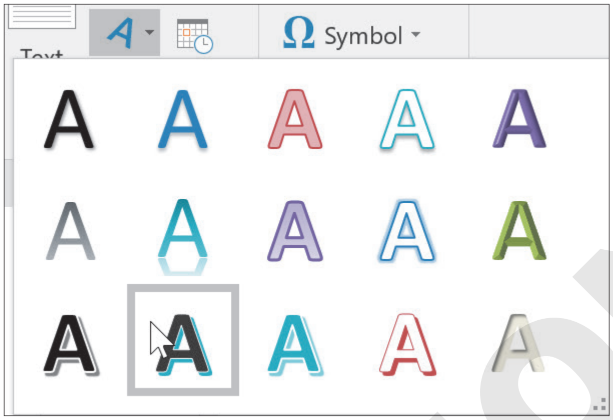
Note! *Depending on your screen size and resolution, you may see a slightly different icon for the Align button.*

- Drawing Tools→Format→Arrange→Align

DEVELOP YOUR SKILLS: W4-D3

In this exercise, you will add a WordArt object and align it with a shape. You will insert and resize a picture and make its background transparent. Then you will format and move the table.

1. Save your file as: `W4-D3-BrochureRevised`
2. Click in the document below the rectangle.
3. Choose **Insert→Text→WordArt**.
4. Choose **Fill: Black, Text color 1; Outline: White, Background color 1; Hard Shadow: Aqua, Accent color 5** from the menu that appears and then type: `The Ergonomically Challenged Office`



5. Place the mouse pointer on the border of the WordArt object and then drag to position it about 1" below the rectangle.

   Don't worry about centering it below the shape; you will center-align the objects in the next steps.
6. With the WordArt object still selected, hold down Shift and click the rounded rectangle above it that you created earlier.

   Both objects should be selected—handles appear on both.
7. Choose **Drawing Tools→Format→Arrange→Align→Align Center**.

   This center-aligns the objects with each other.
8. If necessary, drag the selected objects so they are centered on the page between the margins.

Insert a Picture

9. Scroll down and position the insertion point in the left cell of the table.
10. Choose **Insert→Illustrations→Pictures**.
11. Navigate to your **Word Chapter 4** folder and double-click **ErgoChair.jpg** to insert it.
12. Hold down Shift and resize the picture using a corner handle until it matches the height of the text on the right.

    This picture has a white background. Later, you will add background color to your brochure and the picture's white background won't blend with the background color. Therefore, you will make it transparent, allowing the brochure's background color to show through.
13. With the chair image selected, choose **Picture Tools→Format→Adjust→Color**.
14. Choose **Set Transparent Color** at the bottom of the menu.

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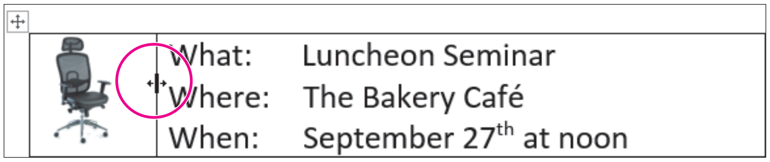
15. Click in the white background of the image.

    This makes the white background transparent, so when you add the page color to the brochure, the color will show through the picture's transparent background.

16. Click anywhere to deselect the image. Then position the mouse pointer on the line between the two cells and double-click to resize the cell.



17. Select the table using the **move handle** and then choose **Home→Paragraph→Center**.
18. With the table still selected, choose **Home→Paragraph→Borders** **menu button** ▼.
19. Choose **No Border** to complete the page.
20. If gridlines appear in the table (although they won't print), follow these steps to remove them:
    - Make sure the table is selected.
    - Choose **Table Tools→Layout→Table→View Gridlines**.
21. Save your file.

Using Text Boxes and Page Setup Options

A text box is a special type of shape designed for inserting text or graphics. You may wonder how inserting a text box is different from drawing a shape and adding text inside it. It's because of the formatting. All documents are based on a theme, which contains a set of theme colors and theme fonts. The default theme for a new blank document is Office. When you originally created the rounded rectangles, a blue fill color was the default fill color for *shapes*. Text boxes do not contain those formatting characteristics. You can format all of the text by selecting the text box itself or format only a portion of the text by selecting the part you want to change. The techniques for rotating, sizing, and moving are the same for text boxes as for other graphics.

View the video "Creating a Text Box."

Insert→Illustrations→Shapes→Text Box | Insert→Text→Text Box

Page Setup Options

Commonly used page setup options include page breaks, margins, page orientation, and paper size. All of these are located in the Page Setup group on the Layout tab. Some page setup options also appear in the Print screen in Backstage view.

Tip! *You can use* Ctrl+Enter *to quickly insert a* manual page break.

View the video "Page Setup Options."

Layout→Page Setup

DEVELOP YOUR SKILLS: W4-D4

In this exercise, you will insert a text box, align it with other objects, and format the text box border and the text within it. Then you will insert a page break to create a second page for your brochure.

1. Save your file as: `W4-D4-BrochureRevised`
2. Choose **Insert→Illustrations→Shapes** and then choose **Text Box** from the Basic Shapes category in the Shapes gallery.
3. Position the mouse pointer below the WordArt object you created previously and drag to draw a text box about **2" wide** and **½" tall**.
4. Type this text and size the box so the text wrapping is the same as shown:

   Email EOS@Yahoo.com or call
   712-555-0123 to register.

5. If the email address appears as a hyperlink, right-click it and choose **Remove Hyperlink**.
6. Make sure the text box is selected and then choose **Home→Paragraph→Center**.
7. Choose the **Drawing Tools→Format→Shape Styles→Shape Outline menu button ▾** and choose **Blue, Accent 1, Lighter 40%**.
8. With the text box still selected, hold down Shift and select the two objects above it.
9. Choose **Drawing Tools→Format→Arrange→Align** and then choose **Align Center**.
10. Click to deselect. If necessary, move the text box so it is well-balanced on the page.

    You will now insert a page break to create a second page.
11. Position the insertion point at the bottom of the page.
12. Choose **Layout→Page Setup→Breaks →Page**.

    Notice the other Page Setup options, including Margins, Orientation, and Size.
13. If necessary, display formatting marks and notice the page break symbol and the new second page.

    Now you will delete the page break and use keystrokes to re-insert a page break.
14. Position the insertion point in front of the page break symbol and tap Delete.
15. Press Ctrl+Enter to insert another page break.
16. Save your file and leave it open.

Linking Text Boxes

Sometimes you need a selection of text to begin in one text box and end in another. Making such a change manually can be difficult; any other changes you make to the formatting, layout, or content of the document can move and change your text boxes. It's far easier to have Word do the work for you.

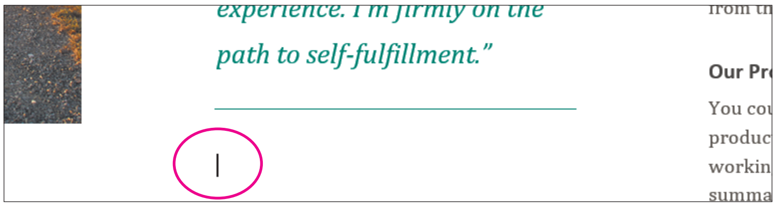
Once you've created the boxes you want to use, you link them together with the Create Link command under the Format contextual tab. When you choose this command, the mouse pointer turns into a pitcher, and you can "pour" the contents from the first text box to the next. Once the text boxes are linked in this way, resizing either box will cause the text to automatically adjust: If one box can no longer fit a line of text, the additional text will automatically move into the linked box.

Drawing Tools→Format→Text→Create Link

DEVELOP YOUR SKILLS: W4-D5

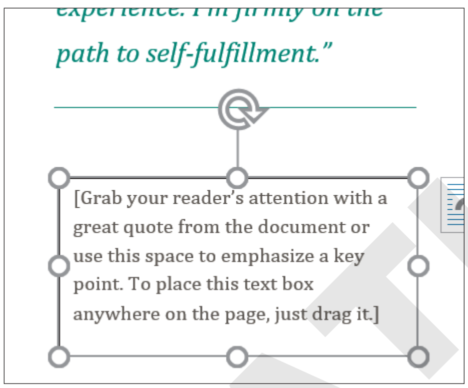
In this exercise, you will insert a text box into which you will “pour” the text from another box that has already been created. You will then resize the first box.

1. Open **W4-D5-Linking** and save it in your **Word Chapter 4** folder as: `W4-D5-LinkingRevised`
2. Place the insertion point in the line below the green callout quote in the middle column.



3. Choose **Insert→Text→Text Box menu button ▾→Simple Text Box**.

   Word inserts the text box at the location of your insertion point, but the box is too wide, so you will resize it.
4. Drag the handles at the left and right sides of the text box so the sides line up with the rest of the content in the middle column.

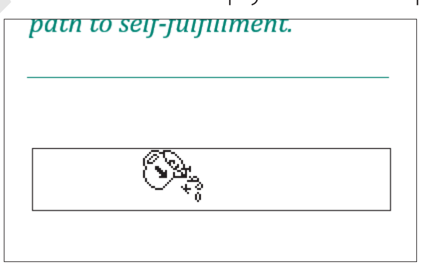


5. Click anywhere inside the text box to select the placeholder content and tap **Delete** to remove it.

   Word automatically resizes the text box vertically to a single line. This height will change when you “pour” the linked text.
6. Click anywhere inside the text box at the top of the middle column and choose **Drawing Tools→Format→Text→Create Link**.

   Note that the cursor changes into an upright pitcher.
7. Hover the cursor over the empty text box below.

   The cursor now changes into a pouring pitcher.
8. Click inside the empty text box to “pour” the contents and link the boxes.



   The linked content between both text boxes is six lines total. You decide that each box should contain three lines.

9. Drag the center-bottom handle of the top text box up to resize it and remove the bottom line.

   The linked content automatically adjusts; the fourth line of the first text box is now the first line of the second text box.

10. Save and close the file.

Working with SmartArt

It is often easier to grasp concepts if information is presented graphically rather than textually. The SmartArt gallery provides a large variety of graphics that you can add to documents. The gallery makes it easy to combine predesigned graphics with text to create sophisticated figures. SmartArt images are divided into the following categories.

Category	Purpose
List	Shows nonsequential data
Process	Shows a progression, a timeline, or sequential steps in a task, process, or workflow
Cycle	Shows a continual process
Hierarchy	Creates a hierarchical structure or shows a decision tree
Relationship	Illustrates associations
Matrix	Shows how parts relate to a whole
Pyramid	Shows proportional relationships
Picture	Used to convey a message with or without explanatory text, or to use pictures to complement a list or process

Insert→Illustrations→SmartArt

Inserting SmartArt Text and Modifying an Image

You can use the SmartArt text pane to add text to your image. You open the pane by clicking the tab that appears on the left side of the image. Text placeholders in the image are replaced with text that you enter in the SmartArt text pane. The font size adjusts based on the amount of information you type. If you prefer, you can type directly in the text placeholders in the image.

If you cannot find the exact image you want, you can modify, add, and delete shapes within the graphic. SmartArt objects are formatted the same way as other graphic shapes.

View the video "SmartArt Text and Bullets."

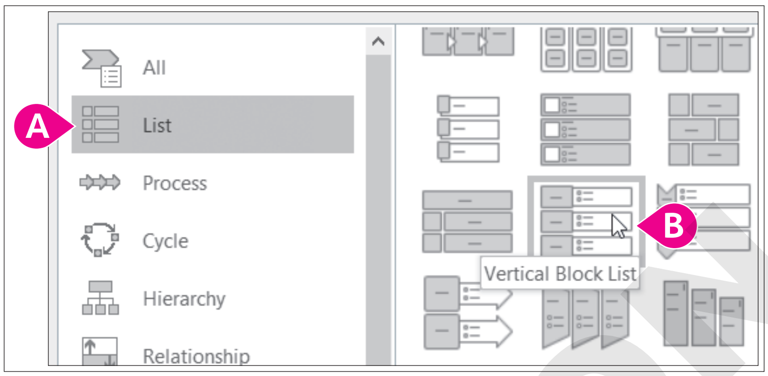
View the video "Modifying SmartArt."

DEVELOP YOUR SKILLS: W4-D6

In this exercise, you will create a SmartArt graphic. Then, you will customize and resize the graphic.

1. Your brochure file should still be open. Save it as: `W4-D6-BrochureRevised`
2. If necessary, move the insertion point to the top of page 2.
3. Choose **Home→Paragraph→Center**.

   This will center the SmartArt image that will be inserted next on the page.
4. Choose **Insert→Illustrations→SmartArt**.
5. Follow these steps to insert a SmartArt graphic:



   A Choose the **List** category.

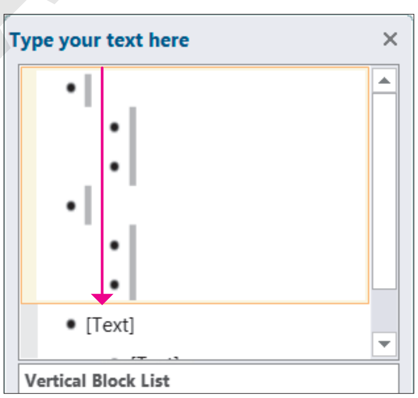
   B Scroll down and choose **Vertical Block List**.

6. Read the description in the bottom-right corner of the dialog box and then click **OK**.
7. If the text pane is not visible, click the **tab**.

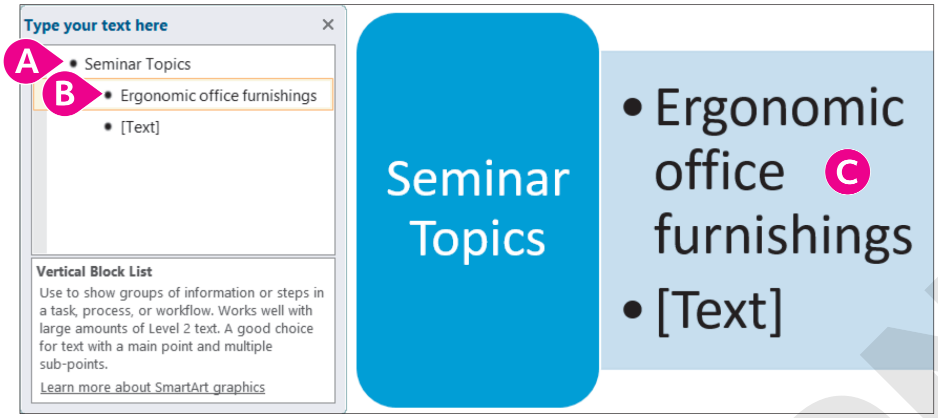
Customize the Image

This image has three major text objects, but you will use only one.

8. Position the mouse pointer to the left of the first major bullet and drag down to select the first six bullets.



9. Tap [Delete] to remove the bullets.
10. Follow these steps to begin entering the seminar topics:



A Position the insertion point to the right of the first bullet and type: **Seminar Topics**

B Tap [↓] and type: **Ergonomic office furnishings**

C Notice that the text appears in the graphic as you type.

11. Tap [↓] to go to the next line and type: **Mobile workstations**
12. Tap [Enter] to generate the next bullet and then type: **Technology support**
13. Tap [Enter] as needed and then type the following items to complete the list:
    - **Personal lighting options**
    - **Q&A**
14. Click **Close** [×] in the upper-right corner of the text pane.
15. Click the outside border frame to make sure the *entire* SmartArt image is selected.

    You will resize the SmartArt object next. If an object within the main frame is selected, you could accidentally resize only a part of the SmartArt object. Clicking the outside border frame prevents that.
16. Drag the bottom-center sizing handle up until the image is approximately half as tall as the original image.
17. Save your file.

Changing a SmartArt Style

The SmartArt Styles gallery allows you to apply interesting variations of the original graphic. Live Preview lets you sample the effects of the various styles without actually applying them.

SmartArt Tools→Design→SmartArt Styles

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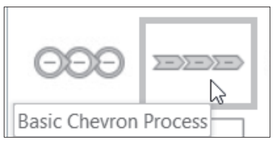
DEVELOP YOUR SKILLS: W4-D7

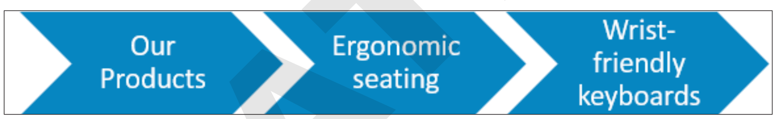
In this exercise, you will add a SmartArt graphic and customize both SmartArt graphics by applying colors and styles.

1. Save your file as: `W4-D7-BrochureRevised`
2. Make sure the outside border of the seminar topics image is selected.
3. Choose **SmartArt Tools→Design→SmartArt Styles→Change Colors**.
4. In the Accent 1 category, choose: **Gradient Loop – Accent 1**
5. Choose **SmartArt Tools→Design→SmartArt Styles→More** to display the SmartArt Styles gallery.
6. In the 3-D category, choose: **Metallic Scene**

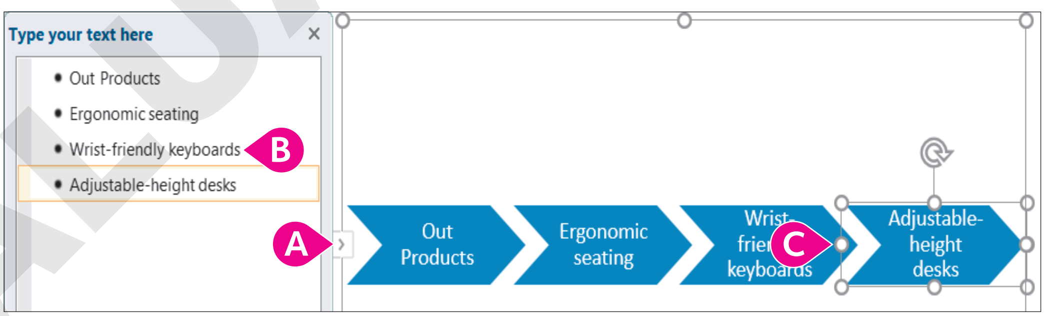
   Next, you will add another SmartArt image.
7. Press Ctrl + End to move to the end of the document and then tap Enter twice.
8. Choose **Insert→Illustrations→SmartArt**.
9. Choose the **Process** category, choose **Basic Chevron Process**, and then click **OK**.



   You can type directly in the image without opening the text pane.
10. Click the **[Text]** placeholder in the first arrow on the left and type: `Our Products`
11. Click in each **[Text]** placeholder and enter the text as shown:



12. Click the outside border of the image and follow these steps to add an arrow to the graphic:



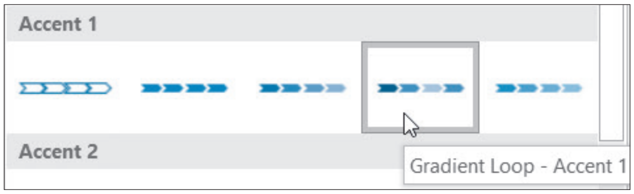
   - **A** Click the **tab** to open the text pane.
   - **B** Position the insertion point after the word *keyboards* and tap Enter.
   - **C** Type `Adjustable-height desks` in the new arrow.
13. **Close** the text pane.

Format the Image

14. Click the outside border of the shape.

15. Choose **SmartArt Tools→Design→SmartArt Styles→Change Colors** .

16. Choose the fourth item in the Accent 1 category: **Gradient Loop – Accent 1**



17. Click the **More** button on the SmartArt Styles gallery and in the 3-D category choose **Cartoon**.

18. Save your file.

Formatting the Page Background

Page background formats add color and visual variety to your documents. Page colors and borders provide the finishing touches that add professional polish. For example, you can add colors from the Page Colors gallery that are specifically designed to blend with a document's theme. Border colors are also designed to tastefully complement page colors.

Adding Page Colors and Page Borders

The Page Colors gallery is similar to other galleries you have worked with. The colors that appear in the Theme Colors section of the gallery, as the name implies, are based on the theme currently in effect in the document.

Page borders surround the outer edges of the entire page. You can adjust the color (again, based on the current theme), line thickness, and other features of the border.

Design→Page Background→Page Color *or* Page Borders

DEVELOP YOUR SKILLS: W4-D8

In this exercise, you will use Live Preview to sample background colors. Then you will add a background color to your brochure and a border around the pages.

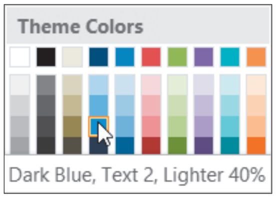
1. Save your file as: **`W4-D8-BrochureRevised`**

2. Choose **Design→Page Background→Page Color** .

3. Hover the mouse pointer over several colors in the Theme Colors area of the gallery.

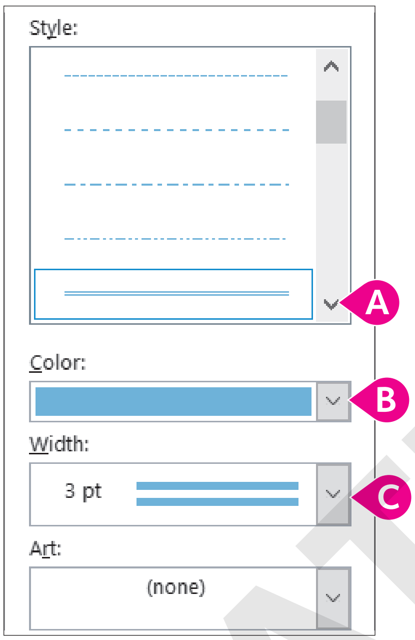
Live Preview displays the effects of the different colors.

4. Choose **Dark Blue, Text 2, Lighter 40%**.



Now you'll add a page border.

5. Choose **Design→Page Background→Page Borders**.
6. Choose **Box** from the Setting area in the left-hand panel.
7. Follow these steps to format the page border:



Ⓐ Choose the **double-line** style.

Ⓑ Choose **Blue, Accent 1, Lighter 40%**.

Ⓒ Choose a width of **3 pt** and then click **OK**.

8. Save and then close your file.

Adding Special Effects to Text

To add interest and dimension to brochures, you can use graphic effects. For example, you can add WordArt for flair. There is a full array of WordArt formatting tools available on the contextual Drawing Tools Format tab.

Various special effects are available for standard fonts as well. Options include strikethrough, superscript/subscript, small caps, and all caps.

Insert→Text→WordArt

Home→Font dialog box launcher

DEVELOP YOUR SKILLS: W4-D9

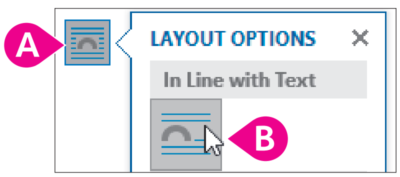
In this exercise, you'll familiarize yourself with special text effects while creating a short newsletter for Raritan Clinic East. You will start with a WordArt heading, which you will format with a new fill color, font color, and text effects. Then you will use the Font dialog box to adjust the font style and size, and then you will add font effects.

1. Open a new, blank document and save it to your **Word Chapter 4** folder as: `W4-D9-RaritanNewsltr`
2. Display formatting marks and then type these heading lines at the top of the document:

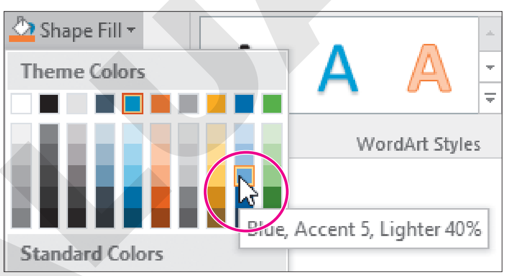
    `Raritan Clinic East`

    `The Children's Clinic`

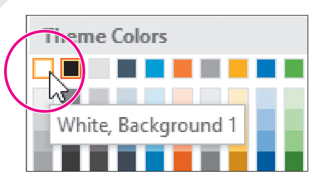
    `November, 2021`
3. Tap Enter three times.
4. Select **Raritan Clinic East** but do not select the paragraph mark at the end of the line.
5. Choose **Insert→Text→WordArt** and then choose **Fill: Blue, Accent color 1; Shadow**.
6. With the WordArt object selected, follow these steps to place it in line with the text:



   - A Click the **Layout Options** smart tag.
   - B Choose **In Line with Text** and then click in the document to close the gallery.
7. Click the border of the WordArt to select the entire object.
8. Choose **Drawing Tools→Format→Shape Styles→Shape Fill menu button ▾** and then choose **Blue, Accent 5, Lighter 40%** from the gallery.



9. Choose **Drawing Tools→Format→WordArt Styles→Text Fill menu button ▾** and then choose **White, Background 1**.



10. With the object selected, choose **Drawing Tools→Format→WordArt Styles→ Text Effects**.

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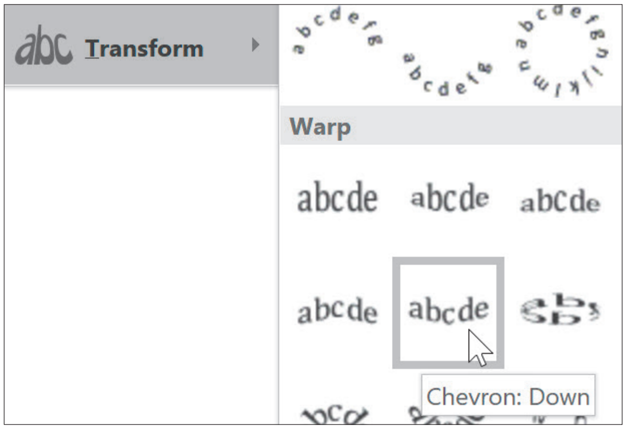
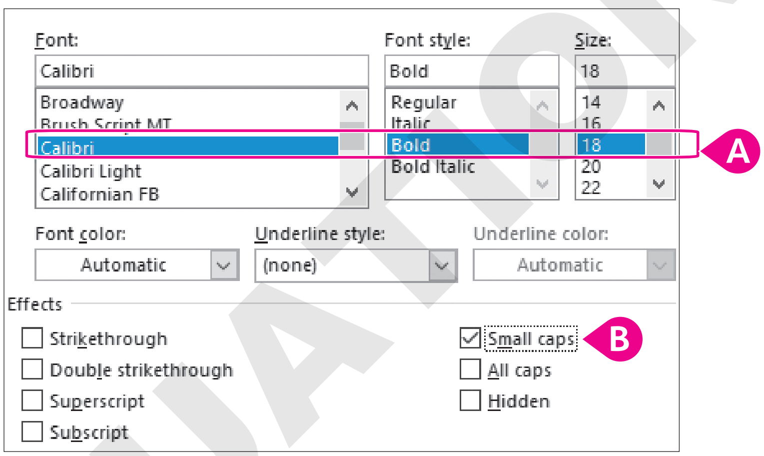
11. Drag the mouse pointer down to the Transform category and choose **Chevron: Down**.



Now you will center all headings and format one of the headings.

12. Position the mouse pointer in the left margin area next to the WordArt object and then click and drag down to select the WordArt and the other two headings.
13. Choose **Home→Paragraph→Center**.
14. Select **The Children's Clinic** and then choose **Home→Font dialog box launcher** to display the Font dialog box.



- **A** Choose **Calibri**, **Bold**, **18 pt**.
- **B** In the Effects area, check **Small Caps**.
- **C** Click **OK**.

15. Save the file.

Using Picture Effects

We've already briefly explored adding pictures into your documents. Once your pictures have been inserted, you'll be able to apply great picture effects, such as shadows, reflections, glows, soft edges, bevels, and 3-D rotations. These effects can help make an otherwise ordinary image *pop* with unique flair.

Insert→Illustrations→Pictures

Picture Tools→Format→Picture Styles→Picture Effects

DEVELOP YOUR SKILLS: W4-D10

In this exercise, you will insert and crop an image. Then you will add a picture effect to the image.

1. Save your file as: `W4-D10-RaritanNewsltr`
2. Position the insertion point on the blank line below the date.
3. Choose **Insert→Illustrations→Pictures** .
4. Navigate to your **Word Chapter 4** folder and double-click the **RaritanClinic.png** graphics file to insert it.

   Next you will crop the words off of the image.
5. With the picture selected, choose **Picture Tools→Format→Size→Crop** .
6. Position the mouse pointer on the right-center cropping handle and drag left to crop off the words *Raritan Clinic East*.
7. Position the mouse pointer on the bottom-center cropping handle and drag up to remove the words at the bottom of the image; click in the document to finish cropping.
8. If necessary, choose **View→Show→Ruler**, and then resize the image using one of the corner sizing handles, making it approximately **1½" wide**.
9. With the image selected, choose **Picture Tools→Format→Picture Styles→Picture Effects** .
10. Drag the mouse pointer to the **Shadow** category and in the Outer category choose **Offset: Bottom Right**.
11. Choose **Home→Paragraph→Center** .
12. Save the file.

Setting Up Columns

When working with images and pictures, you may need extra flexibility in creating your columns. With the Columns dialog box, you can specify column and spacing width or have Word put a vertical line between columns.

DEVELOP YOUR SKILLS: W4-D11

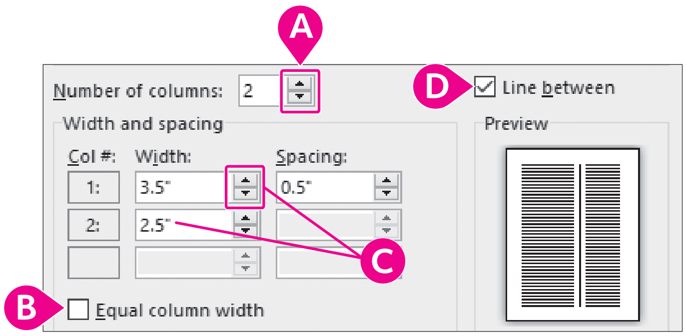
In this exercise, you will insert a section break and lay out the newsletter in columns. Then you will customize the column layout.

1. Save your file as: `W4-D11-RaritanNewsltr`
2. Position the insertion point on the second blank line below the picture object and choose **Layout→Page Setup→Breaks** →**Continuous**.
3. Position the insertion point anywhere above the section break and choose **Layout→Page Setup→Columns** .

   Notice that one column is highlighted. Whenever text or images span the width of the page between the margins, it is considered one column.
4. Position the insertion point below the section break.

Add Newsletter Text and Customize Columns

5. Choose **Insert→Text→Object** **menu button ▾→Text from File**.
6. Navigate to your **Word Chapter 4** folder and double-click **NewsltrTxt**.
7. Choose **Layout→Page Setup→Columns** and then choose **More Columns** to open the Columns dialog box.
8. Follow these steps to customize the columns :

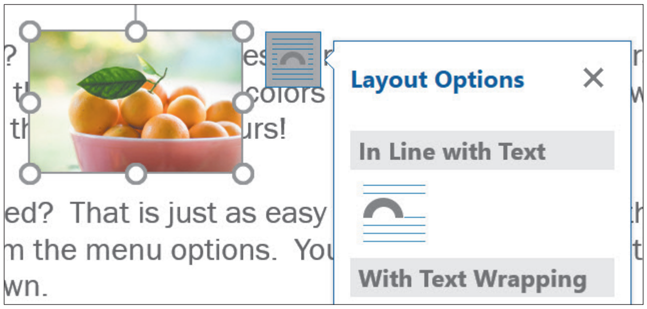


   - (A) Use the **spin box** to change the number of columns to **2**.
   - (B) Remove the checkmark from this checkbox.
   - (C) Use the **spin box** to change the width of column 1 to **3.5"** and notice that column 2 resizes automatically. If necessary, set the spacing to **0.5"** as well.
   - (D) Place a checkmark in the **Line Between** box to add a line between your columns.
9. Click **OK** and then scroll through the document to see the effect.

   The columns don't really look good this way. While you could click Undo if you were to change your mind at a later time, there is still a quick way to return the columns back to equal size.
10. Choose **Layout→Page Setup→Columns** →**More Columns**.
11. Click the **Equal Column Width** checkbox and click **OK**.
12. Scroll through the document to see how it looks.
13. Save the file.

Artistic Effects and Wrapping Text Around a Picture

There are many tools on the contextual Format tab that allow you to customize images. Artistic effects can take your image styling to the next level. Some effects represent the image in pencil, paint, and various textures. In addition, you can set Wrapping controls that will force your document text to wrap around any images you've inserted. To do this, use the Layout Options smart tag that appears to the top right of an image whenever that image is selected.



Picture Tools→Format→Adjust→Artistic Effects

DEVELOP YOUR SKILLS: W4-D12

In this exercise, you will insert a picture and apply an artistic effect as well as a picture style to it. Next, you will use the Layout Options smart tag to wrap text around the picture. Then you will balance the columns at the end of the newsletter.

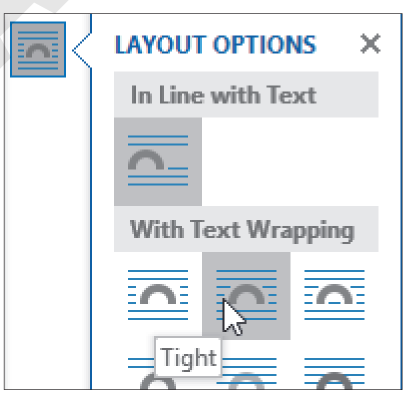
1. Save your file as: `W4-D12-RaritanNewsltr`
2. Position the insertion point on page 2 to the left of the heading *The New Vaccine*.
3. Choose **Insert→Illustrations→Pictures**.
4. Navigate to your **Word Chapter 4** folder and double-click **VaccinePic.jpg** to insert the picture in the newsletter.
5. Resize the picture using a corner handle until it is about **1½" wide**.

Apply an Artistic Effect and a Picture Style

6. With the picture selected, choose **Picture Tools→Format→Adjust→Artistic Effects** and then choose **Crisscross Etching**.
7. Choose **Picture Tools→Format→Picture Styles→More** on the Picture Styles gallery.
8. Use Live Preview to sample various styles and then choose **Simple Frame, Black**.

Wrap Text Around a Picture

9. With the picture selected, click the **Layout Options** smart tag and choose the **Tight** text wrapping option.



10. Click in the document to close the Layout Options gallery.

    Now you will balance the columns on page 2.

    You don't have to insert column breaks and move text around to balance columns. Inserting a Continuous section break at the end of the columns you want to balance is a quick trick for accomplishing the task.

11. Position the insertion point after the period following *disease* at the end of page 2.
12. Choose **Layout→Page Setup→Breaks** →**Continuous**.
13. Save the file.

Printing Part of a Document

Sometimes you may want to print only part of a longer document—maybe a page or two, or even just a couple of paragraphs. This can save both time and supplies. Several techniques make this an easy task; they are found in the Print screen in Backstage view.

Custom Print options allow you to specify which pages to print.

CUSTOM PRINT OPTIONS

Print Consecutive Pages	Enter the page number of the first page to print, type a hyphen, and then type the page number of the last page to print.
Print Nonconsecutive Pages and Ranges	Enter the page numbers you want to print separated by commas (for example: 3,5,7,10-15).
Print a Block of Text	Select the text to print. Navigate to the Print screen in Backstage view. Choose Print Selection from the drop-down list.

File→Print

DEVELOP YOUR SKILLS: W4-D13

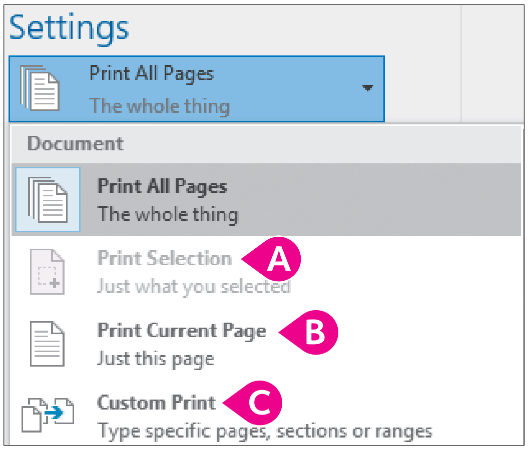
In this exercise, you will explore options for printing part of a document. You will see how to print consecutive and nonconsecutive pages as well as a block of selected text.

1. Choose **File→Print** to display the Print screen in Backstage view.

   In the Settings part of the screen, notice that Print All Pages is the default.

2. Click the **menu button** ▾ next to *Print All Pages*.

3. Follow these steps to review the printing options:



- A This option is available only when you select text prior to accessing the Print screen.
- B This choice prints the page where the insertion point is located.
- C This option allows you to specify printing only certain pages.

4. Click the **menu** button ▼ to close the menu.

Tip! *You can specify which custom pages to print in the Pages field without opening the menu. When you begin entering page numbers, the setting automatically switches to Custom Print.*

5. If you want to conserve resources and not print, click the **Back** button or print to PDF (you can make that choice in the Printer drop-down list).
6. Save the file and exit Word.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

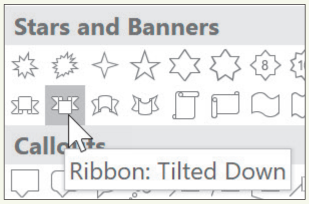
REINFORCE YOUR SKILLS: W4-R1

Create a Flyer Recognizing an Outstanding Volunteer

Kids for Change has a volunteer program, and the person who volunteers the most hours in a quarter is recognized for his or her service. In this exercise, you will create a flyer announcing Janisha Robinson as the winner for this quarter. You will work with shapes, WordArt, pictures, and text boxes.

1. Start Word and create a new file based on the **Blank Document** template. Save it as: **`W4-R1-JanishaFlyer`**
2. Display formatting marks and tap Enter 20 times.

   It can be easier to work with graphics if some spacing is already set up.
3. If necessary, choose **View→Show→Ruler** to display the ruler.
4. Choose **Insert→Illustrations→Shapes**, and in the Stars and Banners category, choose **Ribbon: Tilted Down**.



5. Position the crosshair mouse pointer next to the paragraph symbol at the top of the page.
6. Press and hold the mouse button and drag until the image is about **6½" wide** and **1½" tall**.
7. Type **`Outstanding Member`** in the image and then click the border to select the entire shape.
8. Choose **Home→Font→Font menu button ▾→Comic Sans MS** and then apply boldface and make the font size 28 pt.
9. Choose **Home→Font→Font Color menu button ▾** and choose **Red** in the Standard Colors category.

Insert and Crop a Picture

10. Position the insertion point a little below the graphic.
11. Choose **Insert→Illustrations→Pictures**, navigate to your **Word Chapter 4** folder, and double-click **Janisha.jpg**.

    Now you will resize the picture.
12. Press and hold Shift and then position the mouse pointer on the handle in the upper-right corner of the picture.
13. Drag diagonally toward the center until the picture is about **3" wide**.

    Next you will crop off the left side of the picture.
14. Make sure the picture is selected and then choose **Picture Tools→Format→Size→Crop**.

15. Follow these steps to crop the picture:

Ⓐ Position the mouse pointer on the left-center cropping handle.

Ⓑ Drag to the right to Janisha's right hand and then click in the document to deselect.

Next you will place a border on the picture to give it a finished look.

16. Select the picture and then choose **Picture Tools→Format→Picture Styles→ Picture Border menu button ▾** and pick a shade of blue that you think will blend well.

Now you will choose a layout option that will allow you to freely move the picture on the page.

17. Click the **Layout Options** smart tag at the upper-right side of the picture and choose **In Front of Text** (bottom-right in the *With Text Wrapping* section).

18. Drag the picture to the center of the page.

Use WordArt

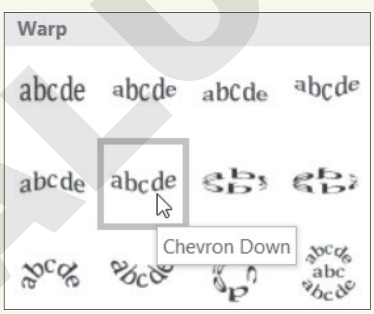
19. Position the insertion point a little below the picture.

20. Choose **Insert→Text→WordArt** and choose **Fill: Black, Text color 1; Outline: White, Background color 1; Hard Shadow: Blue, Accent color 5**.

21. Type `Janisha Robinson` in the image and then click the **outside border** to select the entire image.

22. Choose **Drawing Tools→Format→WordArt Styles→Text Effects →Transform**.

23. In the Warp category, choose **Chevron: Down**.



24. Center the WordArt on the page.

WORD

Add a Text Box

25. Choose **Insert→Illustrations→Shapes** →**Text Box**.
26. Below Janisha's name, draw a text box that is approximately **4" wide** and **2½" tall** and then type the following text:

    `Kids Helping Communities`

    - **`After-school tutor`**
    - **`Schoolyard cleanup`**
    - **`Meals for shut-ins`**
    - **`Emergency relief food collection`**

27. Click the border of the text box, choose **Home→Font→Font menu button ▾→ Comic Sans MS**, and apply 20 pt font size; resize the text box if needed.
28. Hold down [Shift] and select all the images.
29. Choose **Drawing Tools→Format→Arrange→Align** →**Align Center**.

    This center-aligns the images with each other.

30. Use the **zoom slider** in the bottom-right corner of the screen to zoom out until you see the entire page.
31. If necessary, adjust the position of the images so they are well-balanced on the page, and then zoom back to **100%**.
32. Save and close the file.

REINFORCE YOUR SKILLS: W4-R2

Create a Flyer for Charity

Kids for Change is partnering with a local charity to collect clothing and household products for people with developmental disabilities. You have been asked to create a flyer to help in the collection process. In this exercise, you will change page orientation, work with graphic images, and add page color and a page border to the flyer.

1. Start a new, blank document and save it as: **`W4-R2-DonationsFlyer`**
2. If necessary, choose **View→Show→Ruler**.
3. Choose **Layout→Page Setup→Orientation** →**Landscape**.
4. Tap [Enter] 15 times to set up some spacing in advance and then position the insertion point at the top of the page.
5. Choose **Insert→Illustrations→Pictures** , navigate to your **Word Chapter 4** folder, and double-click **Donations.png**.

    Now you will use a text-wrapping layout option so you can easily move the image.

6. Make sure the image is selected and then click the **Layout Options** smart tag at the upper-right corner of the image and choose **In Front of Text** (bottom-right).
7. Drag the image to center it between the margins.
8. Position the insertion point below the picture.

Add WordArt and SmartArt

9. Choose **Insert→Text→WordArt** and choose **Fill: Gray, Accent color 3; Sharp Bevel**.

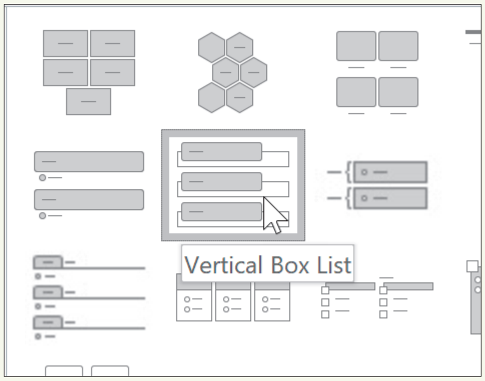
10. Type the following text in the WordArt image:

`We need clothing, furniture, appliances, and household items.`

11. Click outside the image to deselect.

12. Position the insertion point below the WordArt image.

13. Choose **Insert→Illustrations→SmartArt**; then click the **List** category, choose **Vertical Box List**, and click **OK**.



Now you will resize the SmartArt image so it fits on the first page.

14. Press and hold Shift and then position the mouse pointer on the handle in the upper-right corner of the image.

15. Drag diagonally toward the center of the image until it is about **3" wide**.

It should now be positioned on the first page.

16. Click the **Layout Options** smart tag to the right of the image and choose **In Front of Text**.

Now you can move the image freely on the page.

17. Center the image between the margins.

Recolor the Image

18. Click the outside border to select the entire image.

19. Choose **SmartArt Tools→Design→Change Colors** and choose **Colored Fill – Accent 3**.

20. Type the following in the three *[Text]* areas:

`Place boxes or bags by 8 a.m.`

`Donations will be picked up by dark`

`Thank you for your contributions!`

21. Click outside the image to deselect.

Change the Page Color and Add a Page Border

22. Choose **Design→Page Background→Page Color** and then choose **White, Background 1, Darker 25%**.

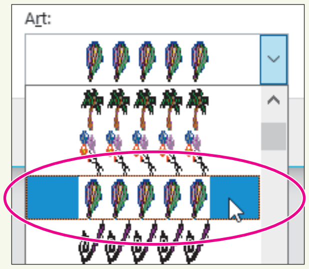
Instead of using lines for the border, you will use an art border.

23. Choose **Design→Page Background→Page Borders**.

WORD

24. Click the drop-down arrow in the Art field at the bottom of the dialog box and choose the **hot air balloons**.

    The hot air balloons option is the 12th in the list; you may need to scroll down to find it.



25. Click **OK** and then turn off formatting marks.
26. Use the **zoom controls** at the bottom right of the screen to zoom out and see the entire page.
27. If necessary, adjust the position of the images so they are well-balanced on the page, and then zoom back to 100%.
28. Save and close the file.

REINFORCE YOUR SKILLS: W4-R3

Create a Recycling Flyer

Kids for Change held a recycling campaign last month. Your cousin, Ingrid, is enjoying a semester studying at the Sorbonne in Paris. She saw the flyer you created, and she would like to implement a recycling program at the university. She asks that you create a copy of your flyer on standard European-size paper, A4. In this exercise, you will recreate the flyer using graphic images, a picture, a text box, a page background, and a border.

1. Start a new document using the **Blank Document** template and save it as: `W4-R3-RecycleFlyer`
2. Choose **Layout**→**Page Setup**→**Size** →**A4**.
3. Display the formatting marks and ruler, if necessary.
4. Tap Enter about 25 times to set up spacing in your flyer and then position the insertion point at the top of the page.
5. Choose **Insert**→**Text**→**WordArt** and choose **Fill: Light Gray, Background color 2; Inner Shadow**.
6. Type `Reduce, Reuse, Recycle` in the WordArt image and then click the outside border.
7. Choose **Drawing Tools**→**Format**→**WordArt Styles**→**Text Fill** **menu button** ▾→ **Green, Accent 6**.
8. Choose **Drawing Tools**→**Format**→**Shape Styles**→**Shape Effects** →**Shadow**.
9. In the Outer category, choose **Offset: Top Left**.
10. Choose **Drawing Tools**→**Format**→**WordArt Styles**→**Text Effects** →**Transform**.
11. In the Warp category, choose **Chevron: Up**.
12. If necessary, drag the WordArt to center it between the margins, and then position the insertion point a little below it.

Add a Picture to the Flyer

13. Choose **Insert→Illustrations→Pictures**, navigate to your **Word Chapter 4** folder, and double-click **World.jpg**.
14. Hold down Shift and resize the picture until it's about **3" wide**.
15. Click the **Layout Options** smart tag, choose **In Front of Text**, and then drag the picture to center it on the page.

    Now you will place a border on the picture.
16. With the picture selected, choose **Picture Tools→Format→Picture Styles→Picture Border menu button ▾→Weight→3 pt**.
17. Choose **Picture Tools→Format→Picture Styles→Picture Border menu button ▾→Green, Accent 6, Darker 25%**.

Add a Text Box

18. Choose **Insert→Illustrations→Shapes→Text Box**.
19. Draw a text box a little below the picture about **3½" wide** and **2" tall** and then type the following bulleted list in the text box:
    - **Separate your trash**
    - **Always look for recycle bins**
    - **Reuse shopping bags**
    - **If it's broken, fix it**
    - **Buy recycled products**
20. Click the border of the text box and choose **Home→Font→18 pt**.
21. Resize your text box, if needed; don't allow the text to wrap.
22. Click the border to select the object.
23. Choose **Drawing Tools→Format→Shape Styles→Shape Outline menu button ▾→No Outline**.
24. Choose **Drawing Tools→Format→Shape Styles→Shape Fill menu button ▾** and choose **Green, Accent 6, Lighter 60%**.

Use a Shape

25. Choose **Insert→Illustrations→Shapes**, and in the Stars and Banners category, choose **Star: 6 points**.
26. While holding down Shift, draw a star about **2½" wide** below the text box and on the left side of the page.
27. Choose **Drawing Tools→Format→Shape Styles** and from the Shape Styles gallery choose **Colored Fill – Green, Accent 6**.
28. Type the following in the star:

    Be a star!

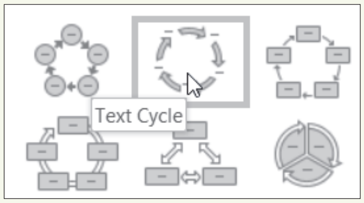
    Do your part!

WORD

Insert SmartArt

29. Position the insertion point a little below the text box.

30. Choose **Insert→Illustrations→SmartArt**; then click the **Cycle** category, choose **Text Cycle**, and click **OK**.



31. Type the following items in the *[Text]* boxes in any order:

`Paper`

`Metal`

`Plastic`

`Hazardous Waste`

`Glass`

32. Hold down Shift, resize the image until it's about **3½" wide**, click the **Layout Options** smart tag, and choose **In Front of Text**.

33. Arrange the star and SmartArt, as needed, so the star is on the left below the text box and the SmartArt is on the right below the text box.

34. Click the outside border of the SmartArt.

This image has an inside frame and an outside frame.

35. Click one of the arrows in the image, and you'll see both frames.

36. With both frames selected, choose **SmartArt Tools→Format→Shape Styles**; in the Shape Styles gallery, choose **Colored Fill – Green, Accent 6**.

This recolors the arrow that you originally clicked to display both frames. Also, notice that the Shape Styles gallery is now displaying the color you chose.

37. Click the next arrow (you won't see handles on the arrow) and click the green color that's visible in the gallery.

38. Continue until all arrows are recolored and then deselect the image.

39. Use the **zoom controls** to zoom out until you see the entire page.

40. If needed, rearrange the objects so they are balanced on the page to your satisfaction and zoom back to 100%.

Add Page Color and a Page Border

41. Choose **Design→Page Background→Page Color**→**Green, Accent 6, Lighter 60%**.

42. Choose **Design→Page Background→Page Borders** and then choose a line style, color, and width of your choice; click **OK**.

43. Save and close the file.

Apply Your Skills

APPLY YOUR SKILLS: W4-A1

Create a Services Flyer

The Universal Corporate Events marketing manager asked you to create a flyer highlighting services that Universal Corporate Events offers. In this exercise, you will use a picture and graphics to add zing to your flyer.

1. Start a new, blank document and save it as: `W4-A1-Services`
2. Tap Enter enough times to position the insertion point close to the bottom margin and then move the insertion point to the top of the page.
3. Select the **Scroll: Horizontal** shape from the Stars and Banners category to insert it.
4. Drag in the document until the scroll is about **6½" wide** and **1" tall**.
5. Type `Take Off with Universal Corporate Events` and then change the font size to 24 pt.
6. Resize the shape, if necessary, and then position the insertion point a bit below the shape.
7. Insert the **Plane.jpg** picture located in your **Word Chapter 4** folder.
8. Click the **Layout Options** smart tag and choose **In Front of Text**.
9. While maintaining the height/width proportions, resize the picture to about **3" wide**, and then position the picture just below the Shapes image and center it between the margins.

   Now you'll add a border to the picture.
10. Choose **Picture Tools→Format→Picture Styles→Picture Border menu button ▾→ Weight→3 pt**.
11. Change the picture border color to **Blue, Accent 1, Darker 25%**.

Add WordArt and a Text Box

12. Position the insertion point below the picture, insert a WordArt graphic, and apply **Fill: Blue, Accent color 1; Shadow**.
13. Type `Services We Offer`; center the graphic on the page.
14. Format the WordArt image by choosing the **Text Effects, Bevel** category and choosing **Round**.
15. Then in the Text Effects, Transform category, choose **Arch** (first form in the Follow Path category).
16. Insert a text box shape below the WordArt image that is about **4" wide** and **1½" tall**.
17. Enter the following in the text box, including the bullet points:
    - `Online itinerary`
    - `Online flight tracking`
    - `Travel insurance`
    - `Visa and passport services`
18. Remove the outline border from the text box.
19. Change the text to 22 pt and then resize the text box, if needed.

WORD

Align Images

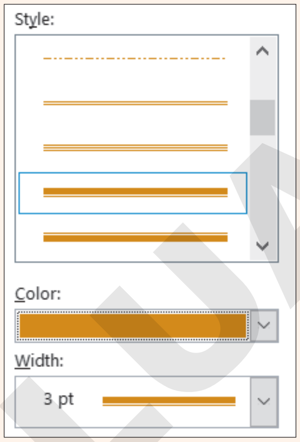
20. Hold the [Shift] key and select all four objects.
21. Use the Align feature to center-align the objects with each other.
22. If necessary, drag the selected objects to center them between the margins.
23. Zoom out to Full Page View and adjust the placement of the images as you deem necessary for the flyer to appear well-balanced; then zoom back to 100%.
24. Save and close the file.

APPLY YOUR SKILLS: W4-A2

Create a European Tours Flyer

A Universal Corporate Events sales rep has asked you to create a flyer for a corporate client who is planning an employee rewards plan. The client will be choosing among three options for the reward tour. In this exercise, you will change the page orientation, format the page background, and use SmartArt to highlight the details of the recommended tours.

1. Start a new, blank file and save it as: **`W4-A2-CorpTours`**
2. Use landscape orientation for the flyer, tap [Enter] until the insertion point is close to the bottom margin, and then position the insertion point at the top of the page.
3. Choose the Page Color **Gold, Accent 4, Lighter 60%**.
4. Add a page border, making the formatting choices as shown (color is Gold, Accent 4, Darker 25%):



5. Use a WordArt image of your choice to add a **`Universal Corporate Events`** heading to the flyer; use a Text Fill color that blends well with the background color and a Text Effect of your choice.
6. Position the insertion point about **1"** below the heading and click the SmartArt graphic **Vertical Chevron List**, which is in the Process category, to insert it.
7. Resize the graphic to about **3" wide** and **3½" tall**.
8. Click the **Layout Options** smart tag and choose **In Front of Text**.
9. In the first blue *[Text]* box, type **`London`**; type **`Berlin`** and **`Rome`** in the next two blue *[Text]* boxes.

10. In the bulleted list to the right of *London*, enter **Stonehenge**, **Windsor Castle**, and **Tate Gallery**.
11. Enter **Dresden**, **Potsdam**, and **Rothenburg** for *Berlin* and **Pompeii**, **Tuscany**, and **Capri** for *Rome*.

Format the WordArt Graphic

12. Change the SmartArt color using the first color option in the Colorful category.
13. Select the white rectangle next to *London* and change the Shape Fill color to a color that you feel complements the London object.
14. Use the same technique to color the *Berlin* and *Rome* rectangles.
15. Arrange and size the objects in a balanced manner on the page.
16. Save and close the file.

APPLY YOUR SKILLS: W4-A3

Create a Mileage Awards Flyer

Universal Corporate Events provides car rentals for travelers, and the company is currently offering mileage awards. In this exercise, you will create a flyer highlighting the award offerings. You will use graphics for interest and format the flyer background for a polished, professional look.

1. Start a new, blank document and save it as: **W4-A3-CarRental**
2. Tap [Enter] until the insertion point is close to the bottom margin and then move the insertion point to the top of the page.

   Next you will use WordArt to create a heading for the flyer.
3. Insert a new WordArt image, using the design in the third row, fifth column.
4. Enter the following text: **Universal Corporate Events**

Add a Text Box and a Picture

5. Insert a text box below the WordArt about **3½" wide** and **1" tall** and then type the following lines in the text box:

   Get behind the wheel!

   Get more reward travel!
6. Change the font size to 22 pt; resize the text box, if necessary.
7. Change the font color to **Light Gray, Background 2, Darker 50%**.

   Later you will add page color, and removing the text box's white fill background and its outline will make the text box blend in better.
8. Change the Shape Fill to **No Fill** and change the Shape Outline to **No Outline**.
9. Position the insertion point a bit below the text box; then, insert the **Driver.jpg** file from your **Word Chapter 4** folder.
10. While maintaining the picture's proportions, resize the picture to about **2½" wide**.
11. Click the **Layout Options** smart tag and choose **In Front of Text**. Then center the picture between the margins.

12. With the picture selected, click **Center Shadow Rectangle** in the Picture Styles gallery.
13. Position the insertion point just below the picture and click **Wave** in the Stars and Banners category of the Shapes gallery.
14. Draw the shape about **4½" wide** and **1" tall**, type `Book Now!` in the shape, and change the font size to 36 pt.
15. With the shape selected, choose **Drawing Tools→Format→Shape Styles→Shape Fill→ Gray, Accent 3**.
16. Change the shape outline to **White, Background 1**.
17. Position the insertion point a bit below the shape.
18. Choose **Insert→Illustrations→SmartArt**, and in the List category, choose **Vertical Box List**.
19. While maintaining its proportions, resize the shape to about **3" wide**.
20. Click the **Layout Options** smart tag, choose **In Front of Text**, and then select all three blue shapes.
21. Choose **SmartArt Tools→Format→Shape Styles→Shape Fill** and then choose **Gray, Accent 3**.
22. Select all three white rectangles and choose the same color for the **Shape Outline**.
23. Center the SmartArt between the margins at the bottom of the page and then type the following in the three *[Text]* areas:

    `100 award miles per day`

    `125 bonus miles per day`

    `150 miles for booking with us`
24. Click elsewhere to deselect, then zoom out to a full page view and, if needed, arrange the objects so they are well-balanced and centered on the page, and then zoom back to 100%.

Add a Page Color and a Page Border

25. Choose the page color **Light Gray, Background 2, Darker 10%**.
26. Choose **Design→Page Background→Page Borders** and choose a line style that you prefer; then apply the **White, Background 1** color and **3 pt** width.

    There is more white in the bottom half of the flyer. It may look better if the SmartArt heading were white.
27. Change the SmartArt Text Fill to **White, Background 1**.
28. Save and close the file; exit Word.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

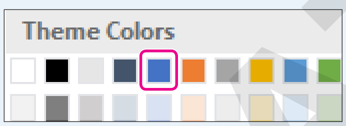
PROJECT GRADER: W4-P1

Creating a Holiday Celebration Flyer

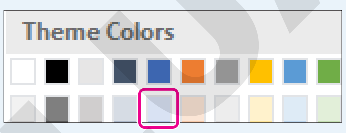
It's been a great year for Taylor Games, so the management team is organizing an end-of-year holiday celebration. In this exercise, you will prepare a flyer to announce the event.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **W4_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **W4_P1_Start** from your **Word Chapter 4** folder.
2. Insert the **Taylor Games Logo.png** picture from your **Word Chapter 4** folder.
3. Apply a page border using these settings:

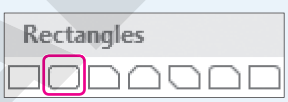
Setting	Value
Setting	**Box**
Style	**Solid line** (first option on the list)
Width	**3 pt**
Color	**Blue, Accent 1**



4. Apply the page color **Blue, Accent 1, Lighter 80%**.



5. Insert a **Rectangle: Rounded Corners** shape below the Taylor Games Logo.

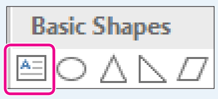


6. Set the shape height to `8"` and the shape width to `2.6"`.
7. Use these guidelines to position the rectangle:
   - Move it vertically until the spacing below the Taylor Games logo is about the same as the spacing above the bottom page border.
   - Move it horizontally until the left edge closely aligns with the left edge of the Taylor Games logo.

8. Enter this text in the rectangle using a font size of **22**. Make sure you underline the heading as shown here:

   Fun Activities
   Face Painting
   Drawing Contest
   Magic Show
   Board Games
   Card Games
   Darts
   And more…

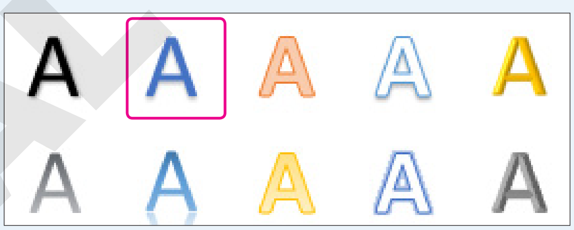
9. Insert a new text box shape above the text box that's on the right side of the page.



10. Set the Shape Height to **2.2"** and the Shape Width to **4.4"**.
11. Align the new text box using these guidelines:
    - Use **Align Top** to align the top edges of the rounded corners rectangle and text box. Make sure the text box moves and the rounded corners rectangle remains stationary.
    - Use **Align Left** or **Align Right** to align the vertical edges of the two text boxes. Make sure the new text box moves and the other text box remains stationary.
12. Enter this text in your new text box using a font size of **18** and **Bold** formatting:

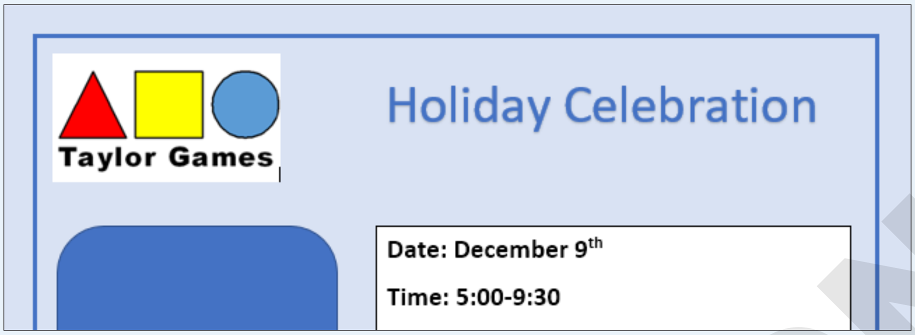
    Date: December 9th
    Time: 5:00-9:30 PM
    Where: Mission Hills Restaurant
    Why: Celebrating the holidays and a great year at Taylor Games

13. Use these guidelines to insert **WordArt** to the right of the Taylor Games logo:
    - WordArt Style: **Fill: Blue, Accent color 1; Shadow**
    - Move the WordArt so it's to the right of the Taylor Games logo and above the *December 9th* text box.
    - Enter the text: **Holiday Celebration**



14. Set the shape height to **0.8"** and the shape width to **4.4"**.

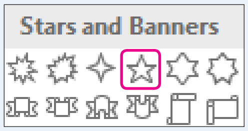
15. Use these guidelines to position the WordArt:
    - Move it up or down so it's roughly centered with the Taylor Games logo.
    - Use **Align Left** or **Align Right** to align the edges of the WordArt with the *December 9th* text box. Make sure the WordArt moves and the *December 9th* text box remains stationary.



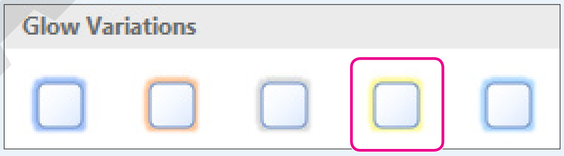
16. Make these formatting changes to the *December 9th* text box and the text box below it:
    - Shape Fill: **Blue, Accent 1, Lighter 80%**
    - Shape Outline: **No Outline**

Property	Value
Shape Fill	**Blue, Accent 1, Lighter 80%**
Shape Outline	**No Outline**

17. Insert a **Star: 5 Points** shape in the open space at the bottom of the page.



18. Set the shape height to **3"** and the shape width to **3"**.
19. Use these guidelines to position the star:
    - Move the star up so its bottom edge is higher than the bottom edge of the rounded-corners rectangle.
    - Move the star horizontally so it is nearly centered below the text box above it.
    - Use **Align Bottom** to align the bottom edge of the star with the bottom edge of the rounded-corners rectangle. Make sure the star moves down and the rounded-corners rectangle remains stationary.
20. Enter this text in the star using a font size of **22 pt**: `What a Year!`
21. Apply this shape effect to the star: **Glow: 5 point; Gold, Accent color 4**



22. Save your document.
    - *Using eLab:* Save to your **Word Chapter 4** folder as **`W4_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Word Chapter 4** folder as: **`W4_P1_Submission`**

PROJECT GRADER: W4-P2

A Promotional Flyer to Attract New Gold Members

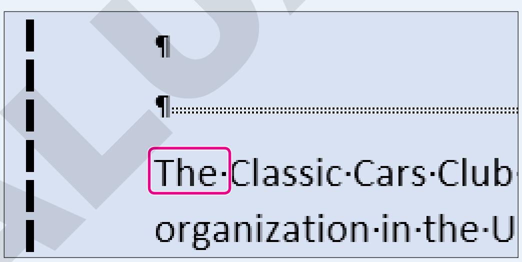
The Classic Cars Club needs a membership benefits flyer to be posted at various locations in the upcoming national show. In this exercise, you will turn a text-only informational document into an attractive flyer.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **W4_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **W4_P2_Start** from your **Word Chapter 4** folder.
2. Apply these Page Border settings:

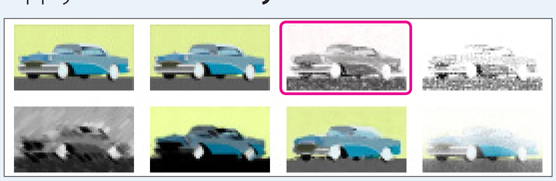
Setting	Value
Setting	**Box**
Style	**Dashed line** (third option on the list)
Color	**Automatic**
Width	**3 pt**

3. Apply the page color **Blue, Accent 1, Lighter 80%**.

4. Use the **Columns, Line Between** setting to display a line between the columns.
5. Insert the **Classic Cars 2.jpg** picture from your **Word Chapter 4** folder in front of the word *The* in the first paragraph.



6. Set the picture's shape height to: **`1.4"`**
7. Apply the **Pencil Grayscale** artistic effect.



8. Set the picture's wrap text option to **Square**.
9. Apply a **Black, Text 1** picture border.

10. Insert a **WordArt** text box using these guidelines:
    - WordArt Style: **Fill: Gold, Accent color 4; Soft Bevel**
    - Move the WordArt so it's in the empty space above the columns.
    - Enter the text: `Classic Cars Club Gold Membership!`

11. Set the shape height to `0.9"` and the shape width to `8"`.
12. Use these guidelines to position the WordArt:
    - Move it up or down so it's roughly centered between the top page border and the tops of the columns.
    - Move it horizontally so the center of the WordArt object is aligned with the line between the columns.
13. Insert the **Wave** shape in the blank space below the columns.

14. Set the shape height to `1.5"` and the shape width to `9"`.
15. Use these guidelines to position the shape:
    - Move it horizontally so the center of the shape is aligned with the line between the columns.
    - Move it up or down so it's roughly centered between the bottom page border and the bottoms of the columns.
16. Enter this text in the shape using a font size of **22 pt**: `Join before April 30 and receive a 25% new-member discount!`
17. Apply the **All Caps** font effect to the Gold Member Benefits heading at the top of the right column.
18. Save your document.
    - *Using eLab:* Save to your **Word Chapter 4** folder as `W4_P2_eSubmission` and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Word Chapter 4** folder as: `W4_P2_Submission`

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

W4-E1 That's the Way I See It

You just completed your training as a dietician, and now you are ready to advertise your services by distributing a brochure throughout the area. Start a new document and save it as: **W4-E1-GoodDiet**

Design a brochure using WordArt, a picture, and a text box and use page color and a page border to give your brochure a polished look. Create a tagline for your business and explain the services you offer and the benefits of eating well. Also include a suggestion that the reader schedule an appointment today.

W4-E2 Be Your Own Boss

As the owner of Blue Jean Landscaping, a Georgia company, you hope to increase sales as your customers get ready to spruce up their gardens with spring plants. Start a new document and save it as: **W4-E2-Spring**

Create a flyer using landscape orientation and include graphics of your choice and a picture. Describe the services you provide and use upbeat verbiage about spring gardening in Georgia. Suggest plants that are appropriate for Georgia's climate. If needed, conduct an Internet search for information about plants that grow well in Georgia in the spring. Give your flyer a finished look by adding page color and a page border.

W4-E3 Demonstrate Proficiency

Stormy BBQ is expanding to include a catering department! You have been asked to create a brochure announcing this new venture. Start a new document and save it as: **W4-E3-Catering**

Include pictures of food that would normally be found in a BBQ restaurant, formatting and cropping them as necessary. Use a SmartArt graphic to list the types of events that you provide catering for and format the image to blend well with the pictures you have chosen. Use one or more text boxes containing testimonials from test customers who have already enjoyed your catering services. Add page color and a page border to your brochure.

WORD

5 Using Mail Merge

In this chapter, you will use the Mail Merge feature to turn boilerplate letters into personalized correspondence. The data source (list of variable information, such as the recipients' addresses) and the main document (form letter) need to be set up and proofed only once. Then you can generate hundreds of letters without checking each one. And you can use Mail Merge for more than letters. You can generate envelopes, labels, legal documents, or just about any fixed-text document that requires variable information. A data source can be a Word document, an Excel worksheet, an Access database, or an Outlook contact list.

LEARNING OBJECTIVES

- Build data sources
- Create main documents
- Perform a mail merge
- Deal with merge problems
- Generate envelopes and labels

Project: Promoting Exercise Classes

Raritan Clinic East is a pediatric medical practice. The practice serves patients ranging in age from newborn to eighteen years. As the administrator who oversees the STAYFIT exercise classes at the clinic, once a week you receive the contact information for all new patients who would benefit from these classes. You will send a letter to the patients explaining the program. Once you set up the main document, you will be able to use it over and over for new patients. And once you design a flexible data source, you can use that same source layout for the exercise letters as well as other communications.

Introducing Mail Merge

Mail Merge is most often used for generating personalized documents, such as Word letters, mailing labels, and envelopes. But Mail Merge is a versatile tool that can be used with any type of document that combines boilerplate text with variable information, such as email, standard contracts, and legal verbiage. Mail Merge can be a big time-saver and is valuable for managing large mailings.

Components of Mail Merge

Merging creates a document that combines information from two files. They are known as the main document and the data source.

- **Main document:** This document controls the merge. It is a Word document that contains the fixed information and merge codes into which the variable information is merged. A typical form letter, for instance, has a different inside address and greeting line in each letter, while the rest of the text is the same for everyone receiving the letter.
- **Data source:** The data source can be another Word document, a spreadsheet, a database file, or contact list in Outlook. The data source contains field names that correspond with the merge codes in the main document.
- **Merged document:** This document is the result of the merge. It is basically multiple "copies" of your letter, with each copy replacing the merge codes with a different recipient's name and information.

You can merge an existing main document with an existing data source, or you can create the main document and data source while stepping through the merge process.

Last Name	First Name	Title	Address Line 1	City	State	ZIP Code
Adams	Andre	Mr.	2224 Culver Drive	San Diego	CA	92102
Bouras	Talos	Mr.	854 Whitmore Drive	San Diego	CA	92101
Chowdrey	Michael	Mr.	146 Meadow Lane	La Jolla	CA	92103
Navarro	Derek	Mr.	3300 Maple Drive	La Jolla	CA	92103
Romero	Nicole	Ms.	132 Lake Street	San Diego	CA	92102
Wright	Mary	Ms.	1240 Potrero Avenue	San Diego	CA	92101

The data source can be Mail Merge recipient list, a Word table, an Excel spreadsheet, or an Access database.

«AddressBlock»

«GreetingLine»

«First_Name», welcome to Raritan Clinic East, one of the finest clinics in the field of pediatric medicine. As part of our ongoing effort to provide the best patient care, we offer an extensive STAYFIT program. Being active helps you be healthier and stronger—and feel your best. And «Your_Doctor» wants the best for you!

In designing your fitness program, choose from the following offerings:

Aerobic Exercise	Flexibility Training	Strength Training
Dance and Movement	Qi Gong	Calisthenics
Water Aerobics	Tai Chi	Free Weights
Zumba	Yoga	Pilates

Having trouble finding the right exercise program for you? Contact a health coach. Call 1-800-555-0101.

Classes are every evening from 7:00–8:00 p.m. Advanced registration is required. Call 1-800-555-0102.

Sincerely,

Molly Lincoln
STAYFIT Coordinator

The main document contains standard text and merge codes where variables from the data source will be merged.

Raritan Clinic East
Pediatric Diagnostic Specialists

719 Coronado Drive
San Diego, CA 92102

February 15, 2021

Mr. Andre Adams
2224 Culver Drive
San Diego, CA 92102

Dear Andre:

Andre, welcome to Raritan Clinic East, one of the finest clinics in the field of pediatric medicine. As part of our ongoing effort to provide the best patient care, we offer an extensive STAYFIT program. Being active helps you be healthier and stronger—and feel your best. And Dr. Bey wants the best for you!

In designing your fitness program, choose from the following offerings:

Aerobic Exercise	Flexibility Training	Strength Training
Dance and Movement	Qi Gong	Calisthenics
Water Aerobics	Tai Chi	Free Weights
Zumba	Yoga	Pilates

Having trouble finding the right exercise program for you? Contact a health coach. Call 1-800-555-0101.

Classes are every evening from 7:00–8:00 p.m. Advanced registration is required. Call 1-800-555-0102.

Sincerely,

Molly Lincoln
STAYFIT Coordinator

Here is a completed merge document with the variables from the data source.

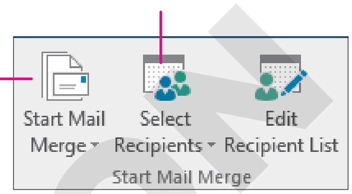
The Benefits of Mail Merge

Mail Merge saves a lot of time. Imagine you want to send a letter to 100 customers. Without Mail Merge, you would have to type the same text in all 100 letters (or copy and paste 100 times). However, with Mail Merge, you create one main document with the standard text and one data source containing customer names and addresses.

You will also really appreciate Mail Merge when you later decide you want to make a change. Using Mail Merge, you can edit the main document once and remerge it with the data source to produce a new merged document. Without Mail Merge, you would need to edit each letter individually.

The Mailings Tab

The Mailings tab provides guidance in setting up the main document and data source, and it helps you conduct the merge. The Start Mail Merge group is the beginning point. Alternatively, you can use the Step-by-Step Mail Merge Wizard from the Start Mail Merge menu to walk you through the process.



Working with the Data Source

Data sources typically contain names, addresses, telephone numbers, and other contact information. However, you can include any information in a data source. For example, you could include part numbers and prices to create a parts catalog. You can create a data source in Word, or you can use an external data source, such as an Access database or Excel spreadsheet. Once a data source is created, it can be merged with many different main documents.

View the video "Creating a Data Source."

DEVELOP YOUR SKILLS: W5-D1

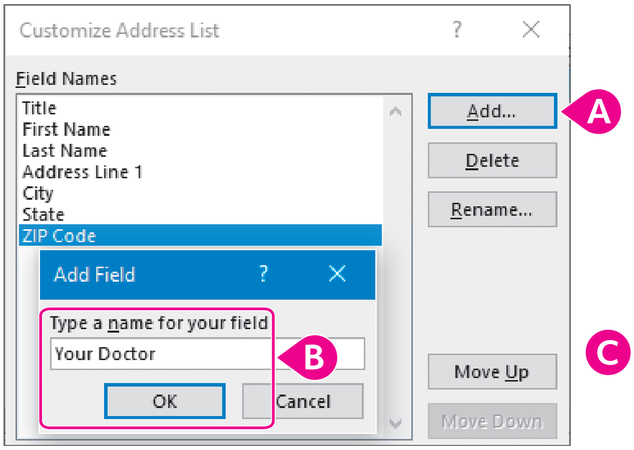
In this exercise, you will use the Start Mail Merge group on the Ribbon to specify a letter as your main document. Then you will customize the data source columns and enter data.

1. Open **W5-D1-ExerciseLtr** from your **Word Chapter 5** folder and save it as: `W5-D1-ExerciseLtrRevised`
2. Choose **Mailings→Start Mail Merge→Start Mail Merge**→**Letters**.

   You are indicating that the letter you just opened will be the main document. Now you will create your mailing list.
3. Choose **Mailings→Start Mail Merge→Select Recipients**→**Type a New List**.

   The New Address List dialog box opens. Now you will remove unnecessary fields and add a new field.
4. Click **Customize Columns** to open the Customize Address List dialog box.

5. Choose **Company Name** and click **Delete**; click **Yes** to verify the deletion.
6. Delete **Address Line 2**, **Country or Region**, **Home Phone**, **Work Phone**, and **E-mail Address**.
7. Follow these steps to add a field:



A Click **Add**.

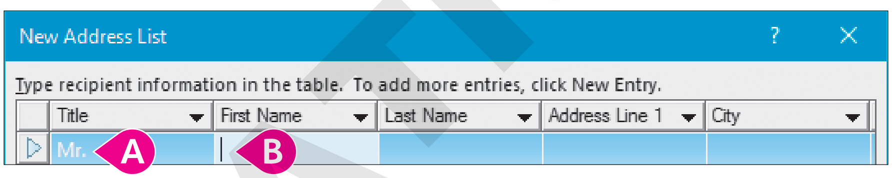
B Type **`Your Doctor`** and click **OK**.

C Click **OK** to close the Customize Address List dialog box.

Enter Records

8. Follow these steps to begin the first record:

   The insertion point should be in the Title field.



A Type **`Mr.`** in the Title field.

B Tap [Tab] to move to the next field.

Tip! *Don't type spaces after entering information in a field; Word will take care of it. You can click a field and make editing changes if necessary.*

9. Type **`Talos`** and tap [Tab] to move to the next field.
10. Finish entering the Talos Bouras data shown, tapping [Tab] between fields. The list of fields will scroll as you [Tab] and type:

Mr. Talos Bouras **854 Whitmore Drive** **San Diego CA 92101** **Dr. Gonzalez**	**Ms. Nicole Romero** **132 Lake Street** **San Diego CA 92102** **Dr. Mansee**	**Mr. Michael Chowdrey** **900 C Street** **La Jolla CA 92103** **Dr. Kelly**

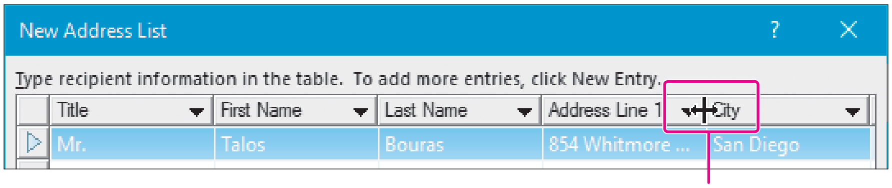
11. When you complete the first record, click **New Entry** or tap [Tab] to generate a new row for the next record; then enter the two remaining records shown.

Tip! *If you accidentally tap [Tab] after the last record, just click Delete Entry to remove the blank record.*

12. Leave the New Address List dialog box open.

Reviewing Your Records

It's a good idea to review your records for accuracy before saving the data source. However, if you miss an error, you can always edit it later.

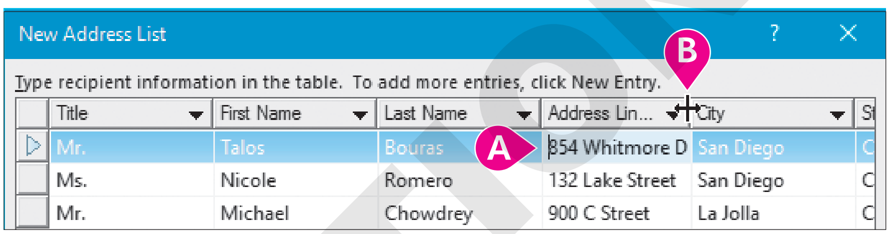


If an entry is wider than the field, position the mouse pointer between column headers and drag to widen (or use the arrow keys to scroll through the entry).

DEVELOP YOUR SKILLS: W5-D2

In this exercise, you will examine your records for accuracy and save your data source.

1. Position the mouse pointer on the scroll bar at the bottom of the dialog box and drag right and left to view all the fields.
2. Follow these steps to review your records:



   - **A** Position the insertion point here and use the **arrow keys** to move through the entry.
   - **B** Position the mouse pointer here and drag to the right to display the entire entry.
3. Review your entry and correct any typos, and then click **OK** to open the Save Address List dialog box.
4. Save the data source file in your **Word Chapter 5** folder as: **`W5-D2-ExerciseLtrData`**

   Your data source is now connected to the main document.

Managing the Address List

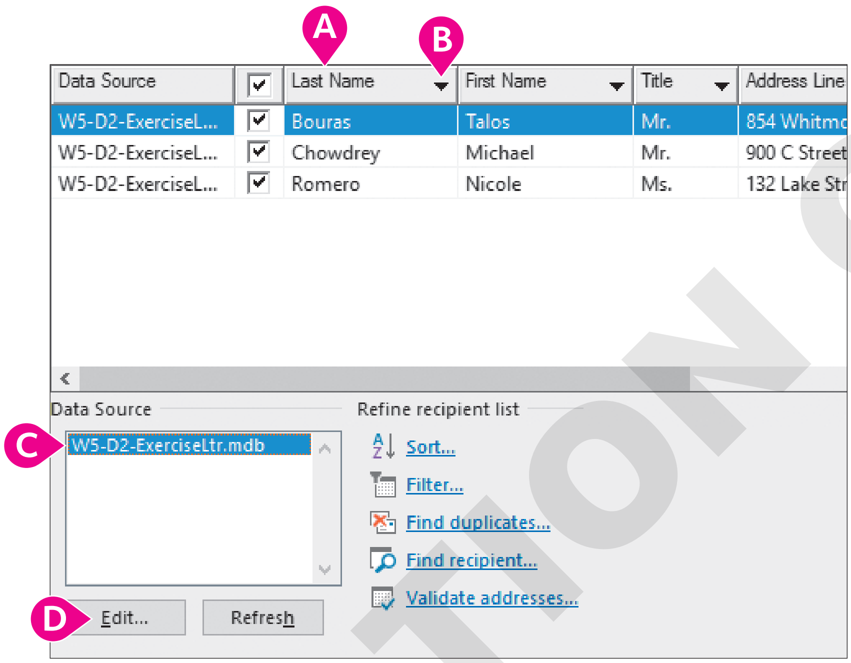
The Mail Merge Recipients dialog box lets you sort and filter address lists, choose records to include in the mail merge, and edit the data source. If you used a Word table, Excel spreadsheet, or other file for your data source, you can edit directly in that data source file. You can also use the New Address List dialog box to create, edit, or delete records and customize columns.

View the video "Working with the Address List."

DEVELOP YOUR SKILLS: W5-D3

In this exercise, you will work with the Mail Merge Recipients dialog box, where you can sort, filter, and edit your mailing list.

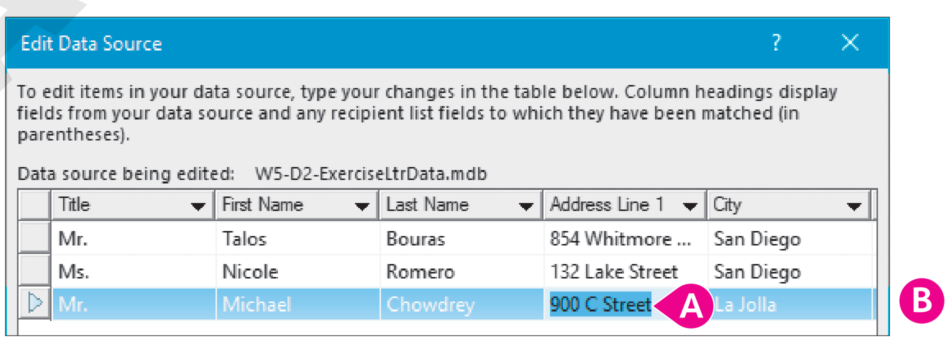
1. Choose **Mailings→Start Mail Merge→Select Recipients** →**Use an Existing List**.
2. Navigate to your **Word Chapter 5** folder and double-click **W5-D2-ExerciseLtrData**.
3. Choose **Mailings→Start Mail Merge→Edit Recipient List** .
4. Follow these steps to sort and filter the list and open the Edit Source dialog box:



- **A** Click this **field header** to sort the list in ascending order by Last Name.
- **B** Click the drop-down arrow and choose **Chowdrey** to filter out other entries. Click the arrow again and choose **(All)** to redisplay all records.
- **C** Click the **data source** to activate the Edit button.
- **D** Click **Edit** to open the Edit Data Source dialog box.

The Edit Data Source dialog box looks and operates like the New Address List dialog box. The entries appear in the order in which they were originally entered.

5. Follow these steps to edit a record:



- **A** Click this address to select it.
- **B** Type `146 Meadow Lane` in its place.

WORD

6. Follow these guidelines to enter the three records in the following illustration:
   - Click the **New Entry** button or tap Tab at the end of the row for each new record.
   - Tap Tab to move from one field to the next.
   - If you accidentally tap Tab after the last record, use **Delete Entry** to remove the blank record.

Ms. Mary Wright 1240 Potrero Avenue San Diego CA 92101 Dr. Gonzalez	Mr. Derek Navarro 3300 Maple Drive La Jolla CA 92103 Dr. Storm	Mr. Andre Adams 2224 Culver Drive San Diego CA 92102 Dr. Bey

7. Review the entries for accuracy and then click **OK** to close the dialog box.
8. Click **Yes** when the message appears verifying your update.
9. Click **OK** to close the Mail Merge Recipients dialog box.

Working with the Main Document

You accomplish a merge by combining a main document with a data source. Merge fields in a main document correspond to fields in the data source. Some merge codes, such as the Address Block code, are composite codes consisting of a number of grouped fields. For example, the Address Block code includes Title, First Name, Last Name, Address, City, State, and Zip.

Merge fields are replaced with the corresponding data from your data source. They appear exactly as you typed them into your data source and exactly where you placed them in your main document.

«Title» «First_Name» «Last_Name» can be contacted at «Home_Phone».

becomes

Ms. Alexia Lopez can be contacted at 831-555-0132.

View the video "Inserting Merge Fields in the Main Document."

DEVELOP YOUR SKILLS: W5-D4

In this exercise, you will set up a form letter. The exercise letter main document should still be open.

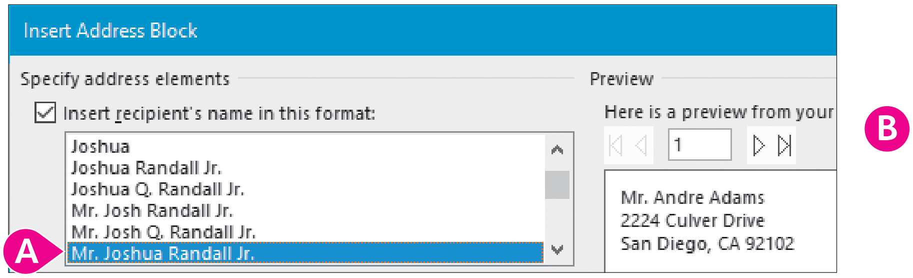
1. If necessary, choose **Home→Paragraph→Show/Hide** ¶ to display formatting characters.
2. Select the **Today's Date** line and tap Delete.
3. Choose **Insert→Text→Date & Time**.
4. Choose the third date format, check **Update Automatically**, if necessary, and click **OK**.

   Checking the Update Automatically option means the date in your letter will always be the current date, which is a convenient option for form letters that you want to use again.
5. Tap Enter four times after inserting the date.

   Now you will insert the Address Block code.
6. Choose **Mailings→Write & Insert Fields→Address Block**.

   The Insert Address Block dialog box allows you to choose a format for the address block.

7. Follow these steps to insert an Address Block code:



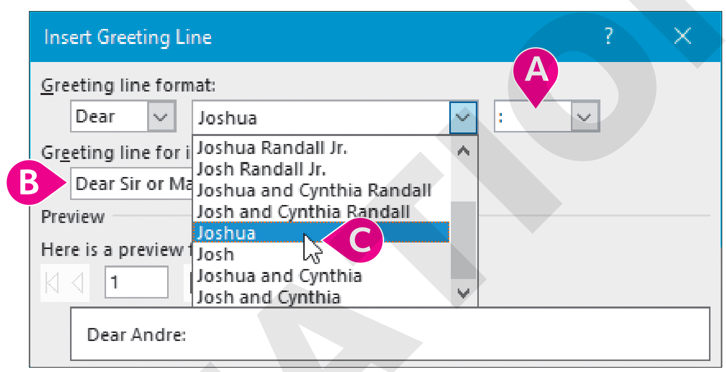
- **A** Choose different formats and view the preview on the right; then choose **Mr. Joshua Randall Jr.**
- **B** Leave the remaining options as shown and click **OK**.

The <<AddressBlock>> *code appears in the letter. During the merge, the information from the data source will be inserted at the Address Block code location.*

8. Tap Enter twice.

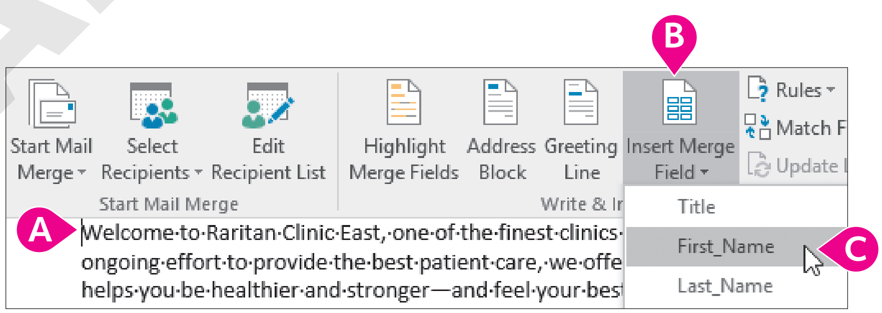
Now you will insert the Greeting Line code.

9. Choose **Mailings→Write & Insert Fields→Greeting Line**.
10. Follow these steps to modify and insert the Greeting Line code:



- **A** Change this option to a colon (:).
- **B** Note the generic greeting that will be used for data records if they are missing last names.
- **C** Choose **Joshua** from the list and then click **OK**.

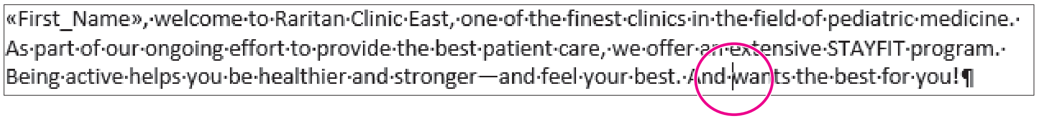
11. Tap Enter twice.
12. Follow these steps to insert the First Name code into the letter:



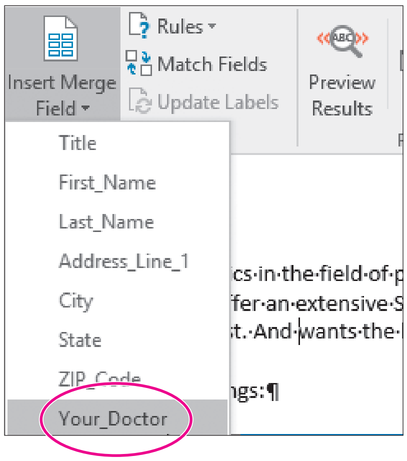
- **A** If necessary, position the insertion point to the left of *Welcome*.
- **B** Click the **Insert Merge Field menu** button ▼.
- **C** Choose **First_Name**.

13. Type a comma and tap Spacebar, then delete the uppercase *W* and replace it with a lowercase *w*.

14. Position the insertion point to the left of *wants* as shown:

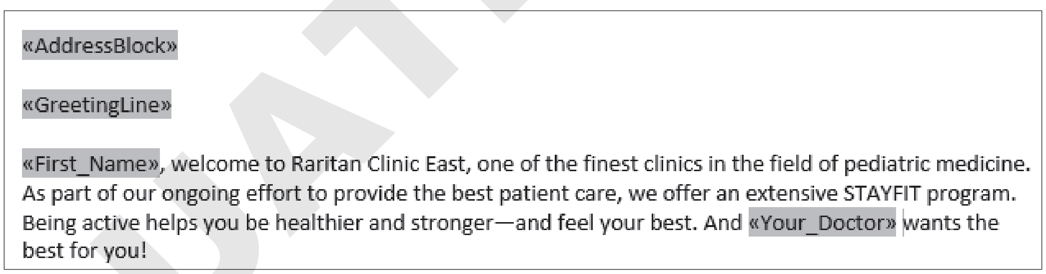

«First_Name»,·welcome·to·Raritan·Clinic·East,·one·of·the·finest·clinics·in·the·field·of·pediatric·medicine.·
As·part·of·our·ongoing·effort·to·provide·the·best·patient·care,·we·offer·an·extensive·STAYFIT·program.·
Being·active·helps·you·be·healthier·and·stronger—and·feel·your·best.·And·wants·the·best·for·you!¶

15. Choose **Mailings→Write & Insert Fields→Insert Merge Field menu button ▾**, choose **Your_Doctor**, and then tap Spacebar.



16. Take time to review your letter, making sure the merge fields match this example. In particular, make sure you use the proper punctuation between fields and the text.

The merge fields are highlighted in this figure to help you locate them; your merge fields do not need to be highlighted. (The Highlight Merge Fields button is in the Write & Insert Fields group.)


«AddressBlock»

«GreetingLine»

«First_Name», welcome to Raritan Clinic East, one of the finest clinics in the field of pediatric medicine. As part of our ongoing effort to provide the best patient care, we offer an extensive STAYFIT program. Being active helps you be healthier and stronger—and feel your best. And «Your_Doctor» wants the best for you!

Note! *Any punctuation or spacing errors that occur in your main document will appear in every merged letter.*

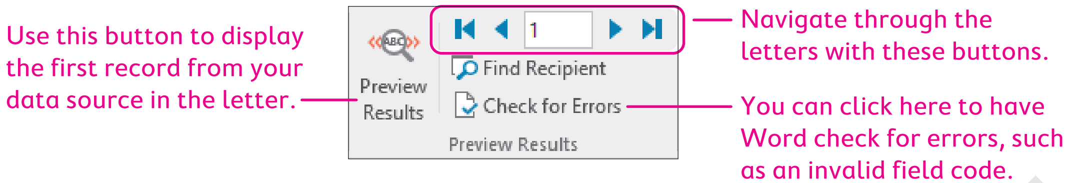
17. Choose **Home→Paragraph→Show/Hide** ¶ to turn off formatting marks.

18. Save your file.

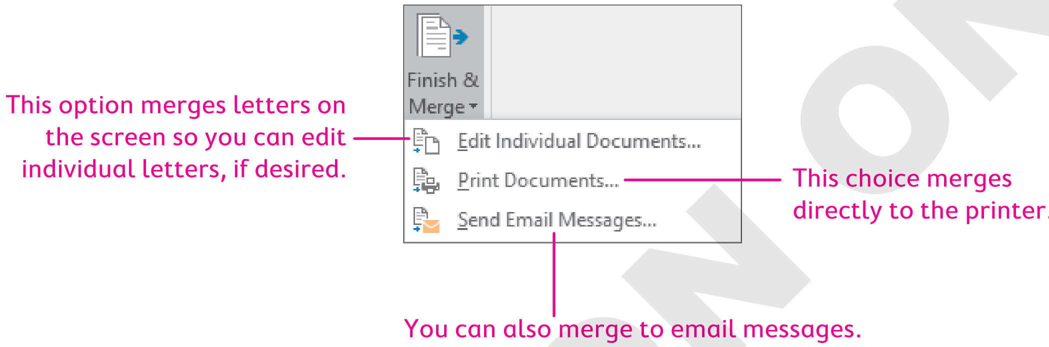
Conducting a Merge

Merging combines a main document with a data source document. If you are merging a form letter with a data source, Word produces a personalized copy of the form letter for each record in the data source.

It's always a good idea to preview the merge results before you complete the merge so you can make any corrections. If you notice an error that needs to be fixed in the main document, simply click Preview Results again to return to the main document.



When you feel confident that your letter and data source are accurate, you are ready to complete the merge.



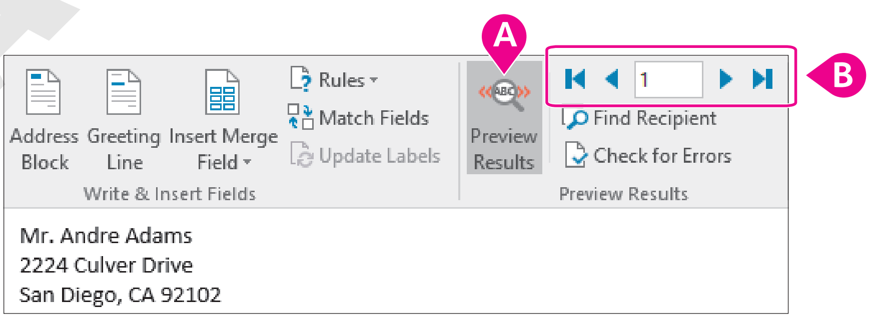
To Save or Not to Save?

Merged documents are rarely saved because they can easily be reconstructed by merging the main document with the data source. Instead, merged documents are usually previewed, printed, and closed without saving. But you can certainly save the merged document if you wish to have a record of it. If a merged document contains errors, you can close it without saving, edit the main document or data source, and conduct the merge again.

DEVELOP YOUR SKILLS: W5-D5

In this exercise, you will use the Preview Results command to review your letters; then you will complete the merge on the screen.

1. If necessary, switch to the **Mailings** tab.
2. Follow these steps to preview the merge:



(A) Click **Preview Results** to display the first inside address.

(B) Use the navigation buttons to scroll through all your merged documents.

3. Choose **Mailings→Finish→Finish & Merge** →**Edit Individual Documents**.
4. Click **OK** to merge all records.
5. Scroll through the letters and scan their contents.

   Notice that there is one letter for each record in the data source.
6. Close the merged document without saving.
7. Choose **Mailings→Preview Results→Preview Results** again to display the main document instead of the previews.

Working with Merge Problems

Several common errors can cause a merge to produce incorrect results. The merged document (or preview) will usually provide clues as to why a merge fails to produce the intended results. Once you identify an error in the merged document, such as leaving out a comma or space before or after a merge field, you can then conduct the merge again to determine whether the error was fixed. Repeat this process until the merge works as intended.

COMMON MERGE PROBLEMS

Problem	Solution
The same error appears in every merge letter.	The problem is in the main document. Correct the error and perform the merge again.
Some letters are missing data.	Some records in the data source are missing data. Add data and perform the merge again.
Some letters have incorrect data.	Some records in the data source are incorrect. Correct the errors and perform the merge again.

DEVELOP YOUR SKILLS: W5-D6

In this exercise, you will examine your document for merge problems. This exercise does not address all possible merge problems; it does, however, address one specific error that you will make intentionally. You will insert a colon after the Greeting Line code.

1. Position the insertion point after <<*GreetingLine*>> and type a colon (**:**).
2. Choose **Mailings→Finish→Finish & Merge** →**Edit Individual Documents**.
3. Click **OK** to merge all records.
4. Browse through the merged document and notice there are two colons following the greeting line in every letter.

   Because the error occurs in every letter, you know the error is in the main document.
5. Locate any other errors and notice how often the errors occur (in every merged letter or just one).

   Next you will correct the double colon error and any other errors you discovered that occurred in all letters.

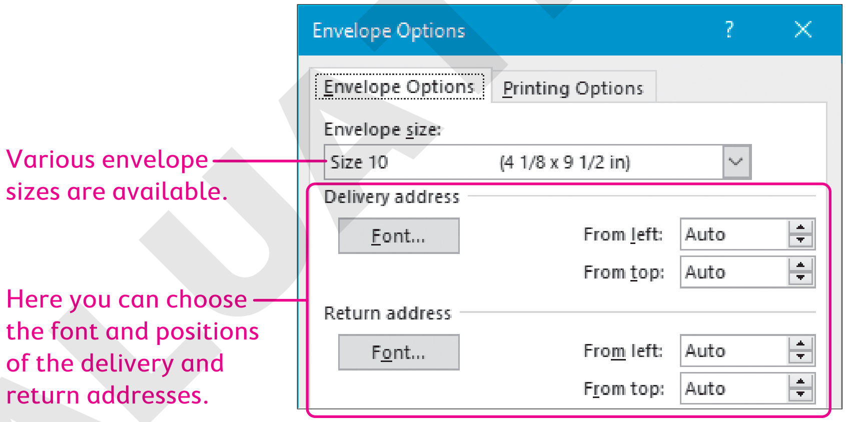
6. Close the merged document without saving; then remove the colon following <<*GreetingLine*>> and save the main document.
7. Follow these guidelines if you find a data error in just one letter:
   - Choose **Mailings→Start Mail Merge→Edit Recipient List**.
   - In the Mail Merge Recipients dialog box, highlight the **data source** in the bottom-left corner and click **Edit**.
   - Fix any errors and click **OK**; click **Yes** to update the data.
   - Click **OK** to close the dialog box.
8. When you have corrected any errors, execute the merge again.
9. Close the merged document without saving it and then save and close the exercise letter main document.

Merging Envelopes and Labels

When you begin a mail merge, you are presented with options for the type of main document you can create. In addition to form letters, you can choose envelopes, labels, and other types of documents. You can use the same data source for various main documents. For example, you can use the same data source for envelopes and mailing labels that you used for the form letter.

Generating Envelopes with Mail Merge

Mail Merge lets you choose the envelope size and formats. The standard business (Size 10) envelope is the default. Check your printer manual for instructions on loading envelopes.



DEVELOP YOUR SKILLS: W5-D7

In this exercise, you will choose an envelope as the main document and connect the exercise letter data file to the envelope.

1. Start a new, blank document.
2. Choose **Mailings→Start Mail Merge→Start Mail Merge** →**Envelopes**.
3. In the Envelope Options dialog box, if necessary, choose **Size 10** as the envelope size and click **OK**.

   Now you will attach the same data source that you used for your letter.

4. Choose **Mailings→Start Mail Merge→Select Recipients** →**Use an Existing List**.
5. In the Select Data Source dialog box, navigate to your **Word Chapter 5** folder and open **W5-D2-ExerciseLtrData**.

Arranging the Envelope

You can insert an Address Block code in the envelope main document just as you do for form letter main documents. If you are not using envelopes with preprinted return addresses, you can type your return address. You save an envelope main document like any other main document.

DEVELOP YOUR SKILLS: W5-D8

In this exercise, you will place the return address and the Address Block code on the envelope. Then you will merge the envelope main document with the data source.

1. If necessary, display formatting marks.
2. Type this return address, starting at the first paragraph symbol in the upper-left corner of the envelope:

   `Raritan Clinic East`

   `719 Coronado Drive`

   `San Diego, CA  92102`
3. Position the insertion point next to the paragraph symbol toward the center of the envelope.
4. Choose **Mailings→Write & Insert Fields→Address Block** .
5. Click **OK** to accept the default address block settings.

   The address information from the data source will appear in this location. Now you will preview the merge.
6. Choose **Mailings→Preview Results→Preview Results** to display a record from the data source in the envelope.
7. Use the navigation buttons in the Preview Results group to scroll through all of your merged envelopes.
8. Choose **Mailings→Finish→Finish & Merge** →**Edit Individual Documents** and click **OK** to merge all records.
9. Turn off formatting marks and then scroll through the envelopes and notice that there is one envelope for each record in the data source.

   You could use the envelopes for mailing the letters created in the previous exercises. Each letter would have a corresponding envelope because they are generated from the same data source.
10. If necessary, fix any problems with the mail merge and merge the envelopes again.
11. Close the merged document without saving it.
12. Choose **Mailings→Preview Results→Preview Results** to turn off the preview.
13. Save the main document envelope in your **Word Chapter 5** folder as **`W5-D8-ExerciseLtrEnv`** and then close it.

Generating Labels with Mail Merge

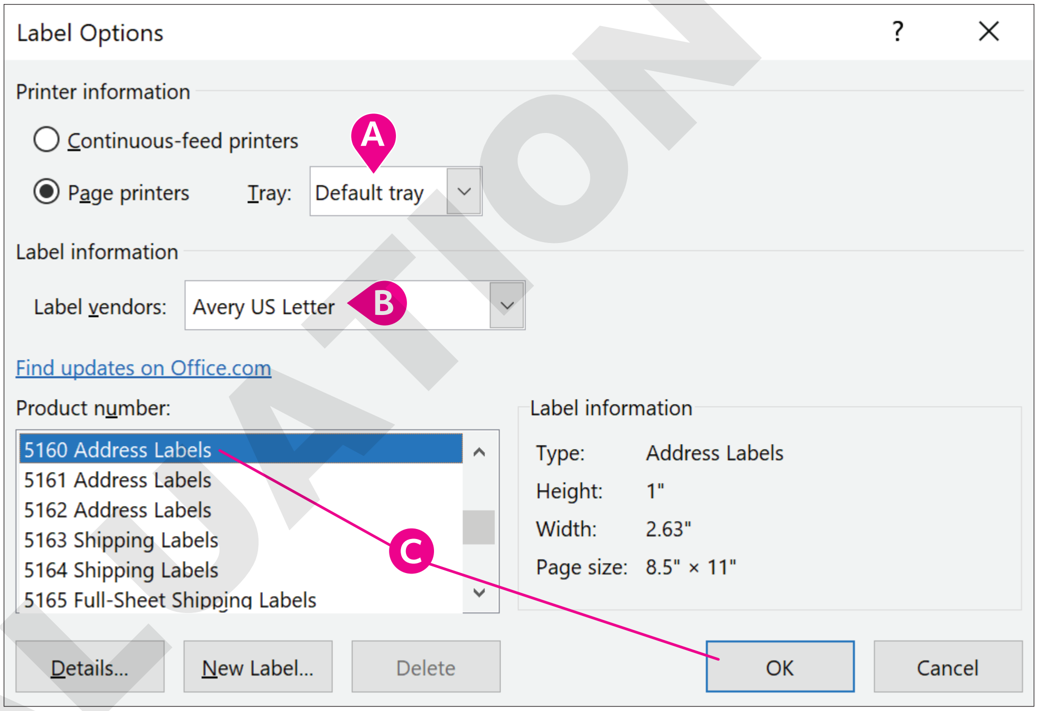
You can use Mail Merge to generate mailing labels for each record in a data source. Mail Merge lets you choose the label format, sheet size, and other specifications. It also lets you insert an Address Block code and other codes in the main document. Like other main documents, a label main document can be saved for future use.

View the video "Using Label Options."

DEVELOP YOUR SKILLS: W5-D9

In this exercise, you will set up a labels main document and merge it with the data source used in the previous exercises.

1. Start a new, blank document and, if necessary, display formatting marks; also, if necessary, set the zoom back to 100%.
2. Choose **Mailings→Start Mail Merge→Start Mail Merge →Labels**.
3. Follow these steps to choose a printer option and a label:



A. Choose **Default Tray**. The text in parentheses may vary based on the printer model.

B. Choose **Avery US Letter**.

C. Choose **5160 Address Labels** and click **OK**.

The labels main document appears in the window. Labels are contained in a Word table, but don't worry. You don't have to be a table expert to create labels.

Connect the Data Source

4. Choose **Mailings→Start Mail Merge→Select Recipients →Use an Existing List**.
5. In the Select Data Source dialog box, navigate to your **Word Chapter 5** folder and open **W5-D2-ExerciseLtrData**.

6. Make sure the insertion point is next to the paragraph symbol in the first address label.

   Notice that the space for the first label is blank and all the rest have a Next Record code in them. Now you will add the Address Block code.

7. Choose **Mailings→Write & Insert Fields→Address Block** and click **OK**.
8. Choose **Mailings→Write & Insert Fields→Update Labels** to place the Address Block code in all labels.

   Your address will fit the labels better if you remove the additional spacing.

9. Select the table and choose **Layout→Paragraph**; then type **0** in the Before field and tap Enter.
10. Choose **Mailings→Preview Results→Preview Results** to see how the labels will look when you print them.
11. Turn off Preview Results when you are finished.

Conduct the Merge

12. Choose **Mailings→Finish→Finish & Merge** →**Edit Individual Documents**.
13. Click **OK** to merge all the records.
14. Close your merged document without saving it.
15. Save the labels main document in your **Word Chapter 5** folder as: **`W5-D9-MergeLabels`**
16. Close the document and then exit Word.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: W5-R1

Create a Data Source and Main Document

In this exercise, you will create a data source and main document for a Kids for Change mailing. The kids are holding a fundraiser for a microlending project that focuses on providing economic opportunities for entrepreneurs in India. They will conduct a mailing to announce the upcoming project and canvass their neighborhoods for donations.

1. Start Word, open **W5-R1-Fundraiser** from your **Word Chapter 5** folder, and save it as: **`W5-R1-FundraiserRevised`**
2. Choose **Mailings→Start Mail Merge→Start Mail Merge** →**Letters** to identify the fund-raising letter as the main document.
3. Choose **Mailings→Start Mail Merge→Select Recipients→Type a New List**.
4. Click **Customize Columns**.
5. Click **Address Line 2** and click **Delete**; click **Yes** to confirm the deletion.
6. Also delete the following fields:
   - Country or Region
   - Home Phone
   - Work Phone
   - E-mail Address
7. Click **Add**, type **`Member First Name`**, and then click **OK**.
8. Also add a field called **`Member Last Name`** and then click **OK** twice.
9. With the insertion point in the Title field, type **`Ms.`** and tap Tab.
10. Follow these guidelines to complete the data source list:
    - Continue typing and tabbing to complete the first record shown.
    - Be sure to include the member first name, *Eric*, and last name, *Speck*, in the first record.
    - Tap Tab to begin a new record and then continue typing and tabbing to enter the next three records.
    - Note that there is no company information for the third record; Tab through that field.
    - If you accidentally tap Tab following the last record, use the **Delete Entry** button to remove the blank record.

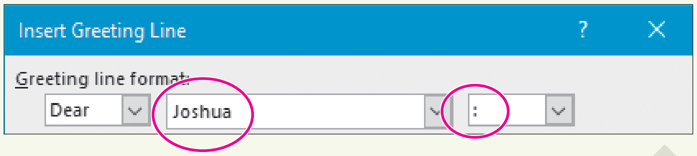
Ms. Loretta Morales **Morales Super Market** **311 Ocean Street** **Miami FL 33130** **Member: Eric Speck**	**Mr. Tony D'Agusto** **Tony's Trattoria** **675 Miller Ave.** **Miami FL 33129** **Member: Wendy Chang**
Mr. Allan Morgan **951 4th Street** **Miami FL 33136** **Member: Stella Hopkins**	**Ms. Margarita Elizondo** **Elan Fashions** **307 Dolphin Way** **Miami FL 33136** **Member: Diego Cantero**

WORD

11. Review your records for accuracy; click **OK** when you are satisfied with your work.
12. Save the data source in your **Word Chapter 5** folder as: `W5-R1-FundraiserData`

Set Up the Main Document

13. In the fundraiser letter, select **[Inside Address]** (but not the paragraph symbol at the end of the line) and tap Delete.
14. Choose **Mailings→Write & Insert Fields→Address Block** and then click **OK** to accept the default address block settings.
15. Delete **[Name]** in the greeting line but not the paragraph symbol at the end of the line.
16. Choose **Mailings→Write & Insert Fields→Greeting Line**.
17. Choose **Joshua** and **colon** in the Greeting Line Format area as shown and click **OK**.



18. In the last sentence of the first paragraph, delete **[Member Name]**.
19. Choose **Mailings→Write & Insert Fields→Insert Merge Field menu button ▾→ Member_First_Name**.
20. Tap Spacebar and insert the **Member_Last_Name** field.
21. Save and close the letter.

REINFORCE YOUR SKILLS: W5-R2

Merge a Letter, Envelopes, and Labels

Kids for Change is starting an after-school tutoring program. The tutoring supervisor will send form letters to parents announcing the program. In this exercise, you will merge a data source with a letter. You will also merge the data source with envelopes and labels.

1. Open **W5-R2-ParentLtr** from your **Word Chapter 5** folder and save it as: `W5-R2-ParentLtrRevised`

   Notice the merge fields in the letter, including four merge fields in the body of the letter, and that <<Child_Name>> *appears twice.*
2. Choose **Mailings→Start Mail Merge→Start Mail Merge →Letters**.
3. Choose **Mailings→Start Mail Merge→Select Recipients→Use an Existing List**.
4. Navigate to your **Word Chapter 5** folder and open **W5-R2-ParentData**.
5. Choose **Mailings→Preview Results→Preview Results**.
6. Navigate through the records and then turn off Preview Results.
7. Choose **Mailings→Finish→Finish & Merge →Edit Individual Documents** and then click **OK** to merge all records.
8. Scroll through the merged letters; close the file without saving it.
9. Save and close the parent letter main document.

Generate Envelopes

10. Start a new, blank document.

11. Choose **Mailings→Start Mail Merge→Start Mail Merge→Envelopes**.

12. Click **OK** to accept the envelope defaults.

13. Choose **Mailings→Start Mail Merge→Select Recipients→Use an Existing List**.

14. Navigate to your **Word Chapter 5** folder and open **W5-R2-ParentData** to attach the data source to the envelope.

15. If necessary, display formatting marks; then type this return address at the first paragraph symbol in the upper-left corner of the envelope:

`Kids for Change`

`726 Throckmorton Ave.`

`Sacramento, CA  95613`

16. Position the insertion point next to the paragraph symbol toward the center of the envelope.

17. Choose **Mailings→Write & Insert Fields→Address Block**; click **OK** to accept the address block defaults.

18. Choose **Mailings→Preview Results→Preview Results**.

19. Navigate through the records and then turn off Preview Results.

20. Save the envelope as **`W5-R2-ParentEnv`** and close the envelope file.

Generate Mailing Labels

21. Start a new, blank document.

22. Choose **Mailings→Start Mail Merge→Start Mail Merge→Labels**.

23. If necessary, choose **Avery US Letter** as the Label Vendor and **5160 Easy Peel Address Labels** as the Product Number, and then click **OK**.

24. Choose **Mailings→Start Mail Merge→Select Recipients→Use an Existing List**.

25. Navigate to your **Word Chapter 5** folder and open **W5-R2-Parent Data**.

26. Display formatting marks, if necessary, and then make sure the insertion point is next to the paragraph symbol in the first label.

27. Choose **Mailings→Write & Insert Fields→Address Block**; click **OK** to accept the address block defaults.

28. Choose **Mailings→Write & Insert Fields→Update Labels** to insert the Address Block code on all labels.

29. Choose **Mailings→Preview Results→Preview Results** to verify all labels will print correctly.

Because the addresses are three lines, they fit on the Avery 5160 labels without removing extra spacing.

30. Turn off Preview Results to return to the labels main document.

31. Save the labels file in your **Word Chapter 5** folder as: **`W5-R2-ParentLabels`**

32. Close the file.

REINFORCE YOUR SKILLS: W5-R3

Merge Letters and Envelopes

Kids for Change is sponsoring a walkathon fundraiser to buy musical instruments for the local elementary school. The walkathon supervisor will be contacting Kids for Change members and encouraging their participation. In this exercise, you will designate a letter as the main document and create a data source. Then you will preview the results and correct any merge problems before conducting the merge. Finally, you will generate envelopes for the letters.

1. Open **W5-R3-Walkers** from your **Word Chapter 5** folder and save it as: `W5-R3-WalkersRevised`
2. Choose **Mailings→Start Mail Merge→Start Mail Merge→Letters** to designate the Walkers letter as the main document.
3. Choose **Mailings→Start Mail Merge→Select Recipients→Type a New List**.

   Now you will customize the data source columns.
4. Click **Customize Columns** to display the Customize Address List dialog box.
5. Click **Company Name** and click **Delete**; click **Yes** to confirm the deletion.
6. Delete the following fields and then click **OK**:
   - **Address Line 2**
   - **Country or Region**
   - **Work Phone**
   - **E-mail Address**
7. In the Title field, type **`Mr.`** and tap Tab to move to the next field.
8. Type **`Sean`** in the First Name field, tap Tab, and type **`Corn`** in the Last Name field.
9. Continue tabbing and typing to complete the *Sean Corn* record as shown, tap Tab to begin the next record, and then enter the remaining records:

Mr. Sean Corn 308 Alhambra Avenue Monterey CA 93940 831-555-0134	Mr. Craig Dostie 31200 Erwin Street Monterey CA 93940 831-555-0167	Ms. Alexia Lopez 2134 Harbor Blvd. Monterey CA 93942 831-555-0132
Ms. Margaret Wong 1308 West Ramona Blvd. Monterey CA 93940 831-555-0198	Ms. Phyllis Coen 4745 Buffin Avenue Monterey CA 93943 831-555-0178	Mr. Winston Boey 263 East Howard Street Monterey CA 93944 831-555-0196

10. Review your records for accuracy and make any necessary corrections.

    Now you will sort your list by Last Name.
11. Click the **Last Name** column header to sort the list alphabetically in ascending order and then click **OK**.
12. Navigate to your **Word Chapter 5** folder and save the file as: **`W5-R3-WalkersData`**

Set Up the Main Document and Correct Merge Problems

13. Follow these guidelines to insert the merge codes:
    - Replace *INSIDE ADDRESS* with the **Address Block** code using the default formats.
    - Replace *GREETING LINE* with the **Greeting Line** code, changing the Greeting Line Format name to **Joshua**.
    - In the last paragraph, replace *HOME PHONE* with the **Home_Phone** code.
14. Use the Preview Results feature to review your letters, correct any errors in the main document, and then turn off Preview Results.

    Phyllis Cohen's name is misspelled in the data source. You will make that correction now.
15. Choose **Mailings→Start Mail Merge→Edit Recipient List**.
16. Click the **data source** in the bottom-left corner and click **Edit**.
17. Change the spelling from *Coen* to `Cohen` and then click **OK**.
18. Click **Yes** to verify the update and then click **OK** to close the Mail Merge Recipients dialog box.
19. Turn on Preview Results and use the navigation buttons to verify the change to the data source and any changes you made to the main document; then turn off Preview Results.
20. Choose **Mailings→Finish→Finish & Merge**→**Edit Individual Documents** and then click **OK**.
21. Scroll through your letters and then close the merged document without saving it; save and close the main document letter.

Merge Envelopes

22. Start a new, blank document.
23. Choose **Mailings→Start Mail Merge→Start Mail Merge→Envelopes**.
24. Make sure the envelope is **Size 10** and click **OK**.

    Now you will attach the data source to your envelope.
25. Choose **Mailings→Start Mail Merge→Select Recipients**→**Use an Existing List**.
26. Navigate to your **Word Chapter 5** folder and open **W5-R3-WalkersData**.
27. If necessary, turn on formatting marks; then type this return address at the top paragraph symbol in the upper-left corner of the envelope:

    `Kids for Change`

    `456 Bayside Road`

    `Monterey, CA  93943`
28. Position the insertion point next to the paragraph symbol toward the middle of the envelope.
29. Choose **Mailings→Write & Insert Fields→Address Block** and then click **OK**.
30. Choose **Mailings→Preview Results→Preview Results**.
31. Use the navigation buttons to view all envelopes and then turn off the preview.
32. Choose **Mailings→Finish→Finish & Merge→Edit Individual Documents** and then click **OK**.
33. Scroll through the envelopes and then close the file without saving it.
34. Save the envelope main document in your **Word Chapter 5** folder as **`W5-R3-WalkersEnv`** and close the document.

Apply Your Skills

APPLY YOUR SKILLS: W5-A1

Create a Data Source and Main Document

Universal Corporate Events is announcing a new affordable and flexible program for its small-business clients. In this exercise, you will create a small-business client data source, and you will review the records and sort the list. Then you will specify a letter as a main document and insert merge fields in the letter.

1. Open **W5-A1-SmallBiz** from your **Word Chapter 5** folder and save it as: **`W5-A1-SmallBizRevised`**
2. Specify the Small Biz letter as the main document.

   Now you will customize the columns for your new data source.
3. Delete and add columns as needed to create the following fields in your data source:
   - Title
   - First Name
   - Last Name
   - Company Name
   - Address Line 1
   - City
   - State
   - Zip Code
   - Agent Name
4. Add these records to your data source:

Mr. Tony Simpson **Bigger Time Video Distributors** **312 York Lane** **Richmond CA 94804** Agent Name: **David Roth**	**Mr. Jason Jones** **Move It Distribution** **2233 Crystal Street** **San Mateo CA 94403** Agent Name: **Tammy Nelson**	**Ms. Debbie Thomas** **Barker Books** **497 Tennessee Street** **Richmond CA 94804** Agent Name: **Jacob Williams**

5. Sort the data source in ascending alphabetic order by **Company Name**.
6. Save the data source in your **Word Chapter 5** folder as: **`W5-A1-SmallBizData`**
7. Delete the *Today's Date* placeholder, choose **Insert→Text→Date & Time**, choose the third date format, and make sure **Update Automatically** is checked.
8. Follow these guidelines for inserting merge codes in the main document:
   - Replace *INSIDE ADDRESS* with the **Address Block** code using the default formats.
   - Replace *GREETING LINE* with the **Greeting Line** code and change the ending punctuation to a colon.
   - In the last paragraph, replace *AGENT NAME* with the **Agent_Name** code.
9. Preview the letters and check that the spacing is correct, and then turn off the preview and make any needed changes.
10. Save and close the letter.

APPLY YOUR SKILLS: W5-A2

Complete a Merge

Universal Corporate Events is conducting a seminar on visa requirements for United States citizens. It is sending a form letter invitation to its clients' in-house travel agents. In this exercise, you will merge letters, envelopes, and labels. You will also correct merge problems.

1. Open **W5-A2-VisaLtr** from your **Word Chapter 5** folder and save it as: **`W5-A2-VisaLtrRevised`**
2. Designate the letter as the main document and **W5-A2-VisaData** from your **Word Chapter 5** folder as the data source.
3. Preview the merge and notice that there is an error in the greeting line.
4. Close the preview and then edit the main document and preview the letters again, checking that the greeting line is correct.
5. Close the preview; save and close the main document.

