



LESSON 2

Using an Access Database

Most databases are designed and set up by professionals who are database experts. As a result, most company employees are simply required to maintain databases—a task that most people are already accustomed to doing. Consider, for example, the address book you use to store addresses of friends and relatives. Each time someone listed in the address book moves or changes phone numbers, you edit the information in your address book.

The same concept is true of electronic databases. Employees come and go, customers relocate to new addresses, phone numbers change, and websites come online. Updating database data to reflect these changes helps maintain the usefulness of the data. In this lesson, you will learn how to adjust the layout of a database table, add data using database input tools, edit data, delete records, and print database data.

LESSON OBJECTIVES

After studying this lesson, you will be able to:

- Add records to a database using both tables and forms
- Change the layout of a table by adjusting column width, hiding columns, and rearranging column layout
- Locate and update records by sorting, filtering, and using Find and Replace
- Preview and print database data
- Save a database as a new file

Case Study: Learning to Use Access

Andrew Johnson has just been hired in the data processing department of Labyrinth Exports. Andrew has little experience working with an Access database, but is a proficient typist and a quick learner. He will be updating the Customers table in the database his first day on the job. As he works, he will add new records to the table, adjust the layout of tables, locate and update records, delete records, and print data.

Before adjusting the layout of the table, some columns are so narrow that numbers are hidden and only a portion of some data displays. In addition, some of the empty columns should be moved.

	Company	First Name	Last Name	E-mail Address	Job Title	Business Phone	Home Phone
1	Company A	Anna	Bedecs		Owner	(123)555-7	
2	Company B	Antonio	Gratacos Solsona		Owner	(123)555-7	
3	Company C	Thomas	Axen		Purchasing Representative	(123)555-7	
4	Company D	Christina	Lee		Purchasing Manager	(123)555-7	
5	Company E	Martin	O'Donnell		Owner	(123)555-7	
6	Company F	Francisco	Pérez-Olaeta		Purchasing Manager	(123)555-7	
7	Company G	Ming-Yang	Xie		Owner	(123)555-7	
8	Company H	Elizabeth	Andersen		Purchasing Representative	(123)555-7	
9	Company I	Sven	Mortensen		Purchasing Manager	(123)555-7	
10	Company J	Roland	Wacker		Purchasing Manager	(123)555-7	
11	Company K	Peter	Krschne		Purchasing Manager	(123)555-7	

After changing the layout, all numbers appear, all data in all columns displays, and the empty E-mail Address column is repositioned.

	ID	Company	First Name	Last Name	Job Title	Business Phone	E-mail Address
1	Company A	Anna	Bedecs	Owner	(123)555-7891		
2	Company B	Antonio	Gratacos Solsona	Owner	(123)555-7892		
3	Company C	Thomas	Axen	Purchasing Representative	(123)555-7893		
4	Company D	Christina	Lee	Purchasing Manager	(123)555-7894		
5	Company E	Martin	O'Donnell	Owner	(123)555-7895		
6	Company F	Francisco	Pérez-Olaeta	Purchasing Manager	(123)555-7883		
7	Company G	Ming-Yang	Xie	Owner	(123)555-7845		
8	Company H	Elizabeth	Andersen	Purchasing Representative	(123)555-7867		
9	Company I	Sven	Mortensen	Purchasing Manager	(123)555-7889		
10	Company J	Roland	Wacker	Purchasing Manager	(123)555-7890		
11	Company K	Peter	Krschne	Purchasing Manager	(123)555-7123		

Andrew adjusts the column widths and positions of columns shown in the top image so that they appear as shown in the bottom image.

Adding Records and Formatting Datasheet Layout

Two tasks frequently associated with databases include adding records to database tables and formatting the layout of the datasheet to display field data. In many cases, these are two primary tasks of data entry personnel.

Adding Records Using a Table

Many of you will already be acquainted with adding rows to Microsoft Word tables and Microsoft Excel worksheets. Each time you enter text or figures into a new row, the table or worksheet grows to accommodate the new text. The same concept is true of database tables.