Merge Envelopes and Labels

6. Start a new, blank document and create a **Size 10** envelope as the main document with this return address:

   `Suzanne Frost, Sales Manager`

   `Universal Corporate Events`

   `129 Potter Road`

   `Middlefield, CT  06455`
7. Attach **W5-A2-VisaData** as the data source for the envelopes.
8. Insert an **Address Block** code in the middle of the envelope using the default formats.
9. Preview the envelopes.
10. Save the envelope main document in your **Word Chapter 5** folder as **`W5-A2-VisaEnv`** and then close it.
11. Start a new, blank document and create a label main document using **Avery US Letter** as the Label Vendor and **5160 Address Labels** as the Product Number.
12. Attach **W5-A2-VisaData** as the data source.
13. Insert the **Address Block** code in the first label using the default formats and use the **Update Labels** command to replicate the Address Block code on all labels.
14. Preview the results and notice that the addresses don't fit well on the labels.
15. Close the preview, select the labels table, and remove Word's extra spacing by entering **0** in the Before field.

    Hint: The Before field is at Layout→Paragraph.
16. Preview the results again to ensure that the labels fit correctly.
17. Close the preview and save the labels main document in your **Word Chapter 5** folder as: **`W5-A2-VisaLabels`**
18. Close the labels main document.

WORD

APPLY YOUR SKILLS: W5-A3

Create a Mail Merge for Trip Winners

A Universal Corporate Events client is rewarding its top sales performers with a trip to Tokyo. It will send an itinerary letter to the company's winners. In this exercise, you will create a data source using customized columns and add merge codes to main documents. You will preview and merge the main documents with the data source, make an editing change to a record, and sort the data source.

1. Open **W5-A3-TokyoLtr** from your **Word Chapter 5** folder and save it as: `W5-A3-TokyoLtrRevised`
2. Specify the letter as the main document and then start a new data source list.
3. Customize the columns by deleting some fields and keeping the fields shown here:
   - Title
   - First Name
   - Last Name
   - Company Name
   - Address Line 1
   - City
   - State
   - Zip Code
4. Create the data source using these three records and save it as: `W5-A3-TokyoData`

Ms. Jasleen Mahal Superior Storage Devices 951 Industrial Way Trenton NJ 08601	Mr. George Iverson Superior Storage Devices 951 Industrial Way Trenton NJ 08601	Mr. Anthony Waldek Superior Storage Devices 951 Industrial Way Trenton NJ 08601

5. Follow these guidelines to insert merge codes in the letter:
   - Replace *INSIDE ADDRESS* with **Address Block** code using the default formats.
   - Replace *GREETING LINE* with **Greeting Line** code using the default formats.
   - In the first paragraph, replace *COMPANY NAME* with the **Company_Name** code.
   - In the last paragraph, replace *FIRST NAME* with the **First_Name** code.

Preview the Merge Results

6. Preview the merge, make sure the spacing is correct, and then close the preview.
7. Modify the spacing in the main document, if necessary.

   You want the greeting line to be less formal, so you will change the format to the recipient's first name.
8. Right-click the **Greeting Line** code and choose **Edit Greeting Line** from the menu.
9. In the Greeting Line Format area, click the drop-down arrow next to *Mr. Randall*, choose **Joshua** from the list, and click **OK**.
10. Preview the letters again to ensure the change was made and then turn off the preview.

11. Merge the letter with the data source, choosing **Edit Individual Documents**, and then scroll through the letters.
12. Close the merged document without saving it; save and close the main document.

Merge Envelopes and Labels

13. Start a new, blank document, designate it as a mail merge envelope, and use a **Size 10** envelope.
14. Insert this return address on the envelope:

    Ms. Tasha Reynolds

    Universal Corporate Events

    456 Riverview Road

    Trenton, NJ 08601

15. Attach the Tokyo data source to the envelope and insert the **Address Block** code using defaults.
16. Merge the envelopes and check them for accuracy; if necessary, correct any errors and conduct the merge again.
17. Close the merge document without saving it.
18. Save the envelope main document as **W5-A3-TokyoEnv** and then close it.
19. Start a new, blank document and designate it as **Labels**.
20. Choose **Avery US Letter** as the Label Vendor and **5160 Address Labels** as the Product Number.
21. Attach the Tokyo data source, insert the **Address Block** code with default settings in the first label, and update the labels to replicate the **Address Block** code in all labels.
22. Preview the labels and notice the addresses don't fit well because of Word's extra spacing.
23. Close the preview, select the labels table, and remove the extra spacing.
24. Preview the labels again to verify the change in spacing and then close the preview.
25. Save the labels main document as **W5-A3-TokyoLabels** and then close it.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: W5-P1

Taylor Games New Items Letter

Taylor Games wants to track customer purchases, storing that information in a data source. In this exercise, you will set up a prototype data source and a letter that will be sent to existing customers promoting new items.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **W5_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **W5_P1_Start** from your **Word Chapter 5** folder.

   You'll now set up a mail merge using W5_P1_eStart as your mail merge main document.
2. Create a new Address List for your main document using these guidelines:
   - Delete these field names from the Field Names list: **Title**, **Company Name**, **Address Line 2**, **Country or Region**, **Home Phone**, **Work Phone**, and **E-mail Address**.
   - Add a field named `Item Type` to the end of the Field Names list.
3. Add these three customer entries to your Address List:

First Name	Last Name	Address Line 1	City	State	ZIP Code	Item Type
Curt	Smith	555 Rock Lane	Danville	CA	94506	Dice
Fred	Parker	664 Park Road	Scottsdale	AZ	85258	Games
Kim	Price	1775 Pine Place	Elmira	NY	14901	Books

4. Save your address list to your **Word Chapter 5** folder as: `W5_P1 Address List.mdb`
5. In the main document on the second empty paragraph below *Today's Date*, insert an **Address Block** using the **Joshua Randall Jr.** format.

   Today's·Date¶
   ¶
   ¶
   ¶
   Dear·FIRSTNAME:¶

6. Replace the FIRSTNAME and ITEMTYPE placeholder text with merge fields as follows. Make sure the spacing between the merge fields and surrounding text is the same as the current spacing between the placeholders and text.
   - Replace the two occurrences of *FIRSTNAME* with the **First_Name** merge field.
   - Replace *ITEMTYPE* in the first body paragraph with the **Item _Type** merge field.

7. Replace the *Today's Date* text by typing the current date in whatever format you like best. Maintain the current one empty paragraph spacing between the date and address block.
8. Finish & merge all records, creating editable individual documents. If necessary, review your merge results, make corrections in your source document, and remerge.
9. Save the merged letters to your **Word Chapter 5** folder as **`W5_P1 Merged Letters`** and then close the document.
10. Save your main document.
    - *Using eLab:* Save to your **Word Chapter 5** folder as **`W5_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Word Chapter 5** folder as: **`W5_P1_Submission`**

PROJECT GRADER: W5-P2

Generating Mail Merge Envelopes

You've been asked to generate envelopes from an existing Classic Cars Club database. In this exercise, you will set up the necessary main document and conduct a merge to produce the desired envelopes.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **W5_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **W5_P2_Start** from your **Word Chapter 5** folder.

   You'll now set up a mail merge using the empty W5_P2_eStart as your mail merge main document.
2. Start your mail merge by changing the document type to **Envelope, Size 10**.
3. Enter the following return address in the top-left corner:

   `Lisa Rowling`

   `Classic Cars Club`

   `356 Maple Lane`

   `Renton, WA 98056`
4. Use the existing list **W5_P2 Addresses** from your **Word Chapter 5** folder as your data source and use the table **Sheet1$**.
5. Insert an **Address Block** in the rectangular box near the bottom-center of the envelope using the **Joshua Randall Jr.** format.
6. Finish and merge all records, creating editable individual envelopes. If necessary, review your merge results, make corrections in your source document, and remerge.
7. Save the merged envelopes to your **Word Chapter 5** folder as **`W5_P2 Merged Envelopes`** and then close the document.
8. Save your main document.
    - *Using eLab:* Save to your **Word Chapter 5** folder as **`W5_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Word Chapter 5** folder as: **`W5_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

W5-E1 That's the Way I See It

You are planning a field trip for the fifth-grade class you teach. Create a permission letter informing parents of the trip and how it relates to students' school work (e.g., visiting an aquarium after studying about ocean life). Include a request for parents to sign and return the letter. Save the letter as: **W5-E1-FieldTripLtr**

Create a three-record data source of parent names and addresses and any other variables you choose. Customize the data source with only the column headings you need. Save the data source as **W5-E1-FieldTripData** and insert merge codes in the form letter. Merge the main document and data source. Save the merged document as: **W5-E1-FieldTripLtrMerged**

Create an envelope main document with your return address, merge it with your data file, and save it as: **W5-E1-FieldTripEnvMerged**

W5-E2 Be Your Own Boss

You are introducing a rewards program for Blue Jean Landscaping customers. Create a form letter of two to three paragraphs describing how customers can accumulate points toward purchases. Mention three other benefits (make them up) for program members. Save the letter as: **W5-E2-RewardsLtr**

Create a data source of three customers' names and addresses and any other fields you want to use. Customize the data source for only those columns needed. Save it as **W5-E2-RewardsData** and insert merge field codes in the letter. Conduct the merge, saving the merged document as: **W5-E2-RewardsLtrMerged**

Finally, create a labels document named **W5-E2-RewardsLabels** and merge it with the data source. Save the merged labels as: **W5-E2-RewardsLabelsMerged**

W5-E3 Demonstrate Proficiency

Stormy BBQ has added brisket of beef to its menu! It offered a free beef brisket meal and a $20 gift certificate to the first five customers who visited its restaurant on New Year's Day. It plans to mail the certificates to the qualifying customers. As a Stormy BBQ employee, you have been asked to compose a congratulatory letter to go with the certificates. Compose an appropriate letter of two or three paragraphs saved as: **W5-E3-CertLtr**

Create a name and address data source for five winners. Customize the data source by adding any fields you want to use in your letter; delete any fields you don't intend to use. Save the data source as **W5-E3-CertData** and merge the letter and the data source. Save the merge document as: **W5-E3-CertLtrMerged**

Finally, create an envelope main document to go with the mailing and include Stormy BBQ's return address and the Address Block code on a Size 10 envelope. Save the envelope main document as **W5-E3-CertEnv** and preview the envelopes to verify that they will print correctly. Make corrections if necessary, merge the envelope with your data source, and then save the merged document as: **W5-E3-CertEnvMerged**

EXCEL

1 Tracking Customer Data

In this chapter, you will use Excel to enter detailed information about customers into a worksheet. You will learn about fundamental Excel features as you create and modify a simple worksheet. By the end of the chapter, you will have a solid grasp of the basic tools used to create worksheets in Excel.

LEARNING OBJECTIVES

- Enter data into a worksheet
- Navigate a workbook
- Format a worksheet
- Apply number and date formats
- Enter a series of related data
- Print a worksheet
- Adjust the view with Zoom tools

Project: Tracking Customer Invoices

Airspace Travel is a company that provides luxurious travel packages to tropical destinations. It is a small, family-run business, and the owners want your help tracking their customer accounts using Excel.

You will use Excel to enter information about each customer who books a trip. Some of the important information to include for each customer is the airline, destination, number of guests, and cost per person.

Introducing Excel

Microsoft Excel is a very popular tool used by millions of people every day. Why do people like it? Partly because it makes work easier! Excel is a worksheet program that allows you to work with numbers and data much more quickly and efficiently than with the pen-and-paper method.

Excel can perform instant calculations and process, analyze, and store large amounts of data. It can perform a variety of tasks such as:

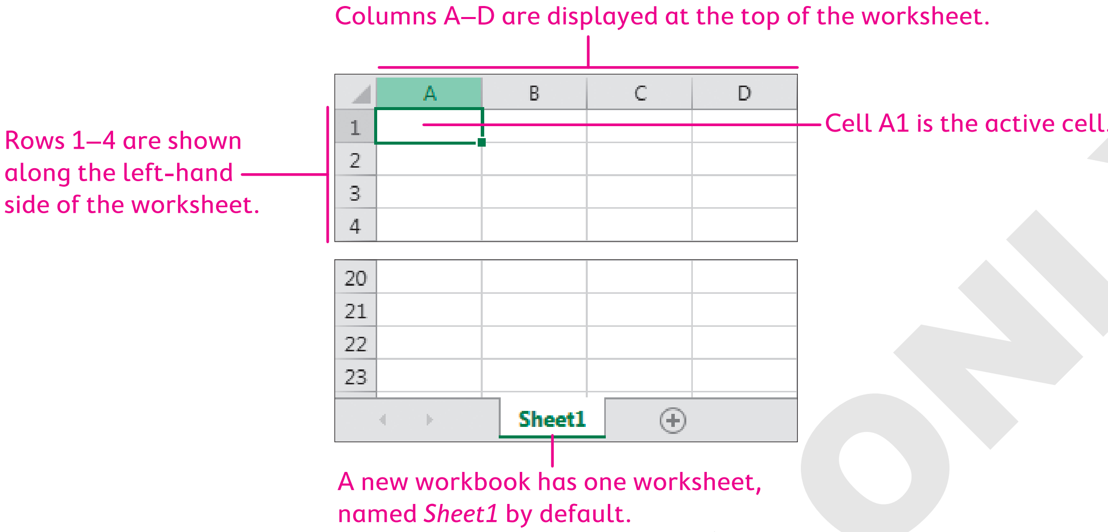
- Creating payment schedules and budgets
- Creating sales reports and performing sales analysis
- Tracking invoices and controlling inventory
- Creating databases or analyzing data imported from a database

The more you learn about and become skilled at using Excel, the more ways you will discover to make work fast and easy.

What Is a Worksheet?

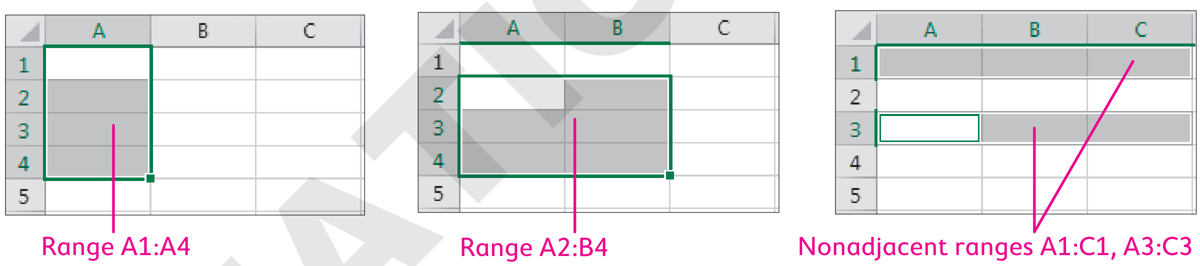
An Excel file is called a workbook, and it contains one or more worksheets (also called spreadsheets) that can be used for small tasks or to create large databases of information. Each worksheet is made up of rows and columns of individual cells, into which you can add data. When you open a new blank workbook, the selected cell is A1. The cell is referred to as A1 because this is where column A meets row 1.

The selected cell, also known as the active cell, is indicated by the thick box around it. The active cell is where you can type data or insert objects into your worksheet.



Cell Ranges

For many tasks, you will want to select a group of cells instead of a single cell. A group of cells is referred to as a range. A range is identified by the first and last cell, separated by a colon. The cells in a range are adjacent (side by side), but you can also choose to select two or more nonadjacent ranges.



Cell Selection and the Mouse Pointer

One of the challenges for new Excel users is getting used to the different mouse functions. The shape of the mouse pointer changes as you point to different parts of the Excel window, so pay close attention to the shape of the pointer to ensure you're performing the intended action.

MOUSE POINTER SHAPES

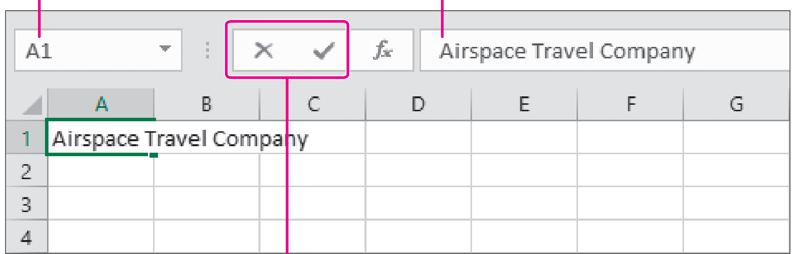
Pointer Shape	Task
	Click to select a cell; drag to select a range of cells
	Drag to move the selected cell contents to another location
	Enter or edit cell contents in the cell or in the Formula Bar
	Drag the fill handle to fill adjacent cells with a series of numbers, dates, or formulas
	Select an entire column (Column A) or row (Row 1)

Entering and Editing Data

Data is easily entered into Excel by selecting a cell and typing. If a cell already contains data, you can double-click the cell to edit it; or, to replace the existing data, just start typing (no need to delete it first!). Text is used for headings or descriptive data, and numbers can either be typed into a cell or calculated with a formula.

Name Box—displays the name of the active cell (A1)

Formula Bar—displays the contents of the active cell



Cancel and Enter—cancels or completes the entry

Completing Cell Entries

After typing or editing data in a cell, you need to complete the entry before you can continue. The method you use to complete the entry will determine which cell becomes active next.

Excel is in Ready mode when a cell is selected and Enter mode when data is being inserted. The difference between Enter and Ready modes is that many Excel features are unavailable while you are entering data.

Tapping Enter, Tab, or any of the arrow keys (→, ←, ↑, ↓) will complete the entry as shown in the table below. Another option is to use the Enter ✓ button on the Formula Bar, which will keep the current cell active.

COMPLETING A CELL ENTRY

Completion Method	New Active Cell Location
Enter	Moves one cell down
Tab	Moves one cell to the right
→, ←, ↑, ↓	Moves to the next cell in the direction of the arrow key
×	Cancels the entry (or modification) and keeps the current cell active
✓	Completes the entry without moving

DEVELOP YOUR SKILLS: E1-D1

In this exercise, you will enter the data for your worksheet title and headings.

1. Start Excel.
2. Click the **Blank Workbook** template on the Excel start screen.
3. Save your workbook in your **Excel Chapter 1** folder as: **`E1-D1-Invoices`**

4. Type **`Airspace Travel Company`** in **cell A1** and tap Enter to complete the entry.

   Notice that cell A2 is now the active cell.

5. Type **`Monthly Customer Invoices`** in **cell A2** and tap Enter to complete the entry.

   So far you've used the Enter *key to move down column A while entering the data. Now you'll use the* Tab *key to move across row 3 as you enter more data.*

6. Type **`First Name`** in **cell A3** and tap Tab to complete the entry, which also moves the active cell one cell to the right.

7. Type **`Last Name`** in **cell B3** and tap Tab.

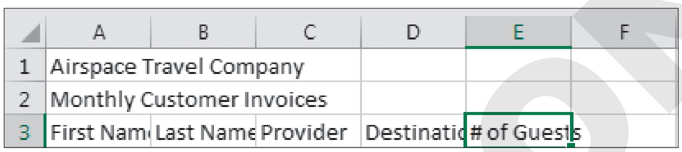
   The First Name *text in cell A3 is no longer fully visible because it's wider than column A. Long entries are cut off like this when the cell to their right contains data. You will fix this in a later exercise.*

8. Type **`Provider`** in **cell C3** and tap Tab.

9. Type **`Destination`** in **cell D3** and tap Tab.

10. Type **`# of Guests`** in **cell E3**, but this time click **Enter** on the Formula Bar to complete the entry.

    Cell E3 remains the active cell. Use Enter on the Formula Bar to complete entries when you want the current cell to remain active. Your worksheet should now look like this:



11. Save the workbook.

Note! *Always leave the file open at the end of an exercise unless instructed to close it.*

Navigating Around a Worksheet

Navigating around your worksheet quickly is an important skill to master. The following table lists some useful keystrokes for changing the active cell. You can also click with the mouse to select the desired cell or type a cell name into the Name Box to quickly jump to it. A worksheet has up to 1,048,576 rows and up to 16,384 columns, so for large amounts of data, you definitely want a quicker way to get around than simply scrolling!

NAVIGATION METHODS

Keystroke(s)	How the Active Cell Changes
→, ←, ↑, ↓	Moves one cell right, left, up, or down
Home	Moves to the beginning (column A) of current row
Ctrl + Home	Moves to the home cell, usually cell A1
Ctrl + End	Moves to the last cell in active part of worksheet
Page Down	Moves down one visible screen
Page Up	Moves up one visible screen
Alt + Page Down	Moves one visible screen to the right
Alt + Page Up	Moves one visible screen to the left
Ctrl + G	Displays the Go To dialog box

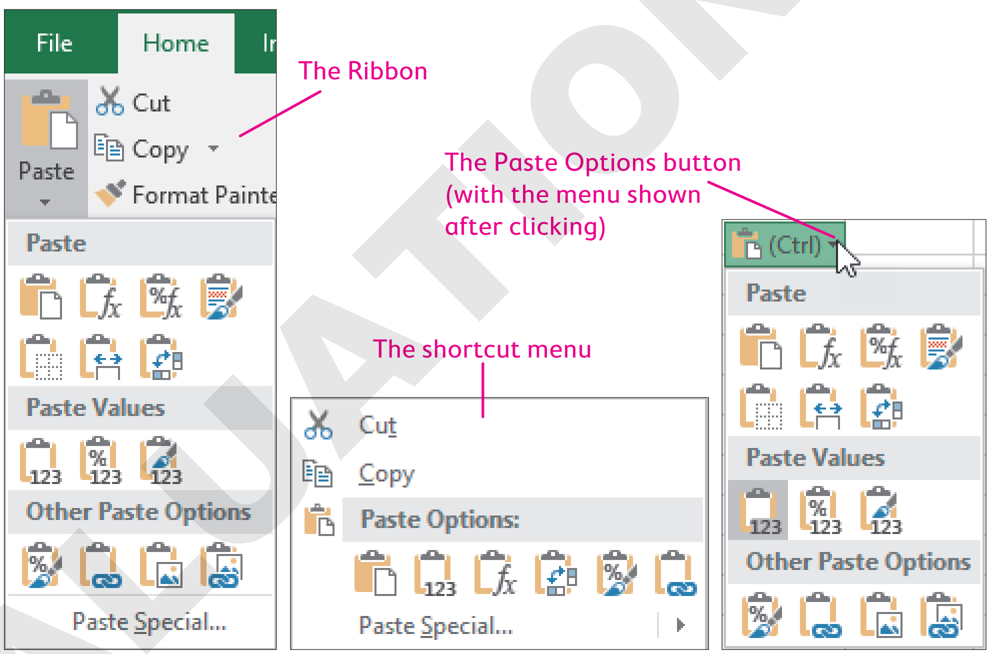
Using AutoComplete to Enter Data

When inputting data, consistency is extremely important. If you are entering employee records in a large database, you want to ensure that information such as department names and position titles is entered accurately; for example, you wouldn't want some employees to be listed in the *Financial* department and others to be listed in the *Finance* department because that would create problems when looking up, sorting, and filtering your data.

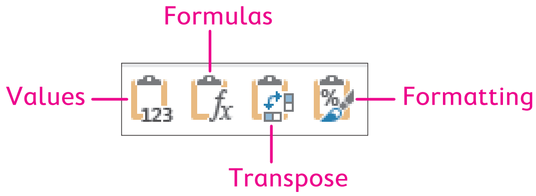
Excel has a feature that helps with this problem and also saves you time when repeatedly entering the same text. AutoComplete suggests text for you as you type, using data from the same column. For example, if you type *Accounting* for a department name in one cell, and then farther down in the same column you type the letter *A*, AutoComplete will suggest *Accounting*. You can either accept the suggestion the way you normally complete a cell entry or ignore it and keep typing.

Rearranging Data in Excel

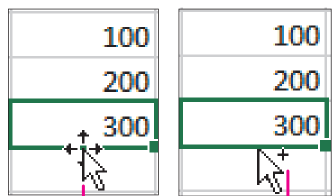
To move or copy content in Excel, you can use the tools in the Clipboard group of the Home tab on the Ribbon, similarly to how you would in other Microsoft Office apps. However, Excel has many unique options for pasting data that aren't available in the other Office apps. The Paste Options are accessible from the Ribbon, the shortcut menu when you right-click a cell after copying, or the Paste Options button that appears after you have pasted something into a worksheet.



Some of the important paste options unique to Excel that are frequently used include pasting values, pasting formulas, transposing data, or pasting only the formatting from the copied cell or range.



To quickly move data, you can also point to the border of the selected cell (or range), and when the mouse pointer changes to a four-headed arrow, you can then drag the cell's contents to the desired location. To copy instead of move data, hold down Ctrl while dragging. These two methods are best used when the original location and new location are relatively close and both are visible on the same screen.



You can move cell contents by pointing to the active cell border so the four-headed arrow appears.

If you hold Ctrl while pointing to the active cell border, you can copy rather than move the cell contents.

EXCEL

DEVELOP YOUR SKILLS: E1-D2

In this exercise, you will enter the customer data below each of the column headings.

1. Save your workbook as: **E1-D2-Invoices**
2. Press Home followed by ↓ to move the active cell to **cell A4**.
3. Enter this data for Eric Snow in **row 4** and press Tab to complete the entry in each cell:

3	First Nam	Last Name	Provider	Destinatic	# of Guest
4	Eric	Snow	Sunwind	Jamaica	

4. Type **2** in **cell E4** and tap Enter to complete the entry.

   The active cell moves to A5, the beginning of a new row. Excel presumes you are finished entering data in the row and wish to start a new row. This is one of Excel's built-in data entry features that make it faster to enter data into a worksheet or database. As long as you enter data using the Tab *key continuously from left to right, the* Enter *key will bring you back to the first column of data to begin the next row. If the active cell does not move from E4 to A5, it is likely because you used the mouse to select a cell rather than* Tab.

5. Type **`Alison`** in **cell A5**, **`Lobosco`** in **cell B5**, and only the letter **`S`** in **cell C5**.

In cell C5, Excel's AutoComplete feature prompts you with the name Sunwind.

3	First Nam	Last Name	Provider	Destinatic	# of Guests
4	Eric	Snow	Sunwind	Jamaica	2
5	Alison	Lobosco	Sunwind		

6. Tap Tab to accept the suggestion, then continue entering the rest of the customer information as shown below, starting from **cell D5**.

As you type the data, use Tab *to accept the AutoComplete suggestions for the Provider and Destination columns when possible; the goal is to enter the data quickly and efficiently. Tap* Enter *at the end of each row to finish one customer's information and begin entering it for the next. Be aware that long entries won't fully display until the column is widened.*

	A	B	C	D	E
3	First Name	Last Name	Provider	Destination	# of Guests
4	Eric	Snow	Sunwind	Jamaica	2
5	Alison	Lobosco	Sunwind	Mexico	2
6	Lacy	Henrich	TrueBlue	Dominican Republic	4
7	Will	Johns	Eastjet	Cuba	3
8	Nicki	Hollinger	Sunwind	Mexico	1
9	Lennard	Williams	TrueBlue	Brazil	6
10	Kerri	Knechtel	TrueBlue	Columbia	4
11	Karynn	Alida	Sunwind	Bahamas	2
12	David	Monton	Eastjet	Dominican Republic	2
13	Amanda	Campbell	Sunwind	Jamaica	7

7. Save the workbook.

Adjusting Column Width and Row Height

To create enough space to properly see your text, you may need to adjust the column width and row height. A key step is to select the desired row(s) or column(s) before adjusting the size. Column width and row height can be set precisely using Ribbon commands or adjusted manually by dragging with the mouse. Even better, AutoFit can adjust the size to accommodate the largest entry in the column or row.

In a new workbook, column width is 8.43 and row height is 15.00; however, you might notice that cells are wider than they are tall. This is because column width is measured in characters and row height is measured in points, similar to font size. One character is bigger than one point.

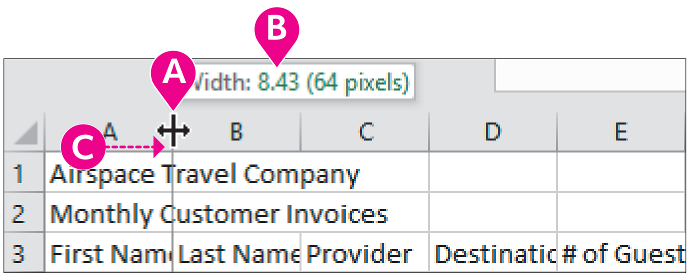
Home→Cells→Format→Column Width *or* Row Height | Right-click column/row heading→Column Width *or* Row Height

Home→Cells→Format→AutoFit | Double-click column/row heading borders

DEVELOP YOUR SKILLS: E1-D3

In this exercise, you will adjust the column widths using various methods to properly display the text in the cells.

1. Save your workbook as: **`E1-D3-Invoices`**
2. Follow these steps to manually adjust the width of **column A**:



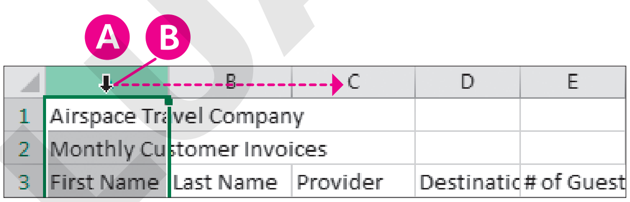
- **A** Move the mouse pointer over the line between the column A and B headings to display the adjust pointer.
- **B** Press and hold the left mouse button, and notice the ScreenTip displays the current width of column A (the default width is 8.43).
- **C** Continue holding the left mouse button and drag right slightly, then release the mouse button. The text *First Name* should now be fully visible in cell A3; if not, keep trying until you get it.

As you drag, the column width is displayed as it changes. You can set column width to an exact amount this way, but it's difficult to be precise. You'll set precise widths later in this exercise.

3. Widen **column B** until *Last Name* is visible in **cell B3** or try to set the width to 10.00.
4. Widen **column C** slightly or try to set the width to 10.00.

Now you will use the Ribbon to ensure that columns A, B, and C are all set to exactly 10.00.

5. Follow these steps to select **columns A–C**:



- **A** Position the mouse pointer on the **column A** heading and then press and hold the left mouse button.
- **B** Drag right until **columns A–C** are selected and then release the mouse button.

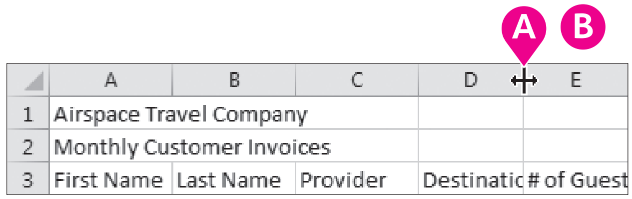
6. Choose **Home→Cells→Format→Column Width** to display the Column Width dialog box.

Tip! *You will only see a number in the box if all three columns have the same width; otherwise, the box will be blank.*

7. Type **`10`** in the box and click **OK**, which will set the widths of **columns A–C** to 10.

EXCEL

8. Follow these steps to use AutoFit to adjust the width of **column D**:



- **A** Point between the column D and E headings to display the adjust pointer.
- **B** Double-click to AutoFit **column D** to accommodate the widest entry.

Column D is now wide enough so the text Dominican Republic *is fully visible in cells D6 and D12.*

9. Save the workbook.

Formatting Cells

You may notice that unformatted data does not look very pleasing. The columns are too narrow, and the black-and-white color is plain and boring. Formatting is important not simply to make worksheets more appealing, but also to make it easier to read and interpret the data they contain. A textbook would be very hard to read if all the text were the same font, size, and color on a white page. Likewise, it is much easier to understand a worksheet if it is properly formatted.

Borders and Fill

Adding some color to your worksheet can accentuate the column headings and helps the data stand out. In addition to changing the font, style, and color of the text, you can use Fill Color to add color or shading inside a cell and use Borders to add lines around the cells. The drop-down menu buttons (▾) give you more choices for lines and colors.

Home→Font→Borders | Right-click→Format Cells→Borders

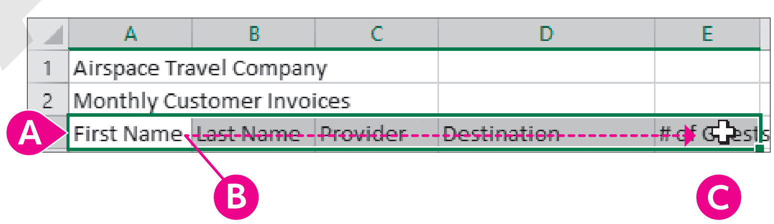
Home→Font→Fill Color | Right-click→Format Cells→Fill

DEVELOP YOUR SKILLS: E1-D4

In this exercise, you will add color to your worksheet using fill colors, borders, and font colors.

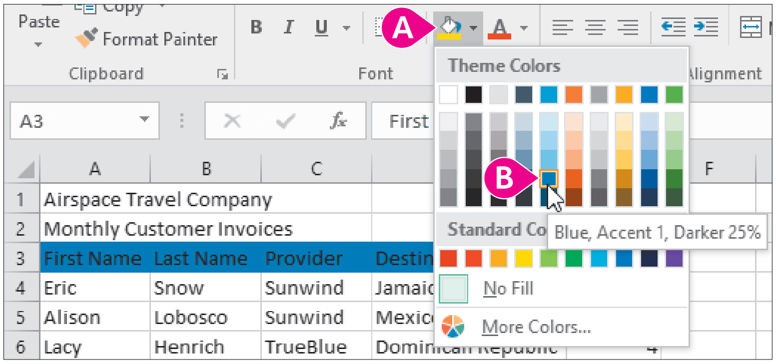
1. Save your workbook as: `E1-D4-Invoices`

2. Follow these steps to select the column headings in the **range A3:E3**:



- **A** Point to the middle of **cell A3** and then press and hold the left mouse button.
- **B** Continue to hold the left mouse button as you drag right, along row 3, until the **range A3:E3** is selected.
- **C** Release the mouse button to complete the selection.

3. Follow these steps to explore the Fill Color palette and apply a color:



(A) Click the **Fill Color menu** button ▼ to display the palette and slowly move the mouse pointer around the various colors, pausing on a few.

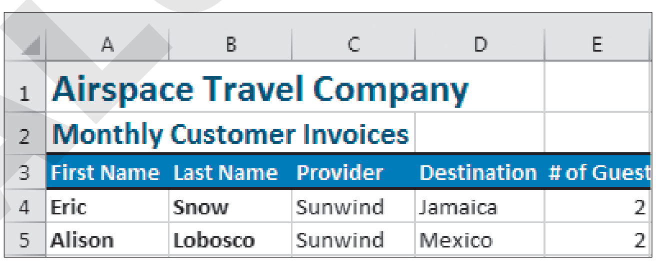
When the mouse stops moving, a ScreenTip indicates the name of the color you are pointing at. The top row under Theme Colors gives you ten color options, with different shades for each in the column below.

(B) Choose **Blue, Accent 1, Darker 25%** (fifth column, fifth row).

4. With the range A3:E3 still selected, choose **Home→Font→Border** **menu button** ▼.
5. Choose **Thick Outside Borders** to apply a thick border around the selected range.
6. For the same range choose **Home→Font→Font Color** **menu button** ▼ and choose **White, Background 1** (first column, first row).
7. Use the keyboard shortcut Ctrl + B to apply bold formatting.

   Now that you have modified the headings, it's time to work on the titles.

8. Select **cell A1** and choose **Home→Font→Font Size menu button** ▼ and choose **18**.
9. Now select **cell A2** and choose **Home→Font→Increase Font Size** two times to increase the font size to **14**.
10. Select the **range A1:A2** and then apply the **Blue, Accent 1, Darker 50%** (fifth column, sixth row) font color and **Bold** **B** formatting.
11. Select the **range A4:B13** and apply **Bold** **B**.
12. Click anywhere outside your data to deselect it.



13. Save the workbook.

EXCEL

Cell Alignment

Excel's alignment tools let you adjust the arrangement of entries within cells. The default alignment for text data is left-aligned inside the cell, and the default for numerical data is right-aligned, as you can see in column E of your working file. The Alignment group on the Home tab provides you with the following options:

ALIGNMENT BUTTONS

Button	What It Does
	Aligns entries vertically at the top, middle, or bottom of cells
	Aligns entries horizontally at the left, center, or right of cells
	Decreases or increases the indent
	Wrap Text; splits long text entries into multiple lines
	Merge & Center; combines cells and centers content
	Adjusts the angle or rotation of your text

Merge & Center is a one-step method for simultaneously merging multiple cells into one cell and centering the content. This is often used for worksheet titles at the top of your sheet. You can also add an indent to the contents of a cell, which increases the distance of the text from the cell border. This adds more space, making it easier to read the data.

Before merging, with three cells selected

After Merge & Center is applied, one cell spans the three columns.

Home→Alignment | Right-click→Format Cells→Alignment

Clear Formatting and Clear All

You may want to keep the text in a cell or range but clear all formatting. This is easy to do with the Clear Formatting feature. You can also remove text and formatting at the same time with Clear All.

Home→Editing→Clear 

DEVELOP YOUR SKILLS: E1-D5

In this exercise, you will adjust the alignment for your headings and data, and use Merge & Center for your titles.

1. Save your workbook as: `E1-D5-Invoices`
2. Select the **range A3:E3** and choose **Home→Alignment→Wrap Text**.

   Wrap Text takes a long entry and splits it into multiple lines, increasing row height at the same time.
3. With the range A3:E3 still selected, choose **Home→Alignment→Middle Align**.
4. With the headings still selected, choose **Home→Alignment→Center**.
5. Select the **range E4:E13** (the number of guests data) and apply **Center** alignment.
6. Select the **range A1:E1**.
7. Choose **Home→Alignment→Merge & Center** (do not click the menu button ▼) to center the company name over the data below.
8. **Merge & Center** the **range A2:E2** to center the Monthly Customer Invoices subtitle.
9. Select the **range A4:A13** and choose **Home→Alignment→Increase Indent**.
10. Save the workbook.

Working with Numbers and Dates

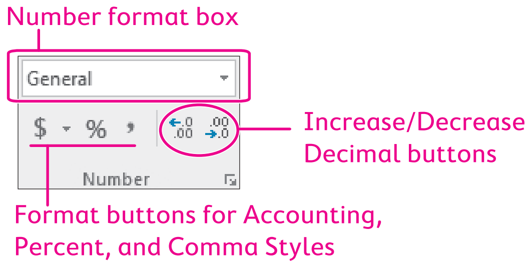
Because Excel is often used to perform calculations, it's important to know how to enter numerical data properly. A number entered into Excel can be formatted in many ways—with a dollar sign, percent symbol, decimals, or no decimals—but the numerical entry in the cell does not change. Typically, to enter a numerical value into a cell, you simply type in the digits and adjust formatting after.

The default number format is General, which has no specific format. When a number format is applied to a cell, it remains with the cell even if the contents are changed or deleted. Here are some basic number format examples:

Number	Format	Result
2317.25	General	2317.25
2317.25	Comma Style	2,317.25
2317.25	Currency	$2,317.25
2317.25	Accounting	$ 2,317.25
0.25	Percent	25%

Tip! *The differences between Currency and Accounting are the position of the $ sign and the indent from the right side of the cell.*

The number format for the current cell is visible in the Number Format box on the Ribbon.



Be aware that the numerical entry in the cell does not change when you increase or decrease the decimal (or when you change the number format). Doing so changes only the *appearance* of that number. Numbers with decimals can still have the decimals removed (decreased), but the number would then appear rounded up or rounded down from the actual entry, as shown in the following example. If the cell is used in a formula, the formula will use the actual numerical entry in the cell, *not the rounded number displayed on the screen.*

Number	Decimal Places	Result	
23.64	3	23.640	(extra zero)
23.64	2	23.64	(no change)
23.64	1	23.6	(rounded down)
23.64	0	24	(rounded up)

Home→Number | Right-click→Format Cells→Number

Negative Numbers

Working with negative numbers is no different from working with other numbers, except that there are more options for displaying the negative values. Negative numbers have the currency, comma, and decimal options, but they can also be represented by a – (minus) symbol, red digits, parentheses, or both red digits and parentheses.

Formatting examples for negative twelve

Date Entries

Date formatting is another kind of number formatting. After a cell has a date entered into it, you can change the display without changing the actual cell entry. Excel can also use dates to perform calculations in a formula.

A date can be entered many ways, though the best way is to enter it in the format MM/DD for the current year or MM/DD/YY for any other year. For example, 10/15 would be entered for October 15 of the current year, and 10/15/18 would be entered for October 15, 2018.

DEVELOP YOUR SKILLS: E1-D6

In this exercise, you will enter two new columns of information using currency and date formatting.

1. Save your workbook as: **E1-D6-Invoices**
2. In **cell F3**, enter the heading **Price Per Person** and tap Tab.

   Notice the font, fill, and wrap text formatting are copied from the previous headings, but the border style is not.
3. Enter the heading **Invoice Date** in **cell G3**.
4. Select the **range F3:G3** and apply **Thick Outside Borders**.
5. In **cell F4**, type the digits **899** and tap Tab.
6. In **cell G4**, type **9/8** and then click **Enter** ✓ on the Formula Bar.

   The digits 9/8 are automatically converted to display 8-Sep. *In the Home→Number→Number Format box you can see the number format for cell G4 has changed to a Custom format.*
7. Continue entering data in **columns F** and **G** as shown, starting in **cell F5**.

   The number format of the Invoice Date column is adjusted for you as you enter the data, as it was in cell G4. You will adjust the number format for the Price Per Person column after you have entered all the data.

	F	G
5	770	9/7
6	1200	9/1
7	950	9/9
8	875	9/8
9	800	9/8
10	560	9/5
11	870	9/8
12	650	9/6
13	900	9/9

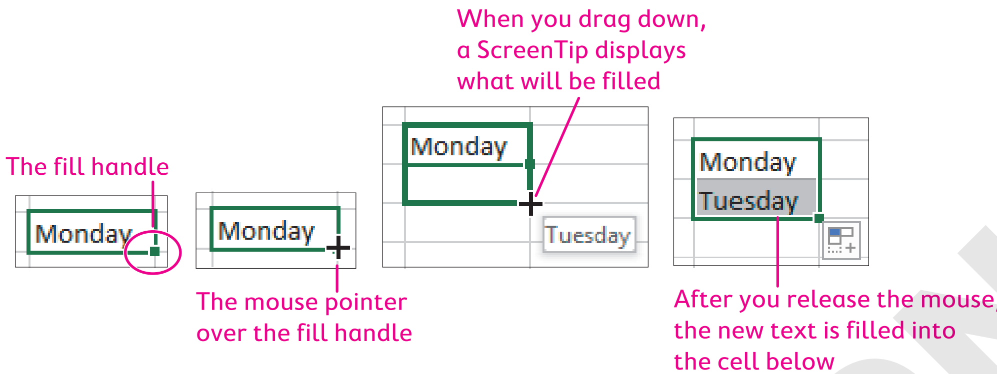
8. Select the **range F4:F13** (the cells with the prices you just entered).
9. Choose **Home→Number→Accounting** $ (not the menu button ▾) to apply the Accounting format to the selection.

   The prices now have a dollar sign, comma separator, and two decimal places. All the prices are even dollar amounts, so you can now eliminate the unnecessary decimals.
10. With the range F4:F13 still selected, choose **Home→Number→Decrease Decimal** twice.
11. Save the workbook.

Entering a Series Using AutoFill

When entering data into a worksheet, it is common to enter a series of data, which is a sequence of text, numbers, or dates. For example, you can enter a series of weekdays from Monday to Friday, a series of months from January to December, a series of numbers from 1 to 100, or a series of dates for the next two weeks.

Rather than type each item line by line, you only need to enter the first cell and then use AutoFill to quickly enter an entire column or row of data. To use AutoFill, you can drag the fill handle or double-click it (if there's adjacent data).



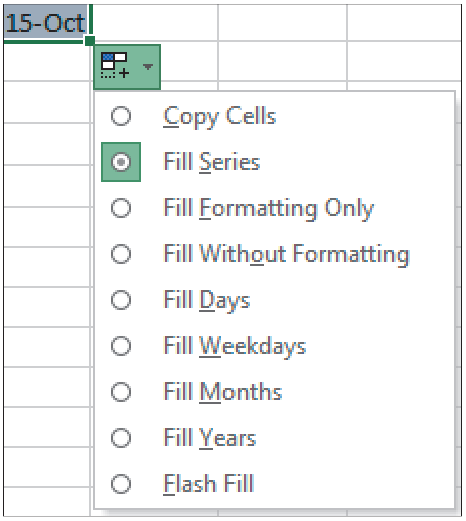
Depending on the type of information in the selected cell(s), the fill handle performs different actions, such as copying, creating a series, or filling in a list. These figures show examples of series created with the AutoFill tool, which you can also try to create on your own in a blank Excel workbook.

Starting cell	Monday	Wed	March	Jan	Invoice 200	1st Day	10-Oct
AutoFill Results	Tuesday	Thu	April	Feb	Invoice 201	2nd Day	11-Oct
	Wednesday	Fri	May	Mar	Invoice 202	3rd Day	12-Oct
	Thursday	Sat	June	Apr	Invoice 203	4th Day	13-Oct
	Friday	Sun	July	May	Invoice 204	5th Day	14-Oct
	Saturday	Mon	August	Jun	Invoice 205	6th Day	15-Oct

When more than one cell is selected, the AutoFill tool will copy the pattern Excel finds in the selected data.

Starting cells	Monday	Jan	1	100	01-Jun
	Wednesday	Apr	2	120	01-Jul
AutoFill Results	Friday	Jul	3	140	01-Aug
	Sunday	Oct	4	160	01-Sep
	Tuesday	Jan	5	180	01-Oct
	Thursday	Apr	6	200	01-Nov
	Saturday	Jul	7	220	01-Dec

After you use AutoFill, the AutoFill Options button appears below the filled cells. The AutoFill Options button allows you to modify the way the data was filled, and the options change depending on the type of data that was filled. For example, after filling in a series of dates, the option allows you to choose either days, weekdays, months, or years.



View the video "Using AutoFill to Fill a Series."

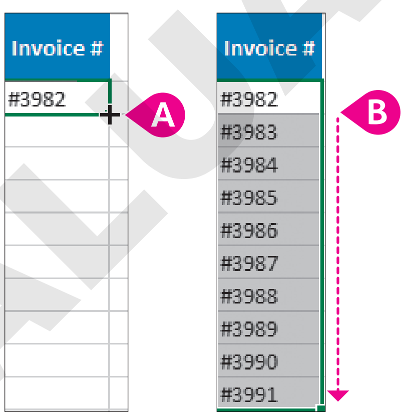
View the video "Using AutoFill Options."

DEVELOP YOUR SKILLS: E1-D7

In this exercise, you will enter invoice numbers for each customer using AutoFill.

1. Save your workbook as: **`E1-D7-Invoices`**
2. Type the column heading **`Invoice #`** in **cell H3** and tap Enter.
3. In **cell H4**, type **`#3982`** and then click **Enter** ✓ on the Formula Bar so cell H4 remains active.

   The invoice number for Eric's trip is #3982. Invoice numbers will continue in sequence counting up by one, so the next invoice will be #3983 and so on.
4. Follow these steps to use AutoFill to enter the rest of the invoice numbers:



   A. In the active cell, place the mouse over the fill handle so the mouse pointer changes to the black cross.
   B. Drag down to **cell H13** to fill in the rest of the series.

   The invoice numbers have now been entered for all customers, ending with #3991 in cell H13.
5. Save the workbook.

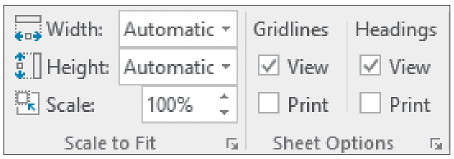
EXCEL

Printing Worksheets

Now that you've entered all the required information into the worksheet, you may want to print your data. Although printing is becoming less common in the digital age, there will certainly be times when you need a paper copy.

Printing a worksheet is simple, although sometimes adjustments need to be made so the cells, columns, and rows fit nicely on the page. To adjust the way your worksheet prints, you can use the Scale to Fit feature. This automatically resizes your content to print the desired number of pages.

Excel will not normally print the gridlines around the cells or the row and column headings, though you can change this setting in the Sheet Options group on the Page Layout tab of the Ribbon.



Because your workbook can contain multiple worksheets, there are three options for printing. In Backstage View you can choose from Print Active Sheets, which is the default option, Print Entire Workbook, which prints all worksheets in the workbook, or Print Selection, which will print only the currently selected cell(s).

File→Print→Settings

Page Layout→Scale to Fit

Page Layout→Sheet Options

DEVELOP YOUR SKILLS: E1-D8

In this exercise, you will put the finishing touches on your worksheet. Then you will access the print preview and prepare your worksheet for printing.

1. Save your workbook as: `E1-D8-Invoices`
2. Select the **range A3:H3** and choose **Home→Font→Border menu button ▾→No Border**.

   This removes all borders from the column headings so you can apply a border around all headings.
3. With the range A3:H3 still selected, choose **Home→Font→Border menu button ▾→ Thick Outside Borders**.

   Now you need to center the titles over the data, including the newly added columns.
4. In **row 1** select the **range A1:H1** and choose **Home→Alignment→Merge & Center** twice.

   The first click of Merge & Center removes the merge formatting from the first five columns; the second click applies the merge formatting across all eight columns.
5. Select the **range A2:H2** and, again, choose **Home→Alignment→Merge & Center** twice.

   Both titles should now be centered over your data.

Change Print Options

6. Choose **File→Print** to access the print preview.

Notice the document will print on one page, with the Invoice # column appearing at the right side of the page. If more columns of data were added they would print on a separate page. Also notice that the gridlines, which are the lines around the individual cells on the worksheet, do not print, nor do the row or column headings (A, B, C, 1, 2, 3, etc.).

7. Click **Back** to return to your worksheet.

You will now see a dashed line between column H and column I, which indicates the print area for your worksheet. Next you will select an area of the sheet to print.

8. Select the **range A1:H8** (the titles, headings, and data for the first five customers) and then choose **File→Print** to access print preview again.

9. In the Settings section, choose **Print Active Sheets→Print Selection**.

The print preview changes to show that the print area will include only the first five customers now.

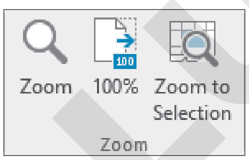
10. In the Settings section, choose **Portrait Orientation→Landscape Orientation**.

The printout will be much easier to read now, with the page turned to Landscape. Do not print at this time.

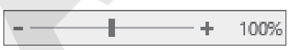
11. Save the workbook.

Zoom Tools

You may want to adjust the view to focus on one area of your worksheet, or you may want to get a broad view of the entire worksheet. The Zoom tools allow you to increase or decrease the magnification of your worksheet so you can see more or less of the worksheet at one time. Changing the view does not change how the worksheet will print. You can select a range of cells and click Zoom to Selection to focus on just that area of the worksheet, or you can jump back to 100% view to see your work in "real" size.



The Zoom tools on the Ribbon allow you to customize magnification settings.



The Zoom slider on the status bar allows you to make quick adjustments by clicking + or –.

View→Zoom

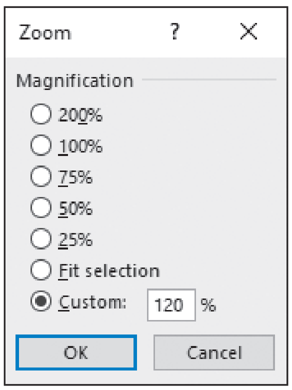
DEVELOP YOUR SKILLS: E1-D9

In this exercise, you will use the Zoom tools to focus on different areas of the worksheet.

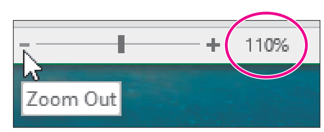
1. Save your workbook as: **`E1-D9-Invoices`**
2. Select the customer invoice data in the **range A3:H13**.
3. Choose **View→Zoom→Zoom to Selection**.

   Your screen view will magnify so the range fills the entire screen; the exact zoom level will depend on your screen size.
4. Choose **View→Zoom→100%**.

   This returns the worksheet to its actual size.
5. Choose **View→Zoom→Zoom**.
6. In the Zoom dialog box, choose **Custom**, type **`120`** in the % box, and click **OK**.



   Another option for quickly adjusting Zoom level is to use the Zoom slider on the status bar on the bottom-right side of the Excel window.
7. On the Zoom slider, click **Zoom Out** to reduce the magnification to 110%.



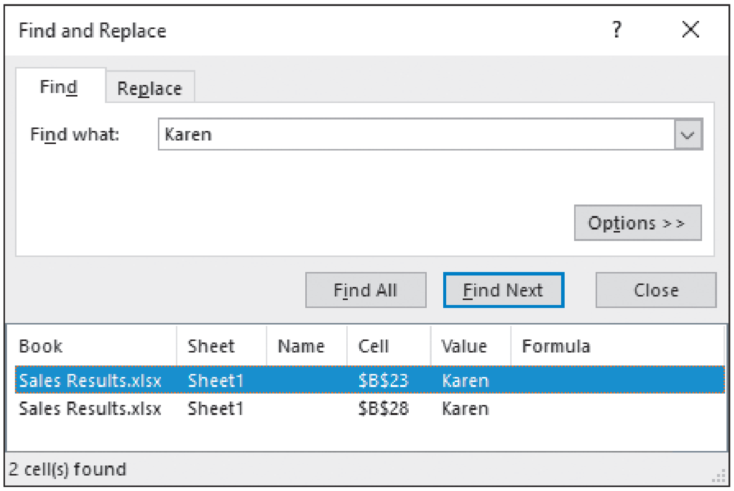
   When you save a file, it also saves the zoom settings so it will display the same the next time the file is opened.
8. Save the workbook.

Other Navigation Methods

Navigating a worksheet is simple using the mouse, scroll bar, and keyboard keys. However, as your workbook becomes larger and more complex, you may want other, faster methods of finding information.

Find

If you are looking for specific text or values, you can use the Find feature. Find searches within the worksheet to find the text or number provided, and the results show the exact cell location where the item is found. The results also show the entire cell value where the search string was found and can be used to navigate to that cell. Other options include searching for formatting; searching the entire workbook; and searching formulas, values, or comments.



In this example, to find Karen's sales, searching for *Karen* shows two results in the Sales Results workbook on Sheet 1, in cells B23 and B28.

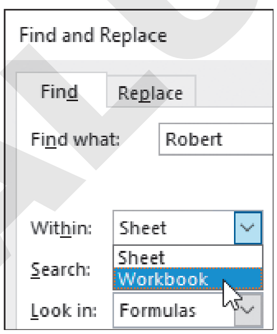
Home→Editing→Find & Select

DEVELOP YOUR SKILLS: E1-D10

In this exercise, you will use Find to search through the workbook.

1. Save your workbook as: **`E1-D10-Invoices`**
2. Choose **Home→Editing→Find & Select**→**Find**.
3. Type **`David`** in the Find What box and then click **Find All**.

   The result shows one cell found and the active cell jumps to cell A12, which contains David.
4. Click **Options >>** in the Find and Replace dialog box.
5. Beside the word *Within*, click **Sheet** to expand the options and select **Workbook**.



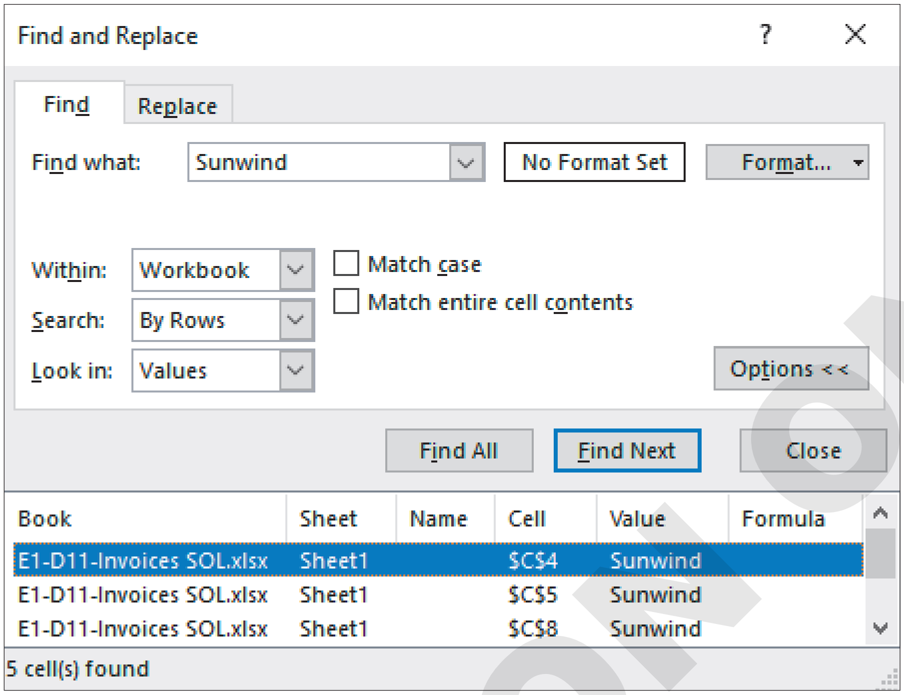
6. Click **Find All**.

   The result still shows just one cell found with David's name, since there are no other sheets in the workbook.

EXCEL

7. To start a new search, type **Sunwind** in the Find What box and click **Find All**.

The results now show all cells that contain Sunwind *to help you find the customers who are using that provider. For this search, five applicable cells are found.*



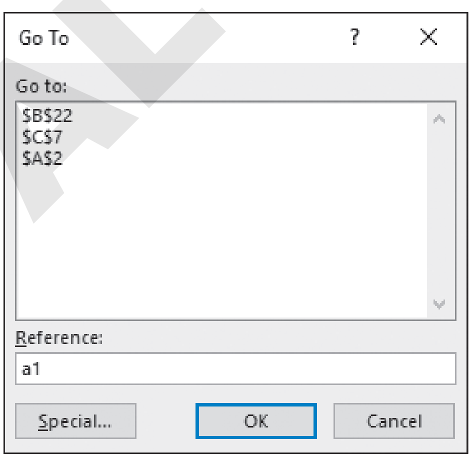
8. Scroll to the bottom of the results and click the last one; this takes you to **cell C13**, beside *Amanda Campbell*.

9. Close the Find and Replace dialog box.

10. Save the file.

Go To or the Name Box

The Go To command can be useful if you know the cell location you want to move to. Rather than scrolling, you can jump directly to that cell. The Go To dialog box will also show as many as four recently used cell locations should you need to go back to that spot again. If the workbook contains cells with defined names, you will see them listed in the Go To dialog box, which you can use to jump to that cell.



Here you can enter your desired cell location into the Reference box. Keep in mind cell references are not case-sensitive, so you can use either upper- or lowercase letters.

The Name box can also be used like the Go To command. Simply type the cell you want to jump to in the Name box and tap [Enter] to move to that cell.

DEVELOP YOUR SKILLS: E1-D11

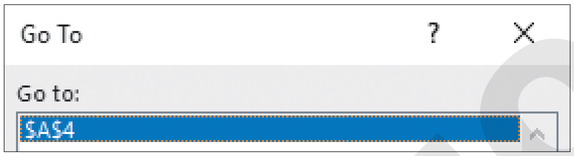
In this exercise, you will use Go To to navigate the workbook.

1. Save your workbook as: `E1-D11-Invoices`
2. Choose **Home→Editing→Find & Select**→**Go To**.
3. In the Go To dialog box, type **a4** in the Reference box and click **OK**.

   The selected cell is now cell A4, where the customer data begins below the headings.
4. Choose **Home→Editing→Find & Select**→**Go To** again.
5. This time, below Reference type **as700** and then click **OK** or tap [Enter].

   Now you have the cell selected in column AS, row 700! As you can see, you can jump to any cell in the entire workbook, even cells that contain no data.
6. Choose **Home→Editing→Find & Select**→**Go To** once more.

   You will see a list including some of the recent cell locations you have searched for.



7. Click the cell reference **$A$4** in the **Go To** list and then click **OK**.
8. Save your work and close Excel.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: E1-R1

Enter Data and Format a Worksheet

Kids for Change is a nonprofit organization that helps minors participate in and organize community service, fundraisers, and social events. In this exercise, you will create a worksheet that will allow Kids for Change to list the items required for purchase for an upcoming charity event.

1. Start Excel, open a new Blank Workbook, and save it in your **Excel Chapter 1** folder as: `E1-R1-Purchases`
2. In **cell A1**, type `Kids for Change` and tap [Enter].
3. In **cell A2**, type `Items for Purchase` and tap [Enter].
4. Enter these headings across the **range A3:D3**:

3	Item Name	Order By	Quantity	Price

5. In **rows 4–8**, enter these items for purchase:

4	T-shirts	5/12/2020	200	12.99
5	Buttons	5/20/2020	100	6.50
6	Hamburgers	5/30/2020	45	9.29
7	Buns	5/30/2020	45	2.19
8	Water	5/30/2020	12	1.99

Remember, number formatting affects the appearance of some numbers; for example, 6.50 will display as 6.5 with the General number formatting applied to the cell (that is, until the number formatting is changed in a later step).

Format the Worksheet

6. Select **column A**, choose **Home→Cells→Format→Column Width**, and set the width to: `12`
7. Select the **range A1:A2** and then choose **Home→Font→Font Color** **menu button** ▾→**Standard Purple**.
8. With the titles still selected, choose **Home→Font→Increase Font Size** two times so it is set to 14 points and then press [Ctrl]+[B] to apply bold formatting.
9. Select the **range A3:D3** and then choose **Home→Font→Fill Color** **menu button** ▾→**Blue, Accent 5, Lighter 60%** (ninth column, third row).
10. With the same range selected, apply the Standard Purple font color and bold formatting.
11. With the headings still selected, choose **Home→Alignment→Center** to center the headings.
12. Select the **range B4:B8** and choose **Home→Number→Number Format→Long Date**.

    The day of the week is important, so now you can see the day displayed in the cells.
13. Select the **range D4:D8** and apply the Accounting number format.
14. Save the workbook.

REINFORCE YOUR SKILLS: E1-R2

Fill a Series of Purchase Numbers

In this exercise, you will fill in purchase order numbers using a series and adjust print settings.

1. Save your workbook as: **`E1-R2-Purchases`**
2. In **cell E3**, enter the heading **`Purchase #`** and tap Enter.
3. In **cell E4**, type **`#335`** and click **Enter** ✓.
4. Use the **fill handle** in **cell E4** to fill the series of purchase numbers down the column.
5. Use AutoFit to adjust the width of **column E** so the column heading is fully visible.
6. Select the **range E4:E8** and change the cell alignment to Align Right.
7. Go to the print preview and, under Settings, adjust the page orientation to Landscape, but do not print at this time.
8. Save and close the workbook.

REINFORCE YOUR SKILLS: E1-R3

Create and Format a Worksheet

In this exercise, you will help Kids for Change track the funds raised during one of its charity events.

1. Open a new Blank Workbook and save it in your **Excel Chapter 1** folder as: **`E1-R3-Pledges`**
2. Beginning in **cell A1**, enter this data:

	A	B	C	D
1	Kids for Change			
2	Summer Charity Race			
3	Participant	Sign-up Date	Pledges	Miles Run
4	Shelly Mundt	4/23	5	25
5	Pauline Alvarado	4/25	12	15
6	Chris Driedger	4/2	14	10
7	Korey Rhynold	3/29	19	15
8	Kimberly Ayres	4/17	23	5
9	Glenn Edwards	4/3	17	25
10	Inga Maier	4/12	12	10

3. Use AutoFit to resize **columns A–B**.
4. In **cell E3**, enter the heading **`Bib #`** and tap Enter.
5. In **cell E4**, type **`KCSCR410`** and then use **AutoFill** to complete the series of bib numbers.
6. In **cell F3**, enter the heading: **`Total Raised`**

   Each participant gathers pledges from donors, so you will enter the total raised by each participant in column F.

EXCEL

7. Starting in **cell F4**, enter this data in the **range F4:F10**:

	F
4	125
5	180
6	140
7	285
8	115
9	425
10	120

8. Select the total raised figures in the **range F4:F10** and apply the Currency number format.
9. Resize **column F** to make it wide enough to fit the column heading.
10. Select the **range B4:B10** and apply the Short Date format.
11. Select the **range C4:D10** (the data for Pledges and Miles Run) and center-align the data.
12. Select the **range A1:F1** and apply Merge & Center.
13. Merge and center the **range A2:F2**.
14. Select the **range A1:F3** (titles and headings) and apply the **Standard Dark Blue** fill color.
15. With the same range selected, apply the **White, Background 1** font color.
16. Save the workbook and close Excel.

Apply Your Skills

APPLY YOUR SKILLS: E1-A1

Enter Data and Format a Worksheet

You work for Universal Corporate Events, a meeting and event planning service that hosts and organizes company meetings, retreats, and parties. The company is expanding! In this exercise, you will prepare a spreadsheet to compare available office space for a second office.

1. Start Excel, open a new Blank Workbook, and save it in your **Excel Chapter 1** folder as: `E1-A1-Listings`
2. Beginning in **cell A1**, enter this data:

	A	B	C	D	E
1	Universal Corporate Events				
2	Potential Office Space				
3	Address	Building Class	List Date	Square Ft	Monthly Rent
4	3100 Sycamore Lane	A	7/21	1200	2500
5	1812 Broadway	A	3/17	1050	2250
6	21 King Street	B	5/22	1450	1875
7	6801 Delamere Way	C	7/16	1700	2150
8	48 Franklin Blvd.	B	5/30	920	1500

3. Select the **range A3:E3** and apply Wrap Text format.
4. With the headings still selected, apply Middle Align and Center.
5. Adjust the column width for **column A** to exactly **18.00**.
6. Select the **range B4:B8** and apply Center alignment.
7. Select the **range E4:E8** and apply the Accounting number format; then remove both decimal places.
8. Select **cell A1** and increase the font size to **18**.
9. Select **cell A2** and increase the font size to **14**.
10. Select the **range A3:E3** and increase the font size to **12**.
11. With the headings still selected, apply the **Gold, Accent 4** fill color.
12. Select the **range A1:E3** and apply bold formatting.
13. Save the workbook.

APPLY YOUR SKILLS: E1-A2

Create a Schedule Using AutoFill

In this exercise, you will enter more data and create a schedule of days for Universal Corporate Events to view the new office space.

1. Save your workbook as: `E1-A2-Listings`
2. In **cell F3**, enter the heading: `Maint. Fees`

EXCEL

3. Starting in **cell F4**, enter this data for the maintenance fees:

	F
4	100
5	90
6	75
7	86
8	60

4. In **cell G3**, enter **`View On:`** as the heading.

   Each day next week you will view a different property, so you will enter the day of the week for each viewing in column G.

5. In **cell G4**, enter **`Monday`** and then use the fill handle to fill in the days of the week from Tuesday to Friday in the **range G5:G8**.
6. Select the **range F4:F8** and apply the Accounting number format; then remove both decimal places.
7. Adjust the column width for **column G** to AutoFit the contents.
8. Select the **range A3:G3** and apply a Top and Bottom border.
9. Save and close the workbook.

APPLY YOUR SKILLS: E1-A3

Create a Financial Report

In this exercise, you will enter data for clients who have booked events with Universal Corporate Events and then format the information appropriately.

1. Open a new Blank Workbook and save it in your **Excel Chapter 1** folder as: **`E1-A3-Income`**
2. Beginning in **cell A1**, enter this data:

	A	B	C	D
1	Universal Corporate Events			
2	June Income Forecast			
3	Client	Event	Event Date	Fee
4	Green Clean	Staff Party	6/13	480
5	Kids for Change	Training	6/18	325
6	Blue Jean Landscaping	Training	6/14	550
7	Stormy BBQ	Team Building	6/23	750
8	Winchester Web Design	Staff Party	6/17	300
9	iJams	Training	6/21	450

Format the Worksheet

3. Use AutoFit to adjust all four **columns A–D**.
4. Select the **range A3:D3** and apply Center alignment; then apply the Fill Color **Gold, Accent 4**.

5. Increase the font size of **cell A1** to **18** and the font size of **cell A2** to **14**.
6. Select the **range A1:D3** and apply Bold format.
7. Select the **range D4:D9** and apply Accounting number format.
8. Select the **range A3:D3** and apply a Top and Bottom Border.
9. Change the page layout orientation to Landscape.
10. Save the workbook and close Excel.

Project Grader

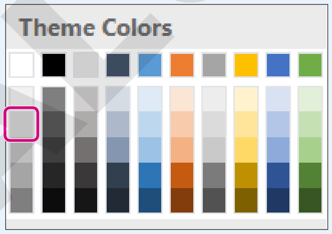
If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: E1-P1

Creating an Inventory Tracking Spreadsheet

Taylor Games creates replacement parts for many different games as well as various types of dice. In this exercise, you will prepare a spreadsheet to manage inventory for various items.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E1_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E1_P1_Start** from your **Excel Chapter 1** folder.
2. Use AutoFit to adjust the width of **column A** so that all text is visible within the column.
3. In **cell A1**, enter the text: `Inventory`
4. Apply 14 pt and Bold text formatting to **cell A1**.
5. Enter today's date in **cell A2** using the MM/DD/YY format.
6. Clear formatting from the **range A5:C5**.
7. Use Autofill to create a sequential list of SKUs in column B starting with **cells B5** and **B6** and continuing down to **cell B19**.
8. Apply the Accounting number format to the **range D5:D19**.
9. Apply Align Left cell alignment to **cells A2** and **A4**.
10. Apply Align Right cell alignment to the **range B4:D4**.
11. Apply Bold text formatting to **cell A2** and to the **range A4:D4**.
12. Apply a thick bottom border to the **range A4:D4**.
13. Apply the Fill Color **White, Background 1, Darker 15%** to the **range A4:D4**.



14. Set the widths of **columns B**, **C**, and **D** to: `10`
15. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 1** folder as `E1_P1_eSubmission` and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 1** folder as: `E1_P1_Submission`

PROJECT GRADER: E1-P2

Classic Cars Club New Members List

In this exercise, you will update and format a spreadsheet with recently added New Members.

1. Download and open your Project Grader starting file.
- *Using eLab:* Download **E1_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
- *Not using eLab:* Open **E1_P2_Start** from your **Excel Chapter 1** folder.

2. In **cell A1**, change the word *Car* to: `Cars`

3. In **cell A2**, insert the text: `New Members`

4. Apply these text formats:

Location	Format
Cell A1	Font Size 14, Bold
Cell A2	Font Size 12, Bold
Range A4 I4	Bold

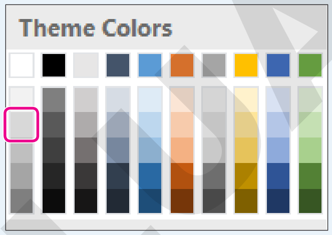
5. Apply Short Date number formatting to the **range H5:H34**.

6. Apply the Accounting number format to the **range I5:I34**, and then decrease the decimals until no decimals are displayed.

7. Set the widths of **columns A**, **H**, and **I** to: `16`

8. Apply Align Right cell alignment to **cells F4** and **I4**.

9. Apply the following formats to the **range A4:I4**:
- Thick bottom border
- Fill Color: White, **Background 1, Darker 15%**



10. Save your workbook.
- *Using eLab:* Save it to your **Excel Chapter 1** folder as `E1_P2_eSubmission` and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save it to your **Excel Chapter 1** folder as: `E1_P2_Submission`

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

E1-E1 That's the Way I See It

You would like to take control of your personal finances, and with your newly learned Excel skills you are going to make yourself a monthly budget. Start a new workbook and save it as: **E1-E1-Budget**

Create a title with your name at the top of your worksheet. Below the title, insert **Monthly Budget** and then next to that cell enter the total amount of money you have to spend each month for items like food, rent, and entertainment. Leave one blank row, then in row 4 create three column headings: **Expense**, **Budget Amount**, and **Actual Amount**. Leave two blank cells in row 5 below Expense and Budget Amount. Below Actual Amount, enter the months of the year across 12 columns so you can track expenses for the whole year. In the next row, begin entering labels for your expenses and how much you might spend on that item. Leave the Actual Amount columns blank; you can enter that at the end of each month to compare to your budget amount. Include at least five expenses, such as rent, groceries, and transportation. Adjust the column widths as necessary and apply appropriate formatting of your choice.

E1-E2 Be Your Own Boss

As the owner of Blue Jean Landscaping, a landscaping business that saves its customers money by having them help with the physical labor, you need to create an inventory list of equipment you own for your insurance company. Your insurance company has asked that specific information be included, specifically the item name, value, and number of each item.

Create a new blank workbook named **E1-E2-Equipment** and set up your worksheet with the company name and the title *Equipment Inventory*, followed by the column headings. Fill in the list with eight to ten items that are standard equipment for a landscape company, such as rakes, wheelbarrows, and shovels (do an online search if necessary). List their approximate value and how many you own. Format the value with dollar signs and apply other formatting as you see fit. Make the worksheet look professional, as you will be submitting this to the insurance company, and your Excel worksheet will represent your company.

E1-E3 Demonstrate Proficiency

Stormy BBQ is a restaurant known for its high-quality, locally grown and sourced ingredients. The owner of the company wants you to create an Excel spreadsheet that can be used to track customer information.

Start a new workbook named **E1-E3-Customers** that uses the company name as the title at the top of your worksheet and the subtitle **Customer Database** below the title. Create column headings such as First Name, Last Name, Email, and Phone Number. Be sure to also include columns to record the dates of the first and last order for each customer so customer loyalty can be tracked. Make formatting changes as you see fit.

EXCEL

2 Calculating Student Grades Using Formulas

In this chapter, you will use Excel to work with multiple worksheets created to record student grades. You will start by using formulas to calculate grade totals and grade percentages. You will also learn about managing and organizing worksheets to insert, delete, and even hide data, and also to make your data easier to find.

LEARNING OBJECTIVES

- Use formulas to perform calculations
- Rearrange data on a worksheet
- Manage multiple worksheets

Project: Tracking Student Grades

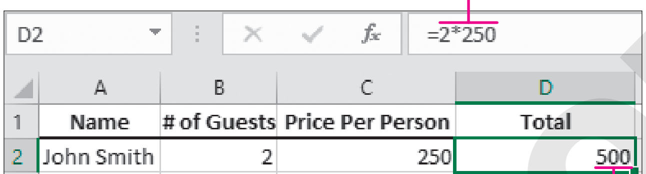
LearnFast College is a school that provides fast-paced learning programs for college students. As an instructor there, you need to keep track of your students' grades for an Introduction to Business course. Excel will help you record marks and quickly calculate final grades for the course using a variety of formulas.

Creating Formulas

Excel uses formulas to perform calculations, which are written as mathematical problems. To create a formula, you should always begin by typing the equals (=) sign in the cell. Then you list the numbers or cells to use in the formula, along with the operation to be performed.

The Formula Bar always displays the formula while the cell displays the results.

The formula =2*250 is entered in cell D2 and is displayed in the Formula Bar.



The result of the formula, 500, is displayed in cell D2.

Mathematical Operators

Addition, subtraction, multiplication, and division are frequently used to perform calculations in Excel. Knowing the correct keystroke for each operation is important to ensure the correct result for your formulas.

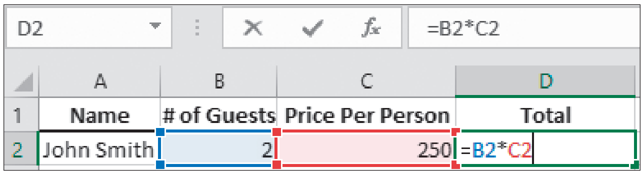
KEYSTROKES FOR USING OPERATIONS IN FORMULAS

Operation	Keystroke	Example	Result
Addition	+	=3+2	5
Subtraction	-	=3-2	1
Multiplication	*	=3*2	6
Division	/	=3/2	1.5
Exponent	^	=3^2	9

Cell References

Rather than typing numbers into your formulas, it is best to use cell references whenever possible. A cell reference takes the place of a number in a formula and makes it easier to copy formulas down a column or across a row. So, instead of =2*250, you could use =B2*C2 with the value *2* in cell B2, and the value *250* in cell C2.

View the video "Using Simple Formulas."

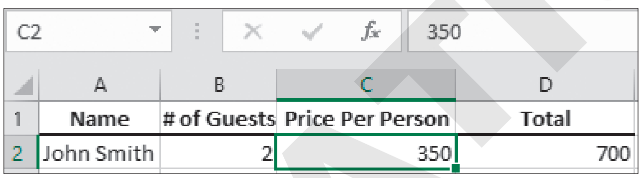


The formula in cell D2 references cells B2 and C2.

The formula result is 500.

Cell references can be typed using upper- or lowercase letters, or you can simply click with the mouse on the cell you want to use.

Another advantage of cell references is that Excel automatically recalculates the formula if the value in the cell reference changes. In the preceding example, if the value in cell C2 is changed to 350, the formula in cell D2 would automatically update to show the new result, 700, without any effort required.



The formula result in cell D2 is updated immediately when cell C2 is changed.

Order of Operations

When there is more than one operation in a formula, Excel must decide which operation to perform first. Excel follows the standard mathematical order of operations, commonly known by the acronym PEMDAS. That is, *Parentheses come first (also called brackets or round brackets), then Exponents, Multiplication, Division, Addition, and Subtraction*. PEMDAS is often remembered with the phrase "Please Excuse My Dear Aunt Sally."

View the video "Understanding Order of Operations."

It's important to understand the order of operations because it can significantly change the outcome of your formula. The formula =2+3*5 would result in 17 because 3*5 is the first operation and then 2+15 is 17. The formula =(2+3)*5, on the other hand, results in 25, because (2+3) is the first operation and then 5*5 is 25.

DEVELOP YOUR SKILLS: E2-D1

In this exercise, you will create formulas to calculate the students' grades.

1. Start Excel, open **E2-D1-Grades** from your **Excel Chapter 2** folder, and save it as: **`E2-D1-NewGrades`**

   The Security Warning bar may display the first time you open this or another file. In this course, you can safely click Enable Content to continue opening the file.

2. Select **cell F6**, type **`=D6+E6`**, and then tap Enter.

   As you type each cell reference, Excel adds color to both the cell reference and the cell being referenced. The text D6 turns blue, and the cell has a border and light shading of the same color around it. As you continue typing the formula, the text E6 turns red. The color changes each time you add a new cell reference, which helps you visualize the cell references while entering or editing the formula.

   You entered a formula that added the two quiz scores, and cell F6 should now show the total of 172. Now you will enter the next formula using the mouse instead of typing the cell references.

3. Type **=** in **cell F7**, click **cell D7**, type **+** and click **cell E7**, and finally click **Enter** ✓.

   The formula is similar, but this time the cell references refer to the information in row 7 and the result is 199. Notice that the formula is visible in the Formula Bar and the result is visible in the worksheet cell. Cell F6 uses cell references to cells D6 and E6, and cell F7 refers to cells D7 and E7, which means the relative position is the same and you can therefore use AutoFill to copy the formula down the column instead of manually entering it for each student.

4. Point to the fill handle in **cell F7** and drag down to **cell F17**.

   The quiz totals are calculated for all students. Now you will calculate project totals for the class.

5. Select **cell J6** and then type **`=H6+I6`** and click **Enter** ✓.
6. Point to the fill handle in **cell J6** and, this time, double-click it.

   Double-clicking automatically fills the cells down the column according to the rows used in adjacent columns.

   Next you will create a formula to calculate the percentage grade for projects by dividing the project total by 200.

7. Select **cell K6**, type **=** and click **cell J6** to select it, and then type **`/200`** and click **Enter** ✓.

   The mark has been calculated for the first student as 0.945, so next you will display it as a percentage. Then you will copy the formula down the column.

8. With cell K6 still selected, choose **Home→Number→Percent Style** %.
9. Point to the fill handle in **cell K6** and double-click it to fill the formula down **column K**.
10. Save the workbook.

Rearranging Data

When using a worksheet there may be times when you need to do more than simply enter data row by row. You may need to insert more information in the middle of existing data, remove chunks of data already entered, or move cells or entire sections of data around. You can also sort your data to put it into a more usable arrangement.

Insert and Delete Rows, Columns, and Cells

To add more data into your existing data, it might make sense to insert a new cell, column, or row. You can add one cell, row, or column, at a time, or several at once. Columns are inserted to the left of your selected column, and rows are inserted above your selected row. Inserting a cell or cells allows you to shift the existing data either right or down.

Home→Cells→Insert | Right-click column/row heading→Insert

Home→Cells→Delete | Right-click column/row heading→Delete

DEVELOP YOUR SKILLS: E2-D2

In this exercise, you will insert and delete both rows and columns, and insert cells to enter additional student data into the gradebook.

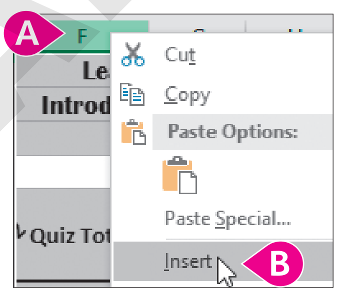
1. Save your workbook as: **E2-D2-NewGrades**
2. Select the cell with Sarah's name, **cell A16**, and choose **Home→Cells→Insert menu button ▾→Insert Sheet Rows**.

   The data for rows 16:17 is shifted down to rows 17:18, and a blank row is inserted in row 16, the currently selected row.
3. Enter the following data for a new student in **row 16**:

First	Last	Student ID#	Quiz 1	Quiz 2	Quiz Total	Quiz %	Project 1	Project 2	Project Total	Project %
Robert	Moreira	53846	96	88	184		90	95	185	93%

   As you type in data, Excel automatically copies adjacent formulas. After entering the data for Quiz 1 and Quiz 2, the Quiz Total column should show 184 automatically; it's the result of the formula that adds the two quiz scores. After entering the two project marks, the total and percentage should also automatically calculate.
4. Select the cell with Todd's name, **cell A18**, and then choose **Home→Cells→Delete menu button ▾→Delete Sheet Rows**.

   All of Todd's information is removed from row 18. Now you need to add a third quiz score between columns E and F.
5. Follow these steps to insert a new column between **columns E** and **F**:



   A Right-click the **column F** heading.

   B Choose **Insert** from the menu.

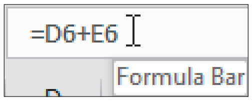
   A new column is entered where column F was, and column F is shifted right to become column G.

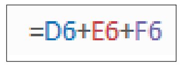
EXCEL

6. Select the cell with the *Quiz 2* heading, **cell E5**, and use the **fill handle** to drag one cell to the right, inserting the heading name `Quiz 3` into **cell F5**.

   Because there are three quizzes now, the Quiz Total column formula needs to be updated to include the new quiz.

7. Select **cell G6**, which contains the total formula for Quiz 1 and Quiz 2.
8. To edit the formula, point to the Formula Bar and click to the right of the **cell E6** reference. Then type **`+F6`** and click **Enter** ✓.





9. Point to the fill handle in **cell G6** and double-click to copy the new formula down **column G**.

   Even though the Quiz 3 grades in column F are blank, the formulas in column G will include those results once they are entered. Now you will insert a single cell for a new column heading.

10. Select the cell with the *Exam* heading, **cell M5**, and then choose **Home→Cells→Insert menu button ▾→Insert Cells**.
11. In the Insert dialog box, choose **Shift Cells Right** and click **OK**.

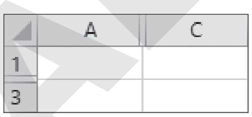
    The Exam *heading is shifted to the right into cell N5.*

12. With cell M5 still selected, type **`Participation`** as the new heading and then complete the entry.
13. Select the **range M5:O5** and adjust the column width to **`11.5`** so the headings fit properly.
14. Save the workbook.

Hide and Unhide Rows and Columns

Sometimes you may want to save data in your worksheet but have the information in certain rows or columns hidden from view. For example, a retailer might use an item's cost in one column to calculate the sale price in another. The cost column can be hidden from view to prevent customers from seeing how much profit the retailer is making, but the information is still saved and can still be used in a formula. Hidden rows and columns will not print, and a hidden row or column can easily be made visible using Unhide.

Hidden rows and columns can be identified by the gap in the column or row headings, as shown in the figure below:



Row 2 and column B are hidden.

Home→Cells→Format→Hide & Unhide | Right-click column/row heading→Hide/Unhide

Sort Data by Column

Excel can easily sort data in either alphabetic or numeric order, using any column of data. For example, you might want to sort by name, date, item number, or dollar amount. A sort keeps any adjacent data in the same row, so sorting by name, for example, means that data, such as addresses or phone numbers, stays with the correct name.

Sorting options depend on the type of data selected. For example, if numerical data is selected, the options are Smallest to Largest or Largest to Smallest. If text is selected, the options are either A to Z or Z to A.

Home→Editing→Sort & Filter

DEVELOP YOUR SKILLS: E2-D3

In this exercise, you will hide and unhide a column and then sort the students first by grade and then by first name.

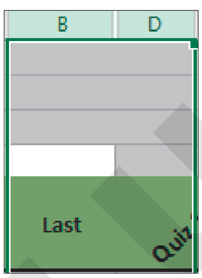
1. Save your workbook as: **E2-D3-NewGrades**
2. Point to the **column C** heading, right-click, and choose **Hide**.

   The Student ID# column is hidden from view, and now columns B and D are side by side.
3. Select **cell L6** and then choose **Home→Editing→Sort & Filter→Sort Largest to Smallest**.

   The students are now listed from highest to lowest according to the Project % column, so John is now the first student listed, Pamela is listed last, and all of the corresponding grades for each student are sorted along with the student names.
4. Select **cell A6** and choose **Home→Editing→Sort & Filter→Sort A to Z**.

   Ashley is now at the top of the list, and Sarah is at the bottom.
5. Point to the **column B** heading, press and hold the left mouse button, and then drag to the right to select **columns B–D**.

   To unhide columns or rows, you must select a continuous *range surrounding the hidden column or row, so be sure to drag rather than selecting each column separately.*

   After columns B–D are selected, there is no line separating the selected range.
6. Choose **Home→Cells→Format→Hide & Unhide→Unhide Columns**.

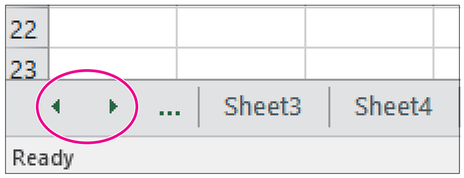
   Column C is once again displayed between columns B and D.
7. Save the workbook.

Managing Multiple Worksheets

By default, an Excel workbook contains one worksheet. You can, however, add multiple worksheets to be saved in the same workbook. This can make it easier to access different worksheets that are related to the same topic. You can also organize a workbook by deleting worksheets you don't need anymore, renaming the worksheets and changing the color of the sheet tab, and moving worksheets.

Insert and Delete Worksheets

Adding a new worksheet is as simple as clicking on the New Sheet button at the bottom of a workbook. When a workbook contains many worksheets, you may need to scroll through the worksheets using the left and right arrows located to the left of the sheet tabs at the bottom of the screen.



To delete a worksheet, you have to be more careful because, once deleted, you can't recover any of the data. Even the Undo button can't recover a deleted worksheet. For protection, Excel does ask you to confirm the action before you delete a worksheet.

≡ Home→Cells→Insert menu button ▾→Insert Sheet | Right-click sheet tab→Insert...

≡ Home→Cells→Delete menu button ▾→Delete Sheet | Right-click sheet tab→Delete

Rename Worksheets

The default names for worksheets don't really help someone understand what data is on the worksheet or what it is being used for. When you start adding more worksheets and need to quickly find the sheet with the information you need, it becomes important to name your sheets.

Names should be short and describe the purpose of the worksheet as clearly as possible. Certain characters, such as ? and /, are restricted, so it is best to stick to text and numbers. To rename a sheet, simply double-click the sheet tab and type the new name.

Examples of good worksheet names that are short, simple, and descriptive

≡ Home→Cells→Format→Rename Sheet | Double-click the sheet tab

DEVELOP YOUR SKILLS: E2-D4

In this exercise, you will insert a new sheet, delete a sheet, and rename a sheet.

1. Save your workbook as: **`E2-D4-NewGrades`**
2. Click the **New Sheet** button:

Notice there is a new worksheet inserted to the right of the active sheet, New. *The default worksheet name is* Sheet *with a number, which increases each time you add a new sheet.*

3. Click the **old** worksheet tab to activate the sheet.

4. Choose **Home→Cells→Delete** **menu button ▾→Delete Sheet** and click **Delete** or tap Enter when prompted in the dialog box.

   Because there is data on the old *worksheet, Excel asks you to confirm before it will delete and permanently remove the sheet. This step cannot be undone.*

5. To change the sheet name, double-click the **Sheet1** worksheet tab you just created; type **`Participation`** and tap Enter.
6. Repeat step 5 to change the name of the **New** worksheet to: **`Final Grades`**
7. On the **Final Grades** worksheet, select the title in the merged **cell A2** and press Ctrl+C to copy the text *Introduction to Business*.
8. Click the **Participation** worksheet tab, ensure **cell A1** is the selected cell, and press Ctrl+V to paste the text.
9. In **cell A2**, below the class title, type **`Participation Grades`** and tap Enter.
10. Select **cell A1**, choose **Home→Clipboard→Format Painter**, and then click **cell A2** to apply the formatting from cell A1.

    Clicking Format Painter once allows you to apply the formatting once, and then it is turned off. If you wanted to continue applying the same formatting to more cells or ranges, you would double-click the Format Painter instead.

    The range A2:O2 is merged and centered, and the text now has the same formatting as the title.

11. Save the workbook.

EXCEL

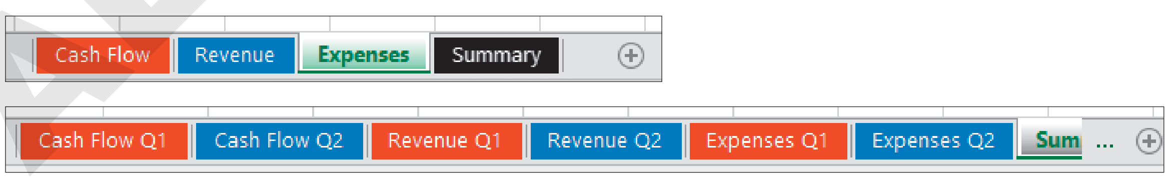
Move Worksheets

You may want to rearrange the order of the sheets at the bottom of the workbook. Excel doesn't have a feature for sorting worksheets, but you can drag worksheet tabs left or right to rearrange the order. You can also rearrange or duplicate the sheets using the Move or Copy dialog box.

Home→Cells→Format→Move or Copy Sheet | Right-click worksheet tab→Move or Copy

Change Worksheet Tab Colors

Finding the right worksheet can be a lot quicker if you use a system of colors for different worksheets. Colors could be assigned based on department, function, importance, or any method you choose. Adding a color to a worksheet tab can be done via the Ribbon or by right-clicking the tab.



These are some examples of using tab colors to organize worksheets; notice the selected worksheet appears only lightly shaded.

Home→Cells→Format→Tab Color | Right-click worksheet tab→Tab Color

Hide Worksheets

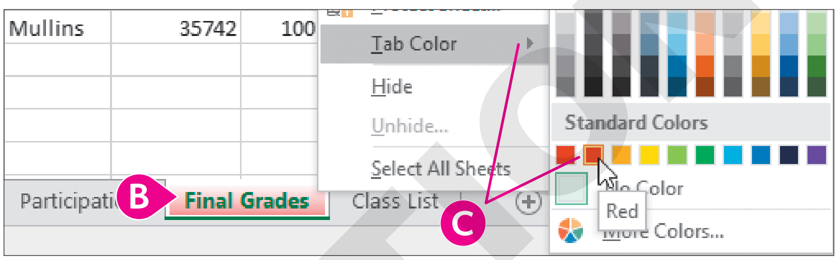
Similar to hiding rows and columns, you may want to save a worksheet's information but have it hidden from view. Hiding a worksheet can also help organize your workbook if you have a lot of tabs or if the end-user will use only some of the worksheets. In this case, hiding the unused worksheets makes it a more user-friendly workbook. Once hidden, it is easy enough to unhide a worksheet when you need to use it again.

Home→Cells→Format→Hide & Unhide | Right-click worksheet tab→Hide/Unhide

DEVELOP YOUR SKILLS: E2-D5

In this exercise, you will reorganize and color the worksheet tabs.

1. Save your workbook as: **E2-D5-NewGrades**
2. Follow these steps to move the Final Grades worksheet and add a tab color:



   - A. Drag the **Final Grades** worksheet tab to the right side past the Participation sheet, as shown.

     Notice the small black arrow that follows your mouse pointer to indicate the new position of the sheet you are moving.
   - B. Right-click the **Final Grades** worksheet tab.
   - C. Choose **Tab Color→Standard Color Red**.
3. Change the color of the **Participation** sheet tab to **Standard Color Blue**.

   The Class List worksheet is not needed at this time, so you will hide it.
4. Right-click the **Class List** worksheet tab and choose **Hide**.
5. Save the workbook.

Create Cell References to Other Worksheets

When using multiple worksheets, you can use common information across different sheets. Excel allows you to link cells from different worksheets in the same workbook or in other workbooks. Linking inserts values from a source worksheet into a destination worksheet. For example, you may want to have a revenue worksheet and a profit worksheet; the profit worksheet can use the values from the revenue worksheet. If the revenue worksheet values ever change, the profit worksheet values will update automatically.

Referencing another worksheet requires the actual cell reference as well as the worksheet name and an exclamation point. Cell references to other workbooks require the workbook name, sheet name, and cell reference. Cell references to other worksheets or workbooks can be used to simply link the data or can be used in a formula.

Revenue is the name of the worksheet in the current workbook, followed by an exclamation point.

=Revenue!A3

A3 is the cell reference on the Revenue worksheet.

In this example, the Revenue worksheet is in a different workbook, and the name of the workbook, *2015Financial.xlsx*, is placed inside square brackets.

=[2015Financial.xlsx]Revenue!A3

It is possible to manually type a cell reference to another worksheet or workbook; however, it is simpler and much more accurate to use the point-and-click method. If you point and click, Excel inserts all the necessary formatting, such as brackets and exclamation points.

DEVELOP YOUR SKILLS: E2-D6

In this exercise, you will use linking formulas to add student names to a worksheet.

1. Save your workbook as: `E2-D6-NewGrades`
2. Click the **Participation** worksheet tab to activate that worksheet, and then select **cell A4**.
3. Enter the heading `First` in **cell A4**, tap Tab, enter the heading `Last` in **cell B4**, and tap Enter.
4. In **cell A5**, type **=** and then click the **Final Grades** worksheet tab.

   You are now looking at the Final Grades worksheet but notice that the Formula Bar shows the beginning of the formula you are entering on the Participation worksheet, including the Final Grades worksheet name.

   ='Final Grades'!

   Excel adds single quotes around any worksheet name that contains a space.
5. Select **cell A6** and then click **Enter** on the Formula Bar.

Warning! *Completing the entry this way and not clicking the Participation worksheet tab is* very important, *because doing so would change your formula. Completing the entry instantly brings you back to the Participation worksheet. You will now see the name* Ashley *in cell A5 and the formula* ='Final Grades'!A6 *in the Formula Bar.*

6. With cell A5 still selected, use the **fill handle** to drag one cell to the right, inserting the last name for Ashley into **cell B5**.
7. With the range A5:B5 selected (the cells with Ashley's first and last name), drag the **fill handle** down to **row 16**.

   The names for all twelve students are now added to the Participation worksheet, and if the names are edited on the Final Grades worksheet, changes will automatically be updated on the Participation worksheet. Felecia has informed the school the correct spelling of her name is "Felicia," so you will update this now.

8. Go to the **Final Grades** sheet and select **Felecia** in **cell A10**.
9. Edit the name by double-clicking, deleting the second *e*, and typing an `i`, and then complete the entry.
10. Go back to the **Participation** worksheet and notice Felicia's name has now been updated in **cell A9**.

4	First	Last
5	Ashley	Ronayne
6	Atif	Khalil
7	Austin	Farrell
8	Crystal	Robinson
9	Felicia	Murray
10	Jessica	McInnis

11. Save the workbook.

Create a Copy of a Worksheet

Rather than starting with a new, blank worksheet, you can save a lot of time by using an existing worksheet that already has some of the information you need or has the structure and formatting you want. Creating a copy of a worksheet does not affect the original worksheet. The new worksheet will have the same name but with *(2)* added to the end to indicate it is a second version.

Home→Cells→Format→Move or Copy Sheet | Right-click worksheet tab→Move or Copy

Edit Multiple Sheets at One Time

It is also possible to select several worksheets at the same time. With multiple sheets selected you can modify all of the selected sheets simultaneously by making changes on just one sheet. When you edit one, the others update automatically. You can enter text or formulas, or change cell format in the same cell in all of the selected sheets simultaneously. You need to be very careful with this feature, however, to ensure you are not replacing existing data in one of the worksheets you can't see!

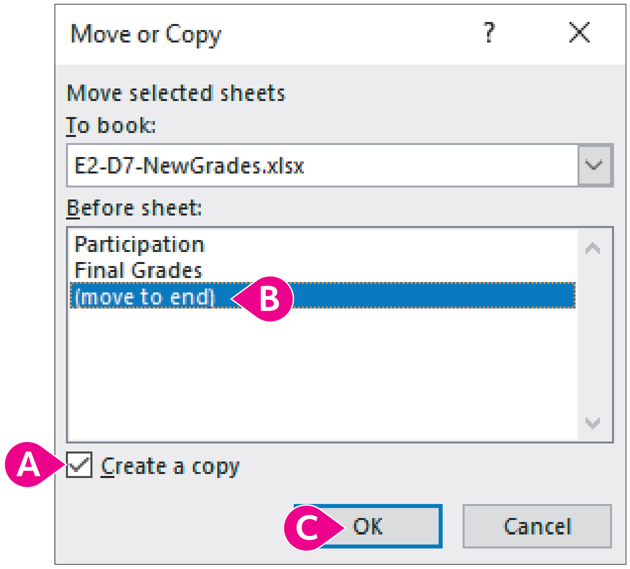
Multiple sheets can be selected (or grouped) by holding the Ctrl key while clicking additional sheet tabs. For consecutive sheets, you can also hold the Shift key and click the last sheet you wish to select. To deselect (or ungroup) the multiple worksheets, either select a different sheet or right-click one of the sheet tabs and choose Ungroup Sheets.

DEVELOP YOUR SKILLS: E2-D7

In this exercise, you will create a new worksheet by copying the Participation sheet and make changes to both at once.

1. Save your workbook as: **`E2-D7-NewGrades`**
2. Right-click the **Participation** worksheet tab and choose **Move or Copy**.

3. Follow these steps to copy the sheet and position it at the end of the workbook:



- **A** Click the checkbox to select **Create a Copy**.
- **B** In the Before Sheet box choose **(move to end)**.
- **C** Click **OK**.

The new worksheet is created to the right of the Final Grades sheet; it is identical to Participation and named Participation (2).

4. Right-click the **Participation** sheet tab again and choose **Move or Copy**.
5. This time *do not* click the Create a Copy box. In the Before Sheet box choose **Participation (2)** and **OK**.

   The original Participation sheet is now positioned to the right of the Final Grades sheet and before the Participation (2) sheet.

6. Double-click the **Participation (2)** sheet tab; rename it **`Exam`** and tap [Enter].

   Your sheet tabs should now look like this:

7. With the Exam sheet still active, select the merged **cell A2** and double-click the word **Participation** in the Formula Bar.

   This method of editing cell contents allows you to replace part of the cell without retyping the whole thing.

8. Type **`Exam`** and complete the entry, so the subtitle in **cell A2** now reads *Exam Grades*.

Edit Multiple Sheets at Once

Now you will select both the Participation and Exam worksheets to edit them both at once because you want the same changes applied to both.

9. With the Exam worksheet still active, press and hold the [Ctrl] key and click the **Participation** worksheet tab.

   Both worksheets are now selected, their names are both bold, and there is a thick line below both sheet tabs. The Final Grades worksheet is not selected.

10. With both sheets selected, select the **range A4:B4**.
11. Apply bold formatting, increase the font size to 12 points, and center-align the content.
12. Add a **Thick Bottom Border** and the fill color **Green, Accent 6, Lighter 40%** (last column, fourth row).
13. Click the **Participation** worksheet tab to confirm your changes were made to both sheets and then click the **Final Grades** worksheet tab to deselect the other two sheets.
14. Save the workbook and close Excel.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: E2-R1

Use Formulas to Calculate Reimbursement

In this exercise, you will create a copy of a worksheet that Kids for Change used to calculate expense reimbursements paid out to volunteers in 2019 and update the sheet for 2020.

1. Start Excel, open **E2-R1-Volunteers** from your **Excel Chapter 2** folder, and save it as: `E2-R1-Volunteers2020`

   Because many of the volunteers are the same each year, and you want to use the same basic structure for the worksheet, it is easier to create a copy than to start all over.
2. Create a copy of the 2019 sheet and rename it as: `2020`

   The 2019 sheet did not use formulas for the calculations, so the data can be deleted. However, after your sheet contains the proper formulas, you can delete the input data only, leaving the formulas under Mileage Paid and Total for the next year's calculations.
3. On the **2020** sheet, delete all data from 2019 for Miles Driven, Mileage Paid, Other Expenses, and Total in the **range B5:E10**.
4. Cheryl did not volunteer this year, so delete **row 7** from the worksheet.
5. There is a new volunteer in 2020, so enter the name `Jessica Banderas` in **cell A10**.
6. Enter the mileage data shown for the corresponding volunteers:

4	Name	Miles Driven
5	Dave Lozano	80
6	Sharon Foster	173
7	Brad Bird	96
8	Michelle Smith	164
9	Stewart Schott	205
10	Jessica Banderas	104

7. Sort the volunteers on the Miles Driven column, from smallest to largest.
8. Select **cell C5** to enter the formula to calculate the mileage paid for Dave.
9. Type `=B5*0.2` and click **Enter** ✓.
10. Click the **fill handle** in **cell C5** and drag down to **cell C10**.

    The data for the Other Expenses column has not been entered yet, but the formula to calculate the total can be created and the expenses entered later.
11. Select **cell E5** and then enter the formula `=C5+D5` and click **Enter** ✓.
12. Double-click the **fill handle** in **cell E5** to fill the formula down to **cell E10**.
13. Point to the column heading for **column B**, right-click, and choose **Hide**.
14. Save the workbook.

REINFORCE YOUR SKILLS: E2-R2

Edit Multiple Sheets and Insert Formulas

In this exercise, you will edit both sheets and then use a formula to update the Mileage Rate column from last year to this year.

1. Save your workbook as: `E2-R2-Volunteers2020`

   You want the mileage rate to be listed at the bottom of each worksheet, so you will edit both sheets at once.
2. Make sure the 2020 worksheet is active and then press and hold Ctrl while clicking the **2019** worksheet tab.
3. In **cell C14**, type `Mileage Rate:` and tap Tab.
4. In **cell D14**, type `0.2` and tap Enter.
5. Select the **range C14:D14** and apply bold, italics, and Wrap Text formatting.
6. Right-click the **2020** worksheet tab and select **Ungroup Sheets** to stop editing both sheets at once.

   You have been informed that the rate will be increased by 10% from last year, so you will use a formula to calculate the new rate. The cell contents do not have to be deleted first; simply start typing the new information to replace the existing information in any cell.
7. Select cell **D14**, type **=** to begin the formula, select the **2019** sheet, select **cell D14**, type **+** and then select **cell D14** again. Finally, type `*10%` and complete the entry. (The entire formula should be ='2019'!D14+'2019'!D14*10% and the result should be 0.22.)
8. Change the **2020** sheet tab color to red.
9. Hide the **2019** sheet now that you are finished with it.
10. Save and close the workbook.

REINFORCE YOUR SKILLS: E2-R3

Format Worksheets and Create Formulas with Functions

In this exercise, you will calculate the Kids for Change employee contributions to an employee retirement savings fund, setting up the appropriate functions, and copy the worksheet to use again the following year.

1. Open **E2-R3-Savings** from your **Excel Chapter 2** folder and save it as: `E2-R3-Savings2020`
2. On the **2019** sheet, begin calculating the total annual contributions for each employee by adding the amount for Jan–Jun and the amount for Jul–Dec.
3. Apply bold and the Currency number format to the totals, and click the **Decrease Decimal** button enough times to entirely remove the decimal places.
4. Select the **2018** and the **2019** sheets to edit both at once.
5. Insert a new row above *Shannon* and then enter the name `Ruth Bowers` on the new blank row, in **cell A9**.
6. Ungroup the sheets and choose the **2019** worksheet.

7. Enter Ruth's contributions: `0` under Jan-Jun and `150` under Jul-Dec.

   Notice Excel enters the formula under Annual Total for you.

8. Enter the column heading `Running Total` in **cell E4** and enter a formula in **cell E5** to find the annual total for Craig from 2019 plus the amount from 2018.
9. Copy the formula down **column E** for the rest of the employees.
10. Use **Autofit** in **column E** to widen the column enough to fit the heading.
11. Hide the row with Shannon's information, **row 10**.
12. Insert a new column to the left of **column E**, and in **cell E4** type `Percent` and center-align the headings in the **range A4:F4**.
13. In **cell E5**, enter a formula that divides the annual total by the running total.
14. Apply the Percentage number format to **cell E5** and copy the formula down the column.
15. Create a copy of the **2019** worksheet and rename the new worksheet: `2020`
16. If necessary, move the **2020** worksheet to the right of the 2019 worksheet.
17. On the **2020** sheet, delete all the data from the **range B5:C11**.
18. Edit the running total formula in **cell F5** so that on this sheet it adds the annual total in **cell D5** and the 2019 running total.
19. Copy the new running total formula down the column to **cell F11**.

    The 2020 sheet is now ready to use. Once data is added for Jan-Jun and Jul-Dec, the formulas will update in columns D, E, and F.

20. Save the workbook and close Excel.

Apply Your Skills

APPLY YOUR SKILLS: E2-A1

Create Formulas to Calculate Prices

In this exercise, you will use an existing set of prices for Universal Corporate Events services to create an updated price list.

1. Start Excel, open **E2-A1-Prices** from your **Excel Chapter 2** folder, and save it as: `E2-A1-NewPrices`

   You will begin by creating a copy of the Price List sheet to be saved and hidden for future reference, and then editing the original sheet.
2. Create a copy of the **Price List** sheet and rename it: `Old Price List`
3. Hide the **Old Price List** sheet.
4. On the **Price List** sheet, insert a row above **row 3**.

   Inserting a blank row separates the data from the titles and allows the data to be sorted more easily.
5. Sort the Service Price List by price, from largest to smallest.
6. Insert a column to the left of the Deposit column.
7. In **column C**, enter the heading `Increase` and in **cell C5** enter the number: `5`
8. Insert another blank column to the left of the Deposit column.
9. In **column D**, enter the heading `New Price` and in **cell D5** enter a formula that adds the Increase column amount to the Price column amount.
10. Select **cell C5** and **cell D5** and drag the **fill handle** down to **row 12**.
11. Use the AutoFill Options Copy Cells command to copy the number 5, as well as the formula, all the way down both columns.
12. Hide **columns B** and **C** so they are hidden from customers, leaving only the New Price and Deposit columns visible for each service.
13. Save the workbook.

APPLY YOUR SKILLS: E2-A2

Use Formulas to Calculate a Discount

In this exercise, you will add formulas to the Universal Corporate Events price sheet to calculate the new prices for your important customers.

1. Save your workbook as: `E2-A2-NewPrices`

   There is a hidden sheet that does not use formulas, so it needs to be updated.
2. Unhide the existing **VIP Price List** worksheet.
3. Change the tab color of the **VIP Price List** worksheet to red.
4. Edit the Price List and VIP Price List at the same time to hide Venue selection from the Services list.
5. Ungroup the sheets. On the **VIP Price List** sheet, delete the list of prices in **column B**.
6. Edit **cell B4** to: `VIP Price`

7. In **cell B5** enter a formula that subtracts a VIP discount of 10% from the New Price column on the **Price List** worksheet.

   There are different methods to mathematically subtract 10% and achieve the correct result of 356 in cell B5. One method is to use ='Price List'!D5*(100%-10%), *which multiplies the New Price listed on the Price List sheet by 100%, the full amount, less 10%, the discount amount.*

8. Copy the VIP Price formula down to **row 12**. Apply the Currency number format and bold to the **range B5:B12**.
9. Hide the **VIP Price List** worksheet so it can only be shown to VIP customers.
10. On the **Price List** worksheet, apply bold and the Currency number format to the **range D5:D12**.
11. Save and close the workbook.

APPLY YOUR SKILLS: E2-A3

Create Financial Projections Using Formulas

In this exercise, you will calculate the profit or loss for the first six months of the year for Universal Corporate Events, and then create projections for the next six months on a new sheet.

1. Start Excel, open **E2-A3-Profit** from your **Excel Chapter 2** folder, and save it as: `E2-A3-ProfitProjections`
2. Create a copy of **Sheet1** and move it to the end.
3. Rename Sheet1 to `Q1&Q2 Results` and then rename the copy to: `Q3&Q4 Projections`
4. On the **Q3&Q4 Projections** sheet, delete all data in the **range B7:G14**.
5. In **cell A2**, add the word `Projections` to the end of the existing text.
6. Edit **cell A3** to: `Q3 & Q4`
7. Enter the proper headings for `Q3` and `Q4` in **row 5** and the months `Jul` to `Dec` in **row 6** (use AutoFill to do it faster).

   You are projecting revenue to increase by 5% and to cut expenses by 2%, so you will use formulas to determine the projections for Q3 and Q4.

8. In **cell B7**, use a formula that multiplies the amount of Revenue from Jan on the **Q1&Q2 Results** sheet by 105% (this represents an increase of 5% over the amount from January).
9. Copy the formula across the row for the other five months.
10. In **cell B10**, enter a formula that multiplies the amount of Employee Wages from Jan on the **Q1&Q2 Results** sheet by 98% (this represents a decrease of 2% from the amount in January).
11. Copy the formula down to **row 14** for the three other expenses as well as the total, use Auto Fill Options to Fill Without Formatting to keep a line above Total Expenses, and then copy across all six months.
12. Select the **Q1&Q2 Results** and **Q3&Q4 Projections** sheets and use a formula in **row 16** to find the profit or loss for each month on both sheets at once. (Hint: Use Revenue-Total Expenses, starting in **cell B16** and copy across to **cell G16**.)
13. With both sheets still selected, apply bold and the Accounting number formatting to all numbers in **row 16** and then just the Accounting number format in **row 7**.
14. Apply Comma Style number format to the **range B10:G14** and then ungroup the worksheets.
15. Save the workbook and close Excel.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: E2-P1

Adding Inventory for Other Locations

You've been asked to enhance an inventory spreadsheet for Taylor Games. In this exercise, you will make various enhancements to allow the worksheet to track a specific group of SKUs at two locations.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E2_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E2_P1_Start** from your **Excel Chapter 2** folder.
2. Delete **Sheet3**.
3. In **Sheet 1**, remove **rows 2** through **6**.
4. Hide **column B** in both **Sheet1** and **Sheet2**.
5. Rename the worksheets as follows:

Sheet1	**Seattle Store**
Sheet2	**Warehouse**

6. Change the worksheet order by moving the **Warehouse** worksheet to the left of the Seattle Store worksheet.
7. Change the tab colors of both worksheet tabs as follows:

Warehouse tab	**Orange, Accent 2** (6th color in the top row of Theme colors)
Seattle Store tab	**Blue, Accent 1** (5th color in the top row of Theme colors)

8. Sort both worksheets on the **SKU #** field in smallest to largest order.
9. In both worksheets, insert a column to the left of the Markup % column.
10. Make these changes in both of the new columns (**column F**):
    - Enter the heading **Inventory Value** in **cell F3**.
    - Set the column widths to: **15**
11. In **cell F4** of both worksheets, use cell references to create a formula that multiplies the Quantity by the Unit Cost (Quantity * Unit Cost).
12. In both worksheets, copy the formula in **cell F4** down the column to the **range F5:F18**.
13. Make the following changes in both worksheets:
    - In **cell H3**, enter the heading text: **Markup Amount**
    - In **cell I3**, enter the heading text: **Retail Value**
    - Set the widths of **columns H** and **I** to: **15**
    - Apply the same formatting that is used in **cell G3** to **cells H3** and **I3**.

14. In **cell H4** of both worksheets, use cell references to create a formula that multiplies the Inventory Value by the Markup % (Inventory Value * Markup %).
15. In both worksheets, copy the formula in **cell H4** down the column to the **range H5:H18**.
16. In **cell I4** of both worksheets, use cell references to create a formula that adds the Inventory Value to the Markup Amount (Inventory Value + Markup Amount).
17. In both worksheets, copy the formula in **cell I4** down the column to the **range I5:I18**.
18. In the **range H4:I18**, in both worksheets, format the cells with the Accounting number format.
19. Make a copy of the **Warehouse** sheet using these guidelines:
    - Choose **(move to end)** on the Before Sheet list.
    - Change the sheet name of the new sheet to: `Warehouse (Backup)`
20. Make a copy of the **Seattle Store** sheet using these guidelines:
    - Choose **(move to end)** on the Before Sheet list.
    - Change the sheet name of the new sheet to: `Seattle Store (Backup)`
21. Hide both the **Warehouse (Backup)** and **Seattle Store (Backup)** sheets.
22. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 2** folder as `E2_P1_eSubmission` and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 2** folder as: `E2_P1_Submission`

EXCEL

PROJECT GRADER: E2-P2

Classic Cars Appreciation in Car Value

You've been asked to modify an existing worksheet to determine how much members' cars have appreciated in value since their original sales price. In this exercise, you will add a new worksheet in which you will focus on the task at hand.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **E2_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **E2_P2_Start** from your **Excel Chapter 2** folder.
2. Make a copy of the **Sheet1** worksheet, moving the copy to the end of the worksheet order.
3. Change the worksheet names as follows:
    - Change the new sheet's name to: `Car Values`
    - Change the Sheet1 name to: `New Members`
4. Make these settings in the **Car Values** sheet:
    - Hide **columns G** and **H**.
    - Unhide **columns J** and **K**.
5. In **cell L4**, enter the heading: `Appreciation`
6. Apply the cell formatting from **cell K4** to **cell L4**.
7. Set the width of **column L** to: **16**
8. In **cell L5**, use cell references to create a formula that calculates the Appreciation (Current Value – Original Value).

9. Format **cell L5** with the Currency number format and then decrease the decimals so that no decimals are displaying.
10. Copy the formula in **cell L5** down the column to the range **L6:L34**.
11. Sort the worksheet on the Appreciation field in largest to smallest order.
12. In the **New Members** sheet, insert a row above **row 4**.
13. In **cell A3**, enter the text: **`Greatest Appreciation`**
14. In **cell C3** of the **New Members** sheet, create a link to **cell L5** in the **Car Values** sheet. **Cell C3** should now display the value from **cell L5** in the Car Values sheet.
15. Format **cell C3** with the Currency number format and then decrease the decimals so that no decimals are displaying.
16. Apply bold formatting to **cells A3** and **C3**.
17. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 2** folder as **`E2_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 2** folder as: **`E2_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

E2-E1 That's the Way I See It

Open **E2-E1-HousePurchase** and save it as: **`E2-E1-HousePurchase2`**

You are a real estate agent, and you want to create a list of potential real estate purchase costs for your clients. The types of purchasing costs and the current rate for each are listed, and you need to enter the appropriate formulas. Enter the price for a house you might wish to buy, using the Internet as necessary to research housing prices in your area. Then create formulas in all of the cells with gray shading to find total Mortgage Plus Fees. Start with the Rate times the Price in column C, then take Price minus Down Payment to get the Mortgage Amount. Then add the two Variable Fees together, add that result plus the Flat Fees to get Total Fees, and add Total Fees to Mortgage Amount in cell D19. When you are done, apply appropriate cell and number formatting as desired. Rename the sheet **`Customer 1`** and make a copy of it named **`Customer 2`**. On the Customer 2 sheet, delete the price but leave all formulas in place.

E2-E2 Be Your Own Boss

Information has been gathered from the Blue Jean Landscaping corporate customer invoices for Quarter 1 (Q1), and you need to calculate total Q1 revenue and make revenue projections for Q2. One of your employees has started the file but needs your expertise in creating the formulas. Open **E2-E2-Revenue** and save it as: **`E2-E2-Projections`**. You are required to enter appropriate formulas to calculate total labor (hours times labor rate) and the total invoice (materials plus total labor). Some of the columns are hidden, so you must unhide them first. Then calculate Q2 projections by multiplying the total invoice by the expected Q2 growth rate. Last, clean up your worksheet by deleting the companies with zero material and hours, hide the Labor Rate and Q2 Growth Rate columns again, and sort the companies by the Total Invoice column from smallest to largest.

E2-E3 Demonstrate Proficiency

Stormy BBQ is known for its delicious, world-famous BBQ sauce. In addition to its restaurant business, the company started selling its sauce by the bottle last year and want to know how profitable it was. Open **E2-E3-SauceSales** and save it as: **`E2-E3-SauceProfit`**. The first step is to calculate Revenue in the appropriate column by multiplying the number of bottles by the price per bottle. Then for expenses, use number of bottles times the expense per bottle. Last, find the profit by subtracting expenses from revenue. Once you have the profit calculated, you can hide the two columns with price and expense per bottle. Make a copy of the sheet and rename the two sheets with an appropriate year; the current sheet should be this year and the copy should be next year. On next year's worksheet, clear the sales entered under Number of Bottles Sold, so the sales can be entered in after each month of the following year. Make any other formatting changes you see fit.

EXCEL

3 Performing Calculations Using Functions

In this chapter, you will begin using functions in your formulas to make complex calculations quicker and easier. You will also learn about the difference between a relative and an absolute reference and practice using both in your formulas.

LEARNING OBJECTIVES

- Create formulas with functions
- Use AutoSum
- Use relative and absolute cell references in formulas
- Define names for cells and ranges
- Use names in formulas

Project: Tracking Progress

As an instructor at LearnFast College, you have already recorded the student grades for your Introduction to Business course. Now you will use functions to perform a variety of calculations that will help you analyze the students' performance.

Using Functions in Formulas

Functions are an important part of Excel. They allow you to do much more than simple mathematical operations. For example, adding two or three cells together is not a problem; however, if you needed to add up hundreds or even thousands of cells, it would be quite the tedious task! You would need a formula such as: =A1+A2+A3+A4... and so on.

The SUM function, in this case, is easier because it allows you to specify a range instead of individual cells. The function then tells Excel what operation to perform on the range, in this case addition. This is one of the reasons Excel is much more efficient than using a calculator!

Formulas with functions are inserted into a cell starting with the equals (=) sign, just like other formulas. This is followed by the function name and one or more arguments inside parentheses. An argument is the name for the numbers, cells, or ranges used in the function.

The function name SUM follows the = sign.

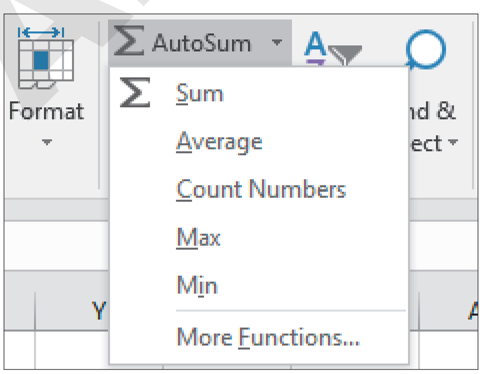
=SUM(A1:A12)

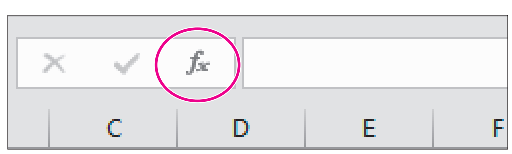
The function arguments must be placed inside parentheses. The argument is the range A1:A12, so Excel will add all of the values contained in that range.

This function has three arguments; two individual cells, A1 and A4, as well as the range A7:A12, separated by commas.

=SUM(A1,A4,A7:A12)

Functions can be typed directly into a cell, if you know the name of the function you wish to use, or inserted a number of other ways. Functions are available from the Formulas tab on the Ribbon, by using AutoSum, or by using the Insert Function button on the Formula Bar. The most common functions can be inserted quickly and easily from the AutoSum drop-down menu on the Home tab of the Ribbon.





When you insert a function by typing, Excel will suggest names for functions as you type. For example, typing =*s* will generate a list of functions that start with the letter *S*; you can ignore the prompt and type the full function name or double-click one of the suggestions that appears.

DEVELOP YOUR SKILLS: E3-D1

In this exercise, you will create a formula using the SUM function to calculate the final grade for each student.

1. Start Excel; open **E3-D1-SummerGrades** from your **Excel Chapter 3** folder and save it as: **`E3-D1-FallGrades`**
2. On the **Final Grades** worksheet select **cell G6**, and then type **`=SUM(C6:F6)`** and click **Enter** ✓.

   The formula in the Formula Bar shows the SUM function, and the total of cells C6:F6 is displayed in cell G6. The final grade for the first student, Ashley, is 37%.

   Currently there are only two grades being added (28% and 9%). The other grades will be added to the total once they are calculated on the Quizzes and Exam worksheets.
3. In **cell G7**, type **`=SUM(`** and use the mouse to select the **range C7:F7**; then click **Enter** ✓.