The Primacy of Tables

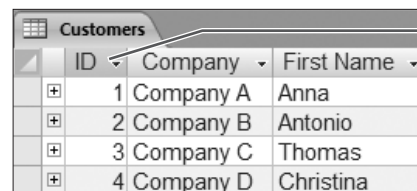
Recall that tables in Access databases hold the raw data. All reports, queries, and forms use table data in different ways. As a result, you must first input—add data to—a table. Access provides two basic input tools for adding data to database tables:

- Typing the data into the datasheet view of the appropriate table.
- Typing data into a form associated with the appropriate table.

NOTE! Access automatically saves each record as you complete it when you tab after entering the data into the last field.

AutoNumbered Fields

Many Access tables contain fields that automatically number records as you add them to a table. As a result, it is unnecessary to type a number in these fields and the numbers are uneditable—the number is assigned to the specific record. In addition, if you delete a record from a table, Access never assigns the number to any new records.



ID	Company	First Name
1	Company A	Anna
2	Company B	Antonio
3	Company C	Thomas
4	Company D	Christina

In this example, the company ID column is AutoNumbered.




QUICK REFERENCE: ADDING A NEW RECORD TO A TABLE


Task

Add a new record to a datasheet

Procedure

- Open the table in the database to which you want to add a new record.
- Click the New Record  button to create a new record.
- Type data into each field in the row, pressing **Tab** to move to the next field.

Add a new record using a form

- Open the form associated with the table in the database to which you want to add a new record.
- Click the New Record  button to create a new record.
- Type data into each field in the form, pressing **Tab** to move to the next field.

Relaunching Access

As you discovered in Lesson 1, Exploring Access 2007, the first time you launch Access, you often have to navigate through several levels of program menus to launch the program. In addition, the first time you open a database, you use the Open command on the File menu to display the Open dialog box and then navigate to the drive and folder containing the database. After you launch Access the first time, the program appears on the Start menu so that it is much easier to launch. The last nine databases, by default, appear on the Open Recent Database list to make them easier to open.

FROM THE KEYBOARD

[Ctrl]+[End] to move to the last field in the last record and then press **[Tab]** to create a new record



Hands-On 2.1 Add a Record to a Database Table

In this exercise, you will launch Access, open a database that you have previously not opened, open a table, and add a record to the table using the datasheet.



1. Launch Access and open the Labyrinth Exports database from the Lesson 02 folder in your file storage location.
2. Enable content in the database, and log in as Steven Thorpe.

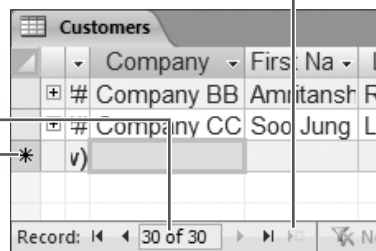


NOTE! There is no particular reason to log in as Steven Thorpe except to ensure that your screens match those shown in this lesson.

3. Close **[X]** the Home form, open the Navigation Pane, and expand the Tables list.
4. Open the Customers table and follow these steps to create a new record:

- A** Click the New Record  button to create a new record.

- B** Ensure that you are creating record 30.



Company	First Name	Last Name
# Company BB	Amitansh	R
# Company CC	Soo Jung	L
*	v)	

- C** Notice that an asterisk (*) appears in the row frame for the new record until you start typing.

5. Type the following data into table columns, pressing **Tab** or **Enter** to move to the next column:

A As you add or edit a record, notice the pencil icon that appears in the row frame.

B Type the data in the columns as shown here.

C Notice, as you start typing the company name, another new record row appears in the table.

D Press the **Tab** key after you fill in this field, and then continue with step 6.

	Company	First Name	Last Name	E-mail Address	Job Title	Business Phone	Fax Number	Add
1	Company DD	Rebecca	Rovarino		Purchasing A	(123) 555-773	(123) 555-7890	
*								

NOTE! The data you type may appear all misaligned and run together. That's okay for now. You will eventually learn how to format the data so that it appears correctly.

6. Complete the record for Company DD by typing your data or made-up data into the remaining field columns, as shown.

	Address	City	State/Province	ZIP/Postal Code	Country/Region	Web Page	Notes	Add
1	Your Street	Your City	Your State	Your ZIP	Your Country	Your Web Page		
*								

NOTE! After you press **Tab** or **Enter** from the Notes column, Access automatically moves to another new record. As long as you leave fields in this record blank, Access will not number the record.

Formatting a Table Datasheet Layout

Several of the columns in the Customers table are so narrow that the data in the columns appears to be cut off. The data in narrow columns is still there—Access displays only the portion of the data that fits within the column width and *truncates* (stores without displaying) the additional data. You can maximize the Access window to provide more space for the table and close the Navigation Pane to provide even more space for objects you have open. These actions simply allow more columns of data to appear onscreen without affecting the width of each column.

Changing the Width of Columns

You can adjust the width of each column in a datasheet to display all data in the column. Access gives you some useful techniques for changing column width.

- **Drag a column border:** Dragging a column border enables you to make the column on the left of the border wider or narrower.
- **Double-click a column heading border:** Double-clicking a border changes the width of the column on the left to fit the longest data entry in the column or the column heading, whichever is wider.

The data in these columns is truncated because the column widths are too narrow.

First Name	Last Name	Job Title	Business Phone
Anna	Bedecs	Owner	(123)555-7891
Antonio	Gratacos Solsona	Owner	(123)555-7892
Thomas	Axen	Purchasing Representative	(123)555-7893
Christina	Lee	Purchasing Manager	(123)555-7894
Martin	O'Donnell	Owner	(123)555-7865
Francisco	Pérez-Olaeta	Purchasing Manager	(123)555-7883

Widening the column widths prevents truncation.

First Name	Last Name	Job Title
Anna	Bedecs	Owner
Antonio	Gratacos Solsona	Owner
Thomas	Axen	Purchasing Representative
Christina	Lee	Purchasing Manager
Martin	O'Donnell	Owner
Francisco	Pérez-Olaeta	Purchasing Manager

Moving and Hiding Data Columns

In addition, there will be times when you want to reposition a column of data in a table layout or hide some columns so that you can view other field columns. Access contains tools that enable you to rearrange columns and hide columns. When you hide columns, Access temporarily removes them from display. The data, however, remains in the table—it is NOT deleted. When you want to view data in hidden columns, you can unhide the column.

Last Name	E-mail Address	Job Title
Bedecs		Owner
Gratacos Solsona		Owner
Axen		Purchasing Representative

Before and after hiding the E-mail Address column.

Last Name	Job Title
Bedecs	Owner
Gratacos Solsona	Owner
Axen	Purchasing Representative
Lee	Purchasing Manager

Saving a Table Layout

Changing the layout of a table datasheet has no real effect on table data or table structure; however, when you make changes to a table datasheet, Access recognizes the differences between the layout and the structure of the table and prompts you to save the changes to the layout when you close the table. If you abandon the changes you make to the layout, the next time you open the table datasheet, the column widths will return to their original size, the hidden columns will show, and the repositioned columns will occupy their original place in the layout. If you save the changes, the next time you open the table datasheet, Access recalls the layout and displays the datasheet as you formatted it.