   It's good practice to type the closing parenthesis after the function arguments, but notice in the Formula Bar that Excel automatically inserts it for you. The sum for the second student, Atif, now shows 36%.
4. Point to the fill handle in **cell G7** and double-click to fill the formula down **column G**.
5. Save the workbook.

The AutoSum Feature

The AutoSum feature not only makes it easy to find some of the simplest functions, it also helps identify and enter the range of cells you are most likely to use in your function. Often when you have a column of numbers, you want to add a total at the bottom of the column. In a row, the total would be placed on the right side of the row.

AutoSum will automatically search for adjacent data, either directly above or to the left of the selected cell. Therefore, selecting the cell at the bottom of a column or the right side of a row and clicking AutoSum will very quickly enter the SUM function, as well as the range of cells necessary to add all the numbers in that column or row. If necessary, you can alter the range Excel selects by dragging to select the desired cells before completing the entry.

Another option is to select the data in the row or column first and then click AutoSum.

SUM, AVERAGE, COUNT, MAX, and MIN

The SUM function is just one of the AutoSum options; other frequently used functions can be found via the AutoSum drop-down menu. These functions take a set of numbers identified in the arguments and can be used to find the average, count how many numbers are in the set, or locate the highest or lowest value. Similar to AutoSum, these functions automatically search for adjacent data, either directly above or to the left of the selected cell.

AUTOSUM FUNCTIONS

Function Name	Description
SUM	Adds the values in the cells
AVERAGE	Calculates the average of the values in the cells
COUNT	Counts the number of cells that contain numerical values; cells containing text and blank cells are ignored
MAX	Returns the highest value
MIN	Returns the lowest value

Home→Editing→AutoSum Σ menu button ▾

Insert Function

For more complex functions, the Insert Function button opens a dialog box that allows you to search for functions and enter function arguments. In the Insert Function dialog box you can search for your desired function by keyword or browse by category. After choosing the function, the Function Arguments dialog box opens, from which you enter the numbers, cell references, or criteria to use in the function.

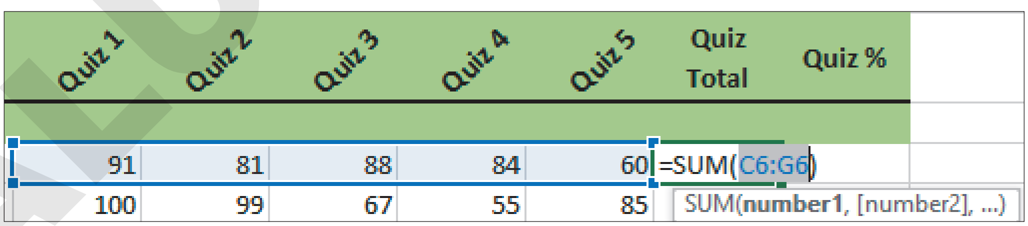
View the video "Entering a Formula Using Insert Function."

DEVELOP YOUR SKILLS: E3-D2

In this exercise, you will use AutoSum to calculate the total each student earned on their quizzes, as well as to calculate the class average for each quiz.

1. Save your workbook as: **`E3-D2-FallGrades`**
2. Click the **Quizzes** worksheet tab and select the empty cell under *Quiz Total* for Ashley, **cell H6**.
3. Choose **Home→Editing→AutoSum** Σ.

   The SUM function is entered into cell H6 with the range C6:G6. Excel finds five adjacent cells to the left of cell H6 containing numerical data, so the range C6:G6 is automatically entered into the function arguments within parentheses.



4. Click **Enter** ✓ to finish the entry and show the result of the formula, 404, in **cell H6**.
5. Use the **fill handle** to copy the formula in **cell H6** down the column for the rest of the students.

   Next you will calculate the class average for each quiz.
6. In **cell A18**, enter: **`Class Average`**
7. Format **cell A18** with bold and italic formatting, and then merge and center **cells A18** and **B18**.
8. Select **cell C18** and choose **Home→Editing→AutoSum** Σ **menu button** ▾ **→Average**.
9. Complete the entry in **cell C18** and then use the **fill handle** to copy the average formula from **cell C18** to the right, into the **range D18:G18** below all five quizzes.

10. Decrease the decimal in the range of selected cells so only one decimal place is displayed and then apply bold formatting and a top cell border.

    Now you want to find the average for each student.

11. Insert a new column to the left of **column I**.
12. Enter `Student Average` into **cell I4**.
13. Select **cell I6** and choose **Home→Editing→AutoSum** Σ **menu button** ▾ **→Average** but do not complete the entry.

    This time AutoSum selects the range C6:H6, which is incorrect because the average for the five quizzes should not include the total. Now you will select the correct range.

14. Use the mouse to drag and select the correct **range C6:G6** and then complete the entry.
15. Use the **fill handle** in **cell I6** to copy the formula down the column for the rest of the students.

    Next you need to calculate the exam grades for each student.

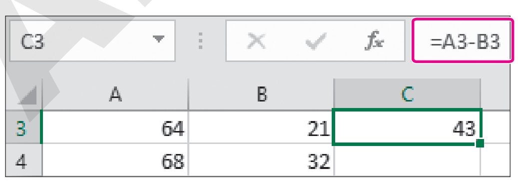
16. Click the **Exam** worksheet tab and select the empty cell under *Exam Total* for Ashley, **cell H6**.
17. Use AutoSum to add the Section 1 to Section 5 exam marks for Ashley, and then copy the formula down **column H** for the other students.
18. Save your work.

Using Relative and Absolute Cell References

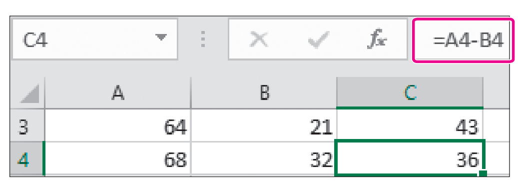
Cell references make it easier to copy formulas when you want to perform the same calculation with new numbers each time. Without cell references, each calculation would need to be typed individually, like with a calculator—slowly and tediously. A *relative* cell reference, which is the default in Excel, is one in which the location of the cell remains relative to the cell that contains the formula. This makes repeating the same calculation many times quick and easy!

For example, if the formula =A3-B3 is in cell C3, the relative position of A3 is two cells to the left of C3, and B3 is one cell to the left of C3. When you copy the formula to another cell, the cell references change to be in the same relative position. So, if you copy the formula =A3-B3 from cell C3 down to cell C4, the formula there will be =A4-B4. Excel updates the new cell references to be in the same relative position to cell C4; that is, two cells to the left and one cell to the left.

Tip! *Remember that a relative cell reference changes when it is copied.*



The original formula is seen in the Formula Bar, with relative references to both cells A3 and B3.



The copied formula is displayed with the new cell references A4 and B4.

Absolute Cell References

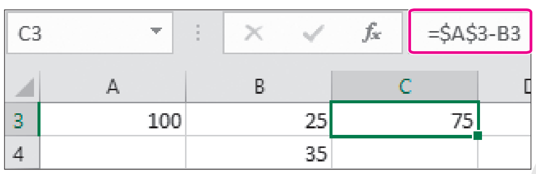
In some situations, you do not want the cell reference to change when you move or copy the formula. To ensure the cell reference does not change, use an *absolute* cell reference. You can think of an absolute cell reference as being locked in place; that is, the cell reference will not change when copied to other cells.

To make a cell reference absolute, start with a relative cell reference such as A1 and add a dollar sign in front of the column and row components, like this: $A$1.

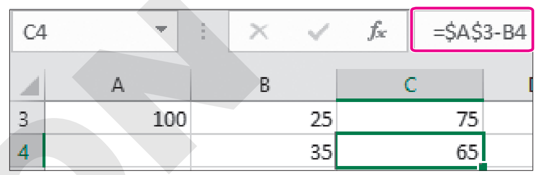
There are two ways to create an absolute cell reference:

1. Type the cell reference and include dollar signs in front of the column and row references.
2. Use the mouse pointer to select the cell and then tap F4 on the keyboard, which inserts both dollar signs into the cell reference at once.

Example: If the formula =$A$3-B3 is entered in cell C3 and then copied to cell C4, the formula in cell C4 would be =$A$3-B4. $A$3 is an absolute reference, so it does not change; B3 is a relative reference, so it changes to B4.



The original formula shows in the Formula Bar and contains an absolute reference to cell $A$3.



After the formula is copied, the absolute reference $A$3 does not change.

View the Video "Relative and Absolute Cell References."

Mixed Cell References

It's also possible to create a mix between a relative and an absolute reference in a cell reference. For example, $A3 is a reference to cell A3 where the column reference is absolute (column A will not change when copied) and the row reference is relative (row 3 will change when copied). This can be useful when copying a formula both across a row and down a column.

After you have tapped the F4 key once, tapping it a second time changes the absolute reference to a mixed reference with only a dollar $ sign in front of the row reference. A third tap of F4 places the dollar $ sign in front of only the column reference, and a fourth tap removes all dollar $ signs so it is once again a relative cell reference.

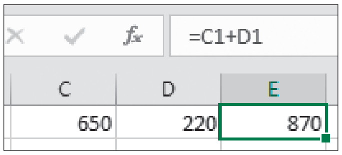
Display and Print Formulas

To see a formula you have entered, you must first select the cell and then check the Formula Bar because it is the result of the formula that is displayed in the worksheet cell. This means that to check your formulas, you have to click each cell and review them one at a time. When you have many cells with formulas, this is very hard and time-consuming to do.

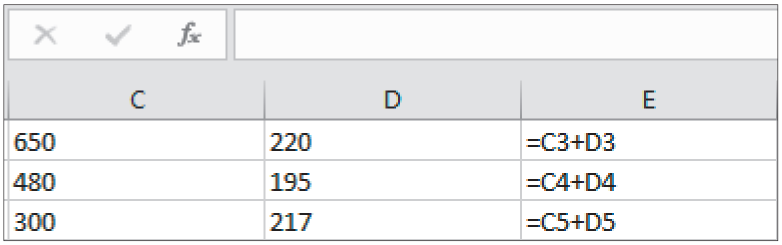
An easier way is to display all formulas within their cells. The Show Formulas button is a toggle that can be turned on and off as necessary.

Tip! *You can still edit the formulas and print the worksheet while Show Formulas is turned on.*

When Show Formulas is turned on, Excel automatically widens columns to show more of the cell contents.



Normally the cell must be selected for you to see the formula.



After turning on Show Formulas, the formulas display in the worksheet without selecting the cell (but you can't see the results).

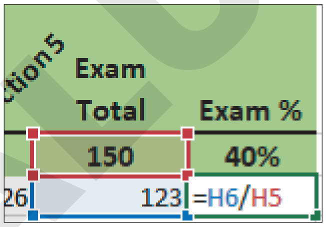
Formulas→Formula Auditing→Show Formulas

DEVELOP YOUR SKILLS: E3-D3

In this exercise, you will use formulas with absolute references to find the percentage grades for the class's exams and quizzes.

1. Save your workbook as: **E3-D3-FallGrades**
2. On the **Exam** worksheet, enter **150** in **cell H5** and **40%** in **cell I5**.

   To get a grade out of 40% for each student, you need to divide their exam score by 150 then multiply by 40%. You will use the values in cells H5 and I5 to do this.
3. In **cell I6**, type **=H6/H5** but do not complete the entry.



   Cell H6 shows Ashley's total exam grade. This will change for each student when we copy the formula. Cell H5 is the number of total points the exam is worth, in this case 150, which should not change for each student; therefore, cell H5 needs to be an absolute reference.

   While using F4 *to edit a formula as we will, the insertion point must be immediately before or after the reference to cell H5 or the correct cell reference won't be converted.*

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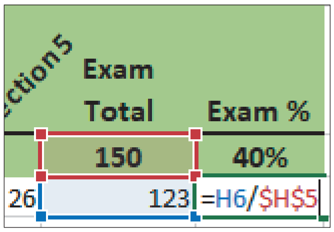
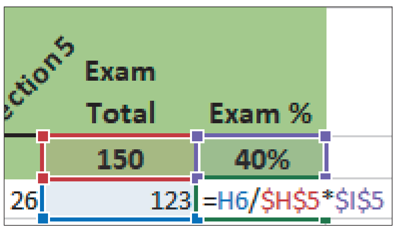
4. While still in edit mode in **cell I6**, tap F4 on the keyboard to make the reference for **cell H5** absolute (dollar $ signs are placed in front of the column and row).

Note! *On some keyboards, including most laptops, you must press Fn (usually beside Ctrl near the bottom of the keyboard) before using the function F keys at the top of the keyboard because these may also be used for adjusting volume or other system controls.*



The last step is to multiply each mark by 40%, which also does not change for each student.

5. Continuing in edit mode in **cell I6**, type `*I5` and tap F4, and then click **Enter** ✓.



Cell I5 is now an absolute cell reference. Ashley's total exam grade is calculated as 33%.

6. Copy the formula down **column I** for the other students.
7. Select **cell I7** and ensure the formula copied correctly. The formula should be =H7/$H$5*$I$5 and the result for Atif is 32%.

   Now you will use absolute cell references to calculate the students' quiz grades.

8. Click the **Quizzes** worksheet tab and enter **`500`** in **cell H5** and **`20%`** in **cell J5**.
9. Enter this formula in **cell J6** to calculate the quiz percentage: **`=H6/$H$5*$J$5`**

   You can decide for yourself if you would prefer to type in the dollar signs individually or use the F4 key!

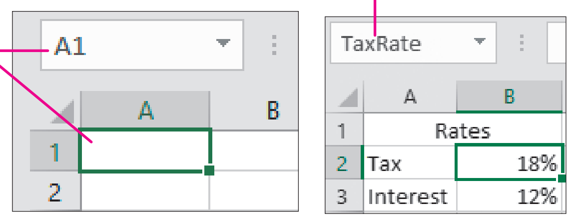
10. Copy the formula down **column J** to calculate the grades for the other students.
11. Click the **Final Grades** worksheet tab and notice the Final Grade now includes grades for the quizzes and exams, along with the grades for projects and participation.
12. Save your work.

Creating Names for Cells and Ranges

When you need to refer to the same cell or range of cells repeatedly in your formulas, consider creating a name for that cell or range. It's easier to remember a name than to scroll or click around your workbook looking for the cells you want to use. This is especially true if you are using a cell or range from another worksheet or even another workbook.

Note! *Cell names cannot contain spaces.*

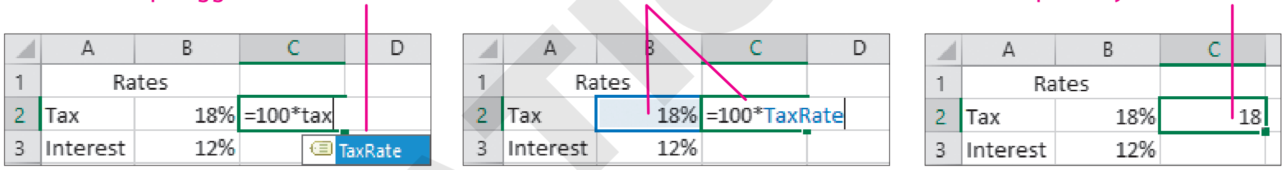
You can create names directly in the Name Box or via the Formulas tab on the Ribbon. You can also create, edit, or delete cell names using the Name Manager. Name references are automatically absolute cell references; that is, the reference will not change when moved or copied.



≡ Formulas→Defined Names

Using Cell Names in Formulas

You use a cell name in a formula just as you would any other cell reference. The cell name can be typed, or the cell can be selected with the mouse. You can also begin to type the first few letters of the name and then double-click the name from the AutoComplete list that appears.

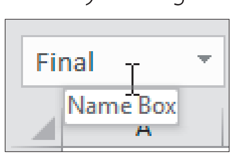


DEVELOP YOUR SKILLS: E3-D4

In this exercise, you will define names for ranges and cells, and then enter formulas to analyze and update the grades using those names for the cell references.

1. Save your workbook as: **`E3-D4-FallGrades`**
2. On the **Final Grades** worksheet, select the **range G6:G17**.
3. Click inside the **Name Box**, which currently displays *G6*, and then type **`Final`** and tap [Enter].

   Final *is now the name that refers to the range G6:G17. The name* Final *can now be used in formulas to analyze the grades.*



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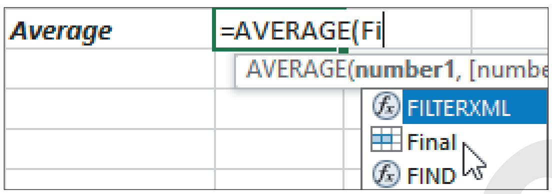
4. Beginning in **cell I5**, enter the following:

	I	
5	Grade Analysis	
6	Highest	
7	Lowest	
8	Average	

5. Add bold and italic formatting to the **range I5:I8** and AutoFit the column width to fit the text you just entered.
6. In **cell J6**, type the formula **`=MAX(Final)`** and tap [Enter].
7. In **cell J7**, type **`=MIN(`** and then use the mouse to select the **range G6:G17**.

   Excel automatically uses the name Final *inside the formula for the range you just selected.*
8. Type **`)`** to complete the formula and then tap [Enter].
9. Now type **`=AVERAGE(Fi`** in **cell J8** and then use the mouse to double-click the name **Final** from the suggested list.



10. Type **`)`** to complete the formula and then tap [Enter].
11. Apply bold formatting and the **Percent Style** number format to the **range J6:J8**.

    The highest, lowest, and average grades for the class are now displayed.

    Next you will create names for the values of each part of the students' grades. This way, if the values change later you can easily update the grade formulas with the new values.
12. Enter this data in the **range A21:B25**:

	A	B
21	Values	
22	Quizzes	20%
23	Projects	30%
24	Participation	10%
25	Exam	40%

13. AutoFit the width of **column A** to fit the word *Participation* in **cell A24**.
14. Select **cell B22** and choose **Formulas→Defined Names→Define Name**.

    Excel adds the name Quizzes *into the Name field based on the adjacent cell.*
15. Ensure that *Quizzes* is inserted in the Name field and click **OK**.
16. Repeat step 14 but select **cell B23** and use the proposed cell name *Projects*.
17. Repeat for **cell B24** and **cell B25**, using the proposed cell names *Participation* and *Exam*, respectively.
18. Choose **Formulas→Defined Names→Name Manager** and make sure all four names, as well as the name *Final* (five total names) have been added to the list, then close the Name Manager.

19. Click the **Quizzes** worksheet tab, select **cell J5**, and enter: **`=Quizzes`**

    The formula enters the value from the cell named Quizzes *(20%) in cell J5. If the value needs to be changed, it can be updated on the Final Grades sheet, and then the Quizzes sheet and all necessary formulas will instantly update, too.*

20. Click the **Exam** worksheet tab, select **cell I5**, and enter: **`=Exam`**

21. Switch back to the **Final Grades** sheet and change the values in **cell B22** and **cell B25** to **`10%`** and **`50%`**, respectively.

    The quiz grades now reflect a grade out of 10 in column C, and the exam grades reflect a grade out of 50 in column E. Review the Quizzes and Exam sheets to see the changes there.

22. Save the workbook and close Excel.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: E3-R1

Use Functions to Calculate Total and Average

In this exercise, you will update a worksheet to calculate totals for each student who volunteered at Kids for Change, and totals for each month of the year. You'll find the average volunteer hours per month as well.

1. Start Excel; open **E3-R1-VolunteerHours** from your **Excel Chapter 3** folder and save it as: `E3-R1-VolunteerTotals`
2. Select **cell H5** and choose **Home→Editing→AutoSum** Σ.

   AutoSum finds the sum of the range D5:G5.
3. Click **Enter** ✓ to finish the entry.

   The result of the formula displayed in cell H5 is 137.
4. Use the **fill handle** to copy the formula in **cell H5** down the column for the rest of the students.
5. Enter the text `Total` in **cell C28** and the text `Average` in **cell C29**.
6. Apply bold and italic formatting to the **range C28:C29**, and then right-align the cell contents.
7. Select the **range D28:H28** and choose **Home→Editing→AutoSum** Σ.

   This time, rather than inserting the sum and copying the formula across, all five cells are filled with the formula instantly. If you are certain the AutoSum formula does not need to be edited, you can use this method.
8. Select **cell D29**.

   Next you will find the average. Because the average function in cell D29 will require editing, you will enter the first function in cell D29 and then copy across.
9. Choose **Home→Editing→AutoSum** Σ **menu button** ▾**→Average**.

   Notice the AVERAGE function selects the range D5:D28; this is incorrect because the average should not include the total in cell D28.
10. Select **cell D5** and hold down the mouse button while dragging down to **cell D27** to modify the range.
11. Once the formula displays the correct range, =AVERAGE(D5:D27), click **Enter** ✓ to complete the formula.
12. Copy the formula in **cell D29** across the row for the months of February, March, and April.
13. Save the workbook.

REINFORCE YOUR SKILLS: E3-R2

Use Absolute References and Named Ranges in Formulas

In this exercise, you will calculate a tuition payment for each of the Kids for Change student volunteers. You will then calculate the highest and lowest total hours volunteered.

1. Save your workbook as: `E3-R2-VolunteerTotals`
2. Enter `Tuition` in **cell I4**.

3. Use the Format Painter to apply the formatting from **cell H4** to **cell I4**.

   Kids for Change offers high school volunteers reimbursement for volunteer hours that they can save up for college tuition. First you will enter the rate and then you will multiply each student's hours by the rate.

4. In **cell J5**, type **`Rate`** and then use the Format Painter to apply the formatting from **cell C29** to **cell J5**.
5. Enter the number **`3.75`** in **cell K5**.
6. Select **cell I5** and enter a formula that multiplies **cell H5** by **cell K5**. Be sure to use an absolute cell reference for **cell K5** so it stays the same for each student when you copy the formula.

   The result for the first student, Ashley, should be 513.75.

7. Copy the formula down **column I** for the other students.

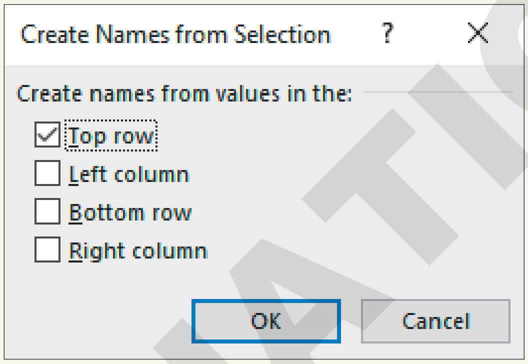
   Be sure to stop at cell I27 (do not copy the formula to cell I28 in the total row). The result for the last student, William, should be 487.5.

   The next step is to define names for the data in the Total and Tuition columns.

8. Select the **range H4:I27** and choose **Formulas→Defined Names→Create from Selection**.

   The Create from Selection button uses the text from the selected range to define names for multiple columns or rows simultaneously. In this case, the text is located at the top, so the top row text values can be used as names for each column; for example, the name Total *will refer to the range H5:H27.*

9. Ensure the **Top Row** box is checked and click **OK**.



10. In **cell I28**, use the SUM function to find the tuition total, taking care to use the name *Tuition* for the range.
11. Apply a bottom border to the **range D27:I27** and then apply the Accounting number format to **cell I28**.
12. Adjust the rate in **cell K5** to **`4.25`** and notice the increase in the total in **cell I28**.
13. Enter the text **`Highest`** in **cell G30** and the text **`Lowest`** in **cell G31**.
14. Use the **Format Painter** to apply the formatting from **cell C29** to the **range G30:G31**.
15. In **cell H30**, enter a formula using the MAX function to find the highest value for the total hours, and be sure to use the name *Total* for the range.
16. Enter a formula in **cell H31** using the MIN function to find the lowest value and, again, use the name *Total* for the range.
17. Repeat steps 15–16 in **cells I30** and **I31** to find the highest and lowest values in the Tuition column.
18. Save and close the workbook.

REINFORCE YOUR SKILLS: E3-R3

Calculate Funds Raised with Formulas and Functions

In this exercise, you will calculate the funds raised at the Kids for Change Summer Charity Race using the appropriate formulas and functions.

1. Open **E3-R3-Pledges** from your **Excel Chapter 3** folder and save it as: `E3-R3-TotalRaised`

   Each participant has obtained pledges from donors at a rate of $2.50 for each mile run. The first step is to calculate the subtotal, which is the number of pledges multiplied by the pledge rate, then multiply by the number of miles each participant ran.

2. In **cell F7**, insert a formula that multiplies **cell D7** by **cell E3** and then multiples that amount by **cell E7**.

   Be sure to use an absolute cell reference to cell E3 since the pledge rate is the same for all runners.

3. Copy the formula in **cell F7** down **column F** for all participants.

   Each participant also pays an entry fee of $25, so the fee is added to the subtotal to calculate the total raised.

4. Insert a formula in **cell G7** that adds **cell F7** to **cell E4**—and remember that you don't want the reference to cell E4 to change when you copy it!
5. Copy the formula down **column G**.
6. Enter the text in the cells specified:

Cell F29	`Grand Total`
Cell F30	`Average`
Cell F31	`Most Raised`

7. Copy the format from **cell A6** to the **range F29:F31**.
8. Select the **range G7:G28** and name it: `Total`
9. Use the name *Total* in functions to find the sum, average, and maximum in the appropriate cells in **column G**.
10. Apply a bottom border to **cell G28** and bold format to the **range G29:G31**.
11. Save the workbook and close Excel.

Apply Your Skills

APPLY YOUR SKILLS: E3-A1

Create an Invoice Using Formulas

In this exercise, you will create an invoice for Universal Corporate Events services using formulas with functions and absolute cell references. Once the appropriate formulas are entered, the invoice can be modified for each customer simply by changing the name, date, and number of guests at the top.

1. Start Excel; open **E3-A1-Bill** from your **Excel Chapter 3** folder and save it as: **`E3-A1-Invoice`**

   There are two sections to the invoice, the flat rate fees and per person fees. For flat rate fees the customer pays the price plus the deposit.
2. Use the SUM function in **cell D7** to add the price plus deposit for the first item and then copy the formula down to **cell D10**.

   The per-person fees must multiply the price by the number of guests, so you will do that next.
3. In **cell D14**, multiply the price for meals in **cell B14** by the number of guests in **cell D3**. Use an absolute reference for the cell that does not change.
4. Copy the formula from **cell D14** down to **cell D17**.
5. Enter a function in **cell D20** to find the subtotal, which is the sum of all item totals in **column D**.

   Be sure to include all flat-rate fees plus all per-person fees in the subtotal. You may need to manually change the range since there are blank cells between the two sections.
6. Test your formulas by changing the number of guests in **cell D3** to: **`150`**

   Your subtotal should increase from $3,840 to $5,165.
7. Save the workbook.

APPLY YOUR SKILLS: E3-A2

Calculate Tax and Discount Amount

In this exercise, you will take the Universal Corporate Events invoice and enter formulas for tax and discount using named cells.

1. Save your workbook as: **`E3-A2-Invoice`**
2. Select **cell C26** and define the name **`TaxRate`** to refer to that cell.

   Remember: Cell names cannot contain spaces!
3. Use the name you just created in a formula to calculate the tax in **cell D21**; that is, multiply the subtotal by the tax rate.

   Universal Corporate Events offers terms of 2/10, n/30 to their customers, which means customers get a 2% discount if they pay the invoice within 10 days or the net amount is due in 30 days.
4. Create a name for **cell C25** and use the name: **`Discount`**
5. In **cell D22**, calculate the discount if the customer pays early using the name **`Discount`** in your formula.
6. In **cell D23**, calculate the total due, which is the subtotal plus the tax, minus the discount.

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7. Test your formulas again by changing the tax and discount rates: Change the discount to zero (if the customer does not pay within ten days) and adjust the tax rate to 8%.
8. Save and close the workbook.

APPLY YOUR SKILLS: E3-A3

Create Formulas Using Names

Universal Corporate Events has started a customer loyalty program. In this exercise, you will use formulas to calculate customer loyalty points.

1. Open **E3-A3-Customers** from your **Excel Chapter 3** folder and save it as: **`E3-A3-Points`**
2. Begin by entering **`Points Earned`** in **cell C5** and **`Total Points`** in **cell D5**.
3. Copy the formatting from **cell B5** to the **range C5:D5**.
4. Enter the text **`Points Per Dollar`** in **cell A25** and **`15`** in **cell B25**.
5. Apply bold and italic formatting to the **range A25:B25**.
6. In **cell C6**, insert a formula to calculate points for the first customer, Green Clean, by multiplying the total spent by the Points Per Dollar amount.
7. Change the number format in **cell C6** to Number with no decimal places.
8. Copy the formula down the column for all customers.

   All customers should show points. If any customers show 0 (zero), modify your formula to use an absolute cell reference.

   You also want to give all of your customers a welcome bonus, which you will now add to their points earned.

9. Enter the text **`Welcome Bonus`** in **cell A26** and **`250`** in **cell B26**.
10. Copy the formatting from **cell A25** to the **range A26:B26**.
11. Name **cell B26**: **`Welcome`**
12. Enter a formula in **cell D6** to add the welcome bonus amount to the points earned for Green Clean, and then copy the formula down the column for all customers.
13. Enter the text **`Average Points Per Customer`** in **cell A20** and then use the Average function in **cell D20** to calculate the average points per customer.
14. Copy the formatting from **cell A25** to the **range A20:D20**.
15. Apply Number formatting with no decimal places to **cell D20**.
16. Save the workbook and close Excel.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: E3-P1

Taylor Games Financial Modeling

The Taylor Games management team wants to do some what-if analysis to help them price items for retail sale and for sales promotions. In this exercise, you will build a model in which they can enter key values, and your worksheet will then automatically recalculate based upon their inputs.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E3_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E3_P1_Start** from your **Excel Chapter 3** folder.
2. In **cell E8**, use a formula with cell references to multiply the Qty by the Unit Cost: (Qty * Unit Cost).
3. Copy the formula down to the **range E9:E22**.
4. In **cell F8**, use a formula with cell references to multiply the Inventory Value (**cell E8**) by the Markup Percentage (**cell B2**): (Inventory Value * Markup Percentage). Use an absolute cell reference to the Markup Percentage in **cell B2**.
5. Copy the formula down to the **range F9:F22**.
6. In **cell G8**, use a formula with cell references to add the Inventory Value to the Retail Markup: (Inventory Value + Retail Markup).
7. Copy the formula down to the **range G9:G22**.
8. In **cell B3**, create the cell name: `Markdown`
9. In **cell H8**, use a formula to multiply the Retail Value (cell G8) by the Markdown % (cell B3): (Retail Value * Markdown %). In your formula, use a cell reference to **cell G8** and the cell name *Markdown* to reference **cell B3**.
10. Copy the formula down to the **range H9:H22**.
11. In **cell I8**, use a formula with cell references to subtract the Sale Markdown from the Retail Value: (Retail Value – Sale Markdown).
12. Copy the formula down to the **range I9:I22**.
13. In the **range E23:I23**, use **AutoSum** to create column totals.
14. In **cell G2**, use the **COUNT** function to count the SKUs in the **range B8:B22**.
15. In **cell G3**, create a link to the Inventory Value total in **cell E23**. The **cell E23** total should now appear in **cell G3**.
16. In **cell G4**, use the **AVERAGE** function to determine the average Retail Value in the **range G8:G22**.
17. In **cell G5**, use the **AVERAGE** function to determine the average Sale Value in the **range I8:I22**.

EXCEL

18. In **cell B2**, enter `80` as the Markup Percentage, and in **cell B3**, enter `10` as the Markdown Percentage. Feel free to enter other numbers in **cells B2** and **B3** if you want to do some what-if analysis. But when you're finished, make sure you have *80* in **cell B2** and *10* in **cell B3** if you want to get credit for this step.
19. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 3** folder as **`E3_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 3** folder as: **`E3_P1_Submission`**

PROJECT GRADER: E3-P2

Classic Cars Club Rebates and Rewards Financial Model

The Classic Cars management team is considering a Rewards & Rebates program for members. In this exercise, you will build a financial model with various inputs that will help them make informed decisions.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **E3_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **E3_P2_Start** from your **Excel Chapter 3** folder.
2. In the **Rebates & Rewards** sheet, use Autofill to create a sequential list of Member #s starting with **cells A9** and **A10** and continuing down to **cell A21**.
3. Copy the Member #s in the **range A9:A21** and paste them into the same cells in the **Car Values** sheet.
4. In **cell K9** in the **Car Values** sheet, use a formula with cell references to subtract the Original Value from the Current Value: (Current Value – Original Value).
5. In **cell K9**, apply the Accounting number format and decrease the decimals to zero (no decimals displayed).
6. Copy the formula down to the **range K10:K21**.
7. In **cell C4**, use the **MAX** function to determine the greatest appreciation in the **range K9:K21**.
8. In **cell C5**, use the **MIN** function to determine the least appreciation in the **range K9:K21**.
9. In **cell C6**, use the **AVERAGE** function to determine the average appreciation in the **range K9:K21**.
10. In **cell C4** of the **Rebates & Rewards** sheet, use the **COUNT** function to count the Member #s in the **range A9:A21**.
11. In **cell C5**, create the cell name: **`Reward`**
12. In **cell I9**, use a formula to multiply the Contract Years (cell H9) by the Reward (Each Year) (cell C5): (Contract Years * Reward (Each Year)). In your formula, use a cell reference to **cell H9** and the cell name *Reward* to reference **cell C5**.
13. Copy the formula down to the **range I10:I21**.
14. In **cell K9**, use a formula with cell references to multiply the Merchandise Purchases (cell J8) by the Merchandise Rebate % (cell C6): (Merchandise Purchases * Merchandise Rebate %). Use an absolute cell reference to the Merchandise Rebate % in **cell C6**.
15. Copy the formula down to the **range K10:K21**.

16. In **cell L9**, use a formula with cell references to add the Contract Reward (I9) to the Merchandise Rebate (K9): (Contract Reward + Merchandise Rebate).
17. Copy the formula down to the **range L10:L21**.
18. In the **range I22:L22**, use **AutoSum** to create column totals.
19. In **cell C5**, enter **`50`** as the Reward (Each Year), and in **cell C6**, enter **`30`** as the Merchandise Rebate %. Feel free to enter other numbers in **cells C5** and **C6** if you want to do some what-if analysis, but when you're finished, make sure you have *50* in **cell C5** and *30* in **cell C6** if you want to get credit for this step.
20. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 3** folder as **`E3_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 3** folder as: **`E3_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

E3-E1 That's the Way I See It

You are house shopping and have started a worksheet (E3-E1-RealEstate) to compare your top-three properties. Open and save **E3-E1-RealEstate** as **`E3-E1-3Houses`** and review the overall structure and content. Then, enter prices for three houses you might wish to buy, using the Internet as necessary to research housing prices in your area. Create formulas in all gray-shaded cells, starting with the Down Payment cells, multiplying the price by the rate for the first house and using an absolute reference so you can copy the formula across each row (subtract down payment from the price to find the mortgage amount). Repeat for the fees, then use the SUM function to find the total fees and add that to the mortgage amount to complete the Total Mortgage Plus Fees rows. Finally, apply appropriate cell and number formatting as desired.

E3-E2 Be Your Own Boss

Open **E3-E2-Revenue** and save it as: **`E3-E2-Projections`**

Blue Jean Landscaping has four divisions, and each division has already reported their customer hours for Q1–Q3. You now need to calculate total invoices and make revenue projections for Q4. Start by calculating total hours and average hours, using the Q1–Q3 hours and the appropriate function. Then create names for the Hourly Rate and Projected Growth cells, to be used in your formulas. In the Total Invoices column, use a formula with the total hours and the hourly rate to calculate the total dollar amount for Q1–Q3. Once that is done you can calculate the Q4 projected hours using the average hours and multiplying by one plus the projected growth rate (in parentheses). Multiply the hours again by the rate to get the Q4 projected invoices. As the last step, find the total for each column in row 10. Format the worksheet appropriately with borders and number formatting so the total in row 10 stands out.

E3-E3 Demonstrate Proficiency

After introducing two new flavors of BBQ sauce last year, Stormy BBQ wants you to do an analysis of its sales for each type of sauce and calculate total revenue for each. Open **E3-E3-Sales**; save the workbook as **`E3-E3-SauceSalesRevised`** and then begin by defining names for each of the columns of sauce data. (Hint: This can be done one column at a time or for all three columns at once using the Create from Selection tool.) Once you have named the three ranges, create row headings and insert the appropriate formulas below December to find the *Total Annual Sales, Average Sales, Highest Sale Amount,* and *Lowest Sale Amount*. Do this for each sauce and use the names you have created in your formulas. Then, create a heading and a formula to find total annual revenue for each sauce. Each bottle sells for $5.99. (Hint: Enter the price somewhere on the worksheet and then either use a name or an absolute cell reference to refer to that cell in your formula.) Apply appropriate formatting to the total annual revenue because this is now a dollar amount, as well as other areas of the worksheet as you see fit.

EXCEL

4 Data Visualization and Images

In this chapter, you will use a variety of ways to create visually interesting worksheets. You will learn when to create charts, which chart types to use for different situations, and how charts are particularly useful in understanding relationships among numbers in a worksheet. In this chapter, you will also learn about formatting data based on desired conditions and inserting pictures and shapes.

LEARNING OBJECTIVES

- Insert charts
- Use chart tools to modify charts
- Move and size charts
- Edit chart data
- Add images to a worksheet
- Apply conditional formatting

Project: Reporting Company Sales Data

Airspace Travel has gathered data from six months of sales, and you need to create charts that will help visualize trends in the data. You have to decide what data to use to create the charts, and the chart types that will best help the company understand how it is performing. You want to show sales comparisons month by month, illustrate the contributions of each travel agent to compare them side by side, and highlight the top and bottom performers throughout the year.

Create Charts to Compare Data

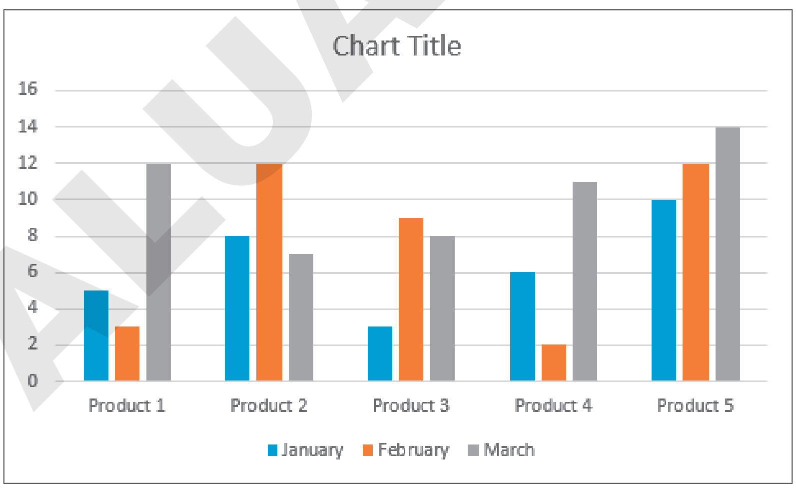
There are many situations in which we are presented with numerical data, and it would be easier to interpret the data if we could visualize it in chart form. Charts are created from worksheet data. Similar to a formula, the data is linked so that if the data changes, the chart changes as well. Creating a chart is as easy as selecting the data and chart type. Excel does the rest! After the chart is created, you can add or modify chart elements to change the way your chart looks.

Chart Types

Excel has more than a dozen different types of charts to choose from, with variations of each chart type as well. However, it is important to remember that the purpose of a chart is to simplify data, not to make it more complicated. The most common options to use are a column or bar chart, a line chart, or a pie chart.

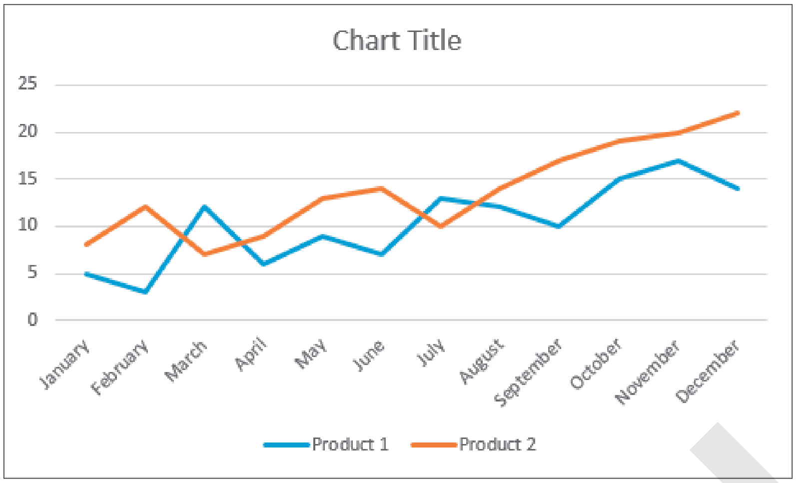
Column Charts and Bar Charts

A column chart displays data in columns across the horizontal axis. A bar chart displays data in bars across the vertical axis. They are basically the same, except one is vertical and the other is horizontal. Column charts and bar charts are useful to compare data across several categories.



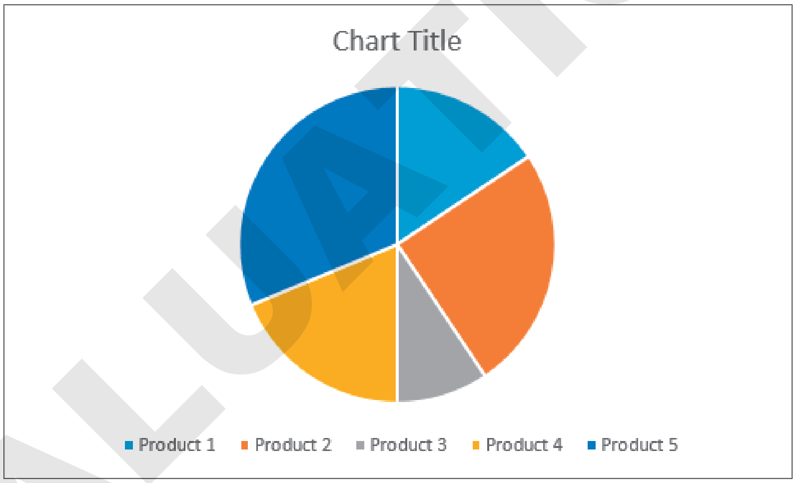
Line Charts

A line chart displays a series of data in a line or several lines and is useful for showing trends in data over time, such as days, months, or years. Line charts are best for a large amount of data and when the order of data—for example, chronological—is important. Line charts are very similar to column charts and have most of the same features.



Pie Charts

A pie chart shows a comparison of data as parts of the whole. Pie charts are best for a small amount of data; too many pieces will be hard to see in a pie chart. Pie charts can contain only one series of data, and they do not have a horizontal or vertical axis like column and line charts.



Excel also has a Recommended Charts option that will list the top chart options for you based on the data you have selected. The Insert Chart window shows a preview of what your chart will look like before you decide which one to use.

Insert→Charts

Insert→Charts→Recommended Charts

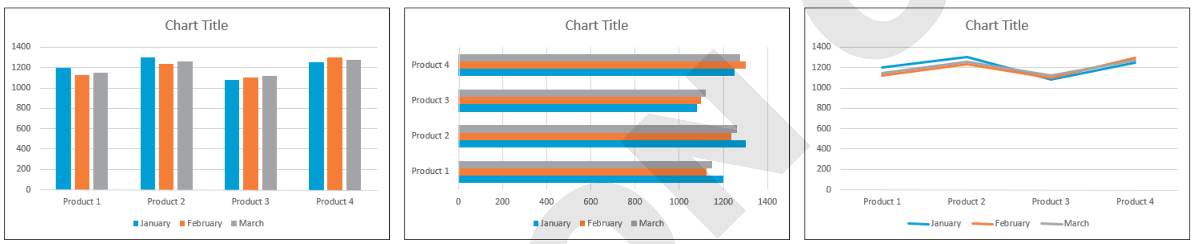
Selecting Chart Data

Choosing the right data is very important to make sure Excel can create the chart correctly. The best method is to select the data and include the appropriate row and column headings. Select an equal number of cells in each row of data, even if some of those cells are empty.

You can create a column, bar, or line chart from the same selected data.

Q1 Revenue			
	January	February	March
Product 1	1200	1123	1150
Product 2	1301	1235	1260
Product 3	1080	1100	1120
Product 4	1250	1300	1275

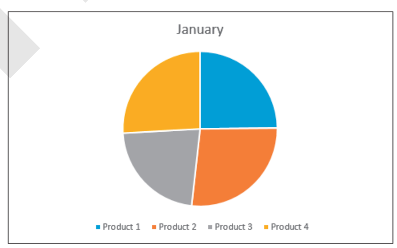
The data, including row and column headings, is selected to create your chart. Note that the blank cell in the top-left corner is also included.



These three charts result from the same selection of data.

To create a pie chart, you can only select one data series.

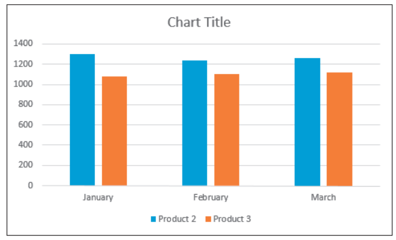
Q1 Revenue			
	January	February	March
Product 1	1200	1123	1150
Product 2	1301	1235	1260
Product 3	1080	1100	1120
Product 4	1250	1300	1275



Only the January data series is selected to create this pie chart.

If you want to create charts showing only some of the data, use the Ctrl key to select the desired data.

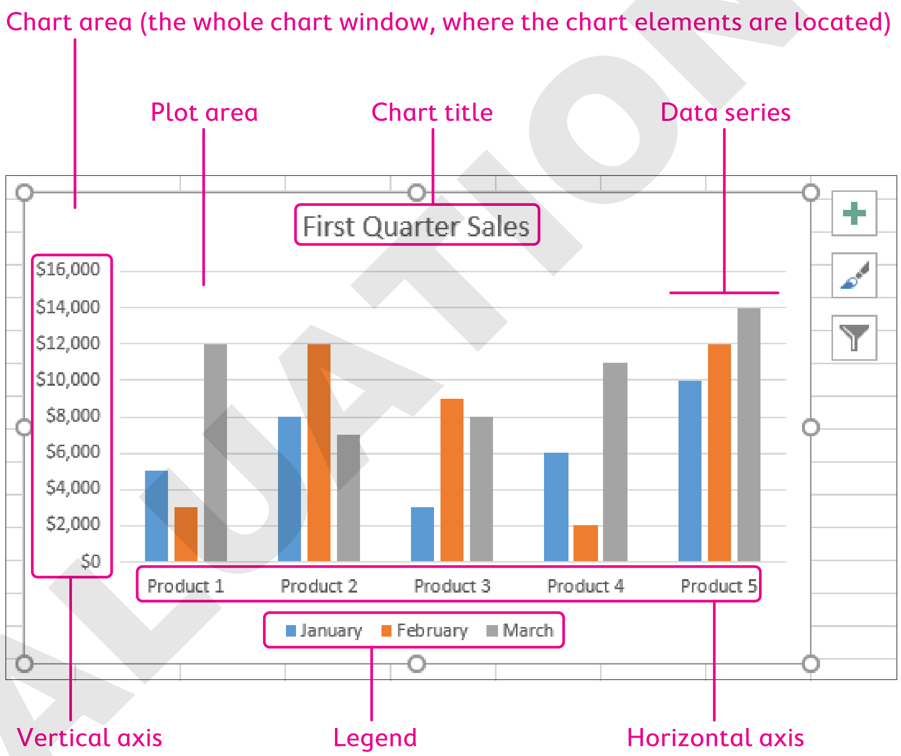
Q1 Revenue			
	January	February	March
Product 1	1200	1123	1150
Product 2	1301	1235	1260
Product 3	1080	1100	1120
Product 4	1250	1300	1275



For a column, bar, or line chart showing only Products 2 and 3, you would select the three rows of data, including the blank cell.

Chart Elements

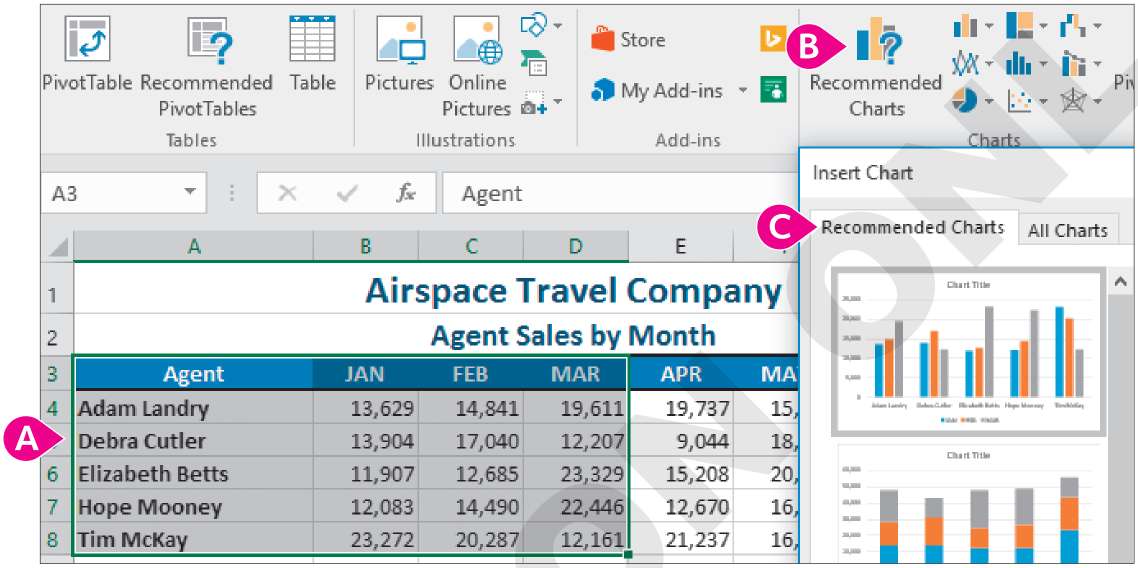
A chart is made up of different elements that can be added, removed, or modified. These elements can help others understand the information on the chart, or accentuate certain aspects of the data. There is a wide range of options for changing the look and style of your chart with each of the chart elements.



DEVELOP YOUR SKILLS: E4-D1

In this exercise, you will select data and use it to create a chart.

1. Start Excel; open **E4-D1-Sales** from the **Excel Chapter 4** folder and save it as: **`E4-D1-SalesCharts`**
2. Follow these steps to insert a column chart:



- **A** Select the **range A3:D8** to compare the results for all agents for the first three months of the year.
- **B** Choose **Insert→Charts→Recommended Charts** from the Ribbon.
- **C** Excel recommends a clustered column chart. Click **OK** to insert the suggested chart.

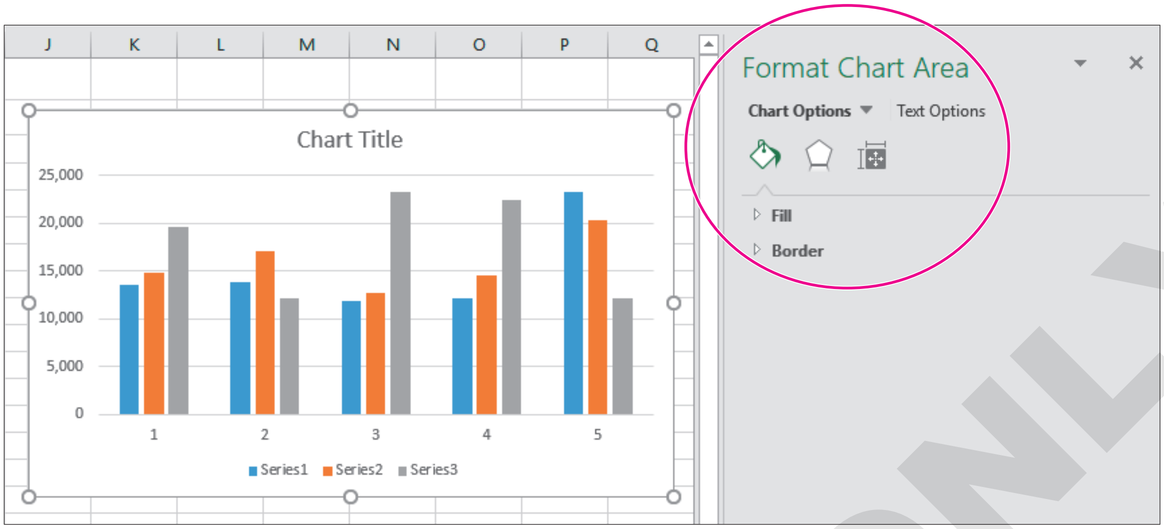
Your chart will be inserted into your worksheet as a floating object, meaning it can be moved easily by dragging.

After creating your chart, notice that resting the mouse pointer over a chart element displays a ScreenTip with the name of that element and that pointing to your data will tell you the data series, point, and value.

3. Save the workbook.

Chart Tools

There are countless ways of formatting a chart; your chart can be as simple or as creative as you like. The way you format it will likely depend on your purpose and how much time you want to spend working on it. The chart tools are found on contextual tabs, meaning they are only available while a chart is selected. You can also use the Format pane on the right side of the screen to format chart elements. The formatting options change for each chart element.



The formatting pane title and menu options change depending on what is selected in the worksheet. In this case, the chart area is selected so the Format Chart Area pane shows.

Chart Design Tools

You can use design tools to quickly and easily change the way your chart looks, using features like Chart Styles and Quick Layout. Styles modify the colors, shading, and layout of the various chart elements in one easy step. To change the appearance of a chart, there are many other design options, including changing the chart type, changing colors, or adding and removing various chart elements like chart titles, axis titles, data labels, and more.

View the Video "Using the Chart Design Tools."

The Chart Formatting Buttons

The chart formatting buttons can add elements to your chart, change the style, or filter the data visible on the chart.

One of the great features of Excel charts is the ability to filter data without changing the data selection or creating a new chart. You can simply filter the data to focus on the sets of data you want to compare and then add or remove the other series or categories as desired.

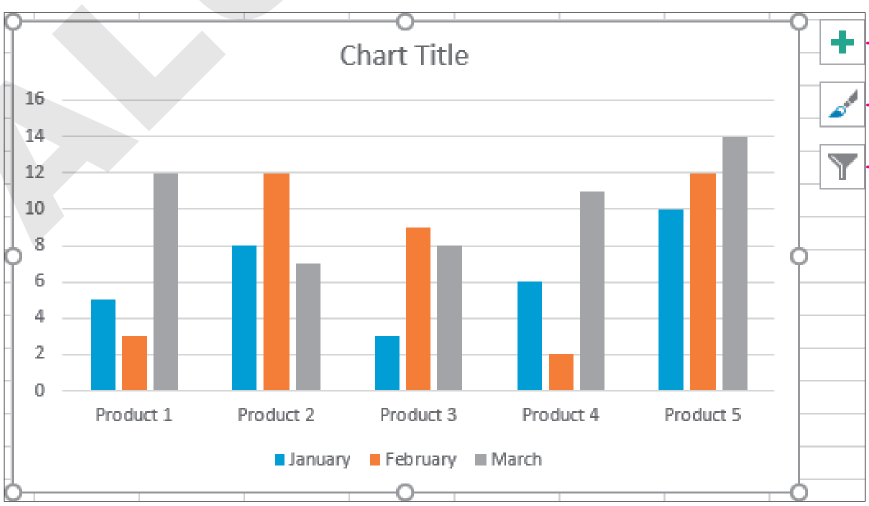


Chart Elements
Chart Styles
Chart Filters

Chart Tools→Design

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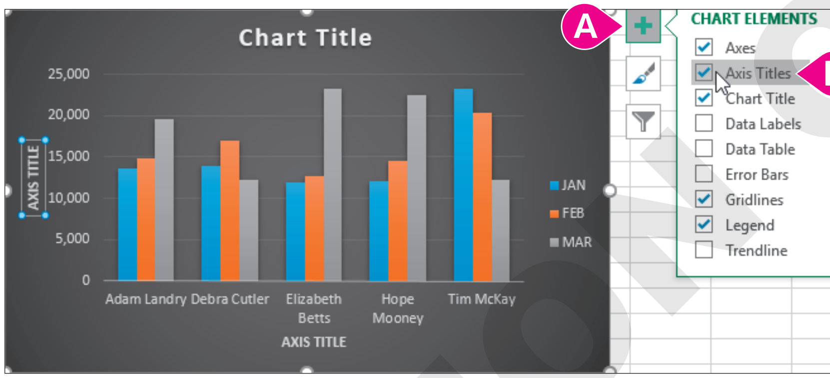
DEVELOP YOUR SKILLS: E4-D2

In this exercise, you will adjust the appearance of your chart using the style, layout, and other chart design tools.

1. Save your workbook as: **E4-D2-SalesCharts**
2. If necessary, click anywhere on the column chart to select it and display the Chart Tools contextual tab on the Ribbon.
3. Choose **Chart Tools→Design→Chart Styles→Style 8** to apply the new style.
4. Choose **Chart Tools→Design→Chart Layouts→Quick Layout→Layout 1** to apply the layout, which moves the legend to the right side of the chart.
5. Follow these steps to add axis titles to your chart:



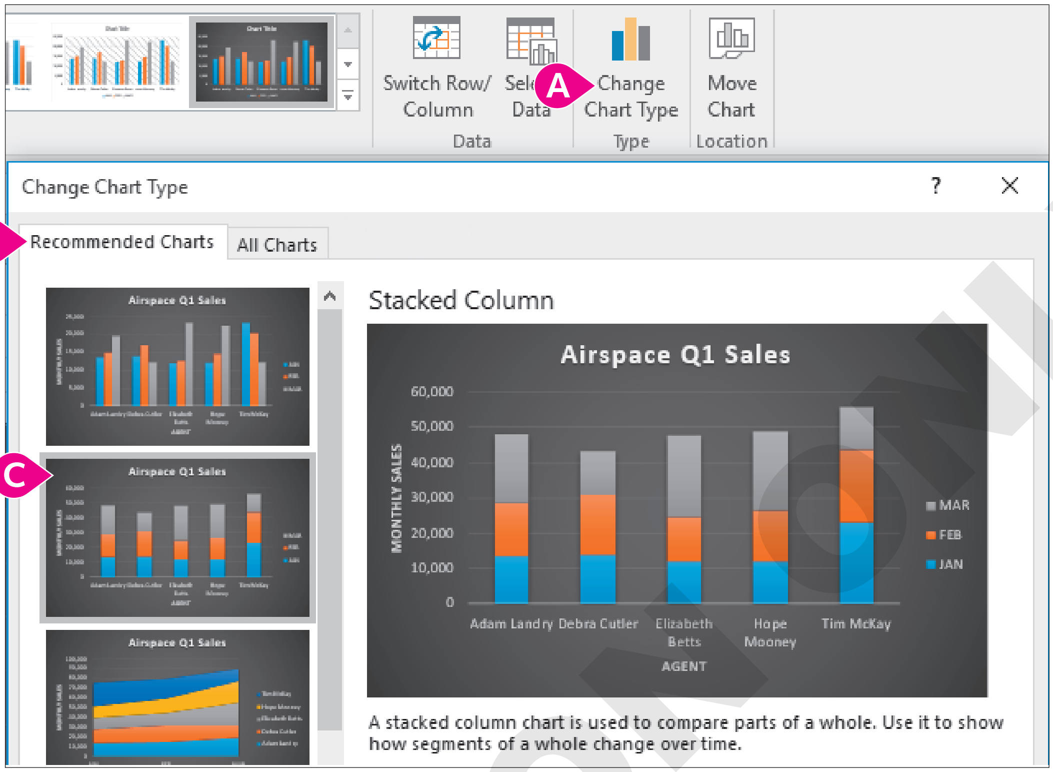
   - Ⓐ Click the **Chart Elements** + button.
   - Ⓑ Click the checkbox beside **Axis Titles**.

6. Point to the title on the vertical axis, which you just added, and triple-click to select the entire text.
7. Type **Monthly Sales** for the axis title.

   After entering an axis title, or a chart title, do not press Enter*. Simply deselect the object or continue with the next task.*

8. Select the horizontal axis title and replace the text with: **Agent**
9. Change the chart title to: **Airspace Q1 Sales**

10. Follow these steps to change the chart type:



- **A** Click the **Change Chart Type** button on the Ribbon to open the dialog box.
- **B** Click the **Recommended Charts** tab.
- **C** Choose the second option, **Stacked Column**, and click **OK**.

This chart more clearly shows a comparison of the total for each agent during the three months, as well as the sales for each individual month.

11. Save the workbook.

Chart Format Tools

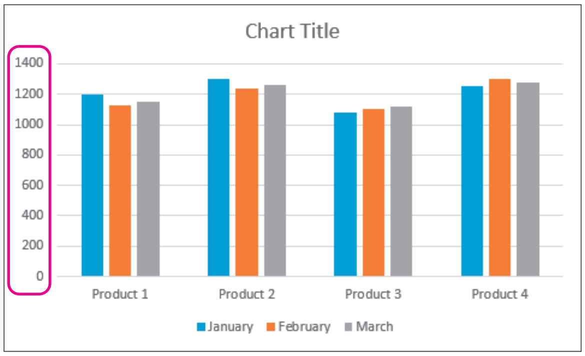
Beyond changing the basic style of a chart, you may want to choose your own colors for the chart area, plot area, or data series. This can be done by modifying the fill or outline of a specific chart element. The fill can be a color, gradient, texture, or even a picture. Other possibilities include adding shapes or WordArt to a chart.

Axis Options

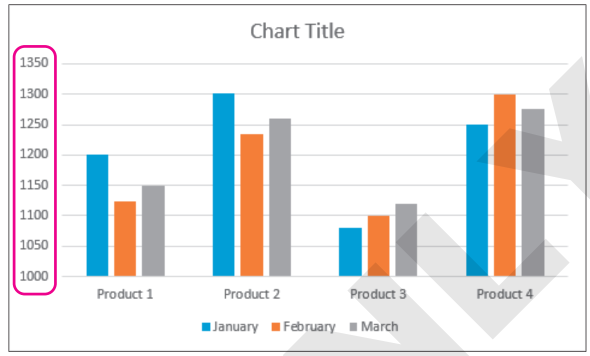
Adjusting the axes can focus the chart on significant differences in the data, or simply change the appearance of the axes using number formatting, such as to display numbers as currency. One of the axis options is the minimum and maximum value displayed on the axis. For example, if the data you

EXCEL

are charting all falls between 1,000 and 1,300, you can set your minimum to 1,000. This highlights the differences, because the first 1,000 units are the same for all the data points.



The data looks very similar with the axis values ranging from 0 to 1400.



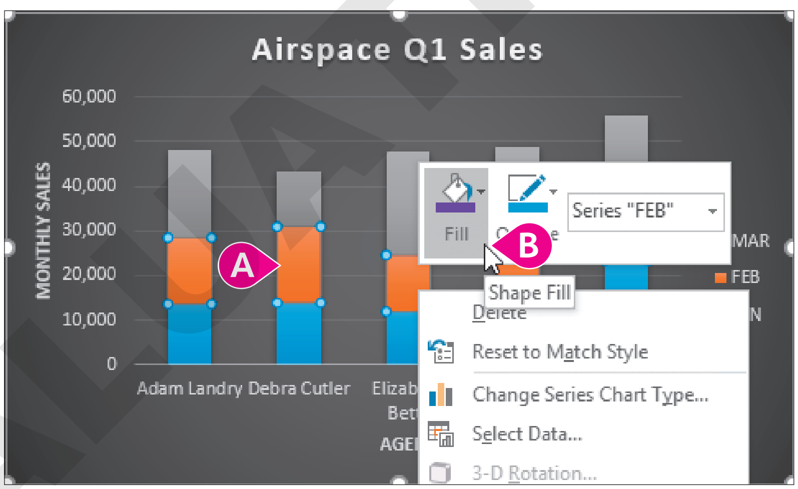
The product differences are much easier to see with the axis values starting at 1000.

Chart Tools→Format→Current Selection→Format Selection | Right-click axis→Format Axis

DEVELOP YOUR SKILLS: E4-D3

In this exercise, you will adjust the chart colors and axis numbering.

1. Save your workbook as: **`E4-D3-SalesCharts`**
2. Continuing with the Airspace Q1 Sales column chart, follow these steps to adjust the color of the FEB series:



A Click once on any orange block to select the FEB data series.

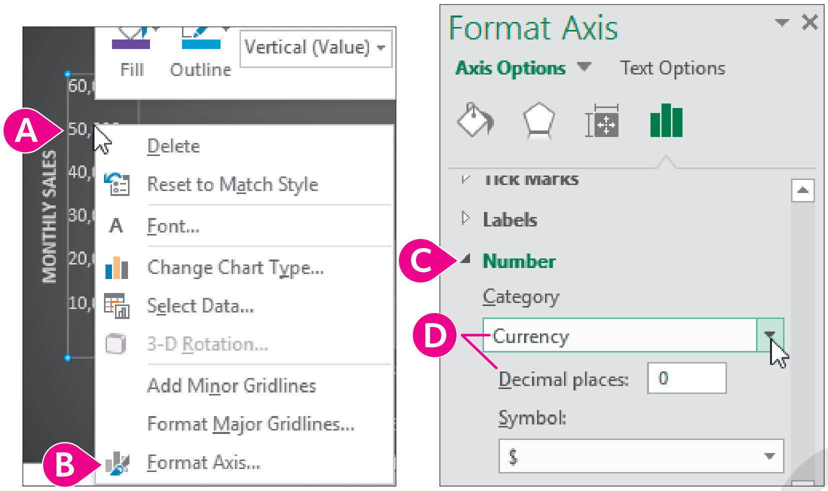
It's important to click only once. One click selects the whole series; clicking a second time would select only one data point from the series to modify.

Note! *You can see what's selected by the four corner circles. If only one data point is selected, deselect the series by clicking anywhere else, and try again to select all five orange columns.*

B Right-click any of the selected orange data points, click **Fill** in the shortcut menu, and choose **Red** from the Standard Colors section.

3. Repeat step 2 to adjust the fill color for the MAR series to **Purple** (under Standard Colors).

4. Follow these steps to adjust the vertical axis:



- **A** Point to a number on the vertical axis and then right-click to display the shortcut menu.

  It is important to point to a number to get the right menu; if you are between the numbers, the Chart Area shortcut menu will appear, which has different options. Ensure the shortcut menu displays Format Axis at the bottom. If not, keep trying until you get it.

- **B** Choose the **Format Axis** command.
- **C** Scroll to the bottom of the Format Axis pane and click **Number** to expand the menu. (Depending on the size of your display, you may need to scroll down again to see the Number options.)
- **D** Choose **Currency** from the Category list using the menu button ▼ and, if necessary, change the decimal places to **0**.

  The number format is changed for the vertical axis. You can either leave the Format Axis pane open or close it by clicking the "X" in the top-right corner.

5. Save the workbook.

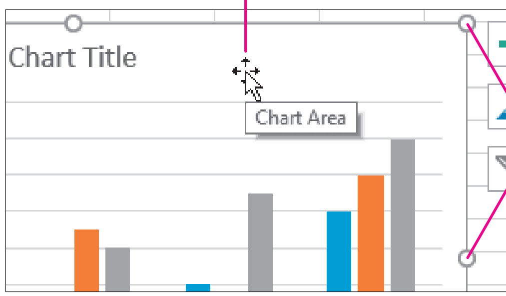
Move and Size Charts

Charts can be moved around on a worksheet or moved to a different worksheet. A chart can be moved on the same sheet by simply dragging. Be sure, however, to click the chart area and not another chart element or you will only move that element and not the whole chart.

Because charts take up a lot of space, and you may want more than one chart in your workbook, it's often a good idea to move a chart onto a new, separate sheet. Charts that are moved onto their own sheet are referred to as chart sheets because they don't contain any rows, columns, or cells—just the chart itself. After moving a chart to a chart sheet, you can continue to work on the chart just like before.

To resize a chart, the chart must first be selected. Then you can drag any of the sizing handles to resize appropriately. You can also resize a chart from the Ribbon to specify the exact height and width. Charts on a chart sheet, however, can't be resized.

The mouse pointer over the chart area displays the four-pointed arrow; drag to move the chart.



The sizing handles can be used to increase or decrease the chart size.

☰ Chart Tools→Design→Location→Move Chart | Right-click chart area→Move Chart

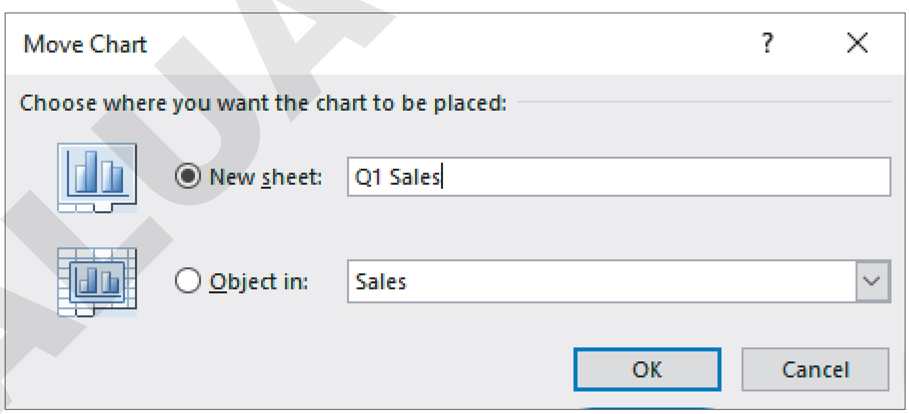
☰ Chart Tools→Format→Size

DEVELOP YOUR SKILLS: E4-D4

In this exercise, you will move the existing chart and then create another chart and resize it.

1. Save your workbook as: `E4-D4-SalesCharts`
2. With the Airspace Q1 Sales chart selected, choose **Chart Tools→Design→Location→ Move Chart** to open the Move Chart dialog box.

   Remember, the chart must be selected to display the Chart Tools contextual tabs on the Ribbon.
3. Choose **New Sheet**, type `Q1 Sales` for the name of the worksheet, and click **OK**.



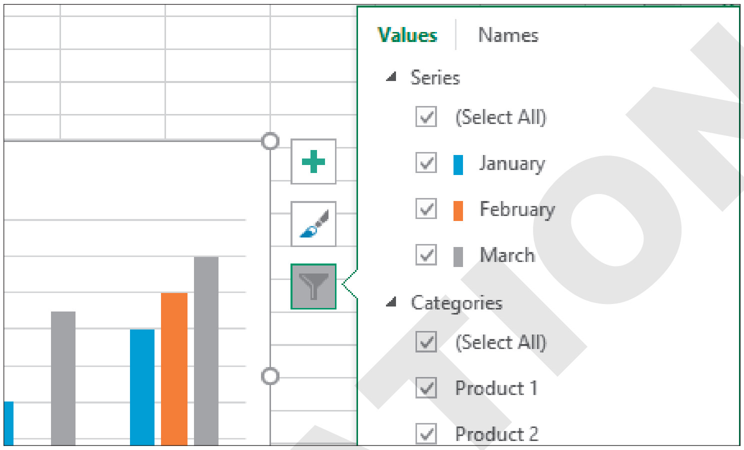
   This moves the chart to a chart sheet, which has no cells, and resizes the chart to fit your screen.
4. Click the **Sales** worksheet tab to create a new chart.
5. Select the **range A3:G6**, which contains the data for Adam, Debra, and Elizabeth.
6. Choose **Insert→Charts→Insert Line or Area Chart** **menu button ▾→Line** (the first option in the 2-D Line group).
7. Drag the chart so it is directly below the data.

8. Replace the chart title with the name: **`Semiannual Sales`**
9. Save the workbook.

Edit Chart Data

After a chart has been created, the data is linked, so if you change the data in the worksheet source, the chart is automatically updated. You can also add or remove data from the chart or filter the chart to change the data displayed. The easiest way to change the chart data is to reselect the entire range to be used, but you can also add or remove individual data series, points, or labels.

Rather than adding and removing data, sometimes a better option is to keep all existing data in the chart and use a filter to display only the data you want to see. The Chart Filters feature allows you to quickly filter specific series and category values and then remove the filter later to display all the data again.



With the Chart Filter feature, you check the series and categories to display and uncheck the ones to hide.

Another way to rearrange your chart data is by swapping the Horizontal Axis and the Legend categories using the Switch Row/Column button. This allows different comparisons to be made, such as switching from comparing months side by side to product categories side by side, with one click.

Chart Tools→Design→Data→Select Data

Chart Tools→Design→Data→Switch Row/Column

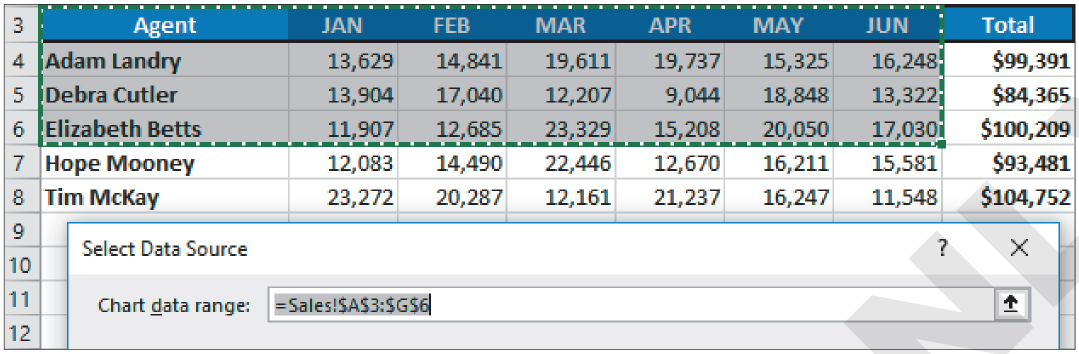
DEVELOP YOUR SKILLS: E4-D5

In this exercise, you will edit the chart to include all five sales agents and then filter the data in the chart.

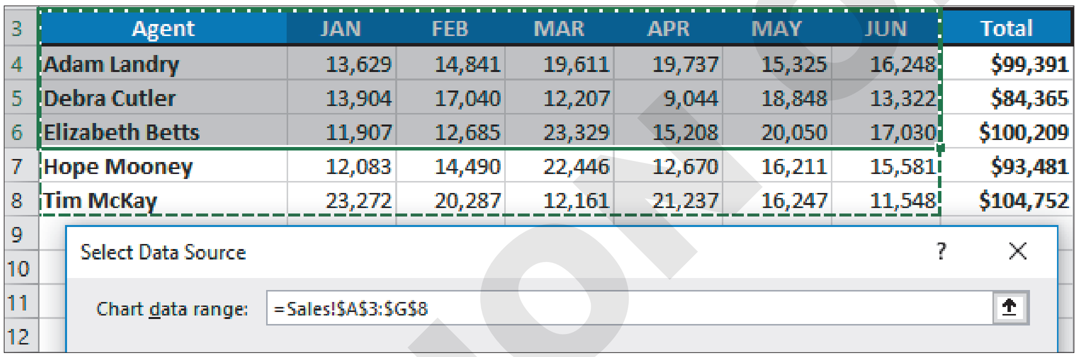
1. Save your workbook as: **`E4-D5-SalesCharts`**
2. Ensure the **Semiannual Sales** chart is still selected on the Sales worksheet.

3. Right-click anywhere in the chart and choose **Select Data** from the shortcut menu.

   The Select Data Source dialog box appears. The current data range is selected and the corresponding cells on the worksheet are surrounded by an animated border.



4. Drag across the worksheet **range A3:G8** to select the new data and click **OK**.



   The new data displays five lines in the chart, one for each of the five agents.

5. Click the **Chart Filters** button and click the checkboxes next to **Adam**, **Elizabeth**, and **Tim** to remove the checks and filter out their data; then click **Apply**.

   You should now see only Debra's and Hope's data on the chart and only their names in the legend.

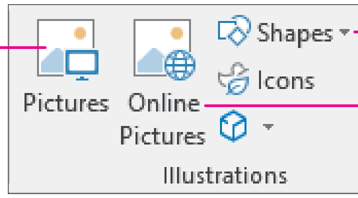
6. Change the number format for the vertical axis to display the **Currency** number format with no decimals.
7. Save the workbook.

Adding Images

For the most part, Excel is used for text and numerical data; however, it is also possible to add pictures and shapes to a worksheet. Pictures might be used to display a company logo, add information to a spreadsheet, or simply bring a little excitement to an otherwise plain set of data. Pictures can be added from your computer or from an online search, and many types of shapes can be added via the menu button. Text boxes can be added for easier formatting and positioning of graphical text on a worksheet.

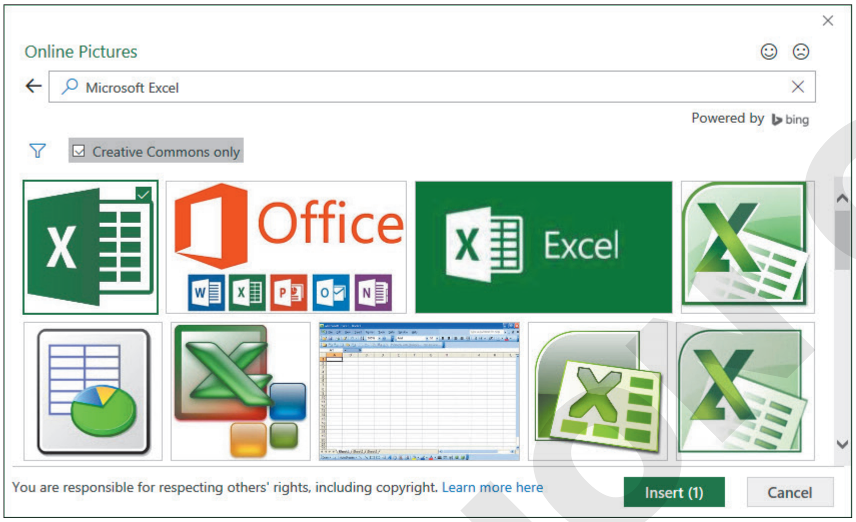
Adding a picture lets you access the Picture Tools tab on the Ribbon, and adding a shape allows you to access the Drawing Tools tab. Both of these contextual tabs give you a great number of options for changing the style, shape, color, and size of the object, and for modifying many other aspects as well.

Add pictures you have saved on your computer.



Choose from a variety of shapes and callouts in the shapes library.

Insert pictures from OneDrive or Bing (Microsoft's search engine that lets you browse an endless supply of images from the Internet).



Using Online Pictures to do a Bing search for *Microsoft Excel* returns many variations of the Excel logo.

When searching online you may find pictures that are protected by copyright. It is important to ensure you respect copyright laws. By default, the online picture search in Excel displays only pictures licensed under Creative Commons, meaning you can use these pictures freely.

Insert→Illustrations→Pictures *or* Online Pictures *or* Shapes

Insert→Text→Text Box

For pictures: Picture Tools→Format | For shapes: Drawing Tools→Format

DEVELOP YOUR SKILLS: E4-D6

In this exercise, you will add a picture to the worksheet and make some modifications to the picture.

1. Save your workbook as: **`E4-D6-SalesCharts`**
2. Select **cell J1** on the **Sales** sheet and then choose **Insert→Illustrations→Online Pictures** to open the dialog box.
3. Search for **`air travel`** in the search box, choose a suitable image (perhaps a plane with a globe), and then click **Insert**.

   Because this is an online search, the results change frequently and you may not see the same images from one search to the next. Some online images are also inserted with licensing information, which refers to the creative commons license to use the image.

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4. With the image selected (if your picture includes licensing information, select only the picture), go to **Picture Tools→Format→Size→Height**, type **1** in the box, and tap Enter.
5. Select **cell I1** and choose **Insert→Illustrations→Online Pictures** again.
6. Enter **space** in the search box, choose an appropriate image of a spaceship, and click **Insert**.
7. Resize this image to be **1"** in height to match the first image.
8. Choose **Picture Tools→Format→Adjust→Color→Blue, Accent Color 1 Light** (in the Recolor group).
9. Save the workbook.

Conditional Formatting

Another way to better visualize your data is to use conditional formatting. Conditional formatting takes a set of data, applies a rule or rules, and modifies the formatting of the cells that match the rule. For example, you may have a large set of data containing student grades and want to quickly find the top three marks. Or you may have sales data for a group of products and want to find which product sells the most and which one sells the least. Conditional formatting applies formatting of your choice to the cells that meet these criteria so you can quickly find them.

Rules can be created to draw attention to the top or bottom, or to numbers greater than or less than a specific number. You can also highlight a cell with a number equal to a specific amount or a cell that contains certain text. Other conditional formatting can be applied to all the selected cells, including data bars, color scales, and icon sets, which are useful for visualizing a set of data as a group. There are so many options!

To apply conditional formatting, the first step is always to select the entire range of data to apply the rule to. For conditional formatting, unlike with charts, you do not include any labels and generally don't include any totals unless you set up a separate rule for total rows or columns. Different rule options are available from the Conditional Formatting drop-down menu, but the criteria and formatting can also be modified to suit your needs. After a rule has been created, you can delete the rule using Clear Rules. Select Manage Rules to see all of the existing rules for either the current selection or the entire worksheet.

	A	B	C	D
1		January	February	March
2	Product 1	5	3	12
3	Product 2	8	12	7
4	Product 3	3	9	8
5	Product 4	6	2	11
6	Product 5	10	12	14

The worksheet before creating conditional formatting, with the range selected

	A	B	C	D
1		January	February	March
2	Product 1	5	3	12
3	Product 2	8	12	7
4	Product 3	3	9	8
5	Product 4	6	2	11
6	Product 5	10	12	14

The worksheet after the conditional formatting rule is applied to the range, showing the top five items with a light red fill and dark red text

Note! *When a conditional formatting rule is created for the top five items, if two or more items are tied for fifth highest, six or more items could be included in the conditional formatting.*

View the video "Highlighting Data with Conditional Formatting."

After a conditional formatting rule is created, the formatting is automatically updated to reflect the new data if it changes.

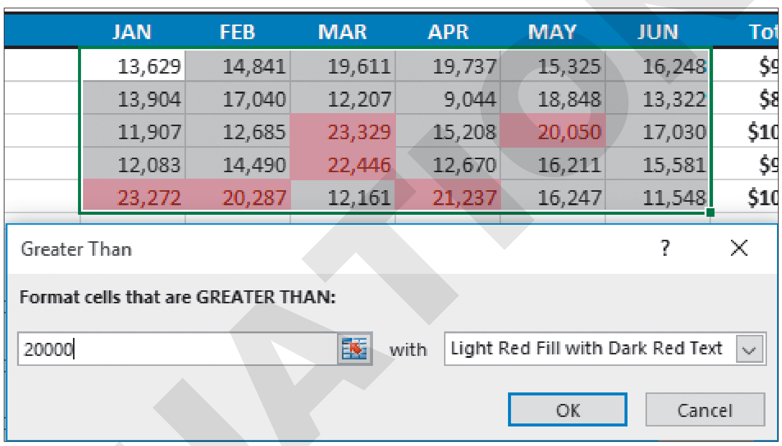
Home→Styles→Conditional Formatting

DEVELOP YOUR SKILLS: E4-D7

In this exercise, you will alter the appearance of the data using conditional formatting to show some of the top and bottom sales numbers for the agents.

1. Save your workbook as: `E4-D7-SalesCharts`
2. Select the **range B4:G8** and choose **Home→Styles→Conditional Formatting→ Highlight Cells Rules→Greater Than...**.
3. In the Greater Than dialog box, type **20000** in the first box (that's 20,000 with no comma).

   The preview shows which data this will apply to, with the default format.



4. Click **OK** to apply the default format and close the dialog box.

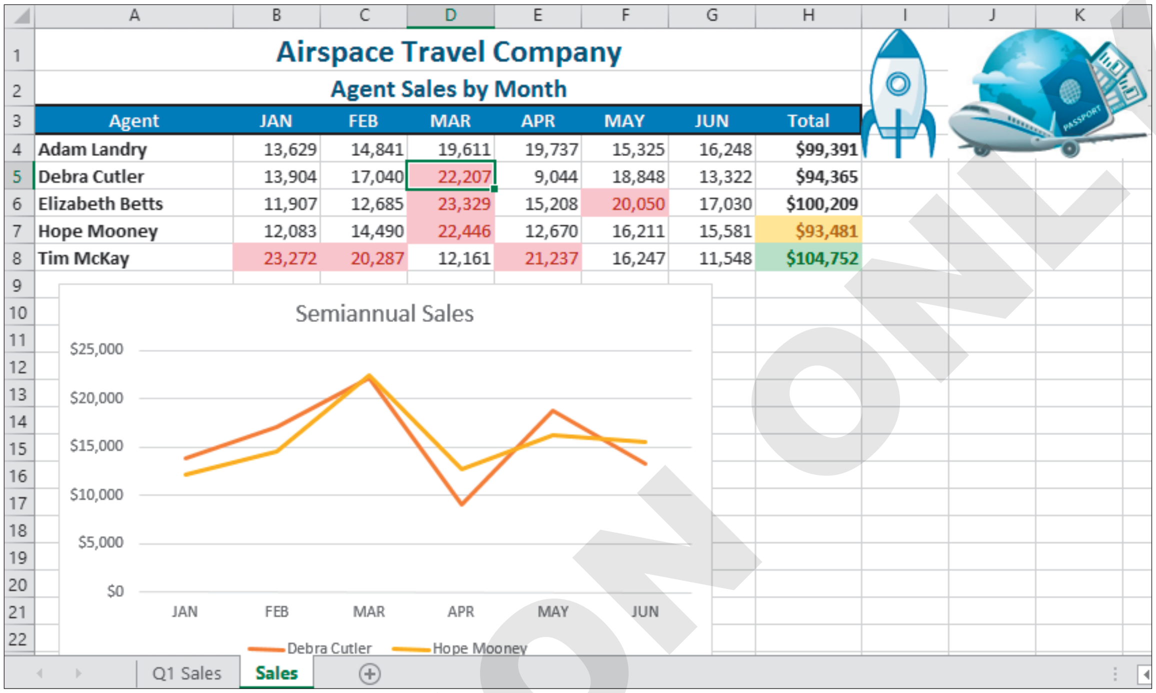
   For the six-month total, you want to see the top and bottom agents, so you will apply two new rules to the data in column H under Total.

5. Select the **range H4:H8** and choose **Home→Styles→Conditional Formatting→ Top/Bottom Rules→Top 10 Items...**.
6. In the dialog box change the *10* to **1** and set the format to **Green Fill with Dark Green Text**; click **OK**.
7. With the **range H4:H8** still selected, choose **Home→Styles→Conditional Formatting→ Top/Bottom Rules→Bottom 10 Items...**.
8. Change the *10* to **1** and select the **Yellow Fill with Dark Yellow Text** format; then click **OK**.

   Now the data needs to be updated. A sale was missed for Debra in March, so the number should be higher.

9. Select **cell D5** and increase the number *12,207* by entering: **22207**

The formatting for cell D7 changes to red fill and red text because it is greater than 20,000. The formatting in the Total column also changes because Debra no longer has the lowest total, and your Semiannual Sales chart below the data updates as well.



10. Save the workbook and close Excel.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

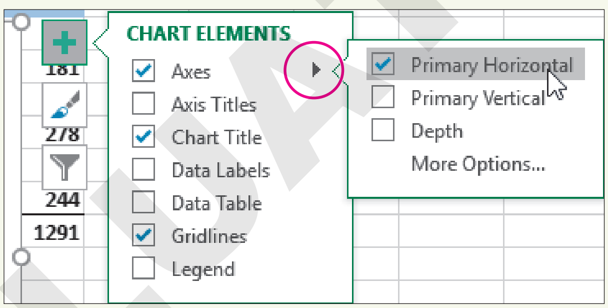
REINFORCE YOUR SKILLS: E4-R1

Create and Modify Charts

In this exercise, you will create several charts to compare volunteer hours for the Kids for Change volunteers and then make some changes to the charts.

1. Start Excel; open **E4-R1-VHours** from your **Excel Chapter 4** folder and save it as: `E4-R1-VHoursSummary`
2. Select the **ranges A4:A10** and **N4:N10**.

   Remember to use the Ctrl *button to select nonadjacent ranges.*
3. Choose **Insert→Charts→Recommended Charts**.
4. Select the third option, the **Pie** chart, and click **OK**.
5. Edit the chart title from *Total* to: `Annual Total`
6. Move the chart to its own sheet, naming it: `Hours by Volunteer`
7. Return to the **Summary** sheet and select the **ranges A4:M4** and **A11:M11**.
8. Choose **Insert→Charts→Insert Line or Area Chart** **menu button ▾→3-D Area** (the first option on the bottom row in the 3-D Area group).
9. Edit the chart title from *Total* to: `Monthly Total`
10. Click on the chart area and then click the **Chart Elements** + button.
11. Hover the mouse over *Axes*, and you will see a menu button ▸ appear; click it to expand the options.



12. Uncheck the boxes beside **Primary Vertical** and **Depth** to remove those axes from the chart.

    Options for fill, besides simple colors, include picture, gradient, and texture, which you can find in the shortcut menu below the color palette. Now you will apply a texture fill.
13. Right-click the data series and change the fill to **Texture→Purple Mesh**.
14. Modify the chart area to a solid fill color using **Blue-Gray, Text 2, Darker 50%** (under Theme Colors).
15. Move the chart to its own sheet, naming it: `Hours by Month`
16. Go to the **Hours by Volunteer** sheet and change the Annual Total chart type from a pie chart to **3-D Clustered Bar**.
17. Change the layout to **Layout 5**, which includes a data table below the chart.
18. Save the workbook.

REINFORCE YOUR SKILLS: E4-R2

Format Charts and Add Conditional Formatting

In this exercise, you will make some further changes to your charts and then add conditional formatting rules to your data.

1. Save your workbook as: **E4-R2-VHoursSummary**
2. Go to the **Hours by Month** sheet and select the **Horizontal Axis**.

   Simple formatting changes—such as altering the font size or type, or adding bold formatting—can be done right from the Home tab, which you will use for the following step.
3. Increase the font size of the horizontal axis to **12**, then right-click it and choose **Format Axis**.
4. Click to select **Text Options**. Expand the Text Fill options, if necessary, and change the color to solid fill **White, Background 1**.

   Keep the Format pane open.
5. Select the chart title and change the text fill to **White, Background 1**, and then close the Format pane.
6. Use the **Chart Filters** button to remove the first six months from the chart, leaving only the data for July to December.
7. Go back to the **Summary** worksheet and select the **range B5:M10**.
8. Apply a conditional formatting rule that highlights cells containing a number greater than **29** with **Light Red Fill with Dark Red Text**.
9. Select the **range N5:N10**.
10. Apply a conditional formatting rule to show the top three cells with **Green Fill with Dark Green Text**.
11. Select the **range B11:M11** and apply a conditional formatting rule to show the top three cells with **Green Fill with Dark Green Text**.
12. Save and close the workbook.

REINFORCE YOUR SKILLS: E4-R3

Add Visual Aids for a Financial Summary

In this exercise, you will use data from the Kids for Change summer fundraising campaign results as you create and edit charts, add pictures, and use conditional formatting.

1. Start Excel; open **E4-R3-SummerFunds** from your **Excel Chapter 4** folder and save it as: **E4-R3-SummerFundsResults**
2. Select the **range A4:D8** and insert a **2-D Clustered Column** chart.
3. Change the chart style to **Style 8**.
4. Modify the chart area to a **Dark Blue** fill color.
5. Change the June Series fill to **Purple** and the July Series fill to **White, Background 1**.
6. Change the chart title to: **Results**
7. Move the chart to a new sheet also named: **Results**

8. Go back to the **Summary** sheet and select the **ranges B4:D4** and **B9:D9**.
9. Insert a **3-D Pie** chart and then remove the title and the legend elements.
10. Move the chart as an object into the existing **Results** sheet.
11. Remove the chart area fill from the pie chart you just moved (choose **Fill** and then **No Fill**) and then remove the border in the same way (**No Line**).

    While working on the chart, the chart is outlined, which prevents you from seeing the change; you won't see that the border is removed until the chart is deselected.
12. Change the June Series fill to **Purple** and the July Series fill to **White, Background 1**.
13. Move the pie chart to the top-right corner of the column chart and change the size to **2.5"** tall.

    The pie chart now shows the totals from each of the categories in the column chart below.
14. Edit the vertical axis of the column chart to be Currency format with no decimal places, apply bold formatting, and increase the font size to **10 pt**.
15. Edit the horizontal axis formatting to match the vertical axis (bold text with 10-pt font size).
16. Increase the font size of the title to **20 pt**.
17. Go back to the **Summary** sheet and create a conditional formatting rule that will apply a red fill and font color to the top three numbers in the **range B5:D8**.
18. Insert two online pictures, first searching for pictures of *running* and then for *barbecue*. Choose the ones you like the best and insert the images below the data.
19. Resize both images to **0.75"** tall and reposition as necessary so they are roughly centered below the data (if your inserted images include licensing information, you can safely delete it for the purposes of this exercise).
20. Save the workbook and close Excel.

Apply Your Skills

APPLY YOUR SKILLS: E4-A1

Create Charts and Use Chart Tools

In this exercise, you will use the revenue and expense data for Universal Corporate Events to create two charts, and then edit the charts.

1. Start Excel; open **E4-A1-Profit** from your **Excel Chapter 4** folder and save it as: `E4-A1-ProfitSummary`
2. On the **Profit Q1&Q2** sheet, select the **ranges A6:G6** and **A10:G13** and insert a **2-D Clustered Column** chart.
3. Change the chart layout to **Layout 11**.
4. Choose **Chart Tools→Design→Data→Switch Row/Column** to switch the months to the legend and the categories to the horizontal axis.
5. Choose **Chart Tools→Design→Chart Styles→Change Colors→Monochromatic Palette 4** to make all series different shades of blue.
6. Change the chart style to **Style 8**.
7. Move the chart to a new sheet named: `Expenses`
8. Go back to the **Profit Q1&Q2** sheet and select the **range A6:G7**.
9. Insert a **2-D Line** chart and adjust the style and colors to **Monochromatic Palette 4** and **Style 7**.
10. Move the chart to a new sheet named: `Revenue`
11. Adjust the vertical axis format to display the minimum value as `15,000` rather than zero.
12. Remove the chart title from the **Revenue** chart.
13. Save the workbook.

APPLY YOUR SKILLS: E4-A2

Apply Conditional Formatting Rules

In this exercise, you will use conditional formatting rules to identify the month with the highest revenue or expense for each category.

1. Save your workbook as: `E4-A2-ProfitSummary`
2. If necessary, go to the **Profit Q1&Q2** sheet.
3. Select the **range B7:G7** (the six months of revenue data in row 7); do not include the total.
4. Create a conditional formatting rule to format the TOP 1 cell with **Red Text**.
5. Select the cells with the six months of employee wage data in row 10 and, again, create a conditional formatting rule to format the TOP 1 cell with **Red Text**.

   Because the numbers are identical, the formatting applies to all of them.
6. Repeat this process five more times, one time for each of the rows of data for capital expenditures, material costs, marketing and sales, total expenses, and profit/loss.

7. Select **cell D17** and insert a picture of an up arrow using an **Online Picture**.
8. Resize the inserted picture to **1"** tall.
9. Save and close the workbook.

APPLY YOUR SKILLS: E4-A3

Create Visual Tools for a Financial Forecast

In this exercise, you will create and modify a chart displaying the long-term financial forecast for Universal Corporate Events.

1. Start Excel; open **E4-A3-LTForecast** from your **Excel Chapter 4** folder and save it as: `E4-A3-5yrForecast`
2. Create a **3-D Column** chart using the revenue and expense data for all five years. (Be sure to include the year headings.)
3. Change the fill for Revenue to **Gold, Accent 4** and for Expenses to **Standard Dark Red**.
4. Remove the chart title completely.
5. Move the chart so it is directly below Profit/Loss in **row 8** and roughly centered below the data.
6. Edit the chart data to include the profit/loss data in **row 8**.
7. Change the chart type to a **Clustered Column – Line** combo chart; also ensure that Revenue and Total Expenses are each a **Clustered Column** chart and Profit/Loss is a **Line** chart.
8. Right-click the line for Profit/Loss and change the outline color to **Dark Blue** (under Standard Colors).
9. Edit the number formatting for the vertical axis to Currency format with no decimals.
10. Create a conditional formatting rule to show the Profit/Loss cells that are greater than `$100,000` with **Yellow Fill with Dark Yellow Text**.
11. Insert the **UniversalCorporateEvents.jpg** logo file from the **Excel Chapter 4** folder in **cell E1** to the right of the sheet title and resize the logo to **1"** tall.
12. Save the workbook and close Excel.

Project Grader

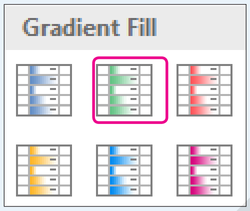
If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: E4-P1

Analyzing Item Sales Performance

Taylor Games is growing fast and adding more items to its inventory. In this exercise, you will use conditional formatting, charts, and other Excel features to help identify the best performing items.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E4_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E4_P1_Start** from your **Excel Chapter 4** folder.
2. Insert the **Taylor Games Logo.png** picture from your **Excel Chapter 4** folder.
3. Change the picture's height to **1"**, allowing the width to adjust to the new height. If necessary, move the picture to the top-left corner of the worksheet.
4. For the **range I8:I22**, apply **Green Data Bar (Gradient Fill)** conditional formatting.



5. Use these settings to apply conditional formatting to the **range H8:H22**:
   - Use **Top 10%** from the Top/Bottom rules category.
   - Change the percentage to **25%** in the dialog box that appears.
   - Leave the color option set to **Light Red Fill with Dark Red Text**.
6. Create a 2-D pie chart using the **ranges A8:A22** and **H8:H22**.
7. Move the chart to a new sheet named: `Replacement Pieces`
8. Change the chart title to: `Replacement Pieces Annual Units`
9. Change the chart style to **Style 3**.
10. Apply a chart filter that only displays items that are **Replacement** pieces.
11. Format the data labels to show only **Category Name** and **Value**.
12. Move the **Replacement Pieces** sheet to the right of the Distributor Sales sheet.
13. In the **Distributor Sales** sheet, create a 2-D clustered bar chart using the ranges **A8:A22** and **I8:I22**.
14. Move the chart to a new sheet named: `Revenue by Item`
15. Change the chart title to: `Revenue by Item`

16. Move the **Revenue by Item** sheet to the end of the sheet order (to the right of the Replacement Pieces sheet).
17. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 4** folder as **`E4_P1_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 4** folder as: **`E4_P1_Submission`**

PROJECT GRADER: E4-P2

Analyzing Car Brands and Ages

The Classic Cars Club management team wants a chart of the brand and age of the members' cars. In this exercise, you will address their needs by using pie charts to display the needed information.

1. Download and open your Project Grader starting file.
    - *Using eLab:* Download **E4_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
    - *Not using eLab:* Open **E4_P2_Start** from your **Excel Chapter 4** folder.
2. In the **Membership List** worksheet, insert the **Classic Cars Logo.png** picture from your **Excel Chapter 4** folder.
3. Change the picture's height to **1"**, allowing the width to adjust to the new height. If necessary, move the picture to the empty cells above the header row and to the right of the title and subtitle.
4. For the **range H7:H36**, apply conditional formatting that highlights all cells in which the term is 5 years with a green fill and dark green text.
5. In the **Brands & Ages** worksheet, create a 3-D pie chart using the ranges **A4:A11** and **C4:C11**.
6. Change the chart style to **Style 3**.
7. Format the data labels to include only the **Category Name** and **Value**.
8. Delete the legend.
9. Move the chart to a new sheet named: **`Older Cars`**
10. Move the **Older Cars** chart sheet to the end of the sheet order (to the right of the Brands & Ages sheet).
11. In the **Brands & Ages** sheet, create a 2-D pie chart using the **range A4:B11**.
12. Add data labels that contain only the value (you may need to remove leader lines even if they don't show).
13. Set the chart's height to **5"** and the width to **6.25"**. If necessary, move the chart up near the top of the sheet.
14. Change the number in **cell B11** to `10`. If your chart doesn't change, then you may need to tap F9 or click the **Calculate** button at the bottom-left corner of the worksheet.
15. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 4** folder as **`E4_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 4** folder as: **`E4_P2_Submission`**

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Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

E4-E1 That's the Way I See It

As a student who prides yourself on achieving top grades, you are creating a chart of your scholastic achievements. Create a new blank worksheet and set up headings so you can list your recent classes in one column and the grades for those classes in the next. List your classes in chronological order, oldest to newest (at least ten classes), and then insert your grades in the next column (if you don't have access to your grades or this is your first class, enter grades you would like to achieve). Create a line chart from the data to show the trend in grades over time. Modify the chart to use your favorite colors, and use conditional formatting to highlight the top three grades and the lowest three grades you received. Save your workbook as: **`E4-E1-ClassGrades`**

E4-E2 Be Your Own Boss

You are looking to acquire more funding to expand Blue Jean Landscaping after a very successful year. You are preparing a report on last year's financial statements, and you want to include a chart to emphasize your revenue growth and the decrease in expenses. Open **E4-E2-RevandExp**, select the data, and then choose the best chart to show this trend. Insert the **BlueJeanLandscaping.jpg** logo and modify the chart as you see fit so that it looks professional and presentable. Apply conditional formatting to highlight the top three Revenue months and the bottom three Expense months. Save your workbook as: **`E4-E2-RevandExpCharts`**

E4-E3 Demonstrate Proficiency

After very encouraging BBQ sauce sales for its two new flavors last year, Stormy BBQ has asked you to create some charts that represent a comparison of its three sauces. Open the file **E4-E3-SauceSales** and use the data to create both a column chart and a line chart for the year. Move both of these charts to new sheets. Then add a total at the bottom for each sauce and create a pie chart comparing the three totals. Be sure to include the Stormy BBQ logo (**StormyBBQ.jpg**) on each chart and adjust the styles, layouts, and formatting in the charts appropriately. Try and use the corporate colors, red and gold, where possible. Save your workbook as: **`E4-E3-SauceSalesCharts`**

EXCEL

5 Organizing Large Worksheets

In this chapter, you will learn how to effectively manage worksheets containing large amounts of data. You will use some exciting Excel tools to organize and view data, perform calculations, and restrict data entry.

LEARNING OBJECTIVES

- Create a template
- Start a workbook from a template
- Change worksheet view options
- Sort and filter data
- Create IF functions
- Apply data validation rules
- Use the Scale to Fit printing options
- Create and modify tables

Project: Preparing Company Payroll Data

Every two weeks, Airspace Travel goes through the process of compiling the data from hours worked and commissions earned to calculate employee paychecks. You have been asked to manage this process, which means taking the data and importing it into a template and then inserting the required formulas into the sheet that will calculate gross pay. You will also need to organize the data so it is presentable, easy to read, and easy to print, if necessary.

Starting with a Template

Using templates in Excel is a way to save yourself a lot of work. Templates allow you to use a preexisting workbook, which usually has the formatting, headings, and formulas already created for you, when creating many similar documents. For example, templates are useful when creating invoices, where the structure and format are the same and only information such as names, dates, and amounts needs to be changed for each new file. Excel offers a large collection of online templates you can search through to find something suitable for your purpose.

Another option is to create your own template. Creating your own template means creating a workbook as usual, inserting text and formulas, and formatting as you desire, but not filling in any actual data. To create the template, you change the type of file to Excel Template when you go to save the workbook.

File name:	Book1
Save as type:	Excel Workbook

File name:	Book1
Save as type:	Excel Template

The default file type when saving your work is Excel Workbook; when creating your own template, change the file type to Excel Template.

PAYROLL CALCULATOR　　GENERATE PAY STUBS　　PERIOD ENDING: 4/8/2013

ID	Employee Name	Reg Hours Worked	Vacation Hours	Sick Hours	Overtime Hours	Overtime Rate	Gross Pay	Taxes and Ded's	Other Ded's	Net Pay
1001	Tony Smith	50	5	1			$560.00	$273.08	$20.00	$266.92
1002	David Jones	40					$320.00	$131.76		$188.24
1003	Denise Smith	35	3				$532.00	$240.43		$291.57
1008	Sebastien Motte	50	5	1			$1,120.00	$441.16		$678.84
1011	Isabelle Scemla	40			2	$15.00	$430.00	$223.62		$206.39
1012	David Bristol	40	5	1			$552.00	$270.04		$281.96
1025	Anne Weiler	36		2	1	$18.00	$474.00	$225.36	$25.00	$223.64
1032	Luka Abrus	40	5	1			$460.00	$175.03	$50.00	$234.97
1049	David Ludwig	40	1				$615.00	$259.01	$23.00	$332.99
Totals	9	**371**	**24**	**6**	**3**		**$5,063.00**	**$2,239.47**	**$118.00**	**$2,705.53**

This template is designed for payroll calculations and already has the structure, formatting, and formulas in place.

Note! *Be aware that some templates require users to have advanced Excel knowledge!*

DEVELOP YOUR SKILLS: E5-D1

In this exercise, you will browse templates, create your own template, and start a new workbook using your template.

1. Start Excel.

   A list of templates displays. The first is Blank Workbook, and then there are several Excel feature tours, followed by a list of template options you can scroll down and browse through. There are many options, including workbooks, to create different types of schedules, calendars, budgets, and more.

2. Click in the **Search for Online Templates** box at the top of the screen, type **`Payroll`**, and tap [Enter].

   Excel searches through thousands of online templates and shows a list of templates related to your search. If you like, you can click an option to preview it, or open a template to look at it.

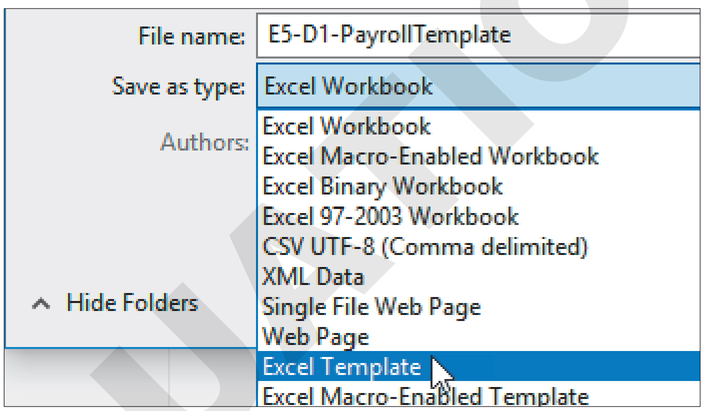
   Now you will create a template to be used for Airspace Travel.

3. If necessary, close any open files, then open **E5-D1-PayrollBlank** from your **Excel Chapter 5** folder.

   This is the file you want to start with every two weeks when you are creating the payroll.

4. Choose **File→Save As→Browse**.

5. In the Save As dialog box, type **`E5-D1-PayrollTemplate`** in the File Name box, then click the **Save as Type** menu and select **Excel Template**.



   You are choosing the type of file first because, by default, saving as a template will save the file to a custom Office template directory created by Microsoft. However, you can navigate back to your file storage location and save the template there instead.

6. Navigate to the **Excel Chapter 5** folder in your file storage location and click **Save**.

   Now that the file is saved as a template, you don't want to make any more changes to it, so you need to close it and then open a copy of the template using File Explorer.

Note! *To edit the template itself, use File→Open from within Excel to open the template file; to open a copy of the template, you can either use File→New to find templates saved in your custom Office template directory or simply use File Explorer.*

7. Close Excel; then use File Explorer to open **E5-D1-PayrollTemplate** from your **Excel Chapter 5** folder.

Note! *Notice that a 1 has been added to the end of the filename in the title bar, similar to when you create a new blank workbook and the default name is* Book1. *Changing this file will not affect the template; it is a new and separate file.*

8. Use **Save As** to save the workbook as: **`E5-D1-PayrollP17`**

   Now that it has been saved, this is just a regular Excel file for you to work on, and the template remains unchanged for future use.

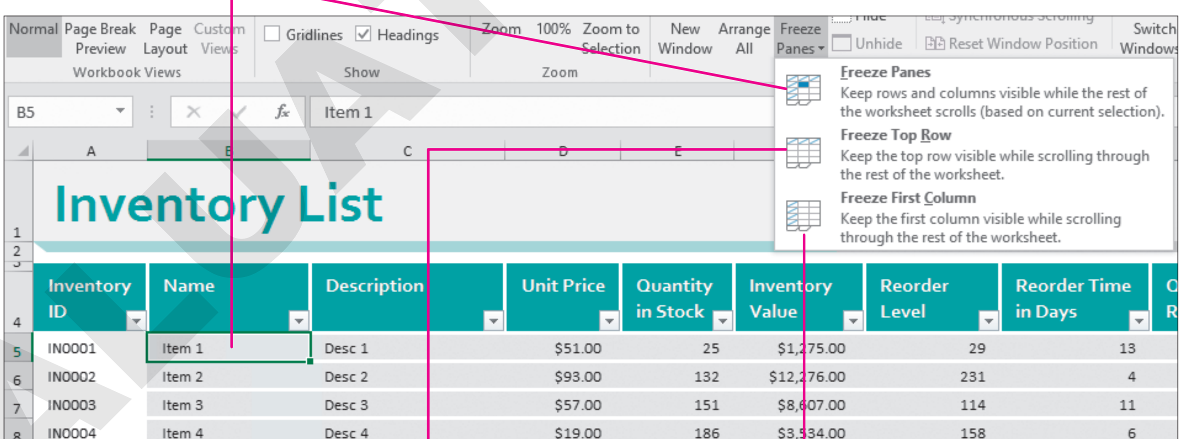
Adjusting View Options

When you have large amounts of data, it can be difficult to see it all and do what you need to do. For example, when you scroll down the worksheet, you will no longer see your headings, so you might lose track of what information is in each column. Or, you might want to see different parts of a spreadsheet at the same time for comparison. Using different view options makes it easier to work with these large worksheets.

Freeze Panes

To keep the headings in your worksheet visible while you scroll through your data, you can use the Freeze Panes feature. You can freeze rows or columns, or both at the same time. You can unfreeze the panes again at any time.

If cell B5 is selected, this option would freeze column A *and* rows 1:4, so the Inventory ID and all column headings would always remain visible.



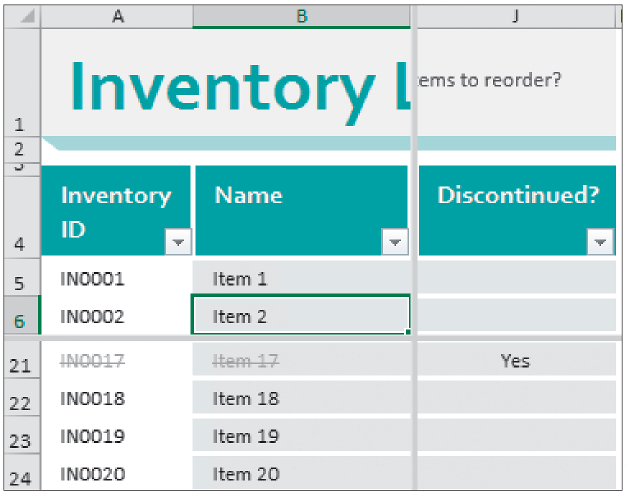
This option freezes row 1 only.

This freezes column A only; you cannot use Freeze Top Row and Freeze First Column at the same time.

View→Window→Freeze Panes

Split a Window

Another option is to split the Excel window, either into two halves or four quadrants. This allows you to scroll through different areas of your worksheet in the different split views, which is useful if you need to refer back and forth to data from different sections of your worksheet. Similar to Freeze Panes, the location of the split is based on the current active cell. To divide your worksheet in two halves, simply choose a cell in column A before creating the split. You can remove the split at any time.

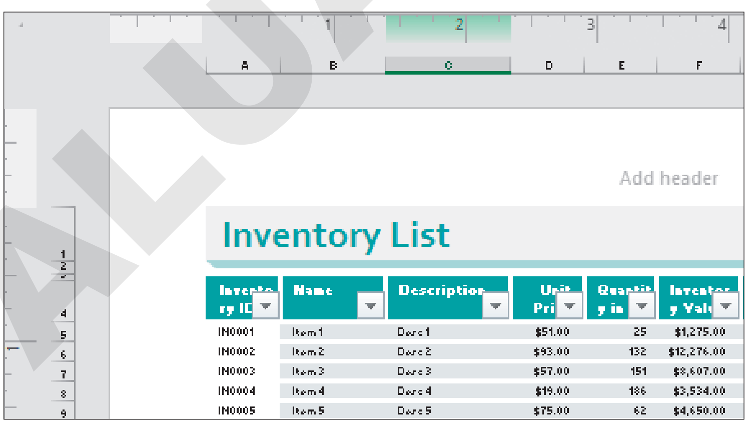


The split lines shown here divide the worksheet into four quadrants, and each can be scrolled through separately to view four different areas of the worksheet.

View→Window→Split

Change the Workbook View

Another issue with large worksheets is understanding how your worksheet will look when it is printed. To see how your worksheet will look when printed, or to see where page breaks will occur, you can use the Page Break Preview or Page Layout view.



Page Layout view shows the ruler and allows you to view and edit the margins and header and footer sections.

View→Workbook Views

DEVELOP YOUR SKILLS: E5-D2

In this exercise, you will copy the data for the payroll period, then make adjustments to view the worksheet several different ways.

1. Save your workbook as: `E5-D2-PayrollP17`

   A coworker from the accounting department has sent you the raw data file, which needs to be added to the payroll file for pay period 17. You will insert the data by simply copying and pasting.

2. Open **E5-D2-PayrollPeriod17data**, which is saved in your **Excel Chapter 5** folder.
3. Select all data in the worksheet using the keyboard shortcut Ctrl+A, then copy the data using the keyboard shortcut Ctrl+C.
4. Return to the **E5-D2-PayrollP17** workbook, ensure that **cell A6** is selected, and use the keyboard shortcut Ctrl+V to paste the data.
5. Autofit **column E** so the department names are fully visible.

   Now that you have the data, you can close the workbook you copied the data from.

6. Switch back to and close **E5-D2-PayrollPeriod17data**.

   When closing the file, you may see a dialog box asking you to either save or delete the data on the Clipboard; if so, click No to delete it.

7. Select **cell C6** and choose **View→Window→Split**.

   Use the scroll bars or mouse wheel to scroll through the worksheet in each of the four quadrants.

8. Turn off the split by choosing **View→Window→Split** a second time.
9. Scroll back to the top-left portion of your worksheet if you are not already there.
10. Select **cell C6** again, and this time choose **View→Window→Freeze Panes menu button ▾→Freeze Panes**.

    Use the scroll bars or mouse wheel to scroll through the worksheet up and down, left and right. Notice that the headings and employee names remain visible.

11. Change the view by choosing **View→Workbook Views→Page Layout**.

    Because Page Layout View isn't compatible with Freeze Panes, it will prompt you to unfreeze the panes.

12. Click **OK** to unfreeze and continue.

    The status bar at the bottom now displays the number of pages in your document. You can scroll down to view the second page.

13. Switch back to the **Normal** view.
14. Save the workbook.

Organizing Data with Sorts and Filters

When you have large amounts of data, you need tools to help you make sense of it. Sorting gives you the ability to rearrange your data in the way that makes the most sense for your purpose. Filtering then allows you to narrow down your data to focus on certain parts of it.

Custom Sorts

Sorting can be performed on any column, using text values, numerical values, or even cell color or font color. Values can be sorted in either ascending or descending order, depending on the type of data being sorted: text, numbers, or perhaps dates.

In addition to a simple one-step sort, you can add multiple levels to your sorting for even better organization; for example, you might have an employee database with information like departments, job titles, office locations, sales performance data, and how long employees have been with the company, and you might decide to sort the data based on department first and then by length of time with the company.

To sort by a single column, you can use Ribbon commands or a shortcut menu. For more advanced sorting and to use multiple sort levels, use the Custom Sort dialog box.

Filters

Filtering allows you to choose what data to include (show) and what data to filter out (hide). You can also filter by text or numbers. For text you can create many filters to find data. This can help you find text that begins with or ends with a specific letter or that contains a certain string of text. For numeric values there are also numerous different ways to create rules to find values that are greater than, less than, equal to, and so on. Using the same company example, you could filter the list multiple ways to view only employees in the sales department, with five or more years of experience, and with less than $10,000 in sales last month.

A customer list with no sort or filter applied

Customers	Country
Carol Gregory	USA
Natasha Dyas	Canada
James Norman	Mexico
Joshua Garcia	USA
Sarah Mckinnon	USA
Shannon Miller	Mexico
Katrina Kormylo	Canada
Susan Colley	USA
William Emerson	Canada
Eugene Fink	USA

A customer list sorted by Country and then by Customers

Customers	Country
Katrina Kormylo	Canada
Natasha Dyas	Canada
William Emerson	Canada
James Norman	Mexico
Shannon Miller	Mexico
Carol Gregory	USA
Eugene Fink	USA
Joshua Garcia	USA
Sarah Mckinnon	USA
Susan Colley	USA

A customer list filtered to show only customers in the USA

Customers	Country
Carol Gregory	USA
Eugene Fink	USA
Joshua Garcia	USA
Sarah Mckinnon	USA
Susan Colley	USA

View the video "Using Sort and Filter."

Data→Sort & Filter→Sort | Home→Editing→Sort & Filter →Custom Sort… | Right-click data→Sort→Custom Sort…

Data→Sort & Filter→Filter

DEVELOP YOUR SKILLS: E5-D3

In this exercise, you will use Sort & Filter to organize the employee data and edit the pay rate for some of the employees.

1. Save your workbook as: `E5-D3-PayrollP17`
2. Select one cell that contains data within the **range A6:H63**.

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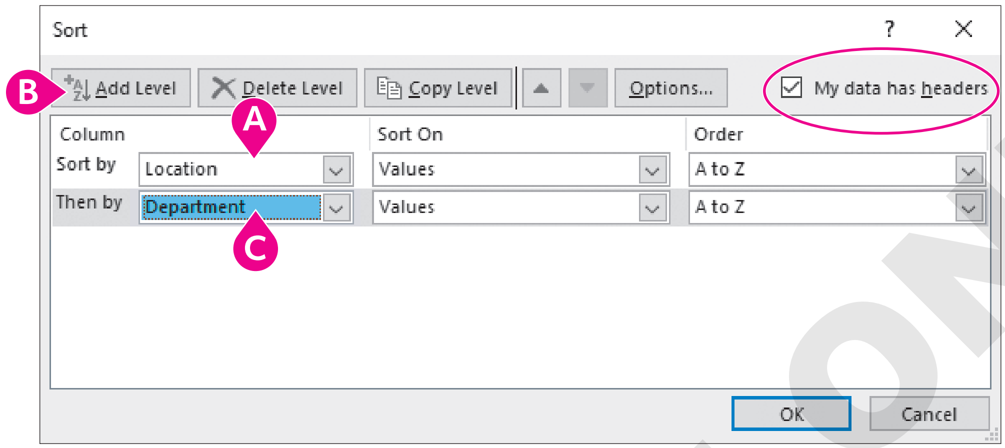
3. Choose **Data→Sort & Filter→Sort** .

Excel automatically selects the entire range of adjacent data to sort, which is easier than trying to select the entire range yourself, especially if there are hundreds or even thousands of rows of data.

4. Follow these steps to sort the data with multiple levels:



A Choose to sort first by **Location**.

Excel recognizes that your data has headers in the top row, so you can select the name of the column you wish to sort by from the drop-down menu; without headers, the menu would show only Column A, Column B, etc.

B Click **Add Level** to perform an additional sort.

C Choose **Department** for the second sort level and click **OK**.

Your data is now sorted, with Los Angeles employees listed at the top and Vancouver employees listed at the bottom. Within each location the employees are sorted by department.

First Name	Last Name	Employee ID#	Location	Department
Jasmin	Newton	13651	Los Angeles	Administration
Tim	Parker	17232	Los Angeles	Administration
Carol	Gregory	16688	Los Angeles	Management
Kobe	Curry	20303	Los Angeles	Sales
Tracy	Bryant	14917	Los Angeles	Sales
Cam	Owens	22404	Los Angeles	Sales
Ashley	Bradford	17571	Miami	Administration
Deborah	Secrett	16735	Miami	Administration
Adel	Kahlmeier	13089	Miami	Administration
Brett	Aberle	22113	Miami	Administration
Tony	Duncan	12743	Miami	Administration
James	Norman	13733	Miami	Management
Melissa	Coelho	21635	Miami	Management
Sophia	Maria	13365	Miami	Management
Steven	Samuel	15563	Miami	Sales

Now you can filter your data to narrow it down.

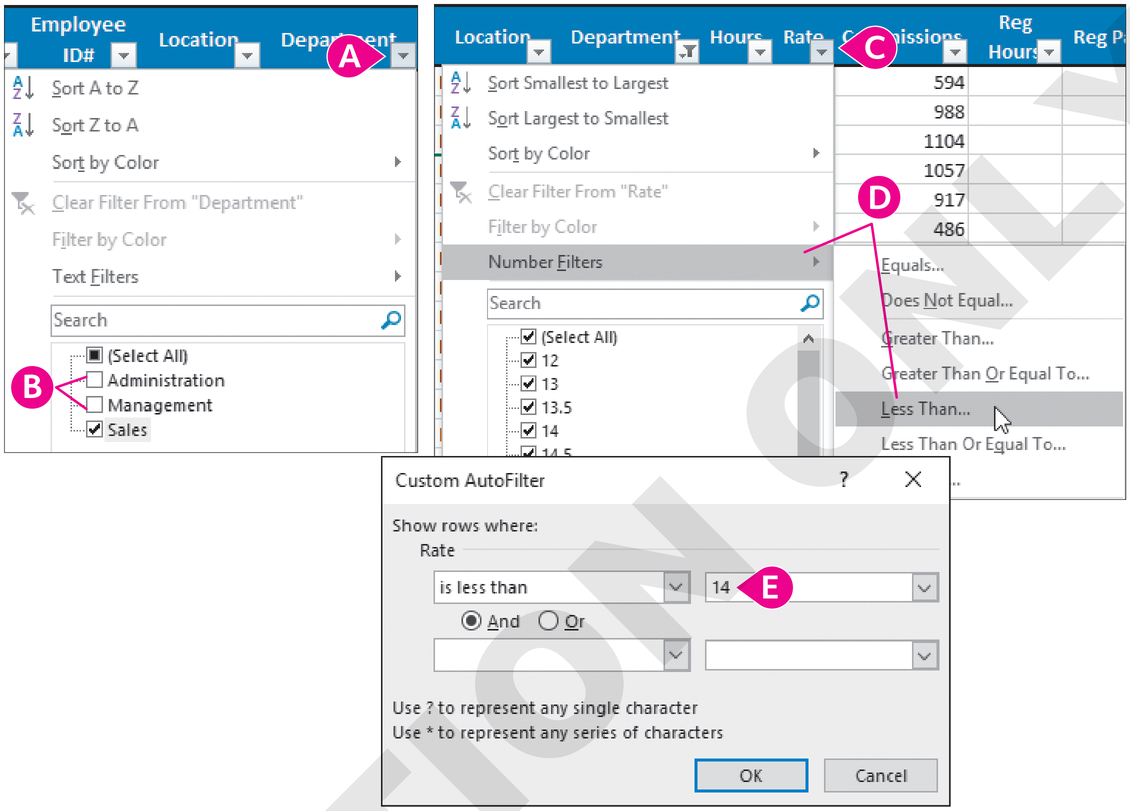
5. Ensure that you still have a cell selected within the sorted list.

Remember, you need only a single cell selected anywhere within the range of data you wish to sort or filter; Excel will automatically detect the correct range.

6. Choose **Data→Sort & Filter→Filter** .

   Notice the menu buttons that appear beside all of your column headings.

7. Follow these steps to filter your data:



- **A** Click the **Department menu** button ▾.
- **B** Filter the Department column to include only Sales employees by removing the checks next to **Administration** and **Management**; click **OK**.
- **C** Click the **Rate menu** button ▾.
- **D** Choose **Number Filters→Less Than** to open the dialog box.
- **E** Type **14** to the right of *Show rows where rate is less than* and click **OK**.

Your worksheet now displays only the six employees in the Sales department who have a rate below $14. Notice the Filter symbol beside the two columns with filters applied to them, Department and Rate.

8. The company has decided to increase all Sales employees to a minimum wage of $14 per hour, so adjust the rate for the six employees listed to: **14**

Tip! *After typing the value in the first cell, you can use the fill handle to copy the number 14; it won't affect the rows hidden by the filter.*

9. Choose **Data→Sort & Filter→Filter** to remove all filters and redisplay all data.
10. Save the workbook.

EXCEL

The IF Function

There are many functions available in the Excel Function Library, but most of us use only a handful of these on a regular basis. Once you understand simple functions like SUM and AVERAGE, you can start exploring additional, more advanced functions. As you learn more about functions, it becomes easier to understand which functions to use and how to insert the function with the correct arguments.

The IF function is used quite frequently because it is helpful in many situations. It allows you to determine the value to enter in a cell based on the outcome of a logical test. The IF function also provides the basis for many other statistical functions, such as COUNTIF and SUMIF. Although the IF function seems rather challenging at first, it gets easier to use with some practice and is almost like creating a sentence in the form of a question.

Logical tests for IF functions include comparison operators, and it's important to understand the symbols used.

COMPARISON OPERATORS

Symbol	Meaning	Symbol	Meaning
=	Equal to	<>	Not equal to
>	Greater than	>=	Greater than or equal to
<	Less than	<=	Less than or equal to

Greater	>	Than
2	>	1

The arrow points to the smaller number. If you can remember 2 is greater than 1, the less than symbol is the opposite.

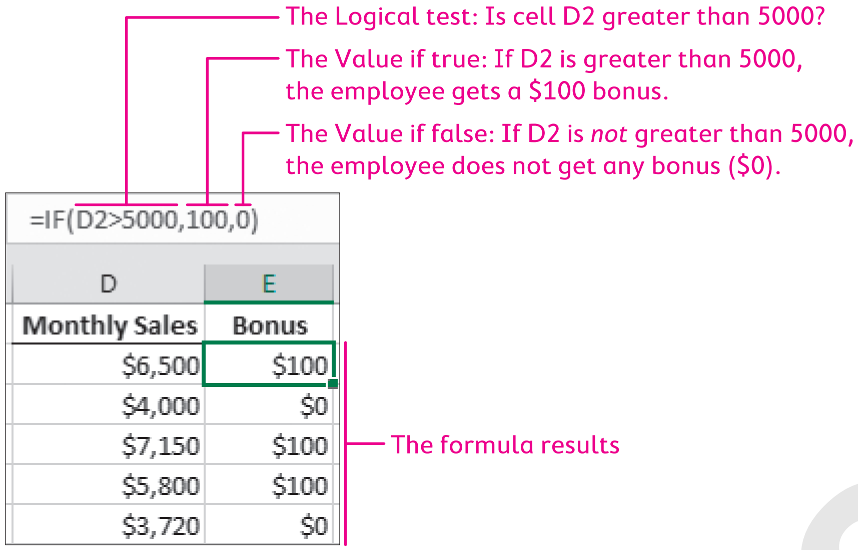
View the video "Using the IF Function."

Example: IF Function in Practice

Use the IF function where there are two possible outcomes and there are defined criteria to determine each outcome. For example, if you offer sales employees a $100 bonus if they achieve $5,000 in sales for the month, you can use an IF function to determine which employees qualify. In this case, the condition is that sales must be greater than or equal to $5,000, which needs to be written as a logical test.

THE IF FUNCTION

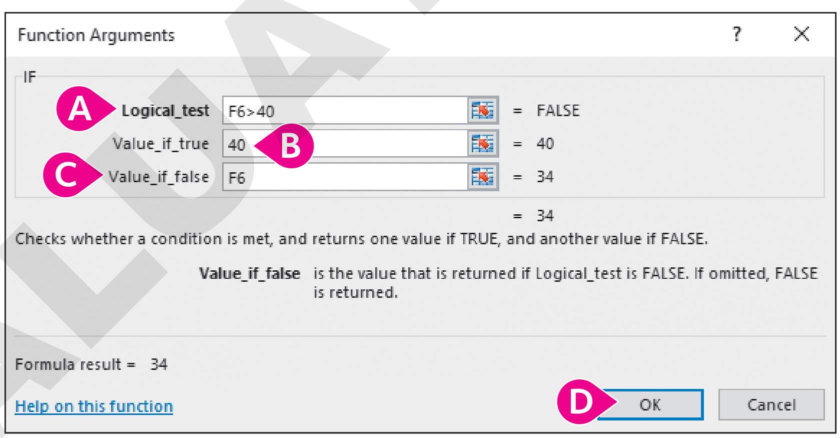
Arguments	Description	Examples
Logical Test	This is a question or criterion that must be a yes/no or true/false question, using a comparison operator, that usually includes at least one cell reference.	D2>5000 D2>=A1
There are two possible outcomes, so you need to enter two values.		
Value if true	If the answer is true, this determines what result is placed in the cell after completing the formula. The result can be text, numbers, cell references, or even another formula.	100 "Yes" D2*10%
Value if false	If the answer is not true, it must be false, so what will the result be? Again, the result can be text, numbers, cell references, or a formula.	0 "No" D2*2%



DEVELOP YOUR SKILLS: E5-D4

In this exercise, you will create several formulas using the IF function to calculate the number of regular hours and overtime hours each employee worked. You will then calculate total Gross Pay.

1. Save your workbook as: **E5-D4-PayrollP17**
2. Select **cell I6** and click **Insert Function** *fx* on the Formula Bar.
3. Choose the **IF** function (usually displayed by default under Most Recently Used; if not, select the **Logical** category) and click **OK**.
4. Follow these steps to create a formula using the IF function to calculate the number of regular hours for employees:



- **A** In the Logical_Test box enter **F6>40** to determine whether the employee worked more than 40 hours.
- **B** In the Value_If_True box enter **40** because if the employee did work more than 40 hours, that person would receive regular pay for 40 hours and the rest would be considered overtime.
- **C** In the Value_If_False box enter **F6** because if the employee worked 40 hours or fewer, all hours worked would be considered regular hours.
- **D** Click **OK**.

The result of the formula is 34; Jasmin worked 34 hours total, so her regular hours equal 34.

EXCEL

5. Select **cell K6** and enter this formula: **`=IF(F6>40,F6-40,0)`**

   The function arguments are typed within parentheses and separated by commas. The result of the formula is zero; Jasmin only worked 34 hours, so there are no overtime hours to be paid.

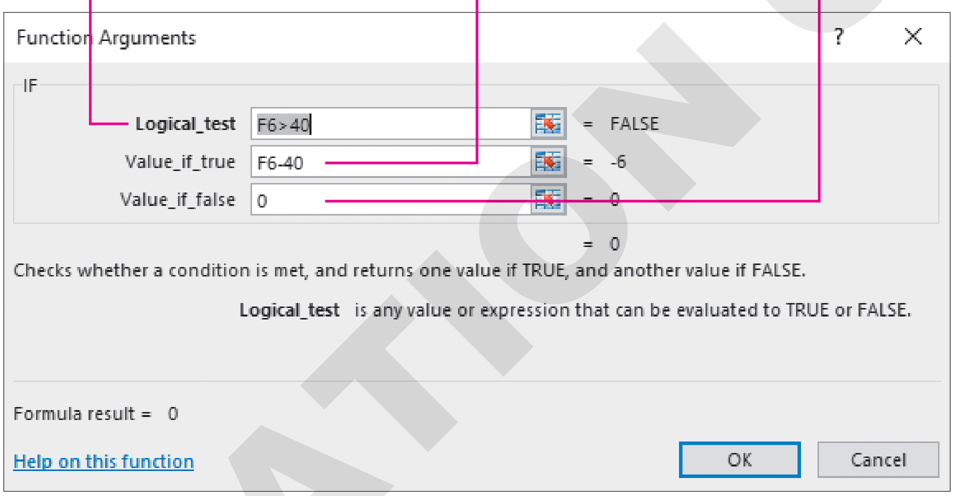
   To edit or to simply double-check the formula, you can click Insert Function at any time to open the Function Arguments dialog box.

6. If necessary, select **cell K6** again, and then click **Insert Function** *fx* and compare your screen to the following:

The Logical_test box has the same logical test, *F6>40*, which determines whether the employee worked more than 40 hours.

The Value_if_true box contains *F6-40*, because if the employee did in fact work more than 40 hours, that employee would receive overtime pay for the total number of hours less 40, the first 40 of which would be paid at the regular rate.

The Value_if_false box says *0*, because if the employee worked 40 hours or less, that employee does not receive any overtime pay.



7. Click **OK** to close the window.

   Since the regular hours and overtime hours have been calculated, you can now calculate the regular pay and overtime pay for employees by multiplying hours by their rate.

8. In **cell J6**, enter the formula **`=I6*G6`** and tap Tab twice.

   We know that Jasmin doesn't receive any overtime, but you will set up the formula to calculate overtime pay for all employees. Overtime pay is calculated as OT Hours x Rate x 1.5 because employees get time-and-a-half for overtime (100% + 50% = 150% or 1.5).

9. In **cell L6**, enter the formula **`=K6*G6*1.5`** and tap Tab.

   Total gross pay includes regular pay, as well as any overtime pay and commissions.

10. Enter the formula to calculate gross pay, which is: **`=J6+L6+H6`**

11. Apply bold formatting and **Currency** number formatting to **cell M6**.

12. Select the **range I6:M6** and double-click the **fill handle** to fill down the formulas for all employees.

Double-clicking is much easier in this case than dragging the fill handle all the way down to row 63, and all five columns can be filled at once rather than one at a time.

Gross pay is now calculated for all employees. You can double-check your formulas visually by checking a few examples of employees who worked overtime and a few who didn't. For example, you can quickly see that Cam Owens (row 11) worked 47 hours and received 7 hours of overtime pay.

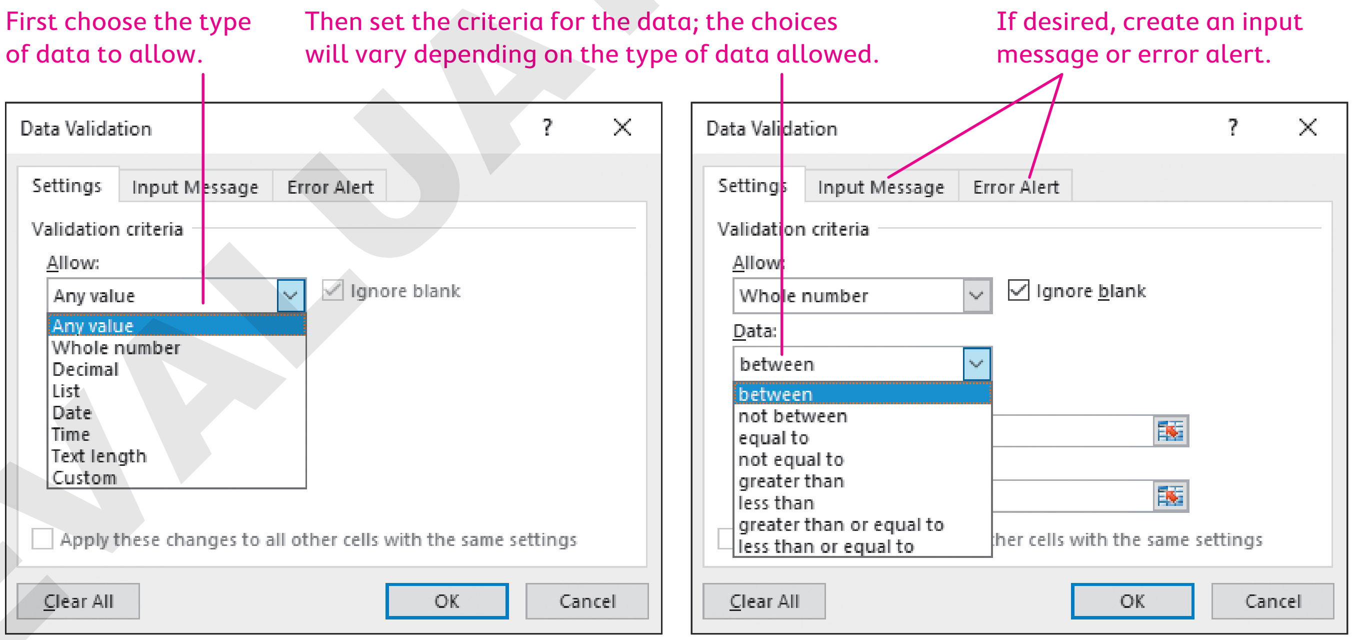
13. Save the workbook.

Controlling Data Entry with Data Validation

When entering values into an Excel worksheet, it is important to be consistent and accurate. However, mistakes can be made, especially if you ask someone else to do the data entry for you. To ensure accuracy and consistency, you can use data validation to create criteria for cells that limit the possible entries into those cells.

Normally, you set up data validation rules before entering the values. You also need to select the entire range where you intend to enter the data, so you are creating the rule for that full range. This is important because creating criteria for a cell that already contains data won't tell you if that data was correctly entered—unless you use the Circle Invalid Data option from the Data Validation menu.

The criteria you choose can restrict the type of data as well as the range of acceptable values. For example, you could restrict data entry to whole numbers between 0 and 100, or you could restrict data entry to a text list. You can also create a custom input message to assist the user in entering the acceptable data and an error alert if they enter an unacceptable value.



Data→Data Tools→Data Validation

DEVELOP YOUR SKILLS: E5-D5

In this exercise, you will create data validation criteria to choose the Department for each employee from a list and to restrict the number of hours that can be entered.

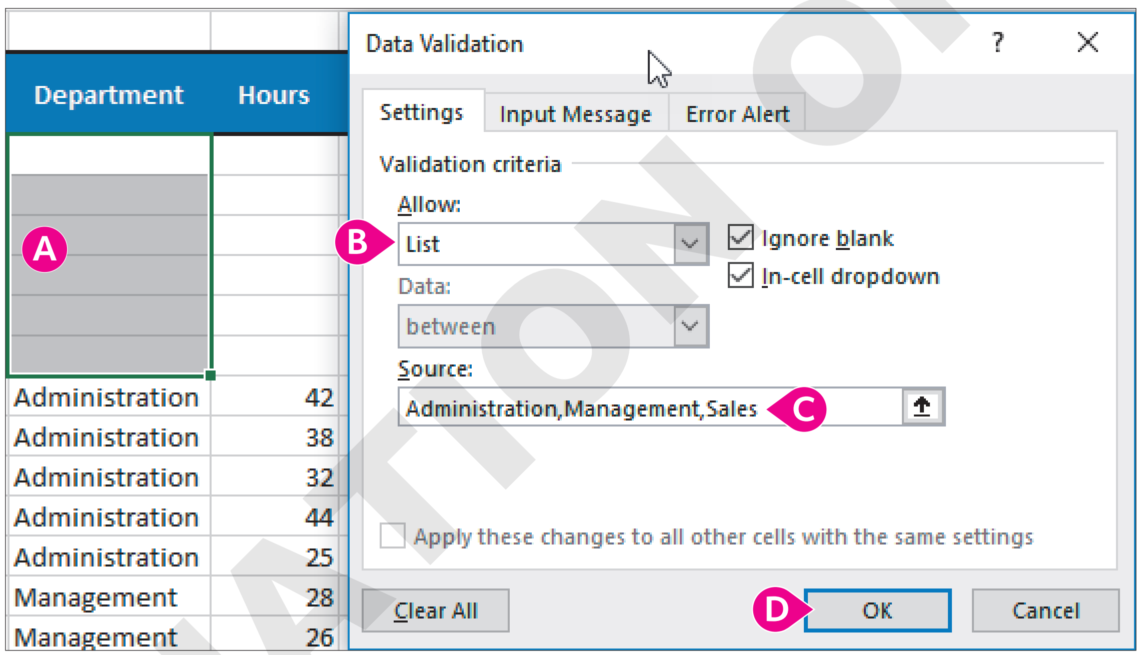
1. Save your workbook as: `E5-D5-PayrollP17`

   To begin, you will remove the data in the Department and Hours columns for the first six employees so you can create data validation rules that change how data is entered.

2. Select the **range E6:F11** and delete the data.

   Now you will use data validation rules to ensure the Department column is correctly populated using one of three choices from a list.

3. Follow these steps to create the data validation rule:



   - **A** Select the cells where the department data will be entered (**range E6:E11**) and choose **Data→Data Tools→Data Validation**.
   - **B** Click the **Allow menu** button ▾ and choose **List**.

     Allowing the List data type means only values you specify can be entered into the cells, which the user chooses from a list.

   - **C** In the Source box, type `Administration,Management,Sales` and ensure each word is separated by a comma but *no space*.
   - **D** Click **OK**.

   The three items typed into the Source box will appear for the user to choose from; an alternative to typing the source options is using cell references to a list of items on your worksheet.

4. Select **cell E6**.
5. Type `Mgmt` and then tap [Enter].

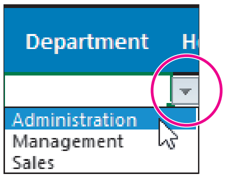
   A window will pop up telling you the value you entered doesn't match the data validation restrictions for the cell.

6. Click **Cancel**.

7. Now type **`Ad`** and tap [Enter].

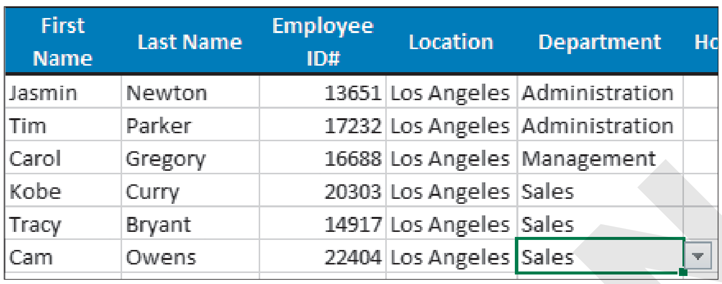
This time typing just a few letters enters the entire department name from the list.

You can also use the mouse to select a name from the drop-down menu button ▾ to the right of the cell, which displays the options you typed for the source of the list.



8. Use the **menu** button ▾ to select **Administration** from the list of Departments for Tim in **cell E7**.

9. Using whichever method you prefer, enter the departments for the other four employees:

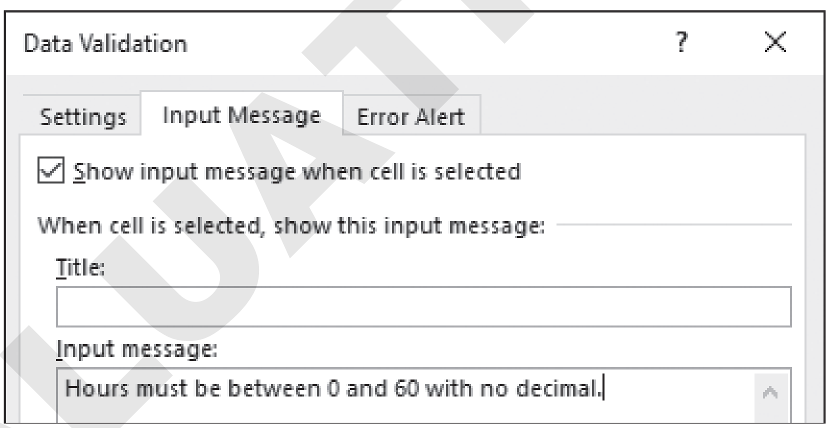


First Name	Last Name	Employee ID#	Location	Department	Hc
Jasmin	Newton	13651	Los Angeles	Administration	
Tim	Parker	17232	Los Angeles	Administration	
Carol	Gregory	16688	Los Angeles	Management	
Kobe	Curry	20303	Los Angeles	Sales	
Tracy	Bryant	14917	Los Angeles	Sales	
Cam	Owens	22404	Los Angeles	Sales	

10. Select the **range F6:F11** to create data validation criteria for the hours to be entered.

11. Choose **Data→Data Tools→Data Validation** and set the criteria to allow only a **Whole Number** between **`0`** (minimum) and **`60`** (maximum).

12. Click the **Input Message** tab and enter the following into the Input Message field:



13. Click **OK** to complete the settings and then select **cell F6**.

A ScreenTip appears with the message you entered.

14. To test the data validation rule, type **`61`** in **cell F6** and tap [Enter]. Read the message and then click **Retry**. Test again by typing **`40.5`** and tapping [Enter]; click **Cancel** to stop editing the cell.

If you need someone else to enter the data, you can be confident no data will be entered that doesn't meet your criteria. For example, you won't end up accidentally paying someone for 400 hours instead of 40!

15. Enter these hours for the six employees in Los Angeles, starting with Jasmin in **cell F6**: **`34`**, **`27`**, **`40`**, **`36`**, **`30`**, **`47`**

16. Save the workbook.

EXCEL

Printing Options

To print large worksheets in a professional, presentable format, you may need to make some adjustments. For example, you may want to ensure that column headings are visible on all pages, you may want to choose how your data is divided across several pages, or you may want to add additional information that isn't part of the worksheet itself to the top or bottom of each printed page.

PRINTING OPTIONS

Feature	Description
Print Titles	Print the same headings on all pages by repeating the same rows or the same columns on all pages.
Print Area	Print only a specific area of your worksheet rather than the whole thing.
Breaks	Determine where one page ends and the next page begins when printing. Page breaks in Excel are both horizontal and vertical. Existing page breaks can be moved and new ones can be inserted.
Scale to Fit	Force data onto a desired number of pages, using width and height, by scaling or shrinking the size of the worksheet contents.

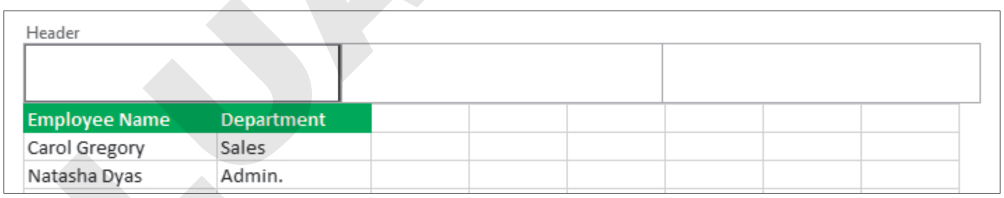
View the video "Printing a Large Worksheet."

Page Layout→Page Setup

Headers and Footers

When you are printing a worksheet, you may want information included on the printout that doesn't need to be shown on the screen. This might include information such as a title, company name, your own name, the page number, or perhaps the current date. There are tools in Excel for automatically entering some of this information, or you can manually type the information you want to appear.

In Excel, both the Header and Footer areas have three distinct sections. These are not part of the worksheet, so they do not have a cell address like the worksheet cells.



Tip! *Navigating to the Footer section can be tricky, but there's a button on the Ribbon that makes it much easier than scrolling down: Header & Footer Tools Design→Navigation→Go to Footer.*

Insert→Text→Header & Footer

View→Workbook Views→Page Layout

DEVELOP YOUR SKILLS: E5-D6

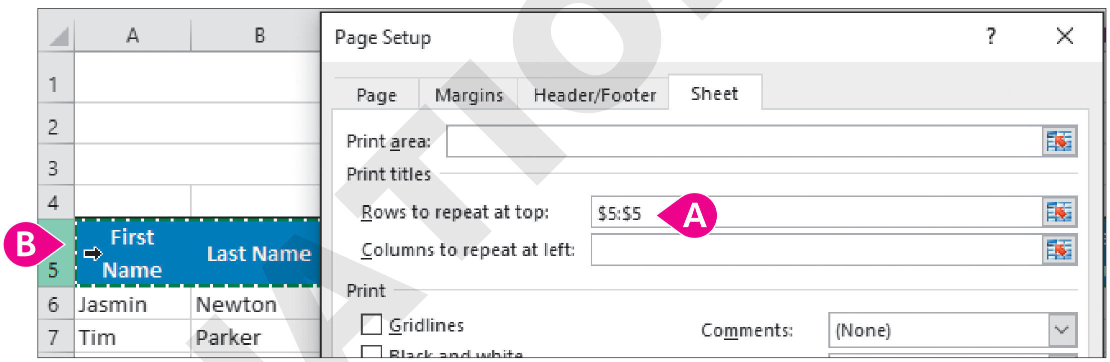
In this exercise, you will set up the print area, repeat the column headings on every page, and adjust other print settings.

1. Save your workbook as: **`E5-D6-PayrollP17`**
2. Choose **File→Print** to see the print preview.

   Notice that the worksheet prints on four pages, and the OT Hours, OT Pay, and Gross Pay columns appear on pages three and four. The first adjustment to be made is to adjust the worksheet width to one page.
3. Use the **Back** button to return to your worksheet.
4. Choose **Page Layout→Scale to Fit→Width→1 page**.
5. Go back to the preview and see that the worksheet now prints on two pages—one page wide and two pages long.
6. Use the **Back** button to return to your worksheet.

Print Repeating Headings

7. Choose **Page Layout→Page Setup→Print Titles** .
8. Follow these steps to print repeating headings:

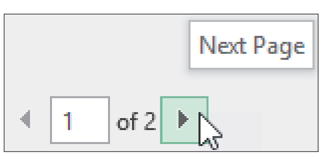


   Ⓐ Select the box next to **Rows to Repeat at Top**.

   Ⓑ Click anywhere in **row 5**.

   When you click to select the row, Excel adds the correct formatting to the row reference.
9. Click **OK**.

   You won't notice anything different in the current view, but you can check the print preview to see the repeating row on page two.
10. Choose **File→Print** and below the preview use the **right-pointing arrow** to advance to page two.



   Now you can see the same headings with the blue background on page two that are printed on page one.
11. Use the **Back** button to return to your worksheet.

EXCEL

Set the Print Area

12. Select the **range A5:M11**.

You must select the desired range before setting the print area.

13. Choose **Page Layout→Page Setup→Print Area→Set Print Area**.

Only the selected range will print, which means the Los Angeles employees and the headings in row 5.

14. Go to the print preview to view the change and then return to your worksheet.

15. Choose **Page Layout→Page Setup→Print Area→Clear Print Area**.

Now the whole worksheet will print once again because the specified print area has been cleared.

Set Page Breaks

For editing some of the page layout settings, it is best to be in Page Layout view. However, for adding/adjusting page breaks, it is best to be in Page Break Preview.

16. Choose **View→Workbook Views→Page Break Preview**.

There are two pages in the print area, and the page break falls between Natasha Dyas *and* Joshua Garcia.

36	Terrence	King
37	Lorraine	Martine
38	Natasha	Dyas
39	Joshua	Garcia
40	Karen	Ablitt
41	Megan	Dorfling

17. Place the mouse pointer over the page break line to display the two-way arrow and then drag the page break up and place it below **row 11**, where the data for Los Angeles employees ends and the data for Miami employees begins.

Because the area below the page break is now too big to fit on one page, Excel automatically adds a new page break, so your worksheet will now print on three pages.

18. Drag the new page break up below **row 28**, where the data for Miami employees ends.

Because the rest of the data does fit on page three, you have to manually insert two more page breaks to print New York, Toronto, and Vancouver on separate pages.

19. Select **cell A38**, below the row where the data for New York employees ends, and choose **Page Layout→Page Setup→Breaks→Insert Page Break**.

20. Insert another page break above the Vancouver employees.

21. Change the workbook view back to **Normal** and then go to the print preview.

The data will print on five pages, one for each location, with the column headings repeated at the top of each page.

Insert Header

22. Return to your worksheet and then switch to **Page Layout** view and select the left header section.

You will see the Header & Footer Tools Design tab appear on the Ribbon, which allows you to insert formatted elements like page numbers and the current date.

23. Choose **Header & Footer Tools→Design→Header & Footer Elements→File Name**.

Notice the code that is inserted; the code will display and print the filename when you click outside of the left header box. Also, if the filename ever changes, the text in the header will update automatically.

24. Select the center header section and insert the **Page Number**.

25. Insert the **Current Date** in the right header section.

26. Deselect the header area, switch back to **Normal** view, and then go to the print preview one last time.

Excel won't let you change the workbook view while you are editing the header, so be sure to click a cell on the worksheet before changing the view.

E5-D6-PayrollP17 1 9/9/2019

Airspace Travel Company
Bi-Weekly Payroll
Period:

First Name	Last Name	Employee ID#	Location	Department	Hours	Rate	Commissions	Reg Hours	Reg Pay	OT Hours	OT Pay	Gross Pay
Jasmin	Newton	13651	Los Angeles	Administration	34	17	0	34	578	0	0	$578.00
Tim	Parker	17232	Los Angeles	Administration	27	13	0	27	351	0	0	$351.00
Carol	Gregory	16688	Los Angeles	Management	40	31	0	40	1240	0	0	$1,240.00
Kobe	Curry	20303	Los Angeles	Sales	36	21.5	594	36	774	0	0	$1,368.00
Tracy	Bryant	14917	Los Angeles	Sales	30	15	988	30	450	0	0	$1,438.00
Cam	Owens	22404	Los Angeles	Sales	47	20	1104	40	800	7	210	$2,114.00

27. Save the workbook.

Excel Tables

Tables allow you to more easily organize and analyze related data. Tables simplify the process of performing sorts, filtering your data, calculating totals, and even modifying the format of your data. The process of taking existing data and inserting a table is very simple, and you can convert a table back to a normal range of cells at any time without losing any data.

The header row makes sorting and filtering easy using the menu buttons ▼ in the header cells.

Banded rows (alternating colors) can be added or removed, and you can use Table Styles to modify the colors.

Employee Name	Department	Salary
Carol Gregory	Sales	$40,000
Natasha Dyas	Admin.	$34,500
James Norman	Management	$68,000
Joshua Garcia	Sales	$46,000
Sarah Mckinnon	Sales	$42,750
Shannon Miller	Management	$52,000
Katrina Kormylo	Admin.	$48,000
Susan Colley	Sales	$44,800
William Emerson	Admin.	$41,000
Eugene Fink	Sales	$37,000

Employee Name	Department	Salary
Carol Gregory	Sales	$40,000
Natasha Dyas	Admin.	$34,500
James Norman	Management	$68,000
Joshua Garcia	Sales	$46,000
Sarah Mckinnon	Sales	$42,750
Shannon Miller	Management	$52,000
Katrina Kormylo	Admin.	$48,000
Susan Colley	Sales	$44,800
William Emerson	Admin.	$41,000
Eugene Fink	Sales	$37,000
Total	10	$454,050

Use the Total row to add functions like Count (Department) and Sum (Salary) via the cell menu button ▼.

The same data, before and after a table is inserted

As you add more data to the bottom or right of the table, the table area expands to include the new adjacent rows or columns. Another nice feature is that entering a formula in one table cell will automatically copy the formula to all cells in that table column.

Insert→Tables→Table

Table Tools→Design→Tools→Convert to Range

DEVELOP YOUR SKILLS: E5-D7

In this exercise, you will create a table and perform tasks such as filtering, sorting, and calculating totals.

1. Save your file as: `E5-D7-PayrollP17`
2. Select **cell J6** and choose **Insert→Tables→Table**.

   Excel looks for the adjacent range of data and suggests the range A5:M63, which includes the table headers.
3. Click **OK** to accept the suggested table area.

   You may see a warning suggesting there are external data ranges. If so, choose to convert the selection to a table and remove all external connections.
4. Click the **Department menu** button ▾.

   Notice the sort and filtering options available.
5. Uncheck the filter boxes for **Administration** and **Sales** and click **OK**.

   Only employees in the Management department are now visible in the list.
6. Use the **Rate menu** button ▾ to sort the **Management** department employees by rate, from largest to smallest.
7. Choose **Table Tools→Design→Table Style Options→Total Row**.

   Notice that in column M there is a total automatically calculated for the Management department, which shows the sum of the department's gross pay.
8. Select **cell F64**, click the **menu** button ▾, and select **Sum**.

   The total hours for Management employees are calculated, showing 416 hours.
9. Change the Table Style to **White, Table Style Medium 1**.
10. Use the **Department** filter to hide the Management data and display the Sales department only.
11. Use the **Location menu** button ▾ to re-sort the data by Location from A to Z.

    Locations should be listed in order from A to Z, and the Total row at the bottom of the table should recalculate the total hours and gross pay.

First Name	Hours	Gross Pay
Total	1152	$40,921.50

12. Save the workbook and close Excel.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: E5-R1

Import and Organize Data for a Donor List

In this exercise, you will open a template and import data related to this year's Kids for Change donors. You'll also organize the data with sorts and filters.

1. Open the **E5-R1-DonorList** template from the **Excel Chapter 5** folder.

   Remember, to create a copy you must open the template from File Explorer. If you do not see a number at the end of the filename after opening the file, you are editing the template itself; close it and reopen through File Explorer.

2. Save the workbook, replacing the number at the end of the filename with the current year.

   The donor information is saved in another file, so you need to open it and copy the data, then paste it into the current workbook.

3. Open **E5-R1-DonorData** from the **Excel Chapter 5** folder and then select all the data and copy it.
4. Paste the data into **cell A4** in the **DonorList** file; close the DonorData file.
5. If necessary, select **cell A4** again and freeze the top three rows.
6. Scroll down to ensure the data was copied correctly. (Hint: *Nicki Hollinger* should be the last donor in the list in row 45.)
7. Scroll to the top of your data and then do a multiple-level sort, first by **Donor Type**, **A to Z**, and then by **First Donation**, **Oldest to Newest**.
8. Filter your data to display only those donors with total annual donations greater than $5,000.

   These are your high-priority donors; you want them to stand out in the list, so you will add a fill color to these rows.

9. With the data filtered, select the **range A4:F40**, which is all donor data including the blank column below *Free Membership*.
10. Click the fill color **Green, Accent 6, Lighter 40%**.
11. Remove the filter from the data.
12. Save the workbook.

EXCEL

REINFORCE YOUR SKILLS: E5-R2

Use the IF Function

In this exercise, you will add information about the Kids for Change donors, using the IF function and data validation, and adjust the sheet for printing.

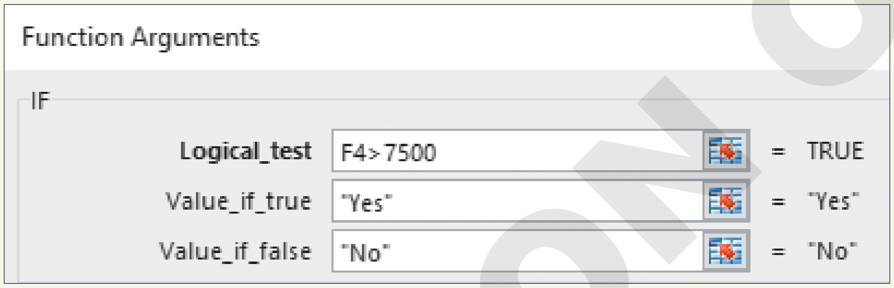
1. Save your workbook as `E5-R2-DonorList` and include the current year at the end of the filename.
2. Insert a new column, with the heading `Contact OK` in **cell C3**, to the left of the Phone # column.

   It is important to ensure you have permission before calling your donors, so you will list Yes or No for each donor.

3. Select all the blank cells below the Contact OK heading in the **range C4:C45**.
4. Create a List data validation rule that allows users to enter only the text *Yes* or *No*.

   All but two donors have given you permission to contact them, so you can fill in this information for all donors now. (Hint: It will be quicker to use the fill handle to fill in "Yes" for everyone first and then adjust the entry to "No" for the two applicable donors.)
5. Enter `Yes` in the Contact OK column for all donors. (Hint: If you use the fill handle, use the **AutoFill Options** to adjust to **Fill Without Formatting** so all cells do not have a green fill color.)
6. Scroll through the list and change the entry to `No` for Eastjet and Crystal Robinson, in **rows 14** and **23**.

   A local business is offering free memberships to donors with total annual donations greater than $7,500, so you will create a formula to determine which donors qualify for the promotion.
7. In **cell G4**, enter a formula using the **IF** function and these arguments:



8. Copy the formula down the column using **AutoFill** and adjust the option to **Fill Without Formatting**.
9. Center align the text in the **range G4:G45** you just entered.
10. Switch to **Page Break Preview** view.
11. To adjust the list to fit nicely on two pages, adjust the page break to fall between *Business* and *Private* in the Donor Type column.
12. Return to **Normal** view and set up the page layout to repeat **rows 1–3** at the top of each page.
13. Select **cell A3** and insert a table using your data in the **range A3:G45**; add the checkmark beside **My Table Has Headers**, if necessary.

    Inserting a table affects the column width, so you need to readjust the column width and page layout options.
14. Adjust the widths of **columns F–G** to `13` and use the appropriate Scale to Fit command to ensure the page width is one page.
15. Use the table tools to remove the banded rows.
16. Add a total row to the bottom of the table.
17. In the total row, insert the **Sum** function in the Total Annual Donations column, and remove the Count function from the Free Membership column. (Hint: To remove a function, click the **menu** button ▾ and choose **None**.)
18. Apply Currency number formatting, with no decimals, to the total in **cell F46**.
19. Save and close the workbook.

REINFORCE YOUR SKILLS: E5-R3

Organize a Large Worksheet and Use the IF Function

In this exercise, you will organize the information about students who have volunteered for Kids for Change using the skills learned in this chapter.

1. Open **E5-R3-StudentHours** from your **Excel Chapter 5** folder and save it as: **`E5-R3-StudentHoursRevised`**
2. Autofit **column B** and adjust the column width for **columns D–F** to: **7**
3. In **column G**, insert the heading **`Total`** and then use **AutoSum** to calculate the total hours from January to March for each student.

   Students who volunteer 60 hours or more in a quarter are invited to an appreciation dinner at the end of each quarter, so you will use an IF formula to determine who is invited.
4. In **cell H3**, enter **`Dinner Invite`** for the heading.
5. Create an IF function in **cell H4** that inserts *Yes* for students with 60 or more hours and *No* for those with fewer than 60 hours.

   Inserting text into arguments from the dialog box automatically inserts quotations around the text ("Yes"). If you type the formula directly into the cell, remember to type quotation marks around the text Yes *and* No*.*
6. Center align and bold the result in **cell H4** and then fill the formula down the column for the other students.
7. Now freeze the panes so the top three rows remain visible at all times.
8. Perform a multiple-level sort on your data so students are listed from A to Z by school and then by total from largest to smallest.
9. Create a table from your data that includes the **range A3:H26**.
10. Filter your table to show only students who have *Yes* in the Dinner Invite column.
11. Adjust the page layout orientation to **Landscape** and then insert a page break below each of the first three schools so each prints on a separate page.
12. Save the workbook and close Excel.

Apply Your Skills

APPLY YOUR SKILLS: E5-A1

Import and Sort Data

In this exercise, you will create a template to record future expenses for Universal Corporate Events. Then you will organize the company's Q3 data.

1. Start Excel, open **E5-A1-Expenses** from your **Excel Chapter 5** folder, and save it as: `E5-A1-ExpensesQ3`
2. Save the workbook as a template named: `E5-A1-ExpensesQuarterly`

   Remember that after you choose the file type, you have to navigate back to your Chapter 5 folder.
3. Delete all data in **cell A3** and the **range D5:F46** to clear the sheet for future use.
4. Save the file and then close the template.
5. Reopen the **E5-A1-ExpensesQ3** workbook you saved in step 1 to continue working on it now.
6. Freeze all rows above **row 6**.
7. Sort your data by category and then by expense, both A to Z.

   Auto Repairs *should now be the first expense listed, in row 6.*
8. Add a total in **cell G6**, and an appropriate heading in **cell G5**, that calculates the three-month total for each type of expense.

   Be sure not to include the budget amount in the total when using the SUM function.
9. Apply Accounting number formatting with no decimals to the total in **column G**.
10. Copy the formula down the column for all expenses.
11. Save the workbook.

APPLY YOUR SKILLS: E5-A2

Use Tables and the IF Function

In this exercise, you will determine if Universal Corporate Events went over budget on any of the expense items.

1. Save your workbook as: `E5-A2-ExpensesQ3`

   To identify which expenses were over budget, you will use the IF function in a formula.
2. In **cell H5**, enter the heading: `O/U`
3. In **cell H6**, enter this formula: `=IF(G6>C6,"OVER","Under")`

   This formula compares the total to the budget amount and returns the text Under *or* OVER *(in caps), depending on the result.*
4. Copy the formula down the column for all expenses.
5. Insert a table using all data in the **range A5:H46**.
6. Remove the banded rows formatting.
7. Turn on the Total Row option and then insert the Sum function at the bottom of the data for all five columns with numerical data: Budget, July, August, September, and Total.
8. Remove the Count function from the Total row in the O/U column.

9. Filter the table to display only the expenses that were over budget.
10. Apply **Gold, Accent 4, Lighter 40%** fill and bold formatting to the O/U column and then remove the filter.
11. Select the **range A1:H10** and set the print area so only the Auto expenses will print.
12. Change the page orientation to **Landscape** so the auto expense data fits on one page.
13. Save and close the workbook.

APPLY YOUR SKILLS: E5-A3

Organize a Large Worksheet and Use Data Validation

In this exercise, you will sort and analyze the data that Universal Corporate Events collected from its clients over the past two months.

1. Open **E5-A3-Feedback** from the **Excel Chapter 5** folder and save it as: **`E5-A3-FeedbackAnalysis`**
2. Create a formula in **cell H5** to calculate the average rating from each customer based on the three columns: Staff Rating, Experience Rating, and Facility Rating.
3. Copy the formula down the column for all clients and edit the number format to show only one decimal.
4. Freeze panes so **rows 1–4** are always showing.
5. Sort the data by **event** (A to Z) and then by **average rating** (Largest to Smallest).
6. Identify which clients gave an average rating above 6 by creating an IF function in **cell I5** that inserts **`YES`** for those above 6 and **`NO`** for those at or below 6.
7. Copy the formula down the column for all clients and center-align the data.

   You want to offer a coupon to the clients who were equal to or below 6.0 since they found their event unsatisfactory, and you need to enter a data validation rule to prevent the coupon amount from exceeding $200.

8. Select the range below the Coupon Offered column for all clients and create a data validation rule that only allows whole numbers between 0 and 200.
9. Input the coupon amounts by entering **`$0`** for all clients, and then edit the coupon amount for the two clients NOT above 6:
   - Stormy BBQ: **`$100`**
   - Wilson Samuels Corp.: **`$200`**
10. Go to **Page Break Preview** view and insert page breaks between *Staff Party Events* and *Team Building Events*, and between *Team Building Events* and *Training Events*.
11. Use **Print Titles** to repeat **row 4** at the top of each page.
12. Go to **Page Layout** view and insert the current date in the left footer section and the page number in the right footer section.

    Remember, you can use the Go to Footer button to navigate to the footer!

13. Return to **Normal** view.

    If you like, check the print preview to verify that your worksheet will print properly—on three pages, with the titles at the top and the footers at the bottom of each page.

14. Save the workbook and close Excel.

EXCEL

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: E5-P1

Rewarding Top Distributors with Rebates

Taylor Games relies on an extensive list of distributors to move items into various retail channels. In this exercise, you will develop a financial model to reward top distributors with rebates.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E5_P1_eStart** from the Assignments page. You must start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E5_P1_Start** from your **Excel Chapter 5** folder.
2. Starting with **cell A6**, freeze the panes.
3. In **cell B4**, create a data validation using these settings:

Setting	Value
Allow	**Decimal**
Data	**Less than or equal to**
Maximum	**0.05**
Input Message	**Show input message when cell is selected**
Input Message Title	**Maximum Rebate Percentage**
Input Message	**5%**

4. In **cell B4**, enter the number: 5%
5. In **cell F7**, use an IF function with this logic: If the March Purchases in cell E7 are greater than or equal to 2000 then display **Yes**; otherwise, display **No**.
6. Copy the formula down to the **range F8:F36**.
7. In **cell F6**, turn on filtering and then set the filter so that only rows where the Top Distributor? is **Yes** are displayed.
8. In **cell G7**, use a formula with cell references to multiply the March Purchases (**cell E7**) by the March Rebate % (**cell B4**): (March Purchases * March Rebate %). Use an absolute cell reference to the March Rebate % in **cell B4**.
9. Copy the formula down to the **range G11:G33**.
10. In the Page Setup window, set the scaling to fit to 1 page wide.
11. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 5** folder as **E5_P1_eSubmission** *and* attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 5** folder as: **E5_P1_Submission**

PROJECT GRADER: E5-P2

Classifying Cars and Displaying Their Values

If Classic Cars are maintained well, their values tend to appreciate over time. In this exercise, you will classify the cars that belong to members as either antiques or classics and display their corresponding values.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **E5_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **E5_P2_Start** from your **Excel Chapter 5** folder.
2. Starting with **cell A8**, freeze the panes.
3. In **cell F8**, use an IF function with this logic: If the car year in cell E8 is less than 1950, display **`Antique`**; otherwise, display **`Classic`**.
4. Copy the formula down to the **range F9:F55**.
5. Sort the worksheet as follows:
   - Sort first in ascending order (A to Z) on the **Status** field.
   - Then in descending order (Largest to Smallest) on the **Car Value** field.
6. Starting in **cell A7**, insert a table with the **data range $A$7:$G$55** and indicate that the table has headers.
7. Add a Total row to the table.
8. Apply a different table style. You can choose any table style as long as it's different from the current style.
9. Set **row 7** to repeat at the top of each printed page.
10. Set the footer to include the page numbering format **page 1 of ?**.
11. In the Page Setup window, set the scaling to fit to 1 page wide.
12. Save your workbook.
    - *Using eLab:* Save it to your **Excel Chapter 5** folder as **`E5_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Excel Chapter 5** folder as: **`E5_P2_Submission`**

EXCEL

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

E5-E1 That's the Way I See It

A friend of yours is teaching a course at Learn Fast College for the first time. She knows you are an Excel expert and has asked for your help setting up her workbook to track student performance. Open the **E5-E1-GradesData** file and save it as: **`E5-E1-Grades`**

Format the headings appropriately and adjust column width as needed. Create a data validation rule so the participation grades must be a whole number between 0 and 10; your friend will enter the data later. Then, use a formula to specify which students qualify for the attendance award; to qualify, their attendance must be perfect (0 days absent). Last, sort the data by the Status and Absent columns and make any other adjustments that will allow your friend to easily print the worksheet, if desired.

E5-E2 Be Your Own Boss

At the end of the year, you always add up all the hours your clients at Blue Jean Landscaping put into their own landscaping work. You track the data in the file **E5-E2-ClientHours**. Open the file and save it as **`E5-E2-ClientTotals`** and insert the current year at the end of the filename. To begin, find the total for each client and sort the data by customer type and then by total. To calculate the customers' discounts for their labor, use the IF function in a new column. Add the heading *Discount Per Hour* and create a formula so customers with more than 100 hours get a discount of $17/hour and customers with fewer than 100 hours get $15/hour. Ensure the maximum number of hours that can be entered per month is 40; create a data validation rule to allow decimal numbers between 0 and 40 and then use the Data Validation menu button and click the option to circle invalid data. Find any numbers entered that are greater than 40 and change them to 40. (Hint: You will change five numbers.) Create a table for your data so you can insert a total row at the bottom for all months. Make any other adjustments necessary so the worksheet is ready to be printed.

E5-E3 Demonstrate Proficiency

Stormy BBQ keeps an inventory of ingredients in its kitchen, complete with the current stock as well as the required minimum for each item in the **E5-E3-Inventory** file. You are organizing the information and determining which items need to be reordered. Save the file as **`E5-E3-InventoryOrders`** and begin by reviewing the data. Insert titles and apply formatting as you see fit. Then in the Order column, use a formula to determine how much of each item needs to be ordered. (Hint: Use the IF function to determine if the In Stock number is less than the Required Amt number; if it is, enter the difference between the two in the Order column.) Organize your list by sorting in an appropriate manner and then prepare the file for printing, if necessary.

POWERPOINT

1 Creating and Delivering a Presentation

You don't have to be a graphic designer to create an eye-catching presentation, as PowerPoint includes many visually appealing themes that are preformatted with fonts, colors, and supporting imagery. It's important for readability to create a visual hierarchy of text, such as headings and associated bullet points—and PowerPoint makes this easy. In this chapter, you will learn to create and display a basic PowerPoint presentation consisting of multiple slides and bulleted text.

LEARNING OBJECTIVES

- Create a new presentation
- Add text to slides
- Apply themes and templates
- Add slides
- Control the indent of bulleted text
- Navigate a slide show
- Hide and unhide slides

Project: Creating a Presentation

As an employee of iJams, an online music distribution company, you have been asked to make a presentation about the company at the JamWorks trade show. Your goal is to introduce iJams to trade show attendees and entice them with a promotional offer. You decide to use PowerPoint to develop and deliver your presentation because it is easy to learn and integrates seamlessly with other Microsoft Office applications.

Getting Started with PowerPoint

PowerPoint is an intuitive, powerful presentation graphics program that enables you to create dynamic, multimedia presentations for a variety of functions. Whether you are developing a one-on-one presentation for your manager or a sophisticated presentation for a large group, PowerPoint provides the tools to make your presentation a success. PowerPoint allows you to project your presentation in many ways. Most presentations are delivered via a computer projection display attached to a desktop or notebook computer. There are also other ways to deliver presentations. For example, you can deliver a presentation as an online broadcast over the Internet or save it as a video to be emailed or distributed on a CD or USB drive.

PowerPoint provides easy-to-use tools that let you concentrate on your presentation's content instead of focusing on the design details. Using PowerPoint's built-in document themes, you can rapidly create highly effective professional presentations.

Navigating the PowerPoint Window

The PowerPoint program window, like other Microsoft Office programs, includes the Quick Access toolbar at the top left and groups all commands on the Ribbon. From app to app, the Ribbon includes some common tabs and/or commands; apps also feature unique Ribbon tabs and commands. And, in PowerPoint, there are several icons and commands at the bottom of the window specific to the program and that deal with slide organization and layout, zooming, speaker notes, and commenting.

View the video "The PowerPoint Window."

Inserting Text

PowerPoint slides have placeholders set up for you to type in. For example, the title slide currently visible on the screen has placeholders for a title and subtitle. You click in the desired placeholder to enter text on a slide. To enter the title on a slide, you click in the title placeholder and then type the text. Do not press Enter; the placeholders are already formatted with Word Wrap. The placeholders are also already formatted with font and paragraph settings to make a cohesive presentation. As you will see shortly, it's easy to make changes to the slide formatting by applying a theme.

DEVELOP YOUR SKILLS: P1-D1

In this exercise, you will start a new presentation and enter a title and subtitle.

1. Start PowerPoint.

   Hint: Click the Start button; type PO and choose PowerPoint from the list of suggestions.

2. Click the **Blank Presentation** template on the PowerPoint Start screen.

   A new, blank presentation appears. You will develop it throughout this chapter.

3. Choose **File→Save As** and navigate to your **PowerPoint Chapter 1** folder.
4. Name the file: **`P1-D1-iJams`**
5. Click the **Save** button at the bottom of the dialog box.
6. Follow these steps to add a title and subtitle:

   A Click once on **Click to Add Title** and type: **`iJams Music Distribution`**

   B Click once on **Click to Add Subtitle** and type: **`Be the star you know you are!`**

   PowerPoint enters the titles. At this point, you have a title slide, but it looks rather plain. This is about to change.

7. Press [Ctrl]+[S] to save the presentation and leave it open; you will modify it throughout this chapter.

   Unless otherwise directed, always keep your file open at the end of an exercise.

Using Document Themes

You can use PowerPoint's built-in document themes, which provide a ready-made backdrop for your presentations, to easily format all slides in a presentation. When you use a document theme, your presentation automatically includes an attractive color scheme, consistent font style and size, and bulleted lists to synchronize with the presentation's design and style. Document themes also position placeholders on slides for titles, text, bulleted lists, graphics, and other objects. By using document themes, you can focus on content by simply filling in the blanks as you create the presentation. You access document themes from the Themes group on the Design tab.

View the video "PowerPoint Document Themes."

Choosing a Theme

More than 30 document themes are included with PowerPoint. Additionally, each theme has four variations. A theme variation uses different colors and sometimes a different background. PowerPoint automatically downloads additional themes and adds them to the Themes gallery on the Ribbon if your computer is connected to the Internet. Match the theme to the type of presentation you are giving. Keep the design appropriate to the function and the audience.

Finding Additional Themes

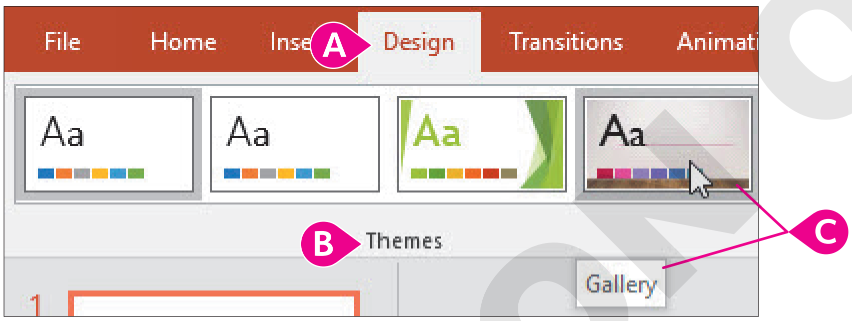
New themes are sent to Microsoft daily, so if you just can't find the right one, browse the Microsoft Office Online website for new themes. You can also search for new themes from the PowerPoint Start screen.

DEVELOP YOUR SKILLS: P1-D2

In this exercise, you will choose a document theme and apply it to the presentation.

1. Choose **File→Save As** and save your file as: **`P1-D2-iJams`**
2. Follow these steps to choose a theme for the presentation:

   Depending on your monitor resolution, you may see a different number of thumbnails in the Themes group.



   - **A** Click the **Design** tab.
   - **B** Locate the Themes command group.
   - **C** Point over (don't click) the fourth theme from the left and notice that the theme's name appears as a ToolTip.

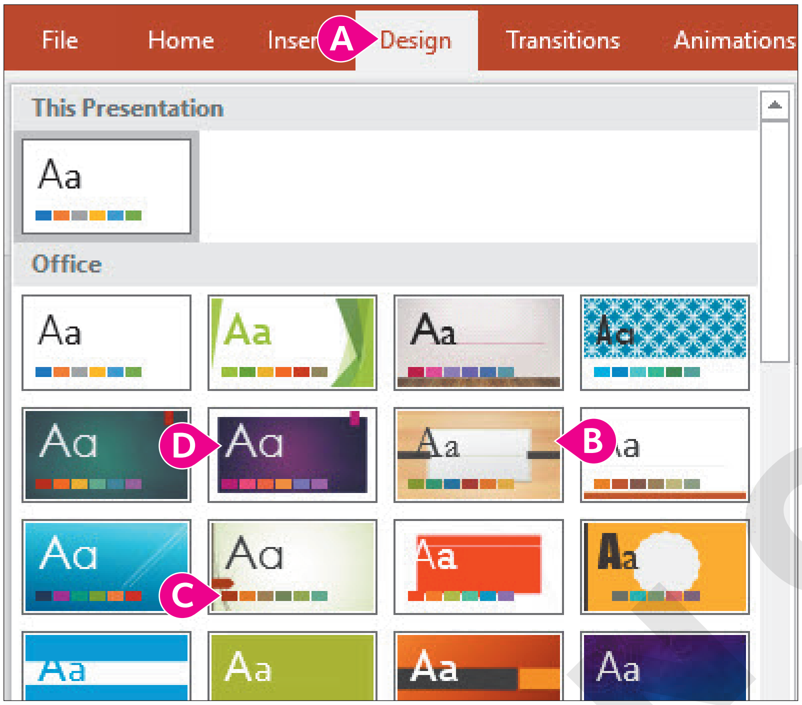
   Note that your fourth theme may not match the one in the figure.

   PowerPoint displays a Live Preview of the theme on your title slide. This gives you a good idea of the theme's overall design. Notice that the fonts and locations have changed for the title and subtitle. A different theme can radically redesign your presentation.

3. Point over (don't click) several more theme thumbnails.

   You see a Live Preview of each theme on the actual slide. The themes visible on the Ribbon are just a small portion of those available, however.

4. Follow these steps to choose a theme:



- **A** Choose **Design→Themes→More** .
- **B** Point to preview the Organic theme and notice the ToolTip. (The default themes are listed in alphabetical order, followed by additional themes in alphabetical order.)
- **C** Point (don't click) to preview the Wisp theme.
- **D** Point to the Ion Boardroom theme and click once to apply it.

PowerPoint applies the theme to your presentation.

5. Save the presentation.

Choosing Slide Sizes

By default, PowerPoint creates slides for widescreen format with a 16:9 ratio. This maximizes the use of space on the slide by taking advantage of the widescreen format on most modern computers. In fact, many of the new PowerPoint themes were designed specifically for widescreen use. You can easily switch to standard format (4:3) from the Ribbon if you need a narrower slide or have a non-widescreen computer monitor.

View the video "Changing the Slide Size/Aspect Ratio."

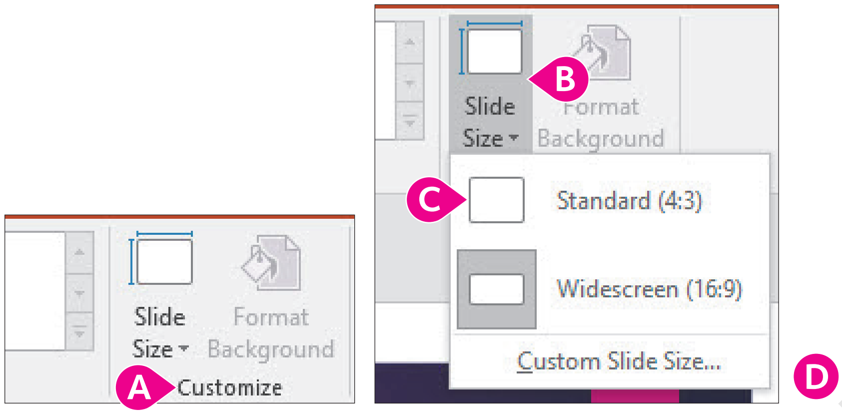
Design→Customize→Slide Size

DEVELOP YOUR SKILLS: P1-D3

In this exercise, you will experiment with slide sizes and choose a document theme variation.

1. Save your file as: **`P1-D3-iJams`**

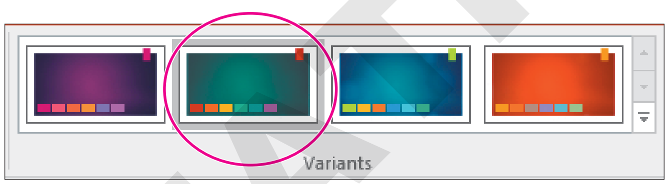
2. Display the **Design** tab and then follow these steps to change the slide size:



- A Locate the Customize command group.
- B Click the **Slide Size menu** button ▼.
- C Choose **Standard (4:3)**.
- D Click the **Ensure Fit** button.

The slide is resized, and the slide title shifts to wrap across two lines.

3. Choose **Design→Customize→Slide Size→Widescreen (16:9)** to return the slide to widescreen format.
4. Locate the **Design→Variants** group on the Ribbon.
5. Point to several theme variations to view the Live Preview on the slide.
6. Click the second variation (with the green background) to apply it.



7. Save the presentation.

Creating a Basic Presentation

There is more to creating a presentation than placing one slide after another. Choosing the appropriate slide layout, just like choosing the appropriate design, will influence how well your audience understands your message. Use the following guidelines when choosing your slide design and layout:

- **Know your audience:** Will you be speaking to accountants or artists?
- **Know your purpose:** Are you introducing a product or giving a report?
- **Know your expectations:** When the last word of this presentation has been given, how do you want your audience to respond to your facts? Are you looking for approval for a project or customers for a product?

Adding Slides

You can add slides to a presentation from the Ribbon or by right-clicking with the mouse. PowerPoint always places the new slide after the currently selected slide.

The Slides panel displays thumbnails of your presentation while you work in the Normal view. The Slide Sorter view, like the Slides panel, also displays thumbnails of your slides. This view can be useful when there are more slides than can fit in the Slides panel display.

Home→Slides→New Slide | Right-click a slide in the Slides panel→New Slide

DEVELOP YOUR SKILLS: P1-D4

In this exercise, you will add a new slide to the presentation and then enter content.

1. Save your file as: **`P1-D4-iJams`**
2. Choose **Home→Slides→New Slide**.

   PowerPoint adds a new slide to the presentation immediately after the title slide.
3. Click once in the title placeholder and then type: **`Our Services`**
4. Click once on the **Click to Add Text** placeholder and then type this list, tapping Enter after each list item except the last:
   - **`CD duplication on demand`** Enter
   - **`Jewel-case-insert printing`** Enter
   - **`Full-service online sales`** Enter
   - **`Downloadable MP3 distribution`**

   PowerPoint adds a bullet point character in front of each line.
5. Save the presentation.

Duplicating a Slide

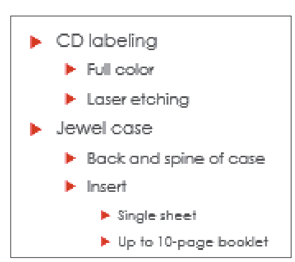
Sometimes it is more efficient to duplicate a slide and then edit it rather than to begin a new slide from scratch. Slides can be duplicated via the Slides panel.

One slide: Right-click the slide in the Slides panel→Duplicate Slide

Multiple slides: Select the slides, right-click one in the Slides panel→Duplicate Slide

Bulleted Lists

You can effortlessly create bulleted lists to outline the thrust of your presentation. The bulleted list layout is an outline of nine levels. A different indentation is used for each level. When you use a document theme, each paragraph is automatically formatted as a bulleted list. The format includes a bullet style, indentation level, font type, and font size for each bulleted paragraph.



Home→Paragraph→Bullets

POWERPOINT

List Levels

To indent a bullet is to demote it or to increase the list level. Typically, a main bullet point has one or more sub-bullets. These sub-bullets, which are smaller than the main bullet, are created by increasing the list level. When a list level is increased, the bullets are indented toward the right and the text is made smaller. Conversely, to decrease a bullet's indent by moving it more toward the left and increasing the bullet and text size is to promote it or to decrease the list level. PowerPoint supports a main bullet and up to eight levels of sub-bullets (nine levels total).

Promote: Home→Paragraph→Decrease List Level | Shift+Tab

Demote: Home→Paragraph→Increase List Level | Tab

DEVELOP YOUR SKILLS: P1-D5

In this exercise, you will create a new slide and then enter information into a multilevel bulleted list.

1. Save your file as: **`P1-D5-iJams`**
2. Choose **Home→Slides→New Slide**.

   PowerPoint creates a new slide after the current slide.
3. Click in the title placeholder and type: **`Packaging Options`**
4. Click in the text placeholder and then type **`CD labeling`** and tap Enter.

   PowerPoint formats the new blank paragraph with the same large bullet. Paragraph formats are carried to new paragraphs when you tap the Enter key.
5. Tap Tab.

   PowerPoint indents the paragraph. It also introduces a new, slightly smaller style for the level-2 paragraph.
6. Type: **`Full color`**

   PowerPoint formats the paragraph in a smaller font, too.
7. Tap Enter.

   PowerPoint maintains the same level-2 formatting for the next paragraph.
8. Type **`Laser etching`** and tap Enter.
9. While holding down Shift, tap Tab once.

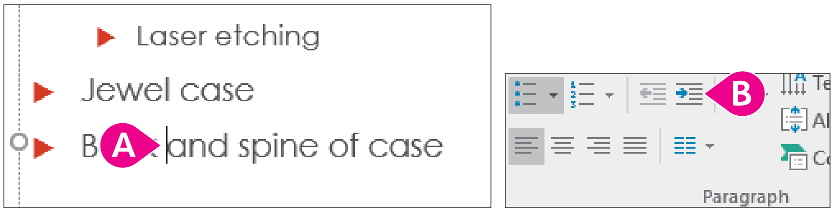
   PowerPoint promotes the new paragraph back to the level-1 style, which is the level of the first paragraph on the slide.

Manipulate Heading Levels

You can also adjust the level after you have typed a paragraph.

10. Type these lines, tapping Enter after each list item except the last:
    - **`Jewel case`** Enter
    - **`Back and spine of case`**

11. Follow these steps to indent the last bullet:



- (A) Click once anywhere within the paragraph to be indented.
- (B) Choose **Home→Paragraph→Increase List Level**.

PowerPoint indents the paragraph and changes the bullet style. Demoting a paragraph makes it subordinate to the preceding paragraph.

12. Click the **Home→Paragraph→Increase List Level** button three more times.

The bullet and font sizes change with each level increase. These formats are determined by the Ion Boardroom theme, on which the presentation is based.

13. Click **Home→Paragraph→Decrease List Level** three times until the bullet reaches the second indentation.

With each promotion, the bullet style changes.

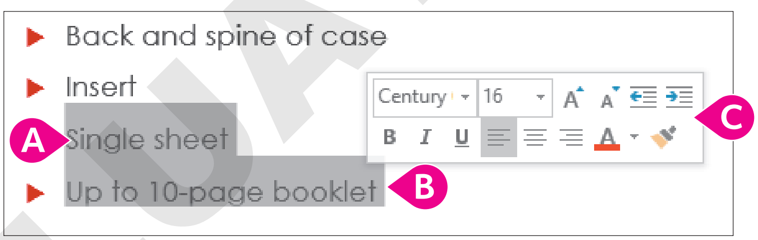
Indent Multiple Bullets

14. Click once at the end of the last paragraph and then tap [Enter].

15. Type these new lines, tapping [Enter] after each list item except the last:

- **`Insert`**[Enter]
- **`Single sheet`**[Enter]
- **`Up to 10-page booklet`**

16. Follow these steps to select the last two paragraphs for your next command:



- (A) Point at the beginning of *Single sheet*, taking care that a four-pointed arrow is not visible.
- (B) Drag down and right to select (highlight) to the end of the last paragraph; release the mouse button.
- (C) Ignore the Mini toolbar that appears. Do not click anywhere else on the slide.

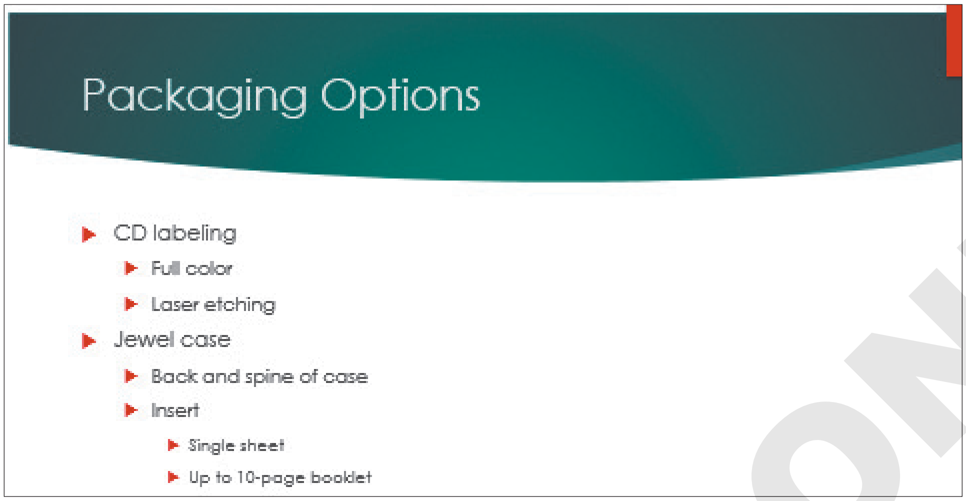
17. Choose **Home→Paragraph→Increase List Level**.

PowerPoint indents the two selected paragraphs.

POWERPOINT

18. Click anywhere outside the border to deselect the text.

Your slide should match this illustration.



19. Save the presentation.

Choosing the Slide Layout

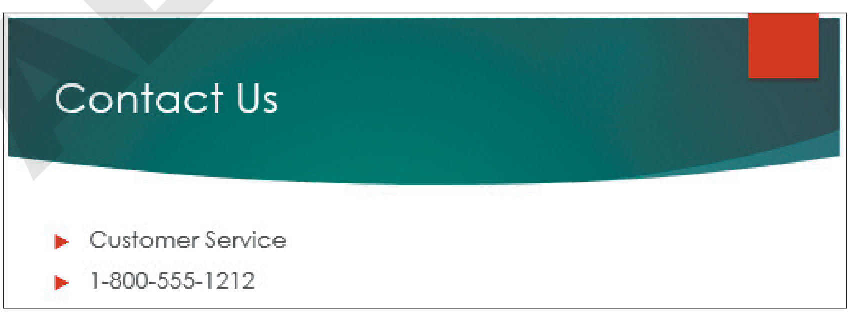
A slide layout is named for the type of data it will contain. For example, the Title layout needs only a title and subtitle. The Content layout will hold other information on the slide, so it has a title and a bulleted list for points. Likewise, the Content with Caption layout is divided into three sections: title, text to one side, and an area for clip art or additional text. The slide layout organizes the information you put into the presentation by giving it a place on the slide. When changing the slide layout, the new layout is applied to all selected slides. There are nine standard layouts, but many themes offer additional layouts.

Home→Slides→Layout | Right-click a slide in the Slides panel

Aligning Text

PowerPoint automatically aligns text to the left, right, or center depending on the theme. However, you may want to override the alignment at times to create a different look for a slide.

Home→Paragraph→click an alignment button



The default formatting for this slide is left-aligned text.

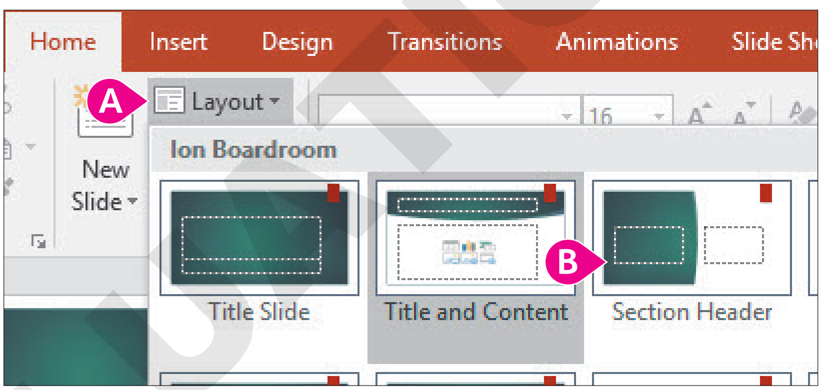
The text has been centered and bullets removed for a different look.

DEVELOP YOUR SKILLS: P1-D6

In this exercise, you will add a new slide and then change its layout.

1. Save your file as: `P1-D6-iJams`
2. If necessary, select the **Packaging Options** slide from the Slides panel on the left side of your screen.
3. Choose **Home→Slides→New Slide** .

   PowerPoint adds another slide to the end of the presentation. Like the previous two slides, this one is set up to display a bulleted list.
4. Follow these steps to choose a new layout for the slide:



Ⓐ Choose **Home→Slides→Layout menu button ▾**.

Ⓑ Choose the **Section Header** slide layout.

PowerPoint applies the new layout. Now there are two placeholders, for a title and subtext.

5. Enter this text:
- Title: **`Questions?`**
- Text: **`End of our brief presentation`**

6. Click the dashed border of the text box to select it.

7. Choose **Home→Paragraph→Center** .

8. Save the presentation.

Delivering the Slide Show

The slides are created, and the presentation is complete. The first phase of the presentation development is over. The next phase, delivering the presentation, is just beginning. Before you stand in front of an audience, familiarize yourself with the following tips.

- Start slide show: Slide Show→Start Slide Show→From Beginning *or* From Current Slide
- End slide show: Tap Esc *or* click the window until the slide show ends

Delivery Tips

It's not only what you say but how you say it that makes the difference between an engaging presentation and an unsuccessful one. Lead your audience. Help it to focus on your presentation's message, not on you as the presenter. Use the *PEER* guidelines to deliver an effective presentation.

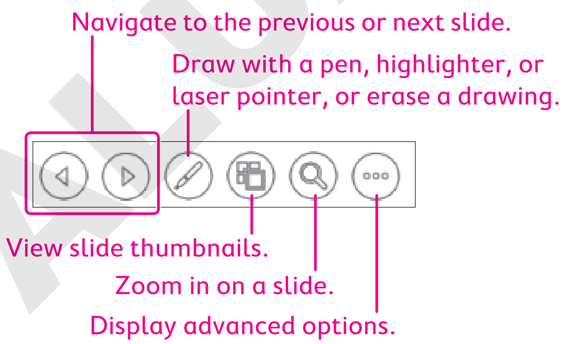
- **Pace:** Maintain a moderate pace. Speaking too fast will exhaust your audience and speaking too slowly may put them to sleep. Carry your audience with you as you talk.
- **Emphasis:** Pause for emphasis. As you present, use a brief pause to emphasize your point. This pause will give the audience time to absorb your message.
- **Eye contact:** Address your audience. Always face your audience while speaking. A common mistake is to speak while walking or facing the projection screen. Don't waste all the work you have done in the presentation by losing your audience's interest now. If you are speaking from a lectern or desk, resist the temptation to lean on it. Stand tall, make eye contact, and look directly at your audience.
- **Relax:** You are enthusiastic and want to convey that tone to the audience. However, when you speak, avoid fast movement, pacing, and rushed talking. Your audience will be drawn to your movements and miss the point. Remember that the audience is listening to you to learn; this material may be old hat to you, but it's new to them. Speak clearly, maintain a steady pace, and stay calm.

Navigating Through a Slide Show

You can use the mouse and/or simple keyboard commands to move through a slide show. These are the easiest ways to navigate from one slide to the next.

The Slide Show Toolbar

The Slide Show toolbar is your navigator during the slide show. It is hidden when a slide show starts but becomes visible when you move your mouse around or point to the lower-left area of the screen. The Slide Show toolbar can be used to navigate a slide show or to draw attention to a specific area on a slide. However, use of this toolbar is unnecessary when you present a simple slide show like this one.



View the video "The Slide Show Toolbar."

Advance one slide: Spacebar, →, Page Down, *or* Enter

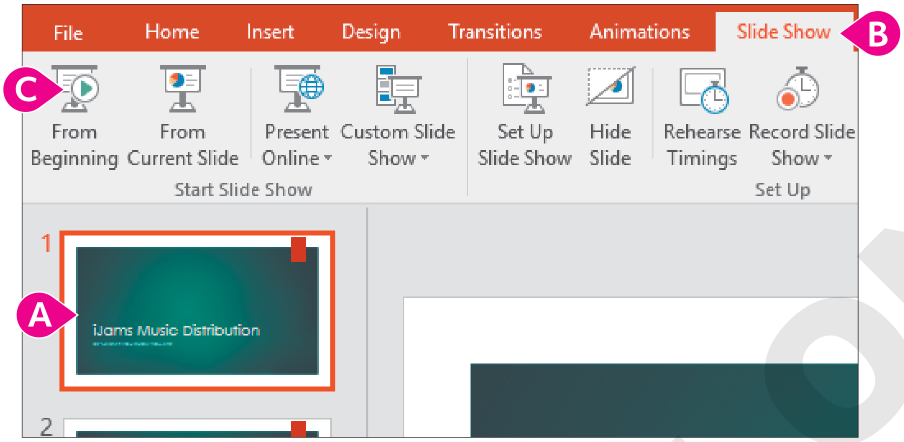
Back up one slide: Backspace, ←, *or* Page Up

POWERPOINT

DEVELOP YOUR SKILLS: P1-D7

In this exercise, you will navigate through your slide show.

1. Follow these steps to start the slide show:



   Ⓐ Click the **title slide** in the Slides panel to select it.

   Ⓑ Click the **Slide Show** tab.

   Ⓒ Choose **Start Slide Show→From Beginning**.

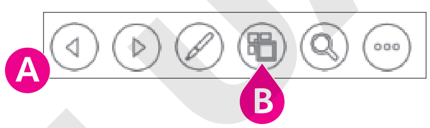
2. Move the mouse pointer around the screen for a moment.

   Notice the Slide Show toolbar near the bottom-left corner of the screen when the slides are in full-screen view.

3. Click the mouse pointer anywhere on the screen to move to the next slide.
4. Tap Page Down twice and then tap Page Up twice, using the keys near the main keyboard (not the keys on the numeric keypad).

   PowerPoint displays the next or previous slide each time you tap these keys.

5. Follow these steps to use the Slide Show toolbar:



   Ⓐ Point to the lower-left area of the slide to display the Slide Show toolbar.

   Ⓑ Click **Show All Slides** to display thumbnails of all slides.

6. Click the **Packaging Options** slide.

   As you can see, there are many ways to navigate slides in an electronic slide show.

End the Slide Show

7. Continue to click anywhere on the screen until the last slide appears (the Questions slide).
8. Click once on the **last slide**.

   The screen turns to a black background, with a small note at the top.

9. Click anywhere on the black screen to exit the slide show and return to the main PowerPoint window.

   Feel free to practice running your slide show again.

Hide and Unhide Slides

Sometimes, a presentation may contain slides that you don't want to show. For example, you might have a slide with information that needs to be updated but you didn't have time to complete the update before presenting. Rather than deleting the slide and then recreating it later, you can hide the slide so it doesn't display during the presentation. You can then update the slide at your leisure and make it visible for presentations later. Hidden slides are still visible in the Slides panel.

DEVELOP YOUR SKILLS: P1-D8

In this exercise, you will hide and unhide a slide.

1. Display the **Packaging Options** slide.
2. Choose **Slide Show→Set Up→Hide Slide**.

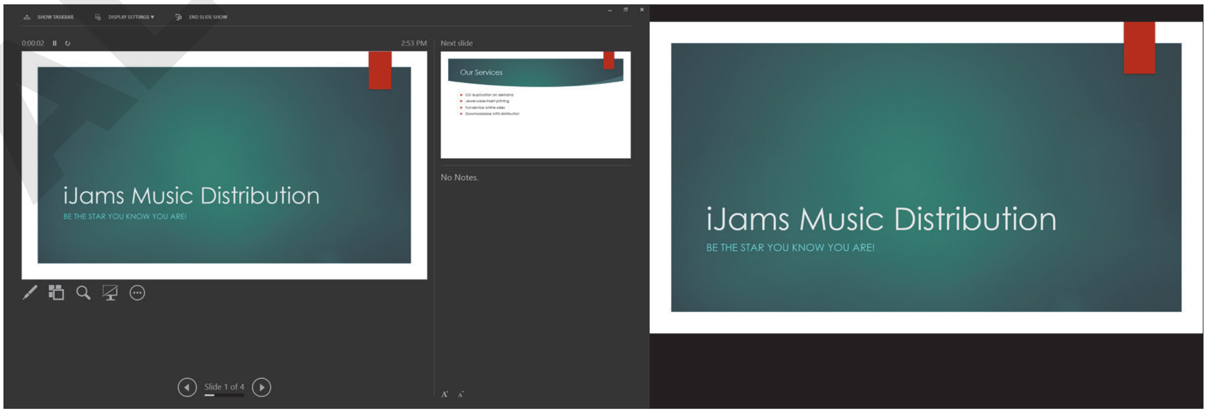
   The Hide Slide button in the Ribbon now appears selected and the slide thumbnail in the Slides panel on the left side of the PowerPoint window is grayed out, indicating that the slide will be hidden during a slide show.
3. Choose **Slide Show→Start Slide Show→From Beginning**.
4. Navigate through the slide show until it ends and you are returned to the main PowerPoint window.

   The hidden slide, Packaging Options, does not display during the slide show.
5. Display the **Packaging Options** slide.
6. Choose **Slide Show→Set Up→Hide Slide**.

   The slide is unhidden.
7. Save the presentation.
8. Choose **File→Close** to close the presentation.

Presenter View

If you have multiple computer monitors, you can use Presenter View to help you deliver a presentation with more confidence. With Presenter View, one screen shows the slide show as the audience sees it while the other screen, which is visible to the presenter only, displays slide notes, a preview of the next slide, and slide show controls. Presenter View works automatically if you are using multiple monitors.



Presenter View on left and audience view on right

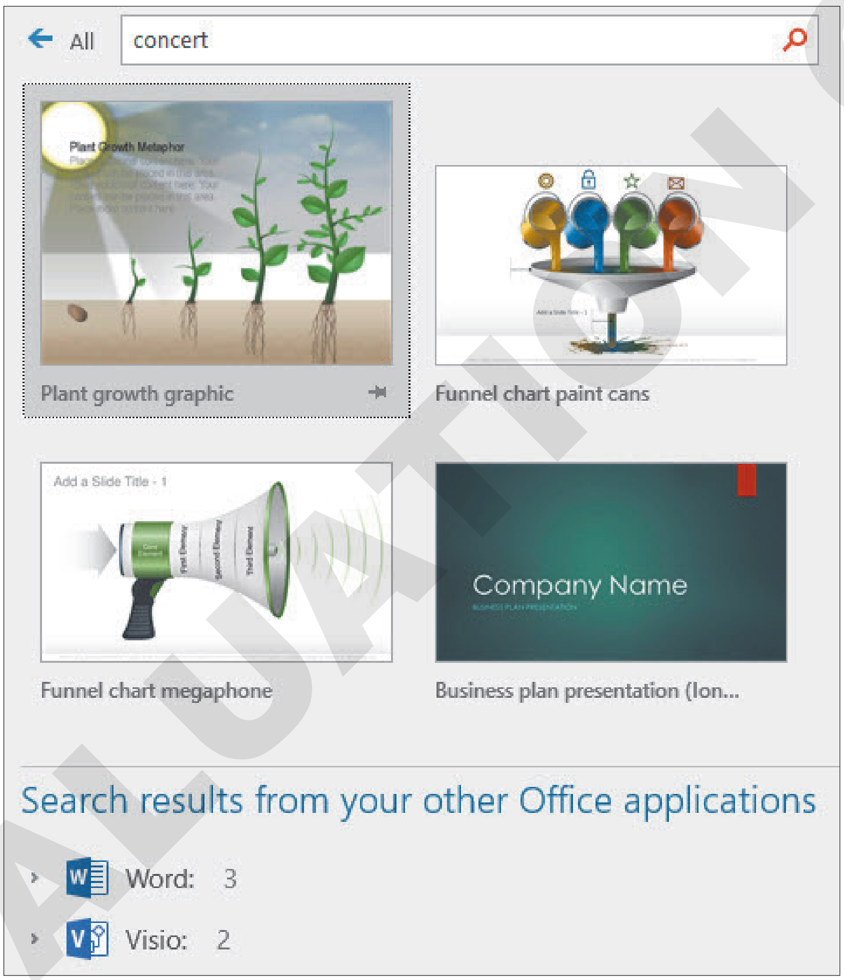
Slide Show→Monitors→Use Presenter View

Creating a Presentation from a Template

A template is similar to a theme but goes one step further in that it includes starter slides and content in addition to a design theme. Microsoft offers many free templates that can be downloaded directly from within PowerPoint. These templates are a great way to jump-start your presentation design and slide content.

Searching for Templates

While you can search for templates directly from within PowerPoint, the results are not limited to PowerPoint. The search feature locates templates for any Office app, including Word, Excel, and other apps. If the results display as slide thumbnails, then the template will work in PowerPoint. It will be obvious if the template is for a different app, as the thumbnails will be collapsed under the app name.



Search results display as PowerPoint slide thumbnails or are collapsed under their app names.

Downloading and Applying a Template

When you find a template you like via the search, you can download it directly from the search results window. When the download is complete, a new presentation is automatically created with the template's design theme and starter slides.

DEVELOP YOUR SKILLS: P1-D9

In this exercise, you will search for and apply a template.

1. Choose **File→New**.
2. Under the search box, type **`Biography`** and tap Enter.

   You can also click one of the suggested search links.
3. Click the **Biography Presentation** template if it is available; if it's not, choose any other template.

   A message box displays a description of the template.
4. Click the **Create** button in the message box.

   A new eight-slide presentation based on the template is created. The slides have placeholder content ready for you to edit. Additionally, the Help panel opens and offers tips for working with this template.
5. Close the Help panel.

   Once you become more comfortable using PowerPoint, the tips in the Help panel will be more useful.
6. Triple-click the slide title, **Presentation Title**, to select it and then type: **`Our Fearless Leader`**
7. Display each slide and notice the starter content is editable and ready for you to customize.
8. Experiment with each slide and edit the starter content.
9. Save the presentation as **`P1-D9-Template`** and then exit PowerPoint.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

POWERPOINT

Reinforce Your Skills

REINFORCE YOUR SKILLS: P1-R1

Create a Basic Presentation

In this exercise, you will begin to create a presentation for the Kids for Change organization—a community-based organization that helps socially aware youth plan and organize events that benefit their community. The presentation will be used to recruit new members and will be shown in high schools across the country.

1. Start PowerPoint and create a new, blank presentation.
2. Save the presentation to your file storage location as: **P1-R1-Kids**
3. Choose **Design→Themes** and apply the **Facet** design theme.
4. Choose **Design→Variants** and apply the second variant (blue).
5. Click in the title placeholder and type: **Kids for Change**
6. Click in the subtitle placeholder and type: **I can make a difference**
7. Save the presentation.

REINFORCE YOUR SKILLS: P1-R2

Add Slides and Deliver a Presentation

In this exercise, you will complete the Kids for Change recruitment presentation by adding slides and text. Then you will deliver the presentation.

1. With the **P1-R1-Kids** presentation still open, choose **File→Save As** and save it as: **P1-R2-Kids**
2. Choose **Home→Slides→New Slide**.
3. Choose **Home→Slides→Layout menu button ▾→Two Content**.
4. Click in the title placeholder and type: **Events**
5. Add this text to the bulleted list on the left:
   - **iRecycling Day**
   - **Toy Collection**
   - **Shave and a Haircut**
   - **Diversity Festival**
6. Add this text to the bulleted list on the right:
   - **Build-a-House**
   - **Bully No More**
   - **Adopt a Street**
   - **Tutoring**

7. Save your presentation.

   After completing a significant portion of work, it's a good idea to save what you've done before continuing.

8. Add a new slide with the title **`Program Benefits`** and notice it is already using the Two Content layout.

9. Add this text and indentation to the bulleted list on the left:

   - Personal
     - College application
     - Leadership skills
     - Sense of accomplishment

10. Add this text and indentation to the bulleted list on the right:

    - Community
      - Crime reduction
      - Increased literacy
      - Improved health

11. Add a new slide with the title: **`Requirements`**

12. Change the slide layout to: **Title and Content**

13. Type these bullet points in the text box:

    - **`You need`**
    - **`Positive attitude`**
    - **`Strong work ethic`**
    - **`Time commitment`**
    - **`One monthly event`**
    - **`One annual meeting`**

14. Select the **Positive attitude** and **Strong work ethic** paragraphs and choose **Home→Paragraph→Increase List Level**.

15. Select the **One monthly event** and **One annual meeting** paragraphs and choose **Home→Paragraph→Increase List Level**.

16. Add a new slide with the title **`Regional Contact`** and notice that it is already using the Title and Content layout.

17. Type this in the text box:

    - **`Angelica Escobedo`**
    - **`(800) 555-0101`**

18. Click the dashed border of the text box to select it.

19. Choose **Home→Paragraph→Bullets** to remove the bullets from the text.

20. Choose **Home→Paragraph→Center** to center both paragraphs on the slide.

21. Save the presentation.

Deliver the Slide Show

22. Choose **Slide Show→Start Slide Show→From Beginning**.

    The slide show starts from the first slide regardless of which slide is currently selected.

23. Navigate through the presentation by clicking the screen until the presentation is ended.
24. Click once more to return to the PowerPoint program window.
25. Choose **Slide Show→Start Slide Show→From Beginning** to restart the slide show from the beginning.
26. Move your mouse to the bottom-left corner of the screen to display the Slide Show toolbar.
27. Click the **Show All Slides** button on the toolbar to display all the slide thumbnails.
28. Click the **Program Benefits** slide to go directly to it.
29. Tap Esc to end the slide show.

Hide a Slide

The regional contact will be out of town when the presentation is given, so you will hide the slide that displays that contact information.

30. Select the **Regional Contact** slide from the Slides panel.
31. Choose **Slide Show→Set Up→Hide Slide.**
32. Run the slide show and ensure the Regional Contact slide does not display.
33. Save the presentation and then exit PowerPoint.

REINFORCE YOUR SKILLS: P1-R3

Create an Events Promotion Presentation

In this exercise, you will create and deliver a new Kids for Change presentation to advertise upcoming events.

1. Start PowerPoint and create a new, blank presentation.
2. Save the presentation to your file storage location as: **`P1-R3-Kids`**
3. Choose **Design→Themes** and apply the **Slice** theme.
4. Choose **Design→Variants** and apply the fourth theme variation (orange).
5. Add **`Kids for Change`** for the title and **`June Event`** for the subtitle.
6. Add a new slide with the title: **`Shave and a Haircut`**
7. Add this bulleted text:
   - **`Free haircuts`**
   - **`Free shaves`**
   - **`Free mustache and beard trimming`**
8. Save your presentation.
9. Add a new slide with the title: **`Participating Locations`**
10. Choose **Home→Slides→Layout menu button ▾→Two Content**.

11. Type the following, with indentations, in the left text box:

- Barbers
  - Sam the Barber
  - Hats Off
  - Clean Cuts

12. Type the following, with indentations, in the right text box:

- Shelters
  - Shelter on Main
  - Helping Hand
  - Safe Night

13. Add a new slide with the title: `Dates and Availability`
14. Choose **Home→Slides→Layout menu button ▾→Title and Content**.
15. Type these bullet points in the text box:
    - `All Locations`
    - `Every Saturday in June`
    - `8:00am – 8:00pm`
    - `Availability`
    - `Free service to help our community's homeless`
16. Select the two paragraphs under *All Locations* and increase their list level.
17. Select the last paragraph and increase its list level.
18. Add a final slide with the title: `Sponsored By`
19. Click the dashed border to select the entire Title text box.
20. Choose **Home→Paragraph→Center** to center the text on the slide.
21. Type `Kids for Change` in the text box.
22. Click the dashed border to select the entire text box.
23. Choose **Home→Paragraph→Bullets** to remove the bullets from the text.
24. Choose **Home→Paragraph→Center** to center the text on the slide.
25. Save your presentation.

Deliver the Slide Show

26. Choose **Slide Show→Start Slide Show→From Beginning**.
27. Click through the presentation until it ends and returns to the main PowerPoint window.
28. Start the slide show from the beginning again.
29. Click the **Show All Slides** button on the toolbar to display all the slide thumbnails and navigate directly to the **Participating Locations** slide.
30. Tap Esc to end the slide show and then exit PowerPoint.

Apply Your Skills

APPLY YOUR SKILLS: P1-A1

Begin a Presentation

In this exercise, you will begin to create a new promotional presentation for Universal Corporate Events, a meeting and event planning service that handles event planning for businesses.

1. Start PowerPoint, create a new, blank presentation, and save it to your file storage location as: **P1-A1-Events**
2. Apply the **Ion** design theme.
3. Apply the fourth variation (reddish orange).
4. Add this text to the title slide:
   - Title: **Universal Corporate Events**
   - Subtitle: **Events made easy**
5. Save your presentation.

APPLY YOUR SKILLS: P1-A2

Add Slides and Deliver a Presentation

In this exercise, you will complete the Universal Corporate Events presentation and deliver a slide show.

1. With the **P1-A1-Events** presentation from the previous exercise still open, save it as: **P1-A2-Events**
2. Add a second slide with this text:

Title	**Event Types**
Bulleted paragraphs	**Celebrations**
	Team building
	Trade shows
	Ceremonies

3. Add a third slide with this text:

Title	**Services**
Bulleted paragraphs	**Venue scouting**
	Catering
	Invitations
	Stage and sound equipment

4. Add a fourth slide with the **Two Content** layout and this text:

Title	**Benefits**
Left bulleted paragraphs	**Our jobs** **Deal with paperwork** **Guarantee safety** **Scheduling**
Right bulleted paragraphs	**Your jobs** **Relax** **Enjoy your event**

5. Select all but the first bullet in the left text box and increase the list level.
6. Select all but the first bullet in the right text box and increase the list level.
7. Add a final slide with the **Section Header** layout and this text:
   - Title: **Universal Corporate Events**
   - Text: **Events made easy**
8. Center both the title and the paragraph on the slide.
9. Save the presentation.

Deliver the Slide Show

10. Start the slide show from the beginning.
11. Advance to the second slide.
12. Use the Slide Show toolbar to display all the slides and then jump to the **Benefits** slide.
13. Continue navigating the slides until the slide show ends and you are returned to the main PowerPoint window.
14. Exit PowerPoint.

APPLY YOUR SKILLS: P1-A3

Create a Services Presentation

In this exercise, you will create a new presentation for Universal Corporate Events that outlines each of its services.

1. Start PowerPoint, create a new, blank presentation, and save it to your file storage location as: **P1-A3-Events**
2. Apply the **Retrospect** theme.
3. Apply the third variation.
4. Enter **Universal Corporate Events** as the title and **Services** as the subtitle.
5. Add a second slide with this text:

Title	**Venue Scouting**
Bulleted paragraphs	**Locate three potential venues** **Provide digital tour** **Provide transportation for up to four**

6. Add a third slide with this text:

Title	**Catering**
Bulleted paragraphs	**Vegetarian and vegan options** **Kosher options** **Never frozen**

7. Add a fourth slide with the **Two Content** layout and this text:

Title	**Invitations**
Left bulleted paragraphs	**Creative** **Graphic design** **Matching envelopes**
Right bulleted paragraphs	**Business** **Create mailing labels** **Mail first class**

8. Select all but the first bullet in the left text box and increase the list level.
9. Select all but the first bullet in the right text box and increase the list level.
10. Add a fifth slide to the presentation with the **Title and Content** layout and this text:

Title	**Stage and Sound Equipment**
Bulleted paragraphs	**Speaker podium and PA** **1,200-watt sound system for bands** **Portable dance floor**

11. Add a final slide to the presentation with the **Section Header** layout and this text:
    - Title: **Thank you!**
    - Text: **Hope to see you soon**
12. Center both the title and text on the slide.
13. Save the presentation.

Deliver the Slide Show

14. Hide the **Invitations** slide.
15. Save the presentation.
16. Start the slide show from the beginning.
17. Use the **Slide Show** toolbar to display all visible slides.
18. Continue navigating the slides until the slide show ends and you are returned to the main PowerPoint window.
19. Exit PowerPoint.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: P1-P1

Create a Presentation for the New Products and Stores Webinar

The marketing director for Taylor Games wants you to take the lead on creating a vibrant presentation. In this exercise, you will create a PowerPoint presentation for the New Products and Stores *webinar.*

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P1_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P1_P1_Start** from your **PowerPoint Chapter 1** folder.
2. Hide **slide 1,** *Webinar Notes*.
3. Change the layout of **slide 2** to **Title Slide**.
4. On **slide 2**, change the slide size to **Standard (4:3)** and maximize the fit.
5. Add the following text to **slide 2**:

Title	**New at Taylor Games**
Subtitle	**Products, Stores, and More!**

6. Insert a new **Title and Content** slide after **slide 2**.
7. Enter this text as the new slide's title: **Webinar Agenda**
8. Apply **Center** alignment to the new slide's title.
9. Add the following bulleted text to the new slide:
   - **Introductions**
   - **New Products**
   - **Books**
   - **Dice**
   - **Games**
   - **New Stores**
   - **Portland, OR**
   - **Spokane, WA**
10. Increase the list level (the indent) by one for the following bullets: **Books**; **Dice**; **Games**; **Portland, OR**; and **Spokane, WA**.
11. Apply the **Facet** theme to the presentation.
12. Save your presentation.
    - *Using eLab:* Save it to your **PowerPoint Chapter 1** folder as **P1_P1_eSubmission** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **PowerPoint Chapter 1** folder as: **P1_P1_Submission**

POWERPOINT

PROJECT GRADER: P1-P2

Classic Cars Club Guide for Potential Advertisers

The Classic Cars Club is gearing up for their annual car show and has requested your help in reaching out to advertisers. In this exercise, you will put together a PowerPoint presentation to show these potential advertisers.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P1_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P1_P2_Start** from your **PowerPoint Chapter 1** folder.
2. On **slide 1**, change the slide size to **Standard (4:3)** and maximize the fit.
3. Add the following text to **slide 1**:

Title	**`Classic Car Show`**
Subtitle	**`A Guide for Potential Advertisers`**

4. Insert a new **Title and Content** slide after slide 1.
5. Enter this text as the new slide's title: **`What Advertisers Should Know`**
6. Apply **Center** alignment to the new slide's title.
7. Add the following bulleted text to the new slide:
   - **`Car Show Dates`**
   - **`Locations and Venues`**
   - **`Advertising Opportunities`**
   - **`Banners`**
   - **`Booths`**
   - **`Show Bags`**
   - **`Deadlines`**
8. Increase the list level of the **Banners**, **Booths**, and **Show Bags** bullets by one.
9. Hide **slide 3**.
10. Apply the **Facet** theme to the presentation.
11. Save your presentation.
    - *Using eLab:* Save it to your **PowerPoint Chapter 1** folder as **`P1_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **PowerPoint Chapter 1** folder as: **`P1_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

P1-E1 That's the Way I See It

In this exercise, you will create a presentation for a charity you feel strongly about to educate others about it. First, decide on a known charity you support or agree with. If you don't know of any, think of a few ideas for charities (such as saving animals or the environment, ensuring human rights, curing disease, etc.) and then search the Internet for a reputable charity that deals with one of those topics.

Create a new, blank presentation named **`P1-E1-Charity`** and apply the design theme and variation of your choice. Use the charity name as the slide title and type a short, descriptive phrase for the subtitle. Add a Title and Content slide that lists at least four actions the charity takes toward bettering its cause. Add a Two Content slide: On the left, list a few facts about the charity and, on the right, list ways to donate to the charity. Create a final slide with the Section Header layout that duplicates the content on the title slide. View the presentation as a slide show and make a mental note of anything you want to change. When the slide show ends, make your changes and then save your presentation.

P1-E2 Be Your Own Boss

Your landscaping business, Blue Jean Landscaping, saves its customers money by having them share in the physical labor. You are creating multiple slides with varying layouts and bulleted text to advertise your unique business to potential investors. Create a new, blank presentation named **`P1-E2-BlueJean`** and apply the desired design theme and variation. Use the company name as the slide title and create a catchy phrase for the subtitle. Add a Title and Content slide that lists four services your company provides. Add a Two Content slide that lists the mutual benefits to the company and the customer: The left column uses *Us* as the first bullet, and the right column uses *You* as the first bullet. Then list at least three benefits for the company (left) and at least three for the customer (right). Increase the list level of all bullets except the first in each column.

Create a final slide with the Section Header layout that duplicates the content on the title slide. Run the slide show. Use the Slide Show toolbar to navigate the slide show and experiment with the other buttons on the toolbar.

P1-E3 Demonstrate Proficiency

Stormy BBQ, a restaurant featuring fresh, locally grown vegetables and local, farm-raised pork/beef, is considering expanding to new locations. Create a presentation from a template (you might search using key terms *restaurant* or *food*) named **`P1-E3-Stormy`** to show at a local town hall meeting to convince residents and community leaders that Stormy BBQ would be a great fit for their community. Create at least five slides, including the title slide, with a different layout for each slide. At least one slide should include bullet points with varying list levels.

POWERPOINT

2 Designing and Printing the Presentation

Establishing a consistent style throughout a presentation, along with formatting and organizing text, adds professional credibility and makes your presentation easier for an audience to follow. Auto-creating slides from a Microsoft Word outline and organizing slides into sections makes the presentation easier for you to create and manage. In this chapter, you will build on the fundamental design of the iJams presentation and examine printing options, allowing you to provide your audience with take-home material.

LEARNING OBJECTIVES

- Use Outline View to create, move, and delete slides and edit text
- Create a presentation from a Microsoft Word outline
- Format and align text and adjust character spacing and line spacing
- Use Slide Sorter view and Sections
- Print a presentation
- Add slide headers and footers

Project: Designing a Presentation

Now that the initial slides of the iJams presentation are complete, you need to make sure that the style is consistent throughout the presentation. A consistent style appears more organized, is easier for an audience to follow, and adds professional credibility. You must also ensure that the slides are in a logical sequence so the presentation is clear.

Working with Slides

As your presentation progresses and you insert additional slides, you may want to change the slide layout or order. For example, some slides may require two columns of bulleted text while others require only one. PowerPoint makes it easy to change the slide order by using Slide Sorter view.

Copying Text and Objects

You can move and copy text and objects by using drag and drop or the Cut, Copy, and Paste commands. It is usually most efficient to use drag and drop if you are moving or copying text or objects within a slide. The drag-and-drop method is also effective for rearranging slides. Cut, Copy, and Paste are most efficient when moving or copying to a location not visible on the current screen.

DEVELOP YOUR SKILLS: P2-D1

In this exercise, you will add a new slide to a presentation, enter a bulleted list, and change the slide layout. You can always change a slide's layout after it has been created.

1. Start PowerPoint, open **P2-D1-Design** from the **PowerPoint Chapter 2** folder, and save it as: **`P2-D1-DesignRevised`**

   It's a good idea to append Revised *or something similar when editing and saving an existing presentation (or any file), as it leaves the original untouched in case you need to go back and start over.*

2. Select the **Our Services** slide from the Slides panel on the left side of your screen.

   The Our Services slide appears. New slides are inserted after the selected slide.

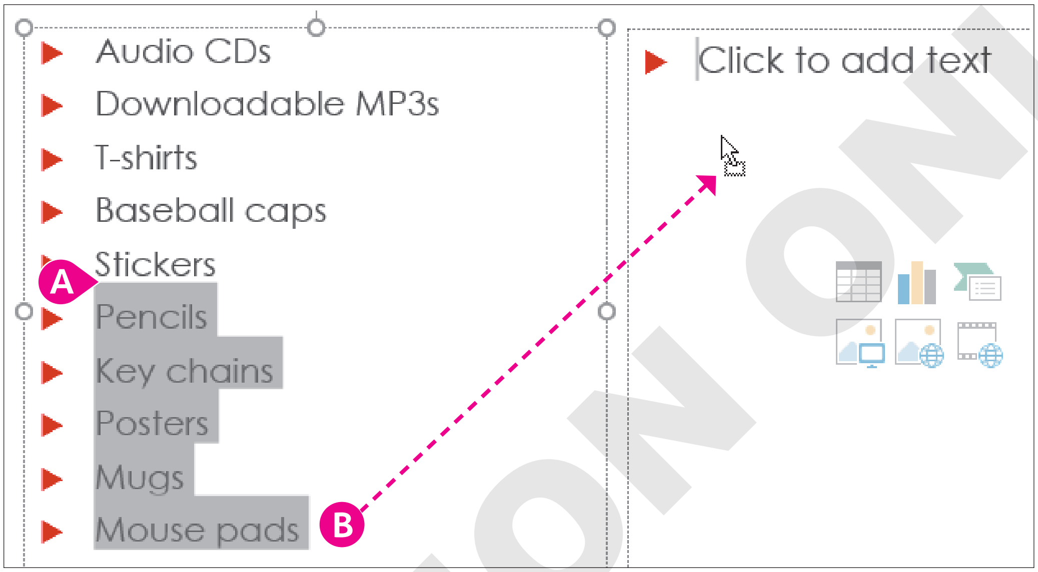
3. Choose **Home→Slides→New Slide**.
4. Click in the title placeholder and type: **`Products and Promotional Items`**
5. Click in the bulleted list placeholder and type this list:
   - **`Audio CDs`**
   - **`Downloadable MP3s`**
   - **`T-shirts`**
   - **`Baseball caps`**
   - **`Stickers`**
   - **`Pencils`**
   - **`Key chains`**
   - **`Posters`**
   - **`Mugs`**
   - **`Mouse pads`**

When you begin typing Mugs, *PowerPoint reformats the bullets with a smaller font size so they all fit in the box. As you type the last bullet point, the font gets even smaller. A long list of bullets can be overwhelming, so strive for no more than six bullets. If there is more information, consider breaking the list into two columns. You will use this technique next by choosing a different layout for the slide.*

6. Choose **Home→Slides→Layout menu button ▾→Two Content**.

PowerPoint applies the Two Content layout to the current slide.

7. Follow these steps to move the last five bullets to the second box:



A Select the last five bulleted paragraphs.

B Drag the selected paragraphs to the right column.

Bulleted paragraphs must be manually moved to the new column.

8. Save the changes to your presentation.

Working with Outlines

Although you have been working primarily in the slide to add and format text, the Outline panel is an alternative way to add, remove, and move text. The Outline panel is a useful interface to organize and structure your presentation.

The Outline Panel

The Outline panel helps you edit and reorganize slides. It's available on the left side of the screen in Outline View. You can type directly in the Outline panel to add or edit text on a slide. You can also select text from the Outline panel and format it with the standard Ribbon formatting commands. Any changes made in the Outline panel are immediately reflected in the actual slide.

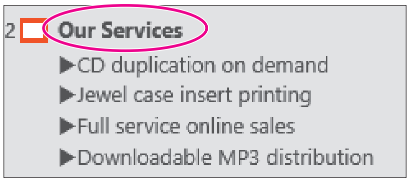
View the video "Using the Outline Panel."

Add a new slide: Place the mouse pointer in the last group of bulleted paragraphs on a slide and press Ctrl+Enter

DEVELOP YOUR SKILLS: P2-D2

In this exercise, you will work in the Outline panel as you add text to slides in your presentation.

1. Save your file as: `P2-D2-DesignRevised`
2. Choose **View→Presentation Views→Outline View**.
3. In the Outline panel, click anywhere in the **Our Services** slide title to select it.



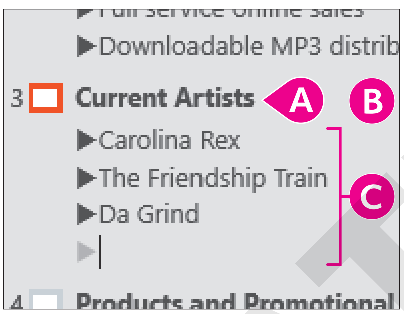
4. Press Ctrl+Enter.

   The insertion point moves to the first bulleted paragraph in the slide.

5. Press Ctrl+Enter again.

   PowerPoint creates a new slide below the selected slide.

6. Follow these steps to add text to the new slide while in the Outline panel:



   Ⓐ Type `Current Artists` here. Notice that the text also appears in the main portion of your window.

   Ⓑ Press Ctrl+Enter to move to the first bulleted paragraph.

   Ⓒ Type these bulleted paragraphs, tapping Enter (*not* Ctrl+Enter) after each, including the last bulleted line. You should see a blank fourth bullet in the Outline panel.

   PowerPoint adds a new slide to the presentation whenever the insertion point is positioned within the last paragraph on a slide and the Ctrl+Enter keystroke combination is issued. At this point, you should have a new, bulleted paragraph visible in the outline below the Da Grind *paragraph.*

7. Ensure that the insertion point is on the blank bulleted paragraph in the outline.
8. Choose **Home→Paragraph→Decrease List Level** .

   PowerPoint promotes the bulleted paragraph to create a new slide.

9. Type `New Artist Specials` and tap Enter.

   Tapping Enter created a new slide. You must use Ctrl+Enter to add a bulleted paragraph after a slide's title. You will fix this by demoting the new slide in the next step.

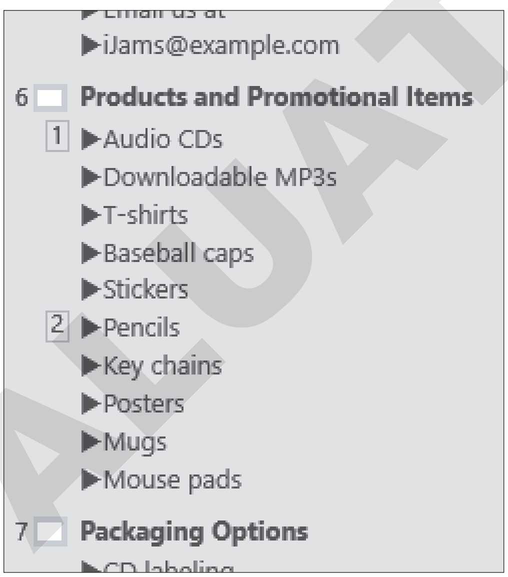
10. Choose **Home→Paragraph→Increase List Level** .

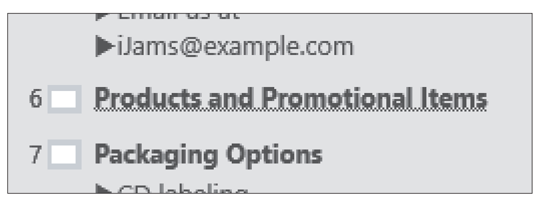
    The new slide created when you tapped Enter in step 9 has been converted to a bullet under the New Artist Specials title.

11. Complete the new slide in the outline as shown, tapping Enter after each paragraph (including the last one):
    - `25% discount on CD duplication` Enter
    - `Five free T-shirts` Enter
    - `10% discount on promotional items` Enter
    - `Valid until July 20` Enter
12. Choose **Home→Paragraph→Decrease List Level** to promote the new paragraph that follows the *Valid until July 20* paragraph and convert it into a new slide.
13. Type `Contact Us` and then press Ctrl+Enter to create a bullet below the title.
14. Taking care not to tap Enter after the last bullet in this slide, complete the new slide as shown:
    - `Call` Enter
    - `(800) 555-0101` Enter
    - `Or` Enter
    - `Email us at` Enter
    - `iJams@example.com`
15. Save your presentation.

Collapsing and Expanding Slides

As the Outline panel grows, it can be difficult to manage your slides when all the bulleted text is showing. PowerPoint lets you collapse slides so only the title is visible. This makes it easier to manage your slides because more slides will be visible in the Outline panel. Collapsing slides also allows you to see and manage more slides at once than when working in Normal view. Collapsed slides still display normally during a slide show.



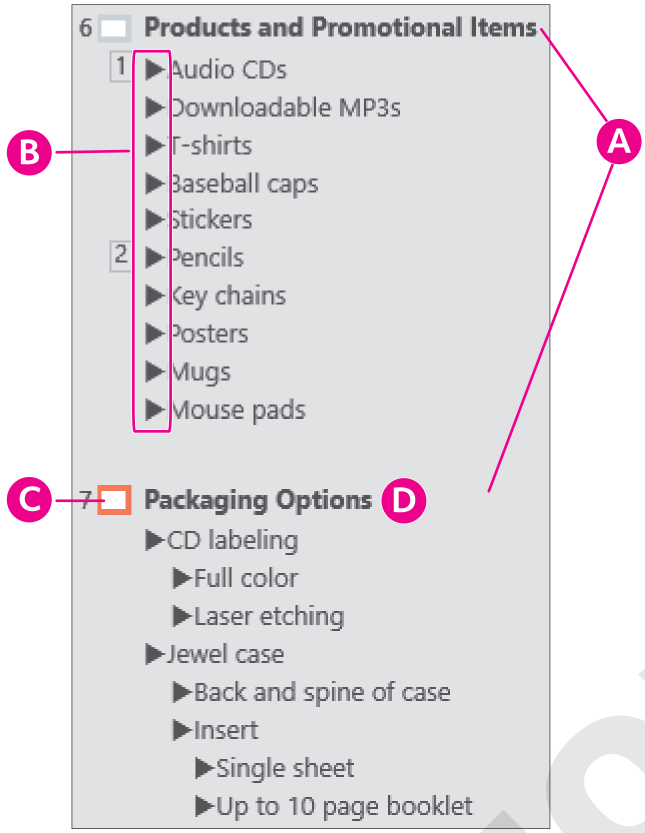


DEVELOP YOUR SKILLS: P2-D3

In this exercise, you will use the context menu from the Outline panel to collapse, expand, and move slides.

1. Save your file as: `P2-D3-DesignRevised`

2. Follow these steps to explore the Outline panel:



- **A** Scroll until the Products and Promotional Items and Packaging Options slides are visible.

  Each slide is represented by an icon. Slides with multiple bulleted lists use numbers for identification.
- **B** Click any bullet icon in the **Products and Promotional Items** slide to select the bulleted text.
- **C** Click this slide icon to select all text on the slide.
- **D** Click to the right of the *Packaging Options* title text (outside the highlighted area) to deselect the slide.

3. Double-click the **Products and Promotional Items** slide icon.

   The bulleted paragraphs beneath the title are collapsed and hidden.
4. Double-click the **Products and Promotional Items** slide icon again.

   The bulleted paragraphs beneath the title are expanded and are once again visible.
5. Right-click anywhere in the **Outline** panel and choose **Collapse→Collapse All**.

   All bulleted paragraphs are collapsed and hidden. Only the slide titles remain visible.
6. Right-click anywhere in the **Outline** panel and choose **Expand→Expand All**.

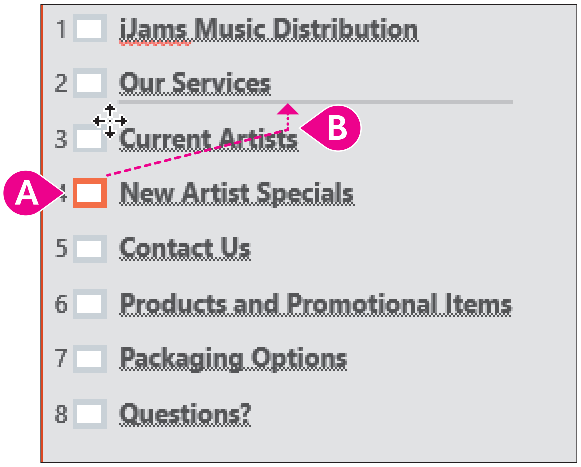
   All bulleted paragraphs are expanded and are once again visible.

Move a Slide

The easiest way to move a slide in an outline is to first collapse all slides. Then you can click the desired slide title and drag it to its new position.

7. Right-click anywhere in the **Outline** panel and choose **Collapse→Collapse All**.
8. If necessary, scroll up until all slide icons and titles are visible in the Outline panel.

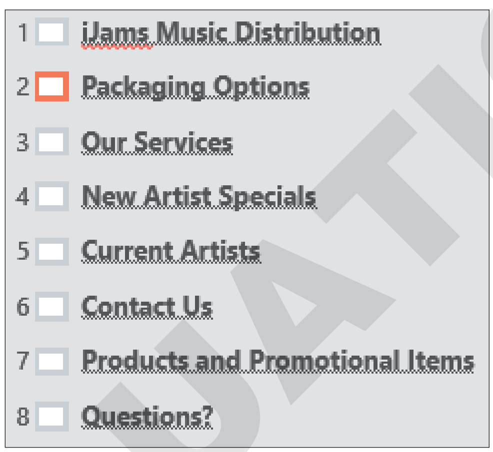
9. Follow these steps to move a slide:



- **A** Click the **New Artist Specials** slide icon to select the entire slide.
- **B** Drag the slide icon up until a line appears above the Current Artists slide and then release the mouse button.

The New Artist Specials slide appears above the Current Artists slide.

10. Using this same method, move the **Packaging Options** slide to the second position, just below the title slide. Your slides should be arranged in this order.



11. Save your presentation.

Deleting Slides

You can delete a slide from a presentation using the Outline panel or in Normal or Slide Sorter views. If you inadvertently delete a slide, you can use the Undo button on the Quick Access toolbar to undo the latest action and restore the deleted slide. If you later decide that you want to keep the change, just use the Redo button!

DEVELOP YOUR SKILLS: P2-D4

In this exercise, you will delete slides using the Outline panel.

1. Save your file as: **`P2-D4-DesignRevised`**
2. Right-click anywhere in the Outline panel and choose **Expand→Expand All**.

3. Click the **Current Artists** slide icon (not the title text) to select the entire slide.
4. Tap Delete to remove the slide.
5. Using this same method, delete the **Questions** slide.

   A faded bullet may appear at the end of the previous slide. This is PowerPoint readying itself for additional text. This ghost bullet will not display on the slide itself.
6. Save your presentation and then choose **File→Close** to close it.

Working with Word Integration

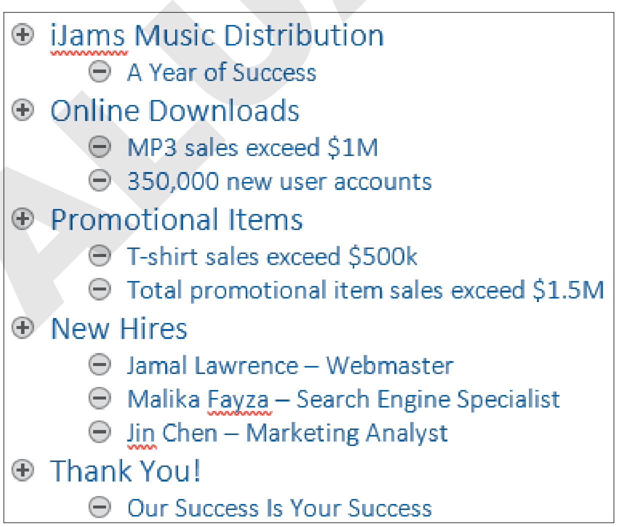
Microsoft Word is an excellent word-processing program that integrates with PowerPoint. An outline created in Word can easily be converted to a PowerPoint presentation. You may need to create a presentation based on an outline someone else created in Word, or you may find it easier to plan a presentation using a Word outline rather than starting PowerPoint first and wondering what slides you will create.

Creating a Presentation Outline in Word

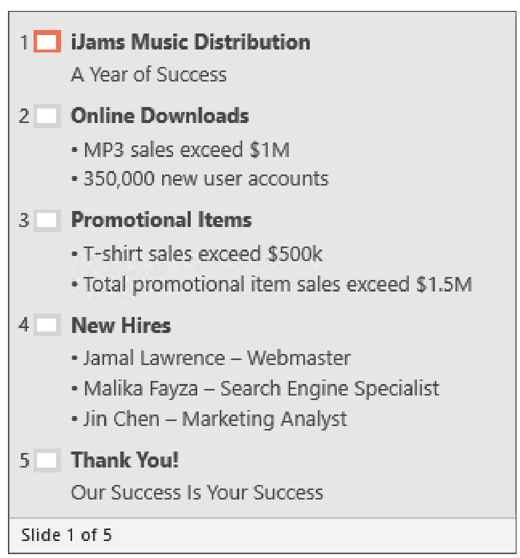
Word's powerful outlining tool makes setting up and modifying outlines easy. You can create an outline in Word and import it to PowerPoint. To use Word outlines in PowerPoint, you must apply the appropriate heading styles to the text in the Word document before importing the outline. PowerPoint converts the Word outline by using these rules:

- All level-1 headings translate to titles in a PowerPoint slide.
- All level-2 headings translate to level-1 body bullets in a PowerPoint slide.
- All level-3 headings translate to level-2 body bullets in a PowerPoint slide.