FROM THE KEYBOARD

Ctrl+S to save changes to the table layout

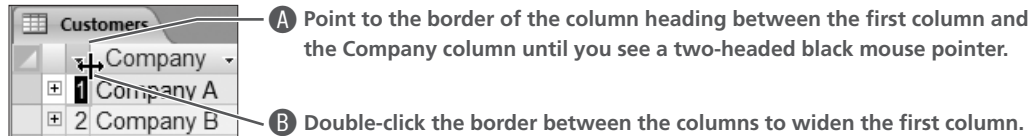
TIP! *The shape and color of the mouse pointer is important when you are adjusting column width and repositioning columns in a table or datasheet layout. Be sure to pay attention to the mouse pointer shape as you work.*



Hands-On 2.2 Format a Table Datasheet Layout

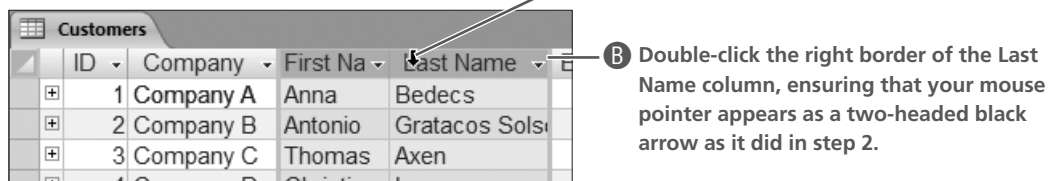
In this exercise, you will adjust the column widths of table datasheet columns, hide columns, and reposition columns.

1. Open the Customers table in the Labyrinth Exports database if it is closed.
2. Follow these steps to change the width of the first table column:



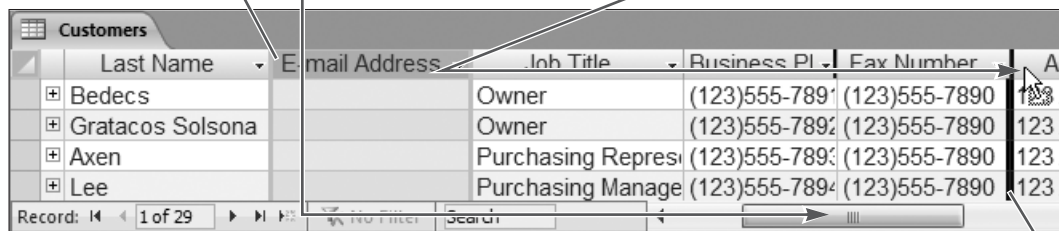
3. Follow these steps to change the width of two columns at the same time:

- A** Point to the column heading First Name, ensuring that you see a black down-pointing arrow, click and drag the pointer to the right toward Last Name to select both columns.



4. Follow these steps to reposition the empty E-mail Address column:

- A** Click the E-mail Address column heading to select the column.
- B** Scroll to the right until the Business Phone and Fax Number columns appear onscreen.
- C** Point to the selected E-mail Address column heading, ensuring that the mouse pointer appears as a white arrow.

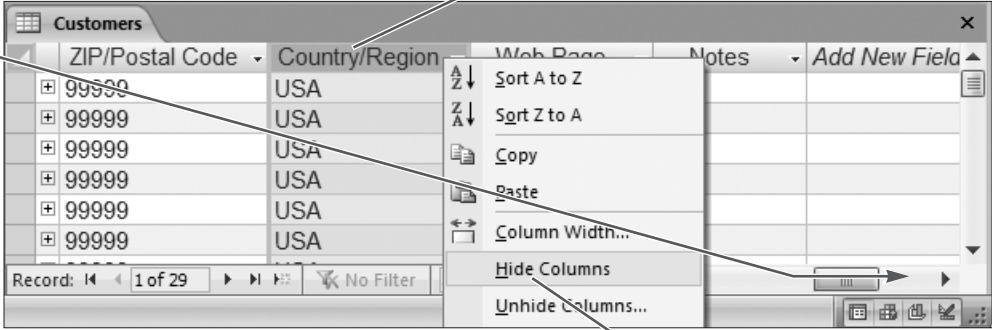


- D** Drag the E-mail column heading to a position to the right of the Fax Number column. As you drag the column, a black vertical bar indicates the active position of the column. If you drop the column before it is properly placed, point to the column heading and drag it to the proper position.

5. Follow these steps to hide the Country/Region column:

A Scroll to the right until the Country/Region column appears onscreen.

B Right-click the Country/Region column heading to display the shortcut menu.



C Choose Hide Columns to hide the column.

ZIP/Postal Code	Country/Region	Web Page	Notes	Add New Field
99999	USA			
99999	USA			
99999	USA			
99999	USA			
99999	USA			
99999	USA			

6. Click the Save  button to save changes to the table layout.

7. Close  the table.

Adding Records Using a Form

As you know, forms are objects that display data onscreen one record at a time and are used to input data into a database. Because of the field layout on most forms, all data contained in a record is normally visible, so it is easier to review all data associated with a record than it is in table datasheet layout. Most forms are also formatted to be more aesthetically pleasing than tables.

Saving the New Record

After you type data into the last field on a form and press the **Tab** key, Access automatically saves the record into the table.



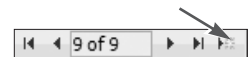
Hands-On 2.3 Add a Record to a Database Using a Form

In this exercise, you will use a form to add a new employee to the Employees table.

1. Expand the Forms list in the Navigation Pane and double-click the Employee Details form to open it.

2. Click the New Record  navigation button to create a new blank record.

Access displays a new blank form.



3. Follow these steps to enter data for a new employee using the form:

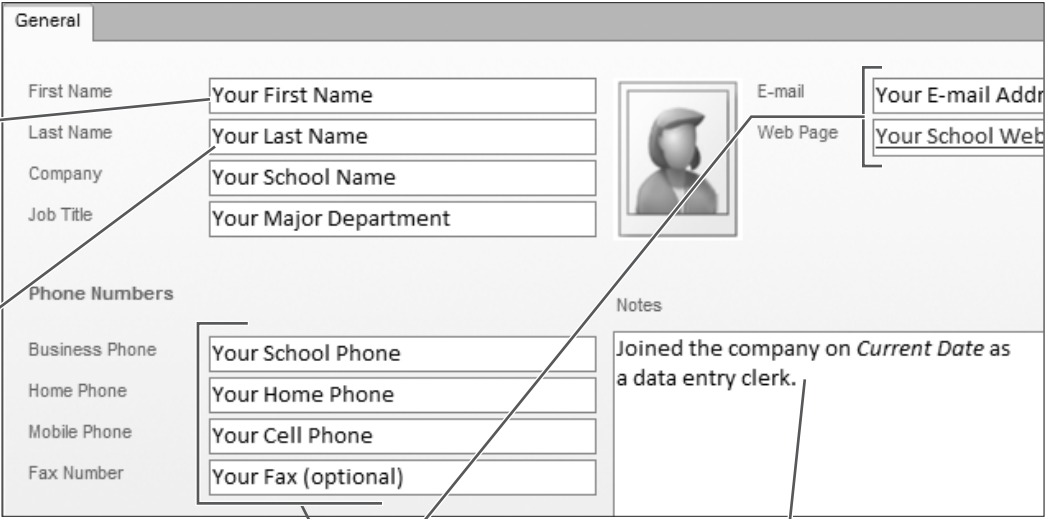
A Click the First Name text box, and then type your first name.

B Press **Tab** to move to the Last Name field, and then enter your last name.

C Continue using the **Tab** key to move from field to field and enter your personal (or fictional) data for the instruction text pictured. Entering fictional data keeps your personal data private.

D Enter more information on the right side of the form.

E Press **Tab** one more time after you enter data in the Notes field.



The screenshot shows a form with the following fields and sections:

- General** (Section Header)
- First Name: Your First Name
- Last Name: Your Last Name
- Company: Your School Name
- Job Title: Your Major Department
- Phone Numbers:
 - Business Phone: Your School Phone
 - Home Phone: Your Home Phone
 - Mobile Phone: Your Cell Phone
 - Fax Number: Your Fax (optional)
- E-mail: Your E-mail Address
- Web Page: Your School Web Page
- Notes: Joined the company on *Current Date* as a data entry clerk.

4. Close **X** the form, open the Employees table to ensure that data for the new record appears, and then close the table.