After a Word outline has been imported into PowerPoint, you can promote or demote the bullets, apply layouts and a design theme, and make other enhancements.



This Word outline...



...creates these PowerPoint slides.

DEVELOP YOUR SKILLS: P2-D5

In this exercise, you will create an outline in Word, use it to generate slides for a new presentation, and then modify the presentation.

1. Start Word, create a new, blank document, and save it in your file storage location as: **`P2-D5-WordOutline`**

   In the next few steps, you will type and apply Word styles to paragraphs.

2. With the blank document open, choose **View→Views→Outline**.
3. Type **`iJams Music Distribution`** and tap Enter.
4. Tap Tab, type **`A Year of Success`**, and tap Enter.

   Tapping Tab increases the list level and creates a level-2 style.

5. Press Shift+Tab, type **`Online Downloads`**, and tap Enter.

   Pressing Shift+Tab decreases the list level and returns the text to a level-1 style.

   Next, you will create two level-2-styled headings that will eventually be converted to text bullets in a PowerPoint slide.

6. Tap Tab, type **`MP3 sales exceed $1M`**, and tap Enter.
7. Type **`350,000 new user accounts`** and tap Enter.
8. Press Shift+Tab to return the indentation level to a level-1 style.

   You are now ready to continue typing the rest of the outline.

9. Complete the rest of the outline as shown, using Enter to create new headings and Tab and Shift+Tab to adjust indent levels.

   
   iJams Music Distribution
   - A Year of Success

   Online Downloads
   - MP3 sales exceed $1M
   - 350,000 new user accounts

   Promotional Items
   - T-shirt sales exceed $500k
   - Total promotional item sales exceed $1.5M

   New Hires
   - Jamal Lawrence – Webmaster
   - Malika Fayza – Search Engine Specialist
   - Jin Chen – Marketing Analyst

   Thank You!
   - Our Success Is Your Success

10. Save the file and then close the outline and Word.

    Word closes, and PowerPoint becomes visible.

POWERPOINT

Import the Outline

11. If necessary, restore PowerPoint from the taskbar (or start it).

12. Choose **File→New**, click the **Blank Presentation** icon, and save your file in your file storage location as: **`P2-D5-WordOutline`**

You can use the same filename as the Word document because the Word and PowerPoint files have different file extensions.

13. Choose **Design→Themes→More** ▾ **→Ion** to apply a document theme.

14. Locate the **Design→Variants** group on the Ribbon and click the third variation (the purple one) to apply it to all slides.

15. Choose **Home→Slides→New Slide menu button ▾ →Slides from Outline**.

16. Use the Insert Outline dialog box to navigate to your file storage location.

17. Choose **P2-D5-WordOutline** and click **Insert**.

PowerPoint will take a moment to import the outline. Note that the first slide is blank because PowerPoint inserted the slides from the outline after the existing blank title slide.

18. Choose **View→Presentation Views→Outline View** and examine the PowerPoint outline.

Each level-1 heading from the outline has become a slide title, and each level-2 heading has become a bulleted paragraph under the appropriate title.

19. Choose **View→Presentation Views→Normal** to view the slide thumbnails.

20. Choose the **first slide** (the blank one) and tap [Delete].

The blank slide is deleted, and the iJams Music Distribution slide becomes selected.

Change a Layout

21. Choose **Home→Slides→Layout ▾ →Title Slide**.

The layout of the selected slide changes.

22. Select the **final slide**, *Thank You!*, and choose **Home→Slides→Layout ▾ →Section Header**.

23. Choose the **first slide**, *iJams Music Distribution*.

Each slide is formatted with blue text because Word formatted the heading styles as blue.

Reset the Slide Formatting

24. With the first slide selected, choose **Home→Slides→Reset**.

The text formatting is removed and returns to the default setting for the current document theme. The slide subtitle is converted to uppercase because that is the Ion theme's formatting.

25. Select the **second slide**, press [Shift], select the **last slide**, and release [Shift].

Slides 2–5 become selected.

26. Choose **Home→Slides→Reset** to reformat the text on the selected slides with the document theme formatting.

27. Save your presentation.

Formatting Your Presentation

PowerPoint makes it so easy to create a presentation that the slides you create may not need any additional formatting. After all, the placeholders arrange the text, the bullets are automatic, and the color scheme is preformatted. However, in most cases, you will want to fine-tune your presentation. Formatting your presentation will make it even better.

Formatting Text

Formatting text is a common step in presentation development. Using the Format Painter is great if something on the slide is already formatted as you like and you simply want to copy the formatting, such as the text size, color, boldness, italics, or other characteristics. However, sometimes you need to format text from scratch. For instance, when reviewing a slide, you might decide that the text could be emphasized by changing the font color.

If you had the time, you could change the font color of each piece of text on the slide individually by using the Font group on the Ribbon's Home tab. A more efficient way to change the font color is to select the placeholder and then apply the color change. By selecting the placeholder, all text within the placeholder is changed in one swoop.

View the video "Formatting Text."

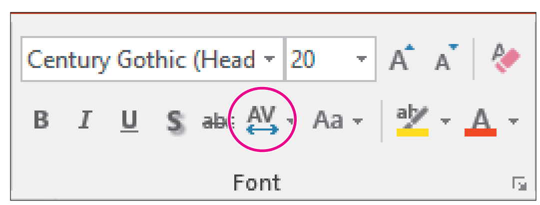
Home→Font→Bold **B** | Ctrl+B

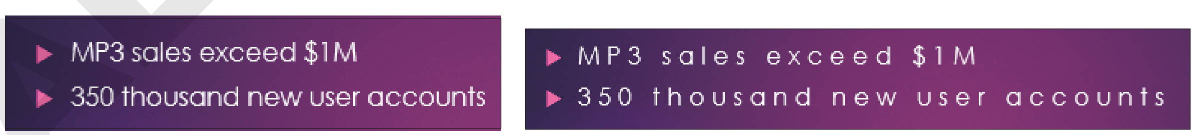
Home→Font→Underline U | Ctrl+U

Home→Font→Italic *I* | Ctrl+I

Character Spacing

Character spacing refers to the horizontal space between characters. PowerPoint lets you adjust this spacing to give your text some breathing room. If none of the preset options fit your needs, you can enter a numerical value to specify the exact amount of spacing. In the professional world of print, this is referred to as tracking or kerning. You must first select characters before applying character spacing or select the placeholder to apply spacing to all the text.

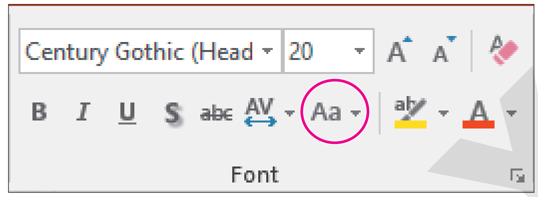




The same slide with no character spacing (left) and a large amount of character spacing applied (right)

Setting the Text Case

A quick way to populate your slides with text is to copy text from an existing source, such as from an email message or a Word document. However, the original text may not be formatted in the case appropriate for your slide. You can easily change the case of text, saving you from having to retype it.



TEXT CASE OPTIONS

Menu Option	How It Affects Text
Sentence Case	Your text will look like this.
Uppercase	YOUR TEXT WILL LOOK LIKE THIS.
Capitalize Each Word	Your Text Will Look Like This.
Toggle Case	Wherever you typed an uppercase letter, it will become lowercase. Wherever you typed a lowercase letter, it will become uppercase. Example: If you type Your Text Will Look Like This, Toggle Case will change it to yOUR tEXT wILL lOOK lIKE tHIS.

DEVELOP YOUR SKILLS: P2-D6

In this exercise, you will change the font formatting in the title and subtitle.

1. Save your file as: **`P2-D6-WordOutline`**
2. Choose **View→Presentation Views→Normal** to return to Normal view, if necessary.
3. Display the **Home** tab so you can see the font settings as you work.
4. Click the **title slide** (the first one) in the Slides panel to select it.
5. Follow these steps to select the subtitle placeholder box:

A. Click anywhere on the subtitle text to position the insertion point inside the handles for this text box. The dashed line indicates the text box border.

B. Click any edge of the dashed border to change it to a solid border (shown here).

The solid line indicates that the text box is selected. Any formatting change you make now will affect all text within the box. Notice that the Font Size box on the Ribbon is currently set to 20. The Ion theme applied this font size to the subtitle.

6. Choose **Home→Font→Increase Font Size** A to increase the font size to **24**.

7. Choose **Home→Font→Bold** B.
8. Choose **Home→Font→Shadow** S.

   The text stands out from the page a bit more because there is now a slight drop-shadow effect.

Format the Title

9. Click on the title text, **iJams Music Distribution**, and then click once on the dashed-line border to select the **Title** text box.
10. Choose **Home→Font→Font Size menu button** ▾ and point to several font sizes.

    Notice how Live Preview displays the slide title size changes as you point to different settings on the Font Size menu.
11. Set the font size to **96**.

    The text is not large enough. There is still some room to enlarge it so the company name dominates the slide.
12. Click **96** in the **Home→Font→Font Size menu button** ▾.
13. Type `115` and tap Enter.

    PowerPoint increases the text size to 115. You can select a font size from the menu or type in your own value.
14. Save the presentation.

Setting Line Spacing

Sometimes, instead of changing the font size or adding many hard returns, you need to increase or decrease only the spacing between lines to have the proper effect. Line spacing determines the amount of space between lines of text. This setting is useful if text appears cramped and you wish to open up some breathing room between lines.

The same slide before and after applying line spacing

POWERPOINT

DEVELOP YOUR SKILLS: P2-D7

In this exercise, you will adjust the line spacing to increase the amount of space between bullets.

1. Save your file as: `P2-D7-WordOutline`
2. Display the **New Hires** slide.
3. Click any of the names to display a dashed border.
4. Click the dashed border to select the entire text box.
5. Choose **Home→Paragraph→Line Spacing** **menu button** ▾ →**2.0** to increase the spacing.
   PowerPoint redistributes the bulleted text vertically on the slide with more spacing between items.
6. Save and close your presentation.

Setting Paragraph Alignment

In time, you will be able to eye a presentation and notice whether the paragraph alignment is not balanced. You can select one or more paragraphs and then click an alignment button on the Ribbon to make the change.

PARAGRAPH ALIGNMENT BUTTONS

Purpose	Button	Example
Left-align		This text is left-aligned. The left edge is in a straight line and the right edge appears jagged. This is most noticeable with multiple lines of text.
Center		This text is center-aligned. The text on both lines is balanced and centered.
Right-align		This text is right-aligned. The right edge is in a straight line and the left edge is jagged.
Justify		This text is justified. Notice that the text is spaced to maintain straight lines at left and right. This is most noticeable with multiple lines of text.

Tip! *Text is typically left-aligned because this alignment allows the eye to easily find the starting point of subsequent lines.*

Home→Paragraph→Align Left, Center, Align Right, *or* Justify

DEVELOP YOUR SKILLS: P2-D8

In this exercise, you will reformat a slide.

1. Open **P2-D8-Contact** from your **PowerPoint Chapter 2** folder and save it as: `P2-D8-ContactRevised`
2. If necessary, scroll down; select **slide 5**, *Contact Us*.
3. Click in the bulleted list and then click a border of the text box.
4. Choose **Home→Paragraph→Bullets** to remove the bullets.
5. Choose **Home→Paragraph→Center**.

6. Select the entire telephone number.

   A formatting box appears. While you can format the selected text from this formatting box, we will use the Ribbon in the next steps.

7. Choose **Home→Font→Font Size menu button ▾** and increase the size to **32**.
8. Click anywhere inside the phone number and then choose **Home→Clipboard→Format Painter** to copy the formatting.
9. Drag across the email address to paste the formatting so its font size is increased to 32.
10. Save your presentation.

Using the Slide Sorter

Up until now, you've been working in Normal view, which is good for manipulating a handful of slides. However, as your presentation grows to more slides than are visible in Normal view, you will want to explore the function of Slide Sorter view.

PowerPoint's Slide Sorter view is used to rearrange slides. In Slide Sorter view, each slide is a thumbnail image so the entire presentation is visible at a glance. As your presentation grows, often the slide order needs to be changed to create a logical concept flow. Using the drag-and-drop method in Slide Sorter view is a great way to quickly reorganize slides.

DEVELOP YOUR SKILLS: P2-D9

In this exercise, you will use Slide Sorter view to rearrange the slide order.

1. Save your file as: **`P2-D9-ContactRevised`**
2. Choose **View→Presentation Views→Slide Sorter**.
3. Follow these steps to move a slide :

- **A** If necessary, drag the **Zoom** slider to change the zoom percentage until all six slides are shown. (Your slides may display differently.)
- **B** Drag the **Our Services** slide to the left of Packaging Options to make it the second slide.
- **C** Drag the **Contact Us** slide to the end of the presentation.

4. Choose **View→Presentation Views→Normal**.
5. Save and close the presentation.

Organizing with Sections

Using the Slide Sorter with individual slides works well for small presentations. For presentations containing many slides, PowerPoint's Section feature helps you keep them organized.

Sections are always created before the selected slide and include all following slides. This often results in a section containing more slides than intended. The fix is to simply create another section after the intended last slide.

Create a section: Home→Slides→Section→Add Section

Rename a section: Right-click the section's title bar→Rename Section

DEVELOP YOUR SKILLS: P2-D10

In this exercise, you will create sections.

1. Open **P2-D10-Sections** from your **PowerPoint Chapter 2** folder and save it as: **`P2-D10-SectionsRevised`**

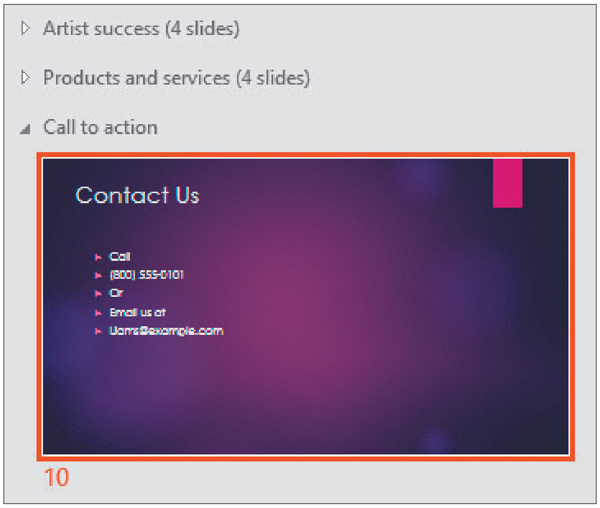
   With so many slides, it may be easier to work in Slide Sorter view.
2. Choose **View→Presentation Views→Slide Sorter**.
3. Select **slide 2**, *Artist Successes*, and then choose **Home→Slides→Section ▾→Add Section**.

   You are prompted to name the section.
4. Type **`Artist success`** and click the **Rename** button.

   The section is renamed but contains slides not intended for this section.
5. Select **slide 6**, *Our Services*; choose **Home→Slides→Section ▾→Add Section**; and name the section: **`Products and services`**
6. Click the **last slide**, *Contact Us*, and create a new section before it named: **`Call to action`**
7. Save your presentation.

Managing Sections

After sections have been created, they can be dragged and rearranged in either the Slides panel or Slide Sorter view. Individual slides can even be dragged from one section to another. Additionally, sections can be collapsed, similar to slide titles in Outline View. Collapsed sections hide the slides, making it easy to drag and reorder the sections. However, the collapsed sections hide slides only when editing. The collapsed slides will display as normal when running the slide show.



Collapsing sections reduces clutter in the Slides panel. When collapsed, the section title bar indicates how many slides exist in that section.

Collapse or expand a section: Double-click a section's title bar

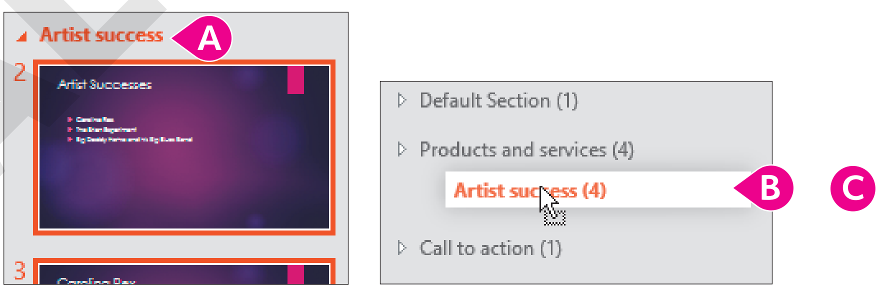
Remove a section: Right-click the section's title bar→Choose desired Remove option

DEVELOP YOUR SKILLS: P2-D11

In this exercise, you will rearrange slides by using sections.

1. Save your presentation as: **`P2-D11-SectionsRevised`**
2. With the presentation still displaying in Slide Sorter view, scroll until you can see the *Artist success* section title bar, if necessary.
3. Double-click the **Artist success** section title bar to collapse it.
4. Double-click the **Products and services** section title bar to collapse it, too.
5. Choose **View→Presentation Views→Normal** .

   The sections do not remain collapsed when you change views.
6. Follow these steps to rearrange the sections:



- **A** Scroll until you see the *Artist success* section title bar.
- **B** Drag the **Artist success** title below the *Products and services* section. As you start to drag, the sections collapse.
- **C** Release the mouse button when the *Artist success* section is placed properly. The sections expand again.

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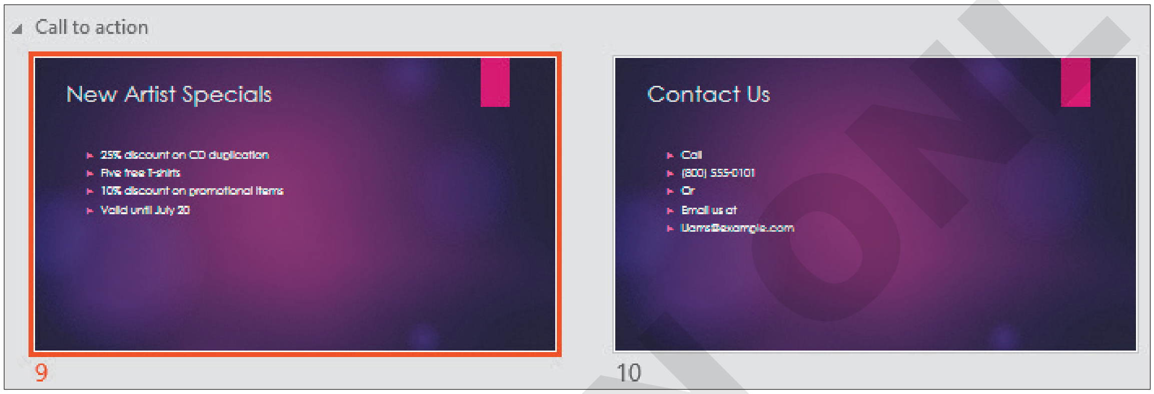
7. Choose **View→Presentation Views→Slide Sorter** .
8. Click anywhere in the gray area outside the slide thumbnails to deselect any slides.
9. Scroll down, if necessary, until you see the entire *Call to action* section with the Contact Us slide.
10. Use the **Zoom** slider, if necessary, to make the view smaller so you see all slides in both the *Products and services* and *Call to action* sections.
11. Drag the last slide of the *Products and services* section (**New Artist Specials**) to the left of the Contact Us slide to move it to the *Call to action* section.



12. Save your presentation.

Printing Your Presentation

Most of the time, you will be viewing or projecting the presentations you create from a PC or laptop computer. However, there may be times when a hard copy of the presentation is needed.

PowerPoint can create the following types of printouts:

- **Slides:** Prints each slide of a presentation on a separate page
- **Handouts:** Prints one or more slides per page, leaving room for attendees to jot notes during the presentation
- **Speaker Notes:** Prints each slide on a separate page, with any speaker notes you created for the slide below
- **Outline:** Prints a text outline of each slide, similar to what is seen in the Outline panel

File→Print | Ctrl+P

The Print Shortcut

If you have customized your Quick Access toolbar to display the Quick Print icon, you may find it tempting to just click it. However, before this becomes a habit, know that a click of this button sends the entire presentation to the current printer, whether or not you want to make adjustments. If you are working with a document theme that has a colored background, the printing process will not only be painstakingly slow, but it may also waste your toner or ink!

Warning! *The Quick Print button on the Quick Access toolbar sends your presentation directly to the printer.*

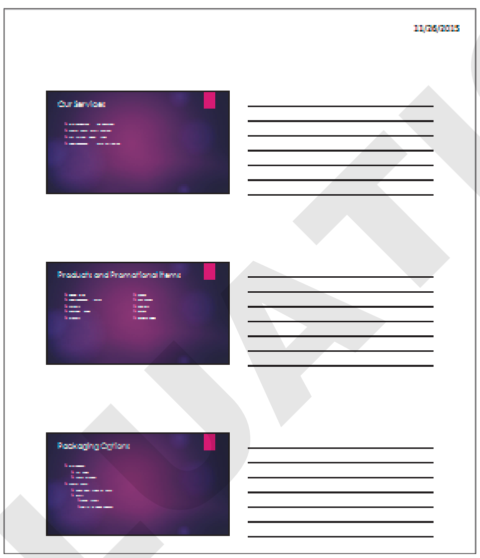
Printing in Color, Grayscale, and Black and White

In addition to printing different items, such as slides and handouts, PowerPoint provides an option to print in color, in grayscale, and in black and white—which is useful when you want to save ink.

Printing Handouts

You can reinforce your presentation's main points by providing handouts. Participants will be able to walk away from your presentation with more than a vague memory of your slide show; all of the facts you presented during the presentation will go with them as a reference. Handouts can be printed in a range of layouts, from two to nine slides per page. For example, printing three slides on a page places three small slides on the left side and multiple lines on the right for note-taking.

File→Print→Settings→Print Layout menu button ▾→select a handout layout



Handout with three slides per page

Handout with six slides per page

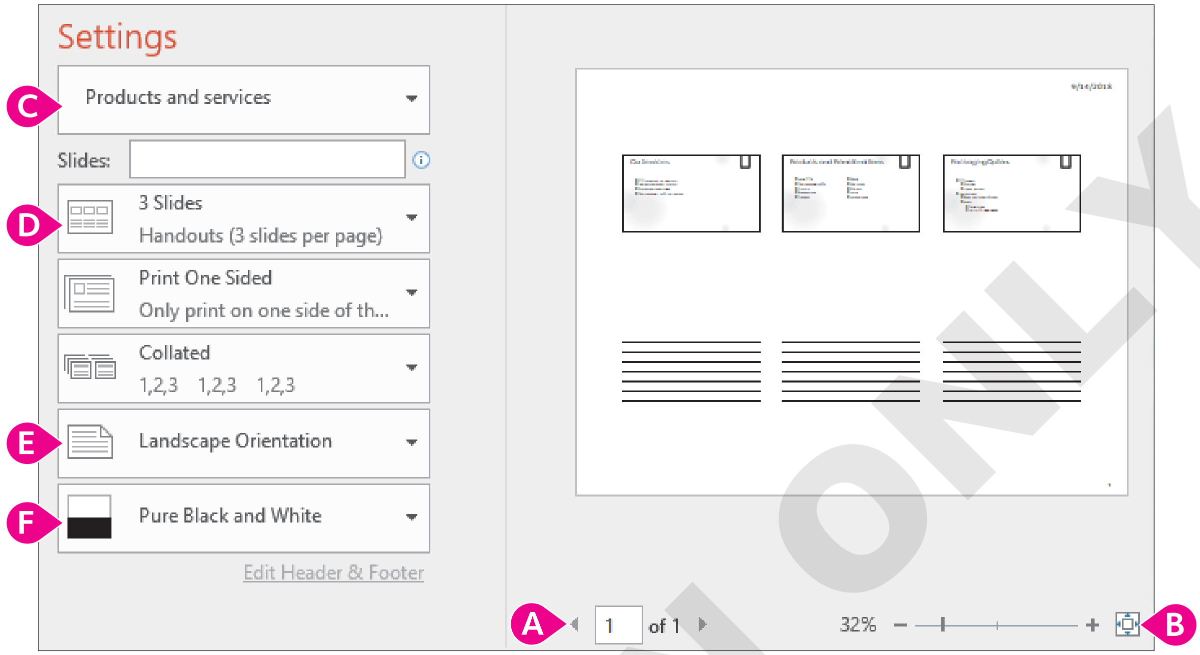
DEVELOP YOUR SKILLS: P2-D12

In this exercise, you will use Backstage view to preview a printout of basic handouts.

1. Choose **File→Print**.

POWERPOINT

2. Follow these steps to examine the print options:



- **A** Use the **left arrow** to return to the first slide.
- **B** Click the **Zoom to Page** button so the whole slide fits in the preview. If your printer is not a color printer, your slide preview will display in grayscale.
- **C** Choose **Sections→Products and Services** to print the three slides in that section.
- **D** Choose **Handouts→3 Slides**. Changing this option to anything other than Full Page Slides adds the Orientation option between the Collated and Color options.
- **E** Change this option to **Landscape Orientation**.
- **F** Change this option to **Pure Black and White** to save ink.

3. Click the **Back** button at the top of Backstage view to return to the main PowerPoint screen without printing.

Handout Masters

In any presentation, there is a single handout master that controls the format of the handout sheets. Any changes you make on the master apply instantly to all handout pages in the presentation. The master maintains a consistent look throughout your handout. This is helpful because you need to change only a single handout master, and the layout, look, and feel of multiple handouts will be affected. You can change the page setup, such as the orientation and slide size, and the background effects, colors, fonts, etc. And headers and footers can be set on the handout master and appear on all printed handout sheets.

View the video "Handout Masters."

View→Master Views→Handout Master

Handout Master→Close→Close Master View

Handout Headers and Footers

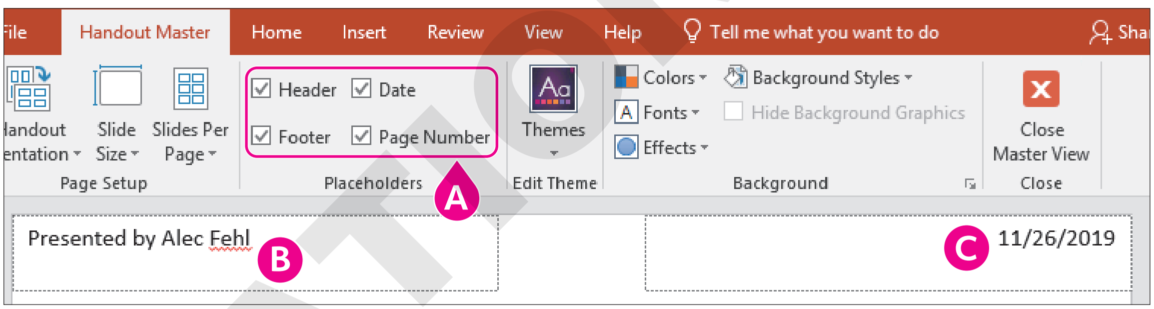
You can set up a header and footer to print on all pages of a handout. They work just like headers and footers in a word-processing document. Handout headers appear at the top, or head, of a document. Handout footers appear at the bottom, or foot, of a document. Headers and footers often include the presenter's name, occasion, date, and other information, which is helpful when attendees reference the handouts later, after the presentation.

These headers will print at the top of each handout page.

DEVELOP YOUR SKILLS: P2-D13

In this exercise, you will add the date and event to the header and footer of the handouts. The handouts will then be previewed in a special print layout.

1. Save the presentation as: **`P2-D13-SectionsRevised`**
2. Choose **View→Master Views→Handout Master**.
3. Follow these steps to set up header sheets:



- A Verify that all four of the Placeholders checkboxes have a checkmark.
- B Scroll up, if necessary; click in the **Header** area at the top-left corner of the document; and type: **`Presented by [Your Name]`**
- C Notice that the current date is automatically entered.

4. Scroll down to the bottom of the document, click in the bottom-left Footer placeholder, and type: **`iJams`**
5. Choose **Handout Master→Close→Close Master View** to return to the presentation.

Preview the Custom Handouts

6. Choose **File→Print**.

   Notice that your previous print settings were saved and that the preview shows the layout of the three slides with your new custom header.

7. Click the **Back** button at the top of Backstage view to return to the main PowerPoint screen without printing.
8. Save your presentation.

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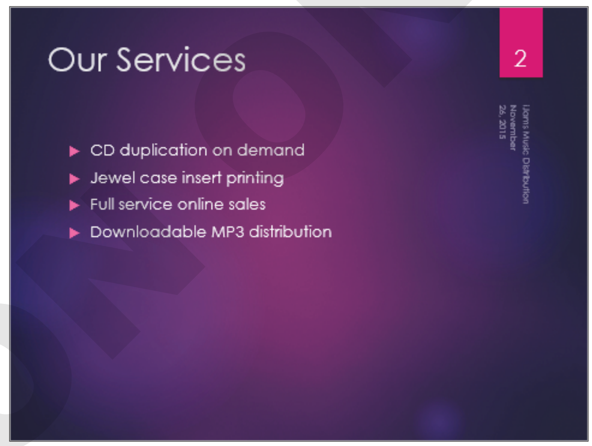
Slide Footers

Just as you can place a header or footer on a handout, you can also place footers on the slides in your presentation. Slide footers often display the date, event name, slide number, or other text that you want visible throughout the presentation. Although the term *footer* implies being inserted along the bottom of a slide, this will change depending on the slide layout and document theme. For example, some slide footers display along the top of the title slide. The same is true for the other elements, such as the slide number and date. These elements will display in different locations on a slide depending on the slide layout and document theme. Additionally, you may opt to display footers on all slides in the presentation, all slides except the title slide, or selected slides only.

Tip! *Slide footers and handout footers are completely separate settings.*

Footer positioned at bottom of slide



Footer position changes based on document theme

Dating Slide Footers

If you choose to include the date, you will need to decide whether you want it updated automatically so your presentation always displays the date/time of when it was last saved or whether you prefer to type in a static date/time that never changes unless you edit it manually. If you choose to update automatically, you may display the date in several formats, including numbers only, day or month spelled out, and the time.

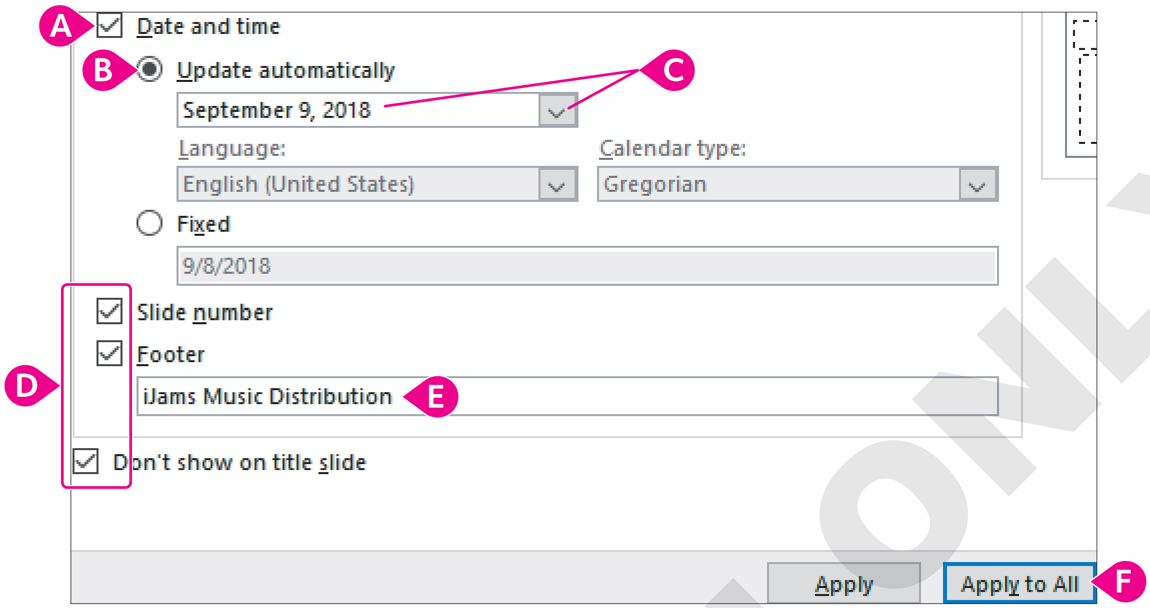
Insert→Text→Header & Footer

DEVELOP YOUR SKILLS: P2-D14

In this exercise, you will create a slide footer and apply it to all slides in the presentation.

1. Save the presentation as: `P2-D14-SectionsRevised`
2. Choose **View→Presentation Views→Normal**.
3. Choose **slide 2**, *Our Services*.
4. Choose **Insert→Text→Header & Footer**.

5. Follow these steps to configure your footer:



- **A** Place a checkmark in the **Date and Time** checkbox.
- **B** Choose the **Update Automatically** option.
- **C** Choose the date format shown here from the menu.
- **D** Place checkmarks in these three option boxes.
- **E** Type **`iJams Music Distribution`** as the footer text.
- **F** Click **Apply to All**.

PowerPoint applies the settings to all slides in the presentation. You could have chosen to apply the footer to just the currently displayed slide. The footer should appear on the right side of the slide, under the slide number, rotated 90 degrees. This is the current theme's design.

6. Browse through the presentation and notice that the footer appears on every slide except the title slide.
7. Save your presentation and close PowerPoint.

Printing Transparencies

In addition to printing handouts and slides to share with your audience, you can also print transparencies to use with an overhead projector, which displays printouts on a large screen similar to a movie projector. While there is no Print Transparency option in PowerPoint, you can simply print your slides, handouts, or notes onto transparency film if your printer supports it. You will need to check the documentation for your printer to learn how to specify transparency film, as the steps vary from printer to printer.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: P2-R1

Work with Outlines and Formatting

In this exercise, you will format some slides in the Kids for Change presentation to increase its visual appeal and formatting consistency.

1. Start PowerPoint. Open **P2-R1-Design** from the **PowerPoint Chapter 2** folder and save it as: **`P2-R1-DesignRevised`**
2. Select the **second slide**, *Events*.
3. Choose **Home→Slides→Layout menu button ▾→Two Content** to change the slide layout to a two-column layout.
4. Select the last four paragraphs in the left column and drag them to the right column.

Create Slides in the Outline Panel

5. Choose **View→Presentation Views→Outline View**.
6. Locate the Program Benefits slide in the Outline panel.
7. Click to the right of the word *health* in the last paragraph of the Program Benefits slide in the Outline panel.
8. Tap Ctrl+Enter to create a new slide.

Edit Slides in the Outline Panel

9. Type **`Requirements`** in the Outline panel as the slide title.
10. Tap Enter and then tap Tab to create a new bulleted paragraph.
11. Type **`You need`** in the Outline panel.
12. Tap Enter and then tap Tab to increase the list level of the new bulleted paragraph.
13. Type **`Positive attitude`**, tap Enter, and type **`Strong work ethic`** to create another indented paragraph.
14. Tap Enter and then tap Shift+Tab to create and promote the next bullet.
15. Type: **`Time commitment`**
16. Tap Enter and then tap Tab.
17. Type **`One monthly event`**, tap Enter, and then type **`One annual meeting`** to create the final two paragraphs.
18. Choose **Home→Slides→Layout menu button ▾→Title and Content**.

Format the Presentation

19. Choose **View→Presentation Views→Normal** and select the **title slide** from the Slides panel.
20. Click the **Title** box and then click again on the edge of the box to select it.
21. Choose **Home→Font→Increase Font Size** once to increase the font size to 60.
22. Choose **Home→Font→Bold** **B**.

23. Display the **Requirements** slide on the Slides panel.
24. Choose **Home→Slides→New Slide** and type `Remember` as the title.
25. Type these bulleted paragraphs:
    - `Think globally, act locally.`
    - `Or think locally, act globally.`
    - `Just...`
    - `think and act!`
26. Select the bulleted text box by clicking the border.
27. Choose **Home→Paragraph→Bullets** to remove the bullets from all paragraphs.
28. Choose **Home→Paragraph→Center** to center the text on the slide.
29. Choose **Home→Paragraph→Line Spacing menu button ▾→2.0** to increase the vertical spacing between bullets.
30. Select the text **think and act!**.
31. Choose **Home→Font→Increase Font Size** four times to increase the size to 32.
32. With the *think and act!* text still selected, double-click the **Home→Clipboard→Format Painter** button to load it for multiple uses.
33. Click the words **think** and **act** in the first line and then click the words **think** and **act** in the second line to duplicate the formatting.
34. Choose **Home→Clipboard→Format Painter** to turn off the Format Painter.
35. Save the presentation and exit PowerPoint.

REINFORCE YOUR SKILLS: P2-R2

Create a Presentation Based on a Word Outline

In this exercise, you will import an outline from Word, create sections, rearrange sections and slides, and print a slide.

1. Start Word and open **P2-R2-Outline.docx** from the **PowerPoint Chapter 2** folder.
2. Choose **View→Views→Outline**.
3. Read over the outline and then close Word.
4. Start PowerPoint, click **Blank Presentation**, and save the file in your file storage location as: `P2-R2-Outline`
5. Choose **Design→Themes→Ion** to apply that design theme.
6. Choose **Home→Slides→New Slide menu button ▾→Slides from Outline** to begin importing the Word outline.
7. Navigate to your **PowerPoint Chapter 2** folder and double-click the **P2-R2-Outline.docx** Word document to import the outline and create the slides.
8. Select **slide 1** in the Slides panel and tap Delete to delete the blank slide.
9. Click **slide 1** in the Slides panel to ensure it is selected, scroll to the bottom of the Slides panel, and Shift+click the **final slide**, slide 7, so all slides are selected.
10. Choose **Home→Slides→Reset** to reset the formatting of all slides.
11. Click **slide 1** in the Slides panel to select it and deselect the others.
12. Choose **Home→Slides→Layout menu button ▾→Title Slide**.

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Organize with Sections

13. Click **slide 2**, *College Application*, in the Slides panel to select it and deselect the others.
14. Choose **Home→Slides→Section menu button ▾→Add Section** to add a new section named `Personal Benefits` and that begins with the College Application slide.
15. Click **slide 4**, *Crime Reduction*, in the Slides panel to select it and deselect the others.
16. Choose **Home→Slides→Section menu button ▾→Add Section** to add a new section starting with the Crime Reduction slide, naming the section: `Community Benefits`

Organize with the Slide Sorter

17. Choose **View→Presentation Views→Slide Sorter**.
18. Drag the **Zoom** slider in the lower-right area of the PowerPoint window until all seven slides are visible.
19. Drag the **Leadership Skills** slide so it is between the College Application and Sense of Accomplishment slides.
20. Drag the **Community Benefits** section header up so it's placed before the Personal Benefits section.

Add Slide and Handout Footers

21. Choose **View→Master Views→Handout Master**.
22. Click in the top-left placeholder and type: `Presented by [Your Name]`
23. Choose **Handout Master→Close→Close Master View**.
24. Choose **Insert→Text→Header & Footer**.
25. Check the box to display the date and time.
26. Check the box to include the slide number and click **Apply to All**.
27. Save your presentation.

Print Your Presentation

28. Choose **File→Print** to display the Print tab in Backstage view.
29. Use the scroll bar at the right of the PowerPoint window to navigate the slides until slide 3, *Increased Literacy*, displays.
30. Choose your printer from the **Printer** option. Your instructor may prefer you to choose the PDF option.
31. Opt to print only the current slide; opt to print full-page slides, one slide per page.
32. Set the color option to **Grayscale**; print one copy.
33. Exit PowerPoint.

REINFORCE YOUR SKILLS: P2-R3

Create a Presentation from a Word Outline

In this exercise, you will import a Word outline to create the initial slides for a Kids for Change community presentation. You will then reset the slide formatting and arrange the slides into sections to make the presentation both more visually appealing and easier for you to manage. Finally, you will print a slide.

1. Start PowerPoint, click **Blank Presentation**, and save the file in your file storage location as: **`P2-R3-Outline`**
2. Choose **Design→Themes→Retrospect** to apply that design theme.
3. Choose **Home→Slides→New Slide menu button ▾→Slides from Outline** to begin importing a Word outline.
4. Navigate to your **PowerPoint Chapter 2** folder and double-click the **P2-R3-Outline.docx** Word document to import the outline and create the slides.
5. Select **slide 1** in the Slides panel and tap [Delete] to delete the blank slide.
6. Choose **Home→Slides→Layout menu button ▾→Title Slide** to change the layout of the first slide.
7. Click **slide 1** in the Slides panel to ensure it is selected, scroll to the bottom of the Slides panel, and [Shift]+click **slide 6** so all slides are selected.
8. Choose **Home→Slides→Reset** to reset the formatting of all slides.

Create Additional Slides

9. Choose **View→Presentation Views→Outline View**.
10. Locate the Bully No More slide in the Outline panel.
11. Click to the right of the word *programs* in the last paragraph of the Bully No More slide in the Outline panel.
12. Tap [Ctrl]+[Enter] to create a slide.
13. Type **`Kids for Change`** in the Outline panel as the slide title, tap [Enter], and then tap [Tab] to create a new, bulleted paragraph.
14. Type **`Part of the Solution`** in the Outline panel.
15. Choose **Home→Slides→Layout ▾→Section Header**.

Format Copy

16. Choose **View→Presentation Views→Normal**.
17. Display **slide 4**, *Toy Collection*.
18. Select the text **foster homes** and then choose **Home→Font→Bold** [B].
19. Double-click the **Home→Clipboard→Format Painter** button to load the Format Painter for multiple uses.
20. Click each of the words **emergency**, **responders**, **Child**, and **Services** to copy the bold formatting.
21. Choose **Home→Clipboard→Format Painter** to unload the Format Painter.

Add Slide and Handout Footers

22. Choose **View→Master Views→Handout Master** .
23. Click in the top-left placeholder and type: `Kids for Change`
24. Click in the bottom-left placeholder and type: `A presentation by [Your Name]`
25. Choose **Handout Master→Close→Close Master View** .
26. Choose **Insert→Text→Header & Footer** .
27. Check the box for **Slide Number**.
28. Check the box for **Footer** and type `A Kids for Change Presentation` in the footer box.
29. Check the box for **Don't Show on Title Slide** and click **Apply to All**.

Organize the Presentation

30. Choose **View→Presentation Views→Slide Sorter** .
31. Slide the **Zoom** slider at the bottom right of the PowerPoint window until all seven slides are visible.
32. Click the **iRecycling Day** slide to select it.
33. Choose **Home→Slides→Section menu button ▾→Add Section** and create a new section named: `Community`
34. Click the **Bully No More** slide.
35. Choose **Home→Slides→Section menu button ▾→Add Section** and name the new section: `School`
36. Drag the **Tutoring** slide to the right of the Bully No More slide to move it to the School section.
37. Save the presentation.

Print Slides

38. Choose **File→Print** to display the Print tab in Backstage view.
39. Use the scroll bar at the right of the PowerPoint window to navigate the slides until slide 1 displays.
40. Choose your printer from the **Printer** option. Use the PDF option if specified by your instructor.
41. Choose the **Custom Range** printing option and type `1–3` in the range box.
42. Specify **3 Slides** per page.
43. Set the color option to **Pure Black and White**; print one copy.
44. Exit PowerPoint.

Apply Your Skills

APPLY YOUR SKILLS: P2-A1

Reformat a Presentation

In this exercise, you will create a promotional presentation for Universal Corporate Events based on a Microsoft Word outline to use during client meetings. You will then add a slide and format text so that it is consistently and professionally formatted.

1. Start Word, click **Blank Document**, and save the file in your file storage location as: `P2-A1-Outline`
2. Choose **View→Views→Outline**.
3. Type this text, using Enter, Tab, and Shift+Tab as needed to create an outline in Word:

- Universal Corporate Events
  - Events made easy
- Event Types
  - Celebrations
  - Ceremonies
  - Team building
  - Trade shows
- Services
  - Catering
  - Invitations
  - Stage and sound equipment
  - Venue scouting
- Benefits
  - Our Jobs
    - Deal with paperwork
    - Guarantee safety
    - Scheduling
  - Your Jobs
    - Relax
    - Enjoy your event
- Universal Corporate Events
  - Events made easy

4. Save and then close your file. Exit Word.

Import a Word Outline

5. Start PowerPoint, click **Blank Presentation**, and save your file as: `P2-A1-Outline`
6. Choose **Home→Slides→New Slide menu button ▾→Slides from Outline**.
7. Browse to your **P2-A1-Outline.docx** Word outline and double-click it.
8. Delete the blank first slide.

Add a Slide

9. Display the presentation in **Outline View**.
10. Click at the end of the last paragraph of the Benefits slide in the Outline panel.
11. Press [Ctrl]+[Enter] to create a new slide and then type: `Specialties`[Enter][Tab]
12. Type these paragraphs, tapping [Enter] after each except the last one:
    - `Custom catering`
    - `Individual transportation`
    - `Group transportation`
    - `Line dancing`
    - `Graphic design`
    - `Radio promotion`
    - `Emergency medical`
    - `Large-item printing`

Format the Presentation

13. Apply the **Facet** design document theme.
14. Display the presentation in **Normal** view.
15. Apply the **Title Slide** layout to the first slide.
16. Apply the **Section Header** layout to the last slide.
17. Apply the **Two Content** layout to the Specialties slide.
18. Select the last four paragraphs on the Specialties slide and move them to the new right-column placeholder.
19. Select all six slides and choose **Home→Slides→Reset**.
20. Display **slide 4**, *Benefits*.
21. Click anywhere in the bulleted text and then select the text box border.
22. Choose **Home→Font→Character Spacing menu button ▾→Loose** to spread the text out horizontally.

Use the Format Painter

23. Select the **Our Jobs** paragraph; bold the text.
24. Load the Format Painter with the formatting.
25. Drag across the **Your Jobs** paragraph to copy the formatting to the paragraph.
26. Save your presentation and exit PowerPoint.

APPLY YOUR SKILLS: P2-A2

Organize and Print a Presentation

In this exercise, you will use Slide Sorter view to create sections and organize the slides within a presentation to make it easier for you and collaborators to manage. You will then print a portion of the presentation so that you can proof audience handouts.

1. Start PowerPoint. Open **P2-A2-Outline** from the **PowerPoint Chapter 2** folder and save it as: `P2-A2-OutlineRevised`
2. Display the presentation in **Slide Sorter** view.
3. Drag the **Zoom** slider in the lower-right area of the PowerPoint window until you can see all six slides.

Rearrange Slides and Add Sections

4. Drag the **Benefits** slide so that it is after the Specialties slide.
5. Drag the **Services** slide so that it is before the Event Types slide.
6. Click the **Services** slide and then add a section named: `Services`
7. Click the **Benefits** slide and then add a section named: `Closing`

Add Slide and Handout Footers

8. Display the **Handout Master** tab.
9. Click in the bottom-left placeholder and type: `UCE Promo`
10. Click the **Close Master View** button.
11. Add the slide number and date and set to update automatically all slides except the title slide.
12. Save your presentation.

Print a Presentation

13. Choose **File→Print**.
14. Using the **Grayscale** option, print handouts with two slides per page. Print the slides as a PDF file if directed to do so by your instructor.
15. Close the presentation and exit PowerPoint.

APPLY YOUR SKILLS: P2-A3

Create, Format, and Organize a Presentation

In this exercise, you will create and import an outline from Word and then design and format a presentation.

1. Start Word and click **Outline View** to create an outline that will produce these slides:

Title	Bullets
Universal Corporate Events	Specialized
Specialties	Custom catering Individual transportation Group transportation Line dancing Graphic design Radio promotion Emergency medical Large-item printing
Catering	Vegan dishes Kosher dishes Meat-lovers dishes Desserts
Transportation	Individual limos Group buses for 6–50
Line Dancing	Experienced dance leaders Country, pop, and hip-hop
Graphic Design	Invitation graphics Signs Banners
Radio Promotion	Script writing Voice talent High-definition recording
Emergency Medical	CPR-certified staff Onsite portable defibrillators
Large-Item Printing	Canvas, polyester, or vinyl Up to 64 square feet

2. Save the outline to your file storage location as `P2-A3-Outline` and close Word.
3. Start PowerPoint and create a new, blank presentation in your file storage location named: `P2-A3-Outline`
4. Import the **P2-A3-Outline.docx** Word outline and then delete the blank first slide.

Work with Slides and Formatting

5. Select all slides in the Slides panel and use the **Reset** command to reset the formatting.
6. Apply the **Ion Boardroom** theme and apply the orange variation.
7. Change the layout of the first slide to **Title Slide**.

8. Change the layout of the second slide to **Two Content**.
9. Move the last four paragraphs of the second slide into the new right-column placeholder.
10. Increase the line spacing of both columns on slide 2 to **2.0**.
11. Display the **Catering** slide.
12. Make the word *Vegan* bold and italic and then use the **Format Painter** to copy the formatting to the words *Kosher* and *Meat-lovers*.
13. Change the case of all eight paragraphs on the **Specialties** slide to **Capitalize Each Word**.

Work with an Outline

14. Display the presentation in **Outline View**.
15. Collapse all the slides on the Outline panel.
16. Expand only the **Specialties** slide in the Outline panel.

    Collapsing all but one slide reduces the clutter in the Outline panel and makes it easier to focus your attention on the single expanded slide.
17. In the Outline panel, locate the Specialties slide and move the **Large-item printing** paragraph below the *Graphic design* paragraph.
18. In the Outline panel, move the **Large-Item Printing** slide below the Graphic Design slide.

Organize Slides

19. Display the presentation in **Slide Sorter** view.
20. Create four sections as indicated:

Where to Start Section	Section Name
Slide 1	`Intro`
Catering slide	`Food and Entertainment`
Transportation slide	`Logistics and Emergency`
Graphic Design slide	`Promotion`

21. Move the **Line Dancing** slide to the end of the *Food and Entertainment* section.
22. Move the **Emergency Medical** slide to the end of the *Logistics and Emergency* section.
23. Move the entire **Promotion** section so that it is before the *Logistics and Emergency* section.

Add Slide and Handout Footers

24. Display the **Handout Master** tab.
25. Click in the top-left placeholder and type: **`UCE – Event Specialists`**
26. Click in the bottom-left placeholder and type: **`July Presentation`**
27. Click the **Close Master View** button.
28. Add the slide number to all slides, including the title slide.
29. Save the presentation.

Print a Presentation

30. Print the slides in the *Promotion* section in **Handouts (3 slides per page)** format so only a single page prints. Print in **Grayscale** to save on color ink. (Or print to PDF if directed to by your instructor.)
31. Exit PowerPoint.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: P2-P1

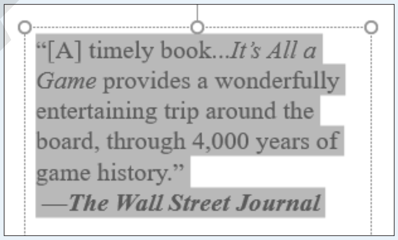
Taylor Games New Products and New Stores Webinar

In this exercise, you will create a PowerPoint presentation for Taylor Games' New Products and Stores *webinar. You've been given an existing presentation and a Word outline to use as a starting point.*

1. Open the Word document **P2_P1_Outline.docx** from your **PowerPoint Chapter 2** folder.
2. In **Outline View**, add these three new games under the Games heading (*New Products, Games*):
   - **Catan**
   - **Dominion**
   - **Monopoly Deluxe**
3. Demote the three new games to **Outline Level 3**.
4. Save the changes to **P2_P1_Outline.docx** and then close it.
5. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P2_P1_eStart** from the Assignments page. You must start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P2_P1_Start** from your **PowerPoint Chapter 2** folder.
6. Insert new slides after slide 1 using the **P2_P1_Outline.docx** file located in your **PowerPoint Chapter 2** folder.
7. On **slide 1**, apply the following formats to the **New at Taylor Games** title text:

Format	Value
Font size	**40**
Character spacing	**Loose**
Paragraph alignment	**Center**

8. On **slide 1**, apply **Center** paragraph alignment to the **Products, Stores, and More!** subtitle.
9. Use these guidelines to copy and paste text:
   - On **slide 6**, copy all text in the Wall Street Journal quotation.



- On **slide 4**, paste it below the *It's All a Game* bullet.

- If you end up with an empty paragraph below the quote, then delete it.

10. On **slide 2**, add these bullets below the *Where we're heading* bullet.
- **`Sarah Jones, Marketing Director`**
- **`Jerome Martin, Facilities Director`**

11. Promote the new bullets to **Level 1** so they align with the *Greetings from CEO Lisa Livoski* bullet.

12. Change the line spacing of the two new bulleted paragraphs to **2.0**.

13. On **slide 5**, delete the object containing the Portland, OR, and Spokane, WA, store names.

14. Use these guidelines to copy and paste an object:
- On **slide 6**, copy the object containing the bulleted list.
- On **slide 5**, paste the copied object into the object containing the *Click to add text* bullet.

15. Delete **slide 6**, *Book Quote & Store Details*.

16. Move **slide 3**, *Agenda*, above **slide 2**, *Introductions*.

17. Create a section named **`Kickoff`** that includes the Agenda and Introductions slides.

18. Create a section named **`New`** that includes the New Products and New Stores slides.

19. Insert a slide footer and apply these settings to all slides:
- Footer text: **`New Products and Stores`**
- Date and time set to update automatically
- Include slide numbers
- Don't show on title slide

20. Insert a **`Notes and Handouts`** header and footer on all pages using these settings:
- Header text: **`Taylor Games`**
- Date and time set to update automatically
- Include page numbers
- Footer text: **`New Products and Stores`**

21. Set the Handout Master, Slides per Page setting to **2 slides**.

22. Save your presentation.
- *Using eLab:* Save it to your **PowerPoint Chapter 2** folder as **`P2_P1_eSubmission`** and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save it to your **PowerPoint Chapter 2** folder as: **`P2_P1_Submission`**

PROJECT GRADER: P2-P2

Classic Cars Club Advertisers Presentation

You've been asked to develop a presentation starting with an existing presentation and a Word outline. In this exercise, you'll develop the presentation for a meeting with potential advertisers.

1. Open **P2_P2_Outline.docx** from your **PowerPoint Chapter 2** folder.
2. In **Outline View**, demote the **Show Booth**, **Banners**, and **Online** headings to a level-2 style.
3. Add these new advertising opportunities below the *Online* heading:
   - **Website**
   - **Email**
   - **Social Media**
4. Demote the three new headings to a level-3 style.
5. Save the changes to **P2_P2_Outline.docx** and then close it.
6. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P2_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P2_P2_Start** from your **PowerPoint Chapter 2** folder.
7. Insert new slides after slide 1 using the **P2_P2_Outline.docx** file located in your **PowerPoint Chapter 2** folder.
8. In **Outline View**, collapse all slides.
9. Delete the **Introductions** and **OTHER ADVERTISING OPPORTUNITIES** slides.
10. On the **Jack-1** slide, copy all bulleted list text and paste it in the **About Us** slide bulleted list box.
11. On the **Jack-2** slide, copy all bulleted list text and paste it in the **Regional Shows** slide bulleted list box.
12. On the **Regional Shows** slide, increase the list level of the last four bullets to indent them below the *Locations and Start Dates* bullet.
13. Move the **National Show** slide above the Regional Shows slide.
14. Change the case of the ADVERTISING OPPORTUNITIES slide title using the **Capitalize Each Word** setting.
15. In **Normal** view, apply the same formatting that's used on the slide 7 bullets to the bullets on **slide 3** and **slide 6**.
16. Use these guidelines to format the **slide 5** bullets:
    - Apply the same formatting that's used on the **slide 7** bullets to all **slide 5** bullets.
    - After applying the formatting, make sure the last three bullets remain indented one level below the *Online* heading.
    - Note that the last three bullets may have a smaller font size.
17. Apply the same formatting that's used on the **slide 8** title to the titles of **slides 2-6**.
18. Delete **slides 7** and **8**.
19. Create a section named **Background** that includes **slides 2**, **3**, and **4**.
20. Create a section named **For Advertisers** that includes **slides 5** and **6**.

21. Insert a slide footer and apply these slide settings to all slides:
- Footer text: **`Advertising with Us`**
- Date and time set to update automatically
- Don't show on title slide

22. Insert a **Notes and Handouts** header and footer on all pages using these settings:
- Header text: **`Taylor Games`**
- Date and time set to update automatically
- Footer text: **`Advertising with Us`**

23. Set the Handout Master, Slides per Page setting to **6 slides** and the Handout Orientation to **Landscape**.

24. Save your presentation.
- *Using eLab:* Save it to your **PowerPoint Chapter 2** folder as **`P2_P2_eSubmission`** and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save to your **PowerPoint Chapter 2** folder as: **`P2_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

P2-E1 That's the Way I See It

You're teaching a cooking class and need a presentation to show others how to make your signature dish. Choose a recipe that you know well or find one online. When you're ready, create a new presentation named: **`P2-E1-Recipe`**

Apply the design theme and variation of your choice. If you can't find one you like, use PowerPoint's Start screen to search for others. Type the recipe name as the slide title and create an engaging subtitle. Add a Title and Content slide that lists the ingredients. Create at least three more slides, each of which describes a few fun facts about one of the ingredients (look it up or make it up). Add a slide that describes each step. Each paragraph should contain no more than four words. Create slides for each step, using the brief description as the slide title and bulleted paragraphs to further explain the step. Create an *Ingredients* section that contains all the ingredient slides and a *Steps* section that includes all the step slides. Finally, run the slide show and make note of anything you want to change. When the slide show ends, make the changes and then save your presentation.

P2-E2 Be Your Own Boss

Open **P2-E2-BlueJean** and save it as: **`P2-E2-BlueJeanRevised`**

View the presentation as a slide show and ask yourself whether the slides are easy to read and in the best order. Based on your evaluation, use the skills taught in this chapter to make the necessary changes, ensuring that you cover these edits:

- Change the document theme
- Rearrange the order of slides
- Adjust the text layout
- Edit text

Be sure the design and formatting are consistent from slide to slide. Add at least three more slides, such as those to describe Blue Jean Landscaping products, a brief company history, or a price list. Rearrange the slides and create at least two sections to group slides in a logical order.

P2-E3 Demonstrate Proficiency

Stormy BBQ is sponsoring a Father's Day picnic. Create a PowerPoint presentation to display on the widescreen monitors at the restaurant to play during business hours that gives details about the event. Create an outline in Word saved as **`P2-E3-FathersDay`** that produces at least five slides when imported to PowerPoint. The slides should describe the picnic and various events and entertainment.

Import the outline to PowerPoint to create the initial slides. Use an appropriate theme and change the slide layouts as necessary. Format the text so important words stand out but be careful not to overdo it! Experiment with character and line spacing, paragraph alignment, and other formatting. Create sections for different parts of the event, such as for food, games, and other activities. Save your final presentation as: **`P2-E3-FathersDay`**

POWERPOINT

3 Adding Graphics, Animation, and Sound

Pictures add interest to a presentation, drawing objects add spark, and slide transitions and animations "bring the presentation to life." In this chapter, you will enhance a presentation that currently includes only text.

LEARNING OBJECTIVES

- Add pictures, screenshots, and shapes to a presentation
- Remove backgrounds and apply artistic effects to slide images
- Add transition effects to a slide show
- Add animation to objects on a slide
- Add sound effects to transitions and animations

Project: Adding Eye Candy

The iJams presentation is evolving nicely. However, you know you will have to add some pizzazz to it if iJams is to contend with its competitors. Although you have created an error-free, technically perfect presentation, you can see that something is definitely missing! You decide that, if used sparingly, pictures and animation will enhance the presentation.

Working with Online Pictures

You can search for and insert pictures from the Internet directly from within PowerPoint. Adding pictures will help you emphasize key points and add polish to the presentation as a whole.

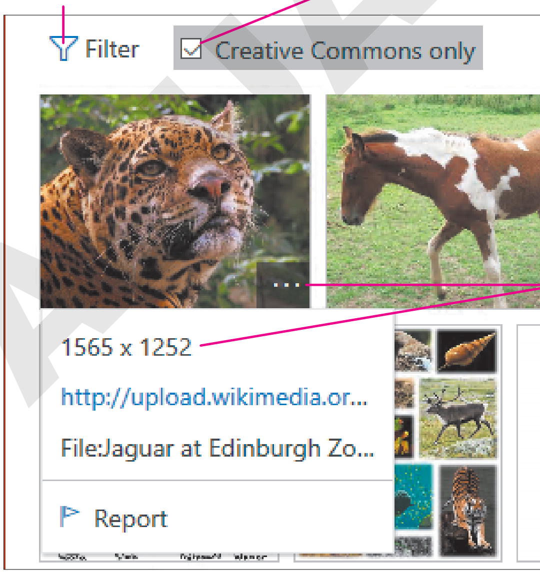
Microsoft uses the term *pictures* to refer to a range of graphic elements, including clip art and photographs. The term *clip art* is an industry-standard term referring to pre-drawn artwork that is added to computer documents. Searching for pictures from within PowerPoint displays results including both clip art and photographs.

Obeying Copyright Law

Per U.S. copyright law, it is illegal to use copyrighted pictures without the express consent of the copyright owner. This means you cannot simply search the Internet and use any picture you happen to find, as that picture may be protected by copyright. However, PowerPoint uses the Bing search engine to search for pictures online and by default displays only pictures licensed under Creative Commons, meaning you can use these pictures freely in your presentations.

Filter the results based on image type, color, size, or other characteristics.

This box is checked by default, ensuring results are licensed under the Creative Commons.



You can click the lower-right corner of a thumbnail to view details such as the image dimensions or source, or to report a possible copyright infringement.

Warning! *Using copyrighted pictures without permission can result in a lawsuit or fines of several thousand dollars.*

Using Text and Object Layouts

PowerPoint creates slides with different layouts, such as slides with titles only and slides with titles and text. These slide layouts allow you to easily create slides with a standardized title and bulleted text. Many of PowerPoint's layouts, including the Title and Content layout and the Two Content layout, provide placeholders for titles, text, and various types of content such as tables, charts, pictures from the Internet or your computer, organizational charts, and videos.

Some slide layouts include a group of six icons.

The Pictures icon inserts an image from your computer.

The Online Pictures icon opens the Insert Pictures search dialog box.

SLIDE INSERT SHORTCUTS

Icon	What It Does	Icon	What It Does	Icon	What It Does
	Inserts a table		Inserts a chart or graph		Inserts a SmartArt graphic
	Inserts a picture from your computer		Opens the Online Pictures dialog box		Inserts a video clip from your computer or online

Deleting Placeholder Text

You may decide to replace all text on a slide with a graphic. Deleting all text inside a placeholder results in the slide displaying its six default insert icons, making it easy to insert a picture or other objects.

When all the text inside a placeholder is deleted...

...the six insert icons reappear.

POWERPOINT

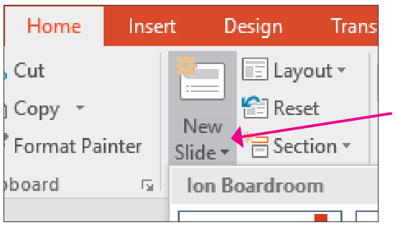
DEVELOP YOUR SKILLS: P3-D1

In this exercise, you will get a slide ready to accept a picture.

1. Start PowerPoint. Open **P3-D1-Animation** from the **PowerPoint Chapter 3** folder and save it as: `P3-D1-AnimationRevised`
2. Select the **Our Services** slide from the Slides panel.

Choose a Layout and Format Text

3. Choose **Home→Slides→New Slide menu button ▾**. Be sure to click the bottom half of the New Slide button so the menu displays.



4. Select the **Content with Caption** layout.

   A new slide is inserted below Our Services *and has the Content with Caption layout applied in a single step. Using this method is faster than first adding a new slide and then changing its layout in a second step.*

5. In the Title placeholder, type: `Our Recent Success`
6. In the text box beneath the title, type:

   `Top of the Rock` Enter

   `Excellence in Service to Musicians` Enter

   `League of Electronic Music Distributors`

7. Select the text **Top of the Rock** and choose **Home→Font→Font Size menu button ▾→24**.
8. Choose **Home→Font→Bold** **B**.
9. Select the text **League of Electronic Music Distributors**.
10. Choose **Home→Font→Italic** *I*.
11. Click in the large text placeholder at the right and type:

    `Many successes` Enter

    `Record-breaking sales`

    As soon as you start typing, the six slide icons disappear. You decide instead to replace the bulleted text with a picture. You will delete all the text in the placeholder so the slide displays the six insert icons again.

12. Click inside the text box, if necessary, to display its dashed border.
13. Click the dashed border to select the text box.
14. Tap Delete.

    The text is deleted, and the six insert icons reappear.

15. Save your presentation.

Searching for Pictures with the Online Pictures Search Window

The Online Pictures search window lets you search for pictures on the Internet using the Bing search engine. When you insert an online picture, PowerPoint also inserts a text box under the picture with the artist's attribution. It is suggested that you leave the attribution box on the slide, as it's likely required by the picture's licensing.

View the video "The Online Pictures Search Window."

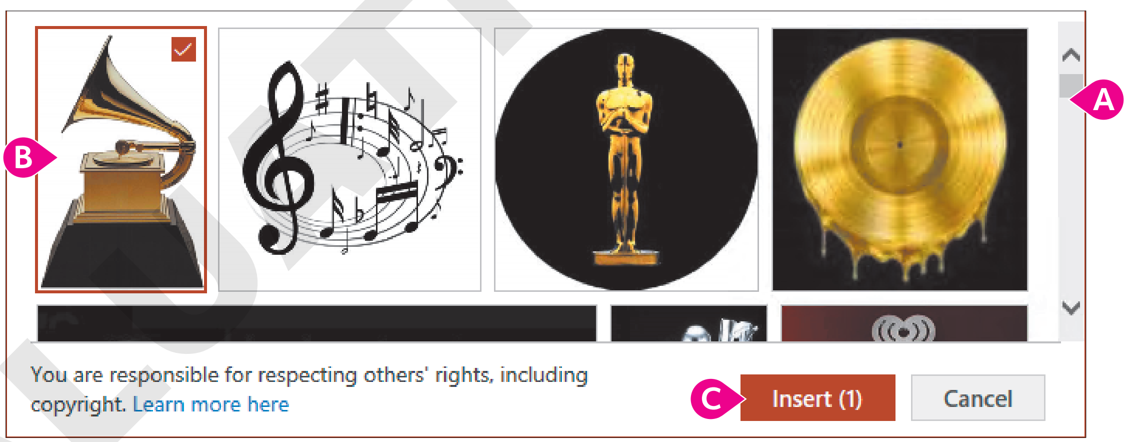
- Insert a picture from an online source: Insert→Images→Online Pictures *or* click Online Pictures on the slide

- Insert a picture from your computer: Insert→Images→Pictures *or* click Pictures on the slide

DEVELOP YOUR SKILLS: P3-D2

In this exercise, you will insert a picture to add visual interest to a slide.

1. Save your file as: **`P3-D2-AnimationRevised`**
2. On the Our Recent Success slide, click the **Online Pictures** icon to open the Online Pictures search window.
3. Type **`music award`** in the search box and tap Enter.
4. Follow these steps to insert a picture on the slide:



- **A** Scroll until you find this gramophone statue. If you can't find it, choose any picture you like.
- **B** Click the desired picture to select it.
- **C** Click **Insert**.

Tip! *If you don't like the picture when you see it on the slide, tap* Delete *and then start this exercise over at step 2 to try a different picture.*

The picture is inserted on the slide and replaces the large text box. A text box containing the attribution details is likely inserted under the picture.

You will move and resize the picture in the next activity.

5. Save the presentation.

POWERPOINT

Moving, Sizing, and Rotating Objects

When you click an object (such as a picture, icon, or 3D model), sizing handles and a rotate handle appear. You can easily move, size, and rotate the selected object so it fits perfectly on the slide.

You can resize objects to be wider or taller than their original size to better fit a slide's contents. If you want to maintain the original picture proportions, take care to drag the handles in the four corners of the picture only. Similarly, you can rotate a picture clockwise or counterclockwise by dragging the rotate handle above the picture.

Tip! *Remember that to manipulate the size or rotation of an object, you must select it first.*

Objects can be moved around the slide as you like. When moving, it's not necessary to select the object first, though. Hovering the mouse pointer over the picture will change it to a four-headed arrow. That arrow means the object is ready to be moved.

View the video "Manipulating Objects."

DEVELOP YOUR SKILLS: P3-D3

In this exercise, you will move and resize an object.

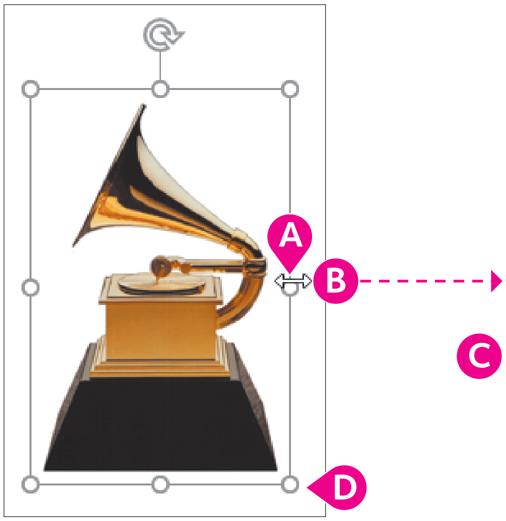
1. Save your file as: **`P3-D3-AnimationRevised`**
2. Click the picture to select it and then follow these steps to rotate it:

A Point to the rotate handle until the insertion point changes to a circular arrow.

B Press the left mouse button and drag slowly to the right. Release the mouse button after the image has rotated about 90 degrees.

C Choose **Quick Access Toolbar→Undo**.

3. Follow these steps to resize the picture:

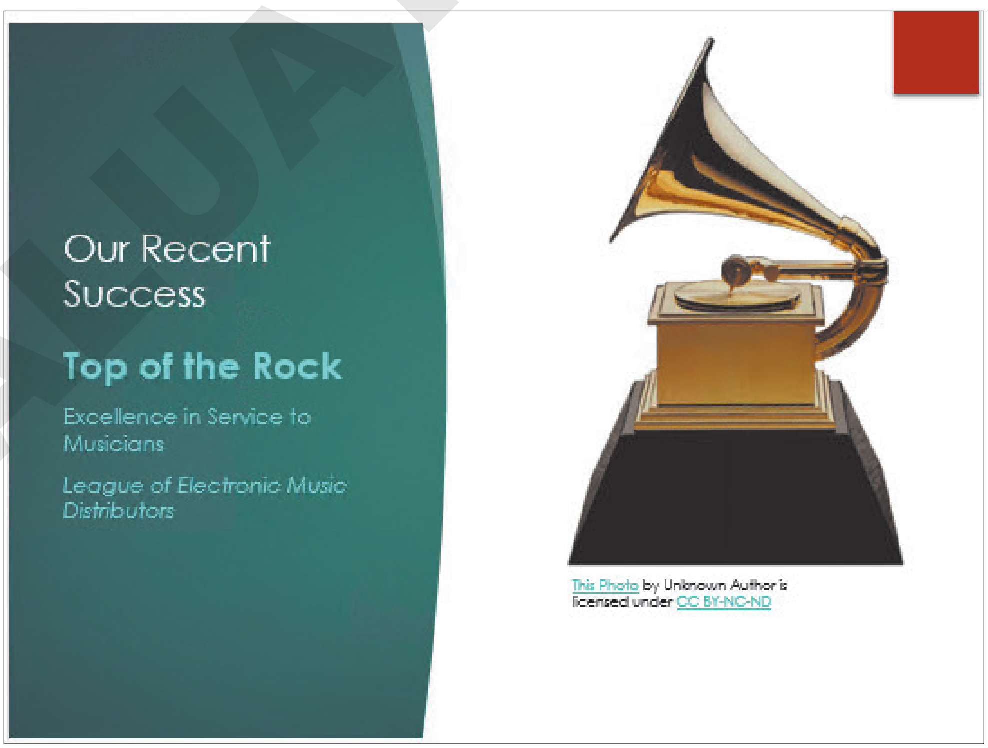


- **A** Point to the handle on the right side so the insertion point becomes a double-headed arrow.
- **B** Press the left mouse button and drag right until the image is twice as wide as the original and stretched too wide.
- **C** Choose **Quick Access Toolbar→Undo**.
- **D** Point to a bottom-right corner handle so the mouse becomes a double-headed arrow and drag to enlarge the image proportionately to your liking.

4. Point to the image itself (not the border or a resize handle) until the pointer becomes a four-headed arrow. Drag so the image is centered next to the bar of text.

5. Drag the **attribution text box** to position it under the picture.

Compare your slide to this example.



6. Save the presentation.

POWERPOINT

Adding Icons and 3D Models

New!

In addition to pictures, you can insert icons and 3D models directly from the Ribbon. Icons are simple symbols that are typically recognized worldwide and can communicate ideas across language barriers. PowerPoint icons are black and white. 3D models are more ornate than regular pictures and icons. After you've inserted a 3D model, drag from its center to rotate it in three-dimensional space to your liking.

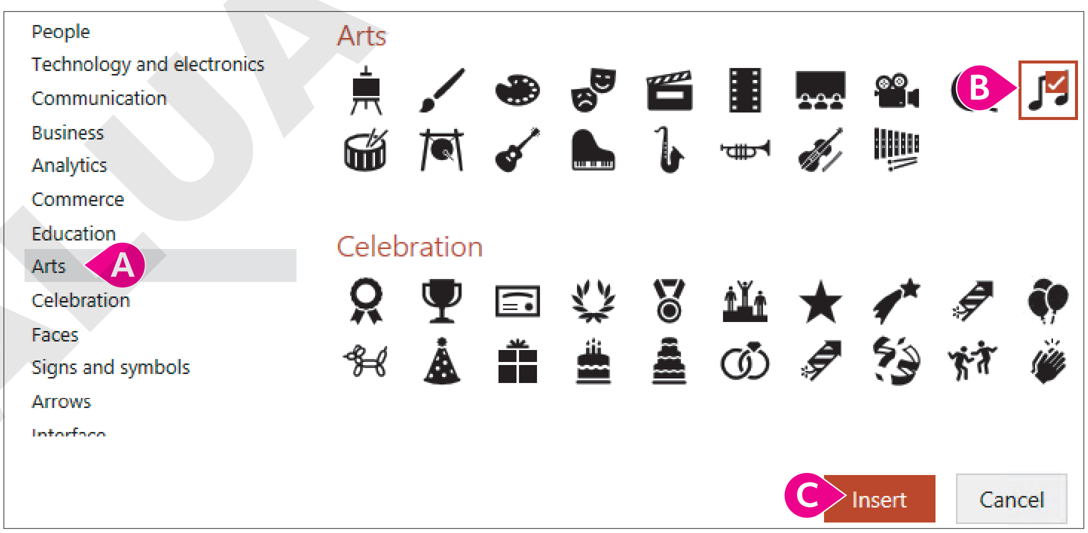
A 3D model when initially inserted (left) and at two different rotations (center and right).

Rotate a 3D model using a preset: 3D Model Tools→Format→3D Model Views

DEVELOP YOUR SKILLS: P3-D4

In this exercise, you will insert an icon and a 3D model.

1. Save your file as: **`P3-D4-AnimationRevised`**
2. Display the **first slide**.
3. Choose **Insert→Illustrations→Icons**.
4. Follow these steps to insert an icon appropriate to the slide:



- **A** Choose the **Arts** category.
- **B** Click the music notes icon.
- **C** Click **Insert**.

5. Drag the icon to the top-right corner of the slide to move it out of the way.
6. Choose **Insert→Illustrations→3D Models menu button ▾→From Online Sources**.
7. Type **`gramophone`** in the search box and tap Enter.
8. Scroll through the results until you find a model similar to this one, click to select it, and click **Insert**.

The 3D model is inserted in the center of the slide and displays a rotate icon in the center. Yours may differ from the figure.

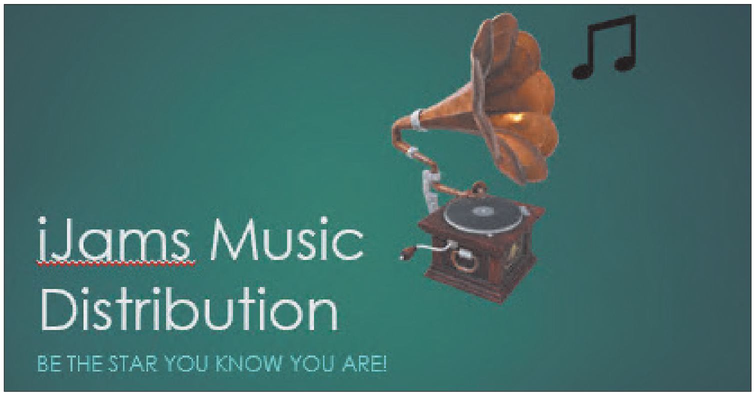
9. Click the center **rotate icon** and drag it slightly in all directions to rotate the model in 3D; rotate it to your liking.

The model is rotated but likely overlaps the text.

10. Drag the model to the right so it no longer overlaps the text; be careful not to drag from the center rotate icon.

POWERPOINT

11. Drag the icon next to the 3D model.



12. Save the presentation.

Ordering Objects

Sometimes when you insert a picture, it overlaps text or some other object(s). You can change the stacking order of objects, such as pictures and shapes, by moving them forward or backward.

If an object is covering text...

...send it behind the text.

Move an object one layer at a time: Picture Tools→Format→Arrange→Send Backward *or* Bring Forward

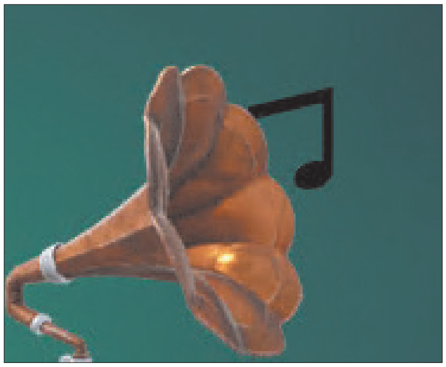
Move to front/back: Picture Tools→Format→Arrange→Send Backward menu button ▾→Send to Back *or* Bring Forward menu button ▾→Bring to Front

DEVELOP YOUR SKILLS: P3-D5

In this exercise, you will change the stacking order of objects.

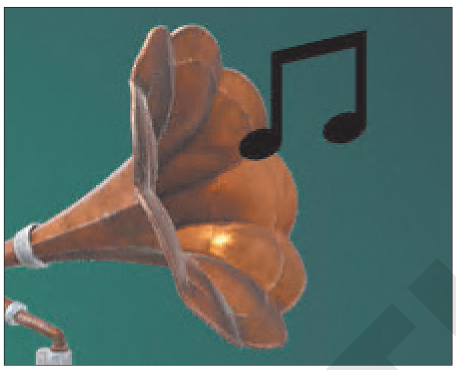
1. Save your file as: **`P3-D5-AnimationRevised`**

2. On the **title slide**, drag the music notes icon so it underlaps the gramophone picture.



Because the picture was added to the slide after the icon, it is at the top of the stacking order.

3. With the icon still selected, choose **Graphics Tools→Format→Arrange→Bring Forward menu button ▾→Bring to Front**.
4. Drag the icon so it matches this figure.



5. Save the presentation.

Align Objects

Alignment tools in PowerPoint include guides, smart guides, and gridlines. These can all be toggled on and off by right-clicking a slide and choosing the desired option. While these appear as lines on your slide, they do not display during a slide show. The alignment tools help you align objects to each other or to a slide.

Guides

Guides are dashed gray lines that display on a slide to help mark areas, such as the vertical or horizontal centers. If a guide is showing, objects will snap to it when dragged.

Display/hide guides: Right-click a slide→Grid and Guides→Guides

Smart Guides

Smart guides are similar to guides in that dragged objects snap to them, but smart guides display automatically as you drag objects to help you determine when one object is close to the top, middle, sides, or bottom of another object. While guides are dashed gray lines, smart guides are dashed red lines.

Enable/disable smart guides: Right-click a slide→Grid and Guides→Smart Guides

POWERPOINT

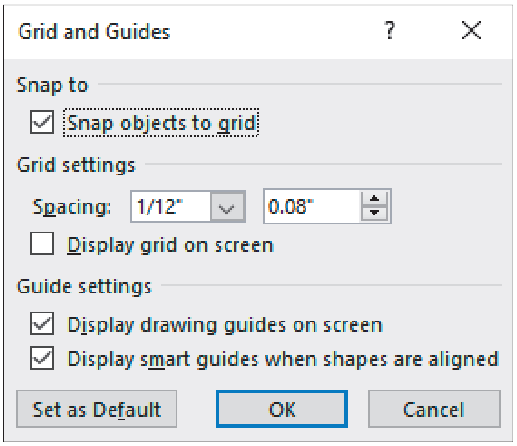
Gridlines

Gridlines are composed of a grid of guides that overlay the entire slide. You can change the size of the grid by adjusting the space between the gridlines.

Show/hide gridlines: Right-click a slide→Grid and Guides→Gridlines

Alignment Tool Options

The Grid and Guides options let you customize your alignment preferences, such as having objects snap to guides or not, setting grid spacing, and displaying smart guides when objects are dragged.



Customize the guides in the Grid and Guides dialog box.

Display the options: Right-click a slide→Grid and Guides

DEVELOP YOUR SKILLS: P3-D6

In this exercise, you will align objects.

1. Save your file as: **`P3-D6-AnimationRevised`**
2. On the **title slide**, drag the music notes icon toward the bottom of the gramophone picture.

   Smart guides display as you drag and snap the icon, helping you align the icon perfectly with the bottom of the picture or the slide text.
3. With the icon still selected, Shift+click the gramophone picture to select both and then choose **Graphics Tools→Format→Arrange→Align menu button ▼→Align Top**.

   The icon moves up to be top-aligned with the picture.
4. Save the presentation.

Group Objects

Once you have aligned objects, you can group them to help protect the alignment. Grouped objects behave as a single object, but you still can move each individual object within the group. Figuring out exactly where to click to achieve this is tricky, as you will see in the next activity.

Warning! *You cannot group an object if it resides in a placeholder box.*

With the objects selected: Graphics Tools→Format→Arrange→Group→Group or Ungroup

DEVELOP YOUR SKILLS: P3-D7

In this exercise, you will group objects.

1. Save your file as: **`P3-D7-AnimationRevised`**
2. On the **title slide** with both the gramophone picture and music notes icon still selected, choose **Graphics Tools→Format→Arrange→Group→Group**.

   The individual borders of each object are replaced by a single large border that includes both objects.
3. Click in the top-left area of the slide to deselect the grouped objects.

   The border no longer displays.
4. With no selection border visible, point your mouse to either the picture or the icon.

   Your mouse pointer displays as a four-headed arrow.
5. Drag the object to the right.

   Regardless of whether you dragged the picture or the icon, both objects move together as a single unit because they are grouped, maintaining their alignment and relative position to each other.
6. Press Ctrl+Z to undo the move.
7. Click either the picture or the icon to select the group and display its border.
8. Move the mouse around inside the border but don't click anything yet.

   As you move the mouse, it displays as a four-headed arrow only when it is over the picture or the icon, not in the empty space within the group's border.
9. Move the mouse over the picture so it displays as a four-headed arrow and then drag the picture down.

   Only the individual picture, and not the entire group, moved. If a group's border is displaying, you can drag each object individually. If a group's border is not displaying, you can drag the entire group as a single unit.
10. Press Ctrl+Z to undo the move.
11. Save the presentation.

Formatting Graphics

After your picture, 3D model, or icon is on the slide, use the various groups on the contextual Format tab to add color or effects or to align your graphics. You can add borders, drop shadows, and bevels and rotate your picture in three dimensions. You can also align, flip, crop, and perform basic image-editing tasks.

Depending on whether you select a picture, 3D model, icon, text, or group, a different Format tab (with different commands) is displayed. The various Format tabs contain similar commands, some of which are specific to the type of object selected.

FORMAT TAB FOR DIFFERENT OBJECTS

Click this object...	...to display this Ribbon tab
Picture	Picture Tools→Format
Icon	Graphics Tools→Format
3D Model	3D Model Tools→Format
Text	Drawing Tools→Format
Group	The appropriate Ribbon tab for each individual group member

POWERPOINT

DEVELOP YOUR SKILLS: P3-D8

In this exercise, you will work with the Ribbon to format a graphic.

1. Save your file as: **`P3-D8-AnimationRevised`**
2. Click the music notes icon to select the group and then click the music notes icon a second time to select it within the group.

   Two borders display: one around the group and one around the music notes icon.
3. Choose **Graphics Tools→Format→Graphics Styles→Graphics Fill menu button ▼→ White, Background 1** (the first white color swatch in the top row).

   The music notes icon turns white to match the rest of the slide.
4. Choose **Graphics Tools→Format→Graphics Styles→Graphics Effects menu button ▼→ Shadow** and point to several shadow types to view a Live Preview of each before selecting **Perspective: Upper Right**.

   As you have seen with other commands, Live Preview makes it easy to anticipate the effect of a command without the need to undo it if you don't like the effect.
5. Click the gramophone picture to select it and display its border within the group.
6. Choose **3D Model Tools→Format**.

   The 3D Model→Format tab is different from the Graphics Tools→Format tab, and there is no command to add effects to a 3D model.
7. Click a blank area of the slide to deselect the group.

8. Save your presentation.

Adding Other Graphics

Sometimes you just can't find that perfect picture through PowerPoint's online search. Often you can incorporate more unique and personal imagery if you take your own pictures or download professional photographs from a commercial website. PowerPoint includes tools and features to make the most of your pictures, including the ability to remove a background and add artistic effects.

Removing a Background

Many times a photograph contains more than what you need. In the past, it was necessary to use a graphics-editing program to remove the background or other unwanted elements. PowerPoint includes a feature that allows you to remove backgrounds with just a few clicks. When removing a background, the original picture is not harmed, because PowerPoint works on a copy of the picture embedded in the slide.

Additionally, nothing is actually removed from the picture. PowerPoint just hides areas of the picture that you mark to be removed. The hidden areas can always be made visible again. You can adjust the settings of the removal tool at any time after the background's initial removal using the Mark Areas to Keep and Mark Areas to Remove commands, so there is no need to worry about getting it perfect on your first try.

The Background Removal tool overlays in purple the areas to be removed.

With just a few clicks, the background can be removed.

Picture Tools→Format→Adjust→Remove Background

DEVELOP YOUR SKILLS: P3-D9

In this exercise, you will insert a picture and remove the background.

1. Save your file as: **`P3-D9-AnimationRevised`**
2. Scroll down the Slides panel, if necessary, and select the **Artist Successes** slide.
3. Choose **Insert→Images→Pictures**.
4. Navigate to your **PowerPoint Chapter 3** folder, select the **P3-D9-Guitarist.jpg** picture, and click **Insert**.

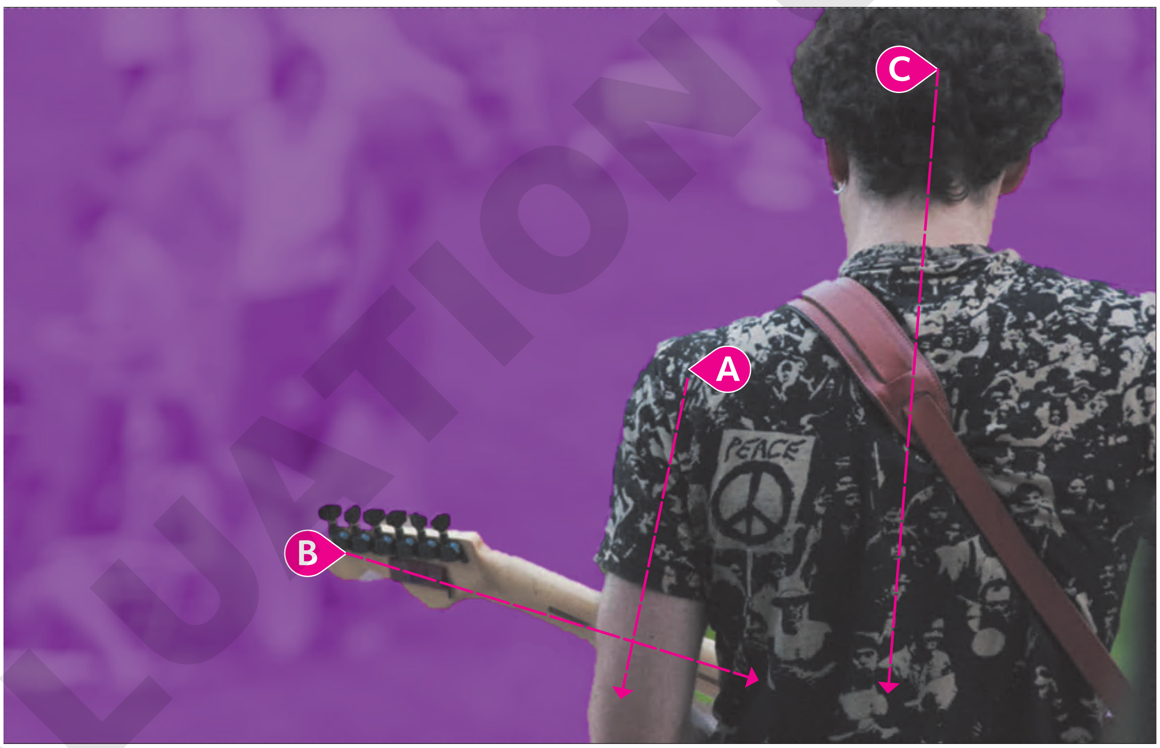
   The picture is inserted on the slide but contains more imagery than we need.

Remove the Background

5. Drag the picture up so its top snaps to the top of the slide.
6. Drag the bottom-left corner handle down and left until the bottom of the picture snaps to the bottom of the slide.

   Dragging a corner handle maintains the proportions of the picture so it doesn't appear stretched or distorted. The picture now covers the whole slide. The left part of the picture extends off the slide and will be cut off during a slide show. This is preferable to dragging the picture taller out of proportion and having it fit the slide exactly.
7. Choose **Picture Tools→Format→Adjust→Remove Background** .

   PowerPoint does its best to guess what you want to remove. A purple overlay indicates the content that will be removed. You can see the final result on the slide thumbnail in the Slides panel to the left. Unfortunately, PowerPoint did a poor job in this case! You will adjust the areas to keep and remove.
8. Choose **Background Removal→Refine→Mark Areas to Keep**.
9. Follow these steps to adjust the overlay:



   A Point to the top of the left shoulder and drag down to the bottom of the elbow to tell PowerPoint not to remove this area.

   B Point to the left edge of the guitar and drag right to keep this area.

   C Drag over any other purple on the guitarist or the guitar until neither has any purple remaining; it may take several additional strokes.
10. Choose **Background Removal→Refine→Mark Areas to Remove**.

11. Follow these steps to define areas to be removed:

Ⓐ Drag over the background in the lower-right corner to tell PowerPoint to remove this area.

Ⓑ Drag over these small sections to remove them as well.

You will probably have to go back and forth with the Mark Areas to Keep and Mark Areas to Remove buttons as you continue to tweak the purple overlay. Be sure no part of the guitarist's shirt is purple.

12. Choose **Background Removal→Close→Keep Changes**.

13. Drag the image to the right so the red ribbon at the top of the slide is covered by the picture.

14. If your slide doesn't resemble this figure, choose **Picture Tools→Format→Adjust→ Remove Background** to adjust the overlay.

Parts of the picture extend to the right beyond the slide. While it may look strange in Normal view, it will look fine as a slide show. The areas outside the slide will not display.

15. Save your presentation.

POWERPOINT

Artistic Effects

PowerPoint includes artistic effects that can be applied to pictures, making photographs look like pencil sketches, cement, or pastels. Additionally, pictures can be recolored to create a color cast that blends with your theme.

No effects have been applied.

Pencil Sketch and Recolor effects have been applied.

Picture Tools→Format→Adjust→Artistic Effects

DEVELOP YOUR SKILLS: P3-D10

In this exercise, you will apply artistic effects to a picture to enhance its visual appeal.

1. Save your file as: `P3-D10-AnimationRevised`
2. If necessary, select the picture on the **sixth slide**, *Artist Successes*.
3. Choose **Picture Tools→Format→Adjust→Artistic Effects menu button ▼**.
4. Point to several effects to see how they change the picture on the slide. Notice that a ToolTip appears when you point to an effect, indicating its name.
5. Select the **Pencil Grayscale** effect.
6. Choose **Picture Tools→Format→Adjust→Color**.
7. Point to several color adjustments to see how they change the picture on the slide.

   Notice the ToolTips that appear.
8. Select the **Recolor→Teal, Accent Color 5 Light** adjustment.
9. Save your presentation.

Inserting a Screenshot

You may want to include a picture of something on your computer screen, such as a program window or web page, in a presentation. PowerPoint's Screenshot tool lets you insert a picture of any open window or program or drag on your screen to define an area to insert. You can insert either a full program or folder window or take a screenshot of a portion of a window.

View the video "Adding Screenshots from Other Applications."

Insert→Images→Screenshot menu button ▼

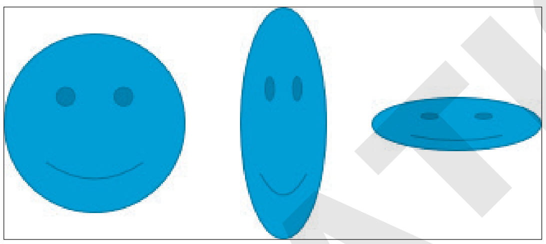
Shapes

PowerPoint offers more than 150 shapes that you can add to your slides. You can use these shapes to build your own custom flowcharts, mathematical equations, speech and thought bubbles, or other designs. Shapes can even include text—and they are all preformatted to match a slide's theme.

Insert→Illustrations→Shapes

Stretching a Shape

You can stretch shapes to make them wider/narrower or taller/shorter. All shapes are preformatted with a specific ratio of width to height, so stretching a shape can sometimes make it appear unbalanced. Whenever possible, you should maintain the original aspect ratio, as a distorted shape makes a slide appear amateurish.



The original proportions are balanced (left) but stretching the shape may cause it to look distorted and unprofessional.

Adding Text to a Shape

You can easily add text to a shape, but the text does not automatically resize itself to fit nicely. Text will, however, automatically wrap to the next line, so there is no need to tap [Enter] as you type.

Text automatically wraps to the next line but does not automatically get smaller to fit inside the shape. You may need to adjust the text size to get it to fit.

Formatting Shapes and Shape Text

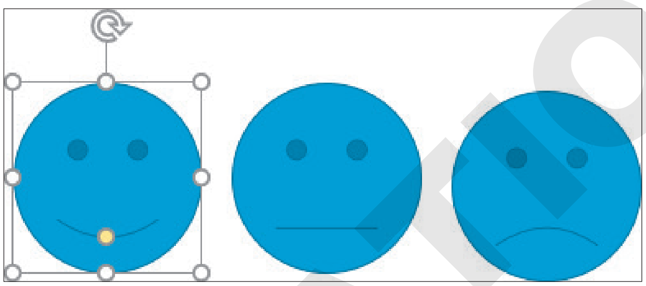
While shapes and the text they contain are automatically formatted to match the slide's theme, you may want a more exciting look such as a drop-shadow or 3D effect. Adding a Shape style or WordArt style can make your shape graphics really pop.

This is the original shape and text.

Here, a Shape style and a WordArt style have been applied to the shape and text.

Shape Variations

When selected on a slide, some shapes display a yellow handle that you can use to change the shape's properties. For example, you can change the Smiley Face shape to a frown.



Dragging the yellow handle generates shape variations.

Merging Shapes

If you need a shape that PowerPoint doesn't offer, you can merge shapes to generate your own custom shape. The benefit of this is that your new custom shape has a single outline and truly looks and behaves like a single shape rather than several overlapped or grouped shapes.

View the video "Custom Shapes."

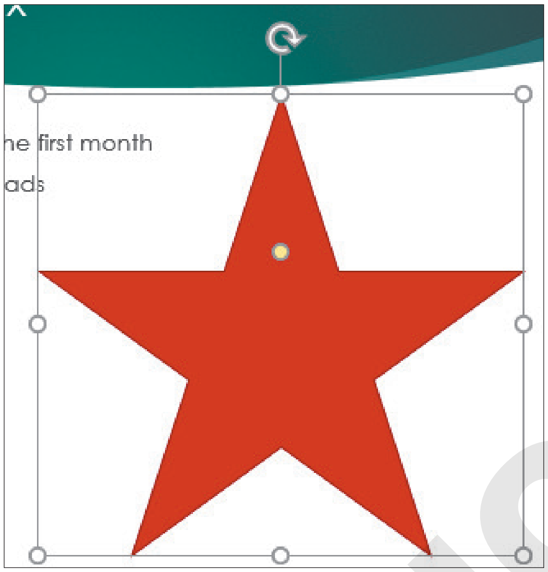
DEVELOP YOUR SKILLS: P3-D11

In this exercise, you will use a shape to emphasize important slide text.

1. Save your file as: **`P3-D11-AnimationRevised`**
2. Display the **seventh slide**, *Carolina Rex*.

3. Choose **Insert→Illustrations→Shapes menu button ▾→Stars and Banners→Star: 5 Points**.

4. Hold Shift as you drag on the slide to create a star shape that fills most of the white area to the right of the text. Make sure the shape does not extend into the top, colored part of the slide.



5. Type **`Top Seller!`** in the shape.

   Your star shape should resemble this figure, though your text may span two lines.

6. Click the dashed border of the shape so it turns solid.

   When the shape is selected, you can format its text.

7. Choose **Home→Font→Font Size menu button ▾→54**.

   The font size increases, but the text no longer fits nicely inside the shape. You will fix this in the next few steps.

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Customize the Shape

8. Follow these steps to change the shape of the star and make the text fit nicely:

- **A** Drag the **yellow handle** up a little to change the shape of the star.
- **B** Try to match your star shape to the figure. You may have to drag the **yellow handle** up or down.

Format the Shape and Text

9. Choose **Drawing Tools→Format→Shape Styles→More** ▾ **→Theme Styles→Intense Effect – Purple, Accent 6**.

The shape changes color and appears three-dimensional. However, the text remains the same.

10. Choose **Drawing Tools→Format→WordArt Styles→More** ▾ **→Fill: White; Outline: Teal, Accent Color 5; Shadow**.

The text within the shape changes.

11. If necessary, change the size of the star shape so the text fits on two lines.

12. Save your presentation.

Working with Slide Transitions

Slide transitions animate the change from one slide to another, not individual elements of the slide. Used properly, these transitions can add zest and excitement to your presentation and provide a distinct breaking point between slides. PowerPoint includes many transitions that are often used in video production, such as 3D rotations and other animated effects. The Transitions tab on the Ribbon contains commands to apply transitions, as well as sound, duration, and other options.

View the video "Slide Transitions."

Tip! *Consistency within a presentation helps keep the audience focused. Avoid using different transitions within a single presentation.*

Creating Transitions in Slide Sorter View

Most of the time, you will apply the same transition to the entire presentation because a consistent transition style looks more professional (less haphazard) and is less distracting for the audience. Using the Slide Sorter view is a quick and easy way to apply transitions, as you can see all slide thumbnails at the same time. From there you can apply transitions to a single slide, multiple slides, or all slides in a presentation.

Transitions→Transition to This Slide

Morph Transition

New!

The Morph transition is new to PowerPoint 2019. It is a visually appealing modern effect that can be difficult to use unless your slides are set up correctly. The key to this transition is having things repeat from slide to slide. For example, entire words, single text characters (letters/numbers/symbols), or specific objects (pictures/icons) must be duplicated across slides for this transition to work. When navigating slides during a slide show, the repeated elements will morph from slide to slide.

DEVELOP YOUR SKILLS: P3-D12

In this exercise, you will apply a transition to all slides except the title slide to make the slide show more interesting.

1. Save your file as: **`P3-D12-AnimationRevised`**
2. Choose **View→Presentation Views→Slide Sorter** .
3. Press Ctrl+A to select all slides.
4. Use Ctrl+click on the **first slide** to remove it from the selection.

   Slides 2–11 are selected.
5. Choose **Transitions→Transition to This Slide→Morph**.

   PowerPoint displays an animated preview of each slide transition. The default option for the Morph transition is to morph objects, but there are no objects that repeat across slides so the transition isn't very exciting.
6. Tap Esc to stop the transition previews.
7. Choose **Transitions→Transition to This Slide→Effect Options menu button ▾→ Characters**.

   This sets the transition to morph characters (letters and numbers) across slides. The effect is much more exciting now.
8. Tap Esc to stop the transition previews.

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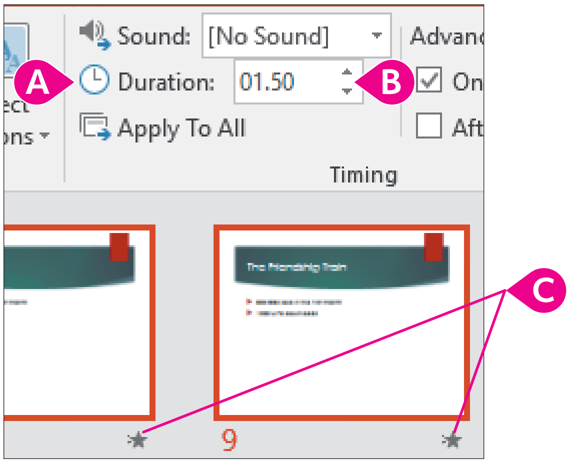
9. Follow these steps to change the transition duration:



A Locate the **Transitions→Timing→Duration** setting.

B Click the **down** button repeatedly to set the duration to **01.50**.

C Notice the star icons indicating a transition effect for the slides.

The title slide does not have the star icon because there is no transition applied to it.

Run the Presentation

10. Choose **Slide Show→Start Slide Show→From Beginning** .

    The title slide appears without a transition. The title slide would have opened with the Morph transition if you had applied the transition to it.

11. Click the mouse button to advance to the next slide.

    The Morph transition effect displays as the slides advance.

12. Continue to click the mouse button until you reach the end of the presentation and the Slide Sorter window reappears.

13. Save your presentation.

Using Slide Animation

Whereas transitions are applied to slides as a whole, animations are applied to individual objects on a slide. Animations begin only after any transition effect is completed. Some examples of animation include:

- A picture that moves across the slide to its final location
- A slide that starts out empty and then has a title and other elements that fade into view with a mouse click
- Bulleted paragraphs that fly in from the bottom of the slide, one by one, each time the presenter clicks with the mouse

Tip! *Less is more. Animation can distract an audience, so use it sparingly.*

PowerPoint offers more than 40 animations you can add to objects on a slide by using a single command. For example, the Fade animation tells PowerPoint to gradually make objects on a slide fade into view after any transition effect is completed.

View the video "Animations."

Animation Options

After applying an animation to an object, you will likely want to set the animation options to control exactly how the animation effect works. The available options differ based on whether the animation was applied to text or an image. The options also differ based on the animation itself. Additionally, you can set timing options to control the speed of the animation.

View the video "Customizing Animations."

Animations→Animation→Effect Options

DEVELOP YOUR SKILLS: P3-D13

In this exercise, you will apply an animation to text objects on a slide to draw attention to them.

1. Save your file as: `P3-D13-AnimationRevised`
2. Choose **View→Presentation Views→Normal**.
3. Display the **Our Services** slide.
4. Click once in the bulleted text so a dashed border appears around the text box.
5. Choose **Animations→Animation→More→Entrance→Float In**.

   The animation previews, and you see each level-1 paragraph float up the slide.
6. Choose **Animations→Animation→Effect Options menu button ▾→Float Down** to have the paragraphs animate from the top of the slide down.

   The numbers next to each bulleted paragraph indicate the order in which the animation is applied. By default, each paragraph will animate after a mouse click. The numbers appear only when on the Animations tab.
7. Display the **Our Recent Success** slide.
8. Click in a blank space in the bottom-right corner of the slide so the slide, rather than the slide thumbnail, is selected in the Slides panel.
9. Press Ctrl+A to select all the objects on the slide.
10. Choose **Animations→Animation→More→Entrance→Float In**.

    Applying the same animation across slides adds consistency to the presentation. The preview shows several objects floating in at the same time. The slide shows two objects marked with the number 1, one object marked with the number 2, and three objects marked with the number 3, indicating there will be three animations on this slide. In the next activity, you will change the animation grouping so the objects float in with better organization.
11. Choose **Slide Show→Start Slide Show→From Beginning** to start the slide show.
12. Click anywhere with the mouse to advance to the second slide.

    The transition effect animates, but no bulleted paragraph appears yet.
13. Click anywhere with the mouse.

    The first bulleted paragraph animates into view.

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14. Continue clicking until all four bulleted paragraphs are visible and the slide show advances to the third slide, Our Recent Success.
15. Continue clicking to trigger the animations on the Our Recent Success slide and advance to the Products and Promotional Items slide.
16. Tap [Esc] to end the slide show and return to Normal view.
17. Save your presentation.

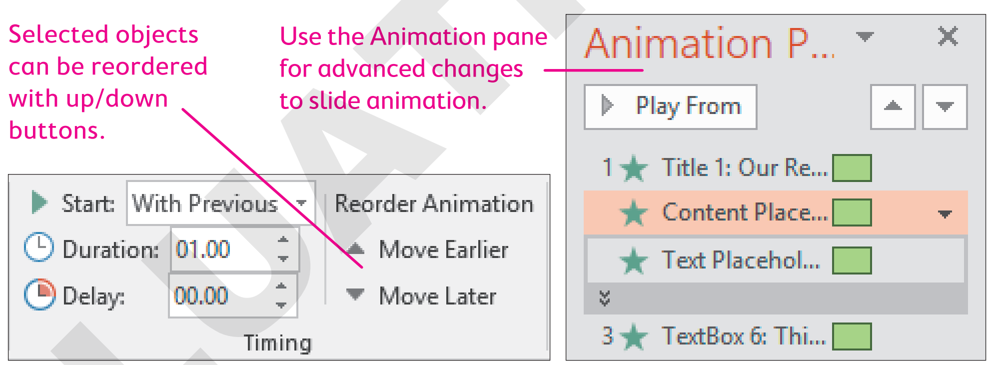
The Animation Pane

By using the Animation pane, you have many more choices for effects than you have in the animation menu you used previously. You can also individually set the animation for each element on a slide. From the Animation pane, you can control the visual effects, timing, and sequencing of the animation process. For example, rather than having to click each time to display the next animated bulleted paragraph, you can set it so the animation starts automatically after the slide transition and continues until all objects on the slide have been animated.

Animations→Advanced Animation→Animation Pane

Reorder Animations on a Slide

If objects do not animate in the order or groups you want, you can reorder them from the Animation tab or Animation pane. To change the grouping or perform other advanced changes, you must use the Animation pane. Using the Animation pane to customize each animation is a time-consuming process. Be prepared to spend a significant amount of time selecting each animated object individually and then setting its options.



View the video "The Animation Pane."

DEVELOP YOUR SKILLS: P3-D14

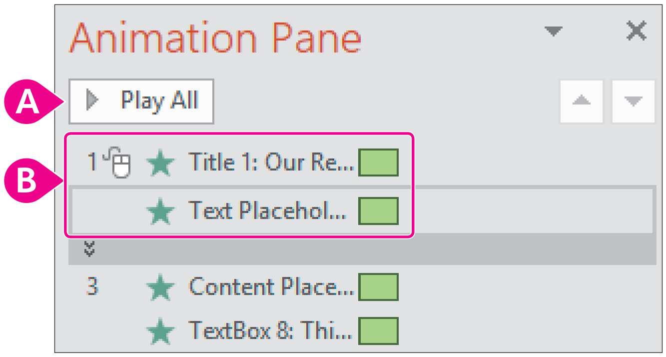
In this exercise, you will use the Animation pane to regroup and reorder the animations on the Our Recent Success slide. You will also configure the bulleted paragraphs on the Our Services slide to animate automatically after the slide transition completes. This reduces the need for you to click constantly during a slide show.

1. Save your file as: **`P3-D14-AnimationRevised`**
2. Display the **third slide**, *Our Recent Success*, if necessary.

   You will regroup the animation so the slide title animates by itself, the picture and attribution caption animates as a group, and the rest of the text animates as a single group.

3. Choose **Animations→Advanced Animation→Animation Pane**.

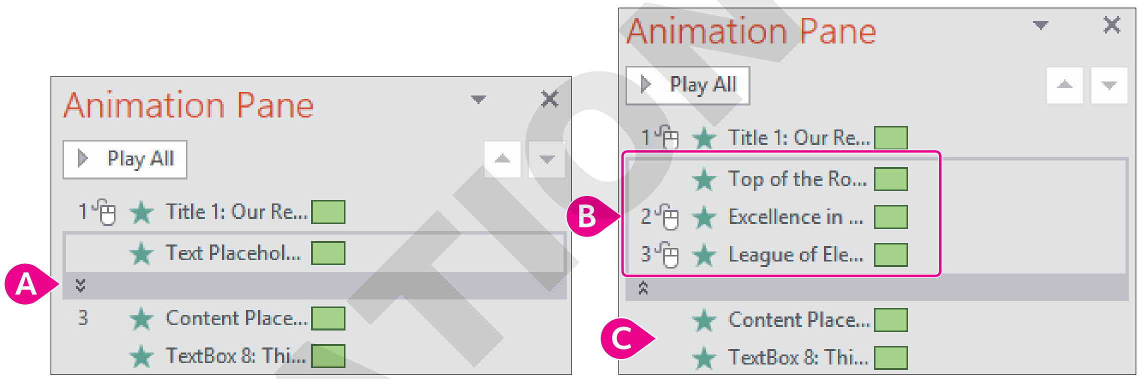
4. Follow these steps to explore the objects in the first animation sequence:



A Click **Play All** and notice that the two objects animate as a group for the first animation.

B Click each of the items in the first animation group one at a time and notice that their number becomes highlighted on the slide. The mouse icon next to the number 1 won't display if your screen isn't wide enough.

5. Follow these steps to explore the objects in the second and third animation sequences:

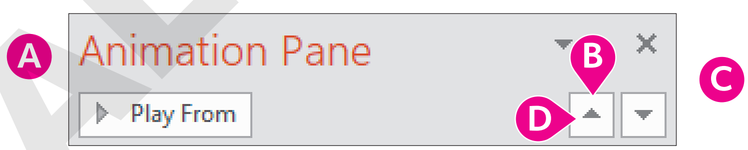


A Click the **stacked arrows** to expand the Text Placeholder and see its contents.

B Notice that the first line of text, *Top of the Rock,* animates with the first sequence while the second and third lines animate with the second and third sequences, respectively.

C The picture's attribution caption is grouped with the last line of text in the third sequence.

6. Follow these steps to redefine the animation sequence:



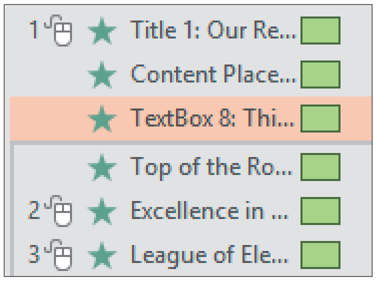
A Click the trophy picture on the slide to select it and highlight it in the Animation pane.

B Click the **Move Up** button three times.

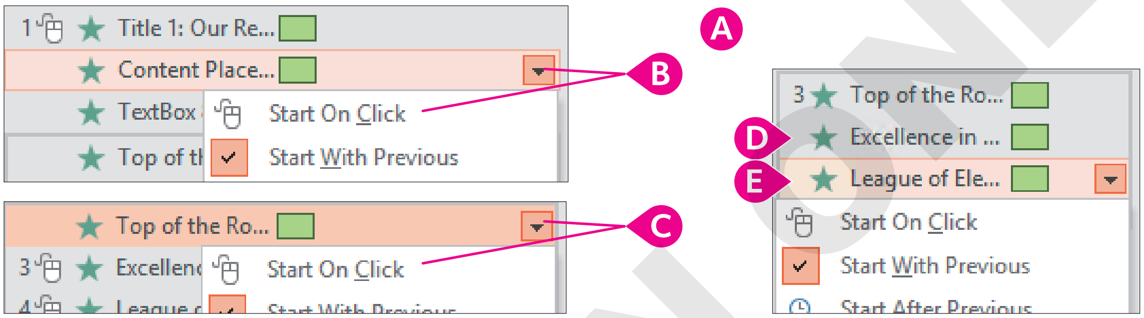
C Click the attribution caption on the slide.

D Click the **Move Up** button three times.

Your sequence should match this figure.

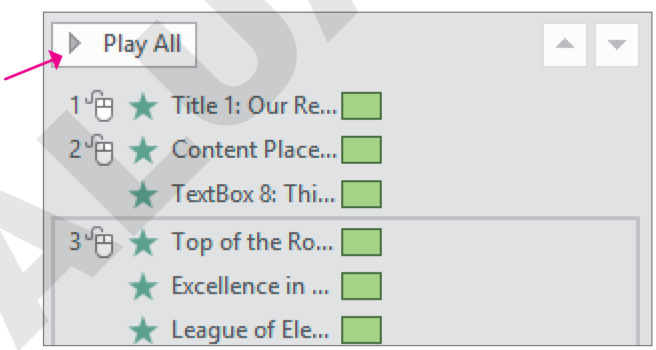


7. Follow these steps to redefine when the animations start:



- **A** Click the trophy picture on the slide to easily select it in the Animation pane.
- **B** Click its **menu** button ▾ and choose **Start On Click**.
- **C** Click the **Top of the Rock** item in the Animation pane, click its **menu** button ▾, and choose **Start On Click**.
- **D** Click the **Excellence** item and then click its **menu** button ▾ and choose **Start With Previous** to group it with the preceding items.
- **E** Click the **League** item and then click its **menu** button ▾ and choose **Start With Previous** to group it with the preceding items.

8. Your Animation pane should match this figure. Click **Play All** to preview the three animation sequences.

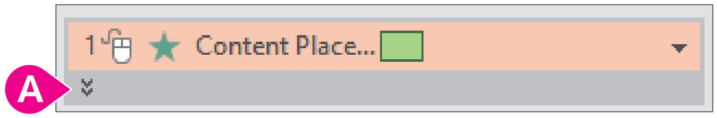


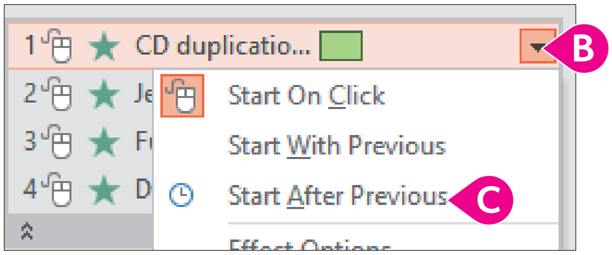
While the Play All button on the Animation pane shows a preview of the animation sequences on the slide, the mouse icons next to each group in the Animation pane indicate the mouse must be clicked during a slide show for each of the sequences to play.

Auto-Advance Animation Sequences

9. Display the **second slide**, *Our Services*.
10. Click once in the bulleted text so a dashed border appears around the text box.

11. Follow these steps to begin to configure the advanced animation settings:



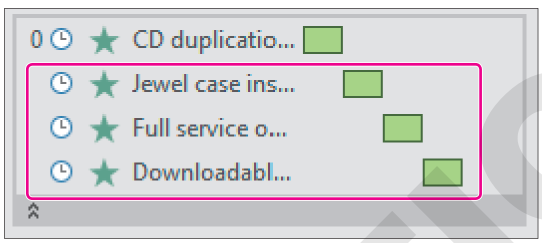


Ⓐ Click the arrows in the Animation pane to expand the items.

Ⓑ Click the first item and then click its **menu** button ▾ to display the menu.

Ⓒ Choose **Start After Previous** so the animation begins automatically after the previous animation (in this case, the slide transition).

12. Ensure each of the remaining items is set to **Start After Previous**.



The green rectangles next to each item are staggered to indicate the items will animate one after the other rather than all at the same time. The clock icon next to each item indicates the animation will start automatically rather than requiring a mouse click.

13. Choose **Slide Show→Start Slide Show→From Beginning**.

14. Click anywhere with the mouse to advance to the second slide.

The bulleted paragraphs animate automatically after the slide transition ends. Each animation happens sequentially.

15. Click anywhere to advance to the third slide.

The slide displays, but no content displays yet.

16. Click anywhere on the slide to trigger the first animation sequence.

The slide title animates into view.

17. Click anywhere on the slide to trigger the second animation sequence.

The picture and caption animate into view.

18. Click anywhere on the slide to trigger the third animation sequence.

The detail text animates into view.

19. Tap Esc to end the slide show and return to Normal view.

20. Save your presentation.

3D Animations

New!

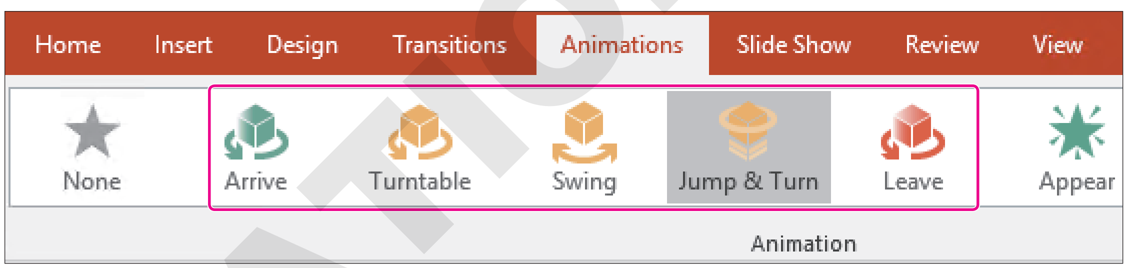
If you've added a 3D model to a slide, you can add a 3D animation. These special animations are available only to 3D models and cannot be applied to non-3D objects.

DEVELOP YOUR SKILLS: P3-D15

In this exercise, you will apply a 3D animation.

1. Save your file as: **`P3-D15-AnimationRevised`**
2. Display the **first slide** and click the gramophone picture.

   The gramophone and music notes icon are still grouped. You will break up the group so you can more easily apply a different animation to each object.
3. Choose **Graphics Tools→Format→Arrange→Group menu button ▾→Ungroup**.
4. Click any blank area of the slide to deselect the objects.
5. Click the gramophone picture to select it.
6. Navigate to the **Animations** tab and notice that several new animations applicable only to 3D models appear in the Animation gallery.
7. Click the 3D animations one at a time to preview each on the slide and then choose the **Jump & Turn** animation.



8. Save your presentation.

Motion Paths

Rather than limiting yourself to the default single straight lines that some animated objects travel, you can create custom animation paths so objects follow a curved line or some other path. There are several preset motion paths from which to choose, or you can create your own custom path.

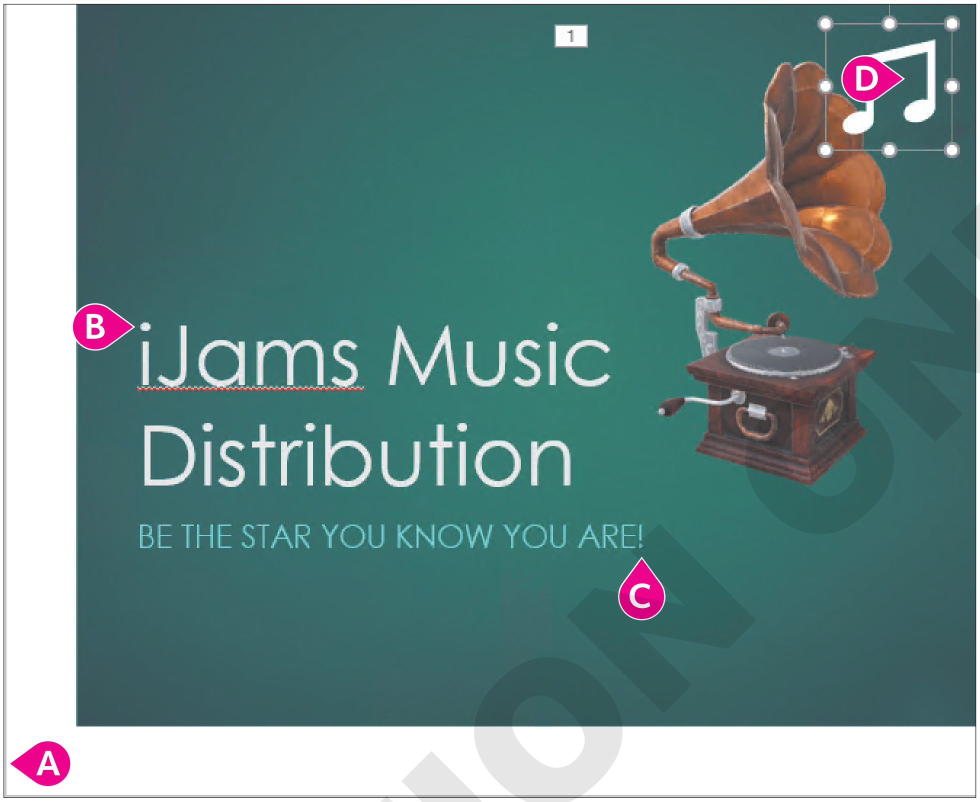
The Motion Paths category in the Animation gallery includes preset and custom animation paths.

DEVELOP YOUR SKILLS: P3-D16

In this exercise, you will define a custom path for an animated object.