Retrieving Data

The primary purpose of any database is to be able to locate and retrieve data quickly and efficiently. Whether you're processing an order, announcing statistics, or updating records, being able to find the data is important. Access provides three main tools and features for helping locate and retrieve data:

- Sorting features
- Filtering tools
- Find and Replace

Sorting Records

Access automatically sorts records according to the field set up when a table is created and fields are set up. Many times tables are sorted by record number so that as you enter records, Access assigns a number to the record and the records sort in the order in which you enter them. The database sort feature enables you to rearrange table records on the basis of data found in other table columns. Two main sort orders are available:

- **Sort Ascending:** Arranges data in alphabetical order from A to Z, in numeric order from lowest to highest, or in chronological order from first to last.
- **Sort Descending:** Arranges data in reverse alphabetical order from Z to A, in numeric order from highest to lowest, or in reverse chronological order from last to first.

Sorting Records Using Tables and Forms

Regardless of whether you are working with a table or a form, the primary procedures for sorting records are the same.



Hands-On 2.4 Sort Records in a Table

In this exercise, you will sort records in both tables and forms and clear all sorts set.

1. Open the Employees table and follow these steps to sort records by last name:

A Position the cursor on any record in the Last Name field.

ID	Company	First Name	Last Name	Job Title	Business Phone
1	Labyrinth Exports	Nancy	Freehafer	Sales Representative	(123)555-1212
2	Labyrinth Exports	Andrew	Cencini	Vice President, Sales	(123)555-1212
3	Labyrinth Exports	Jan	Kotas	Sales Representative	(123)555-1212
4	Labyrinth Exports	Mariya	Sergienko	Sales Representative	(123)555-1212
5	Labyrinth Exports	Steven	Thorpe	Sales Manager	(123)555-1212
6	Labyrinth Exports	Michael	Neipper	Sales Representative	(123)555-1212
7	Labyrinth Exports	Robert	Zare	Sales Representative	(123)555-1212
8	Labyrinth Exports	Laura	Giussani	Sales Coordinator	(123)555-1212

B Choose Home→Sort & Filter→Ascending on the Ribbon.

2. Follow these steps to set a descending sort order and clear all sorts:

A Click any record in the Job Title column.

ID	Company	First Name	Last Name	Job Title	Business Phone
2	Labyrinth Exports	Andrew	Cencini	Vice President, Sales	(123)555-1212
1	Labyrinth Exports	Nancy	Freehafer	Sales Representative	(123)555-1212
8	Labyrinth Exports	Laura	Giussani	Sales Coordinator	(123)555-1212
9	Labyrinth Exports	Anne	Hellung-Larse	Sales Representative	(123)555-1212
3	Labyrinth Exports	Jan	Kotas	Sales Representative	(123)555-1212
6	Labyrinth Exports	Michael	Neipper	Sales Representative	(123)555-1212

B Choose Home→Sort & Filter→Descending on the Ribbon to sort records by job title. Notice, too, that the last names arrange alphabetically for each job title because you already sorted the table on that column.

C Click the Clear All Sorts button. Notice that records are rearranged in ID order—the default sort order.

3. Close the table.

Access displays a prompt asking if you wish to save changes to the table. Because you have changed the sort order a couple of times and then cleared the sorts, Access recognizes that you have changed the layout of the table while it was open. As a result, it prompts you to save changes. If you were to click Yes, the changes would become part of the table design. Instead, choose No and discard the changes.

4. Choose No in response to the prompt to save the changes.
5. Open the Customer Details form and follow these steps to sort the customers:

The screenshot shows the Microsoft Access interface with the 'Customer Details' form open for 'Elizabeth Andersen'. The form has tabs for 'General' and 'Orders'. The 'Company' field is set to 'Company H'. The 'Primary Contact' section includes fields for 'First Name' (Elizabeth), 'Last Name' (Andersen), and 'Job Title' (Purchasing Representative). The ribbon at the top includes 'Home', 'Create', 'External Data', and 'Database Tools'. The 'Sort & Filter' group on the 'Database Tools' ribbon is highlighted, showing the 'Filter' button and the 'Sort & Filter' dropdown menu. Three callout boxes provide instructions:

- A** Click the Company value text box to make it the active field.
- B** Click the Ascending button to sort the table by company name. Company A becomes the first record.
- C** Clear All Sorts to restore the table to its default sort order.