1. Save your file as: **`P3-D16-AnimationRevised`**
2. Click the music notes icon on the slide.

3. Choose **Animations→Animation→More** ▾ **→Motion Paths→Custom Path**.
4. Follow these steps to create a motion path:



Ⓐ Click the bottom-left corner of the slide to set the starting point.

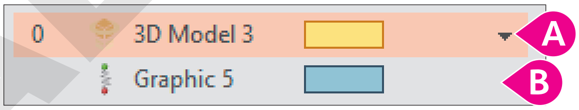
Ⓑ Click the **dot** above the letter *i*.

Ⓒ Click the **dot** under the exclamation point.

Ⓓ Double-click in the middle of the icon's border box to end the path.

The motion path is completed and PowerPoint previews the animation on the slide. At this point, you could experiment with dragging the borders of the animation path to resize it just as with any object. In this case, you will leave it as it is.

5. Follow these steps to simultaneously animate the gramophone and music notes as soon as the slide displays:



Ⓐ Click the **3D Model** item in the Animation pane to select it, click its **menu** button ▾, and choose **Start With Previous**.

Ⓑ Set the second item (music notes) to also **Start With Previous**.

6. Choose **Slide Show→Start Slide Show→From Beginning** .

The picture and icon animate together when the slide displays without having to click the mouse.

7. Tap Esc to end the slide show and return to Normal view.
8. Save your presentation.

POWERPOINT

Adding Sound Effects

PowerPoint provides audio clips and sound effects to accompany or accentuate your slide elements. For example, you may attach sound effects to slide transitions or animations. You can use the Transitions tab to add a sound to a slide transition or the Animation Pane to add a sound to an animation.

View the video "Sound Effects on Transitions."

Transitions→Timing→Sound

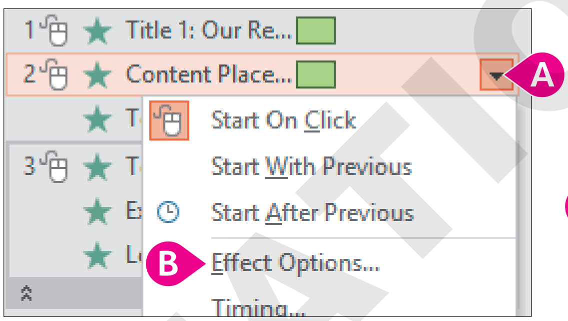
Sometimes you don't want a sound effect to play during a slide transition, but rather when an animation causes an object to move across the slide. PowerPoint lets you do this as well.

View the video "Sound Effects on Animations."

DEVELOP YOUR SKILLS: P3-D17

In this exercise, you will apply two sounds to the presentation to enhance an animation.

1. Save your file as: **`P3-D17-AnimationRevised`**
2. Choose the **Our Recent Success** slide and then select the picture.
3. Follow these steps to display the effect options:

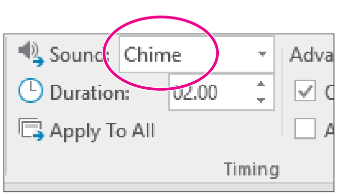


- A Click the drop-down **menu** button ▾ for the animation.
- B Choose **Effect Options**.
- C On the **Effect** tab, click the **Sound menu** button ▾ and choose **Applause**.

4. Click **OK**, and the animation and sound will be previewed.

Apply a Transition Sound Effect

5. Display the **Our Services** slide.
6. Choose **Transitions→Timing→Sound→Chime**.



PowerPoint applies the Chime sound to the transition effect for this slide.

7. Choose **Slide Show→Start Slide Show→From Beginning**.
8. Navigate through the presentation until you hear the applause and see the animation on the Our Recent Success slide.

Tip! *You may not be able to hear the sound effect if your computer does not have speakers.*

9. Tap Esc to end the slide show early and return to Normal view.
10. Click the **X** to close the Animation pane.

11. Save your presentation and exit PowerPoint.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: P3-R1

Work with Pictures

In this exercise, you will add pictures to the Kids for Change community presentation to increase interest in the group's promoted events.

1. Start PowerPoint, open **P3-R1-KidsPics** from the **PowerPoint Chapter 3** folder, and save it as: **`P3-R1-KidsPicsRevised`**
2. Choose the **second slide**, *Events*.
3. Choose **Home→Slides→Layout menu button ▾ →Two Content**.

Insert and Format a Picture

4. Click **Online Pictures** on the slide to display the Online Pictures search window.
5. Type **`calendar`** in the search box and tap Enter.
6. Scroll through the results until you find an appropriate image, click it, and then click **Insert**.
7. Click a blank area of the slide to deselect the picture and its attribution caption (if applicable).
8. Click the picture to select it.
9. Drag any of the picture's **corner handles** to resize it so it fills the right half of the slide.
10. Drag from the center of the picture to move and position it so it does not overlap any text.
11. Drag the **rotate handle** above the top edge of the picture to rotate it slightly for visual interest.
12. With the picture still selected, go to **Picture Tools→Format→Picture Styles**.
13. Point to several of the thumbnail samples in the Picture Styles gallery to preview them and then click one to apply it. Choose a style that works well with your calendar image.
14. Drag the **attribution caption**, if one was inserted, to an appropriate location near the picture.

Apply Advanced Image Editing Skills

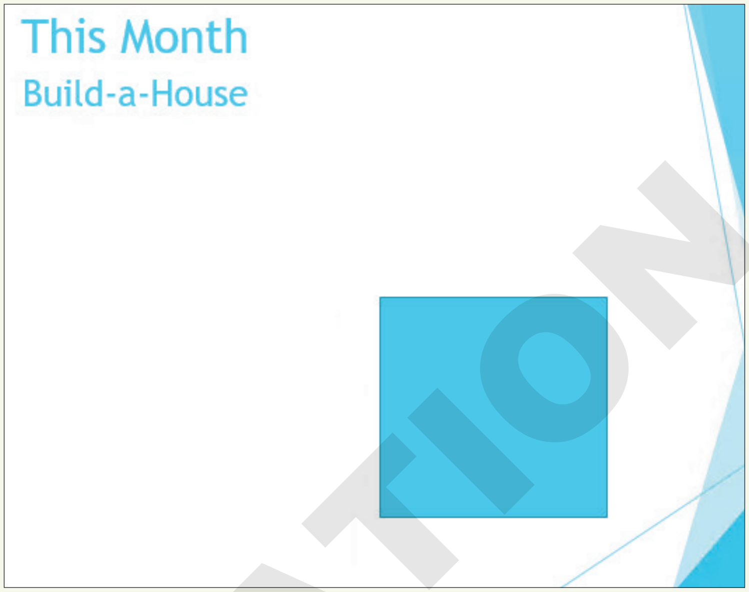
15. Display the **fourth slide**, *Contact Us*.
16. Choose **Insert→Images→Pictures** .
17. Browse to your **PowerPoint Chapter 3** folder and insert the **P3-R1-Phone.jpg** picture.
18. With the picture selected on the slide, choose **Picture Tools→Format→Adjust→ Remove Background** .
19. Use the Mark Areas to Keep and Mark Areas to Remove commands to remove the background (be sure to keep the phone and the wires) and then choose **Background Removal→Close→Keep Changes**.
20. Move the phone so it is roughly centered below the phone number.
21. With the picture still selected, choose **Picture Tools→Format→Adjust→Artistic Effects→ Pencil Sketch**.
22. Choose **Picture Tools→Format→Adjust→Color→Recolor→Dark Green, Accent Color 4 Light**.
23. Save the changes and exit PowerPoint.

REINFORCE YOUR SKILLS: P3-R2

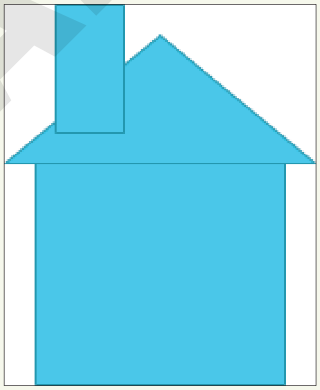
Add Shapes and Animations

In this exercise, you will create a custom shape of a house and incorporate animation to add visual appeal to the presentation.

1. Start PowerPoint, open **P3-R2-KidsAnimated** from the **PowerPoint Chapter 3** folder, and save it as: `P3-R2-KidsAnimatedRevised`
2. Display the **second slide**, *This Month*.
3. Choose **Insert→Illustrations→Shapes menu button ▾→Rectangles→Rectangle**.
4. Drag on the slide to draw a rectangle. Resize and move it so it roughly matches this figure.



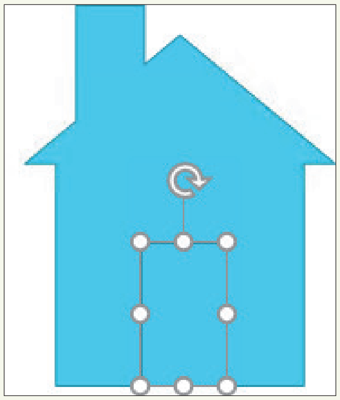
5. Choose **Insert→Illustrations→Shapes menu button ▾→Basic Shapes→Isosceles Triangle**.
6. Drag on the slide to draw a triangle to act as the roof of the house, resizing and moving it so it roughly matches the figure in step 8.
7. Choose **Insert→Illustrations→Shapes menu button ▾→Rectangles→Rectangle**.
8. Drag on the slide to draw a small rectangle to act as a chimney, resizing and moving it to roughly match this figure.



POWERPOINT

Merge Shapes

9. Click the large rectangle on the slide to select it and then use [Shift]+click on the triangular roof and the small chimney to select all three shapes.
10. Choose **Drawing Tools→Format→Insert Shapes→Merge Shapes** **menu button ▾→Union**.
11. Choose **Insert→Illustrations→Shapes menu button ▾→Rectangles→Rectangle**.
12. Drag on the slide to draw a rectangle to act as the door; adjust as necessary to roughly match this figure.

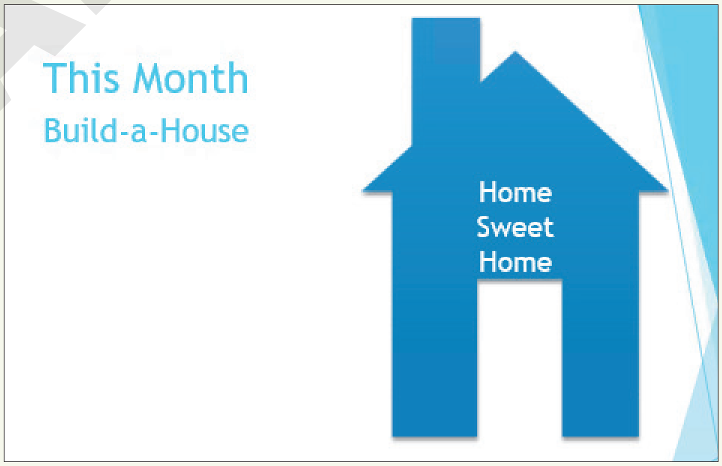


13. Click the door shape to select it, if necessary, and then use [Shift]+click on the house so both shapes are selected.
14. Choose **Drawing Tools→Format→Insert Shapes→Merge Shapes** **→Combine**.

Format and Add Text to a Shape

15. Click the house shape to ensure it's selected and its border displays and then type:
`Home`[Enter]`Sweet`[Enter]`Home`[Enter]
16. Click the shape's dashed border to select it.
17. Choose **Home→Font→Font Size menu button ▾→36**.

    If your text no longer fits in the shape, choose a smaller font size or adjust the size of the house shape.
18. Choose **Drawing Tools→Format→Shape Styles→More** **→Theme Styles→Intense Effect – Blue, Accent 2** (bottom thumbnail in the third column).
19. Resize and move the shape so it fits in the upper-right area of the slide; adjust the font size as necessary.

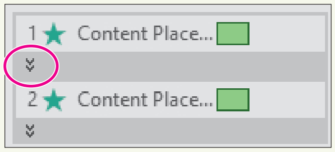


Apply Transition Effects

20. Select **slide 2**, *This Month*, in the Slides panel.
21. Use Shift+click on the **last slide** in the Slides panel to select all but the title slide.
22. Choose **Transitions→Transition to This Slide→More** →**Subtle→Random Bars**.

Add Animation

23. Display the **second slide**, *This Month*, if necessary, and then click the house shape to select it.
24. Choose **Animations→Animation→More** →**Entrance→Bounce**.
25. Choose **Animations→Timing→Start menu button** →**After Previous**.
26. Click the up arrow on the Delay box four times to set the delay to **1 second**.
27. Display the **third slide**, *Event Benefits*.
28. Click in any text in the left column so a dashed border appears around the text box.
29. Choose **Animations→Animation→More→Entrance→Float In**.
30. Click in any of the text in the right column so a dashed border appears around the text box and choose **Animations→Animation→More→Entrance→Float In**.
31. Choose **Animations→Advanced Animation→Animation Pane**.
32. Click the double arrows to expand the top group of content in the Animation pane.



33. Click the second item, **Homeless families**, to display its menu button.
34. Click the item's **menu** button and choose **Start After Previous**.
35. Click the third item, **$0 mortgage**, and then click its **menu** button and choose **Start After Previous**.
36. Click the fourth item, **A fresh start**, and then click its **menu** button and choose **Start After Previous**.
37. Expand the second group's contents and set each of the four items to **Start After Previous**.

Add a Sound Effect to an Animation

38. Display the **second slide**, *This Month*.
39. Click the house shape to select it.
40. Click the single item in the Animation pane and then click its **menu** button and choose **Effect Options**.
41. Set the Sound menu to **Whoosh** and click **OK**. Close the Animation pane.
42. Choose **Slide Show→Start Slide Show→From Beginning** and click each slide until the slide show ends and you return to Normal view.
43. Save the changes and then exit PowerPoint.

REINFORCE YOUR SKILLS: P3-R3

Add Visual Interest

In this exercise, you will add a 3D model, pictures, and animation to enhance a presentation and inspire audience members to donate to the group's toy drive.

1. Start PowerPoint, open **P3-R3-KidsVisual** from the **PowerPoint Chapter 3** folder, and save it as: `P3-R3-KidsVisualRevised`
2. Display the **third slide**.
3. Choose **Home→Slides→Layout menu button ▾→Two Content**.

Insert Pictures

4. Click the **Pictures** icon on the slide to insert a picture from your computer.
5. Browse to your **PowerPoint Chapter 3** folder and insert the **P3-R3-Girl.jpg** picture.
6. Drag the picture to roughly fill the right side of the slide.
7. Display the **fourth slide** and choose **Home→Slides→Layout menu button ▾→ Two Content**.
8. Click the border of the placeholder box on the right and tap [Delete].

   You changed the slide layout to Two Content to match the previous slide and then deleted the placeholder on the right because there is no icon on it to add a 3D model.
9. Choose **Insert→Illustrations→3D Models**.
10. Type `truck` in the search box and tap [Enter].
11. Scroll through the results, click a truck you like, and then click **Insert**.
12. Adjust the picture as indicated:
    - Drag the **rotate icon** in the center of the truck to rotate it to your liking.
    - Drag a **corner handle** of the truck's border to enlarge the truck to your liking.
    - Drag the truck picture to roughly center it on the slide.
13. Display the **fifth slide** and choose **Insert→Images→Online Pictures**.
14. Type `toy` in the search box and tap [Enter].
15. Scroll through the results until you find a toy you like and click that image to select it.
16. Continue to scroll and look for more toys. Click additional toys to add them to your selection. After you have selected six toys, click **Insert**.

Move, Size, and Rotate Pictures

17. Click an empty area of the slide to deselect the inserted pictures.
18. Click one of the toys on the slide to select it.
19. Adjust the picture as indicated:
    - Drag a **corner handle** on the picture's border to make the picture smaller.
    - Drag the **rotate handle** above the top edge of the picture to slightly rotate it.
    - Drag the picture to move it to a position of your liking.

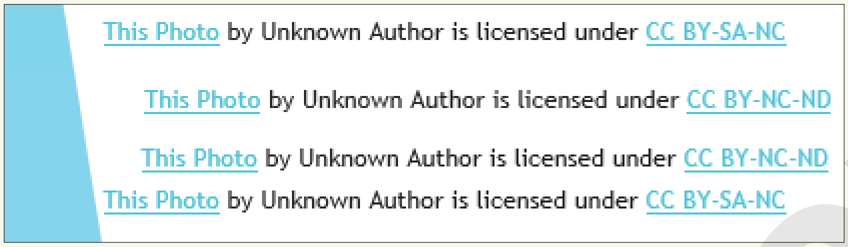
    Do not be concerned if the picture becomes separated from its attribution caption, if one exists. You will format all the attribution captions later.

20. Resize, rotate, and move the remaining toys so they are spaced throughout the slide, leaving room at the bottom for the attribution captions (if any exist).

Do not be concerned if the picture backgrounds overlap one another or the slide text at this point.

Align and Space Objects

21. Drag each of the attribution captions to the bottom of the slide as shown; do not be concerned with the alignment or spacing.



22. Click the first caption to select it and then Shift+click the other captions so all are selected.

23. Choose **Drawing Tools→Format→Arrange→Align menu button ▾→Align Left**.

24. Choose **Drawing Tools→Format→Arrange→Align menu button ▾→Distribute Vertically**.

Remove a Background

25. Click any toy and choose **Picture Tools→Format→Adjust→Remove Background**.

26. Use the **Mark Areas to Remove** and **Mark Areas to Keep** commands as needed to define the background that should be removed and then choose **Background Removal→Close→ Keep Changes**.

27. Remove the backgrounds of the other five pictures, if necessary, and then drag the pictures to reposition them to your liking.

Format Pictures

28. Display the **third slide** and click the picture of the girl and her teddy bear.

29. Choose **Picture Tools→Format→Picture Styles→More→Rotated, White**.

30. Drag the picture to reposition it, if necessary.

31. Choose **Picture Tools→Format→Adjust→Artistic Effects menu button ▾→Glow, Diffused**.

Add and Format a Shape with Text

32. Choose **Insert→Illustrations→Shapes menu button ▾→Stars and Banners→Ribbon: Tilted Up**.

33. Use Shift+drag to create a proportional ribbon that fills the left side of the slide under the text.

34. Type: `My 1st toy`

35. Click the blue ribbon shape to select it and tap Ctrl+C to copy it.

36. Display the **fourth slide** with the truck.

37. Tap Ctrl+V to paste the shape.

38. Drag the ribbon and truck pictures so they don't overlap.

39. Click the blue ribbon shape and then choose **Drawing Tools→Format→Shape Styles→Shape Effects menu button ▾→Reflection→Reflection Variations→Half Reflection: Touching**.
40. Choose **Home→Clipboard→Format Painter** to copy the formatting.
41. Display the **third slide** and click the blue ribbon to duplicate the shape's effect.

Apply Transition Effects

42. Choose **View→Presentation Views→Slide Sorter**.
43. Click **slide 2** and then Shift+click on **slide 5** to select all but the title slide.
44. Choose **Transitions→Transition to This Slide→More→Exciting→Glitter**.
45. Choose **Transitions→Transition to This Slide→Effect Options menu button ▾→Diamonds from Top** and click the **down arrow** as necessary to set the duration to **02.00**.

Apply an Animation

46. Double-click **slide 5** to display it in Normal view.
47. Click one of the toys on the slide and choose **Animations→Animation→More→Entrance→Grow & Turn**.
48. Click a second toy on the slide to select it and choose **Animations→Animation→More→Entrance→Grow & Turn**.
49. One at a time, click each remaining toy and apply the **Grow & Turn** animation.

Use the Animation Pane

50. Choose **Animations→Advanced Animation→Animation Pane**.
51. Click the first animated item in the Animation pane to display its menu button ▾.
52. Click the **menu** button ▾ and choose **Start After Previous**.
53. One at a time, click each remaining item and set it to **Start After Previous**.

Add a Sound Effect to an Animation

54. Click the last item in the Animation pane, click its **menu** button ▾, and choose **Effect Options**.
55. Set the sound effect to **Applause**, click **OK**, and then close the Animation pane.
56. Choose **Slide Show→Start Slide Show→From Beginning** and click each slide to view the presentation. Return to Normal view when you are finished.
57. Save the changes and then exit PowerPoint.

Apply Your Skills

APPLY YOUR SKILLS: P3-A1

Work with Pictures

In this exercise, you will add pictures and remove the backgrounds for the Universal Corporate Events presentation. You will also format the pictures to enhance the slides' visual appeal.

1. Start PowerPoint, open **P3-A1-UniversalPics** from the **PowerPoint Chapter 3** folder, and save it as: `P3-A1-UniversalPicsRevised`
2. Choose the **third slide**, *Catering*, and apply the **Two Content** layout.
3. Select **slides 4–9** in the Slides panel and apply the **Two Content** layout to change all selected slides at once.
4. Display **slide 3**.
5. Click the **Online Pictures** icon and then search for and insert a picture appropriate for a catering slide.
6. Search for and insert an appropriate photograph on slides 4–9. Each slide's photograph should represent the slide's text content.

Format Objects and Finalize the Presentation

7. Resize and reposition the photographs on each slide so they fill the right half of the slide.
8. Add a picture style or picture effect to each photograph. Use a maximum of two effect styles.
9. Remove each photo's background if applicable. You may want to resize or move the photos after removing the backgrounds.
10. Display **slide 5**, *Graphic Design*, and apply an artistic effect to the photo.
11. Save the changes and exit PowerPoint.

APPLY YOUR SKILLS: P3-A2

Add Shapes and Animations

In this exercise, you will add shapes and an animation to emphasize specific slides.

1. Start PowerPoint, open **P3-A2-UniversalAnimated** from the **PowerPoint Chapter 3** folder, and save it as: `P3-A2-UniversalAnimatedRevised`
2. Display **slide 3**, *Vegan*.
3. Insert the **Explosion: 14 Points** shape.
4. Type `Certified Vegan!` in the shape.
5. Resize and reposition the shape so it fills the area below the text.
6. Enlarge the font size of the shape's text to be as large as possible while remaining inside the shape.
7. Add the **Explosion: 8 Points** shape to **slide 4** with the text: `Certified Kosher!`
8. Resize and reposition the shape so it fills the area below the text.
9. Enlarge the font size of the shape's text to be as large as possible while remaining inside the shape.

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10. Add the **Ribbon: Curved and Tilted Up** shape to **slide 5** with the text: `Certified Organic!`
11. Use the three yellow dots on the shape to alter the shape to your liking.
12. Resize and reposition the shape so it fills the area below the text.
13. Enlarge the font size of the shape's text to be as large as possible while remaining inside the shape.

Merge and Format Shapes

14. Display the **last slide** and insert a **Rectangle** shape, resizing it to be tall and thin.
15. Insert a **Teardrop** shape and adjust the size and shape so it looks like a candle flame. Position it on top of the thin rectangle.
16. Merge the **Rectangle** and **Teardrop** shapes into a single candle shape.
17. Copy the new candle shape and paste three copies on the slide, arranging them similarly to this example:

18. Select all four candles and group them.
19. Insert a **Rectangle: Rounded Corners** shape on the slide and position it over the bottom of the candles to create a birthday cake.
20. Go to **Drawing Tools→Format→Shape Styles** and apply the **Moderate Effect – Dark Red, Accent 2** style to the shapes on **slides 3–6**.

Apply Transition Effects and Animations

21. Select all slides except the title slide.
22. Apply the **Checkerboard** transition and set the Effect Options to **From Top**.
23. Display the **second slide**, *Catering*.
24. Apply the **Fade** animation to the bulleted paragraphs.
25. Use the Animation pane to select the **Kosher Dishes** item and set it to **Start with Previous**.
26. Set **Meat-lovers dishes** and **Desserts** to **Start with Previous** so all four paragraphs will fade in at the same time after a click.

Add a Sound Effect to an Animation

27. Select the **Vegan dishes** item in the Animation pane and apply the **Applause** sound effect.
28. Close the Animation pane.

29. Choose **Slide Show→Start Slide Show→From Beginning** and click each slide until the slide show ends and you return to Normal view.
30. Save the changes and exit PowerPoint.

APPLY YOUR SKILLS: P3-A3

Add an Icon

In this exercise, you will add 3D Models, icons, and animation to enhance the Universal Corporate Events presentation.

1. Start PowerPoint, open **P3-A3-UniversalVisual** from the **PowerPoint Chapter 3** folder, and save it as: `P3-A3-UniversalVisualRevised`
2. Display the **second slide**.
3. Insert a world icon from the Location category of icons.
4. Enlarge the icon and center it on the slide.

Remove a Background and Apply Artistic Effects

5. Display the **title slide**.
6. Insert the **P3-A3-Hand.jpg** picture from the **PowerPoint Chapter 3** folder.
7. Use the **Background Removal** tool to remove the picture's white background.
8. Move the picture to the lower-right corner of the slide and resize it so it doesn't overlap any text.
9. Apply the **Photocopy** artistic effect to the picture.
10. Use the **Picture Tools→Format→Adjust→Color** gallery to apply **Color Tone→Temperature: 7200k**.

Add 3D Models

11. On the **third slide**, insert a 3D model of a bus.
12. Rotate and enlarge it so it fills the right half of the slide.
13. Add **3D models** to **slides 4 and 5** appropriately matched to their content.

Apply Transition Effects and Add Animation

14. Apply the **Reveal** transition to all but the title slide.
15. Set the effect on all slides to **Through Black from Right**.
16. Set the transition duration on all slides to **3** seconds.
17. Apply the **Fly In** animation to the hand picture on the **title slide**.
18. Set the option effect to appear **From Right**.
19. Apply the **Arrive** 3D animation to the 3D models on **slides 3–5**.

Use the Animation Pane to Add Sound

20. Use the Animation pane to add the **Whoosh** sound effect to the hand's animation.
21. Close the Animation pane.
22. Choose **Slide Show→Start Slide Show→From Beginning** and click each slide to view the presentation, returning to **Normal** view when you are finished.
23. Save the changes and exit PowerPoint.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: P3-P1

Adding Flair to Your Presentation

Now it's time to liven up the New at Taylor Games *presentation. In this exercise, you'll add a picture, an icon, and shapes along with animations and slide transitions to create interesting effects.*

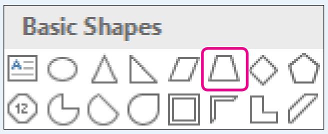
1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P3_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P3_P1_Start** from your **PowerPoint Chapter 3** folder.
2. Apply these Grid and Guide settings:
   - **Snap objects to grid**
   - Spacing: **½"**
   - **Display grid on screen**
   - Guide settings: You decide
3. On **slide 1**, insert the **Taylor Games Logo.png** picture from your **PowerPoint Chapter 3** folder.
4. Move the logo to the position shown here, letting it snap to the grid points.

5. On **slide 3**, insert the following **People** icon, positioning and sizing it as shown:

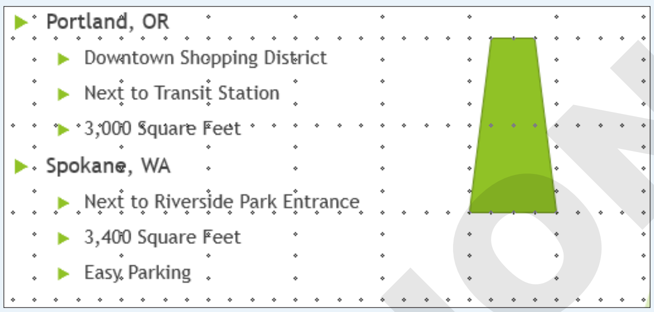
6. Apply an animation to the icon using these settings:

Setting	Value
Animation	**Fly In**
Start	**With Previous**
Effect Options Direction	**From Bottom-Right**
Effect Options Sound	**Whoosh**

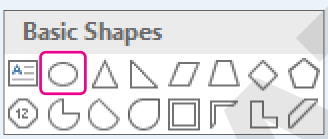
7. On **slide 5**, insert a shape using these guidelines:
   - Set the Grid and Guides Spacing to **¼"** and choose **Snap objects to grid**.
   - Choose the **trapezoid** shape.

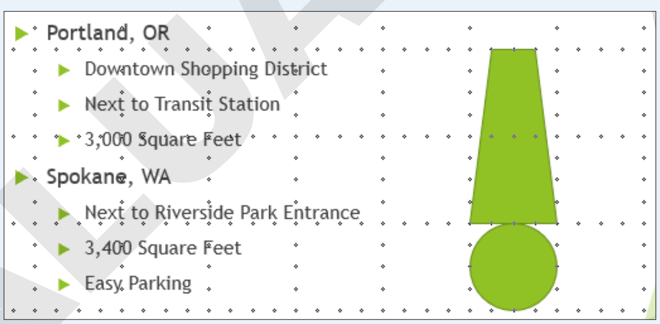


   - Create the trapezoid with the size and position shown here:

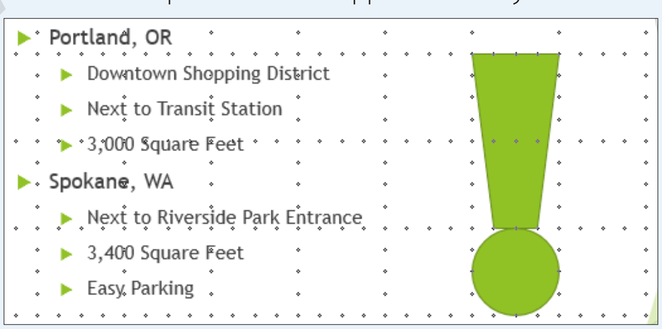


8. Choose the **oval** shape to insert a circle with the size and position shown here:



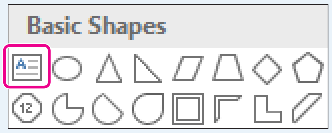


9. Rotate the trapezoid so it is flipped vertically.



10. Insert and format a shape using these guidelines:

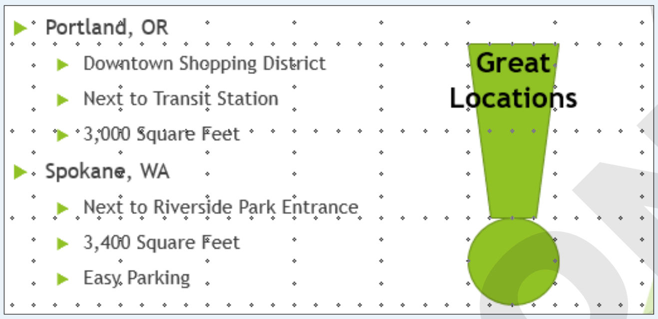
- Choose the **text box** shape.



- Position the text box by clicking somewhere above the trapezoid.
- Type `Great`, tap [Enter], and then type `Locations` to complete the text entry.
- Set the font size of all text to **24** and apply **Bold** formatting.
- **Center** the text within the box.

11. Move the text box until it is positioned approximately as shown here, where the word *Great* is contained within the top of the trapezoid.

Hint: You can nudge objects using keyboard arrows and the [Ctrl] *key or turn off grid snapping.*



12. On **slide 1**, apply the following animations and settings:

Text to Apply To	Animation and Setting
New at Taylor Games title	**Grow & Turn**, **Start After Previous**
Products, Stores, and More! subtitle	**Float In**, **Start With Previous**
Taylor Games Logo picture	**Shape**, **Start With Previous**

13. Reorder the animations to occur in this sequence:

- *Taylor Games Logo* picture
- *New at Taylor Games* title
- *Products, Stores, and More!* subtitle

14. Add the **Wipe** transition to **slides 2–5**.

15. Add a **Drum Roll** transition sound to **slide 1**.

16. Save your presentation.

- *Using eLab:* Save to your **PowerPoint Chapter 3** folder as **`P3_P1_eSubmission`** and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save to your **PowerPoint Chapter 3** folder as: **`P3_P1_Submission`**

PROJECT GRADER: P3-P2

Enhance the Classic Cars Club Presentation

It's time to put the Classic Cars Club presentation in motion. In this exercise, you will add pictures and other enhancements prior to the first presentation to potential advertisers.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P3_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P3_P2_Start** from your **PowerPoint Chapter 3** folder.
2. On **slide 1**, insert the **Classic Cars 1.png** picture from your **PowerPoint Chapter 3** folder.
3. Move the picture down so it is vertically centered (doesn't have to be exact) between the subtitle and bottom of the slide.

   Hint: You can nudge objects using keyboard arrows and the Ctrl *key.*
4. Use these guidelines to align the slide objects:
   - Make these Grid and Guide settings: **Snap Objects to Grid**, **Display Grid on Screen**, Grid Spacing, **1"**.
   - Move the title, subtitle, and picture to the right until their right edges snap to the vertical grid line as shown here.
   - If necessary, nudge the picture up or down until it closely matches the position shown here:

5. Apply an animation to the picture using these settings:

Setting	Value
Animation	**Fly In**
Start	**With Previous**
Effect Options Direction	**From Left**
Effect Options Sound	**Whoosh**

6. On **slide 4**, change the layout to **Two Content**.
7. Select the **Pictures** icon in the right placeholder to insert the **Classic Cars 2.jpg** picture from your **PowerPoint Chapter 3** folder.
8. Apply the artistic effect you like best to the picture (choose any except *None*).

9. On **slide 5**, insert the following **Technology and Electronics** icon, positioning and sizing it as shown here:

10. Apply an animation to the icon using these settings:

Setting	Value
Animation	**Grow & Turn**
Start	**With Previous**
Effect Option Sound	**Cash Register**

11. Apply the transition you like best to **slides 2–6** (choose any except *None*).
12. Save your presentation.
    - *Using eLab:* Save to your **PowerPoint Chapter 3** folder as `P3_P2_eSubmission` and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **PowerPoint Chapter 3** folder as: `P3_P2_Submission`

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

P3-E1 That's the Way I See It

New PowerPoint users often use too many transitions, animations, and sound effects. In this exercise, you will see how less can be more. Create a new presentation, saved as **`P3-E1-AnimationOverkill`** and that includes at least six slides, in which every slide except the title slide includes a title, text, an icon, and a picture or 3D model. Apply any design theme and variation. Make sure the presentation focuses on a single idea (for example, a classic car collection, your favorite movies, or inspirational people). Apply a different transition to each slide. Apply a different animation to each text block and each graphic. Add a different sound effect to each slide. In other words—overdo it! View the presentation as a slide show and then save it as: **`P3-E1-AnimationAppropriate`**

Now edit the presentation so each slide uses the same subtle transition. Remove the animation from each graphic and standardize the animation on the text blocks. Maintain consistency by using either an icon on all slides, a 3D model on all slides, or a picture on all slides (do not mix and match). Choose a subtle entrance animation. Remove all sound effects. Save your changes. View the revised presentation as a slide show and compare it with your "overkill" version.

P3-E2 Be Your Own Boss

Open **P3-E2-BlueJeanAnimated** and save it as: **`P3-E2-BlueJeanAnimatedRevised`**

View the presentation as a slide show and notice where the animations occur; then edit the presentation so they occur when a slide is clicked rather than automatically. Also, make sure the bulleted text animates one line at a time. Add a final slide using the Section Header layout. Use **`Get Outside More`** as the title and **`It'll do you good!`** as the subtitle. Insert **P3-E2-Flowers.jpg** and make these changes:

- Remove the photo background.
- Move the image to appear behind the text.
- Apply the same slide transition used by the other slides.
- Add a sound effect that you feel is appropriate.

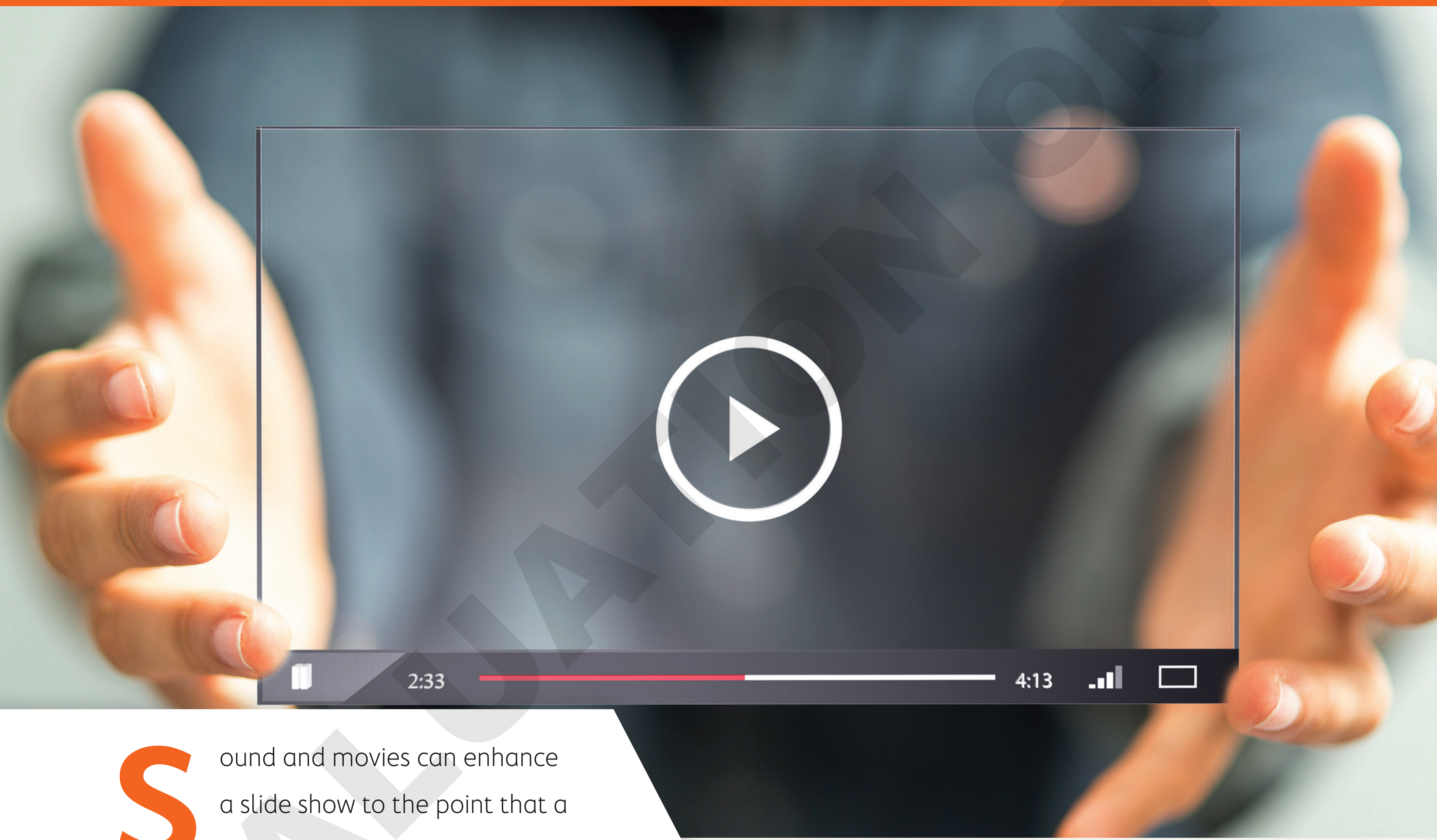
P3-E3 Demonstrate Proficiency

Stormy BBQ needs a slide show to play on television screens throughout its seating area. It should feature images of mouthwatering barbeque. Create a new presentation named **`P3-E3-BBQSlideShow`** with at least five slides, where each slide includes a single photo of delicious barbeque. Remove the backgrounds from the images as necessary. Use slide transitions to fade one slide into the next. Include an animated title on each slide that names the dish. Choose one slide on which to add a shape. Add a shape from the Stars and Banners category with the text **`Blue Ribbon Winner`** added. Format the shape and its text to add visual interest while keeping the text easy to read.

POWERPOINT

POWERPOINT

4 Adding Multimedia to Presentations



Sound and movies can enhance a slide show to the point that a presentation is more than just information—it's entertaining. PowerPoint makes the development of "infotaining" presentations quick and easy. In this chapter, you will work with PowerPoint's media features to enhance your presentations.

LEARNING OBJECTIVES

- Acquire and add audio to a presentation
- Acquire and add video to a presentation
- Edit movies and add movie effects
- Customize a video's start/end times and size
- Use slide show timings
- Loop a presentation endlessly

Project: Adding Multimedia to the Presentation

iJams annually donates to a variety of charities, including animal rescue charities and young musician scholarships. You have been charged with creating a few new presentations that will play in a kiosk in the lobby at iJams' main office. They will showcase the animals and young musicians who have benefited from iJams' generosity. You want the presentations to be entertaining and engaging, but you also need them to run by themselves with no human physically clicking through the slides. You decide to add audio and video to the presentations and to use slide timings so each presentation will run unattended.

Working with Multimedia

Multimedia, also called rich media, includes video and audio that can enhance a presentation. A photographer delivering a presentation may play a soundtrack of classical music while the slides display a gallery of wedding photos. A presentation used to train employees may have a spoken narration playing throughout the slide show to explain company policy. A summer camp director giving a presentation to prospective families may include videos of camp activities. Multimedia may be incorporated so simply as to play an audible click when navigating to subsequent slides during a presentation. Although multimedia can add excitement to your presentation, it can become overwhelming and distracting if used in excess.

Tip! *Add multimedia sparingly and only when there is true value in doing so.*

Types of Multimedia

PowerPoint lets you add a variety of multimedia types to your presentation, including the following:

- Audio: This includes short sound effects such as a click or creaking door, as well as entire songs or narration soundtracks. Most users will be familiar with MP3 or WAV sound files.
- Video: This can include home movies from your smartphone, a camcorder, or downloaded videos from the Internet. PowerPoint does not let you create the video itself. You will need to create your video file in advance.

Linked Media Files

Most multimedia files exist as separate files that are saved outside your presentation but that are linked to it. However, when a linked multimedia file is moved or renamed, it will not play during the presentation. Therefore, it is recommended that you store the presentation and all linked media files in the same folder—and don't change the names of the multimedia files after they have been linked. Then you can easily copy all the files in the presentation folder to other media, such as a USB drive or CD, to share with people.

Organizing Media with Subfolders

If you have many linked multimedia files, you may decide to keep your files organized in subfolders rather than having all your files at the same level within a single folder. This makes it easier to find and launch your presentation and find any multimedia files you may need to edit.

When all files are in the same folder, finding the one you need may be difficult.

Organizing your files by type in subfolders makes it easy to find what you want when you want it.

DEVELOP YOUR SKILLS: P4-D1

In this exercise, you will create folders in which to store your various types of multimedia files.

1. Close all programs and folder windows so only your Windows 10 Desktop is showing.
2. Click the **File Explorer** icon on the Windows taskbar and then maximize the File Explorer window.
3. Navigate to the **PowerPoint Chapter 4** folder and choose **View→Layout→Medium Icons**.
4. Choose **Home→New→New Folder**.
5. Type **`Audio`** as the folder name and tap [Enter].
6. Repeat steps 4–5 to create a second folder named: **`Video`**
7. Click the **P4-A1-TransportationNarration.mp3** file to select it.
8. Hold down [Ctrl] as you click these files to add them to the selection:
   - **P4-A3-Invites.mp3**
   - **P4-D2-bach-bwv813.mp3**
   - **P4-R1-Castle.mp3**
   - **P4-R1-Cheer.wav**
   - **P4-R1-Library.mp3**
   - **P4-R1-Lunch.mp3**
   - **P4-R1-Makeup.mp3**
   - **P4-R3-AudioBenefits.mp3**
9. After all nine audio files have been selected, release [Ctrl].
10. Drag any one of the selected audio files onto the **Audio** folder to move all nine selected files into that folder.
11. Click the **P4-A2-Band.mp4** file to select it.
12. Hold down [Ctrl] as you click these files to add them to the selection:
    - **P4-D7-Classical.mpg**
    - **P4-R2-ZeroPower.mp4**
    - **P4-R3-Video.mp4**
13. After all four video files have been selected, release [Ctrl].
14. Drag any one of the selected video files onto the **Video** folder to move all four selected files into that folder.
15. Close the folder window.

    Your chapter folder is now organized with multimedia subfolders.

Using Audio in Presentations

You have many options for acquiring audio to use in a presentation. Popular sources include the following:

- Searching for audio on your computer with the Audio on My PC command on the PowerPoint Ribbon
- Ripping audio from a CD
- Downloading an audio file from the Internet
- Recording your own narration directly in PowerPoint or with your own software

Audio File Types

Only audio files with a file type supported by PowerPoint may be added to a presentation. There are many types of audio formats, and PowerPoint supports the most popular ones. This table lists the file types you can insert into a presentation.

SUPPORTED AUDIO FILE TYPES

File Type	Filename Extension	When to Use
AIFF audio file AU audio file	.aiff .au	Use as an alternative to WAV.
MIDI file	.mid, .midi	Use when computerized reproductions of instrumental music are desired. Use when instrumental music is needed and small file size is important.
MP3 audio file Windows Media audio file	.mp3 .wma	Use for music ripped from a CD or recorded narration. Example: A song that plays across slides throughout the entire presentation.
Advanced Audio Coding—MPEG-4 audio file	.m4a, .mp4	Use as an alternative to MP3.
Windows audio file	.wav	Use for small sound bites that are a few kilobytes in size. Example: A click sound or door-slam effect.

Adding Audio to a Presentation

Adding audio to a slide places a small speaker icon on the slide. This icon can be hidden from view during a slide show, or it can function as a start/stop button for the sound. When you insert audio onto a slide, you have the option to play the sound automatically after the slide loads or when you click the audio icon on the slide.

Inserting and Linking

Audio files can be either inserted (embedded) or linked. When inserted, the audio file is embedded in and becomes absorbed by the presentation file, causing the size of the presentation file to increase. When linked, it remains a separate file and does not increase the file size of the presentation. This table compares the pros and cons of each method.

INSERTING VS. LINKING

	Inserting	Linking
Increases file size of presentation	Yes	No
Can move, rename, or delete audio file without breaking the presentation	Yes	No
Audio file size limit	Must be under 100 KB	Unlimited size

A slide with a speaker icon, indicating audio has been added to the slide

Insert from or link to an audio file on your computer: Insert→Media→Audio menu button ▾→Audio on My PC

DEVELOP YOUR SKILLS: P4-D2

In this exercise, you will insert an audio clip from your computer. You must have speakers connected to the computer with the volume turned up to hear the audio.

1. Start PowerPoint and make sure the app window is maximized.
2. Open **P4-D2-Beneficiaries** from the **PowerPoint Chapter 4** folder and save it as: `P4-D2-BeneficiariesRevised`
3. Choose **Insert→Media→Audio menu button ▾→Audio on My PC**.
4. Navigate to your **PowerPoint Chapter 4\Audio** folder, select **P4-D2-bach-bwv813.mp3**, and click **Insert**.

   Remember that your computer may be configured to hide the file extensions and the .mp3 portion of the filename may not be displayed. The Insert command embeds the audio file into the presentation.
5. Drag the speaker icon to the top of the slide so nothing overlaps the text.
6. Choose **Slide Show→Start Slide Show→From Beginning**.

   The sound does not play because it is configured to start playing when the slide is clicked.
7. Click as if you were advancing to the next slide.

   Rather than advancing, the audio plays.

8. Click the slide again.

   The next slide appears and the audio stops.

9. Tap Esc to end the slide show.
10. Save your presentation.

Acquiring More Audio

Copying music from a CD into a digital music file on your computer is referred to as ripping and can be accomplished with software such as Windows Media Player or the free Audiograbber (audiograbber.org). Windows Media Player rips to the WMA format by default but can rip to MP3 by installing a plug-in. Audiograbber is great in that it rips directly to MP3 with no additional configuration or plug-ins, so your ripped files are already in an appropriate format to use in a presentation—and a universal format to be played outside of your presentation. Be sure you are not violating any copyright laws if ripping sound from a CD.

Downloading Sound Effects

Many websites offer audio downloads in the form of sound effect clips, music background tracks, or promotional releases for bands. Be aware of copyright laws when downloading sound files.

Recording a Narration

If your computer has a microphone, you can record your own narration directly from PowerPoint.

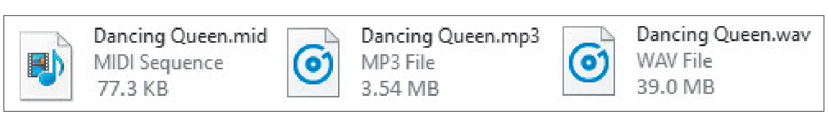
Insert→Media→Audio menu button ▼→Record Audio

Choosing an Audio File Format

Whether you will download, purchase, rip, or record audio, you'll need to decide on the file format. Should you use a WAV file? A WMA file? An MP3 file? A MIDI file? What about AIFF or AU? Because WAV and MP3 files are the most prevalent, and every modern PC can play these without additional software or codecs, you should stick to these two file types when ripping or recording your own narration.

MP3 Compared with WAV File Format

If the files are only a few kilobytes in size, it doesn't matter whether you use WAV or MP3. However, MP3 files are compressed, whereas WAV files are not. Although WAV files may sound a little better to the trained ear, an MP3 of the same sound will be about one-tenth of the file size. Most people can't tell any difference in quality between a WAV and MP3. The MP3 encoding process attempts to remove audio information that is outside the range of what humans can hear. In other words, the average person won't miss the audio that was removed from an MP3 file but will certainly notice the smaller file size.



Displayed is the same song saved as a 77.3 KB MIDI file, a 3.54 MB MP3 file, and a 39 MB WAV file. Note that the icons for the file types may differ from computer to computer based on personalized settings.

WMA File Format

The WMA format is an alternative to MP3 with comparable compression and quality, but not all music player software and hardware support the WMA format.

Tip! *Because the MP3 format is more universally supported, it is recommended over the WMA format.*

MIDI File Format

MIDI files also have their place and are probably the third type of sound file you are likely to use. MIDI files don't contain sound information like WAV or MP3 files. They simply provide instructions to the computer to reproduce the sounds of musical instruments. What you hear when you play a MIDI file depends on your computer's sound hardware. Your computer may really sound like a violin when you play that MIDI file of a Paganini violin concerto, whereas another computer will not sound like a true violin at all.

Tip! *MIDI files cannot reproduce vocal tracks and should be used only when instrumental music is desired. (They are great for karaoke!)*

Configuring Audio Options

When you add audio to a slide, you can choose to play the audio automatically or when clicked. If you choose to play the audio automatically, there is little reason to display the speaker icon, which appears by default, on the slide because you no longer need to click it to play the audio. PowerPoint lets you hide the speaker icon in addition to setting a few more options, including having the audio loop endlessly or have it rewind after playing.

View the video "Audio Options."

Configuring Audio Styles

PowerPoint includes two Audio Styles shortcut buttons that automatically set audio options. These buttons are simply time-savers that set options for you in one click.

CONFIGURING AUDIO STYLES

Button	Settings Made Automatically
No Style	• Start is set to In Click Sequence • Play Across Slides is disabled • Loop Until Stopped is disabled • Hide During Show is disabled
Play in Background	• Start is set to Automatically • Play Across Slides is enabled • Loop Until Stopped is enabled • Hide During Show is enabled

DEVELOP YOUR SKILLS: P4-D3

In this exercise, you will configure the sound to play automatically and hide the speaker icon.

1. Save the presentation as: `P4-D3-BeneficiariesRevised`
2. Display the **first slide** and then click the **speaker** icon on the slide.

3. Choose **Audio Tools→Playback→Audio Options** and set the Start option to **Automatically**.

This option will start playing the audio automatically when the slide loads during the slide show. Because the sound will start automatically, there is no reason to display the speaker icon during the slide show.

4. Choose **Audio Tools→Playback→Audio Options** and place a check in the **Hide During Show** box.
5. Choose **Slide Show→Start Slide Show→From Beginning**.

   The speaker icon is hidden, and the sound starts to play immediately after the slide loads.

6. Click anywhere on the slide to advance to the next slide.

   The audio stops when the presentation advances to the next slide.

7. Tap Esc to end the slide show and return to Normal view.
8. Save your presentation.

Linking Audio

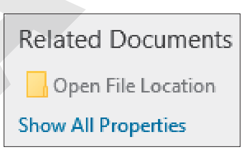
Linking media files instead of embedding them keeps the file size of the presentation smaller, which is good if you need to email the presentation. However, the linked media must remain in the same location (same folder) relative to the PowerPoint file, or the presentation won't be able to find the media to play it during a slide show.

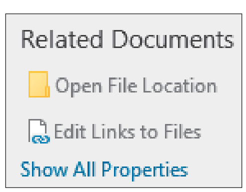
Whether you choose to embed or link media is largely personal preference. While linking maintains a smaller presentation, embedding is often less problematic.

DEVELOP YOUR SKILLS: P4-D4

In this exercise, you will determine whether a sound is embedded or linked. You will then purposefully break the link to a linked file to see what happens when you attempt to play the presentation. Finally, you will repair the link and confirm that the media file plays.

1. Save the presentation as: `P4-D4-BeneficiariesRevised`
2. Choose **File→Info**.
3. Locate the *Related Documents* section at the bottom of the right column of Backstage view and note the absence of a link to Related Documents.

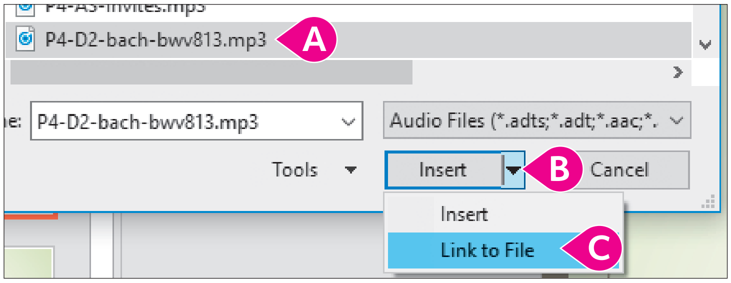




On the left, Edit Links to Files *is not displayed, indicating no linked files. If there were linked files,* Edit Links to Files *would be displayed (as shown on the right).*

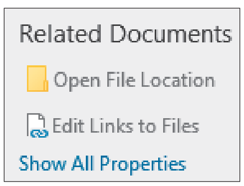
4. Click **Back** to exit Backstage view.
5. If necessary, choose the **first slide** from the Slides panel.
6. Click the **speaker** icon on the slide and tap Delete to remove the embedded audio file.

7. Choose **Insert→Media→Audio menu button ▾→Audio on My PC**.
8. Browse to your **PowerPoint Chapter 4\Audio** folder.
9. Follow these steps to link to, rather than embed, the audio file:



- Ⓐ Click once on **P4-D2-bach-bwv813.mp3**.
- Ⓑ Click the **Insert menu** button ▾.
- Ⓒ Choose **Link to File**. The audio file is linked and is set to play In Click Sequence by default.

10. Drag the **speaker** icon to the top of the slide so it doesn't overlap any text.
11. Choose **File→Info**.
12. Locate the *Related Documents* section at the bottom of the right column of Backstage view and notice that the *Edit Links to Files* link exists, indicating there are now linked files.



13. Click **Back** to exit Backstage view.
14. Choose **Slide Show→Start Slide Show→From Beginning**.
15. Move your mouse until the mouse pointer white arrow appears.
16. Point at the speaker icon on the slide and then click the **Play** button on the control bar.

    The audio file plays. When the control bar displays, you can play and pause the audio.
17. Tap Esc to end the slide show and return to Normal view.
18. Display the first slide.

Break the Link

19. Minimize PowerPoint.
20. Navigate to your **PowerPoint Chapter 4\Audio** folder and locate the **P4-D2-bach-bwv813 .mp3** file.

    If your computer is configured to display file extensions, the filename will be displayed as P4-D2-bach-bwv813.mp3. *If your computer is configured to hide file extensions, the filename will be displayed as* P4-D2-bach-bwv813 *without any file extension.*
21. Right-click the **P4-D2-bach-bwv813.mp3** file and choose **Rename**.
22. Follow the appropriate instruction to rename the file:
    - If the filename displays as *P4-D2-bach-bwv813* (no file extension), rename the file **`P4-D2-bach`**.
    - If the filename displays as *P4-D2-bach-bwv813.mp3*, rename the file **`P4-D2-bach.mp3`**, taking care not to delete or duplicate the *.mp3* extension.

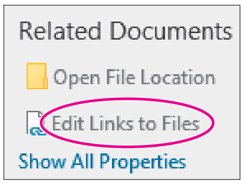
POWERPOINT

23. Maximize PowerPoint and choose **Slide Show→Start Slide Show→From Beginning**.
24. Move your mouse until the mouse pointer white arrow appears.
25. Point at the speaker icon on the slide and then click the **Play** button on the control bar.

    The audio file fails to play because the link to the file has been broken. The message Media Not Found *appears in the progress bar.*
26. Tap Esc to end the slide show and return to Normal view.

Repair the Link

27. Choose **File→Info** and click **Edit Links to Files**.



28. Click the link to **P4-D2-bach-bwv813.mp3** and then click **Change Source**.
29. Navigate to your **PowerPoint Chapter 4\Audio** folder, select **P4-D2-bach.mp3**, and click **Open**.

    You have repaired the link. The Links dialog box displays the path to the source file you selected.
30. Click **Close** to close the Links dialog box.
31. Click **Back** to exit Backstage view.

    At the time of this writing, there is a bug in PowerPoint that causes the speaker icon on the slide to enlarge after repairing a link. If your speaker icon became larger, don't worry. It may look strange, but it will still work just fine.
32. Choose **Slide Show→Start Slide Show→From Beginning**.
33. Move your mouse until the mouse pointer white arrow appears.
34. Point at the speaker icon on the slide and then click the **Play** button on the control bar.

    The sound plays because the link has been repaired.
35. Tap Esc to end the slide show and return to Normal view.
36. Save the presentation.

Creating Slide Show Timings

When using background music or a narration, you often want the slide show timed to the audio so the soundtrack and slides end at the same time. Rather than guessing when to advance to the next slide during a presentation, PowerPoint lets you automate the slide show by creating a slide show timing. You can even use slide show timings without audio to automatically navigate to subsequent slides during a live talk given by the presenter. As the speaker addresses the audience, the slide show can be on "autopilot," allowing the presenter to move away from the computer and interact more freely with the audience.

Determining Slide Timings

All it takes is a little math. If you can do simple division or have access to a calculator, you can time your presentation to your soundtrack and have both end at the same time. Assuming your audio begins on the first slide, and you want each slide displayed for an equal amount of time, follow these simple steps to determine the length of time to spend on each slide.

DETERMINING SLIDE TIMINGS

Goal	Steps
Determine the length of the audio file in seconds	• Select the audio icon on the slide. • Point at the right edge of the progress bar to see the total playing time of the audio file. • Convert this time to seconds. Example: A 2-minute and 30-second audio file would be 150 seconds.
Divide the total seconds by the total slides	• Use the Slides panel or Slide Sorter view to determine how many slides are in the presentation. • Divide the length of the audio in seconds by the total number of slides in the presentation. Example: A 150-second audio file used in a presentation containing 20 slides works out to 150 ÷ 20 = 7.5.
Determine the total time per slide	• If your division works out to a whole number, that is the number of seconds to spend on each slide. • If your division works out to a decimal, you'll have to round off or use another creative solution. Example: The answer to the division is 7.5. To apply this amount, you might display slide 1 for 7 seconds, slide 2 for 8 seconds, slide 3 for 7 seconds, slide 4 for 8 seconds, and so on.

Rehearsing Timings

PowerPoint's Rehearse Timings feature allows you to create an automated slide show. Use this feature to practice your speech and automatically have the slides advance as you speak, or time the presentation to a soundtrack so the audio ends just as the last slide appears.

Create a slide show that runs automatically: Slide Show→Set Up→Rehearse Timings

Slide Show→Set Up→Use Timings (check or uncheck)

DEVELOP YOUR SKILLS: P4-D5

In this exercise, you will configure the slide show to run by itself with a soundtrack.

1. Save the presentation as: `P4-D5-BeneficiariesRevised`
2. Select the speaker icon on the title slide and then choose **Audio Tools→Playback→Audio Styles→Play in Background** to automatically set the Audio Options.

   Several options in the Audio Options command group are automatically set: The speaker icon is hidden, and the sound will now start automatically. It will continue to play as you navigate through the slides and will start over again if it ends before the slide show.

3. Point at the right edge of the progress bar to determine the total playing time for the audio file.

   The sound is about 1 minute and 17 seconds (01:17) long.

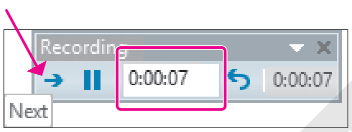
4. Here's how to determine the number of seconds to allocate to each slide:

General step	In this case
Determine the total number of slides in the presentation	10 slides
Determine the length of the sound clip in seconds	77 seconds
Divide the length of the sound by the total number of slides	77 ÷ 10
Round off	7.7 = about 7 or 8 seconds per slide

5. Locate the **Slide Show→Set Up** group.

   In the next step, you're going to use the Rehearse Timings feature. This is time-sensitive because after you start the rehearsal, you're going to need to click the Next button every 7 or 8 seconds.

6. Click **Rehearse Timings** and click the **Next** button every 7 or 8 seconds until you reach the last slide.



7. Choose **Yes** when prompted to save your timings.

   If you make a mistake or want to start over, simply repeat steps 5–7.

8. Choose **Slide Show→Start Slide Show→From Beginning** and watch as the slide show autoplays with the soundtrack. Click anywhere on the black screen after the slide show ends.

Loop a Slide Show

9. Choose **Slide Show→Set Up→Set Up Slide Show**.
10. Place a checkmark in the **Loop Continuously Until 'Esc'** option box and click **OK**.
11. Choose **Slide Show→Start Slide Show→From Beginning** and notice that when the last slide is reached (Corky), the slide show starts over again.
12. Tap Esc to end the slide show and return to Normal view.
13. Save and close your presentation.

Using Video in Presentations

Similar to audio, PowerPoint allows you to insert online video or a video file from your computer. Online videos include videos located on your Microsoft OneDrive cloud storage, YouTube, or other websites, provided you have the embed code.

Embed code is HTML code (web programming code) usually provided by the website on which the video is housed. If a website provides embed code for you to copy and paste, you can use it in PowerPoint. If the website does not provide embed code, you will not be able to use that video in PowerPoint.

Warning! *At the time of this writing, there is a bug in PowerPoint that prevents you from previewing videos from the Insert Video dialog box's YouTube search results. If this happens to you, just use your web browser to search YouTube and then copy and paste the embed code into PowerPoint.*

Using Online Videos

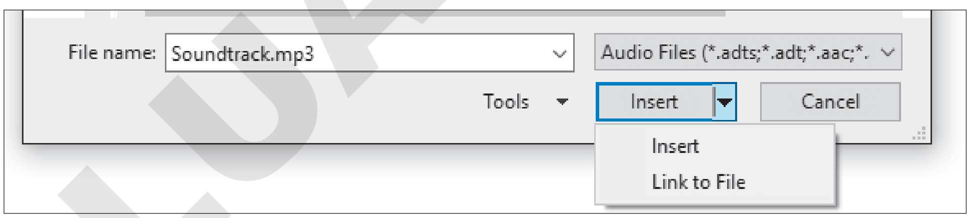
You must be careful when adding any kind of media—pictures, audio, or video—to a presentation. Not all media found with an Internet search is free to use. PowerPoint may let you search YouTube for media, but that doesn't necessarily mean you're legally allowed to use the media clip. It is safest to research the license of any media you want to use and then verify that it is in the public domain (free to use), royalty free (absent of royalty or license fees), or carries the Creative Commons license (free to use and share). Finding this information is not always easy and usually involves determining the owner of the media.

Insert→Media→Video menu button ▾→Online Video | Insert Video

Warning! *At the time of this writing, PowerPoint supports embedding online videos only from YouTube. Unfortunately, support is buggy and many YouTube videos initially may look fine on the slide but then fail to play during a slide show. Test your presentation and videos before delivering a slide show to your audience!*

Using Video from Your Computer

You can create your own full-motion video movie files by using the video camera built into a smart-phone and video-editing software such as the free Windows Movie Maker available for Windows or third-party software such as Studio made by Pinnacle (pinnaclesys.com). You can also download videos from the Internet. As with audio, you can either insert (embed) or link to a video. You indicate to PowerPoint whether you're linking or embedding by choosing the applicable option from the Insert menu within the Insert Video window.



Tip! *As with audio files, be sure you are not violating any copyright laws when downloading and using videos in a presentation. Always check a website's Terms and Conditions before using any downloaded multimedia content.*

Insert→Media→Video menu button ▾→Video on My PC

Using Screen Recordings

Screen recordings are helpful if you want to show a software demo or demonstrate how to use a particular website. Screen recordings are embedded in the presentation and are not saved as external files.

Insert→Media→Screen Recording

Windows + Shift + Q to stop recording

POWERPOINT

Video File Formats

Full-motion video, such as a home movie of your trip to the beach, manifests in several file formats such as MPEG or AVI. MPEG files are generally smaller files compared with AVIs and are less problematic when playing on different computers.

SUPPORTED VIDEO FILE TYPES

Video Format	File Extension
Windows media file	*.asf*
Windows video file	*.avi*
MP4 video file	*.mp4, .m4v, .mov*
Movie file	*.mpg, .mpeg*
Adobe Flash media	*.swf*
Windows Media Video file	*.wmv*

Codecs

Although you may think you're doing everything correctly by using a file with a supported file extension, your audio or video files may not play when the presentation is viewed on someone else's computer. This is most often due to a codec incompatibility.

The Role of Codecs

Audio and video multimedia files can be huge—sometimes several gigabytes. Software called a compressor is used to make the file smaller. To be played, the file must be decompressed or decoded—the job of more software called a decompressor. A codec, which is an abbreviation of compressor/decompressor, does both jobs.

If a multimedia file was created with a certain codec, that codec must be present on any computer wanting to successfully play the file. To confuse matters, many different codecs can create files with the same file extension, and they may not be compatible. For example, the I263, DivX, and Xvid codecs all create movie files with the *.avi* file extension.

Identifying a Codec

Don't assume that just because an AVI video file plays on your computer, it will also play on your friend's. Your computer may have the correct codec installed, while your friend's does not. This becomes an issue when using multimedia files compressed with codecs other than what Windows has installed by default—and is more of an issue with video than with audio. Software such as MediaInfo or AVIcodec—both free—can identify what codec is needed to play a certain video file.

Determining the Codec

You will find that AVI video files downloaded from the Internet may contain nonstandard codecs. Also, some digital video cameras create videos in nonstandard formats. The best advice is to simply try to play the video with Windows Media Player before inserting it in your presentation. If it plays in Windows Media Player, it will play in your presentation. If it fails to play, identify the codec by using software such as MediaInfo or AVIcodec. Then search the Internet for the codec, download it, and install it. The website VideoHelp.com is an excellent source for learning more about video and video codecs and offers a Tools section where you can download codecs and other helpful software.

Tip! *Make sure that your presentation computer has the necessary codecs for any movie to be played in your presentation.*

DEVELOP YOUR SKILLS: P4-D6

In this exercise, you will add a video from an existing external file.

1. Open **P4-D6-Scholarship** from the **PowerPoint Chapter 4** folder and save it as: `P4-D6-ScholarshipRevised`
2. Choose **Home→Slides→New Slide** and type `Scholarship Recipient` as the title.
3. Click the **Insert Video** icon on the slide and then click **Browse**.
4. Navigate to your **PowerPoint Chapter 4\Video** folder, select the **P4-D6-Classical.mpg** video movie file, and click **Insert**.

   Your computer may be configured to hide file extensions and may not display the .mpg portion of the filename.

   PowerPoint displays a message indicating that the video file must be optimized. A progress bar at the bottom of the PowerPoint window indicates the progress. Wait until the message box disappears.
5. Choose **Slide Show→Start Slide Show→From Beginning**.
6. Click anywhere to advance to the next slide and move your mouse around until the mouse pointer becomes visible.
7. Point at the video to display the control bar at the bottom and click the **Play** button.
8. Point at the video again to display the control bar and use the **Play/Pause** button to pause or resume the video.
9. When the video ends, tap Esc to return to Normal view.

   You may have heard a clicking sound at the beginning and end of the video—a sound the video camera itself made. Such sounds can be removed. You will do this later.
10. Save your presentation.

Setting Video Start and Stop Times

PowerPoint offers the ability to edit videos. While PowerPoint is not meant to replace a full video-editing suite, it offers basic editing functions. You can trim the start and end of a video (cut off the beginning or the end) and have it fade in or out. You can edit audio the same way. Any audio or video editing you perform in PowerPoint has no effect on the actual media file. The editing affects only how PowerPoint plays the media; therefore, the edits are nondestructive.

View the video "Setting Video Start and Stop Times."

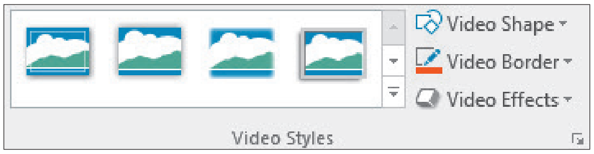
Video Tools→Playback→Editing

POWERPOINT

Applying Video Effects

PowerPoint also offers the ability to apply video styles. Using the Video Styles gallery, you can easily format a video much like pictures.

Video Tools→Format→Video Styles



You can choose a predefined style from the Video Styles gallery or create your own custom effect by using the Video Shape, Video Border, or Video Effects menus.

Slides can be spiced up with a simple video style.

Adjusting the Media Window Size

After adding a video effect, it may be necessary to resize the video on the slide. Resize a video just as you would any other object: Click the video to display its border and then drag a handle to resize it. Just as with other objects, be sure to drag a corner handle to maintain the video proportions. Be careful not to enlarge a video too much as it can get blurry.

DEVELOP YOUR SKILLS: P4-D7

In this exercise, you will edit a video and apply a video style.

1. Save the presentation as: `P4-D7-ScholarshipRevised`
2. Select the **second slide**, if necessary, and click the video to select it.
3. Choose **Video Tools→Playback→Editing→Trim Video**.

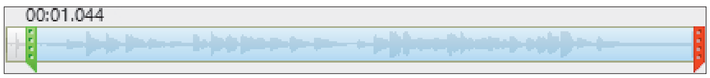
Remove an Unwanted Sound

4. Ensure that your speakers are turned on and click the **Play** button. As soon as you hear the popping sound stop, click the **Pause** button.

The Play button turns into a Pause button while the video is playing.

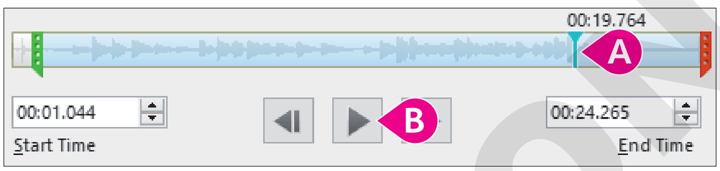
5. If necessary, drag the **blue playhead** back to the start of the video and repeat step 4 until you can identify when the popping stops.

6. As the popping stops at about 1 second, drag the **green trim control** to the right until the number above it indicates you are at about the 1-second mark. It doesn't have to be perfect but should be close to 1 second.



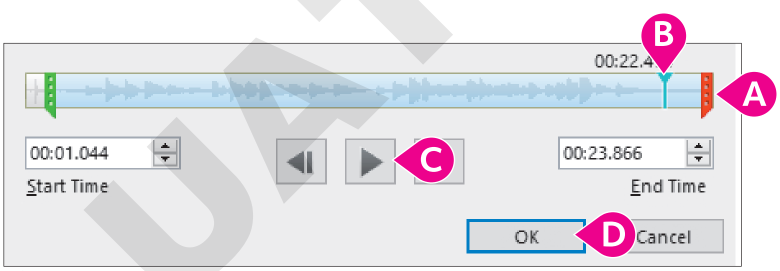
The portion of the video to the left of the green trim marker is cut off.

7. Follow these steps to listen to the end of the video:



- **A** Click here toward the end of the video to set the playhead.
- **B** Click **Play** and listen for the pop. Notice that the pop occurs at the very end.

8. Follow these steps to trim the end of the video:



- **A** Drag the **red trim control** slightly left to cut off the portion of the video to its right.
- **B** Click here, toward the end of the video and to the left of the red trim marker, to set the playhead.
- **C** Click **Play** and listen for the pop to check if it has been removed.
- **D** If the pop is still audible, repeat steps A–C. When the pop has been removed, click **OK**.

Warning! *At the time of this writing, there is a bug in PowerPoint that causes the video preview to disappear when trimmed, so your video may no longer display an image of the first frame but rather a black screen.*

Apply a Video Style

9. Choose **Video Tools→Format→Video Styles→More** to display the Video Styles gallery.
10. Point at several styles to see them temporarily applied to the video on the slide and then choose **Intense→Monitor, Gray**.

Note that your video may display a black screen due to a PowerPoint bug. The video will still play fine during a slide show.

11. Drag a corner handle on the video's border to resize the video to your liking.
12. Choose **Slide Show→Start Slide Show→From Current Slide**.

    The slide displays the video with the 3D style.
13. Move your mouse until the mouse pointer white arrow appears.
14. Point at the video on the slide and then click **Play** on the control bar.

    The popping sounds at the beginning and end of the video are no longer heard because the video has been trimmed.
15. Tap Esc to exit the slide show and return to Normal view.
16. Save your presentation.

Setting Video Options

Just as with audio, there are several options you can apply to videos on a slide, such as having the video run automatically or when clicked, allowing the presentation to fill the screen, or setting the video to run endlessly.

View the video "Video Options."

There is no "wrong" or "right" when configuring these options. They are dependent on personal preference and the needs and expectations of the audience. For example, if your presentation were to play in a trade-show kiosk in a continuous loop to draw in a crowd, you would probably want video and audio to start automatically rather than requiring an icon to be clicked to start playback.

Warning! *At the time of this writing, there is a playback bug in PowerPoint. Even when set to play automatically, online videos from YouTube require you to click them to start.*

Video Tools→Playback→Video Options

DEVELOP YOUR SKILLS: P4-D8

In this exercise, you will configure a video to play in full-screen mode.

1. Save the presentation as: `P4-D8-ScholarshipRevised`
2. Select the **Scholarship Recipient** slide and then select the movie, if necessary.
3. Choose **Video Tools→Playback→Video Options** and then click to place a checkmark in the **Play Full Screen** box.
4. Choose **Slide Show→Start Slide Show→From Beginning** .
5. Navigate to the **second slide** and move your mouse around until the pointer becomes visible.
6. Click the video to play it.

   The video plays in full-screen mode. When the video is done, it returns to normal size and the slide is visible again.
7. Tap Esc to end the slide show.
8. Save and close your presentation, and then exit PowerPoint.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: P4-R1

Work with Audio

In this exercise, you will enhance a Kids for Change presentation that will be used at a high school assembly to recruit teens. You will add audio from your computer that needs to be edited and apply rehearsed timings so the slide show can run unattended.

1. Start PowerPoint, open **P4-R1-Tutoring** from your **PowerPoint Chapter 4** folder, and save it as: `P4-R1-TutoringRevised`

Embed Audio Clips

2. Display **slide 1** and choose **Insert→Media→Audio menu button ▾→Audio on My PC**.
3. Browse to your **PowerPoint Chapter 4\Audio** folder, select **P4-R1-Cheer.wav**, and click **Insert**.
4. Drag the **speaker** icon to the top of the slide.
5. Display **slide 4**, choose **Insert→Media→Audio menu button ▾→Audio on My PC**, and browse to your **PowerPoint Chapter 4\Audio** folder.
6. One at a time, add the audio files and position the speaker icons as described:

Audio	Where to Place Speaker Icon
P4-R1-Lunch.mp3	Next to the word *Lunch*
P4-R1-Castle.mp3	Next to the word *Castle*
P4-R1-Makeup.mp3	Next to the word *Makeup*

Hint: Follow the process in steps 2–4 if you need help.

Link to an Audio Clip and Set Playback Options

7. Choose **Insert→Media→Audio menu button ▾→Audio on My PC**.
8. Browse to your **PowerPoint Chapter 4\Audio** folder, select the **P4-R1-Library.mp3** audio file, and click **Insert menu button ▾→Link to File**.
9. Drag the **speaker** icon next to the word *library*.
10. Display **slide 1** and select the **speaker** icon on the slide.
11. Set the **Audio Tools→Playback→Audio Options→Start** option to **Automatically**.
12. Select the **Audio Tools→Playback→Audio Options→Hide During Show** checkbox.

Edit Audio

13. Display **slide 4** and select the **Lunch speaker** icon.
14. Choose **Audio Tools→Playback→Editing→Trim Audio**.

    Depending on your computer's power and video capabilities, the Trim Audio window may or may not show a sound wave. Visible sound waves are easier to edit; unfortunately, a disappearing sound wave is a bug in this version of PowerPoint.

15. Click **Play** and watch the blue playhead move across the sound wave. Notice when the English word *Lunch* is spoken and when the French word for *Lunch* ends.

16. Drag the **green trim control** to the right until it is just before the start of the English pronunciation of *Lunch*.

    If your Trim Audio window shows a sound wave, the word Lunch *is marked by a large bump.*

17. Drag the **red trim control** to the left until it is just after the end of the French pronunciation of *Lunch* (the second large bump in the sound wave).
18. Click **OK**.
19. Click a blank area on the right side of the slide to deselect the speaker icon.
20. Trim the unwanted sounds from the beginning and end of the audio files on the remaining speaker icons.
21. Save your presentation and minimize PowerPoint.

Organize Media Files

22. Navigate to **PowerPoint Chapter 4\Audio** and create a new folder named: **`French`**
23. Drag these files into the **French** folder:
    - **P4-R1-Castle.mp3**
    - **P4-R1-Cheer.wav**
    - **P4-R1-Library.mp3**
    - **P4-R1-Lunch.mp3**
    - **P4-R1-Makeup.mp3**
24. Maximize PowerPoint and select the **Lunch speaker** icon on **slide 4**.
25. Click **Play** and notice that the audio plays because the **Lunch** audio file is embedded. Play the **Castle** and **Makeup** audio files and notice that they also play.
26. Attempt to play the **Library** audio file. It fails to play because the link is broken.
27. Choose **File→Info→Edit Links to Files**.
28. Select the link to the **Library** file and click the **Change Source** button.
29. Browse to the **PowerPoint Chapter 4\Audio\French** folder, select the **P4-R1-Library.mp3** file, and click **Open**.
30. Close the Links dialog box.
31. Resize the **Library speaker** icon to match the size of the others.
32. Click the **Play** button and note that the **Library** audio now plays. If it doesn't, repair the broken link and, if necessary, trim the audio again.
33. Resize the **Library speaker** icon to match the others and trim the **Library** audio to remove the unwanted sounds from the beginning and end.

Apply Rehearsed Timings

34. Choose **Slide Show→Set Up→Rehearse Timings**.
35. Set the slides to display as described:

Slide	Number of Seconds
Title	5
Math	10
Humanities	15
Language	30

POWERPOINT

36. Choose **Yes** to save the timings.

Run the Slide Show

37. Choose **Slide Show→Start Slide Show→From Beginning** .
38. Wait as the slide show runs automatically and displays the title slide for 5 seconds, the Math slide for 10 seconds, and the Humanities slide for 15 seconds.
39. When the Language slide appears, point to each speaker icon and click their **Play** buttons.
40. Tap Esc to end the slide show.
41. Save and close the file. Exit PowerPoint.

REINFORCE YOUR SKILLS: P4-R2

Work with Video

In this exercise, you will add video to a presentation for a Kids for Change parent meeting about math tutoring. You will also trim a video and apply video effects and playback options.

1. Start PowerPoint, open **P4-R2-Math** from your **PowerPoint Chapter 4** folder, and save it as: `P4-R2-MathRevised`
2. Display **slide 2** and choose **Insert→Media→Video menu button ▾→Online Video**.
3. In the YouTube search box, type `Pythagorean theorem` and tap Enter.

   Because of a bug in PowerPoint, you may not be able to preview the videos shown in the results. You may have to choose one based on the thumbnail and then play the video on the slide to see if you like it.
4. Select the thumbnail of your desired video and click **Insert**.

Insert an Online Video by Using Embed Code

Sometimes it is easier to browse and find a video directly from YouTube.

5. Display **slide 3** and minimize PowerPoint.
6. Start Microsoft Edge, or the web browser of your choice, and navigate to: `youtube.com`
7. In the search box at the top of the web page, type `Fibonacci sequence` and tap Enter.
8. Click a video to watch it; continue previewing videos until you find one you like.
9. Once you find a video you like, click the **Share** link below the video.
10. Click the **Embed** link to show the embed code.
11. Click anywhere within the embed code to select it all and tap Ctrl+C to copy the embed code.
12. Close your web browser and maximize PowerPoint.
13. Choose **Insert→Media→Video menu button ▾→Online Video**.
14. Click in the embed code box and press Ctrl+V to paste the copied embed code.
15. Click the **Insert menu** button ▾ on the right side of the embed code box.

Insert a Video from Your Computer

16. Display **slide 4** and choose **Insert→Media→Video menu button ▾→Video on My PC**.
17. Navigate to your **PowerPoint Chapter 4\Video** folder, select **P4-R2-ZeroPower.mp4**, and click **Insert**.

   Wait while PowerPoint imports and optimizes the video.

18. Save your presentation.

    You've completed a significant amount of work. This is a good time to save.

Edit and Style a Video

19. Click the video on **slide 4** to select it, if necessary, and choose **Video Tools→Playback→Editing→Trim Video**.
20. Click **Play** and listen to the cough at the beginning of the video.
21. Drag the **green trim control** to the right of the cough so the cough no longer plays (about 2 seconds from the beginning).
22. Click **Play** to verify that the cough no longer plays and adjust the **green trim control**, if necessary. Click **OK**.
23. Choose **Video Tools→Format→Video Styles→More** ▾ **Moderate→Compound Frame, Black**.
24. Apply the same video style to the videos on **slides 2** and **3**.

Set Video Playback Options

25. Display **slide 4** and click the video on the slide to select it.
26. Choose **Video Tools→Playback→Video Options→Start→Automatically**.
27. Save the presentation.

Run the Slide Show

28. Choose **Slide Show→Start Slide Show→From Beginning**.
29. Click the **title slide** to move to the Pythagorean Theorem slide.

    The video does not start to play because it is an online video.

30. Click the video to play it.
31. Tap Esc to stop the video, click the slide to move to the Fibonacci Sequence slide, and then click the video to play it.
32. Tap Esc to stop the video and then click the slide to move to the Power of Zero slide.

    The video starts to play automatically because it was embedded from your computer.

33. Tap Esc two more times, once to stop the video and once to end the slide show.
34. Exit PowerPoint.

REINFORCE YOUR SKILLS: P4-R3

Work with Audio and Video

In this exercise, you will add audio and video to an automated Kids for Change membership drive presentation.

1. Start PowerPoint, open **P4-R3-AudioBenefits** from your **PowerPoint Chapter 4** folder, and save it as: `P4-R3-AudioBenefitsRevised`
2. Display **slide 1**, if necessary, and choose **Insert→Media→Audio menu button ▾→Audio on My PC**.
3. Navigate to the **PowerPoint Chapter 4\Audio** folder, select the **P4-R3-AudioBenefits.mp3** file, and choose **Insert menu button ▾→Link to File**.

POWERPOINT

4. Drag the **speaker** icon to the top of the slide.

Set Audio Playback Options and Edit Audio

5. Choose **Audio Tools→Playback→Audio Styles→Play in Background** to automatically set the audio options.
6. Deselect the **Audio Tools→Playback→Audio Options→Loop Until Stopped** checkbox.
7. Choose **Audio Tools→Playback→Editing→Trim Audio**.
8. Click **Play** and note when the speaker says, "Why should you join Kids for Change?"
9. Drag the **green trim control** to the right until it is just before "Why should you join Kids for Change?"
10. Click toward the right of the sound wave at about 01:00.000 to place the blue playhead toward the end of the file.
11. Click **Play** and note when the speaker says, "OK, is that it?" and then drag the **red trim control** to the left until it is just before that question.
12. Click **OK**.
13. Click **Play** on the slide and ensure that the audio begins with "Why should you join Kids for Change?" and ends with "The benefits are obvious." If necessary, trim the audio appropriately.

Organize Media Files

14. Save your presentation and minimize PowerPoint.
15. Navigate to your **PowerPoint Chapter 4** folder and create a new folder named: `Benefits`
16. Move **P4-R3-AudioBenefits.mp3** and **P4-R3-Video.mp4** into the **Benefits** folder.
17. Maximize PowerPoint and click the **speaker** icon on **slide 1** to select it.
18. Click **Play** and notice that the audio fails to play because the link is broken.
19. Choose **File→Info→Edit Links to Files**.
20. Select the link to the **Benefits** file and click **Change Source**.
21. Browse to the **PowerPoint Chapter 4\Benefits** folder, select **P4-R3-AudioBenefits.mp3**, and click **Open**. Close the Links dialog box.
22. Reduce the size of the speaker icon on the slide.
23. Click **Play** and note that the audio now plays.

    If the audio doesn't play, repair the link and, as necessary, trim the audio again.

Apply Rehearsed Timings

24. Choose **Slide Show→Set Up→Rehearse Timings**.
25. Listen to the audio and click **Next** after you hear each of these phrases:
    - "Why should you join Kids for Change? There are many benefits."
    - "...shows a college that you are not afraid to work for something worthwhile."
    - "...translates to effective management skills, which are important for any job applicant."
    - "...that you are willing to work hard to get the job done."
    - "Why should you join Kids for Change? The benefits are obvious."
26. Choose **Yes** to save the timings.

Run the Slide Show

27. Choose **Slide Show→Start Slide Show→From Beginning**.
28. Watch as the slide show runs automatically and the slides match up to the narration.
29. When the slide show ends, click the screen to return to Normal view.
30. If necessary, choose **Slide Show→Set Up→Rehearse Timings** and recreate the timings to match up better with the audio.

Insert a Video

31. Display the **last slide** and choose **Home→Slides→New Slide menu button ▾→Title and Content**.
32. Type **`And It's Fun`** as the slide title.
33. Click the **Insert Video** icon on the slide and choose **From a File→Browse**.
34. Browse to the **PowerPoint Chapter 4\Benefits** folder, select **P4-R3-Video.mp4**, and click **Insert**.

Edit and Style a Video

35. Choose **Video Tools→Playback→Editing→Trim Video**.
36. Click in the middle of the sound wave to place the blue playhead.
37. Drag the **blue playhead** to the right and note when the camera starts to move away from the girl, at about 12 seconds.
38. Drag the **red trim control** to the left to cut off the end of the video where the camera moves and then click **OK**.
39. Choose **Video Tools→Format→Video Styles→More→Intense→Reflected Bevel, White**.

Set Video Playback Options and Run the Slide Show

40. Choose **Video Tools→Playback→Video Options→Start→Automatically**.
41. Save the presentation.
42. Choose **Slide Show→Start Slide Show→From Beginning**.
43. Watch as the slide show plays automatically. When the last slide is displayed, the video should play automatically. When the video ends, tap Esc to end the slide show.
44. Exit PowerPoint.

Apply Your Skills

APPLY YOUR SKILLS: P4-A1

Work with Audio

In this exercise, you will enhance a Universal Corporate Events sales pitch presentation. You will add audio from your computer that needs to be edited and apply rehearsed timings so the slide show can run unattended.

1. Start PowerPoint, open **P4-A1-Transportation** from your **PowerPoint Chapter 4** folder, and save it as: `P4-A1-TransportationRevised`
2. On **slide 2**, link to (don't embed) **P4-A1-TransportationNarration.mp3** from the **PowerPoint Chapter 4\Audio** folder.
3. Configure the audio on **slide 2** to start **Automatically**, **Play Across Slides**, and **Hide During Show**.
4. Edit the audio on **slide 2** to remove the noise from the beginning of the file.

Organize Media Files

5. Minimize PowerPoint and navigate to the **PowerPoint Chapter 4\Audio** folder.
6. Create a new folder named `Universal` and then drag **P4-A1-TransportationNarration .mp3** into the folder.
7. Maximize PowerPoint and attempt to play the audio file on **slide 2**.
8. Edit the link to the file so that the audio on slide 2 plays.
9. Reduce the size of the speaker icon.

Apply Rehearsed Timings

10. Set up Rehearsed Timings so that slide 1 displays for **7 seconds** and each subsequent slide displays in time with the narration.
11. Choose **Slide Show→Set Up→Set Up Slide Show**, place a checkmark in the **Loop Continuously Until 'Esc'** option box, and click **OK**.
12. Save the presentation.

Run the Slide Show

13. Run the slide show and ensure it plays automatically with slides timed to the narration.
14. Tap Esc to end the slide show.
15. Exit PowerPoint.

APPLY YOUR SKILLS: P4-A2

Work with Video

In this exercise, you will add videos to a presentation highlighting some of the entertainment services offered by Universal Corporate Events. You will also trim a video and apply video effects and playback options.

1. Start PowerPoint, open **P4-A2-Entertainment** from your **PowerPoint Chapter 4** folder, and save it as: **`P4-A2-EntertainmentRevised`**

Insert Online Video

2. Display **slide 2** and click the **Insert Video** icon in the left placeholder.
3. Use the YouTube search box to search for and insert a video on: **`Line Dancing`**
4. Minimize PowerPoint and use your web browser to navigate to: **`youtube.com`**
5. Find another line-dancing video and copy the embed code.
6. Close the web browser and maximize PowerPoint.
7. Click the **Insert Video** icon in the right placeholder on the slide.
8. Paste the embed code into the proper box and click **Insert**.
9. If necessary, resize the videos so they do not overlap.

Add Video and Run the Slide Show

10. Display **slide 3** and insert **P4-A2-Band.mp4** from the **PowerPoint Chapter 4\Video** folder.
11. Edit the video on **slide 3** to remove the shaking at the beginning.
12. Apply the **Subtle→Simple Frame, White** video style to all three videos in the presentation.
13. Set the video on **slide 3** to start **Automatically** and **Play Full Screen**.
14. Save the presentation.
15. Run the slide show and verify that the videos on **slide 2** play when clicked and the video on **slide 3** starts automatically at full screen.

    If your video fails to play during the slide show, replace it with a different video or click the Enable Content button if PowerPoint displays it.

16. Exit PowerPoint.

APPLY YOUR SKILLS: P4-A3

Work with Audio and Video

In this exercise, you will add audio and video to an automated presentation that will run in video kiosks at event venue lobbies.

1. Start PowerPoint, open **P4-A3-Invitations** from your **PowerPoint Chapter 4** folder, and save it as: **`P4-A3-InvitationsRevised`**

POWERPOINT

Add and Edit Audio

2. On **slide 1**, link to (don't embed) **P4-A3-Invites.mp3** from the **PowerPoint Chapter 4\Audio** folder.
3. Drag the **speaker** icon to the top-right corner of the slide.
4. Configure the audio clip to start **Automatically**, **Play Across Slides**, and **Hide During Show**.
5. Edit the linked audio clip to remove the noise from the beginning of the file.

Organize Media Files

6. Minimize PowerPoint and navigate to the **PowerPoint Chapter 4\Audio** folder in your file storage location.
7. Create a new folder named: `Invitations`
8. Drag **P4-A3-Invites.mp3** into the **Invitations** folder.
9. Maximize PowerPoint and attempt to play the linked audio file.
10. Edit the link to the file so the linked audio file plays.

Apply Rehearsed Timings

11. Set up Rehearsed Timings so each slide displays for about **4** seconds.
12. Run the slide show and ensure it plays automatically with sound. The narration should not get cut off at the end. If necessary, create new rehearsed timings to extend the length of the slide show.
13. Tap Esc to end the slide show.

Insert Online Video

14. Add a new slide to the end of the presentation by using the **Title and Content** layout.
15. Type `Celebrations` as the new slide's title.
16. Insert an online video and use the YouTube search to find a video on: `Corporate Celebrations`
17. Apply the **Intense→Perspective Shadow, White** video style.
18. Run the slide show and verify that the video plays when clicked. If it doesn't, delete it from the slide and try another online video.
19. Save and close the file. Exit PowerPoint.

Project Grader

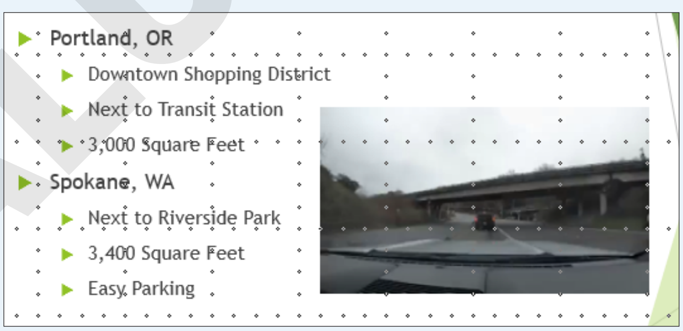
If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: P4-P1

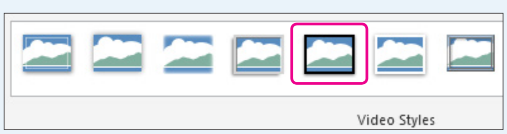
Adding Multimedia to Your Presentation

You have been asked to create a version of the New at Taylor Games *presentation for advertisers that contains multimedia. In this exercise, you'll add a sound clip and videos from your computer and YouTube.*

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **P4_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **P4_P1_Start** from your **PowerPoint Chapter 4** folder.
2. On **slide 1**, insert the **Blade Intro.wav** audio file located in your **PowerPoint Chapter 4** folder and then move the **speaker** icon toward the bottom-left corner of the slide.
3. Make these playback settings:
   - **Start Automatically**
   - **Hide During Show**
4. Make **Blade Intro.wav** audio the first step to occur in the animation.
5. On **slide 5**, insert the **Spokane Store Drive.mp4** video located in your **PowerPoint Chapter 4** folder.
6. Use these guidelines to move and size the video:
   - Make these Grid and Guide settings: **Snap Objects to Grid**, **Display Grid on Screen**, Grid Spacing, **1/4"**.
   - Move and size the video, letting it snap to the grid points so it has the approximate size and position shown here:



7. Apply the **Simple Frame, Black** video style.



8. Set the playback to **Start Automatically**.
9. Trim the video so the start time is 10 seconds (`00:10`) and the end time is 30 seconds (`00:30`).

POWERPOINT

10. On **slide 4**, use these guidelines to insert an online YouTube video:

- Use either the identifier code `KQPYOR2N01Q` or the video name `Your Turn: A Documentary About Playing Board Games`. If you use the code, then note that the *O* in *YOR* is the letter O and the *0* in *N01* is the number 0.
- Move and size the video, letting it snap to the grid points so it has the approximate size and position shown here:

11. Set the playback to **Start When Clicked On**.

12. Save your presentation as follows:

- *Using eLab:* Save to your **PowerPoint Chapter 4** folder as `P4_P1_eSubmission` and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save to your **PowerPoint Chapter 4** folder as: `P4_P1_Submission`

PROJECT GRADER: P4-P2

Creating a Kiosk-Style Presentation

You've been asked to modify the Classic Cars Club presentation to enable it to run by itself. The kiosk-style presentation will be used at regional shows to attract advertisers for the national show. In this exercise, you'll add multimedia and set up timings so the presentation runs on its own.

1. Download and open your Project Grader starting file.

- *Using eLab:* Download **P4_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
- *Not using eLab:* Open **P4_P2_Start** from your **PowerPoint Chapter 4** folder.

2. On **slide 1**, apply an animation to the picture using these settings:

Setting	Value
Animation	**Fly In**
Start	**After Previous**
Effect Options Direction	**From Left**

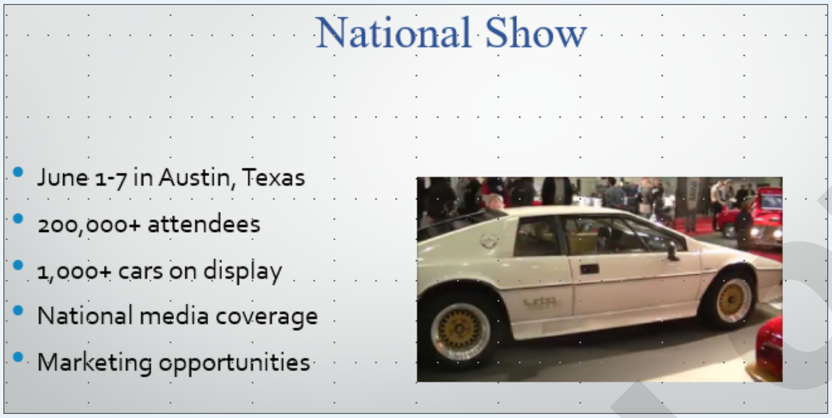
3. On **slide 1**, insert the **Ferrari.mp3** audio file located in your **PowerPoint Chapter 4** folder, and then move the **speaker** icon toward the bottom-left corner of the slide.

4. Apply these playback settings for the audio:

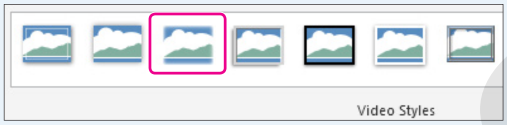
- **Start Automatically**
- **Hide During Show**

5. Move the **Ferrari.mp3** audio earlier in the animation sequence so it occurs before the car animation.

6. On **slide 3**, insert the **Car Show.mp4** video located in your **PowerPoint Chapter 4** folder.
7. Use these guidelines to move and size the video:
   - Apply these Grid and Guide settings: **Snap Objects to Grid**, **Display Grid on Screen**, Grid Spacing, **1/4"**.
   - Move and size the video, letting it snap to the grid points so it has the approximate size and position shown here:



8. Apply the **Soft Edge Rectangle** video style.



9. Set the playback to **Start Automatically**.
10. Trim the video, setting the end time to **8 seconds** (00:08).
11. Rehearse timings for all slides with approximately 8 seconds per slide.
12. Set up the slide show so that the show type is **Browsed at a Kiosk (full screen)**.
13. Save your presentation as follows:
    - *Using eLab:* Save to your **PowerPoint Chapter 4** folder as **`P4_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **PowerPoint Chapter 4** folder as: **`P4_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

P4-E1 That's the Way I See It

You are creating a presentation to accompany your introduction to a group of campers you will be working with over the summer. You decide to share your favorite hobby to bond with your future campers. Create a blank presentation named: **P4-E1-Hobby**

Change the first slide's layout to Title and Content. Title the first slide with the name of your favorite hobby (it could be sports, music, food, etc.) If you have access to a video camera (many smartphones have a built-in video camera), take a short video of yourself explaining your hobby. Transfer the video to your computer and insert it on the first slide. Edit it to trim off any unwanted beginnings or endings and apply a video style. Set it to play automatically. If you don't have a video camera, insert a clip art image depicting your hobby. Create a second slide and insert an online video depicting your hobby. Apply a video style and set the video to play when clicked. Add an appropriate slide title. Finally, apply a design theme.

P4-E2 Be Your Own Boss

You are creating an automated slide show highlighting gardens created by Blue Jean Landscaping. Open **P4-E2-BlueJean** and save it as: **P4-E2-BlueJeanRevised**

Search the Internet and download an audio file to add to slide 1 appropriate for a garden slide show (e.g., light classical or cool jazz). Make sure the audio is legal to use. Set the audio to start automatically and ensure that it plays across all slides and loops until stopped. The speaker icon should not display during the slide show. Configure the slide show to run automatically, about 7 seconds per slide. Upon reaching the last slide, the slide show should start over and loop continuously until Esc is pressed. Create a second presentation named **P4-E2-HowTo** that includes four slides. On the title slide, use **Blue Jean Landscaping** as the title and **How to Garden** as the subtitle. On each of the remaining slides, use the YouTube search to insert an online video. Set each video to start when clicked. Add an appropriate title to each slide and apply a design theme to the presentation. Apply the same video style to all three videos so the presentation has a consistent look. Run the slide show and verify that each video plays. If not, replace it.

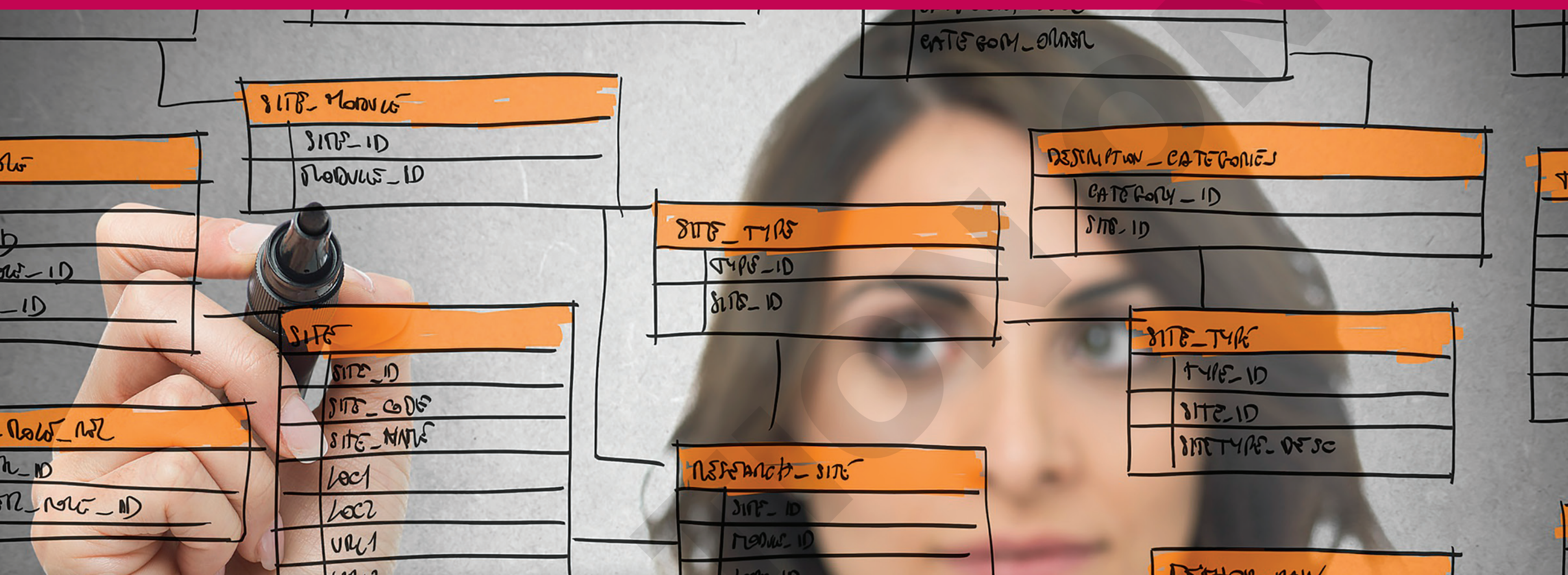
P4-E3 Demonstrate Proficiency

To promote its cooking classes, Stormy BBQ wants to display a presentation on the restaurant television screens showing some of its favorite recipes. Create a blank presentation named: **P4-E3-Recipes**

Add an appropriate title, subtitle, and design theme. Create a second slide using the Title and Content layout. Use the Internet to find a YouTube video showing how to cook something appropriate for a barbeque restaurant. Copy the embed code from the YouTube page. Insert the video, using the embed code, to the second slide and add an appropriate title. Apply a video style and set the video to play when clicked. Search the Internet and download some public domain audio clips of people saying "mmmmm," "yummy," or making polite eating sounds. Add them to slide 1. Set each audio clip to play automatically and hide the speaker icons during the slide show. Do not play the audio clips across all slides. Create rehearsed timings to display slide 1 for about 5 seconds, even if it cuts off eating sounds. Make sure the timing for slide 2 is long enough to show the entire video.

ACCESS

1 Getting Started with Tables



Have you ever wondered how sportscasters come up with fun and interesting facts about teams and players in a flash? Have you been taken by surprise when a customer service agent suddenly begins to recite your name, address, and a detailed purchase history? In most cases, these people have access to a powerful database from which they obtain the information. In this chapter, you will be introduced to database concepts and work with tables, the starting point of all databases.

LEARNING OBJECTIVES

- Identify database objects and the functions they perform
- Identify table features
- Create database tables
- Identify and choose data types
- Sort and filter table records
- Import a data source
- Establish a relationship between two database tables

Project: Creating a Database

Winchester Web Design is a website development company that specializes in building websites for small businesses. You have been asked to build a database to help the company manage its employee, customer, and sales data. You'll get started by creating a database and building tables and table relationships.

Introducing Databases

It is likely that you routinely interact with databases. If you make an online purchase, your order information goes into a database. The database might be used to track your order status, product likes and reviews, past orders, or future promotions. If you post or like something on your Facebook account, that information is maintained in a database. If you search for or store a telephone number, that information is likely kept in a database. It is quite possible you have been using databases without even knowing it! Here, you will be introduced to what a database is and gain a better understanding of related terms, explore a sample database, and, finally, create your own!

While there are many definitions of a database, you can think of a database as an organized collection of related data files or tables. For example, a company might organize its information by both customers (external to the business) and employees (internal to the business). While the data relate to the same business, the types of data provided for customers and employees will likely differ.

Databases are the epicenter of our digital world.

Types of Databases

Large organizations typically use large custom-designed databases specifically for that company or industry. When you make travel plans, you are using a database that is specific to the airline industry. It contains real-time data, meaning that if there is only one seat left on a plane, whoever selects and pays for the seat first gets the reservation. If you are a small-business owner, you may use predesigned database software such as Microsoft Access to track information about your customers, products, and employees. Access provides the tools needed to let small organizations create, use, and maintain databases.

Open and Save an Access Database

Each time you start Access, the Backstage view displays options for opening an existing file, creating a new blank database, or selecting from a number of prebuilt templates. If you're creating a new database, Access will immediately prompt you to save the file in your desired storage location. You must save your file first because the database will constantly update data as it is entered or edited.

DEVELOP YOUR SKILLS: A1-D1

In this exercise, you will open an existing Access database and save it with a new name.

1. Start Microsoft Access.
2. Browse through the list of templates and then choose **Open Other Files** near the upper-left side of the window.
3. Click the **Browse** button, navigate to your **Access Chapter 1** folder, and double-click the **A1-D1-WinDesign** database file.

   The database opens with the database objects shown in the Navigation pane on the left.
4. Click **Enable Content** if the Security Warning bar displays.

   The Security Warning appears whenever a database file is opened for the first time. When working with the files that correspond to this text you should always click the Enable Content button that appears. You should never open files unless you know or trust the file sender.
5. Choose **File→Save As**.

   Notice the Save Database As option is already selected in the File Types task pane to the left. This allows users to save the entire contents of a database, including any objects, relationships, and settings.
6. Click **Save As** to accept Access Database as the file type.
7. Replace the *1* at the end of the filename with `Rev` to make it *A1-D1-WinDesignRev* and then click the **Save** button.

   The database is saved as a Microsoft Access Database file type. This format saves databases as Access 2007–2019 files with the file extension of .accdb.
8. Click **Enable Content** when the Security Warning bar displays again.

   Not only did you save the database with a new name, which creates another file, but you also closed the original database and opened the new one, so the Security Warning appears again.
9. Keep Access open, as you will continue to use the database to explore the Access environment.

Note! *Always leave the database file open at the end of an exercise unless instructed to close it.*

ACCESS

Database Objects and the Access Window

The Access window includes the Ribbon, Navigation pane, and work area. The Navigation pane appears along the left side of the window and displays the database objects. A database object is a structure used to either store or retrieve data, and the four Access objects are tables, forms, queries, and reports. You can open and use database objects from the Navigation pane; you can also create new database objects using commands on the Ribbon along the top of the window. Whether you use the Ribbon to create a new object or double-click an existing object from within the Navigation pane, the object will open in the work area, where you create and modify database objects.

DATABASE OBJECT TYPES

Access Object	What It Does
Table	Tables contain the database's data, and they let you enter, edit, delete, or view records in a row and column layout that is similar to that used in an Excel worksheet.
Form	Forms are used to view, edit, delete, and add data to a table one record at a time.
Query	Queries are used to search for specific table records using criteria and to sort and perform calculations on the results.
Report	Reports are printable database objects that can display, group, and summarize data from tables and/or queries.

View the video "Working with Access Objects."

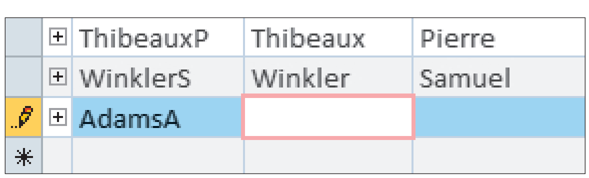
DEVELOP YOUR SKILLS: A1-D2

In this exercise, you will open and view the four Access object types.

1. Take a moment to explore the Access window, noticing the various tables, forms, queries, and reports in the Navigation pane.
2. Double-click the **Customers** table from within the Navigation pane to open the table in the work area.

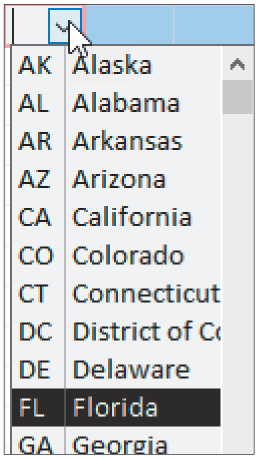
   The table opens in Datasheet View by default, which appears similar to a worksheet with columns and rows. Datasheet View lets you view, add, and edit table records. One benefit of Datasheet View is it lets you see more than one record at a time.
3. Click in the first empty **Cust ID** cell at the bottom of the CustID column.
4. Type **AdamsA** and tap Tab to complete the entry and move the insertion point to the next field.

   Notice the pencil icon highlighted in yellow. This indicates the current record is active and being created or edited.

   Cust ID *is known as a primary key field in this table, so each Cust ID must be unique.*
5. Type **Adams** in the Last Name field and tap Tab.

6. Enter **`Anthony`** as the first name, **`23 Pine St`** as the street address, and **`Bradenton`** as the city.
7. Click the drop-down **menu** button in the ST field and choose **FL** from the list of states.



The ST field is an example that utilizes field properties to make data entry easy and accurate.

8. Complete the record as follows, making sure to tap Tab after entering the information.

   Tapping Tab after entering data completes the record, saving it in the database. As you enter the telephone number, Access will automatically format the entry for you.
   - ZIP: **`34210`**
   - Telephone: **`(941) 555-3648`**
   - Email: **`AAdams@email.com`**
   - Notes: **`Call for delivery.`**
9. Choose **Home→Views→View menu button** and then choose **Design View**.

   Each object type can be created or edited using Design View. Tables Design View is where fields can be added, removed, or edited and field properties can be set.
10. Click the **View menu** button and choose **Datasheet View**.

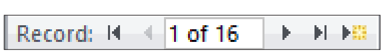
    The Anthony Adams record is now the second record in the table. It moved up because the records are sorted in ascending order by the data in the Cust ID field.

Explore a Form

Now you will explore a form that is based on the Customers table. Forms help facilitate effective data entry by displaying one record at a time.

11. Double-click **Customers Form** in the Forms section of the Navigation pane.

    The form displays all fields from the Customers table, but only one record is visible.
12. Locate the Record bar at the bottom of the form.



13. Click the **Next Record** button to view the Anthony Adams record you just entered.
14. Click in the **Notes** box and add the phrase **`after 10:00`** to the end of the note (that is, "Call for Delivery after 10:00").
15. Click the **Next Record** button again to complete the edit.

    This edit has now been saved in the Customers table.

ACCESS

Explore a Query

Now you will explore a query that is based on the Customers table. Queries choose specific database records using criteria that you specify.

16. Double-click **Customers Query** in the Queries section of the Navigation pane.

The query results look like a table displayed in Datasheet View, but the query displays only some of the fields from the underlying Customers table and records where the City is equal to Bradenton.

17. Click the **View menu** button ▾ on the Ribbon and choose **Design View**.

The query has fields from the Customers table and the criterion Bradenton. *This is an example of a simple query based on a single table. Queries can draw data from multiple tables and can include more sophisticated criteria.*

18. Choose **Query Tools→Design→Results→Run** to run the query and display only the Bradenton results.

Explore a Report

Now you will explore a report that uses multiple tables, including the Customers table.

19. Double-click **Invoice Details Report** in the Reports section.

Take a moment to scroll through and observe the report.

20. Switch to **Design View**.

The Report design grid may look complicated, but it's easy to create a robust report using the Access Report Wizard. The design grid can then be used to make modifications once the foundation has been set with the Wizard.

21. Switch to **Report View**, which is great for viewing reports.

22. Follow these steps to display and then close an object:

Ⓐ Display the Invoice report by selecting the tab at the far right.

The object type is indicated on each tab by the icon on the left of the tab.

Ⓑ Click the **Close Object** button at the far right to close the object.

23. Close the three open objects that remain.

24. Choose **File→Close** to close the database.

Introducing Tables

A table is the starting point for entering, finding, and reporting useful information located in your database. A database can have separate tables, each tracking different types of data. A business might use a table to keep track of customer billing or employee contact information.

Table Features

Data are meaningful units of information such as names, numbers, dates, and descriptions organized for reference or analysis. The data stored in the Winchester Web Design database might include customer first and last names, business names, telephone numbers, and other important information.

A field is the smallest meaningful unit of information about one person, place, or item. Individually, each field represents a piece of data. Together the fields provide information. In most databases fields are displayed in columns.

A record is a collection of related fields about a person, place, or item, such as a single customer or employee. A collection of related records makes up a table. In most databases records are displayed in rows.

Field

Record

Customers

CustID	Last Name	First Name	Street Address	City	ST	ZIP	Telephone
AbramsJ	Abrams	John	1210 West Pier Wa	Palmetto	FL	34620	(941) 555-9902
AndersM	Anders	Mark	205 Montana St	Bradenton	FL	34211	(941) 555-2309
BlaserH	Blaser	Helen	600 Fowler	Tampa	FL	33802	(941) 555-1991
DavisP	Davis	Peter	65 Terracotta Way	Sarasota	FL	34024	(941) 555-1792
FleetwoodC	Fleetwood	Candace	92 Highland St	Sarasota	FL	34023	(941) 555-9256
HassanA	Hassan	Ahmed	2301 Proctor Rd	Sarasota	FL	34048	(941) 555-0809

CustID field and BlaserH record in Customers table

Field Data Types

If you have ever filled out an online form, you might have seen instant formatting of some fields. When typing in currency values, the dollar sign and decimal point may appear automatically, and when entering a date, the slashes between month, day, and year spontaneously appear. This can be accomplished by assigning a data type to the field. A data type sets the characteristics of a particular field, identifying the type of values it may hold, such as alphanumeric text or numbers, dates, yes/no values, or even a hyperlink.

Primary Key Fields

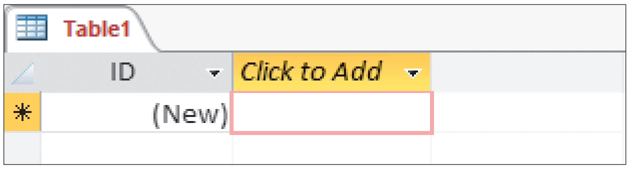
Almost every database table should have a primary key field. A primary key is a unique identifier for each record in the table. Examples of field data that would make good primary keys are Social Security numbers, student IDs, and email addresses. Using a student ID as a primary key ensures that each student is uniquely identified in a student database table. Two students may have identical names, but they will never have identical student ID numbers.

Table Tools→Design→Tools→Primary Key

ACCESS

Creating a Table in a New Database

Instead of using a database that someone else has prepared, you can design your own using a blank database template in Access. Tables are the starting point for databases, and this shows up when a new blank database is first created. The new table has a single primary key field as a starting point for the database.



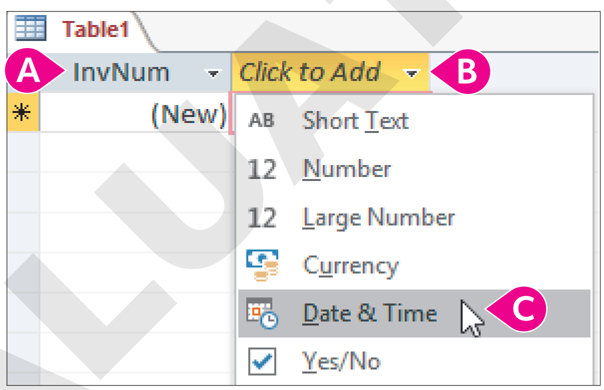
The starting point in a blank database

DEVELOP YOUR SKILLS: A1-D3

In this exercise, you will create a new blank database and add an Invoices table in Datasheet View.

1. Choose **File→New→Blank Database**.
2. Click **Browse Folders** and navigate to your **Access Chapter 1** folder.
3. In the File Name box at the bottom of the window, enter **`A1-D3-Datasheet`** as the filename and then click **OK**.

   The browsing window closes. Your new database file is now ready for creation in your chosen location using the filename you entered.
4. Click the **Create** button, and a new table will appear.
5. Follow these steps to change the name of the ID field and set the data type for a second field:



A. Double-click the **ID** field name and type **`InvNum`** as the new name. This will be the primary key field.

B. Tap Tab to go to the second column and, if necessary, choose **Click to Add** to display the data type list.

C. Choose **Date & Time**.

Once the data type is selected, the heading for the new field becomes Field1.

6. Replace *Field1* with the name **InvDate** and tap Tab to move to a new field.

   Your table currently has a primary key field and one Date/Time field.

7. Choose **Short Text** as the data type for the third field and change the field name to: **EmpID**
8. Tap Tab, choose **Short Text** for the fourth field data type, and change the field name to: **CustID**

   Your simple table with four fields is now set up and ready for data to be entered.

9. Click in the empty **InvDate** field directly below the InvDate header you just created (you might have to click twice) and type: **12/15/2019**
10. Tap Tab and type **JFW** as the EmpID.
11. Tap Tab and type **SmithW** as the CustID.
12. Enter the data for the three additional records shown.

    As you enter the records notice that the InvNum primary key field is automatically numbered because it has an AutoNumber property set.

Note! *You cannot enter data into a field that has an AutoNumber property set. Tap Tab or use your mouse to select the next field. Once you type data into the next field the AutoNumber field will automatically populate with the next available number in sequence.*

InvNum	InvDate	EmpID	CustID
1	12/15/2019	JFW	SmithW
2	12/2/2019	MJW	SantosE
3	1/1/2019	JMM	SantosE
4	11/30/2019	JMM	SmithW

13. Choose **File→Save** or click the **Save** button on the Quick Access toolbar and save the table with the name: **Invoices**
14. **Close** × the table.

Creating Tables in Design View

You may find it easier to create a new table in Design View than Datasheet View because Design View offers a straightforward layout and intuitive options for entering field names, setting data types, adding field descriptions, and setting field properties.

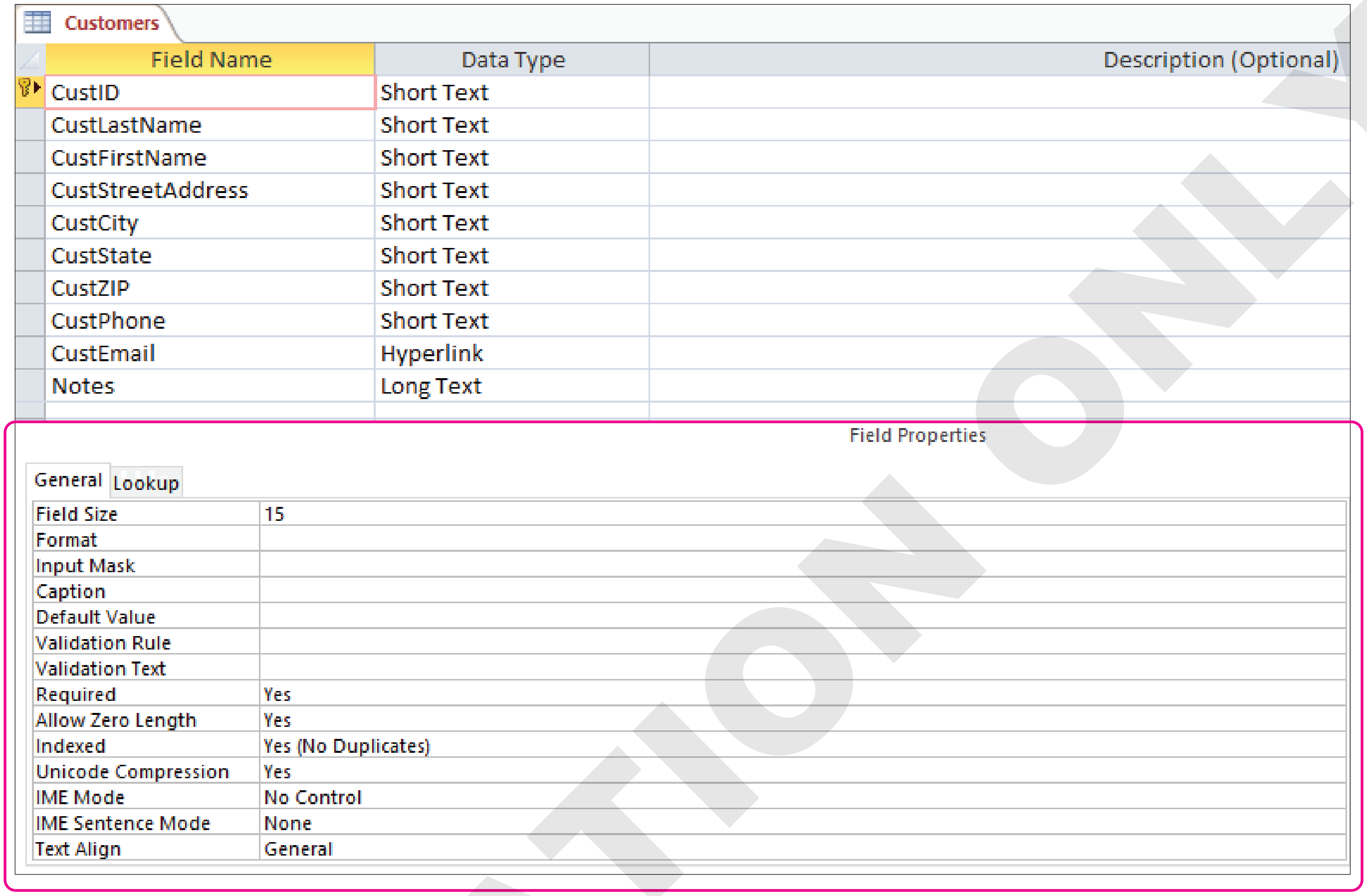
Create→Tables→Table

Field Properties

Each field data type has numerous properties that can be set to assist with data entry, formatting of displayed data, and other useful functions. Some properties contain drop-down menus and built-in wizards to help guide the user in setting the property.

Properties are set while working in Design View by using the Field Properties Pane at the bottom of the window.

Tip! *The field properties available are always based on the data type for the selected field. For example, a field set with the Number data type will include the Decimal Places property while fields set as Short Text would not.*



Customers

Field Name	Data Type	Description (Optional)
CustID	Short Text	
CustLastName	Short Text	
CustFirstName	Short Text	
CustStreetAddress	Short Text	
CustCity	Short Text	
CustState	Short Text	
CustZIP	Short Text	
CustPhone	Short Text	
CustEmail	Hyperlink	
Notes	Long Text	

Field Properties

General | Lookup

Field Size	15
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	Yes
Allow Zero Length	Yes
Indexed	Yes (No Duplicates)
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

View the video "Exploring Field Properties."

DEVELOP YOUR SKILLS: A1-D4

In this exercise, you will create a new table using Table Design View. Then you will adjust the width of the table columns.

1. Choose **Create→Tables→Table Design**.

   Access opens an empty table in Design View.

2. Type **`CustID`** in the Field Name box and tap Tab.
3. Tap Tab to accept *Short Text* as the Data Type.
4. Type **`Customer Last Name and First Initial`** in the Description field and tap Tab.

   It's a good idea to use field descriptions when setting up tables to help keep track of the purpose and intent of the fields.

5. Click in the **CustID** field and choose **Table Tools→Design→Tools→Primary Key**.

   CustID is now a required field, and each record must have a unique customer ID. Notice the key icon next to the CustID field name, indicating it is the primary key field.

6. Click in the empty box below the CustID field and complete the following fields as shown:

Table1

Field Name	Data Type	Description (Optional)
CustID	Short Text	Customer Last Name and First Initial
CustLastName	Short Text	
CustFirstName	Short Text	
CustStreetAddress	Short Text	
CustCity	Short Text	
CustState	Short Text	2 character state abbreviation
CustZip	Short Text	5 digit ZIP code
CustPhone	Short Text	Area code and number
CustEmail	Hyperlink	
Notes	Long Text	Special comments

7. Click anywhere in the **CustLastName** field, and the Field Properties for that field will display at the bottom of the window.

8. Change the Field Size property to **`25`** and enter **`Last Name`** as the Caption property.

   The field will now accept only last names of up to 25 characters in length. The Caption property will make Last Name the label that appears for the field when the table is displayed in Layout View and when the table is used in queries, forms, and reports. Good database design requires the actual field names follow certain guidelines such as eliminating spaces within the name. The caption lets you follow good design principles while having more descriptive labels for fields.

9. Change the Field Size and Caption properties for the remaining fields as follows:

Field Name	Field Size	Caption
CustFirstName	**`25`**	**`First Name`**
CustStreetAddress	**`25`**	**`Street`**
CustCity	**`15`**	**`City`**
CustState	**`2`**	**`State`**
CustZip	**`5`**	**`ZIP`**
CustPhone	**`15`**	**`Telephone`**
CustEmail		**`Email`**

10. Choose **File→Save** or click **Save** on the Quick Access toolbar and save the table as: **`Customers`**

    If you ever forget to save, Access will prompt you to save when you close a table or other object.

Set an Input Mask Property

In the next few steps, you will set an input mask property for the CustPhone field. The input mask will automatically format telephone numbers as they are entered, adding parentheses, ( ), around the area code and a hyphen, -, between the digits.

11. Click anywhere in the **CustPhone** field and then click in the **Input Mask** property box.

12. Click the **Input Mask** button on the right side of the property box to display the Input Mask Wizard.

    The Input Mask Wizard has several steps that can be used to fine-tune the mask. However, the default settings will work just fine.

13. Click **Finish** to complete the input mask and apply it to the CustPhone field.
14. Click the **View menu** button ▾, choose **Datasheet View**, and choose **Yes** when asked if you want to save the table.

    Notice the CustID field is still listed as CustID because you did not apply a caption in the preceding steps. However, all other fields now display the captions you entered previously.

Enter Records

Notice as you are entering records that the input mask you just created formats the telephone numbers, and the email field is automatically formatted as a hyperlink because of the field type setting you made. Also, feel free to widen the columns slightly by dragging the double-headed arrow that appears between column headings if you need more space to see all the data.

15. Enter the following records.

    Be sure to check your data entry for accuracy.

Customers

CustID	Last Name	First Name	Street	City	State	ZIP	Telephone	Email	Notes
AndersM	Anders	Mark	205 Pine St	Bradenton	FL	34211	(941) 555-2309	MAnders@email.com	
DavisP	Davis	Peter	65 Maple St	Sarasota	FL	34228	(941) 555-1792	PDavis@email.com	
JeffriesD	Jeffries	Daniel	102 Fern St	Bradenton	FL	34209	(941) 555-6939	DannyJ@email.com	

16. Choose **File→Close** to close the database.

Sorting and Filtering Table Data

The primary purpose of any database is to locate and retrieve data quickly and efficiently. Sorting and filtering table records can help accomplish this goal.

When a table is created the records are automatically sorted using the primary key field. This can be changed by applying an ascending or descending sort to other table fields. You can even sort on more than one field, so customers could be sorted by last name and then by first name.

Home→Sort & Filter→Ascending *or* Descending

Filtering displays a subset of records. For example, in a customer table you may want to view only customer records for customers that live in a specific ZIP code. This is accomplished by applying a filter to the ZIP code field.

Home→Sort & Filter→Filter

DEVELOP YOUR SKILLS: A1-D5

In this exercise, you will sort and filter records in a database for a medical clinic named Raritan Clinic East.

1. Open **A1-D5-RCE** from your **Access Chapter 1** folder and save it as: `A1-D5-RCERev`
2. Double-click the **Patients** table in the Navigation pane to open it in Datasheet View.

   The records are sorted in ascending order (smallest to largest) on the Patient ID primary key field. Records are always sorted on the primary key field unless a sort is applied to one or more other fields.
3. Click any name in the Last Name column and then choose **Home→Sort & Filter→Ascending**.

Apply a Filter

4. Double-click the **Raritan Clinic East Doctors** table in the Navigation pane.
5. Click anywhere in the **ZIP** column and click the **Filter** button.
6. Uncheck the **Select All** box and then check the **34205** box.
7. Click **OK** to apply the filter.

   Just two records should now be visible. The remaining records are still in the table but are hidden from view because of the filter.
8. Close both tables and save the changes.

   The sort and filter you applied will be active next time the tables are used.
9. Choose **File→Close** to close the database.

Importing Data Sources

Organizations frequently have data in text files, Excel worksheets, and other formats that needs to be imported into a database. It's easy to import data into Access using the Import & Link tools. Data is imported into tables that become part of the database. Excel workbooks are the most common source of imported data.

External Data→Import & Link→Excel

DEVELOP YOUR SKILLS: A1-D6

In this exercise, you will import an Excel worksheet into a new table.

1. Open **A1-D6-WinDesign** from your **Access Chapter 1** folder and save it as: `A1-D6-WinDesignRev`
2. From the Ribbon, choose **External Data→Import & Link→New Data Source** and then choose **From File→Excel** from the menu.
3. Take a moment to examine the options in the first screen of the Get External Data Wizard.

   You will leave the how and where *option set to Import the Source Data into a New Table in the Current Database. Notice the data could also be appended (added) to an existing table if desired.*
4. Click the **Browse** button, navigate to your **Access Chapter 1** folder and choose **A1-D6-WebContacts**, and click **Open**.
5. Click **OK** to start the import and display the second Wizard screen.
6. Check the **First Row Contains Column Headings** box and click **Next** to specify the Excel column headings as the field names in the new table.

   The next Wizard screens let you adjust various settings, including field names and data types. In the next step you will change the data type for the email field, changing it to a hyperlink.
7. Click in the **Email** column and click the **Data Type menu** button ▾.
8. Choose **Hyperlink** and click **Next**.

   The new Email field hyperlink formatting won't show up until the import is complete.

ACCESS

9. Click **Next** again to let Access add a primary key field with autonumbering.
10. Name the table `Web Contacts` and click **Finish**.
11. Choose **Close** on the final Wizard screen without checking the Save Import Steps box.

    The Web Contacts table appears at the bottom of the Tables list in the Navigation pane.
12. Double-click the **Web Contacts** table to open it in Datasheet View.

    Notice the hyperlink format is applied to the Email field.
13. Adjust the column widths to fit the widest entries in each column by either dragging the column head borders or autofitting the columns by double-clicking between two column heads.
14. Click **Save** on the Quick Access toolbar and close any open tables.

Relational Databases

Early database programs stored data in one large, flat file similar to a worksheet. If a salesperson sold merchandise and the same product was sold many times, these databases required the salesperson to enter the same product description and price for every transaction. Such repetitive data entry is time-consuming and bound to cause data errors and inconsistencies.

Relational databases like Access link tables using primary key fields. A good example is linking a Salesperson table with a Sales Invoices table. One salesperson might be linked to hundreds of sales invoices for which that person received commissions. Once a relationship between the Salesperson and Sales Invoices tables is created, all that's needed to associate an invoice with a salesperson is to choose the correct salesperson when creating the invoice. This type of relationship is called a one-to-many relationship because one salesperson is responsible for many invoices. The other types of database relationships are one-to-one and many-to-many, although they are not frequently used.

Database Tools→Relationships→Relationships

Referential Integrity

Referential integrity is an option that can be chosen when creating a relationship between tables. It is a set of rules that prevents changes from being made to fields or records that are related to other fields or records. For example, if referential integrity were in effect, then a salesperson could not be removed from a database that has invoices assigned to that salesperson. Referential integrity would require all the invoices either be removed (not a good idea) or associated with a different salesperson before the original salesperson's record could be deleted. Referential integrity also requires the data types of related fields to be the same or compatible.

Data Normalization

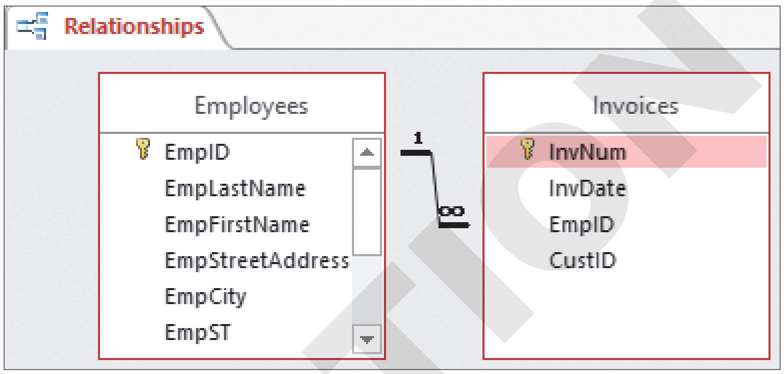
A properly designed database organizes tables and fields into their smallest usable units and then links them using relationships. This is known as normalization. Normalization eliminates data duplication, decreases data entry errors and inconsistencies, reduces file size, and streamlines the search for necessary information. An example of reducing fields to their smallest usable units would be to use separate fields for first name and last name rather than a single name field. If a single name field were used, then the database could never be searched or sorted by just last name or first name.

DEVELOP YOUR SKILLS: A1-D7

In this exercise, you will open the Relationships window, add tables, create a one-to-many relationship between the Invoices table and the Employees table, and set referential integrity for the relationship.

1. Choose **Database Tools→Relationships→Relationships**.
2. Click the **Show Table** button.
3. Add the **Employees** and **Invoices** tables to the Relationships window by double-clicking them from the list.
4. Close the Show Table box.

   The one-to-many relationship between the EmpID fields is automatically created because it is a primary key in the Employees table and a foreign (or secondary) key in the Invoices table. The line connecting the tables is called a join line. There's a 1 on the Employees side of the join line because EmpID is the primary key in that table. EmpID is a foreign key in the Invoices table, so it has an infinity symbol on that side of the join line. Each employee can have an unlimited number of invoices associated with them.



5. Click **Close** in the Relationships group on the Ribbon and choose **Yes** to save the relationship.
6. Choose **File→Close** to close the database and then close Access.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

ACCESS

Reinforce Your Skills

REINFORCE YOUR SKILLS: A1-R1

Create a Table in Datasheet View

In this exercise, you will create a new database and a table using Datasheet View.

1. Start Access and choose **Blank Database** from the template list.
2. Click the **Browse Folders** button and save the database to your **Access Chapter 1** folder as: **A1-R1-K4C**
3. Click the **Create** button to start a new database.
4. Double-click the **ID** heading and change the text to: **StID**

   This will be the primary key field with autonumbering, so your records will automatically get numbered.
5. Tap Tab, choose **Short Text** as the data type, and change the heading from *Field1* to: **StLName**
6. Add the following as fields with the Short Text data type: **StFName**, **StAdd**, **StCity**, **StST**, **StZIP**, **StPhone**, and **StAvail**
7. Choose **File→Save** or click **Save** on the Quick Access toolbar and save your table as: **Staff**
8. Click the first empty cell in the StLName field and enter the following records using these guidelines:
   - Use Tab to complete entries.
   - Enter hyphens in the phone field, as the field is not formatted with an Input Mask.
   - Widen the columns as necessary.
   - Strive for 100% accuracy when entering data, including spaces between characters and uppercase and lowercase letters.

StID	StLName	StFName	StAdd	StCity	StST	StZIP	StPhone	StAvail
1	Bryant	Matthew	12 Macintosh St	Sarasota	FL	34022	941-555-7523	Thursday
2	Earle	Kevin	77 Kingfisher Ct	Sarasota	FL	34024	941-555-1368	Monday

9. Choose **File→Close** to close the database.

REINFORCE YOUR SKILLS: A1-R2

Create a Table in Design View

In this exercise, you will create a new table using Table Design View. Then you will adjust the width of the table columns.

1. Choose **File→New** and then choose **Blank Database** from the template list.
2. Click the **Browse Folders** button and navigate to your **Access Chapter 1** folder. Name the database file: **A1-R2-K4C**
3. Click the **Create** button and then switch to **Design View**.
4. Save the table with the name **Children**, and the design grid will appear.

5. Replace the field name *ID* with `ChID` and tap [Tab].

   Notice the key icon to the left of the Field Name indicating this is a primary key field.

6. Change the Data Type to **Short Text** and tap [Tab].
7. Type `Last Name and First Initial` and tap [Tab] to complete the description.
8. Enter the remaining fields using the data types and descriptions shown:

Field Name	Data Type	Description (Optional)
ChLName	Short Text	
ChFName	Short Text	
ChAdd	Short Text	
ChCity	Short Text	
ChST	Short Text	2-char abbreviation
ChZIP	Short Text	5-digit ZIP code
ChPhone	Short Text	Area code & number
ChBday	Date/Time	

9. Click anywhere in the **ChPhone** field and then click in the **Input Mask** property box.
10. Click the **Input Mask** button on the right side of the Input Mask property box and choose **Yes** if asked to save the table.
11. Click **Finish** to accept the Phone Number input mask and apply it to the ChPhone field.
12. Switch to **Datasheet View**, saving the table if prompted to do so.
13. Enter these records, adjusting the column widths as necessary:

ChID	ChLName	ChFName	ChAdd	ChCity	ChST	ChZIP	ChPhone	ChBday
CregerK	Creger	Kurt	503 Hillview St	Sarasota	FL	34022	(941) 555-0245	10/12/2012
LangfordJ	Langford	James	43 Wisteria Ct	Bradenton	FL	34209	(941) 555-1098	8/13/2010

14. Choose **File→Close** to close the database, saving the changes if prompted.

REINFORCE YOUR SKILLS: A1-R3

Create, Import, and Sort Tables and Establish Relationships

The staff director of Kids for Change would like you to add two new tables to the database: one that stores various community activities and one that stores parent volunteers. You'll create one of these tables and import the other.

1. Open **A1-R3-K4C** from your **Access Chapter 1** folder and save it as: `A1-R3-K4CRev`

   The first thing you'll do is import a worksheet into a table, which will then be linked with other tables through relationships.

2. Choose **External Data→Import & Link→New Data Source**.
3. From the menu that appears, choose **From File→Excel**.
4. Click the **Browse** button on the first Wizard screen and navigate to your **Access Chapter 1** folder.
5. Choose **A1-R3-ActivityParticipation** and click **Open**.
6. Click **OK** to import the worksheet into a new table and display the next Wizard screen.
7. Click **Next** again to choose **ActivityParticipation** as the worksheet to use.

8. Check the **First Row Contains Column Headings** box and click **Next** to specify the Excel column headings as the field names in the new table.
9. Click **Next** again to accept the data type of the two fields as Short Text.
10. Click **Next** again to let Access add a primary key field.
11. Click **Finish** to accept *ActivityParticipation* as the table name and then click **Close** to complete the import.

    ActivityParticipation *should now be in the table list.*

Sort the Imported Worksheet

12. Double-click the **ActivityParticipation** table to open it in Datasheet View.

    Notice the table is sorted in ascending order by Activity ID.
13. Click anywhere in the **Child ID** column and choose **Home→Sort & Filter→Ascending** .

    The records are now sorted by Child ID to easily see all the activities each child has participated in.
14. Close the table and save the changes.

Create Relationships

15. Choose **Database Tools→Relationships→Relationships** .

    Notice there is currently a relationship between the Donors and Donations tables.
16. Click the **Show Table** button.
17. Add the **Children**, **ActivityParticipation**, and **Activities** tables and then close the Show Table box.
18. Drag the **Child ID** primary key field from the Children table and drop it on the ChildID field in the Activity Participation table.

    Make sure ChildID *appears in both the Table/Query and Related Table/Query lists.*
19. Check the **Enforce Referential Integrity** box and then click the **Create** button to complete the relationship.
20. Drag the **ActID** field from the Activities table and drop it on the ActID field in the **ActivityParticipation** table.
21. Choose to **Enforce Referential Integrity** and then click **Create**.

    These relationships will now allow a database user to determine all the activities a particular child has participated in and to view the details of those activities.
22. Click the **Close** button above the relationships and choose **Yes** to save the relationships.

Add a Table in Design View

23. Choose **Create→Tables→Table** .
24. Choose **Home→Views→Design View** and save the table as: `Volunteers`

25. Follow these guidelines to set up the table and enter a record:

- Use the field names provided in the image.
- Let VolID be the primary key field with autonumbering.
- Set the data type of all fields (except the primary key field) to **Short Text**.
- Enter the record shown here, including the hyphens in the phone number:

VolID	VolLName	VolFName	VolStreet	VolCity	VolST	VolZIP	VolPhone	AvailDay
1	Jones	Stan	892 South St	Sarasota	FL	34024	941-555-8929	Tuesday

26. Choose **File→Close** when you are finished, saving the changes if prompted.

ACCESS

Apply Your Skills

APPLY YOUR SKILLS: A1-A1

Create a Database and Tables

In this exercise, you will create a new database with two tables.

1. Create a new database and save it to your **Access Chapter 1** folder as: `A1-A1-SunStateU`
2. Create a new table named `Classes` using these field names, data types, and captions:

Field Name	Data Type	Caption
ClassID	**Short Text (Primary Key)**	
Department	**Short Text**	
ClassNumber	**Short Text**	`Class Number`
SectionNumber	**Short Text**	`Section Number`
RoomNumber	**Short Text**	`Room Number`
StartTime	**Date/Time**	`Start Time`
EndTime	**Date/Time**	`End Time`
CreditHours	**Number**	`Credit Hours`

3. Brainstorm and add at least two records to the table and then close the table.
4. Create another new table named `Professors` using these fields and data types and making **ProfID** the primary key field:

Field Name	Data Type
ProfID	**Short Text**
ProfLastName	**Short Text**
ProfFirstName	**Short Text**
ProfDept	**Short Text**
ProfRank	**Short Text**

5. Brainstorm and add at least two new records to the table and then close the table.
6. Choose **File**→**Close** to close the database.

APPLY YOUR SKILLS: A1-A2

Import a Table and Establish a Relationship

In this exercise, you will import an Excel worksheet and establish a relationship between the new table and an existing table.

1. Open **A1-A2-Customers** from your **Access Chapter 1** folder and save it as: `A1-A2-CustomersRev`
2. Open the **Customers** table in Datasheet View.
3. Sort the records in **Ascending** order on the **CustZIP** field.

4. Widen all columns to fit the widest entry in the columns.
5. Close the table, saving the changes.

Import a Worksheet

6. Follow these guidelines to import the **A1-A2-Invoices** workbook in your **Access Chapter 1** folder as a table into the open database:
   - Leave all field names and data types as they are in the Wizard.
   - Make **InvNum** the primary key field.
   - Use `Invoices` as the table name.
7. Double-click the **Invoices** table to open it in Datasheet View.
8. Sort the table in **Ascending** order on the **EmpID** field.
9. Close the table, saving the changes.

Establish a Relationship

10. Open the **Relationships** window and create a relationship between the CustID fields in the Customers and Invoices tables, enforcing referential integrity.
11. Close the Relationships window and save the changes to the relationship.
12. Choose **File→Close** to close the database.

APPLY YOUR SKILLS: A1-A3

Create a Table, Import a Database, and Establish a Relationship

In this exercise, you will create a database to track the courses taught by specific teachers in a nonprofit organization.

1. Create a new database and save it to your **Access Chapter 1** folder as: `A1-A3-Teachers`
2. Follow these guidelines to create the table shown:
   - Use the table name, field names, and data as shown.
   - Set all data types to **Short Text** and make **TeacherID** the primary key field.
   - Enter this data:

TeacherID	TFirstName	TLastName	TStatus
Amack	Alex	Mack	Fulltime
Bsmith	Brian	Smith	Parttime
Jjones	Jack	Jones	Parttime
Twatts	Tonya	Watts	Fulltime

3. Close the table and save it with the name: `Teachers`
4. Import the **A1-A3-Courses** workbook (**Access Chapter 1** folder) using **CourseID** as the primary key field and naming the table: `Courses`
5. Establish a one-to-many relationship between the **TeacherID** fields in the Teachers and Courses tables and enforce referential integrity.
6. Close and save the Relationships window and close the database.

ACCESS

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: A1-P1

Taylor Games: Create and Import Tables

Taylor Games creates replacement parts for many different games as well as various types of dice. You've been asked to create a database to manage orders and inventory. It would like you to use the data from a spreadsheet that was previously created to manage inventory for various items.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A1_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A1_P1_Start** from your **Access Chapter 1** folder.
2. Create a new table named `Orders` that contains the following fields and criteria:

Field Name	Data Type	Primary Key	Field Size	Caption
Order_ID	AutoNumber	Yes		Order #
Order_Date	Date & Time			Date
SKU	Number		Double	
Item	Short Text			
Quantity	Number			
Cost	Currency			
Total_Cost	Currency			Total Cost

3. Import data from an Excel file into a new table using the following guidelines in the Import Wizard:
   - Choose the **A1_P1_Inventory.xlsx** Excel workbook from your **Access Chapter 1** folder.
   - The first row should contain column headings.
   - Leave all Field Options set to the default values.
   - Use **SKU** as the primary key.
   - Import to a table named: `Inventory`
4. Sort the Inventory table data in **Ascending** order on the **Quantity** field; then close the table, saving the changes.
5. Create a one-to-many relationship between the SKU fields in the Inventory and Orders tables, enforcing referential integrity. Close and save the relationship when you are finished.
6. Save your database.
   - *Using eLab:* Save it to your **Access Chapter 1** folder as `A1_P1_eSubmission` and attach the file to your eLab assignment for grading.
   - *Not using eLab:* Save it to your **Access Chapter 1** folder as: `A1_P1_Submission`

PROJECT GRADER: A1-P2

WebVision: Design a Database and Create Tables

You are the Senior Sales Rep for WebVision, a startup company providing a unique closed-circuit television service. You've been asked to create an Access database of the most recent orders taken and relate them to the sales reps who made the sales.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A1_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A1_P2_Start** from your **Access Chapter 1** folder.
2. Create a new table named `Sales Reps` that contains the following fields and criteria:

Field Name	Data Type	Primary Key	Caption
RepID	Short Text	Yes	Rep ID
LastName	Short Text		Last Name
FirstName	Short Text		First Name
SalesTeam	Short Text		Sales Team

3. Enter the following data into the Sales Rep table and then close the table, saving the changes, if necessary:

Rep_ID	LastName	FirstName	SalesTeam
S101	Franks	Bernie	North
S102	Edmunds	Sally	Central
S103	Berry	Amy	West
S104	Lifestone	Ben	South

4. Import data from an Excel file into a new table using the following guidelines in the Import Wizard:
   - Choose the **A1_P2_Orders.xlsx** Excel workbook from your **Access Chapter 1** folder.
   - The first row should contain column headings.
   - Leave all Field Options set to the default values.
   - Use **OrderID** as the primary key.
   - Import to a table named: `Orders`
5. Make the following changes in the Orders table:
   - Set the caption for the OrderID field to: `Order Number`
   - Set the caption for the RepID field to: `Rep ID`
   - Sort the data in the **Date** field in descending order and then close the table, saving the changes if necessary.
6. Create a one-to-many relationship between the RepID fields in the Sales Reps and Orders tables, enforcing referential integrity. Close and save the relationship when you are finished.
7. Save your database.
   - *Using eLab:* Save it to your **Access Chapter 1** folder as `A1_P2_eSubmission` and attach the file to your eLab assignment for grading.
   - *Not using eLab:* Save it to your **Access Chapter 1** folder as: `A1_P2_Submission`

ACCESS

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

A1-E1 That's the Way I See It

You've volunteered to help a nonprofit organization determine how much recyclable material is being collected by the five recycling centers in the area. You've been tasked with creating a database with contact information for the five centers. You will also visit the five centers, gathering information on the recyclables they accept and the annual number of metric tons of each that they've collected each year over the past three years. The annual tonnage information needs to be in a separate table that is related to the Centers table. Save your completed database as: **A1-E1-Recycle**

A1-E2 Be Your Own Boss

Your boss, the owner of Blue Jean Landscaping, has decided to sponsor the Sarasota Service Guild, a nonprofit organization created to raise money to help adults with disabilities. It needs a database that tracks businesses that donate to the guild and the donations that are made. Create a database with tables and fields to track the businesses and the donations they make. Create a relationship that can be used to relate businesses to the donations it has made over the past five years. Populate your tables with information for two businesses, with each making an annual donation over the past five years. Include relevant information about the businesses, including their names, addresses, and primary contact information. Include the amount and date of the annual donations. Save your completed database as: **A1-E2-BJL**

A1-E3 Demonstrate Proficiency

Stormy BBQ wants to modernize its business. It has hired you to design and create a database for its BBQ restaurant. Use Access to create a database with three tables: one for staff, one for menu items, and one for transactions where each transaction lists the menu items on that transaction including the quantity and price of each item. Relate the menu and transactions tables. Enter enough data to be able to view and modify the tables as needed. Save your completed database as: **A1-E3-StormyBBQ**

ACCESS

2 Working with Forms

If you have ever entered your personal information on a college application, filled out a loan application, or purchased an item from an online retailer, you have used a form. You also use forms to sign up for social media and email accounts. In this chapter, you will create and work with Access forms that provide an attractive, easy-to-use interface that allows users to focus on one table record at a time.

LEARNING OBJECTIVES

- Create basic forms
- Create forms using the Forms Wizard
- Modify forms using Layout View
- Modify forms using Design View
- Set properties for form sections and form controls
- Set the tab order of a form
- Create multiple item forms and split forms

Project: Designing Forms at Winchester Web Design

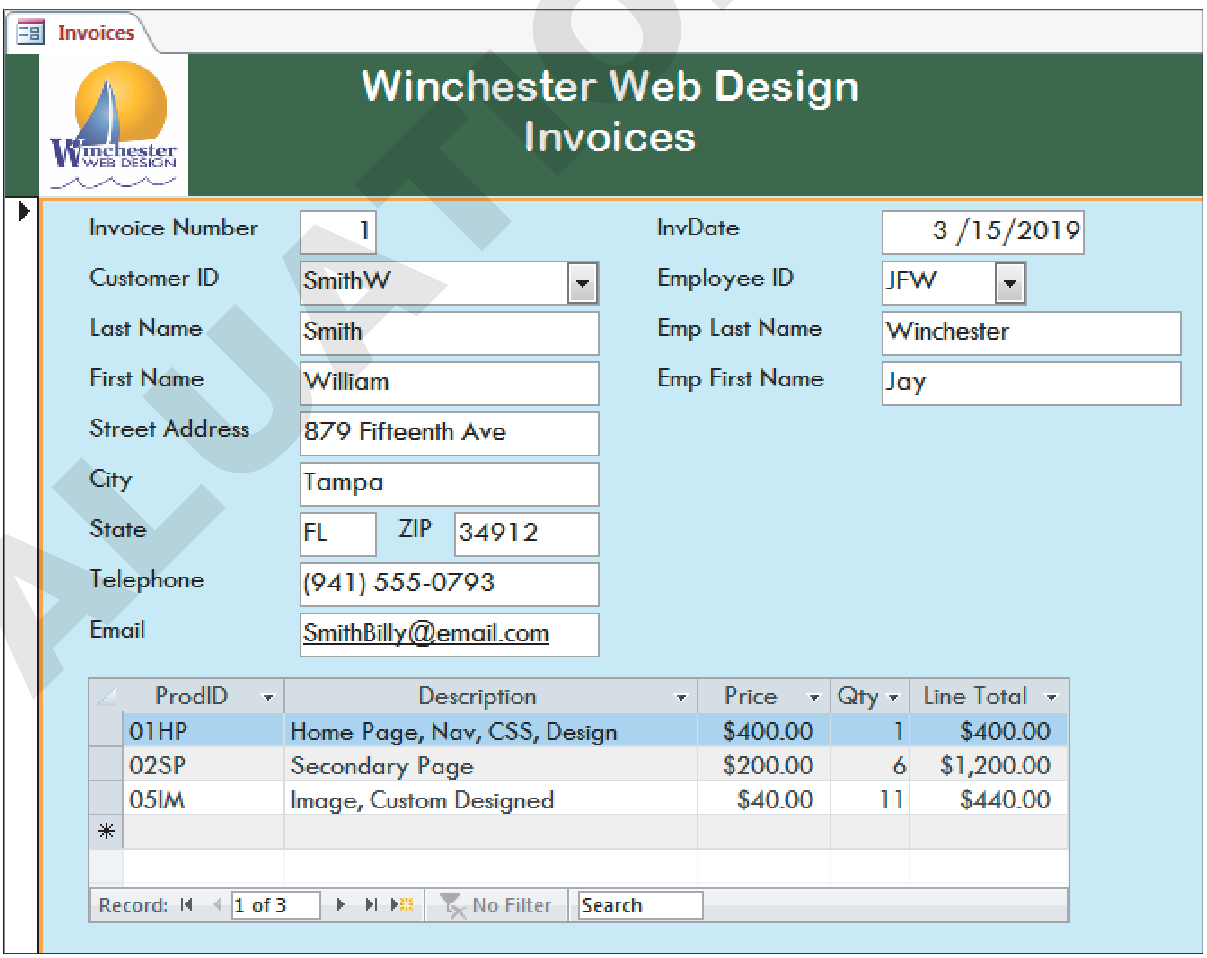
As the information technology (IT) director at Winchester Web Design, you are responsible for designing and formatting the forms and reports in the company database to make them more attractive, consistent, and user-friendly. Part of your job is to customize forms so they better identify the company. To accomplish this, you plan to create a consistent color scheme and add the corporate name and logo to all company forms.

Creating Forms

A form is a database object used to enter, edit, or view the data for individual table records. Forms are a nice alternative to the row and column arrangement of table Datasheet View. Being able to view and focus on a single record can help ensure data accuracy.

Record Sources

Forms display data from a record source, which is typically a single table or query. However, if a relationship exists between two or more tables, fields from all related tables can be displayed on the same form. An example is an Invoice form that displays fields from the Invoice, Products, Customers, and Employee tables.



A form with controls containing data from fields in the Invoice, Products, Customers, and Employee tables

Creating and Using Basic Forms

The Form button instantly creates a basic form based on the table or query selected in the Navigation pane. This is the easiest way to create a form using all fields from the selected table or query. Only one table or query can be used in a basic form.

Create→Forms→Form

DEVELOP YOUR SKILLS: A2-D1

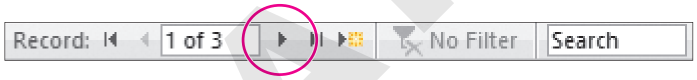
In this exercise, you will create a basic form and edit a record using the form.

1. Open **A2-D1-WinDesign** from your **Access Chapter 2** folder and save it as: **`A2-D1-WinDesignRev`**

   When completing exercises, always choose to Enable Content.
2. Choose the **Employee Spouses** table in the Navigation pane by clicking the table name (don't double-click).
3. Choose **Create→Forms→Form**.

   A basic form is created based on all fields in the Employee Spouses table and is displayed in Layout View. Layout View is used to size and position form controls.
4. Click the **View menu** button ▾ and choose **Form View**.

   Form View is used for entering, editing, and viewing table records one at a time. The navigation controls located in the record selector at the bottom of the form are used to browse table records and create new records.
5. Navigate to record 2 (the Tom Franklin record) by clicking once on the **Next Record** button in the navigation controls.



6. Change the last four digits of the phone number to: **`6767`**
7. Choose **File→Save** or click **Save** on the Quick Access toolbar and save the form as: **`Employee Spouses`**
8. Click the **Close** × button on the right side of the form.

Creating Forms with the Form Wizard

The Form Wizard is a great way to get started with the creation of most forms. It allows you to build a form using the fields you choose from one or more tables or queries (record source). When choosing the fields your form requires, the Add and Remove buttons allow you to add or remove the field selected, while the Add All or Remove All buttons add or remove all fields within the record source with one command. You can also choose from multiple layout options—including Columnar, Tabular, Datasheet, and Justified—from within the Wizard. The form can then easily be modified using Layout View or Design View.

View the video "Working with the Form Wizard."

Create→Forms→Form Wizard

ACCESS

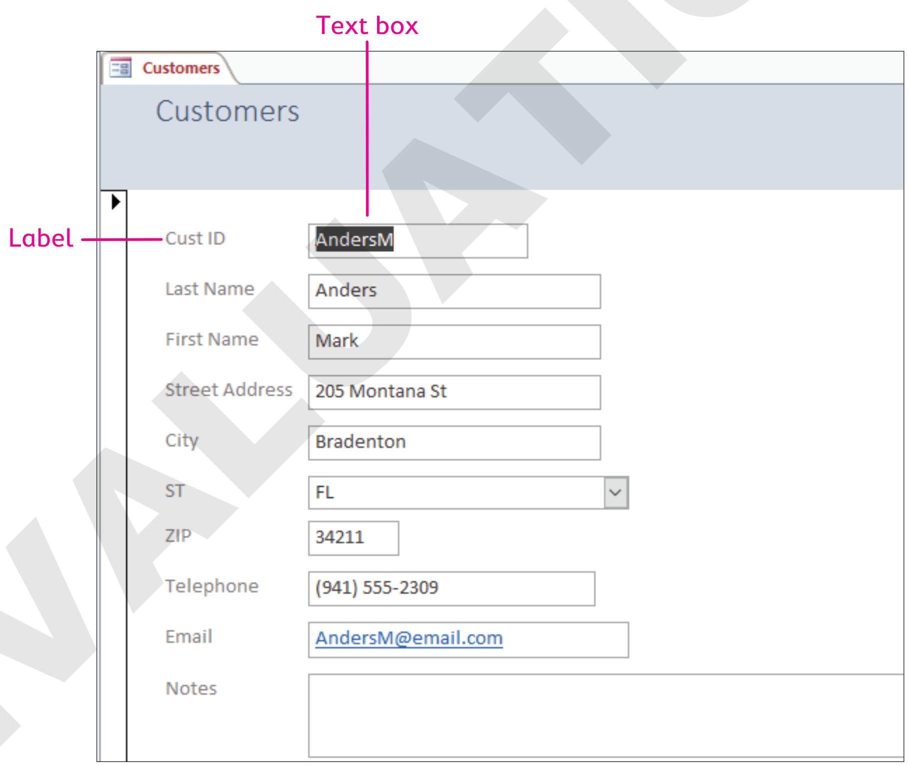
DEVELOP YOUR SKILLS: A2-D2

In this exercise, you will use the Form Wizard to create a form.

1. Choose the **Customers** table in the Navigation pane.
2. Choose **Create→Forms→Form Wizard**.
   Customers is chosen in the Tables/Queries list because you chose it before starting the Wizard.
3. Click the **Add All Fields** >> button and click **Next**.
   This adds all fields from the Customers table to the Selected Fields list. You could add fields from other tables and queries as well, although you won't do that now.
4. Click **Next** again to accept the Columnar layout format option.
5. Leave the form name as *Customers* and click **Finish**.
   The form is displayed in Form View and is ready for data entry or editing.

Changing Forms in Layout View

A typical form has a header section where tiles, logos, and decorative elements are displayed and a detail section with control labels and text boxes. In a basic form, most labels will contain the name of the field, while the text box displays the field data for that record.



These objects can easily be sized, moved, edited, and removed in Layout View. Multiple objects can be selected by holding the Ctrl key while clicking each desired one. Selecting multiple objects allows you to format or edit those objects at one time.

View the video "Reorganizing Forms in Layout View."

Home→Views→Layout View

DEVELOP YOUR SKILLS: A2-D3

In this exercise, you will size, position, and edit controls, and you'll get extensive practice selecting multiple controls.

1. With the Customers form still open, click the **View menu** button ▾ and choose **Layout View**.
2. Click the **Street Address** label to select it.
3. Click in the selected label, just to the right of *Address*.
4. Tap the Backspace key until the word *Address* has been removed.
   The label should now be Street.
5. Click in the **ST** label and rename it to: `State`
6. Click in the **ZIP** label and change it to: `Zip`

Size Text Boxes

7. Click the large, empty **Notes** text box (not the label) to select it.
8. Hover the mouse pointer over the right edge until the adjust pointer appears.

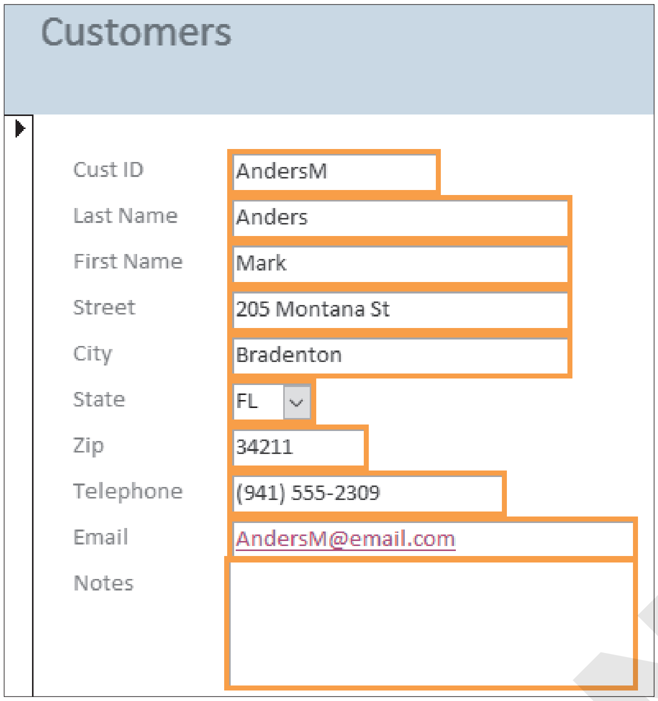
9. Drag left, reducing the box width to equal the Email text box width.
10. Reduce the width of the State text box so it is slightly wider than the two-character state abbreviation.

Change the Position of Labels and Text Boxes

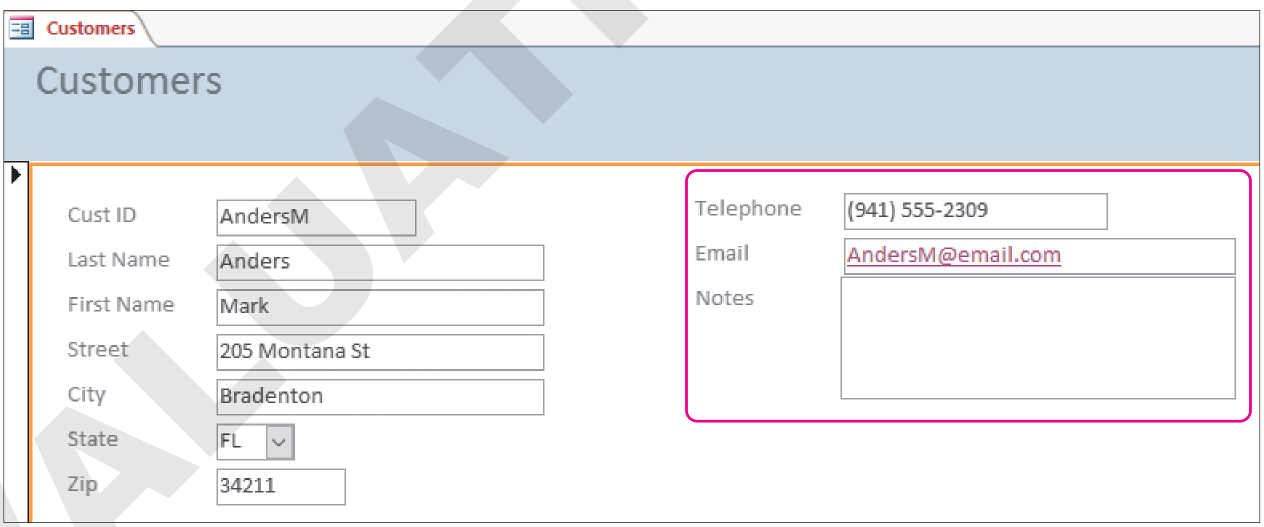
In the next few steps, you will move the text boxes so they are closer to their descriptive labels.

11. Click the large **Notes** text box.
12. Press and hold Ctrl and click the **Email** text box.
    Both boxes should be selected.
13. Press and hold Ctrl while you select all other text boxes in the column.
    Use Undo if you accidentally move the boxes while selecting.

14. Tap the **left arrow** [←] key repeatedly to move the text boxes closer to their labels.



15. Click any empty part of the form (white background) to deselect all boxes.
16. Use the mouse and [Ctrl] key to select the **Telephone**, **Email**, and **Notes** labels and text boxes.
17. Use the keyboard or drag with the mouse (when the four-headed arrow appears) to move the labels and text boxes up and right as shown.



18. Choose **File→Save** or click **Save** on the Quick Access toolbar to save the changes to the form.

Changing Forms in Design View

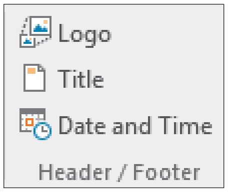
Form Layout View is a great tool for controlling the visual layout of a form, including editing, sizing, and rearranging labels and text boxes. However, some form design details can be more precisely set using Design View. In Design View you can set section properties as well as which Sections to include in a form. The Property Sheet is used in both Layout View and Design View to specify the details for any form object.

Form Layout Tools→Design→Views→Design View

Form Design Tools→Design→Tools→Property Sheet

Modifying Form Header and Footer Sections

The Form Header and Footer sections appear at the top and bottom of the form. The Form Header is the typical location for decorative features such as the title and logo controls, which are available in the Header / Footer group on the Home tab of the Ribbon.



Form Footers are used less frequently; however, you can place static data there, such as the date or various contact information. Form Footers are available with the same controls offered to the Form Header section. The Form Header and Form Footer can be modified in either Layout View or Design View.

DEVELOP YOUR SKILLS: A2-D4

In this exercise, you will format the Form Header and field labels and insert a logo to make the form look more professional.

1. With the Customers form still open, choose **Form Layout Tools→Design→Views→ Design View**.

   The Form Header section contains the Customers title and the text boxes, and their labels are located in the Detail section.

2. Click in the **Customers** title box in the form header and change the title to: `Winchester Customers`

   Next you will use the Property Sheet to precisely size, position, and format the title.

ACCESS

3. Choose **Form Design Tools→Design→Tools→Property Sheet**.

   The Property Sheet shows the settings for the currently selected object (the Customers title box).

4. Click in the **Width** box in the Property Sheet and then set the width to **`5.5`** and press Enter.

Tip! *After setting a property, press* Enter *or* Tab*. Property settings don't take effect until after the current property box is no longer active.*

5. Click in the **Left** box and enter: **`1.5`**
6. Choose **Lucida Calligraphy** for the Font Name setting and enter **30** for the Font Size setting.
7. Choose **Home→Text Formatting→Font Color** **menu button** ▾ and choose a blue color of your choice.

   You can set text formats in this manner or directly in the Property Sheet, if desired.

Set Control Properties in the Detail Section

8. Click the **Cust ID** label (not the text box) in the Detail section.

   The name CustID_Label *appears at the top of the Property Sheet. The Property Sheet always indicates which control is selected.*

9. Press and hold Ctrl and click all labels in the Detail section to select them all.

   Properties can be set for multiple controls at the same time, provided the controls are of the same type (labels or text boxes). Notice in the Property Sheet that many properties, like Width and Height, are identical for all labels. Other properties, like Top and Left positioning, are blank because they are not the same for all labels.

10. Apply the same blue font color you just applied to the title to the selected labels.

Insert a Logo

11. Choose **Form Design Tools→Design→Header/Footer→Logo**.
12. Navigate to your **Access Chapter 2** folder, choose **WWD-Logo.bmp**, and click **OK**.

    Access places the logo in the upper-left corner of the Report Header section, but it's a bit small. The logo should be selected so the Property Sheet will show the logo properties.

13. Set both the width and height to: **`0.8`**

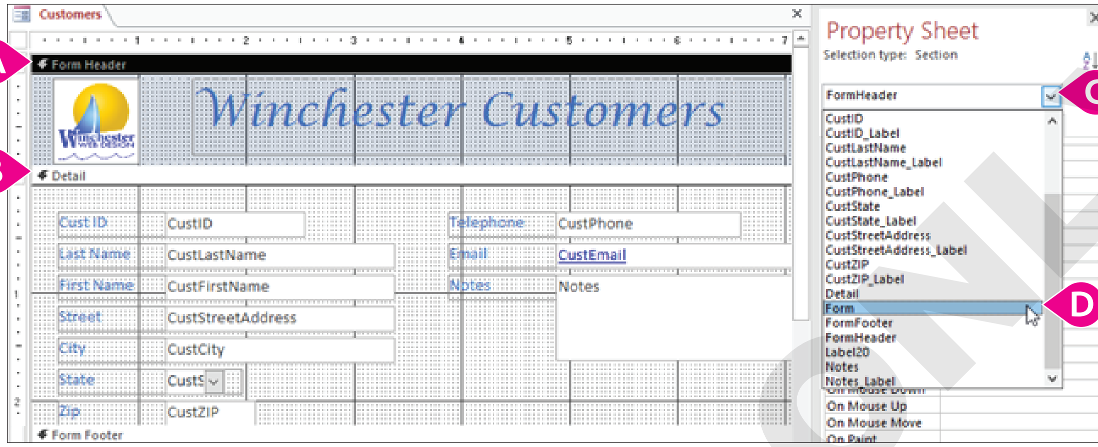
    The form header will increase in height slightly to accommodate the logo.

14. Switch to **Form View** to see the changes.

Explore Property Sheets for Sections and the Form

15. Switch to **Design View**.

16. Follow these steps to explore section and report properties :



(A) Click the **Form Header** section bar and view the Property Sheet.

The Property Sheet should be set to FormHeader. Here you can specify the visibility of the header area and set formats like the background color.

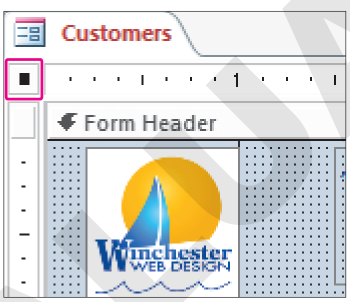
(B) Click the **Detail** section bar and examine its properties.

(C) Click the **Selection Type menu** button ▼ in the Property Sheet.

(D) Scroll through the list and choose **Form** from the list.

The Form properties control the overall appearance and functionality of the form.

Tip! *Properties for the form can also be accessed by clicking the Select Form box at the top-left corner of the form.*



Tab Order

The most effective way to enter a record using a form is to use [Tab] to move from one field to the next. Forms have a tab order that determines which field the insertion point moves to each time the [Tab] key is tapped. The tab order can be changed to allow fields to be entered in a different sequence. This may be necessary if fields are rearranged on a form and when fields from more than one table appear on the same form.

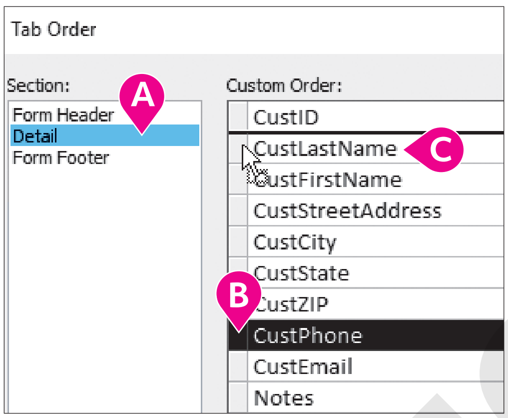
Design→Tools→Tab Order

DEVELOP YOUR SKILLS: A2-D5

In this exercise, you will change the form tab order to make the telephone number the second field in the tab order.

1. Switch to **Form View**.
2. Use the Tab key to cycle through the fields.

   The last name field is the first field in the tab order after the CustID field.
3. Switch to **Design View**.
4. Choose **Form Design Tools→Design→Tools→Tab Order**.
5. Follow these steps to adjust the tab order:



A Choose **Detail** from the section pane to the left to see the current tab order for fields in the Detail section.

B Click the small selection box next to the CustPhone field.

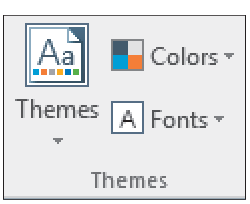
C Drag the **CustPhone** selection box up and drop it above the CustLastName field. CustPhone should now be second in the tab order.

6. Click **OK** to complete the tab order change.
7. Switch to **Form View** and tap Tab repeatedly to cycle through the fields.

   The tab order remains the same with the exception of the CustPhone field, which is now second in the order.

Themes

Themes are prepackaged groups of design elements such as background colors, font families, font sizes, and other properties. When themes are applied, they impact all objects in the database (tables, forms, queries, and reports). The Themes group on the Ribbon lets you change just the colors or fonts or the overall design, including both the colors and fonts.



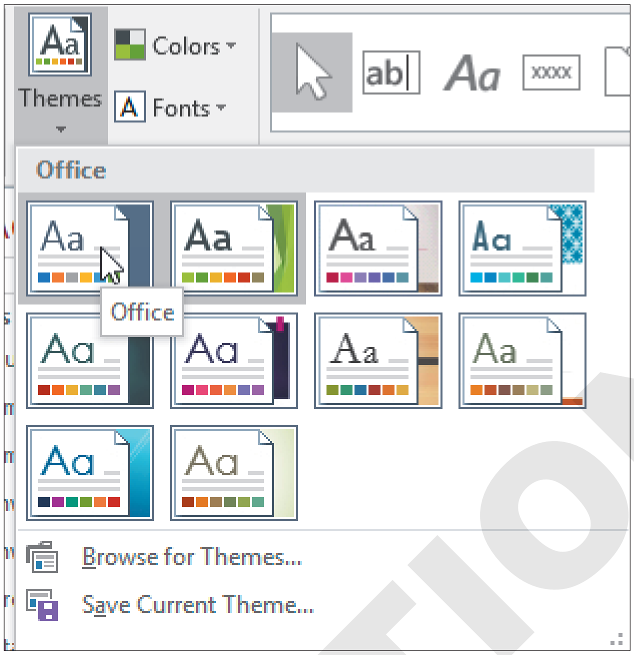
Form Design Tools→Design→Themes→Themes

DEVELOP YOUR SKILLS: A2-D6

In this exercise, you will apply a theme to your form and adjust theme colors and fonts.

1. Switch to **Design View** and choose **Form Design Tools→Design→Themes→Themes**.
2. Hover over the thumbnail of the first available theme (first row, first column) in the gallery.

   A ToolTip showing the theme name appears near the bottom of the mouse pointer and a live preview of the theme appears in the working area.



Tip! *With the exception of the first theme (Office), themes in the gallery are listed in alphabetical order from left to right, top to bottom.*

3. Click to choose the **Office** theme from the gallery.
4. Choose **Design→Themes→Colors** **menu button ▾**.
5. Choose **Blue Warm** from the menu.
6. Choose **Design→Themes→Fonts** **menu button ▾** and then choose **Franklin Gothic** from the menu.
7. Switch to **Form View** to see how your finished form looks with the new theme.

   Access themes are subtle, applying small, incremental changes to the form. Keep in mind that themes are applied to all objects in the database (tables, forms, queries, and reports). And once a theme is applied, it cannot be undone.
8. Close your form, saving the changes if prompted to do so.

Creating Other Types of Forms

The basic form may not always meet the needs of an organization. Some organizations will benefit by equipping staff to view multiple records or compare a form to a corresponding table within the same object. Different departments within an organization may need to access the same database tables but view different fields from within those tables. A good example would be the difference between what a customer service representative and a salesperson might need. They will both have a need to access customer information, but the salesperson will want to see sales history, sales opportunities, and other information that a customer service representative won't need. For these and other reasons, organizations may desire a variety of forms designed to make their staff highly efficient.

Creating Multiple Item Forms

Most forms are designed to let the user focus on one record at a time. Sometimes, however, it is necessary to print multiple items in a table using a layout more appropriate for printing and distributing than a table datasheet. The multiple item form is used for those occasions.

Multiple item forms resemble datasheets because data appears in rows and columns. However, multiple item forms can be customized to enhance the appearance of the form using colors, graphics, and other design elements.

Create→Forms→More Forms→Multiple Items

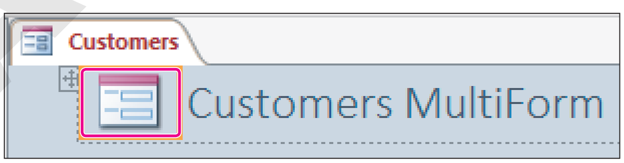
DEVELOP YOUR SKILLS: A2-D7

In this exercise, you will create a multiple item form.

1. Choose the **Customers** table in the Navigation pane.
2. Choose **Create→Forms→More Forms→Multiple Items**.

   Notice the form's datasheet-like appearance.
3. Choose **Form Layout Tools→Design→Themes→Themes** and choose a theme that has text sizes and formatting you like.
4. If necessary, click any of the customer ID data below the CustID column header to select all cells in that column.

   The selected cells will have faint yellow borders.
5. Hover the mouse pointer over the right edge until the adjust pointer appears.
6. Drag the right border of the selected cells to the left, reducing the column width to just accommodate the largest entry.
7. Reduce the widths of the remaining columns; see if you can get the form to fit on your screen.
8. Change the title to: `Customers MultiForm`
9. Click the **Forms** icon in the form header next to the Customers MultiForm title and tap **Delete** to remove it.

   Your completed form is now ready to be used as an alternative to a datasheet for data entry and other uses.
10. Close the form, saving it as: `CustomersMultiForm`

Creating Split Forms

A split form simultaneously shows a table in Datasheet View and a form displaying a single record from the table. The views are synchronized so that a selected record in one view is also selected in the other view.

Create→Forms→More Forms→Split Form

DEVELOP YOUR SKILLS: A2-D8

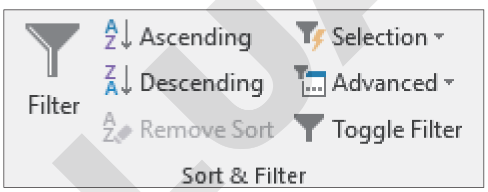
In this exercise, you will create a split form.

1. Choose the **Customers** table in the Navigation pane.
2. Choose **Create→Forms→More Forms→Split Form**.

   Click any record in the datasheet and notice that it displays in the form.
3. Choose **Form Layout Tools→Design→Themes→Themes** and choose a theme that has text sizes and formatting you like.
4. Change the title to: `Customers SplitForm`
5. In the header, remove the Forms icon located next to the title control.
6. Choose **File→Close** to close the database, saving the form as: `CustomersSplitForm`

Sorting and Filtering Records by Form Field

Like tables, forms allow the user to filter or sort data using the commands provided in the Sort and Filter group. Ready-to-use filters are available for each data type, allowing a different filter to be used for each field. You can apply filters to any single field or to multiple fields—as long as those fields are present in Form View.



Filtering a Form

The Filter by Form command creates a blank form with a look and layout that mimics the original. This form allows you to filter multiple fields at one time by entering values directly in the text box or selecting from a drop-down list located in the field. When the filter is applied, only the records that match the values you entered will be displayed.

Home→Sort & Filter→Advanced→Filter by Form

ACCESS

DEVELOP YOUR SKILLS: A2-D9

In this exercise, you will first sort records in a form. You will also add and then remove a filter from the form.

1. Open the **Customers** form from the Navigation pane.
2. Select the **Last Name** text box control.
3. Choose **Home→Sort & Filter→Descending**.

   The Last Name field is now sorted in descending order, making William Smith *the first record in the form.*

4. Choose **Home→Sort & Filter→Remove Sort**.

   The sort is removed, and the records are now back to the order held previously.

Filter by Form

5. Choose **Home→Sort & Filter→Advanced**.
6. Choose **Filter by Form** from the menu.

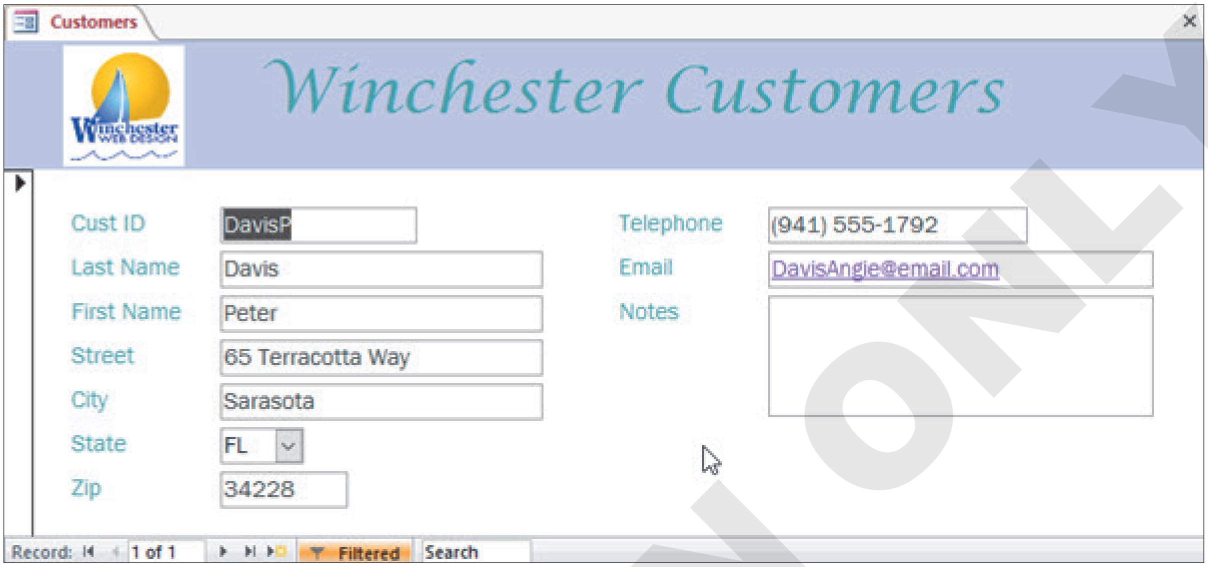
   A blank form appears with two new tabs at the bottom of the form.

7. Follow these steps to create a filtered form:

- **A** Select the **City** text box control.
- **B** Click the drop-down **menu** button that appears to the right.
- **C** Choose **Sarasota** from the list.

8. Choose **Home→Sort & Filter→Toggle Filter** to apply the filter.

   The Customers form is restored with the navigation control indicating the form is filtered to one record. This is the only record in our form with Sarasota *in the City field.*



Tip! *The field drop-down menu provides a list of all data entered into the active field. This is a helpful option if you are not familiar with the data in a field or are unsure about keying in the values you would like to use in a filter.*

9. Choose **Home→Sort & Filter→Toggle Filter** to remove the filter.
10. Save and then close your database file.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

ACCESS

Reinforce Your Skills

REINFORCE YOUR SKILLS: A2-R1

Create and Customize a Form

Kids for Change has hired you to create a new form and customize it with a new design. In this exercise, you will use the Form Wizard to create a form, add an image, and set several formatting properties.

1. Open **A2-R1-K4C** from your **Access Chapter 2** folder and save it as: `A2-R1-K4CRev`
   Enable the content when prompted.
2. Choose the **Children** table in the Navigation pane.
3. Choose **Create→Forms→Form Wizard**.
4. Add all fields from the Children table to the Selected Fields list and click **Next**.
5. Keep the Columnar layout and click **Next**.
6. Name the form `Kids for Change Children Volunteers` and click **Finish**.

Edit and Format the Title

7. Switch to **Design View**.
8. Click in the title box and position the insertion point just in front of the letter *C* in *Children*.
9. Press and hold the Shift key and tap Enter to force *Children Volunteers* to a new line.
10. If necessary, display the **Property Sheet**.
11. Set these properties for the title:

Property	New Value
Width	3
Font Name	**Arial**
Font Size	18
Text Align	**Center**
Font Weight	**Semi-bold**

Insert a Logo and Set Properties

12. Choose **Form Design Tools→Design→Header/Footer→Logo**.
13. Navigate to your **Access Chapter 2** folder, choose **K4C-Logo.bmp**, and click **OK**.
14. Set these properties for the logo:

Property	New Value
Width	0.7
Height	0.7
Left	3.3

Format Text Boxes and Labels

15. Click the **Child ID** label in the Detail section.
16. Press and hold Ctrl while you select all other labels.
17. Set these properties for the labels:

Property	New Value
Width	`1.5`
Height	`0.25`
Special Effect	**Raised**
Font Name	**Arial**
Font Weight	**Semi-bold**

18. Select all text boxes in the Detail section and set these properties:

Property	New Value
Height	`0.25`
Font Name	**Arial**
Font Weight	**Semi-bold**

19. Choose **Form Design Tools→Design→Themes→Themes** and apply the **Slice** theme.
20. Switch to **Form View** to see your completed form.
21. Choose **File→Close** to close the database and save the changes to your form.

REINFORCE YOUR SKILLS: A2-R2

Create a Multiple Item Form and Apply a Theme

Kids for Change has hired you to redesign its database forms and apply a consistent and attractive theme to both new and existing forms. In this exercise, you will create a multiple item form for entering and managing staff information. Then you will apply a theme to the new form.

1. Open **A2-R2-K4C** from your **Access Chapter 2** folder and save it as: `A2-R2-K4CRev`
2. Choose the **Staff** table in the Navigation pane and choose **Create→Forms→More Forms→ Multiple Items**.
3. Change the title to: `Kids for Change Staff`
4. Delete the small image that is just to the left of the *Kids for Change Staff* title.
5. Choose **Form Layout Tools→Design→Themes→Themes** and apply the **Ion** theme.
6. Reduce the widths of all columns to fit the widest entries in the columns.
7. Switch to **Form View** to see your completed form.
8. Choose **File→Close** to close the database, saving the form as: `Staff-MultiItem`

ACCESS

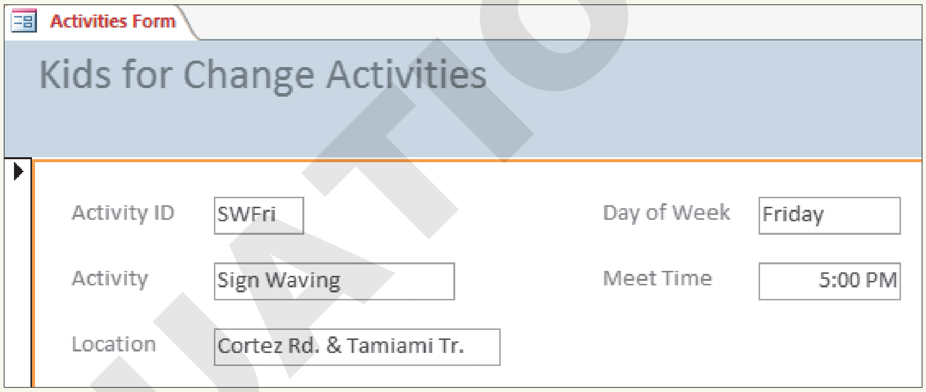
REINFORCE YOUR SKILLS: A2-R3

Create and Sort a Form

You have been asked to help facilitate the management of the Kids for Change Activities table. In this exercise, you will create a form with a title and an image. Then you will sort the form to display the activities by day.

1. Open **A2-R3-K4C** from your **Access Chapter 2** folder and save it as: `A2-R3-K4CRev`
2. Using the Form Wizard, create a form that includes all fields in the **Activities** table. Choose the **Columnar** layout and save the form as: `Activities Form`
3. Switch to **Layout View** and change the title to: `Kids for Change Activities`
4. Widen the title box so the text doesn't wrap inside the box.

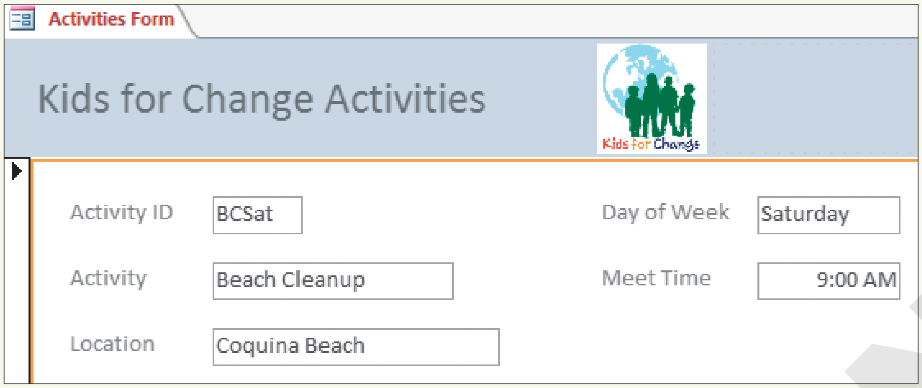
   You may need to click outside of the title box and then click on the title again before sizing it.
5. Reduce the widths of all labels so they are just slightly wider than the label text.
6. Use the form to navigate through the ten records and reduce the width of the text boxes to be slightly wider than the widest entries.
7. Move the text boxes closer to the labels.
8. Move the **Day of Week** and **Meet Time** labels and text boxes. Add a little extra space between all rows as shown here:



9. Choose **Form Layout Tools→Design→Header/Footer→Logo** .
10. Navigate to your **Access Chapter 2** folder, choose **K4C-Logo.bmp**, and click **OK**.
11. Set these properties:

Property	New Value
Width	`0.7`
Height	`0.7`
Left	`3.6`

12. Reduce the height of the title box so it's just high enough to hold the title and then move it down in the Form Header so it is vertically centered in the header area.



13. Choose **Form Layout Tools→Design→Themes→Themes** and apply the theme of your choice.

If you apply a theme that increases the text size, you may need to go back and adjust the controls' sizes again.

Apply a Sort

Now you will sort the records in order by the day of the week the activity occurs so you and others can easily see the weekly Kids for Change offerings.

14. Switch to **Form View**.

15. Select the **Day of Week** text box control.

16. Choose **Sort & Filter→Ascending**.

17. Choose **File→Close** to close the database, saving the changes to the form.

Apply Your Skills

APPLY YOUR SKILLS: A2-A1

Create and Modify a Form

Universal Corporate Events is a planner of corporate and professional events. You have been tasked with revamping the image of Universal Corporate Events, including everything from reports to forms. In this exercise, you will create a new Personnel form.

1. Open **A2-A1-UniversalCorp** from your **Access Chapter 2** folder and save it as: **`A2-A1-UniversalCorpRev`**
2. Using the Form Wizard, create a form that includes all fields in the **Personnel** table. Choose the **Columnar** layout and save the form as: **`Personnel Mgmt`**
3. Switch to **Layout View** and display the Property Sheet.
4. Click in the **title** box and set these properties for the title:

Property	New Value
Width	**`4`**
Left	**`1.5`**
Text Align	**Center**

5. Edit the title, creating a two-line title with **`Universal Corporate Events`** on the first line and **`Personnel`** on the second.

   Remember to use the Ctrl+Enter *keystroke combination to push Personnel to the second line.*
6. Insert **UCE-Logo.bmp**, located in your **Access Chapter 2** folder.
7. Set both the Width and Height properties to: **`0.7`**

Modify the Detail Section

8. Apply the **Slice** theme to the form.
9. Set the Width property of all labels to: **`1.2`**
10. Set the Width property of the EmpID, ST, and ZIP text boxes to: **`0.6`**
11. Set the Width property of the First Name, Last Name, Address, and City text boxes to: **`1.5`**
12. Set the Width property of the **Email Address** and **Salary Grade** text boxes to: **`2`**
13. Select all text boxes and move them closer to the labels.
14. Reposition the **Telephone**, **Email Address**, **Date Hired**, and **Salary Grade** labels and text boxes up and to the right of the other fields, creating a two-column form.
15. Switch to **Design View** and change the tab order, making EmpPhone the second field in sequence and leaving the rest of the tab order as it currently is.
16. Switch to **Form View** to view the database and test the tab order.
17. When you are finished, close the database, saving the changes you've made to the form.

APPLY YOUR SKILLS: A2-A2

Edit and Format Labels and Text Boxes

In this exercise, you will create a new Personnel form.

1. Open **A2-A2-UniversalCorp** from your **Access Chapter 2** folder and save it as: `A2-A2-UniversalCorpRev`
2. Open the **Event Schedules** form and switch to **Layout View**.
3. Change the *Location* label to: `Venue`
4. Change the *Event ID* label to: `Event Code`
5. Display the Property Sheet and change the properties for the Universal Corporate Events title as follows:

Property	New Value
Width	4.5
Height	0.3
Font Name	**Georgia**

6. Set these properties for the Scheduling subtitle:

Property	New Value
Width	4.5
Height	0.3
Font Name	**Georgia**
Font Weight	**Light**

7. Select all the labels in the Detail section and set these properties:

Property	New Value
Width	1.3
Height	0.3
Font Name	**Arial**
Font Size	12
Font Weight	**Semi-bold**

8. Select all the text boxes in the Detail section and set these properties:

Property	New Value
Height	0.3
Left	1.5
Font Name	**Arial**
Font Size	14

9. Apply the **Slice** theme.
10. Switch to **Form View** and then make any changes needed.
11. Close the database, saving the changes to the form.

APPLY YOUR SKILLS: A2-A3

Create a Form with a Logo and Filter

In this exercise, you will create a new form for managing UCE's event venue information, add and format a Form Header and title, and add an original company logo. You will then add a filter to the form to show only the events occurring in the city of Sarasota.

1. Open **A2-A3-UniversalCorp** from your **Access Chapter 2** folder and save it as: `A2-A3-UniversalCorpRev`
2. Using the Form Wizard, create a form that includes all fields in the **Venues** table. Choose the **Columnar** layout and save the form as: `Event Venues`
3. Switch to **Layout View** and display the Property Sheet.
4. Click in the title box and set these properties:

Property	New Value
Height	`0.35`
Top	`0.25`
Left	`1.5`
Font Name	**Georgia**

5. Insert the **UCE-Logo.bmp** logo, which is located in your **Access Chapter 2** folder.
6. Set the Width and Height properties of the logo to: `0.8`
7. Select all the labels in the Detail section and set these properties:

Property	New Value
Width	`1.5`
Height	`0.25`
Font Name	**Arial**
Font Size	`12`
Font Weight	**Semi-bold**

8. Select all the text boxes in the Detail section and set these properties:

Property	New Value
Height	`0.25`
Left	`1.6`
Font Name	**Arial**
Font Size	`12`

9. Apply any theme with an alternative theme color and the theme font of your choice.
10. Change the tab order, making VenuWebsite the second-to-last field in sequence and leaving the rest of the tab order as is.
11. Switch to **Form View** to see your completed form.

Apply a Sort and Filter

Universal Corporate Events would like to add an additional event in the city of Sarasota. It wants to review any events that are currently scheduled there before making a selection. Now you will add a filter to show only events occurring in the city of Sarasota.

12. Sort the **City** field in descending order.
13. Use the **Filter by Form** command to display only the records that include the city of Sarasota.
14. Choose **File→Close** to close the database, saving any changes to your form.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: A2-P1

Taylor Games: Creating Forms

Taylor Games wants to provide forms for employees to enter inventory and orders. You will first create a basic order form and improve readability and layout. You will also create an inventory split form and enhance its appearance.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A2_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A2_P1_Start** from your **Access Chapter 2** folder.
2. Create a basic form based on the **Orders** table.
3. Change the Date label to: `Order Date`
4. Set these properties for all label controls:

Property	Value
Width	`1`
Height	`0.3`

5. Set these properties for all text box controls:

Property	Value
Width	`2`
Height	`0.3`

6. Set the SKU text box Font Weight property to: `Bold`
7. Insert a **Logo** control in the Form Header and set properties for it as follows:

Property	Value
Picture	Use the **Taylor Games Logo-B.png** file from your **Access Chapter 2** folder.
Size Mode	**Zoom**
Width	`0.75`
Height	`0.5`

8. Set the following properties for the Title control located in the Form Header (contains the title *Orders*):

Property	Value
Width	`2`
Font Size	`26`
Text Align	**Center**
Font Weight	**Bold**

9. Apply the theme you like best.
10. Save the form with the name: `Orders`
11. Create a new split form based on the **Inventory** table.
12. Set the Width property of all label controls to: `1`
13. Set the following properties for all text box controls:

Property	Value
Width	`3`
Height	`0.25`

14. Set the SKU text box Font Weight property to: `Bold`
15. Insert a Logo control in the Form Header and set properties for it as follows:

Property	Value
Picture	Use the **Taylor Games Logo-B.png** file from your **Access Chapter 2** folder.
Size Mode	**Zoom**
Width	`0.75`
Height	`0.5`

16. Set the following properties for the Title control located in the Form Header (contains the title *Inventory*):

Property	Value
Width	`2`
Font Size	`26`
Text Align	**Center**
Font Weight	**Bold**

17. Apply the theme you like best.
18. Save the form with the name: `Inventory`
19. Close all open forms and then save your database.
    - *Using eLab:* Save it to your **Access Chapter 2** folder as `A2_P1_eSubmission` and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Access Chapter 2** folder as: `A2_P1_Submission`

PROJECT GRADER: A2-P2

WebVision: Work with Forms

WebVision is updating a database to provide forms for employees to enter data. You will first create a form using the Form Wizard and modify it for employee use. You will also create a multiple item form and enhance its appearance.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A2_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A2_P2_Start** from your **Access Chapter 2** folder.
2. Create a new form using the Form Wizard and the following guidelines:
   - It should be based on the **Orders** table.
   - Add all available fields.
   - Use **Columnar** layout.
   - Set the title as: `Orders`
3. Change the Date label to: `Order Date`
4. Set these properties for all label controls:

Property	Value
Width	`1.2`
Height	`0.25`

5. Set these properties for all text box controls:

Property	Value
Width	`0.75`
Height	`0.25`
Left	`1.5`
Text Align	**Left**

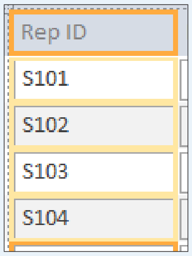
6. Delete the **Title** control from the Form Header (contains the title *Orders*) then insert a new **Title** control and set these properties for it:

Property	Value
Width	`2`
Height	`0.35`
Font Weight	**Bold**

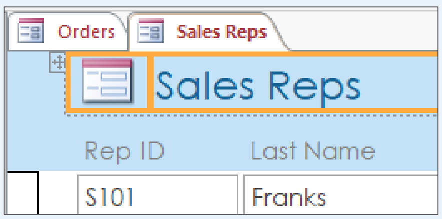
7. Follow these guidelines to insert a **Logo** control in the Form Header and set properties for it:

Property	Value
Picture	Use the **WebVision Logo.jpg** file from your **Access Chapter 2** folder.
Width	`1.75`

8. Apply the theme you like best.
9. Set the tab order from top to bottom for the fields in the Detail section as: OrderID, RepID, Date, Amount.
10. Save the form.
11. Create a new multiple item form based on the **Sales Reps** table.
12. Set the Width property to `1` and the Height property to `0.25` for all controls in the Rep ID column:



13. Delete the **Form Icon** and **Title** controls from the Form Header.



14. Insert a new **Logo** control and set these properties for it:

Property	Value
Picture	Use the **WebVision Logo.jpg** file from your **Access Chapter 2** folder.
Width	`1.75`
Height	`0.35`

15. Insert a new **Title** control and set these properties for it:

Property	Value
Width	2
Font Weight	**Bold**

16. Save the form with the name: **`Sales Reps`**
17. Close all open forms and then save your database.
    - *Using eLab:* Save to your **Access Chapter 2** folder as **`A2_P2_eSubmission`** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save to your **Access Chapter 2** folder as: **`A2_P2_Submission`**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

A2-E1 That's the Way I See It

You've been asked to create a sales invoice form for Blue Jean Landscaping that shows all fields from the Sales Invoices query. Open **A2-E1-BJL** and create a well-designed form that is based on the Sales Invoices query and that includes a title and logo (use **BJL-Logo.bmp**). Make sure all fields are appropriately positioned and sized using the largest entries in the database as a guideline for determining the appropriate text box sizing. Apply a theme of your choice. Apply a filter to show only records with the Last Name of Ford. Save your form as: `Sales Invoices`

A2-E2 Be Your Own Boss

Blue Jean Landscaping wants a split form that's based on the Services table. The split form should include all fields from the table, a company logo, and the company name in the Form Header along with a *Landscape Services* subtitle. Begin with the file **A2-E2-BJL** and use the logo file **BJL-Logo.bmp**. Make sure all fields are appropriately positioned and sized using the largest entries in the database as a guideline for determining the appropriate text box sizing. Apply a theme of your choice. Sort the Equip ID field in ascending order. Save your form as: `Services Split Form`

A2-E3 Demonstrate Proficiency

You've been asked by the management of Stormy BBQ, a local BBQ restaurant, to create consistent forms and reports. Open the **A2-E3-StormyBBQ** database and examine the Merchandise form. Create a new form from the Restaurants table that closely matches the Merchandise form. Replicate the layout and formatting of fields and of the Form Header. You may not be able to create a perfect match but try to get the layout and formatting as close to the Merchandise form as possible. Add the **SBQ-Logo.bmp** file. Name your new form: `Restaurants`

ACCESS

3 Querying a Database

One of the main goals of a database is to organize data so that information can be located and retrieved quickly. People in all types of businesses retrieve stored data and information daily, often at a moment's notice. In this chapter, you will search information that is stored in tables in a relational database and extract records that meet specific criteria using a query, a database object used to locate records based on the conditions you set.

LEARNING OBJECTIVES

- Create, save, and run select queries
- Create select queries using multiple tables
- Use simple query criteria
- Use AND and OR criteria in queries
- Use wildcard characters in query criteria
- Sort query results
- Create and format a calculated field

Project: Using Queries to Get Answers

You have been asked to query the Winchester Web Design database and compile two separate customer lists. The lists will be used to notify all past clients of updates to their website contact forms. The first list will include only the first and last names of the clients and their email addresses. The second list will include the first and last names of the clients and their mailing addresses, sorted by ZIP code. Additionally, you have been asked to build queries that instantly calculate the total income from all the Winchester Web Design services and from specific areas such as blogs or shopping carts.

Select Queries

A query asks a question, such as, *What are the customer addresses?* or *How much money did the company make last month?* The answer to the question is provided in a set of records.

All queries have common attributes:

- They function like a saved question you ask a database.
- They produce a subset of data from one or more tables.
- They are dynamic objects that display up-to-date data from tables.
- They can be used to create forms and reports with fields drawn from multiple tables.
- When you edit data in query results, you are actually editing the data stored in the source tables.

A select query is basically a database inquiry that selects only the records you want to see or edit, from one or more database tables, based on criteria that you set. The easiest way to create a select query is with the Query Wizard.

Create→Queries→Query Wizard

DEVELOP YOUR SKILLS: A3-D1

In this exercise, you will use the Query Wizard to create a select query that generates a customer email list.

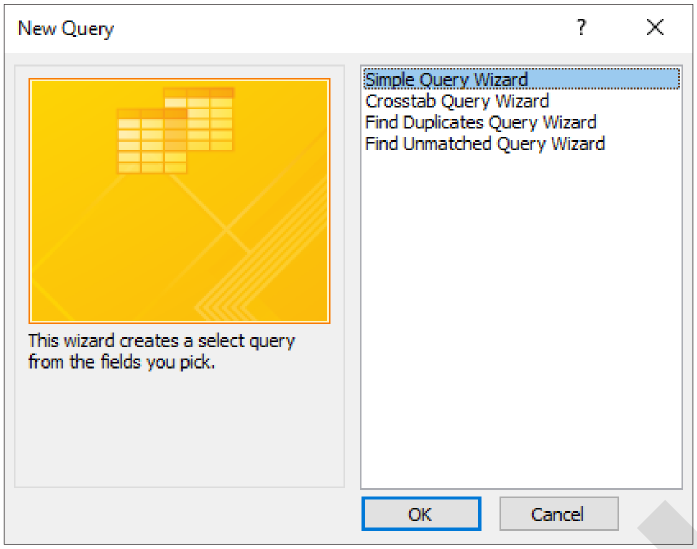
1. Open **A3-D1-WinDesign** from your **Access Chapter 3** folder and save it as: **`A3-D1-WinDesignRev`**

   Notice in the Navigation pane that the database currently has three queries.

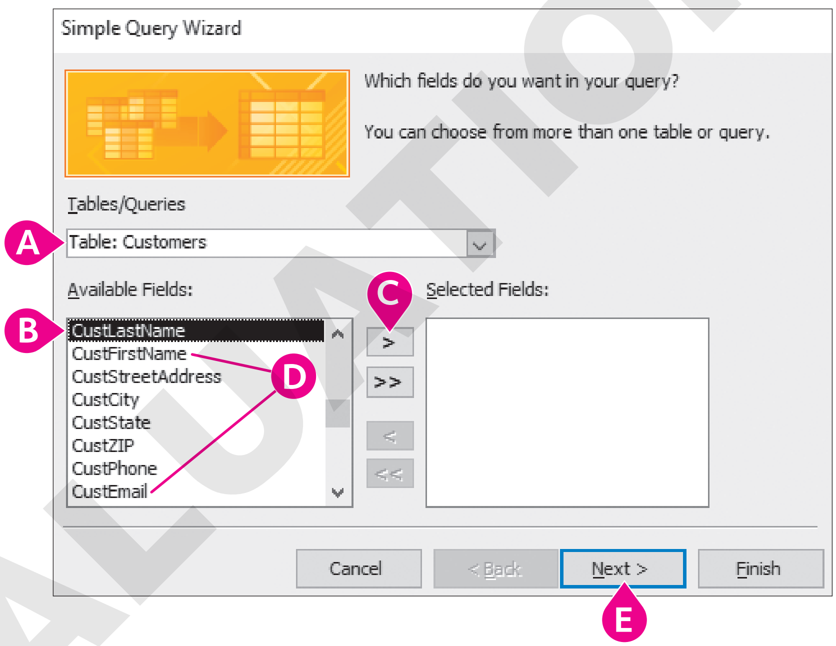
Note! *When completing exercises, always choose to Enable Content.*

2. Choose **Create→Queries→Query Wizard**.

   The New Query dialog box appears, allowing you to select the Query Wizard you would like. The Wizard can help you create four types of queries, shown in the right pane of the dialog box.



3. Click **OK** to accept the Simple Query Wizard.
4. Follow these steps to build the query:



Ⓐ Make sure the **Customers** table is chosen in the Tables/Queries list. When building a query, you can use multiple tables and even existing queries.

Ⓑ Choose the **CustLastName** field from the Available Fields list.

Ⓒ Click the **Add** > button to add it to the Selected Fields list.

Ⓓ Now add the **CustFirstName** and **CustEmail** fields, scrolling to find them as necessary, to the Selected Fields list.

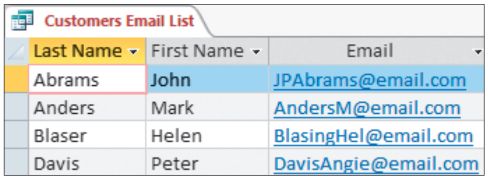
Ⓔ Click **Next**.

If you add the wrong field, double-click the name to move it back to the Available Fields list or select it and use the Move Back < *or Move All Back* << *buttons.*

ACCESS

5. Type `Customers Email List` in the query title field at the top of the dialog box.
6. Make sure the **Open the Query to View Information** option is chosen and click the **Finish** button.

   Notice the query results datasheet includes only the three fields you chose from the Customers list.



Customers Email List

Last Name	First Name	Email
Abrams	John	JPAbrams@email.com
Anders	Mark	AndersM@email.com
Blaser	Helen	BlasingHel@email.com
Davis	Peter	DavisAngie@email.com

7. Click the **Close** × button to the right of the *Customers Email List* tab to close the query.

Creating a Select Query Using Query Design View

Some queries display just a few fields but report on every single record in the table. That may not be a problem for a small table, but, when thousands of records and multiple tables are involved, it is often necessary to choose only specific records by setting precise criteria. Using Query Design View, Access allows you to:

- Select fields from multiple tables
- Locate records using criteria from one or more fields
- Perform calculations
- Sort query results and show or hide fields in query results

Create→Queries→Query Design

DEVELOP YOUR SKILLS: A3-D2

You have already created an email list for the Winchester Web Design customers and now need one for the company's employees. In this exercise, you will create a query to select fields from the Employees table in the Winchester Web Design database and then rearrange the columns in the query grid.

1. Choose **Create→Queries→Query Design** to display the query design grid.

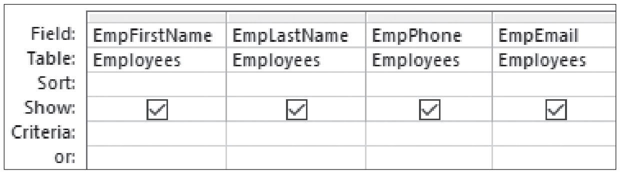
   The Show Table list appears, showing the existing tables and queries in the database.
2. Choose the **Employees** table and click the **Add** button.

   The Employees table appears in the design grid.
3. Close the Show Table dialog box and close the Property Sheet if it's open.

   Next you will add fields from the Employees table to the grid.
4. Double-click the **EmpFirstName** field in the Employees table to add it to the grid.

5. Now add the **EmpLastName**, **EmpPhone**, and **EmpEmail** fields to the grid by either double-clicking or dragging them.

Tip! *Use the scroll bar located at the right of the table fields to access all available fields in the list.*

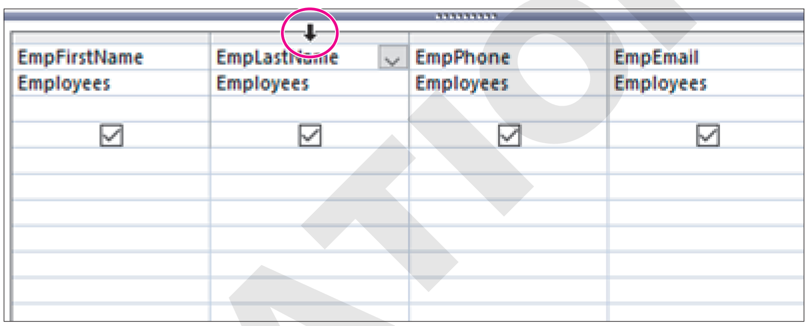


6. Choose **File→Save** or click the **Save** button on the Quick Access toolbar.
7. Type **`Employee Contact Info`** as the query name and click **OK**.
8. Choose **Query Tools→Design→Results→Run** !.

   Access runs the query and displays four columns of data (First Name, Last Name, Telephone, and Email) for all Employee records.

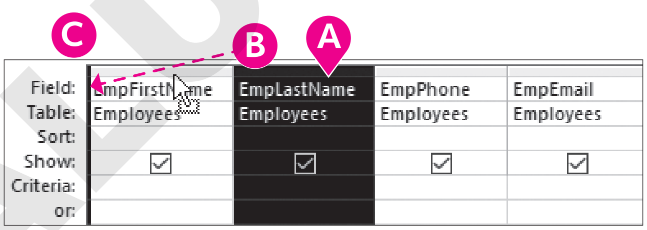
Rearrange Query Fields

9. Choose **Home→Views→View→Design View**.
10. Select the **EmpLastName** column by placing your mouse pointer over the column heading until it becomes a downward-facing black arrow and then single-click.



The entire column is selected, shown by shading it in black.

11. Follow these steps to rearrange the EmpFirstName and EmpLastName fields:



   A Click the **EmpLastName** column heading again, this time without releasing the button. The button will change to a white arrow with a silhouetted box, indicating you can move the column.

   B Drag the **EmpLastName** column to the left of the *EmpFirstName* column until the thick vertical bar is positioned as shown.

   C Release the mouse button to complete the rearrangement.

12. **Run** ! the query.

   Last Name should now appear first in the results.

13. Close the query and save the changes.

ACCESS

Designing a Query Using Multiple Tables

Until now, the query results presented in the datasheets you have worked with have displayed data from only one table. There will be times when you need to view data contained in different tables within the same database. Multi-table queries allow you to do this.

Choosing Fields to Include in a Query

When you build a multi-table select query, you start in Query Design view. Using the Show Table dialog box, you can select only those tables and fields that you want to display in the query results datasheet and leave out those fields that have no impact on the data you want to view or that are confidential. By specifying only certain tables and fields in a database and displaying only the desired fields in a query, you can create a report or a form that presents only pertinent data.

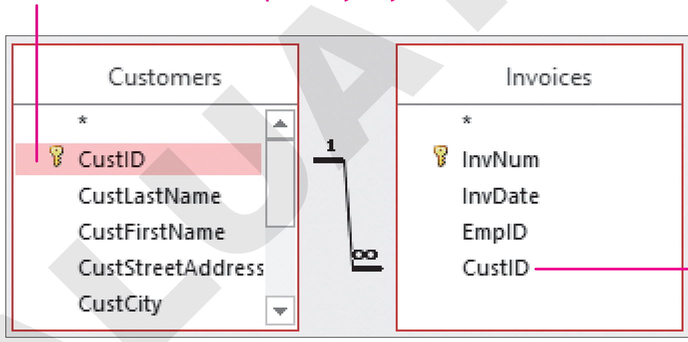
Multiple tables are effective in a query only if the tables are related. Using related tables allows a query to provide results based on all the data contained in the related table fields selected. For example, if you want to find the names and addresses of customers who placed orders from a specific employee, you would need fields from both the Customers table and the Invoices table. This is because the Customers table does not include any Employee fields, and the Invoices table does not include the Customer fields. It would be impossible to answer the question using only the Customers or Invoice tables alone.

View the video "Create a Multi-Table Select Query."

Selecting a Field That Appears in Multiple Tables

Sometimes the same field occurs as a primary key in one table and as a foreign (or secondary) key in another table. If this occurs, always use the table with the primary key in your query.

Use the Customers table in the query because CustID is the primary key.



CustID is a foreign key in the Invoices table.

DEVELOP YOUR SKILLS: A3-D3

In this exercise, you will create a multi-table query using Query Design view to track the Winchester Web Design invoices by invoice number.

1. Choose **Create→Queries→Query Design** to display the query design grid.
2. Double-click the **Invoices**, **Invoice Details**, and **Products** tables to add them to the query.

   If the Show Table dialog box is not visible, choose Query Tools→Design→Query Setup→Show Table.
3. Close the Show Table dialog box.

4. Double-click the **InvNum**, **InvDate**, and **EmpID** fields in the Invoices table to add those fields to the query grid.
5. Add the **ProdDescription** and **Price** fields from the Products table.
6. Add the **Qty** field from the Invoice Details table.

   Your query field list should look like this.

Field:	InvNum	InvDate	EmpID	ProdDescription	Price	Qty
Table:	Invoices	Invoices	Invoices	Products	Products	Invoice Details
Sort:						
Show:	☑	☑	☑	☑	☑	☑
Criteria:						
or:						

7. Click the **Sort** cell for the InvNum field, click the **menu** button ▾, and choose **Ascending**.

Field:	InvNum	InvDate
Table:	Invoices	Invoices
Sort:	Ascending	
Show:	☑	☑
Criteria:		
or:		

8. Choose **Query Tools→Design→Results→Run** ! to run the query.

   The query results are now sorted by invoice number in the first column.

9. Click the **Save** button on the Quick Access toolbar; then name the query `InvoicesList` and click **OK** to save the query.

Using Criteria in Queries

Queries let you specify criteria, which are conditions that field values must meet. Only records meeting the criteria are returned when the query is run.

Field:	InvNum	InvDate	EmpID	ProdDescription	Price	Qty
Table:	Invoices	Invoices	Invoices	Products	Products	Invoice Details
Sort:	Ascending					
Show:	☑	☑	☑	☑	☑	☑
Criteria:			"JFW"			
or:						

In this query, the EmpID criteria is set to *JFW*.

Invoice Details Query

InvNum	Invoice Date	Emp ID	Description	Price	Qty
1	3 /14/2017	JFW	Home Page, Nav, CSS, Design	$400.00	1
1	3 /14/2017	JFW	Secondary Page	$200.00	6
1	3 /14/2017	JFW	Image, Custom Designed	$40.00	11
5	6 /18/2017	JFW	Home Page, Nav, CSS, Design	$400.00	1

Only records where EmpID is *JFW* are returned.

Criteria are commonly used with text, numeric, currency, and date fields. Review the table for examples of how criteria are used.

TYPES OF CRITERIA

Field Type	Criteria	Examples of How Records Are Returned
Text	Smith	Last name is Smith
	> =Smith	Last names are from Smith through the end of the alphabet
	Not Smith	Last name is not Smith
Numeric & Currency	> 123	Numeric value is greater than 123
	> =123	Numeric value is greater than or equal to 123
Date	Date( )	Date is today's date
	< Date( ) – 30	The Date field is 30 days or more prior to today's date

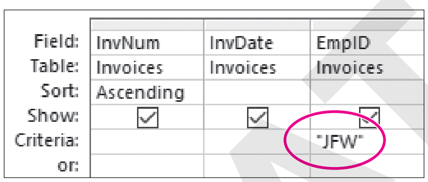
Tip! *Search for* Query Criteria *in Access help for more criteria examples.*

DEVELOP YOUR SKILLS: A3-D4

In this exercise, you will add criteria to the query grid and run the query.

1. With the InvoicesList query open, switch to **Design View**.
2. Click the **Criteria** cell for the EmpID field.
3. Type `JFW` and tap Enter.

   Access will apply quotation marks indicating this is a literal value.



4. Choose **Query Tools→Design→Results→Run** to run the query.

   The query results now include only records where the EmpID is equal to JFW.
5. Close the query and choose **No** when prompted to save the changes.

   Saving changes to the query at this time would save the JFW criteria as part of the query. However, you will continue to use the query for all employees.

Wildcard Characters

Wildcard characters are used to locate records that have similar but not identical data. They help you locate records that match a pattern. For example, you might want to find all customers with last names that begin with the letter *B* or all products that begin with the word *Blog*.

COMMON WILDCARD CHARACTERS

Wildcard Symbol	How It Is Used
Asterisk (*)	Substitutes for a group of characters that appear at the position of the asterisk **Example**: *R** in the last name field will locate all last names beginning with *R* regardless of how many characters make up the name. In this case, *Rogers, Rich,* and *Rodriquez* would all appear in the results datasheet.
Question mark (?)	Substitutes for a single character that might appear at the position of the question mark **Example**: *m?s* will locate records containing values such as *mrs, ms,* and *mbs*.
Open/close brackets [ ]	Matches text or individual characters placed within the brackets individually **Example**: *ca[rt]* will find *cat* and *car* but not *cab* or *cad*.

Tip! *Search for* wildcard characters *in Access help for more wildcard symbols and examples.*

AND and OR Criteria

In some cases, you may need to locate records that meet multiple criteria. This can be done using AND and OR conditions. For example, you may want to locate all records where the employee is web certified AND lives in Sarasota. Or you may want to locate all employees who live in Sarasota OR Bradenton.

Field:	CustID	CustFirstName	CustLastName	CustCity
Table:	Customers	Customers	Customers	Customers
Sort:				
Show:	☑	☑	☑	☑
Criteria:				"Sarasota"
or:				"Bradenton"

Create an OR condition by adding a second criterion to the Or row of a field.

Field:	InvNum	InvDate	ProdDescription	Price	Qty
Table:	Invoices	Invoices	Products	Products	Invoice Details
Sort:	Ascending				
Show:	☑	☑	☑	☑	☑
Criteria:			"Image"		>10

Create an AND condition by adding another criterion to a different field on the Criteria row.

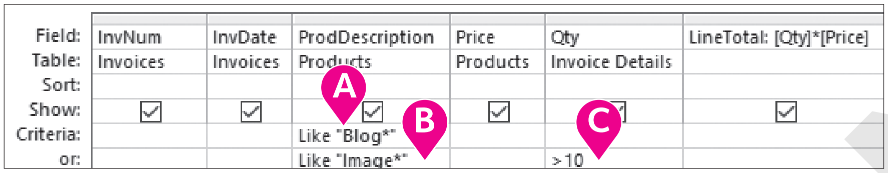
View the video "Create a Query with Criteria."

ACCESS

DEVELOP YOUR SKILLS: A3-D5

In this exercise, you will use wildcards to locate variable data and set multiple criteria in a query to find out which customers have gotten blogs and which customers have added more than ten images at a time to their websites.

1. Open the **Invoices Query** query in **Design View**.
2. Follow these steps to use wildcard characters and to use AND and OR criteria:



   A. In the ProdDescription **Criteria** cell, type **`Blog*`** and tap [Enter].

   Access converts Blog* *to:* Like "Blog*"

   B. In the ProdDescription **Or** cell, type **`Image*`** and tap [Enter].

   C. Enter **`> 10`** in the Qty **Or** cell. Be sure to type in the same row as *Like "Image*"* (the *Or* row).

   These criteria will choose records where ProdDescription begins with Blog *OR ProdDescription begins with* Image *AND the Qty is greater than 10.*

3. **Run** the query.

   Access displays the records that meet the specified criteria: either a blog or a transaction with more than ten images.

4. Close the query and save the changes.

Date Criteria

You can set date criteria to determine age, hired date, invoice date, and so forth. Access acknowledges the same comparison criteria for performing date comparisons that it does for locating other types of data, regardless of the format used to enter dates.

DATE CRITERIA

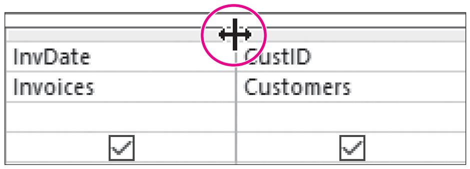
Criterion	Examples of How Records Are Returned
06/22/2019	Date is 06/22/2019
<22-Oct-2019	Dates that occur before 22/Oct/2019
>01/01/19	Dates that occur after 01/01/19
Between 01/01/19 and 06/30/19	Dates between 01/01/2019 and 06/30/2019

DEVELOP YOUR SKILLS: A3-D6

Winchester Web Design needs to track all invoices issued in 2018. In this exercise, you will query the database to locate customers with invoices dated from January 1, 2018, through December 31, 2018.

1. Choose **Create→Queries→Query Design**.
2. Use double clicks to add the **Customers**, **Invoices**, **Invoice Details**, and **Products** tables to the query.

3. Close the Show Table dialog box.
4. In the Invoices table double-click **InvNum** and **InvDate** to add those fields to the query grid.
5. From the Customers table add the **CustID** field.
6. From the Invoice Details table add the **Qty** field.
7. From the Products table add the **ProdDescription** and **Price** fields.
8. Hover your mouse pointer on the right edge of the InvDate column heading so a black, two-direction arrow appears.

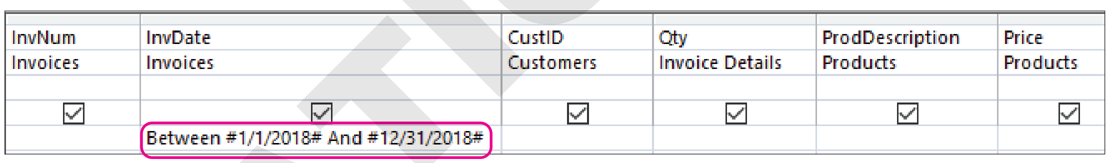


9. Click and drag the column heading to the right until the column is about three times the original width.

   You will enter a long entry in the next step and widening the InvDate column will allow you to see the entire entry.

10. Click in the **Criteria** cell for the InvDate field and type: **`Between January 1, 2018 And December 31, 2018`**

    Access formats the expression. Your query grid should now match this example. Regardless of how you type the dates—whether January 1, 2018; 01/01/18; or 1-1-2018—Access formats the data after you enter it so it appears as #1/1/2018#.



11. **Run** ! the query.

    Notice that only records with a date in 2018 appear in the results.

12. Choose **File→Save** or click the **Save** button on the Quick Access toolbar.
13. Save the query as **`Invoices2018`** and then close it.

Sorting, Showing, and Limiting Results

The query grid contains a Sort row that lets you sort the query results. At times you may also want to use fields to specify criteria but may not want those fields to be displayed in the query results. This can be accomplished by unchecking the Show box for the desired field(s).

Limiting the Number of Results Displayed

Large databases with thousands of records often return so many records that it can be challenging to find what you are looking for. Limiting the number of records displayed can be beneficial, especially when these records are sorted.

ACCESS

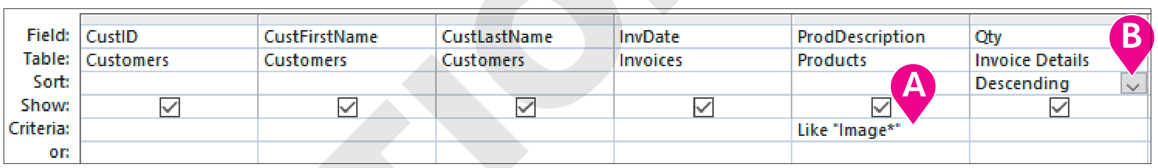
For example, if you set up a query to sort in descending order and then limit the number of items displayed to ten, you would, in effect, have a list of the top ten items in the table being queried. The Return feature lets you set the number of records to be displayed, or returned, in the query results.

Design→Query Setup→Return

DEVELOP YOUR SKILLS: A3-D7

In this exercise, you will create a query that sets a sort order and hide a field from displaying in the query results. You will also limit the number of records returned.

1. Choose **Create→Queries→Query Design**.
2. Use double clicks to add the **Customers**, **Invoices**, **Invoice Details**, and **Products** tables to the query.
3. Close the Show Table dialog box.
4. In the Customers table double-click the **CustID**, **CustFirstName**, and **CustLastName** fields to add them to the design grid.
5. From the Invoices table add the **InvDate** field.
6. From the Products table add the **ProdDescription** field.
7. From the Invoice Details table add the **Qty** field.
8. Follow these steps to set a criterion and set the sort order:



A. In the ProdDescription **Criteria** cell, type **`Image*`** and tap Enter. Access converts *Image** to *Like "Image*"*. This criterion will choose only records where the product description begins with *Image*.

B. In the **Sort** cell for the Qty field, choose **Descending** from the list of sort options.

9. **Run** ! the query.

   The records are now sorted in descending order (largest to smallest) by quantity.

   CustID is an important key to have in the query because it is a primary key field. But it isn't needed in the query results because it contains the same information that appears in the CustFirstName and CustLastName fields, so you will hide it from the query results.

10. Choose **Home→Views→Design View** to switch back to Design View.
11. Uncheck the **Show** box for the CustID field and **Run** ! the query.

    The CustID field is still part of the query design, but it no longer shows in the query results.

12. Switch back to **Design View** and choose **Query Tools→Design→Query Setup→Return menu button** ▾.
13. Choose **5** from the list and run the query.

    The query returns seven records (not five). This is because the query returns all records with the five largest quantities. But three records had a Qty of 14, which is the fifth highest amount, so all those records were returned, increasing the total to seven records.

14. Save the query as **`Most Images`** and then close it.

Calculated Fields

Calculated fields are fields containing formulas that perform calculations. Formulas used in calculated fields are often based on other fields within the query. Calculated fields are added as an additional field to a query and are not part of the underlying query tables. They are added to the query design grid and their calculated results then appear in the query results. A calculated field:

- Creates a new field in a query that can also be used in a form or report
- Can be used to perform mathematical operations, such as addition and multiplication
- Has a name and can be formatted with properties just like a regular field
- Enables you to combine values in two text fields into one field, such as LastName and FirstInitial
- Updates and recalculates each time you run the query

Identifying Parts of a Calculated Field

The structure of a calculated field includes a field name and a mathematical expression. An example of a calculated field in an Access query is Wage: 12.00 * 40, where Wage is the calculated field name and 12.00 * 40 is the calculation to be performed. Another example is Total: Price * Quantity, where Total is the calculated field name and Price * Quantity are the calculations performed using the data in those query fields.

Price	Qty	LineTotal: [Price]*[Qty]
Products	Invoice Details	
☑	☑	☑

The LineTotal calculated field multiplies Price * Qty.

Price	Qty	LineTotal
$200.00	6	$1,200.00
$40.00	11	$440.00
$400.00	1	$400.00
$40.00	15	$600.00

The query results.

Each calculated field can contain the following elements:

CALCULATED FIELD ELEMENTS

Element	Description
Calculated field name	This is the unique name you assign to the field and is followed by a colon (:) to separate the field name from the expression.
Field names from existing tables	Field names from the query can be added to the calculated field expression. Access adds brackets [ ] around field names.
Arithmetic or comparison operators	Use +, –, *, /, ( ), ^, <, =, and > to perform mathematical operations or compare values.
Concatenation (i.e., linking together)	An ampersand (&) can be used to join text values from multiple fields. For example, FirstName&LastName. Spaces can be added between fields by using quotation marks around a single space (" "). For example, the quotation marks in FirstName& " " &LastName create a space between the first and last names in the query results.

ACCESS

Calculated Field Properties

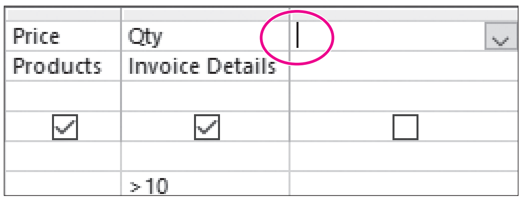
You can set field properties such as size, number format, and default values within tables. Likewise, you can set field properties in calculated fields. This is almost always needed in calculated fields as the query results need to be formatted with the correct number of decimal places, commas, currency format, and other formatting as needed. Field properties are set using the field Property Sheet.

Design→Show/Hide→Property Sheet

DEVELOP YOUR SKILLS: A3-D8

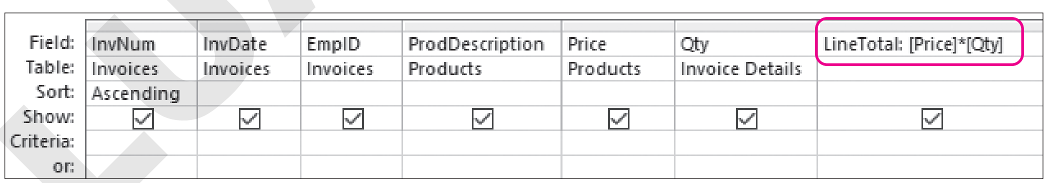
In this exercise, you will create and format a calculated field.

1. Open the **InvoicesList** query and switch to **Design View**.
2. Click in the first cell of the blank column next to the Qty field.



3. Type the calculated field expression, taking care to include the colon between *LineTotal* and *Price:*
   `LineTotal:Price * Qty`
4. Tap Enter to accept the entry and allow Access to format the expression by adding brackets to the field names.

   Access does not always format your expression by adding brackets to field names. Brackets are required for Access to identify the entry as a field within the query. If you want to use field data within a calculated field expression, you need to include the name of your calculated field within brackets. In this example our calculated field is named LineTotal, *and it will multiply the data in the Price field by the data in the Qty field in each record when the query is run. Your completed field should match the following.*



5. Right-click anywhere in the column of your calculated field and choose **Properties**.

   The Property Sheet opens.
6. Click the **Format** field, then click the **menu** button ▾ and choose **Currency** from the list.
7. Click the **Caption** field and type: **`Line Total`**

   The currency format will display the calculated results with a dollar sign and two decimals. The caption will become the column heading for your calculated field in the query results.

8. **Run** ! the query, and your calculated field results will appear as shown:

InvoiceList

InvNum	Invoice Date	Emp ID	Description	Price	Qty	Line Total
1	3 /14/2017	JFW	Secondary Page	$200.00	6	$1,200.00
1	3 /14/2017	JFW	Image, Custom Designed	$40.00	11	$440.00
1	3 /14/2017	JFW	Home Page, Nav, CSS, Design	$400.00	1	$400.00
2	4 /1 /2017	MJW	Image, Custom Designed	$40.00	15	$600.00
2	4 /1 /2017	MJW	Home Page, Nav, CSS, Design	$400.00	1	$400.00
2	4 /1 /2017	MJW	Secondary Page	$200.00	7	$1,400.00

9. Save and close the query and then close the database.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

ACCESS

Reinforce Your Skills

REINFORCE YOUR SKILLS: A3-R1

Create Queries Using Criteria and Wildcards

Kids for Change is planning to fine-tune its database by adding queries that enable it to track activities as well as staff/volunteer availability. In this exercise, you will create various queries that will yield the desired information.

1. Open **A3-R1-K4C** from your **Access Chapter 3** folder and save it as: `A3-R1-K4CRev`
2. Choose **Create→Queries→Query Wizard**.
3. Choose **Simple Query Wizard** and click **OK**.
4. Add the **Activity**, **Location**, **Day**, and **MeetTime** fields from the Activities table to the Selected Fields list and click **Next**.
5. Name the query `Activities List` and click **Finish**.
6. Review the query results and then close the query.

Create a Query in Design View

7. Choose **Create→Queries→Query Design** to start a new query.
8. Add the **Volunteers** table and then close the Show Table dialog box.
9. Add the **VolLastName**, **VolFirstName**, **VolPhone**, and **VolDay** fields to the query design grid (in that order).
10. Run the query and take a moment to review the results.

    Now you will change the field order.
11. Switch to **Design View**.
12. Click and drag the **VolDay** field, dropping it in front of the *VolLastName* field.

Field:	VolDay	VolLastName	VolFirstName	VolPhone
Table:	Volunteers	Volunteers	Volunteers	Volunteers
Sort:				
Show:	☑	☑	☑	☑
Criteria:				
or:				

13. **Run** ! the query and review the results.

    You may notice the field names appear differently from those used in the query grid. Field names in queries retain any caption labels previously set in table properties.
14. Save the query as `Volunteer List` and then close the query.

Create a Multi-Table Query

15. Create a new query in **Query Design** view, add the **Activities** and **Staff** tables to the query, and then close the Show Table dialog box.
16. Move the fields from the indicated tables to the query design grid:

From This Table	Add These Fields
Activities	• **Activity** • **Day** • **MeetTime**
Staff	• **StaffLastName** • **StaffFirstName** • **StaffPhone**

17. Set the Sort option for the Activity field to **Ascending**.
18. **Run** ! the query and view the results.
19. Save the query as **`Activity Staffing List`** and then close it.

Add Wildcard and AND/OR Criteria to a Query

20. Right-click the **Activity Staffing List** query in the Navigation pane and choose **Design View**.

    You can open a query in Design View using this method or you can run it first and then switch to Design View. Remember to try right-clicks if you are having trouble finding commands.
21. Create a Saturday or Sunday OR condition in the Day field.

    Typing the quotation marks " " isn't necessary, as Access will add them for you.

Field:	Activity	Day	MeetTime
Table:	Activities	Activities	Activities
Sort:	Ascending		
Show:	☑	☑	☑
Criteria:		"Saturday"	
or:		"Sunday"	

22. Run the query.

    Only activities for Saturday or Sunday should be displayed.
23. Switch to **Design View** and delete **Sunday** to remove the OR condition.
24. Enter **`12:00`** in the **MeetTime Criteria** field, tapping [Enter] when finished.

    This creates a Saturday AND 12:00 meet-time condition. Access will format the 12:00 condition like this: #12:00:00 PM#

Field:	Activity	Day	MeetTime
Table:	Activities	Activities	Activities
Sort:	Ascending		
Show:	☑	☑	☑
Criteria:		"Saturday"	#12:00:00 PM#
or:			

25. Run the query.

    Because both conditions must be met, just one activity meeting (a car wash) should be returned by the query.
26. Switch to **Design View** and remove both the **Saturday** and **12:00** criteria.

ACCESS

27. Type `S*` in the Criteria cell for the Day field and tap [Enter].

    *Access recognizes the asterisk * wildcard character and formats the condition as* Like "S*". *The query will return all records where the name of the day begins with S (Saturday and Sunday) and should produce the same results as when you used the Saturday OR Sunday condition earlier in this exercise.*

28. Run the query and take a moment to observe the results.
29. Save the changes and close the query.

Add Date Criteria to a New Query

Now you will create a query that returns the records of the youngest children so you can determine which children may need more supervision.

30. Create a new query in **Design View**, adding the **Children** table and the fields **ChildLastName**, **ChildFirstName**, and **BirthDate**.
31. Run the query and take a moment to observe the results.

    Now you will add a condition.

32. Switch to **Design View**, type `>January 1, 2010` in the **BirthDate Criteria** field, and tap [Enter].

    Once again Access will apply formatting to the criterion.

33. Run the query.

    Only records where the child was born after January 1, 2010, should be displayed.

34. Choose **File→Save** or click the **Save** button on the Quick Access toolbar and save the query as: `Younger Children`
35. Close the query and then close the database.

REINFORCE YOUR SKILLS: A3-R2

Limit the Records Returned and Use Calculated Fields

Kids for Change is planning to fine-tune its database further by adding queries that will produce calculated results. You are in charge of the IT department. In this exercise, you will generate the desired query results.

1. Open **A3-R2-K4C** from your **Access Chapter 3** folder and save it as: `A3-R2-K4CRev`
2. Run (open) the **Children List** query.

    The query returns the records of all children in the database in alphabetical order by last name.

3. Switch to **Design View** and choose **Query Tools→Design→Query Setup→Return menu button ▼**.
4. Choose **5** from the list.
5. Click in the **Sort** cell for the BirthDate field and choose **Descending**.
6. Run the query.

    Only the records for the five youngest children should be displayed.

7. Close the query, saving the changes.

Add a Calculated Field and Format the Field

As part of its community give-back policy, Kids for Change puts 10% of all donations into a scholarship fund. Now you will add a field that calculates 10% of each donation.

8. Run the **Donations Query** query and take a moment to observe the results.
9. Switch to **Design View** and use the scrollbar at the bottom of the grid to scroll the query grid to the right until the first empty column is visible.

   You will enter a calculated field in this column.
10. Type `ScholarFund:Amount*.1` in the first cell (the Field cell) of the empty column, being sure to include the colon between *ScholarFund* and *Amount*.
11. Tap Enter to complete the calculated field, and if necessary, widen the column so you can see the entire calculated field.
12. If the Property Sheet is not open, right-click anywhere in your calculated field column and choose **Properties**.
13. Click in the **Format** field and choose **Currency** from the drop-down list.
14. Type `Scholar Fund` in the Caption field.
15. Run the query and take a moment to ensure that the calculated field is calculating correctly and is formatted with the Currency format.
16. Close the query, saving the changes, and then close the database.

REINFORCE YOUR SKILLS: A3-R3

Create Select Queries Using Criteria and Calculated Fields

In this exercise, you will help Kids for Change further develop its database by adding queries that will produce calculated and formatted results based on specific search criteria.

1. Open **A3-R3-K4C** from your **Access Chapter 3** folder and save it as: `A3-R3-K4CRev`
2. Use the **Query Wizard** to create a simple query using the **Donors** table and the **DonorLName**, **DonorFName**, **DonorPhone**, and **DonorEmail** fields.
3. Use `Donor Contact List` as the query name and finish the query.
4. Review the query results and then close the query.
5. Using **Query Design**, create a new query with the **Staff** table and the **StaffLastName, StaffFirstName**, **StaffStreet**, **StaffCity**, **StaffST**, and **StaffZIP** fields.
6. Save the query as: `Staff Mailing List`
7. Run the query, review the results, and then close the query.

ACCESS

Create a Multi-Table Query

8. Create a new query using **Query Design** view and add the **Activities** and **Children** tables to the design grid.
9. Move the fields from the indicated tables to the query design grid:

From This Table	Add These Fields
Activities	• **Activity** • **Day** • **MeetTime**
Children	• **ChildLastName** • **ChildFirstName** • **ChildPhone**

10. Save the query as: `Participant List`
11. Run the query and review the results.

Add Criteria Including Wildcards and Dates

Now you will add criteria to the Participant List query to list the children signed up for 9:00 AM Saturday activities.

12. Switch to **Design View**.
13. Create an AND condition by setting `Saturday` as a criterion in the Day field and `9:00` as a criterion in the MeetTime field.
14. Run the query.

    The only records returned are those where the day is Saturday AND the meet time is 9:00.
15. Close the query, saving the changes.

    Now you will use a wildcard to select nearby donors so they can be invited to local activities.
16. Right-click the **Donations Query** query in the Navigation pane and choose **Design View**.
17. If necessary, scroll right through the field list until you locate the DonorZIP field.
18. Enter `34*` in the DonorZIP Criteria field.

    The asterisk is a wildcard character.
19. Run the query.

    Only records where the ZIP code begins with 34 are returned by the query.
20. Switch to **Design View** and remove the criteria from the DonorZIP field.
21. Enter `>01/01/2018` in the DonationDate Criteria field.
22. Run the query and review the results.

Sort and Limit Query Results

23. Switch to **Design View**.
24. Set the DonationDate field to sort in **Descending** order.

25. Use the **Query Tools→Design→Query Setup→Return menu button ▾** list to limit the records returned to **5**.
26. Run the query and review the results.

Add a Calculated Field and Format the Field

27. Switch to **Design View** and set the Return number back to **All**.
28. Create a calculated field by entering **`NetAmt:Amount-ScholarFund`** in the first empty column's Field row.
29. Right-click in the new calculated field column and open the Property Sheet.
30. Set the Format to Currency and type **`Net Donation`** as the Caption.
31. Run the query and review the results.
32. Close the query, saving the changes, and then close the database.

Apply Your Skills

APPLY YOUR SKILLS: A3-A1

Create Queries Using Criteria and Wildcards

The new CEO of Universal Corporate Events has asked you to refine a number of queries to be more selective in data output. In this exercise, you will create queries; add criteria, wildcards, and AND/OR conditions to a query; and add date criteria to a query.

1. Open **A3-A1-UCE** from your **Access Chapter 3** folder and save it as: `A3-A1-UCERev`
2. Use the **Query Wizard** and this table to create a simple select query:

Table to Use	Fields to Add	Query Name
Personnel	• **PerLastName** • **PerFirstName** • **PerPhone** • **PerEmail**	`Personnel Contact List`

3. Review the results and then close the query.
4. Create a query in **Design View** that uses the tables and fields indicated:

From This Table	Use These Fields
Events	• **EventName**
Schedules	• **VenueID** • **ContactID** • **EventDate** • **Guests**
Menus	• **MenuPlan** • **Chg/PP**

5. Run the query and review the results.
6. Save the query as `Event List` and then close it.

Use Wildcards and AND/OR Criteria

UCE is planning a recruiting event in Sarasota and would like to contact employees from greater Sarasota (area code 941) to involve them in the planning. You will modify a query to return the records of personnel who live in the Sarasota area.

7. Open the **Personnel Contact List** query in **Design View**.
8. Enter the wildcard text `*941*` in the PerPhone Criteria field.
9. Run the query and verify that each telephone number in the query results contains *941* somewhere in the number.
10. Close the query, saving the changes.

11. Create a new query in **Design View** from the **Venues** table that includes the **VenueName**, **VenueCity**, **VenuePhone**, and **VenueWebSite** fields.
12. Enter `Sarasota` in the VenueCity Criteria field and `Tampa` in the Or row of the VenueCity field.
13. Run the query and verify that the city is *Sarasota* or *Tampa* in each record.
14. Save the query as `Tampa-Sarasota Venues` and then close it.

Add Date Criteria

15. Run the **Event List** query and notice the range of dates.
16. Switch to **Design View** and type `>May 1, 2019` in the EventDate Criteria field.
17. Sort the query in **Ascending** order on the **EventDate** field.
18. Run the query and make sure it produces the intended results.
19. Close the query, saving the changes, and then close the database.

APPLY YOUR SKILLS: A3-A2

Limit the Records Returned and Use Calculated Fields

You've been asked to improve Universal Corporate Events' data retrieval and formatting. In this exercise, you will sort and limit records returned in query results and create a query using a calculated field.

1. Open **A3-A2-UCE** from your **Access Chapter 3** folder and save it as: `A3-A2-UCERev`
2. Run the **Event Revenue** query and review the results.
3. Switch to **Design View** and set the sort order of the TotalRev calculated field to **Descending**.
4. Set the Return number to **5** to limit the number of records returned by the query to the top five.
5. Run the query and review the results.
6. Switch to **Design View** and change the Return value back to **All**.

Add a Calculated Field and Format the Field

7. Create a new calculated field using the name and the expression: `Comm:TotalRev*.08`
8. Open the Property Sheet for the new calculated field and set the Format to **Currency** and use `Commission` as the Caption.
9. Run the query and review the results.
10. Close the query, saving the changes, and then close the database.

ACCESS

APPLY YOUR SKILLS: A3-A3

Create Select Queries Using Criteria and Calculated Fields

In this exercise, you will create and modify a number of queries for more precise, targeted data selection for Universal Corporate Events.

1. Open **A3-A3-UCE** from your **Access Chapter 3** folder and save it as: `A3-A3-UCERev`

   To begin, you will create a query to list contact information for the event venues that have an 800 telephone number so they can be reached by phone at no charge to the caller.

2. Create a simple query named `TollFreeVenues` that uses the **Venues** table to generate a list of venue names and their corresponding phone numbers and websites.
3. In **Design View**, add the wildcard text `*800*` to the Criteria row to return only records for which the venue phone number includes *800*.
4. Run the query and resize the columns in the query results so all data is visible.
5. Close the query, saving the changes.

Add Wildcard and Date Criteria and Sort the Query

Because June is the most popular month for weddings, UCE wants to pay special attention to weddings scheduled for June so they can hire extra part-time workers.

6. Using the **Query Wizard**, create a simple query that uses all fields from the Event List query.
7. Leave the Wizard's Detail or Summary option set to **Detail**.
8. Name the query `June Weddings` and finish the query.
9. Switch to **Design View**.
10. Add the wildcard text `Wed*` (for *Weddings*) to the EventName Criteria field.
11. Set the sort order of the EventDate field to **Ascending**.
12. In the EventDate Criteria field, enter: `Between June 1, 2019 And June 30, 2019`
13. Run the query and review the results.
14. Close the query, saving the changes.

Limit the Number of Records in Query Results

Now you will sort the Location Scheduling query by the largest number of guests and return the ten highest values so the company can focus extra personnel and resources to those events if the guests are scheduled for a full menu plan.

15. Display the **Location Scheduling** query in **Design View**.
16. Sort the query in **Descending** order by **Guests**.
17. Set the number of records returned to: `10`

    You'll need to click in the Return cell and type 10. If Access changes the 10 to 100, delete the extra zero (0).

18. Run the query and review the results.
19. Close the query, saving the changes.

Add and Format Calculated Fields

Now you will add a calculated field that subtracts the venue contact's commission from the total revenue to result in a net revenue amount.

20. Display the **Event Revenue** query in **Design View**.
21. Add a calculated field named **`NetRev`** that subtracts Comm from TotalRev.
22. Format the new field as **Currency** and set the Caption as: **`Net Revenue`**
23. Add a criterion to the TotalRev field to choose only records where the TotalRev is greater than 3000.
24. Run the query and review the results.
25. Close the query, saving the changes, and then close the database.

Project Grader

If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: A3-P1

Taylor Games: Creating Queries

Taylor Games wants to evaluate where levels of inventory are too high. You will use the inventory data to create several queries, leverage wildcard characters, and add a calculated field.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A3_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A3_P1_Start** from your **Access Chapter 3** folder.
2. Use **Query Design** to create a simple query using the following guidelines:
   - Add all fields from the **Inventory** table in the same sequence as they appear in the table.
   - Set the criteria to include all records where (Quantity is greater than 75) AND (Total Cost is greater than 250).
   - Save the query as `Overstock` and run it.

Query1

Item	SKU	Quantity	Cost	Total Cost
Vinyl 3-hole card holders	5273359	621	$0.76	$471.96
Replacement pieces - Monopoly	5273363	88	$3.25	$286.00

3. Add criteria to the Overstock query so that the query logic now becomes (Quantity is greater than 75 AND Total Cost is greater than 250) OR (Item contains the word *dice* AND Quantity is greater than 75) and then run the query.

Overstock

Item	SKU	Quantity	Cost	Total Cost
Vinyl 3-hole card holders	5273359	621	$0.76	$471.96
Replacement pieces - Monopoly	5273363	88	$3.25	$286.00
20-sided dice - White	5273368	247	$0.38	$93.86

4. Add a calculated field named `Overstock Qty` that subtracts 75 from the Quantity field in each record.
5. Sort the query results on the **Overstock Qty** field in descending order.

Overstock

Item	SKU	Quantity	Cost	Total Cost	Overstock
Vinyl 3-hole card holders	5273359	621	$0.76	$471.96	546
20-sided dice - White	5273368	247	$0.38	$93.86	172
Replacement pieces - Monopoly	5273363	88	$3.25	$286.00	13

6. Save and close the query.
7. Save your database.
   - *Using eLab:* Save it to your **Access Chapter 3** folder as `A3_P1_eSubmission` and attach the file to your eLab assignment for grading.
   - *Not using eLab:* Save it to your **Access Chapter 3** folder as: `A3_P1_Submission`

PROJECT GRADER: A3-P2

WebVision: Querying a Database

WebVision would like to create a monthly query that will calculate the Sales Rep commissions for each order. You will use the data in multiple tables to create a select query and add a calculated field.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A3_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A3_P2_Start** from your **Access Chapter 3** folder.
2. Use the **Query Wizard** to create a simple query using the following guidelines:
   - Add the **RepID**, **LastName**, and **SalesTeam** fields from the **Sales Reps** table in that sequence.
   - Add the **OrderID**, **Date**, and **Amount** fields from the **Orders** table in that sequence.
   - Use the **Detail** option.
   - Name the query: `June Commissions`
3. Set the Date criteria to include records between `6/1/2019 And 6/30/2019`.
4. Sort the query results on the **RepID** field in **Ascending** order.
5. Add a calculated field named `Commissions` that multiplies the Amount field in each record by: `0.02`
6. Apply the **Currency** number format to the Commissions field and then run, save, and close the query.

June Commissions

Rep ID	Last Name	Sales Team	Order Numb	Date	Amount	Commission
S101	Franks	North	9	6/7/2019	$38,024	$760.48
S101	Franks	North	5	6/15/2019	$29,382	$587.64
S102	Edmunds	Central	10	6/3/2019	$62,569	$1,251.38
S102	Edmunds	Central	6	6/14/2019	$52,063	$1,041.26
S102	Edmunds	Central	2	6/23/2019	$60,093	$1,201.86
S103	Berry	West	11	6/2/2019	$36,759	$735.18
S103	Berry	West	7	6/11/2019	$46,146	$922.92
S103	Berry	West	3	6/20/2019	$53,933	$1,078.66
S104	Lifestone	South	8	6/8/2019	$35,249	$704.98
S104	Lifestone	South	4	6/19/2019	$63,958	$1,279.16

7. Save your database.
   - *Using eLab:* Save it to your **Access Chapter 3** folder as `A3_P2_eSubmission` and attach the file to your eLab assignment for grading.
   - *Not using eLab:* Save it to your **Access Chapter 3** folder as: `A3_P2_Submission`

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

A3-E1 That's the Way I See It

Blue Jean Landscaping needs queries to better manage its customer and equipment lists and you've volunteered to assist. Open **A3-E1-BJL** and save it as: **`A3-E1-BJLRev`**

Create a query named **`813 Area Code`** that uses all fields from the Customers table. The query should return only customers with a phone area code of 813 sorted in ascending order by city. Create another query named **`Equipment Value`** that uses all fields from the Equipment table. Use a calculated field named **`EquipValue`** to determine the total value of equipment by multiplying the Cost by the quantity In Stock. Sort the results with the largest Equipment Values appearing first and format the EquipValue field using the Currency format.

A3-E2 Be Your Own Boss

Blue Jean Landscaping wants to devise more targeted data retrieval. Open **A3-E2-BJL** and save it as: **`A3-E2-BJLRev`**

Create a query that returns a contact list for BJL's customers sorted by last name. Create another query that creates a customer mailing list sorted by ZIP code. Use a wildcard to select only records where the ZIP code begins with 33. Add a calculated field to the Sales Invoices query that multiplies Cost by Qty Sold to produce a total. Format the new field as Currency and assign it a caption. Finally, limit the number of records returned to the largest five invoice totals, so those customers can be targeted for preferred customer offers.

A3-E3 Demonstrate Proficiency

You've been asked by the management at Stormy BBQ to query its database. Open **A3-E3-StormyBBQ** and save it as: **`A3-E3-StormyBBQRev`**

Create a query that uses data from the DailyReceipts table and determines the total revenue received for each item using the ItemPrice and QtySold fields. Include all fields from the table in the query and sort in descending order on the field that is used to perform the daily total calculations. Create another query using the Merchandise table that contains all fields from the Merchandise table and a sequence of calculated fields. For each item, the calculated fields should determine the Stock Cost of that item (Cost * Stock), the List Price Revenue if all items were sold at list price (Listprice * Stock), and the Profit, which is the difference between the revenue and cost.

ACCESS

4 Using Reports to Display Information

Although reports can summarize data from a single database table, they often present specific data from multiple tables or from queries based on multiple tables. Both forms and reports use many of the same tools and techniques to organize and present information in a readable format. In this chapter, you will create reports to organize and summarize data into meaningful information.

LEARNING OBJECTIVES

- Create basic reports using the Report tool
- Create reports with the Report Wizard
- Change field alignment and size in Layout View
- Change field properties
- Insert logos and dates
- Insert new fields

Project: Turning Data into Information with Reports

Forms are great for entering data and displaying single records. Most businesses, however, want to filter and summarize data, as well as display specific data, such as running totals, in a readable format. Winchester Web Design needs a new report to summarize the sales for each employee and display sales totals. As its database manager, you have agreed to create a report to meet these needs.

Introducing Reports

Because reports are often presented in a readable format and end up as a printout, there are some basics that every report should include. Of course, it should be well organized, look professional, and be visually appealing. Imagine finding a report on your desk without a date, page numbers, or a title that states what it is for. How might this affect the usability and readability of the data?

Most reports should have both a title and a subtitle. The title may simply be the company name. The subtitle should state specifically what the report is for, such as Monthly Income or Product List. Every report requires a date and should include the page number, even if the report is only one page. Once you have a good handle on the who, what, and when, you will be ready to create your first report.

Basic Reports

Use the Report button to instantly create a basic report for a selected table or query. This is the easiest way to create a report using all fields from the table or query. Only one table or query can be used in a basic report.

Create→Reports→Report

DEVELOP YOUR SKILLS: A4-D1

In this exercise, you will create and explore a basic report and then apply a multiple column format to that report.

1. Open **A4-D1-WinDesign** from your **Access Chapter 4** folder and save it as: **`A4-D1-WinDesignRev`**

   Click the Enable Content button, if it appears.

2. Choose the **Products** table in the Navigation pane.
3. Choose **Create→Reports→Report**.

   A basic report is displayed in Layout View. In Layout View you can easily move and size report objects.

4. Close any boxes that may be open, such as the Property Sheet or Field List pane.
5. Choose **Home→Views→View menu button ▾→Report View**.

   Report View is best when viewing how a report will be presented electronically.

6. Choose **Home→Views→View menu button ▾→Design View**.

   The report body contains sections populated with text labels and controls that display the date, time, and other data and that perform calculations.

7. Mouse over the report control tools in the Controls group of the Ribbon, reviewing the ToolTips that appear.

Apply Multiple Columns

8. Choose **Home→Views→View menu button ▾→Print Preview** to see how your report will look when printed.

9. Choose **Print Preview→Page Layout→Landscape** and then click the **Columns** button.

   The Page Setup dialog box appears with the Columns tab active.

10. Set the Number of Columns property to **2** and the Width property under Column Size to `4.5` and then click **OK**.

    The report is now formatted to print records into two even columns.

11. Click **Close Print Preview** on the right side of the Ribbon.

12. Choose **File→Save** or click the **Save** button on the Quick Access toolbar and save the report as: `Products`

13. Close the report.

Report Organization and Structure

Reports can display data from multiple tables and even from queries. Report data must often be grouped and sorted so it can be easily analyzed and interpreted. Effective reports turn data into information by displaying it in an organized and understandable manner. Queries are often the best data source for reports as they can receive data from multiple tables, sort the data, and even include calculated fields.

Sections

Sections provide the structure needed to effectively organize and present information. There are several types of sections, with each type used for a specific purpose.

REPORT SECTIONS

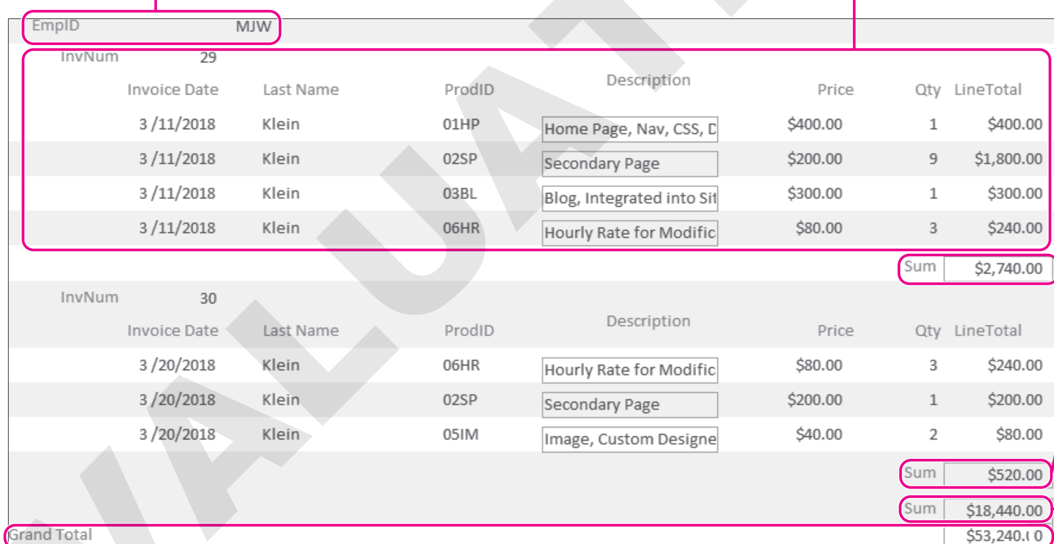
Section(s)	Description
Report Header and Footer	Displayed only at the top of the first page and bottom of the last page. Some uses include titles, subtitles, and logos.
Page Header and Footer	Displayed at the top and bottom of every page. Some uses include descriptive labels, page numbers, and dates.
Group Header and Group Footer	The group header shows the fields on which report data is grouped. For example, grouping by Salesperson might list each salesperson and all the transactions that person is responsible for. The group footer displays summary information such as the total of all transactions for each salesperson.
Detail	Main part of the report where the records are displayed. The records are typically organized in groups. The detail sections are where field headings appear.

The Report Header appears at the top of the report.

This image shows a report in Layout View with the various sections highlighted.

Group headers show the records grouped first by employee ID and then by invoice number.

Detail sections show headings, records, and, in this case, a LineTotal column calculated from the underlying query.



Group footers show totals for invoice numbers 29 and 30.

The group footer for employee ID MJW adds the group totals for all invoices with an EmpID of MJW (some not shown here).

The Grand Total line appears in the report footer and adds all group totals (some not shown here).

Grouping and Sorting

A group is a collection of records that has at least one data element or key field in common. In the preceding example, records are grouped first by employee ID MJW and then by invoice numbers 29 and 30. A group consists of a header, records, and a footer. Grouping helps organize the information in meaningful ways. Groups are arranged by level. Each nested group (lower level) will appear indented below the group above it (higher level), so you can visualize how groups are prioritized.

Once grouping has been set, summary options become available. Summary options allow users to summarize a group with calculated values such as a total, average, maximum, or minimum value. These calculations are based on the remaining ungrouped fields whose data contains a numeric value.

It is important that records first be sorted using the same field used for grouping. Otherwise, a new group might be created each time the data in the group changes. Sorting can be added in the report; however, it's best to make the sorting occur in the underlying tables or queries.

The Report Wizard

The Report Wizard is a great way to get started with most reports. It lets you choose multiple tables or queries, group and sort data, perform calculations, and organize and present the information. The Wizard builds the report for you, creating the necessary structure and organization.

View the video "Grouping and Sorting in the Report Wizard."

Create→Reports→Report Wizard

DEVELOP YOUR SKILLS: A4-D2

In this exercise, you will create a detailed Invoice report using the Report Wizard.

1. Choose the **Invoice Details Query Q1 2018** query in the Navigation pane.
2. Choose **Create→Reports→Report Wizard**.

   Invoice Details Query Q1 2018 is chosen in the Tables/Queries list because you chose it before starting the Report Wizard.
3. Double-click the **EmpID** field to add it to the Selected Fields list or choose it and click the **Add** > button.
4. Add the **InvNum**, **InvDate**, **CustLastName**, **ProdID**, **Price**, **Qty**, and **LineTotal** fields to the Selected Fields list.

   Do not select CustFirstName *and* ProdDescription. *If you add every field to the report, there won't be enough room to display all the information. Be sure that* EmpID *is the first field on the list.*
5. Click **Next**, and the Wizard will ask if you want to add grouping levels.
6. With EmpID still selected, click the **Add** > button to set EmpID as the first grouping level.

   All invoices associated with a particular employee will be grouped together.
7. Click **Add** > once more, this time to make the **InvNum** field the second grouping level.

   The information will first be grouped by employee ID and then within each employee group by invoice number.

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8. Click **Next**, and the sort order and summary information screen will appear.

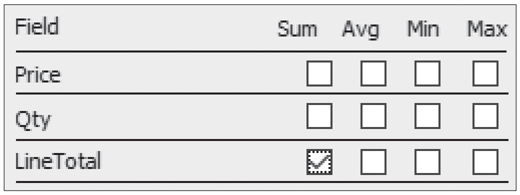
   This is where you can add totals and other calculations and sort the results within groups. The underlying query sorts the invoices in ascending order, so it isn't necessary to add sorting in this report.

9. Click the **Summary Options** button in the lower part of the dialog box.

   Price, Qty, and LineTotal are numeric fields, so they can be used to create totals as well as average, minimum, or maximum values.

10. Check the **Sum** box for the LineTotal field.

    This will sum the invoices associated with each employee ID.



11. Leave the other settings as they are and click **OK**.
12. Click **Next** because sorting isn't needed.
13. Choose **Outline** for the layout type and **Landscape** for the orientation.
14. Leave the Adjust the Field Width box checked and click **Next**.
15. Name the report `Invoice Details Report Q1 2018` and click **Finish**.

    Your report displays in Print Preview, showing invoice totals and summary totals for each employee.

16. Take a moment to review the report using the page controls at the bottom of the screen (there should be ten pages, including unnecessary extras resulting from the width of the summary totals control).

    The Report Wizard provides a great starting point; however, the report needs some formatting and layout work.

17. Click the **Close Print Preview** button on the right side of the Ribbon.

    The report will display in Design View.

Modifying Reports

Reports can be created from scratch using Design View, but the Report Wizard is much easier to use and far more efficient. And while the Report Wizard provides a great starting point, it's often necessary to add, delete, move, or resize fields and to enhance a report in other ways such as adding titles and a company logo. These and other enhancements can be done using Layout View or Design View.

Layout View allows controls to be moved and sized while viewing how the report will look when printed. Design View gives you a detailed view of the report to allow design changes to individual controls, sections, and report structure without affecting the underlying data.

View the video "Modify Reports in Layout View."

View the video "Modify Reports in Design View."

Controls

Controls determine where field data, titles, headings, images, and other information are precisely positioned within report sections. There are three types of controls used in reports.

TYPES OF CONTROLS

Control Type	Description
Bound	Controls that display data from the table or query
Unbound	Objects that enhance the appearance of a report, such as labels, titles, lines, and images
Calculated	Controls that display calculated fields from queries or that perform calculations within the report itself

Here are the controls available on the Design tab of the Ribbon.

Adding Fields to a Report

Sometimes fields need to be added to an existing report. The Existing Fields tool displays a list of tables and their fields. Fields are added to the report in Design View by dragging them from the Field List pane into report sections. Adding a field creates a text box control where the field data is displayed and a label control that contains the field name. The label can be changed, allowing you to be creative with the field names displayed on the report.

Report Design Tools→Design→Tools→Add Existing Fields

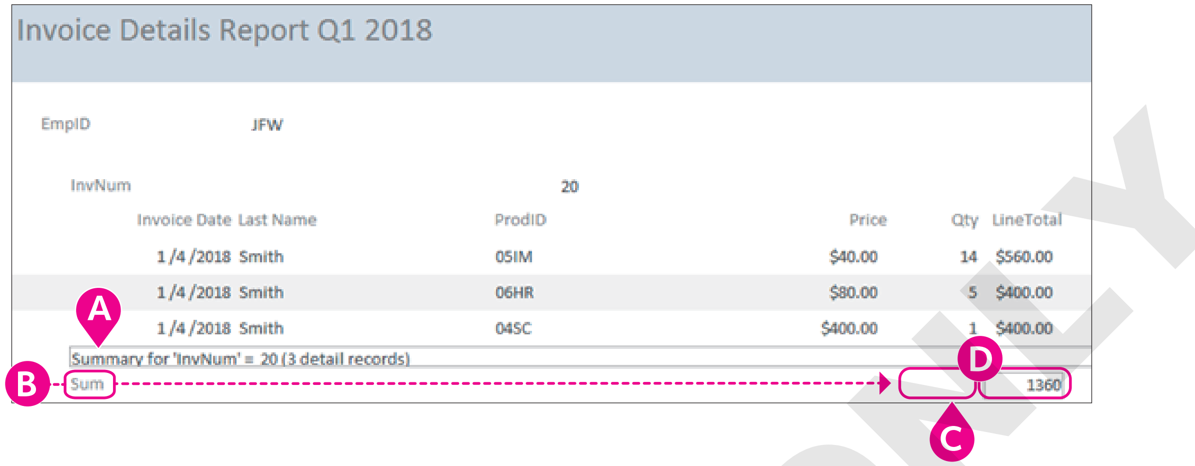
DEVELOP YOUR SKILLS: A4-D3

In this exercise, you will delete unneeded controls, add controls, and rearrange and resize controls to produce a more attractive, well-balanced report.

1. If necessary, open **Invoice Details Report Q1 2018**.
2. Switch to **Layout View**.

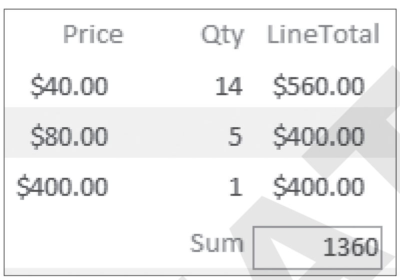
   Layout View lets you easily move controls and adjust their sizes while seeing how the report will look when printed.
3. Close any open boxes, such as the Property Sheet or Field List pane.

4. Follow these steps to delete and rearrange the invoice number summary controls:

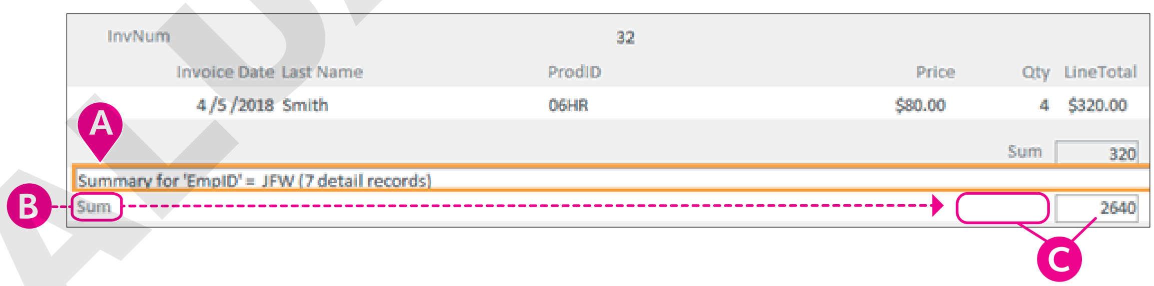


- **A** Click the **Summary for 'InvNum'** control and tap Delete to remove it.
- **B** Click the **Sum** label and then tap or hold the **right arrow** → to move it across the report next to the Total text box.
- **C** With the Sum label still selected, press the Ctrl key and click the **Total** text box. Both controls should be selected.
- **D** Tap the **up arrow** ↑ three times to move the controls up.

This section of the report should now look like this.

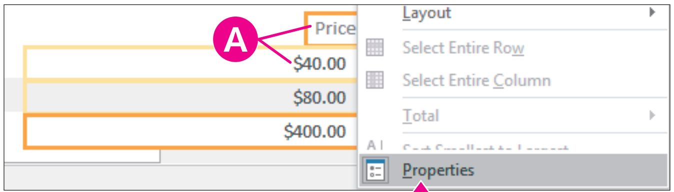


5. Follow these steps to rearrange the EmpID field controls:



- **A** Scroll down to the Summary for 'EmpID' control, click to select it, and then tap Delete to remove it.
- **B** Scroll down, click the **Sum** label, and tap the **right arrow** → multiple times until the Sum label aligns with the Sum and Qty controls above it.
- **C** With the Sum label selected, press Ctrl, click the **Total** text box, and then tap the **up arrow** ↑ three times to move the controls up.

6. Follow these steps to change the width and alignment of the Price controls:



- **A** Click any **Price** label and then press Ctrl and click any price text box to select all price labels and text boxes.
- **B** Right-click the selected controls and choose **Properties** at the bottom of the menu.

7. Set the Width property to: `0.8`

   The setting won't take effect until you tap Enter or click in another box.

8. Set the Left property to `6.625` and tap Enter so you can see the change take effect.

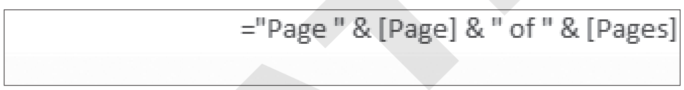
   The Left property determines the position from the left side of the page.

Change the Width of a Control and the Overall Report

Now you will work in Design View as you adjust the width of the page numbering control located in the Page Footer section.

9. Switch to **Design View**.
10. Click the **="Page"** numbering control in the page footer section.

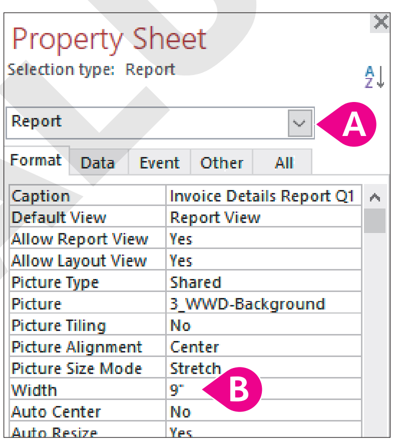
   You may need to move the Property Sheet box to be able to see the control. This control determines how page numbers appear in the report, including their position within the page footer.



11. With the Property Sheet box visible, set the Width property to **2** and tap Enter to see the change.

   Now you will change a width setting for the entire report.

12. Follow these steps to change the report width :



- **A** Click the **Selection Type** button in the Property Sheet box and choose **Report**.
- **B** Set the width to: **9**

   You are now viewing the properties for the report rather than for individual controls. The overall report width will now be 9", although this won't be readily visible in Design View.

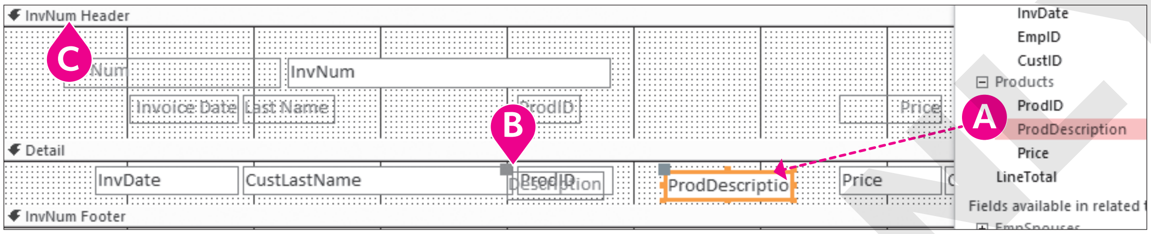
Add a Control

Now you will add the Product Description control to the report and reposition it and its label.

13. Choose **Report Design Tools→Design→Tools→Add Existing Fields** .

This tool lets you add new fields to reports.

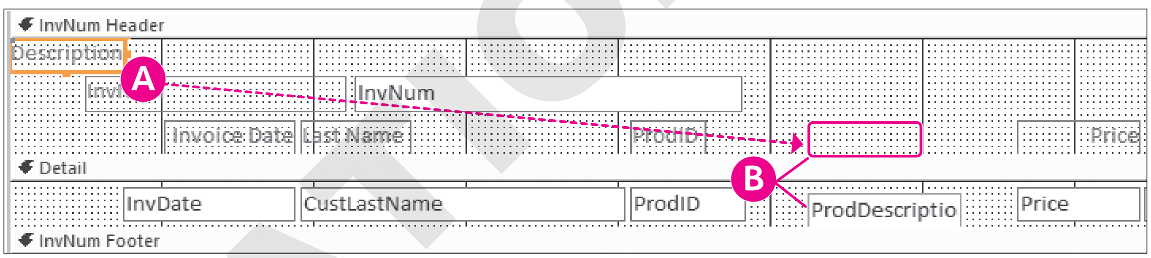
14. Follow these steps to add the ProdDescription field and to move its label:



- **A** Drag the **ProdDescription** field from the Field List pane between the ProdID and Price fields in the Detail section.
- **B** Select the new **Description** label (it will be hard to see) then right-click the selected label and choose **Cut** from the menu.
- **C** Right-click **InvNum Header** and choose **Paste**.

This pastes the field label in the header section. You will move it in the next step.

15. Follow these steps to reposition the fields:

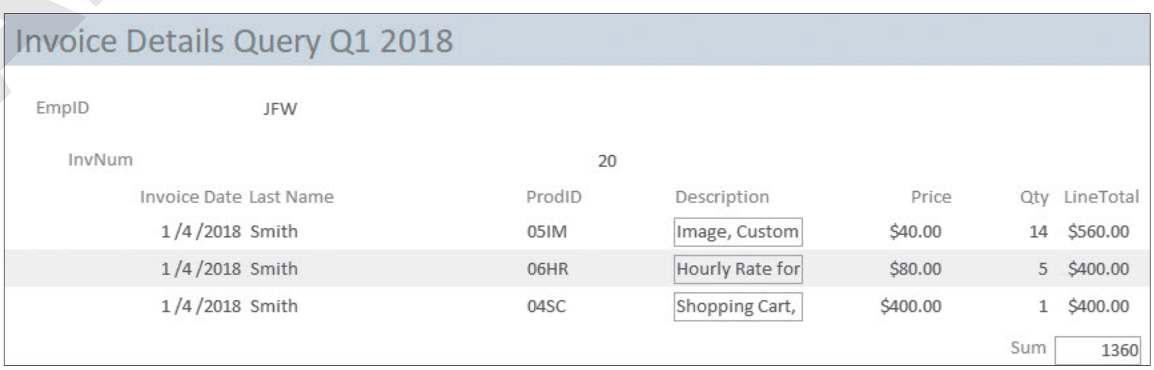


- **A** Drag the **Description** label between the ProdID and Price labels in InvNum Header.
- **B** Use the arrow keys to position the **Description** label and **ProdDescription** field so they are left-aligned with each other and roughly centered between the ProdID and Price fields.

16. Close the Field List pane and switch to **Layout View**.

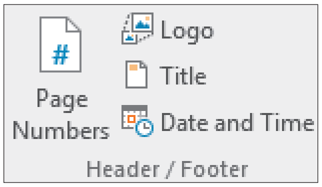
17. Click the **Save** button on the Quick Access toolbar to save your changes.

At this point, the top part of the report should closely match this example. You will continue to enhance the appearance of this report.



Header and Footer Objects

The Header/Footer group on the Design tab lets you easily add page numbers, titles, the date and time, and logos while working in Design View. Logos are especially useful because they can make reports look more professional and visually appealing. When a new report is created, a title control is generated based on the name of the report, so the Title tool is often used to add subtitles.



DEVELOP YOUR SKILLS: A4-D4

In this exercise, you will enhance the report header by adding a subtitle, logo, and the date and time. You will also format these controls.

1. Switch to **Design View**.

   The first thing you will do is increase the height of the header area to accommodate a logo and subtitle.

2. Right-click the **Report Header** section bar and choose **Properties**.

3. Set the Height property to: **`0.9`**

Format the Title and Subtitle

4. Click in the existing title control, **Invoice Details Report Q1 2018**, and replace the text with: **`Winchester Web Design`**
5. Set these properties for the title control:

Property	Setting
Width	**`3.5`**
Font Size	**`22`**
Text Align	**Center**
Font Weight	**Bold**

6. Choose **Report Design Tools→Design→Header/Footer→Title**.

   The report name appears in the new title control, which is placed on top of the existing title.

7. Drag the new subtitle control so it is left-aligned with and just below the *Winchester Web Design* title.
8. Replace the text in the new subtitle control with: **`Invoices for Q1 2018`**

9. Set these properties for the subtitle control:

Property	Setting
Width	**`3.5`**
Height	**`0.35`**
Special Effect	**Shadowed**
Text Align	**Center**
Font Weight	**Bold**

Insert a Logo

10. Choose **Report Design Tools→Design→Header/Footer→Logo** .

The Insert Picture dialog box opens, prompting you to insert an image file.

11. Navigate to your **Access Chapter 4** folder, choose **WWD-Logo.bmp**, and click **OK**.

Access places the logo in the upper-left corner of the Report Header section.

12. Set the Left property of the logo to: **`4`**

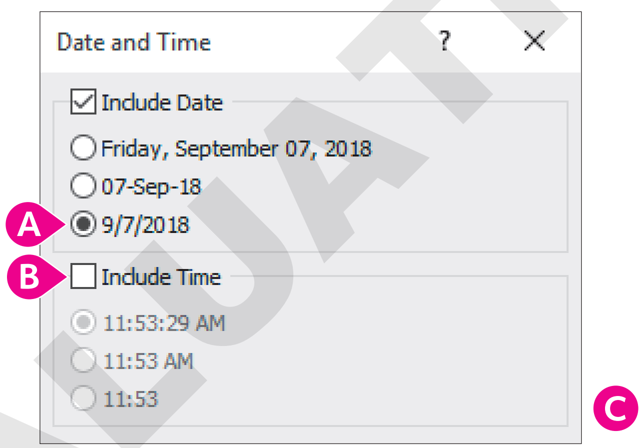
The logo moves over to the 4" position.

13. Set both the Width and Height properties to: **`0.8`**

Add the Date and Time and Review the Report

14. Choose **Report Design Tools→Design→Header/Footer→Date and Time** .

15. Follow these steps to insert a date control into the header:



- **A** Choose the **mm/dd/yyyy** date format (the third format).
- **B** Uncheck the **Include Time** checkbox.
- **C** Click **OK**.

The date is inserted at the right edge of the header.

16. Switch to **Report View** and review your report header.

Formatting Controls

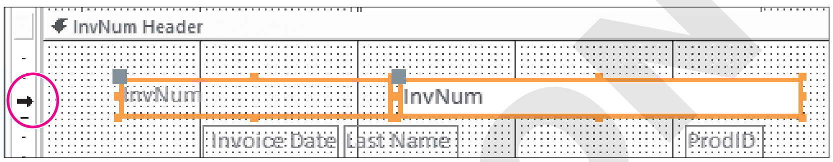
It is important to ensure that the data values are fully displayed in a report, while at the same time taking care not to leave unsightly and unnecessary blank space between columns. To accomplish this, you must resize, reposition, and align controls. It is best to adjust controls in Layout View because you can see the actual field values while making the adjustments. Multiple controls can be formatted simultaneously after you select them. You will need to use the [Ctrl] key when selecting any nonadjacent controls.

DEVELOP YOUR SKILLS: A4-D5

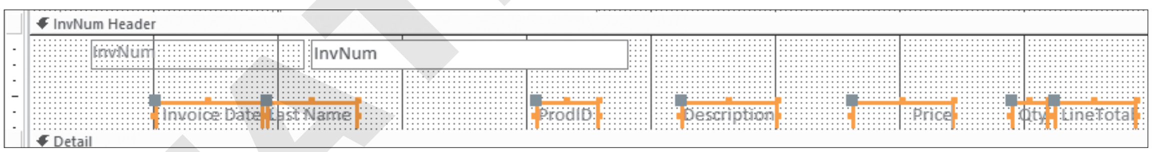
In this exercise, you will use both Design View and Layout View to resize, reposition, and align report controls.

1. Switch to **Design View** in the Invoice Details Report Q1 2018 report.
2. Click the vertical ruler to the left of the InvNum label and text box in InvNum Header, as shown here, to select both of them.

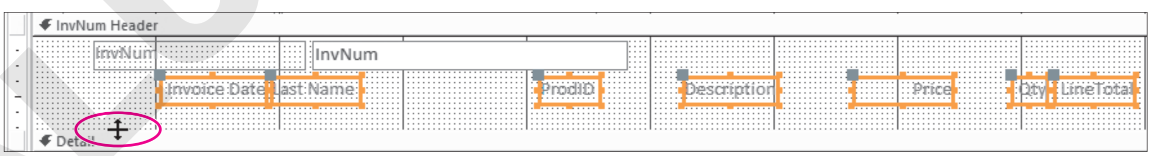
   You can also click one field and hold down [Ctrl] while clicking the other.



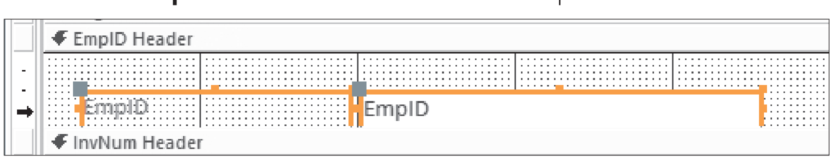
3. Tap the **up arrow** [↑] five times to nudge the controls up closer to the InvNum Header.
4. Select the remaining controls in the InvNum Header section, as shown here, and tap the **up arrow** [↑] five times to nudge them up.



5. Position the mouse pointer over the top edge of the Detail section bar until your pointer becomes a two-headed arrow.



6. Click and drag with the mouse upward until the section bar is just below the controls you moved previously.
7. If necessary, choose **Report Design Tools→Design→Tools→Property Sheet** to display the Property Sheet.
8. Select the **EmpID** label *and* text box in the EmpID Header section.

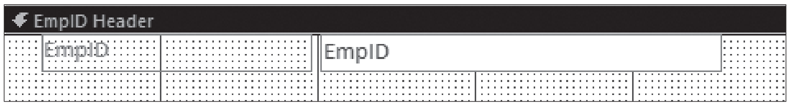


ACCESS

9. Set the Top property for these controls to: **0**

   This will move them up so they are just below the EmpID Header section bar. You can move controls by setting properties, using the arrow keys, or dragging. Setting properties is a way to position them with precision.

10. Click **EmpID Header**, and it will turn black to indicate it is selected.

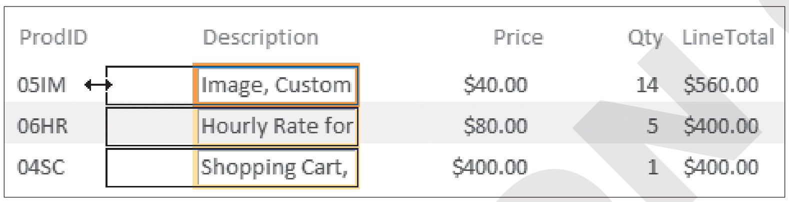


11. Set the height to: **0.33**

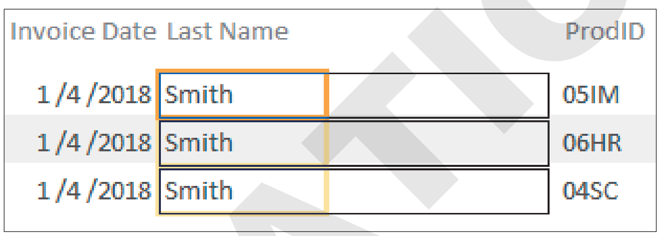
   Access sometimes changes a precise property value that you type, so don't worry if your Height property differs slightly from 0.33.

12. Switch to **Layout View**.

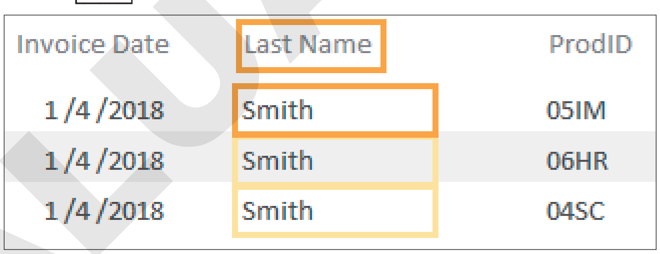
13. Click one of the text boxes in the Description column to select all the fields and then drag left to widen the column almost to the ProdID column.



14. Select the **Last Name** boxes and drag left to shorten the boxes as shown.



15. Press Ctrl and click the **Last Name** label to select the label with all the text boxes.

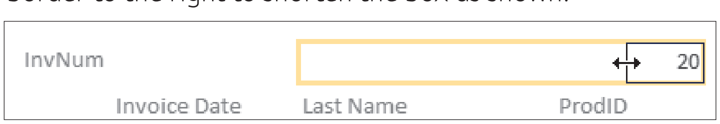


   In the next step, you will nudge the boxes to the right. Sometimes while moving a group of controls in Layout View, the screen scrolls down to the end. If this occurs, just keep nudging until you are finished and then scroll back up to the top of the report.

16. Tap the **right arrow** → eight times to nudge the text boxes to the right.

17. Select the **ProdID** label and one of the text boxes below it and then nudge the entire selection to the left six times.

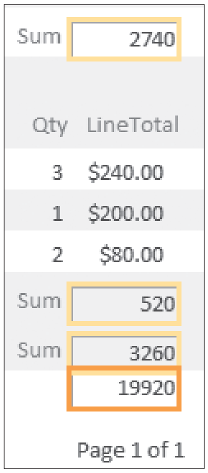
18. Scroll to the top of the report, click the **InvNum** text box with *20* in it, and then drag the left border to the right to shorten the box as shown.



19. Tap the **left arrow** [←] enough times to position the text box closer to the InvNum label.

20. Scroll to the bottom of the report until the Sum controls are visible.

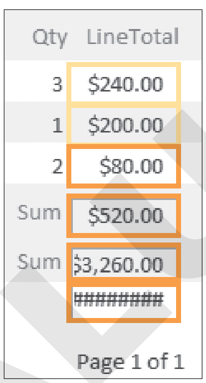
21. Use [Ctrl] to select the two **Sum** text boxes and the **Grand Total** text box.



22. In the Property Sheet, set the Format property to **Currency**.

When you apply formatting, the fields may no longer fit in the text box. When a value is too large for the text box, it fills the box with the # symbol.

23. With the controls still selected, press [Ctrl] and click one of the unselected **LineTotal** text boxes in the column so all line total boxes are selected.



24. Now drag the right border of one of the controls to the right until the Grand Total is fully visible.

25. Switch to **Print Preview** view to see how your report will look when printed.

26. Close Print Preview. Feel free to return to **Design View** or **Layout View** to make additional adjustments to the report.

27. Save the report.

Themes

Themes in a report function identically to themes in forms, including any steps taken to apply and modify them. Don't forget that when a theme is applied in any object, the applied theme impacts all objects in the database.

Report Design Tools→Design→Themes→Themes

Backgrounds

Backgrounds are images in a report or form that add a visual element beyond applying a basic back color in report sections. Backgrounds appear behind form controls and include additional settings for size, alignment, and mode. Using the Background Image command in the Background group on the Ribbon allows you to select the image of your choosing to be inserted as a background image.

Report Design Tools→Format→Background→Background Image

DEVELOP YOUR SKILLS: A4-D6

In this exercise, you will apply a theme and insert a background image into your report.

1. Switch to **Design View** and choose **Report Design Tools→Design→Themes→Themes** .
2. Hover over each theme's thumbnail and take note of the ToolTips that appear to show the theme names, then choose **Office** theme to apply it to the report.
3. Choose **Report Design Tools→Format→Background→Background Image menu button ▾→Browse.**

   The Insert Picture dialog box appears.
4. Navigate to your **Access Chapter 4** folder, select the file named **WWD-Background.jpg**, and click **OK**.
5. If necessary, choose **Report Design Tools→Design→Tools→Property Sheet** to display the Property Sheet.
6. If necessary, click the **Selection Type** button in the Property Sheet box and choose **Report**.
7. Set the Picture Size Mode property to **Stretch** so the inserted image spans the entire report page background.

Tip! *When setting the property for a background image, be sure to evaluate the size and format of the image file being inserted. Smaller images may need to be tiled or stretched to fill the report page.*

8. Switch to **Print Preview** to see your finished report.
9. Choose **File→Close** to close the database, saving the changes to your report.

Self-Assessment

Check your knowledge of this chapter's key concepts and skills using the Self-Assessment in your ebook or online (eLab course or Student Resource Center).

Reinforce Your Skills

REINFORCE YOUR SKILLS: A4-R1

Create and Modify a Report

The president of Kids for Change wants a report that lists financial donations the organization has received since its inception, grouped by donor. He also wants to list the amount that Kids for Change is depositing into its scholarship fund for local high-school students. In this exercise, you will create a basic donations report and create a more customized report. Then you will rearrange, resize, and format controls and also add a logo and title.

1. Start Access, open **A4-R1-K4C** from your **Access Chapter 4** folder, and save it as: `A4-R1-K4CRev`
2. Choose the **Donations** table in the Navigation pane.
3. Choose **Create→Reports→Report**.
4. Take a moment to review the report and then close it, saving it as: `Quick Donations List`

Create a Report Using the Report Wizard

Now you will create a donations report that is grouped by donor IDs and includes donation totals.

5. Choose **Donations Query** in the Navigation pane and then choose **Create→Reports→Report Wizard**.
6. Add **DonorID**, **DonorLName**, **DonorFName**, **DonationDate**, and **Amount** to the Selected Fields list and click **Next**.

   The next Wizard screen asks how you want to view your data. This screen appears because the query uses two tables and the Wizard wants to know which table will be used for the first grouping level.
7. Choose **By Donations** and click **Next**.
8. Choose **DonorID** as the grouping field and add it to the grouping area.
9. Click **Next** and then click the **Summary Options** button.
10. Check the **Sum** box for the Amount field and click **OK** to add a sum calculation for that field; click **Next**.
11. Choose **Block** for the layout and **Landscape** for the orientation; click **Next** to display the final Wizard screen.
12. Enter `Donations Report 2017-2018` as the title and click **Finish**.
13. Review both report pages and then close Print Preview.

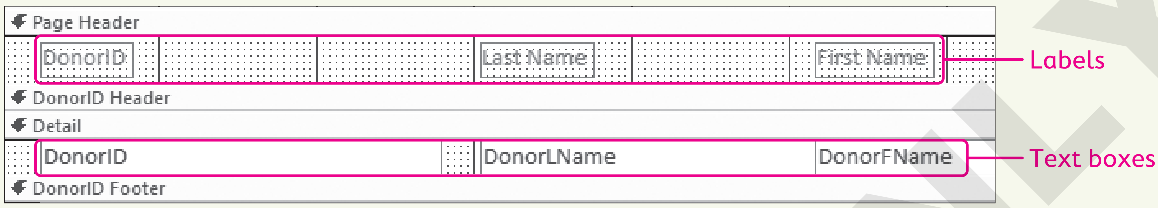
   You will continue to use this report.

ACCESS

Add, Delete, and Edit Report Controls

14. In **Design View**, open the Property Sheet, if necessary.

In the next few steps you will select and format text boxes that display field data and the labels for those text boxes. The text boxes are located in the Detail section, while their labels are located in the Page Header section.



15. Click the **DonorID** text box and set the width to: `0.5`

16. Use Ctrl to select the **DonorLName** and **DonorFName** text boxes and set the Width property to `1` and apply it to both controls.

17. Select the **Last Name** label in the Page Header section and the **DonorLName** text box in the Detail section and set their left properties to: `1.5`

18. Select the **First Name** label in the Page Header section and the **DonorFName** text box in the Detail section and set their left properties to: `3`

19. If necessary, scroll to the right of the report grid to see the other controls. Then set the left properties for the controls listed as indicated:

Control	Location	Left Property
Date label	Page Header	`5`
DonationDate text box	Detail	`4.5`
Amount label	Page Header	`6.2`

20. Select the **Amount** text box in the Detail section and both **=Sum(Amount)** controls located in the DonorID footer and in the report footer.

21. Set the width to `1` and the left property to `6` for each of the three controls.

Add a New Field and Format It

22. Choose **Report Design Tools→Design→Tools→Add Existing Fields** to open the Field List pane.

23. Drag **ScholarFund** from the Field List pane and drop it to the right of the Amount text box in the Detail section.

The corresponding Scholar Fund label is partly on top of the Amount text box.

24. Click the **Scholar Fund** label and tap Delete to remove it.

Next you will use the Label control tool to insert a new label in the Page Header for the Scholar Fund.

25. Choose **Report Design Tools→Design→Controls→Label** Aa.

26. Drag the **Page Header** section above the ScholarFund text box to create a rectangular label box.

27. Type `Scholarship` into the new label, adjusting the size of the label box as necessary.

28. Close the Field List pane and then scroll to the left in the design grid.

29. Click the long **Summary for " & "'DonorID'...** control in the DonorID Footer section.

30. Tap Delete to remove the control.
31. Click in the **Sum** label located in the DonorID Footer and replace the label text *Sum* with: **`Donor ID Total`**
32. Select the title in the report header section and replace it with: **`Kids for Change`**

Add a Logo and a New Title

33. Choose **Report Design Tools→Design→Header/Footer→Logo**, navigate to your **Access Chapter 4** folder and choose **K4C-Logo.bmp**, and click **OK**.
34. Set the width and height of the logo to: **`0.7`**
35. Drag the logo toward the right side of the header so it is positioned above the Amount fields.
36. Choose **Report Design Tools→Design→Header/Footer→Title**.
37. Drag the new title to the left and position it below the *Kids for Change* title.
38. Switch to **Report View** to see how your report looks and then, if necessary, switch back to **Design View** and make the desired adjustments to your report.
39. Close the database, saving the changes to your report.

REINFORCE YOUR SKILLS: A4-R2

Use Controls and Apply a Theme

In this exercise, you will size, align, and format report controls, apply a theme, and add the date to the Page Header.

1. Open **A4-R2-K4C** from your **Access Chapter 4** folder and save it as: **`A4-R2-K4CRev`**
2. Double-click the **Donations Report 2017-2018**.

   The report has some alignment problems, and the formatting of controls is inconsistent.
3. Switch to **Design View** and open the **Property Sheet**, if necessary.
4. Select the two titles in the report header section and set these property values:

Property	Value
Width	**4**
Height	**0.4**
Left	**2**
Text Align	**Center**

5. Press Ctrl and click the **Donations Report 2017-2018** subtitle to deselect it.
6. Set the font size of the *Kids for Change* title to: **`22`**
7. Set the width and height of the logo to: **`0.8`**
8. Set the logo's top property to: **`0.05`**

   Be sure to type 0.05 *and not* 0.5.
9. Click the vertical ruler to the left of the controls in the Detail section to select all the controls in that section.

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10. Choose **Report Design Tools→Arrange→Sizing & Ordering→Size/Space→Equal Horizontal** to evenly space all controls in the Detail section.
11. Click the **Last Name** label in the page header and then press Ctrl and click the **DonorLName** text box in the Detail section.
12. Choose **Report Design Tools→Arrange→Sizing & Ordering→Align→Left** to left-align the controls.
13. Follow the procedures in the previous two steps to left-align the First Name controls.
14. Click the **Date** label in the page header and drag to center it above the DonationDate text box.
15. Select the **Donor ID Total** label (in the DonorID footer), the **Grand Total** label (in the report footer), and the **DonationDate** text box (in the Detail section).
16. Choose **Report Design Tools→Arrange→Sizing & Ordering→Align→Right** to right-align the controls.
17. Select the **Amount** text box located in the Detail section and the two **=Sum([Amount])** calculated controls located in the DonorID footer and the report footer.
18. Choose **Report Design Tools→Arrange→Sizing & Ordering→Align→Right** to right-align the controls.

Add the Date to the Page Header

Now you will add a date control to the page header section so when viewing the report on a computer, readers don't have to scroll to the very end of the report to check the date.

19. Click **=Now( )** in the page footer section and tap Delete to remove it.
20. Choose **Report Design Tools→Design→Header/Footer→Date and Time**.
21. Choose the **mm/dd/yyyy** date format (the third format).
22. Uncheck the **Include Time** checkbox and click **OK**.

    The new date control is inserted on the right-hand side of the Report Header. You may need to move the Property Sheet to be able to see the new date box.
23. Click the new date control and set these property values:

Property	Value
Width	1
Top	0.875
Left	3.5
Text Align	**Center**

24. Switch to **Print Preview** to review the completed report.
25. Feel free to return to **Design View** to make any adjustments you feel are necessary.
26. Close the report when you are finished, saving any changes.

Apply Themes to a Report

27. Display the **Quick Donations List** report in **Design View**.
28. Choose **Report Design Tools→Design→Themes→Themes** and apply the **Integral** theme.

29. Review the report in **Print Preview** and, if desired, switch back to **Design View** to choose another theme.
30. Save the report and close it when you're finished.

REINFORCE YOUR SKILLS: A4-R3

Create Reports and Modify Controls

Kids for Change is rapidly expanding, adding new activities and staff members almost daily. To meet the organization's need to match staffers with the new activities, you will create two new reports.

1. Open **A4-R3-K4C** from your **Access Chapter 4** folder and save it as: `A4-R3-K4CRev`
2. Select the **Activities** table in the Navigation pane and then choose **Create→Reports→Report**.

   Access generates a report of Kids for Change's activities in Layout View. Notice the vertical dotted line toward the right side of the report. This is a page break line indicating the report extends beyond a standard 8.5" x 11" printed page.
3. Click an **Activity** text box to select the entire Activity column of text boxes.
4. Hover the mouse pointer over the right border of one of the text boxes until it is a resize arrow and then drag left to reduce the width of the boxes to fit the widest entry in the column.
5. Resize the remaining columns to fit the widest entries in the columns.
6. Switch to **Design View** and display the **Property Sheet**.
7. Click the **="Page"** control in the page footer and set the width to `1` and the left property to: `6`
8. Choose **Report** from the Selection Type list at the top of the Property Sheet box and set the width to: `7`

   Access may change the property, making it greater than 7 to account for any variations in your report. Setting this property to 7 adjusts the overall width of the report.
9. Select the **=Count(*)** control in the Report Footer and set the Height property to: `0.25`
10. Switch to **Print Preview**.

    The report should now fit nicely on one page.
11. Close Print Preview and then save the report as `Activities Report` and close it.

Create a Report Using the Report Wizard

Now you will use the Report Wizard to create a staff availability report to match staffers with specific activities. The report will be grouped by activity.

12. Click the **Staff Schedule** query in the Navigation pane and then choose **Create→Reports→Report Wizard**.
13. Add the **Activity**, **Day**, **MeetTime**, **StaffLastName**, **StaffFirstName**, **StaffPhone**, and **Hours** fields to the Selected Fields list.
14. Click **Next**, add **Activity** as a group, and click **Next** again.
15. Click **Next** two more times, once to skip the Sort Order and Summary screen and once to accept Stepped as the layout.
16. Name the report `Staff Availability Report` and click **Finish**.

ACCESS

Size, Add, Delete, and Edit Report Controls

17. Close Print Preview and then display the report in **Layout View**, opening the **Property Sheet** if necessary.

18. Select the **Activity** label and **Activity** text box and set the Width property to: `1.2`

19. Set the properties for both the label and text box controls as indicated:

Label and Text Box	Width Property	Left Property
Day	`0.9`	`1.5`
Meet Time	`0.75`	`2.5`
Last Name	`0.8`	`3.3`
First Name	`0.8`	`4.2`
Telephone	`1.1`	`5.1`
Hours	`0.4`	`7`

20. Switch to **Design View** and then choose **Report Design Tools→Design→Tools→Add Existing Fields** to display the Field List pane.

21. Drag the **HrlySal** field to the right of the StaffPhone text box in the Detail section.

A label control is included with the text box. You will delete the label then add a new label in the Page Header section.

22. Click the **HrlySal** label control, which will be on top of the StaffPhone box, and delete it.

23. Close the Field List pane and open the **Property Sheet**.

24. Select the **HrlySal** text box and set the width to `0.55` and the left property to: `6.3`

25. If necessary, use the arrow keys to nudge the control up or down to align it with the other controls in the Detail section.

26. Choose **Report Design Tools→Design→Controls→Label** *Aa* and drag a new label between the *Telephone* and *Hrs* labels in the Page Header section.

27. Type `Hrly Sal` in the new label, tap Enter, and then set the width to `0.55` and the left property to: `6.3`

28. If necessary, use the arrow keys to nudge the control up or down to align it with the other controls in the page header section.

29. Switch to **Print Preview** to review your report.

Add a Subtitle and a Logo

30. Close Print Preview and switch to **Design View**.

31. Select the title in the report header and replace the text with: `Kids for Change`

32. Set these property values for the Kids for Change title:

Property	Value
Width	`4`
Left	`2`
Font Size	`22`
Text Align	**Center**

33. Choose **Report Design Tools→Design→Header/Footer→Title** to insert a new title and then enter these property values for it:

Property	Value
Top	**0.46**
Width	**4**
Left	**2**
Font Size	**20**
Text Align	**Center**

34. Choose **Report Design Tools→Design→Header/Footer→Logo** and navigate to your **Access Chapter 4** folder.
35. Choose the **K4C-Logo.bmp** and click **OK** to insert it.
36. Set the width and height of the logo to: **0.8**

Add the Date to the Page Header Section

37. Choose **=Now()** in the page footer and delete it.
38. Choose **Report Design Tools→Design→Header/Footer→Date and Time**.
39. Choose the **mm/dd/yyyy** date format (the third format) and uncheck the **Include Time** checkbox; click **OK**.

    The new date control is inserted on the right-hand side of the page header.
40. Click the new date control and tap the **up arrow** [↑] repeatedly to move it to the top of the report header section.
41. Drag the left border of the date box to the right to the 6.5" mark on the horizontal ruler.
42. Review your report using **Print Preview** and return to **Design View** to make any adjustments you feel are necessary.
43. Save the changes to your report and then close it.

Finalize the Report

44. Display **Activities Report** and take a moment to review it.
45. Switch to **Design View** and choose **Report Design Tools→Design→Themes→Themes**.
46. Choose any theme.
47. Choose **Report Design Tools→Format→Background→Background Image** and select **Browse** from the menu.
48. Navigate to your file storage location, select the file **K4C-Background.jpg**, and click **OK**.
49. If necessary, choose **Report Design Tools→Design→Tools→Property Sheet** to display the Property Sheet.
50. If necessary, click the **Selection Type** button in the Property Sheet box and choose **Report**.
51. Set the property for Picture Alignment to **Top Right**.
52. Switch to **Print Preview** to review the report.
53. Close the database, saving the changes to your report.

Apply Your Skills

APPLY YOUR SKILLS: A4-A1

Create and Modify Reports

Universal Corporate Events is ready to add reports to its database. In this exercise, you will create two reports: The first is a basic report that lists contacts' telephone numbers; the second lists the event venues and their contact information (address, telephone number, and website), grouped by the contact person. Then you will add, delete, and edit the venue report controls and also add a logo and title.

1. Open the **A4-A1-UCE** database from your **Access Chapter 4** folder and save it as: `A4-A1-UCERev`
2. Use the **Report** tool to create a report based on the **Contacts** table.
3. Save the report as `Contacts List` and then close it.

Use the Report Wizard and Delete and Edit Report Controls

Now you will use the Report Wizard to create a list of the event venues, including their address, phone number, and website, grouped by contact person.

4. Choose the **Venues** table and start the **Report Wizard**.
5. Choose all the fields *except* VenueID.
6. Leave VenueContact as the only grouping level.
7. Do not add a sort or change any layout options.
8. Name the report `Venues List` and finish the report.
9. Switch to **Design View** and delete the **=Now()** control in the page footer.
10. Change the *VenueContact* label in the page header to: `Contact`
11. Change the *VenueName* label in the page header to: `Name of Venue`

Add a New Title and a Logo

12. Change the *Venue List* title in the report header to `Universal Corporate Events` and then set these properties for it:

Property	Value
Width	`4`
Height	`0.4`
Left	`2`
Font Name	**Arial Narrow**
Font Size	`22`
Text Align	**Center**

13. Insert a new title, leaving the name set as *Venue List* and setting these properties:

Property	Value
Width	`4`
Height	`0.4`
Top	`0.45`
Left	`2`
Font Name	**Arial Narrow**
Font Size	`20`
Text Align	**Center**

14. Insert the **UCE-Logo.bmp** from your **Access Chapter 4** folder into the header.

    The logo should be positioned on the left side of the header.

15. Set the logo's width and height properties to: `0.8`
16. Review your report in **Layout View**.

    The report has layout problems that are addressed in the next exercise.

17. Save the report, close it, and close the database.

APPLY YOUR SKILLS: A4-A2

Fine-Tune Reports

The CEO of Universal Corporate Events has sent back the first draft of the Contacts List and Venues List with a list of modifications he would like you to make. In this exercise, you will resize, align, and format controls on the Venues List report and apply a theme and background image to the Contacts List report.

1. Open **A4-A2-UCE** from your **Access Chapter 4** folder and save it as: `A4-A2-UCERev`
2. Display the **Venue List** report in **Layout View**.
3. Modify the position and width of all columns as necessary so all data is visible.
4. Insert a date in the header using the **mm/dd/yyyy** format and omitting the time.
5. Save and then close the report.

Apply a Theme and Insert a Background

6. Display the **Contacts List** report in **Design View**.
7. Apply a theme of your choice to the report.
8. Delete the Logo control next to the title in the report header section.
9. Insert a background image using the image file **UCE-Background.jpg** and set the alignment to **Bottom Right**.
10. View the report in **Report View** and make any adjustments you feel are necessary.
11. Save and close the report and then close the database.

APPLY YOUR SKILLS: A4-A3

Create and Modify Reports

Universal Corporate Events is ready to add more reports to its database. In this exercise, you will create two reports: a basic report using the Menus table as the record source and a report that lists personnel contact information grouped by last name. Then you will add, delete, and edit report controls; modify the captions of several labels to make them more readable; and add a logo, title, and subtitle to the venue report.

1. Open the **A4-A3-UCE** database from your **Access Chapter 4** folder and save it as: `A4-A3-UCERev`
2. Use the **Report** tool to create a report based on the **Menus** table.
3. Save the report as `Menus List` and close it.

   Now you will use the Report Wizard to create a list of the company personnel and their addresses, phone numbers, and email addresses. The report will be grouped by last name.
4. Choose the **Personnel** table and start the **Report Wizard**.
5. Add **PerLastName**, **PerFirstName**, **PerAddress**, **PerCity**, **ST**, **PerZIP**, **PerPhone**, and **PerEmail** to the **Selected Fields** list.
6. Use **PerLastName** as the only grouping level.
7. Do not add a sort and leave the layout default values.
8. Name the report `Personnel List` and finish it.

Modify Controls and Add a New Title, Logo, and Date

9. Switch to **Design View** and delete the **=Now()** and **="Page"** controls in the page footer.
10. Change the *PerLastName* label in the page header to: `Last Name`
11. Change the *Personnel List* title in the report header to `Universal Corporate Events` and then set these properties for it:

Property	Value
Width	`4`
Height	`0.4`
Left	`2`
Font Name	**Arial Narrow**
Font Size	`22`
Text Align	**Center**

12. Insert a new title, leaving the name set as *Personnel List* and setting these properties:

Property	Value
Width	**4**
Height	**0.4**
Top	**0.5**
Left	**2**
Font Name	**Arial Narrow**
Font Size	**22**
Text Align	**Center**

13. Insert the **UCE-Logo.bmp** from your **Access Chapter 4** folder into the header.

    The logo should be positioned on the left side of the header.

14. Set the logo's Width and Height to: **0.8**
15. Insert a date in the header using the **mm/dd/yyyy** format and do not include the time.
16. Move the new **Date** control to the top-right corner of the report header and shorten its width so it doesn't overlay the title.

Review the Report and Apply a Theme

17. Review your report in **Layout View**.

    Some controls, such as Telephone and Email Address, may not be wide enough to display all data. You will need to move some columns to the left to create space to allow for the expansion of the Telephone and Email Address columns. Remember that an entire column can be selected by clicking the column heading and using Ctrl *to select any box in the column.*

18. Move and widen columns as necessary so all data is visible, but make sure the Email Address field does not go past the vertical dotted page break line.
19. Save the report and close it.
20. Display the **Menus List** report in **Design View**.
21. Apply a theme of your choice to the report.
22. Review your report in **Report View** and change the theme if desired.
23. Save and close the report.

Project Grader

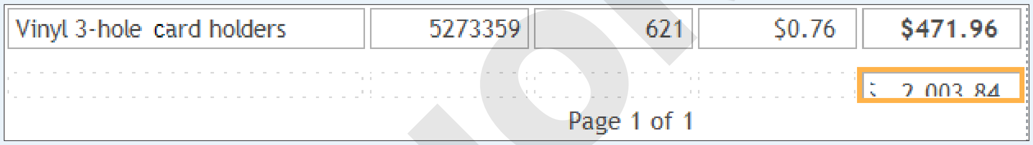
If your class is using eLab (labyrinthelab.com), you may upload your completed Project Grader assignments for automatic grading. You may complete these projects even if your class doesn't use eLab, though you will not be able to upload your work.

PROJECT GRADER: A4-P1

Taylor Games: Create and Modify a Basic Report

Taylor Games needs a basic inventory report. You will first create the report using the Report command, then modify it to improve readability and enhance its appearance.

1. Download and open your Project Grader starting file.
   - *Using eLab:* Download **A4_P1_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
   - *Not using eLab:* Open **A4_P1_Start** from your **Access Chapter 4** folder.
2. Create a basic report based on the **Inventory** table.
3. Set the following properties for the Total Cost Total control located at the bottom of the report:



Property	Value
Format	**Currency**
Height	**0.25**
Font Weight	**Bold**

4. Delete the **Logo**, **Date**, and **Time** controls from the Report Header.

5. Insert a **Date and Time** control in the report header and set properties for it as follows:

Property	Value
Date Format	Any
Time Format	None
Width	**4**
Text Align	**Center**

6. Format the Title control (contains the title *Inventory*) in the Report Header as follows:

Property	Value
Width	**6.25**
Font Size	**26**
Text Align	**Center**
Font Weight	**Bold**

7. Insert a background image and set properties for it as follows:

Property	Value
Picture	Use the **Taylor Games BG.png** image from your **Access Chapter 4** folder.
Picture Alignment	**Bottom Right**
Picture Size Mode	**Stretch**

Hint: Set the Property Sheet's selection type to Report to access the needed properties.

8. Apply the theme you like best.

9. Save the report as `Inventory` and then close it.

10. Save your database.

- *Using eLab:* Save it to your **Access Chapter 4** folder as `A4_P1_eSubmission` and attach the file to your eLab assignment for grading.
- *Not using eLab:* Save it to your **Access Chapter 4** folder as: `A4_P1_Submission`

PROJECT GRADER: A4-P2

WebVision: Work with Reports

WebVision would like a report that displays the sales orders for each sales team. You will first create the report using the Report Wizard and then modify it to improve readability and enhance its appearance.

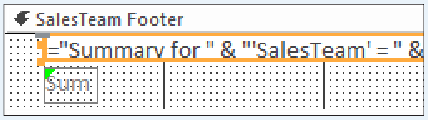
1. Download and open your Project Grader starting file.

- *Using eLab:* Download **A4_P2_eStart** from the Assignments page. You *must* start with this file or your work cannot be automatically graded.
- *Not using eLab:* Open **A4_P2_Start** from your **Access Chapter 4** folder.

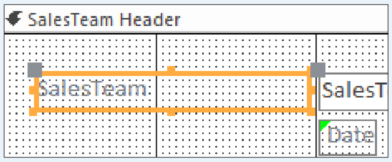
2. Create a new report using the Report Wizard and these guidelines:

- Add the **SalesTeam** field from the **Sales Reps** table.
- Add the **OrderID**, **Date**, and **Amount** fields from the **Orders** table.
- View the data by **Orders**.
- Add **SalesTeam** as the only grouping level.
- Sort by **Date** in ascending order.
- Add summary options that include a **Sum** calculation on the **Amount** field and show **Detail and Summary**.
- Use **Outline** layout.
- Set the Orientation to **Landscape**.
- Use `Orders by Region` as the title.

3. Delete the **Summary for Sales Team** control.

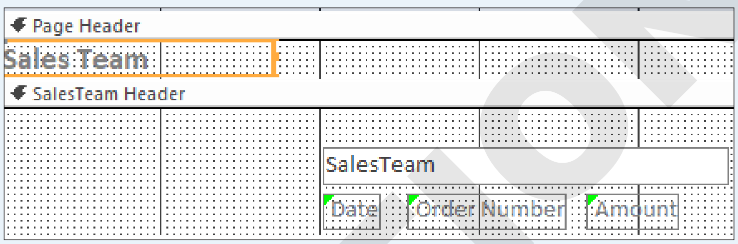


4. Set the following properties for the SalesTeam label:



Property	Value
Caption	**Sales Team** (add a space to the current caption)
Font Size	**14**
Font Weight	**Bold**

5. Set the Page Header section height to: **0.25**
6. Move the **SalesTeam** label into the Page Header section. Move only the label (not the Sales Team text box).



7. Set the following properties for the SalesTeam text box:

Property	Value
Width	**1**
Top	**0**
Left	**0**
Font Size	**12**
Font Weight	**Semi-Bold**

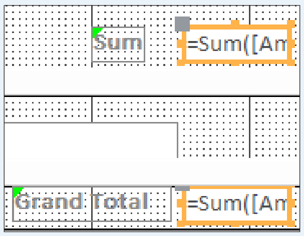
8. Insert the **LastName** field from the **Sales Reps** table into the SalesTeam Header section.
9. Delete the **LastName** label control.
10. Set these properties for the LastName text box:

Property	Value
Top	**0.2**
Left	**1**
Border Style	**Transparent**
Font Weight	**Bold**

11. Set the Date text box Width property (located in the Detail section) to **1** and the Text Align property to **Left**.
12. Set the Date label Left property to: **0.5**
13. Set the Sum label Left property to **3** and Font Weight property to **Semi-Bold**.
14. Set the following properties for the Grand Total label:

Property	Value
Width	1
Left	2.5
Font Weight	**Semi-Bold**

15. Set the following properties for both the Sum of Amount text box and the Amount Grand Total Sum (Sum) text box:



Property	Value
Border Style	**Transparent**
Font Weight	**Bold**

16. Delete the **Title** control (*Orders by Region*) from the report header and insert a new **Title** control using the following properties:

Property	Value
Width	2
Height	0.35
Font Weight	**Bold**

17. Insert the **WebVision Logo.jpg** image from your **Access Chapter 4** folder and set the Width property to: **1.75**
18. Save and close the report.
19. Save your database.
    - *Using eLab:* Save it to your **Access Chapter 4** folder as **A4_P2_eSubmission** and attach the file to your eLab assignment for grading.
    - *Not using eLab:* Save it to your **Access Chapter 4** folder as: **A4_P2_Submission**

Extend Your Skills

These exercises challenge you to think critically and apply your new skills in a real-world setting. You will be evaluated on your ability to follow directions, completeness, creativity, and the use of proper grammar and mechanics. Save files to your chapter folder. Submit assignments as directed.

A4-E1 That's the Way I See It

You've been asked to create a sales report for Blue Jean Landscaping that shows the total amount of sales by equipment type, drawing the information from sales invoices. Open **A4-E1-BJL** and save it as: `A4-E1-BJLRev`

Create a well-designed report header with a title and logo (use **BJL-Logo.bmp**). Make sure all information is visible and that the report is easy to read and understand. The date and page numbering should appear at either the top or bottom of the report. Save your report as: `Equipment Sales`

A4-E2 Be Your Own Boss

Blue Jean Landscaping has asked you to add reports to its company database that provide listings of its equipment, services, and customers in an attractive and useful manner. Open **A4-E2-BJL** and save it as: `A4-E2-BJLRev`

Use the Store Inventory query as a record source to create a report that is grouped by manufacturer and includes item name, price, quantity in stock, inventory amount, and a sum of the InvTot field. Use the default layout settings. Use the skills you learned in this chapter to size, rearrange, and format the report controls. Create a well-designed report header with a title and logo (use **BJL-Logo.bmp**). Name the report: `Store Inventory Report`

Create another report using the Service Invoices Query that includes all fields except InvNum. Group the results by InvDate and sum the LineTotal field. Choose the Stepped and Landscape layout options and use `Service Invoices Report` as the report name. Format the report controls and create the same consistent header with a logo, title, and subtitle as in the Store Inventory Report. Add the background image **BJL-Background.jpg** that is aligned bottom left to the report.

A4-E3 Demonstrate Proficiency

You've been asked by Stormy BBQ to prepare a Manufacturer Stock Level report that shows the total number of items in stock for each manufacturer. Open **A4-E3-StormyBBQ** and save it as: `A4-E3-StormyBBQ-Rev`

Locate the table or query in the database that will provide the data you need and use all fields from that table or query. Organize the report so the total stock for each manufacturer is displayed. Create a well-designed report header with a title and logo (**SBQ-Logo.bmp**). Make sure all information is visible and the report is easy to read and understand. The date and page numbering should appear at either the top or bottom of the report. Save your report as: `Manufacturer Stock Levels`

INTEGRATION

1 Office: Designed for Integration

Each product in the Office lineup is designed for a specific type of task. However, the products are also designed to work together. For example, you can create charts in Excel and display them in Word or PowerPoint, or create a table in Word and import it into Excel. In this chapter, you will explore the many features in Office that enhance your productivity and make multitasking easy.

LEARNING OBJECTIVES

- Transfer information between Office apps
- Use Excel to create charts from Access
- Convert a Word outline to a PowerPoint presentation
- Present Excel charts in PowerPoint
- Use Outlook to send documents

Project: Submitting a Quarterly Report

You are the lead financial project manager for a multimillion-dollar Hollywood film studio. Among other things, you're in charge of keeping track of studio expenses, budgets for each film project, studio revenue, and other company profits and losses. You're responsible for saving the studio as much money as possible by keeping in contact with talent agencies, possible donors, and distribution companies.

Due in part to your diligence, the studio has benefited from several profitable consecutive fiscal quarters. At the end of another successful three months, your phone buzzes with a reminder notification. It's time to create and submit the latest quarterly report.

Getting Organized

You track the studio financial data in several Office programs. The CEO prefers to receive the reports in a PowerPoint presentation, but you use other Office programs to sort and prepare the information. To make sure you cover all the necessary steps, you open the OneNote app on your phone to jot down a to-do list with the apps you'll be using to create the report.

1. Export profit and loss data (Access, Excel).
2. Sort and chart profit and loss data (Excel).
3. Chart merchandise revenue by country data (Word, Excel).
4. Display all results in a PowerPoint presentation (Word, Excel, PowerPoint).
5. Send the presentation to the studio CEO (PowerPoint, Outlook).

Each task requires a different app or combination of apps. Because the Office products are designed to work together seamlessly, you'll easily transfer data between apps as you work to accomplish each task.

Copying Data from Access to Excel

You keep the profit and loss data in an Access database. Your first step is to use that database to generate a profit and loss report for later use in other programs.

DEVELOP YOUR SKILLS: I1-D1

In this exercise, you will use Access to generate a report that you can export to Excel and other programs.

1. Start Access and open **I1-D1-ProfitLossData** from your **Integration Chapter 1** folder. If necessary, click **Enable Content** in the yellow Security Warning bar.
2. Under the All Access Objects panel on the left, double-click the **2021 Q4 Project Profit Loss Data** table.

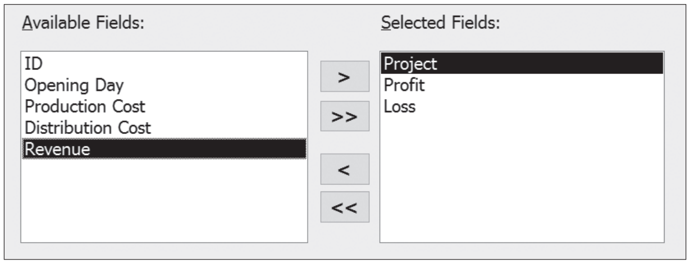
   In this table, you'll see the forty-seven film projects the studio has completed during Quarter 4 of 2021, the production and distribution costs, the revenue, and the profit and loss data for each project. Access makes it easy to export this data to other Office apps, such as Excel.

Create a Profit and Loss Report

3. Choose **Create→Reports→Report Wizard** to begin a report using the data in the table.

The Report Wizard dialog box appears.

4. In the Available Fields box, double-click **Project**, **Profit**, and **Loss** to move them into the Selected Fields box.



5. Click **Next**.

The grouping screen appears.

6. You will group the information in Excel, so leave the grouping as is and click **Next**.

7. You will sort the information in Excel, so leave the sorting as is and click **Next**.

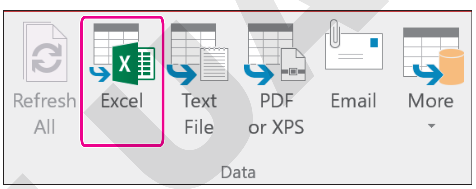
The Wizard recognizes your criteria and automatically suggests the tabular layout option for your report.

8. Click **Next** to accept the tabular report layout.

9. In the final Wizard screen, remove the default text and type `Profit/Loss Data for 2021 Q4 Report` as the report title, leave selected the option labeled *Preview the Report*, and click **Finish**.

Organizing the data into an Access report, as you've done here, will make sorting and charting the data in Excel easier.

10. Choose **Print Preview→Data→Excel** to begin the export process to Excel.



You have several options for exporting the report, including creating a PDF file or starting an email.

11. In the Export window, browse to your student data files folder. Type `I1-D1-ProfitLossSpreadsheet` in the File Name box and click **Save**.

12. Check the **Open the Destination File After the Export Operation Is Complete** box and click **OK**.

Excel will automatically open.

13. Return to Access. Close any open dialog boxes and click **Save**.

There are other ways to share Access data across Office apps. For example, you can run an Access query directly in Excel using the New Query→From Database→From Microsoft Access Database button under the Data tab in Excel. You can also run queries from multiple other sources using this tool.

14. Close Access and switch to Excel.

Sorting and Charting Data in Excel

Now that you've placed the Access data into Excel, you'll use it to generate the charts you'll need for your quarterly report.

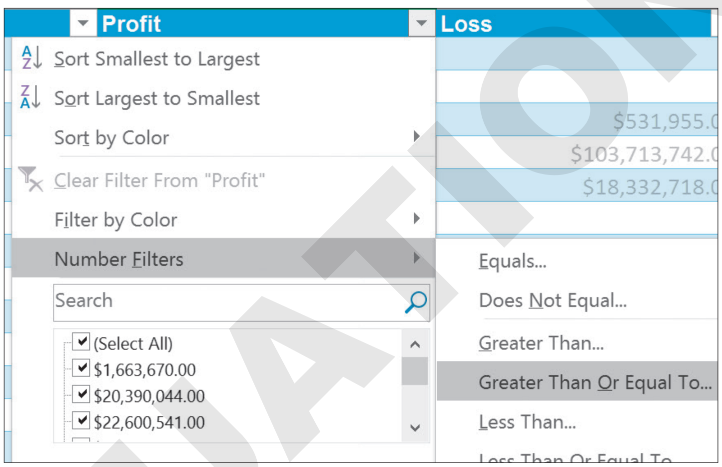
DEVELOP YOUR SKILLS: I1-D2

In this exercise, you will first convert the data into an Excel table. This will make the sorting and filtering process easier. Then you'll sort, filter, and chart the information.

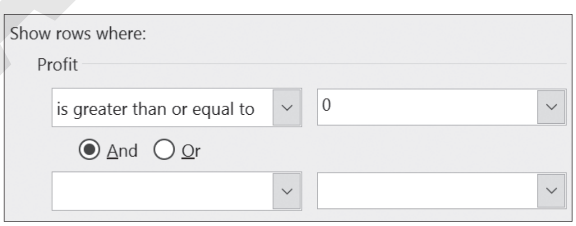
1. Save your file as: `I1-D2-ProfitLossSpreadsheet`
2. Choose **Insert→Tables→Table**.

   In the Create Table dialog box that appears, Excel automatically detects the borders of your table.
3. Leave **My Table Has Headers** checked and click **OK**.

   Excel converts the range into a table in which you can easily sort and filter the information before creating charts.
4. In **cell B1**, click the **Profit menu** button ▾ to show the sorting and filtering options for the Profit column and then choose **Number Filters→Greater Than Or Equal To**.



   For now, you want to see only the projects that made a profit. The easiest way to do this is to filter out any projects with no data in the profit cells. Therefore, you'll filter the table to show only projects with the profit cells greater than zero.
5. In the Custom AutoFilter dialog box, enter **0** in the box next to *Is greater than or equal to* and click **OK**.



   Notice that the Profit menu button is now a filter button. Excel will filter out any projects with 0 in the profit box or, in other words, any cells without profit data.

6. To sort the newly filtered data, click the **Profit** button (in cell B1) and choose **Sort Smallest to Largest**.

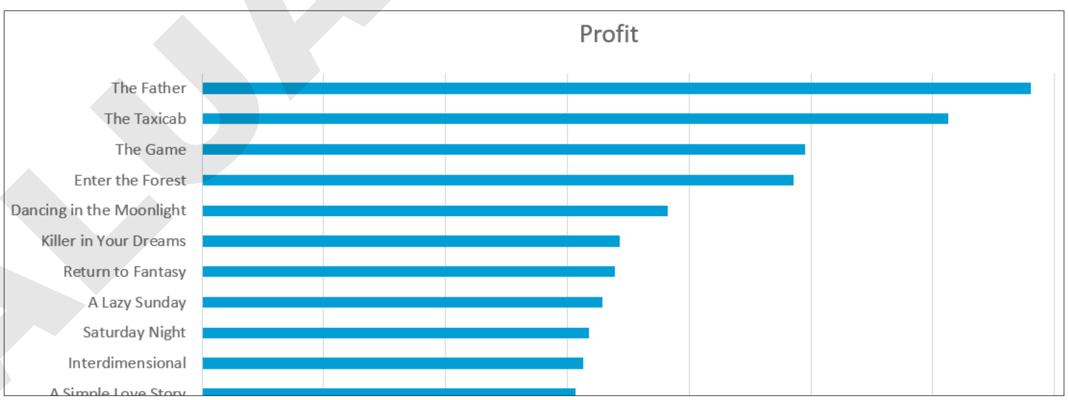
   Excel sorts the filtered information.

	A	B	C
1	Project	Profit	Loss
2	The Queen and the Peasant	$1,663,670.00	
3	Dancing with a Prince	$20,390,044.00	
7	Don't Tell Mom	$22,600,541.00	
9	Band Camp	$28,068,448.00	
12	Team Spirit	$33,650,397.00	
13	The Surprise	$34,734,121.00	
14	Inglewood	$35,060,487.00	
15	The Family of Families	$36,258,818.00	
16	The Fight	$38,777,211.00	
17	The Fantastic French Pheasant	$38,997,875.00	
18	Dwarves and Orcs	$39,321,367.00	
21	The Chance of a Lifetime	$40,339,804.00	
22	Crazy for Her	$47,487,363.00	
23	Wrinkles	$49,683,250.00	
25	The Roof is Frozen	$55,411,445.00	

Chart the Information

Now that you've sorted and filtered the information you need, you'll create a chart for easy visual reference.

7. Select the **range A1:B47**.
8. Choose **Insert→Charts→Recommended Charts**.
9. Click **OK** to accept the recommended Clustered Bar chart.
10. Once the chart has been inserted, choose **Chart Tools→Design→Location→Move Chart**.
11. In the Move Chart dialog box, select **New Sheet** to move the chart to a new sheet, leave the default name of *Chart1*, and click **OK**.



12. **Save** the file and leave it open. If a Compatibility Checker dialog box appears, click **Continue**.

INTEGRATION

Copying Data from Word to Excel

Your assistant keeps track of which movies get the most revenue in merchandising, how merchandising does in certain countries, and how much of the merchandising revenue is the result of direct sales to theaters. For each quarterly report, he emails you the information in a Word document.

DEVELOP YOUR SKILLS: I1-D3

In this exercise, you will import the data your assistant has emailed to you into Excel for easy sorting and charting. You will use delimiters to convert the data from a word-processing format to a spreadsheet format. Finally, you'll chart the information.

1. Start Word and open **I1-D3-CountryRevenue** from your file storage location.

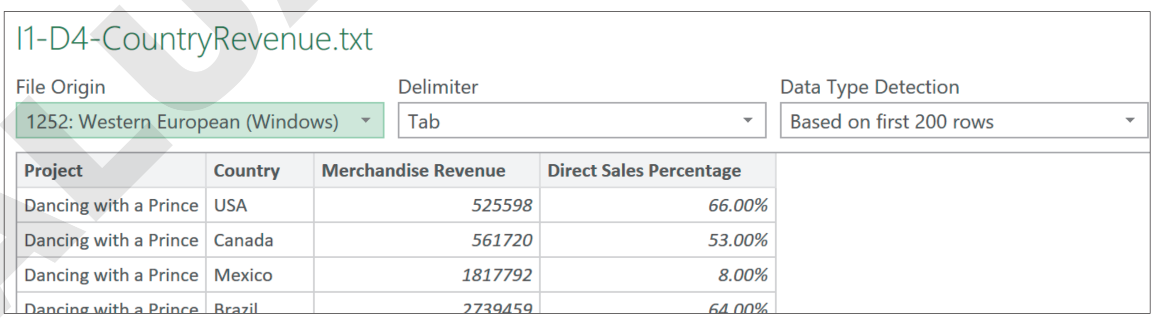
   The document is divided into columns and rows using Tab *and* Enter*. To see these formatting marks more clearly, choose Home→Paragraph→Show/Hide* ¶*. This type of consistent formatting is essential to making delimiters work.*

   To import the data into Excel, the document must first be saved as a plain text file.

2. Choose **File→Save As→Browse** and, if necessary, browse to your file storage location.
3. From the Save as Type drop-down menu, choose **Plain Text** and click **Save**.
4. In the File Conversion dialog box, leave all default settings as they are and click **OK**.
5. Leave Word open and switch to Excel.

Import the Data into Excel

6. In Excel, click the **New Sheet** ⊕ button.
7. Select **cell A1** if it is not already selected.
8. Choose **Data→Get & Transform Data→From Text/CSV**.
9. Import the plain text version of **I1-D3-CountryRevenue** from your file storage location.
10. In the dialog box that appears, leave all default settings as they are and click **Load**.



Delimiters use consistent characters to separate data into Excel columns. They can work with various separators, including spaces, commas, and, in this case, tabs. Experiment by selecting options besides Tab in the Delimiter drop-down menu and notice that the preview at the bottom of the window changes with your selection. Before moving on, reselect Tab.

Excel imports and separates the data according to the delimiters specified. When doing this, Excel automatically creates a new sheet, which you'll now rename.

11. Double-click **Sheet2**, rename it `Merchandise data by country`, and press [Enter]. If a Queries & Connections panel appears, close it.

Note! *The number of your newly created sheet may vary.*

12. Save the file as `I1-D3-CountryRevenue` and leave it open. If a Compatibility Checker dialog box appears, click **Continue**.

Chart the Data

Now that you've imported the data, you'll need to organize it to see only totals for each project and chart the data for the quarterly report.

13. Select the **range C2:C612**.

Rather than selecting this long range by clicking and dragging, select the first cell, C2, and then press [Shift]+[Ctrl]+[↓]. *Normally, the down arrow* [↓] *simply moves your selection one cell down, but, when combined with* [Ctrl], *it moves your selection to the bottom of the range. Adding* [Shift] *selects the cells as well.*

14. Apply the Accounting format to the selected range by choosing **Home→Number→Accounting Number Format** [$].

15. Click the **Decrease Decimal** button twice to remove decimal places.

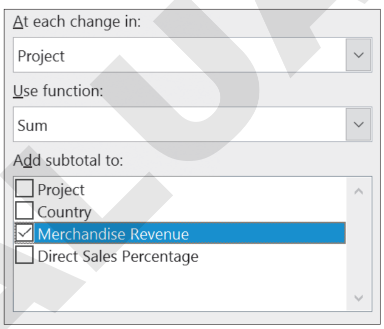
16. Click anywhere in the table to select a single cell and choose **Table Tools→Design→Tools→Convert to Range**. Click **OK** in the warning box.

Converting the table to a range allows you to create an outline of the material.

17. Press [Ctrl]+[A] to select the entire range of data and choose **Data→Outline→Subtotal**.

18. In the Subtotal dialog box that appears, uncheck **Direct Sales Percentage**, check **Merchandise Revenue**, and click **OK**.

The settings in the Subtotal dialog box specify where you want the groupings to occur, as well as which function and which column you want to use. In this case, you're grouping by project, using the SUM function and merchandise revenue numbers.



19. Click the **Subtotal** [2] button at the top-left corner of the spreadsheet to collapse the information to the second level, or the totals in this case.

20. Right-click the **column B** header [B] and select **Hide** from the menu.

With column B hidden, columns A and C—the project names and merchandise revenue totals—are next to each other. This will make charting the information easy.

21. Select **cell C1** and then choose **Home→Editing→Sort & Filter→Sort Z to A** to sort the information from highest to lowest revenue.

22. Select the **range A1:C659** and choose **Insert→Charts→Insert Pie or Doughnut Chart**→**Pie** (first option, first row).

23. Choose **Design→Location→Move Chart**.

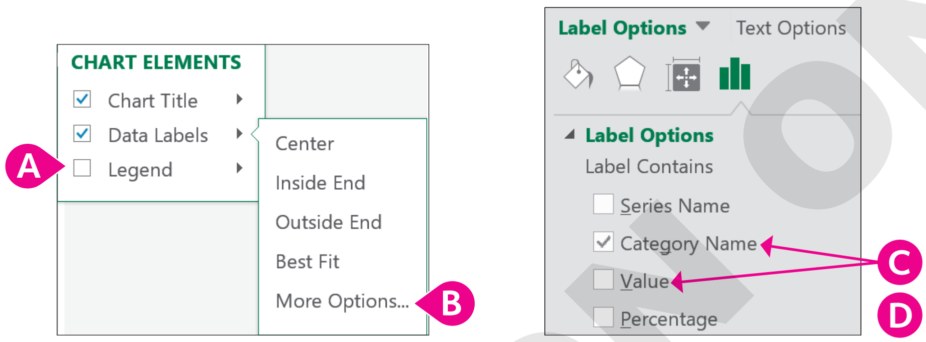
24. In the Move Chart dialog box, select **New Sheet** to move the chart to a new sheet, leave the default name of *Chart2*, and click **OK**.

The data is difficult to understand in this chart. Instead of using the Legend, we'll use Data Labels to show the data more clearly.

25. Click the **Chart Elements** + button at the top right of the chart.

Tip! *You may have to hover your mouse into the chart for the Chart Elements button to appear. The chart must also be selected.*

26. Follow these steps to format the chart elements:

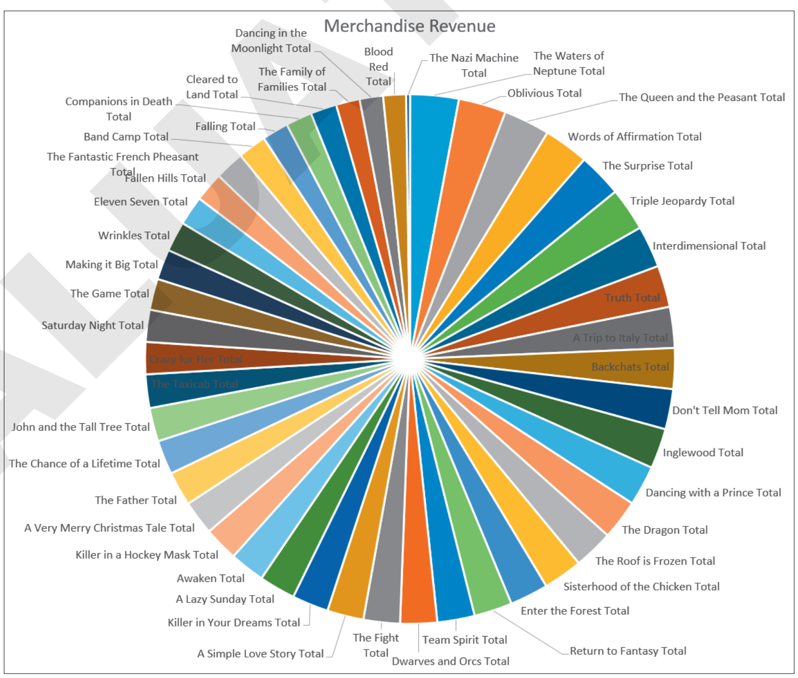


Ⓐ Uncheck **Legend**.

Ⓑ Choose **Data Labels menu button ▾→More Options**.

Ⓒ In the Format Data Labels panel under Label Options, check **Category Name** and uncheck **Value**.

Ⓓ Close the Format Data Labels panel.



Your final pie chart showing Merchandise Revenue should look similar to the provided image, but there may be slight differences depending on your screen resolution and other factors.

27. Save the file and leave it open. If a Compatibility Checker dialog box appears, click **Continue**.

Creating the PowerPoint Presentation

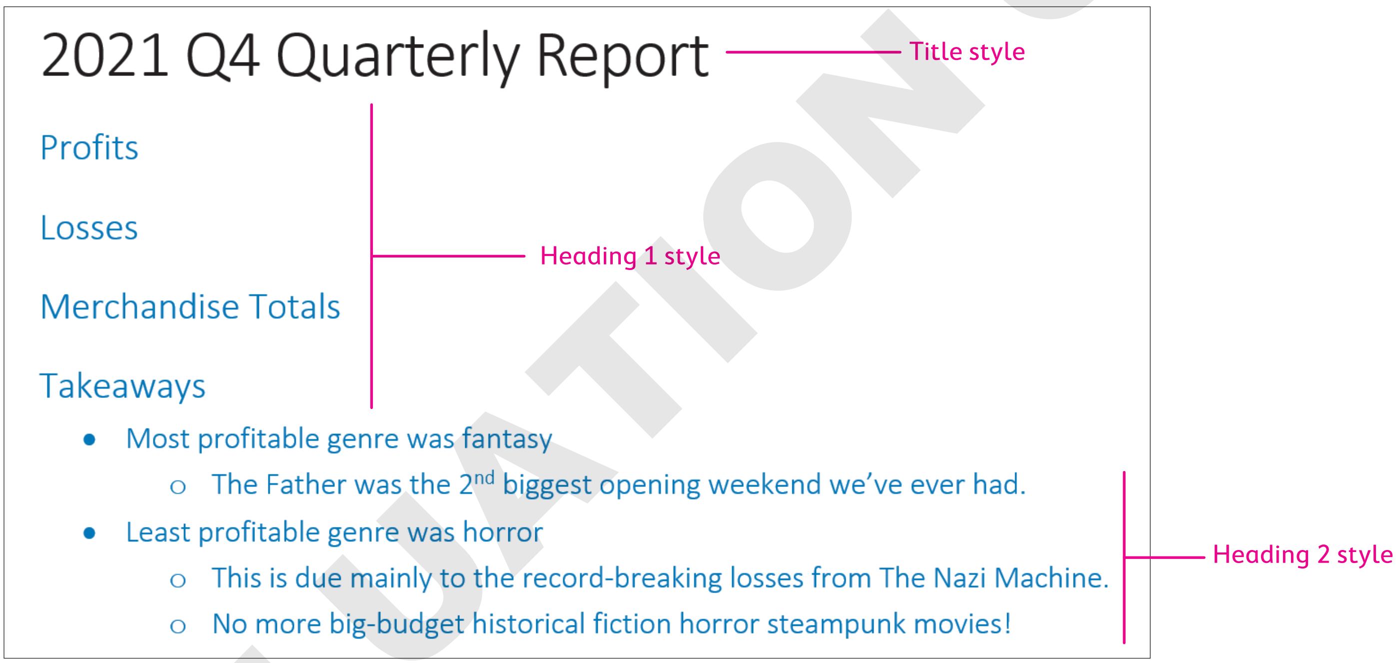
Now that you've created all the charts you need, you'll create a PowerPoint presentation and combine the information you've gathered into a final report.

DEVELOP YOUR SKILLS: I1-D4

In this exercise, you'll use Word to create an outline for your presentation and then you'll import the outline directly into PowerPoint. Finally, you'll copy all the charts you need from Excel into your final quarterly report presentation.

Tip! *For PowerPoint to properly import your outline, you must use the Word styles exactly as shown. To increase the indentation of a bulleted line, place the insertion point before the first word in the line and press* Tab.

1. Switch to Word, open a new **Blank Document**, and type this outline as shown and using the styles listed.


2021 Q4 Quarterly Report

Profits

Losses

Merchandise Totals

Takeaways

- Most profitable genre was fantasy
  - The Father was the 2nd biggest opening weekend we've ever had.
- Least profitable genre was horror
  - This is due mainly to the record-breaking losses from The Nazi Machine.
  - No more big-budget historical fiction horror steampunk movies!

Tip! *When you press* Enter *at the end of a line, the style resets to Normal. This can be frustrating when you're creating the bulleted list with the Heading 2 style. To avoid this, you can type the entire outline in Normal style first and then go back and apply the styles.*

2. Save the file to your file storage location as `I1-D4-PresentationOutline` and then close Word.

Import the Outline into PowerPoint

3. Open PowerPoint and choose the **Blank Presentation** template.
4. In the slide list panel to the left, right-click the **slide 1** thumbnail and choose **Delete Slide**.

   Normally, you'd use this first slide to get started. However, your outline includes a title slide, rendering this title slide unnecessary.

5. To import the outline, choose **Home→Slides→New Slide menu button ▾→Slides from Outline**.
6. Browse to your file storage location and insert your saved Word document **I1-D4-PresentationOutline**.

   PowerPoint uses the styles in the outline document to organize the presentation. Each Heading 1 style creates a new slide. Notice that slide 5 also includes the bulleted list made with Heading 2.
7. On slide 1, click in the **Click to Add Text** box and enter your name.
8. Select slides 2, 3, and 4 by clicking on **slide 2**, holding Shift, and selecting **slide 4**.
9. Choose **Home→Slides→Layout menu button ▾→Title and Content**.

   By default, slides imported from a Word outline have the Title and Text layout. Because you're going to be importing images of your graphs, you'll need the ability to add pictures rather than text and so are switching to the Title and Content layout.
10. Select **slide 5**, select all text in **bullets 2** and **4–5** (press Ctrl while clicking and dragging through the text), and then choose **Home→Paragraph→Increase List Level** to indent those bullets.

- Most profitable genre was fantasy
  - The Father was the 2nd biggest opening weekend we've ever had.
- Least profitable genre was horror
  - This is due mainly to the record-breaking losses from The Nazi Machine.
  - No more big-budget historical fiction horror steampunk movies!

Import Charts into PowerPoint

11. Switch to Excel, select the **Chart1** sheet, and then select the **bar chart**.

    Click anywhere inside the bar chart to select it.
12. Choose **Home→Clipboard→Copy**.
13. Switch to PowerPoint, select **slide 2**, and then select the content box as an object.

    In PowerPoint, you can select an item as an object or as a text tool. In this case, we want to select the content box as an object by clicking anywhere along its outside edge. When selected, the content box has a solid edge, as opposed to a dashed line that shows when the item has been selected as a text tool.
14. Choose **Home→Clipboard→Paste menu button ▾→Use Destination Theme & Embed Workbook** (first option) to paste the chart in place of the content box.

    Be sure to use the Paste option to embed the chart so it will not change even if the source information changes. The default paste will change to reflect any changes made in the source Excel charts.

Tip! *You can use this same method to copy charts from Excel to Word or other Office apps.*

15. Switch to Excel and select the **Profit Loss Data for 2021 Q4...** sheet.

    You'll now change the data in the table to show only losses and create a Losses chart.

16. Click the **Filtered and Sorted** button in **cell B1** and choose **Clear Filter from "Profit"** from the menu.

    With the filter cleared, Excel will once again show all results, both profits and losses.

17. In **cell C1**, click the **Sort/Filter menu** button ▾ to show the sorting and filtering options for the Loss column and choose **Number Filters→Greater Than Or Equal To**.

18. In the Custom AutoFilter dialog box, enter **0** in the box next to *is greater than or equal to* and click **OK**.

    Just as before with profit data, Excel filters out any projects with 0 in the Loss box, or, in other words, any cells without loss data. Also, just as before, the menu button has changed to a filter button.

19. Once again in **cell C1** click the changed **Loss** button and choose **Sort Largest to Smallest**.

20. Right-click the **column B** B header and select **Hide** from the menu.

21. Select the **range A1:C48** and choose **Insert→Charts→Recommended Charts**.

22. Click **OK** to accept the recommended Clustered Bar chart.

23. Choose **Design→Location→Move Chart** and move the chart to its own sheet. The name assigned to your sheet may vary.

24. Select the chart and choose **Home→Clipboard→Copy**.

25. Switch to PowerPoint, select **slide 3**, and then select the **content box** as an object.

26. Choose **Home→Clipboard→Paste menu button ▾→Use Destination Theme & Embed Workbook**.

27. Switch to Excel and select the **Chart2** sheet.

28. Select the **chart** and choose **Home→Clipboard→Copy**.

29. Switch to PowerPoint, select **slide 4**, and then select the **content box** as an object.

30. Choose **Home→Clipboard→Paste menu button ▾→Use Destination Theme & Embed Workbook**.

    If desired, use the skills learned in the PowerPoint chapter to add animations and transitions to the PowerPoint presentation.

31. Save the presentation to your file storage location as: `I1-D4-2021Q4Report`

32. Close all applications. Save any unsaved files as you close them. Click **OK** on any compatibility boxes that appear.

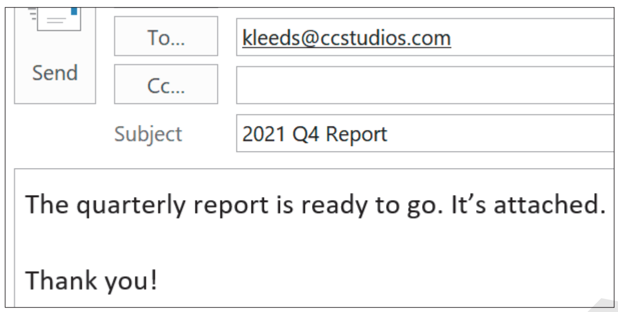
Sending the Presentation with Outlook

You've completed your 2021 Q4 quarterly report and are ready to send it to the studio CEO.

DEVELOP YOUR SKILLS: I1-D5

In this final exercise, you'll use Outlook to send your report to the CEO.

1. Open Outlook.
2. Choose **Home→New→New Email** and fill out the fields as shown:



3. Choose **Message→Include→Attach File menu button ▾→Browse This PC**.
4. Navigate to your file storage location and insert **I1-D4-2021Q4Report**.

   The Recent Items list under the Attach File menu displays all recent files opened in various programs. If your desired file is in the Recent Items list, simply select it to attach it.

   Outlook attaches the file to the email message. It shows just under the Subject box.
5. Click **Send** and then close Outlook.

Glossary

Access Database software that helps you quickly retrieve data; allows you to create and enter data into a table and then use forms, reports, and queries to display the desired results

adjacent Arrangement of cells, objects, or files next to each other; may be selected as a group by using Shift; also known as *contiguous*

alignment Horizontal placement of text relative to the left and right margins of a cell or a page, where text is left-, right-, or center-aligned; or vertical placement of text relative to the top and bottom margins of a cell or page, where text is top-, middle-, or bottom-aligned

animations Special motion effects applied to individual objects on a slide, such as clip art or text

arguments The information or values, such as numbers, text, or cell references, used by a function in Excel to solve a formula

AutoComplete A feature that offers to complete the typing for you when it recognizes certain words or phrases

AutoCorrect Predefined text used for automatically correcting common spelling and capitalization errors; can be customized with user-defined entries

AutoFill A feature that extends a series, copies data, or copies a formula into adjacent cells

block style Letter style that aligns all parts of a letter with the left margin

captions Text added to a figure to describe or explain the figure; text formatted as captions can be used to create a table of figures

cell A box formed by the intersection of a row and column in a worksheet or table, in which information is entered and displayed

cell references Sets of coordinates that indicate the location of cells on a worksheet; for example, the cell reference D2 indicates a cell that appears at the intersection of column D and row 2

character spacing The horizontal space between characters

character styles Styles used to format a single word or selected group of words with text formatting such as font, bold, font size, etc.; no paragraph formatting is included

citation(s) Reference to a source used in a document; contains information to locate the source

clip art Predrawn artwork that is added to computer documents

Clipboard A location within Microsoft Office that contains thumbnails of what you have recently cut or copied from your Microsoft Office file(s) during your Windows session; used to quickly paste text, pictures, images, or charts into a file

codec Software that compresses/decompresses sound and full-motion video files; you must have the proper codec installed to play a sound or full-motion video

column break Manual break of a newsletter column at a specified location; moves text at the break point to the top of the next column

columns Vertical arrangement of cells in a table

Comment Electronic note attached to a document

conditional formatting Formatting applied to cell contents only when user-specified criteria are met

contextual tab(s) Hidden Ribbon tabs that only appear when certain types of objects, such as pictures or tables, are selected

controls Objects placed in forms or reports that display data, text, checkboxes, lines, images, or buttons

Copy Creates a duplicate of the original selection, which remains in the source location, and places a copy of the selection on the Office Clipboard

cropping Cutting off parts of a picture to make certain other elements stand out or to remove unwanted elements

Cut Removes the original selection from the source location and places the selection on the Office Clipboard

data Information such as names, numbers, dates, descriptions, etc., organized for reference or analysis

data source In Mail Merge, the variable data that merges with the main document; controlled by merge fields in the main document

data validation Feature used to limit the type of data and values allowed to be entered in a cell and to provide the user with messages to guide them when entering data

database A collection of data related to a particular subject or purpose, organized by records and fields; for example, an employee database contains information for each employee, such as their name, employee ID, and contact information

Datasheet View Displays actual data values

default Setting or name a computer program uses until you specify otherwise

demote To increase text indentation so it appears farther away from the left margin and, if numbered or bulleted, reduces the numbering or bulleting level to the next lower level

description Optional field property in Design View to help identify special information about a field

Design View Where form, query, and report layout are defined; shows field names and labels, as well as other objects that can be displayed

dragging (drag) Clicking and holding down the left mouse button while moving the mouse pointer; used for many tasks, including selecting, moving, and resizing text, objects, cells, columns, or rows

embedded A file, such as an Excel spreadsheet or another PowerPoint presentation, that is absorbed into the current presentation; changes to an embedded file have no effect on the original object

endnotes Notes that appear at the end of the document body in which the reference is made; numbered sequentially throughout a document

Excel Worksheet software, arranged with rows and columns, used to create calculations and to make what-if analyses; perfect for preparing a budget or income statement or determining the amount of interest paid on a loan

field Group or category of specific information or data, such as last names or phone numbers; in an Access table, each field is displayed in a column

file format Type of method used for storing information in a file; each application normally has a special file format it uses by default

filtering (filter) Process used to display only the rows of data that meet the conditions specified

footer Text that usually, but not always, is located toward the bottom of a document, slide, or handout and that repeats on all (desired) pages, slides, or handouts within a document or presentation

footnotes Notes that appear at the bottom of the page on which the reference is made; footnote numbers can start with 1 on each page or can be numbered sequentially throughout a document or individually

foreign (or secondary) key Field in a secondary table that links to the primary key field in the main table, which contains the detailed information for an item

form Database screen used to enter, edit, and view data for an individual record in a layout that is more convenient and attractive than a table datasheet layout

Form Footer Bottom section of a form that appears on the last page of a page form; seldom used

Form Header Top section of a form that contains constant information, such as a title, logo, decorative line, or color scheme

Format Painter Applies the character and paragraph formatting from the source selection to any characters or text selected

formatting marks Special characters such as spaces, tabs, and paragraph symbols made visible when the Show/Hide button is turned on

formula A cell entry that uses a sequence of values, cell references, names, functions, or operators to perform a mathematical calculation and produce a new value; always begins with an equal sign (=)

Formula Bar A bar above the Excel worksheet that can be used to enter or edit values or formulas in cells; displays the constant value or formula stored in the active cell

freeze To set a row or column so it remains visible at the top or left of the screen while scrolling

functions Specific formulas that take an input value or values in the form of arguments, performs an operation, and returns a value or values; functions simplify the creation of formulas and are useful for lengthy or complex calculations

group Collection of controls or records with at least one feature in common; quick forms tie all automatically inserted text boxes and corresponding labels into one group, allowing you to move the entire group but not individual controls; or, if you want to display all vendors with offices in the same state, you could group on the State field

Group Footer displays summary information (such as the total of all transactions for each salesperson)

Group Header Identifies a field (such as EmpID) by which report data is grouped, so a summary (such as a total of each employee's sales) can be displayed for the grouped field

handles Small squares or circles on selected graphics that can be dragged to make the graphic larger or smaller

handout master Controls the format of handouts

handouts Printouts of slides for presentation attendees; can be used for note-taking

header Text that usually, but not always, is located toward the top of a document, slide, or handout and that repeats on all (desired) pages, slides, or handouts within a document or presentation

hyperlink A block of text or a graphic that takes you to another location in a file, to another file, or to a web page when clicked

insert control Appears when the mouse pointer is outside the table, pointing between columns or rows; click the control to insert a new column or row at that location

justify Text alignment where character spacing is automatically adjusted differently for each line in the paragraph so the left and right side of the paragraph form straight lines

Keep Source Formatting Pastes the text and the selection with any formatting (bold, italic, underline) of the selection from the source location to the target location; the selection pasted retains the original formatting from the source location

Keep Text Only Pastes the selection from the source location to the target location; the selection pasted takes on the formatting of the target location

kerning The horizontal space between pairs of characters; *see* character spacing

labels Part of a control that contains a caption identifying the data displayed in a text box or checkbox; e.g., the caption Last Name is a good label for the LastName field

Layout View Combines the editing ability of Design View with the layout look of Form/Report View so you can better visualize and modify the form's appearance; does not allow you to add, change, or delete records

line spacing Vertical space between lines of text

link Objects and formulas can be linked to connect the information from the source to the destination; the source can be on the same sheet, another sheet, or another workbook, and the destination is updated when the source is modified

linked (object) Object created in a source file and inserted in a presentation; object retains a link to the source file; destination file can be updated when source file is modified

Live Preview Feature that allows you to point at formatting commands on the Ribbon to show how the format would appear on selected text and objects without actually applying the format

Mail Merge Feature used to personalize standard letters, envelopes, mailing labels, and other documents by combining a main document with a data source

main document In a Mail Merge, the document that contains the content that remains the same for each recipient; controls the merge with merge fields

manual page break Forced page break created by pressing Ctrl+Enter or choosing Insert→Pages→Page Break

merge fields Placeholders in a Mail Merge main document that instruct Word to insert information from a data source

Merge Formatting Pastes the text and selection with any formatting (bold, italic, underline) of the selection from the source location to the target location and combines it with any formatting already at the target location; the selection pasted has formats from both the source and target locations

merged document Document that results when you complete a merge of the main document and the data source

Microsoft account Account that gives you access to your Microsoft settings, files, contacts, and more, as well as to your computer or other devices; can include Bing, Hotmail, MSN, Office, OneDrive, Outlook, Skype, Stores, or Xbox Live

Microsoft Office 2019 Version of Microsoft Office that you purchase one time, for one device, similar to what you may have done to obtain software in the past; anytime there is a new version of Microsoft Office, you need to purchase it if you desire the most recent version (select Office Home & Student 2019 to install Office on one PC)

MLA style *Modern Language Association Handbook for Writers of Research Papers*; shows how to work with sources in expository writing

multimedia Audio or video that enhance a presentation; also called *rich media*

multiple item form A form resembling a datasheet with data appearing in row and column format

name A word or string of characters created or defined to represent a cell or range of cells, which can then be used for navigation or used as a cell reference in a formula

Name Box The box on the left side of the Formula Bar that identifies the selected cell; can be used for navigating to another cell or creating a new name for the selected cell

Navigation pane Objects panel that lists existing database objects (specifically tables, queries, forms, and reports)

nonadjacent The arrangement of cells, objects, or files not next to each other; may be selected as a group using Ctrl; also known as *noncontiguous*

object Refers to graphical images such as shapes, WordArt, Excel spreadsheets, charts, and pictures; these elements can be shared between documents; in Access, a database structure used to store or reference data

Office 365 Version of Microsoft Office that has a monthly subscription rate for one or more devices that offers automatic updates similar to how you make apps purchases on your smartphone or tablet (select Office 365 Personal for a monthly subscription for one device—PC or Mac, plus one smartphone and one tablet; select Office 365 Home for a monthly subscription for up to five PCs or Macs, plus five smartphones and five tablets)

Office Online Version of Microsoft Office that is free when you are logged in to a Microsoft account; the online apps include Outlook, Word Online, Excel Online, PowerPoint Online, OneNote Online; not all features of Office 365/2019 are available in these apps

OneNote Notetaking software used to organize notes (handwritten or keyed), audio/sound recordings, screen captures, or sketches you have collected or created to share with others

orientation Direction in which the page is turned for viewing and printing, either portrait (short edge on top) or landscape (long edge on top)

Outline panel Located on the left side of the screen; displays the text content of each slide

Outlook Personal information manager software used to create, send, and receive emails, record tasks, maintain one or more calendars, schedule meetings and appointments, manage contacts, and take notes

paragraph In Word, this is created anytime you tap Enter; it can consist of several lines, a single line, or a blank line

paragraph style Style used to format a paragraph or selected group of paragraphs; may include character formatting

Paste Inserts a copy of the most recent item found on the Office Clipboard at the target location, or destination; there are usually at least three paste choices: Keep Source Formatting, Merge Formatting, and Keep Text Only

PowerPoint Presentation software used to create, edit, revise, format, and share slides designed to tell a story, market a product, or explain a concept

primary key Unique ID that cannot be the same for any two records (e.g., a student ID)

promote To reduce text indentation so it appears closer to the left margin and, if numbered or bulleted, to elevate the item to the next higher level of bullet

property Field attributes that control features such as format, field size, font size, weight, and color; available properties depend on the data type

Property Sheet Panel on the right side of a design window used to set values for controls, such as font size, color, alignment, etc., depending on the type of control

Publisher Desktop publishing software used to design and lay out text and images, often for newsletters or brochures

query Object used to select, search, sort, and extract table data based on criteria and conditions; displays results in a row-and-column format

real-time data Data that is updated and shown at the speed at which a computer receives and processes information

record Collection of details (fields) about an individual person, place, or thing, such as an employee record or a product record

record source Field property that connects text boxes in a form, subform, or report to a field in an underlying table or query

referential integrity Relationship protocol that maintains the validity of related data; requires that the data types of related primary and foreign key fields are the same or compatible

Rehearse Timings Feature that automates the advancement of slides during a slide show by defining the number of seconds to stay on each slide; using the Rehearse Timings command creates slide show timings

report Database page that presents processed and summarized data from tables and queries as meaningful information in an easy-to-read format; designed to be printed

Ribbon Band at the top of an application window that contains commands to complete tasks; organized in tabs that relate to a particular type of activity and groups of related commands (some tabs are only shown when needed, such as Chart Tools, Table Tools, or Picture Tools)

ripping Copying sound from an audio CD to your computer

rows Horizontal groups of cells in a table

Scale to Fit (Scale) Process that increases or reduces size to a percentage of its original size; can be applied to an object or to a worksheet for printing

section break Position in a document where one section ends and another begins because page formatting is going to change, such as from single- to multiple-column layout

sections (in Access) The major parts of the form, such as the Form Header, Form Footer, Detail, Page Header, and Page Footer, that are separated by section bars

sections (in PowerPoint) Groups of slides treated as a single object, making it easy to change the order of large blocks of slides

select To drag over the desired text with the mouse pointer or other called highlighting

shapes Tool for drawing graphics in documents

Show/Hide button Feature that displays nonprinting characters such as tabs, spaces, and paragraph symbols onscreen for easy access

Skype Web communication software that utilizes the Internet to share audio, video, text, messages, files, or Desktops via a webcam on both the sending and receiving devices

slide layout Preset layout of placeholder boxes on a slide

slide show timing Automating the advancement of slides during a slide show by defining the number of seconds to stay on each slide; using the Rehearse Timings command creates slide show timings

Slide Show toolbar Contains navigation controls, drawing tools, and options to be used during a slide show presentation; located in the bottom-left corner of a slide during a slide show

slide transitions Animations that occur when navigating from one slide to the next during a slide show

smart tag Context-sensitive option button that appears on menus

SmartArt Predesigned graphic designs added to a document; categories include List, Hierarchy, Pyramid, and so forth

software suite Collection of applications generally produced by the same manufacturer and bundled together for a better price that provides a common user interface throughout each application

sort Process used to arrange data in a specific order, such as alphabetic, numeric, by date, or in ascending or descending order

sorting (sort) Process used to arrange data in a specific order, such as alphabetic, numeric, by date, or in ascending or descending order

source Original location of text that has been cut or copied

split To create two or more table cells from a single table cell

split form Two synchronized views of a table data in Layout/Form View and Datasheet View, shown simultaneously

standard format Slide size with the ratio of 4:3

style Group of formats that allows you to quickly apply multiple formats at once; when a style is modified, all text with the style applied is updated with the modification; also known as Quick Styles

tab Area on the Ribbon that displays an organized collection of commands; some tabs are only shown when needed, such as Chart Tools, Table Tools, or Picture Tools

tab order Order in which Access moves among form fields when you press Tab or Enter

tab stops Preset stops along the horizontal ruler set at every half inch to control and align text; can be customized

table (in Access) File or collection of related records; contains the data used in all other database objects

table (in Excel) A related collection of data about a subject stored in records (rows) and fields (columns) that allow for easier sorting, filtering, formatting, and calculations using structured references

table styles Styles applied to table cells, rows, or columns to ensure formatting consistency

target Destination location for pasted text

template A preformatted document or workbook layout used as the basis for new documents to maintain consistency among documents and save the user time and that usually contains text, paragraph, table, graphical, and other types of formatting; in Excel, can also include formulas

text boxes Controls that display the actual data stored in a field (e.g., Smith might be the data displayed in a LastName text box linked to the LastName field in an Employees table)

theme Preset formatting selections you can apply to a document or presentation; includes colors, graphic elements, and fonts all designed to work well together and quickly achieve the look of a professional design; in PowerPoint, themes include matching backgrounds, placeholder positions, matching color schemes, and text formatting

thumbnails Small images that represent an application, file, etc.

title bar Appears across the top of the application window; contains the name of the application and the name of the current file

toggle Selecting a button once to turn it on and again to turn it off

Track Changes Feature that, when activated, marks each change to a document; the changes can then be reviewed and either accepted or rejected

tracking The horizontal space between a range of characters; *see* character spacing

view Onscreen layout of a document optimized for performing specific tasks or for determining how the document will look in final form

widescreen format Slide size with the ratio of 16:9

wildcards Special characters such as an asterisk (*) used to represent multiple characters or a question mark (?) to represent any single character

Wizard Tool that walks you through the selection and ordering of specific fields from the tables or queries that contain the data you want to place onto a form, query, or report

Word Word-processing software for creating, editing, revising, formatting, and sharing documents, such as letters, reports, essays, and business plans

Word Wrap Automatic moving of text to a new line when it extends beyond the right margin of a paragraph; eliminates the need to tap Enter at the end of lines within a paragraph

WordArt Feature for creating stylized formatting of text; often used for headings

work area Main part of the screen where you design tables, queries, forms, and reports; where you enter data into tables and forms

workbook One or more worksheets saved together as one file

worksheet A collection of information, or blank space to enter new information, divided into columns and rows that form cells

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