6. Close  the form.

Sorting Records Using Multiple Fields

Data in Access can be sorted on more than one table field at the same time. This can be useful when sorting fields where the value in the first field of more than one record is the same so you want to select a second field on which to organize the records.

Last Name	First Name	Job Title
Kupkova	Helena	Purchasing Manager
Lee	Christina	Purchasing Manager
Lee	Soo Jung	Purchasing Manager
Li	George	Purchasing Manager

These records are sorted first by Last Name column and then by First Name.

Example

Take, for example, personal names. Many records in a table might contain the same last name value. When this happens, selecting the first name field as a second sort field is often appropriate. Using this example, the last name field would be considered the *primary sort* field, and the first name field is called the *secondary sort* field. The secondary sort field is only considered when multiple records contain the same data in the primary sort field.

How Multiple Column Sorts Work




Access sorts data on multiple fields from left to right. As a result, the columns in a table must appear side by side in the datasheet and the column on the left must be the one you want sorted first (primary sort field). Access will then consider the second column (secondary sort field) only when it finds identical values in the primary sort field. You can perform more complex sorts on multiple fields using the Advanced Filter/Sort options, which you will learn more about in future lessons, or sort multiple columns by rearranging them in the datasheet so that they appear side by side.

Last Name	First Name	Job Title
Kupkova	Helena	Purchasing Manager
Lee	Christina	Purchasing Manager
Lee	Soo Jung	Purchasing Manager
Li	George	Purchasing Manager

In order to sort the Last Name field first, it had to be moved to the left of the First Name field.



QUICK REFERENCE: SORTING RECORDS

Task	Procedure
Sort Ascending	<ul style="list-style-type: none">■ Position the cursor in the field on which you want to sort records.■ Choose Home→Sort & Filter→Ascending  on the Ribbon.
Sort Descending	<ul style="list-style-type: none">■ Position the cursor in the field on which you want to sort records.■ Choose Home→Sort & Filter→Descending  on the Ribbon.
Clear Sorts	<ul style="list-style-type: none">■ Choose Home→Sort & Filter→Clear All Sorts  on the Ribbon.
Sort on Multiple Fields	<ul style="list-style-type: none">■ Arrange the fields you want to sort next to each other with the primary field to the left of the secondary field.■ Select both field column headings and click the sort button for the sort order in which you want to sort the records.

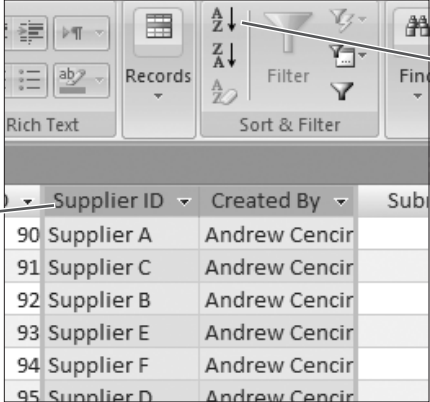


Hands-On 2.5 Sort Records Using Multiple Fields

In this exercise, you will sort data in a table on the basis of the values found in two columns.

1. Open the Purchase Orders table in the Labyrinth Exports database.
2. Follow these steps to sort table records on the basis of values contained in multiple fields:

A Click the Supplier ID column heading and drag the mouse to select the Created By column heading so that both columns are selected.



B Choose Home→Sort & Filter→Ascending on the Ribbon.

Supplier ID	Created By	Sub
90	Supplier A	Andrew Cencir
91	Supplier C	Andrew Cencir
92	Supplier B	Andrew Cencir
93	Supplier E	Andrew Cencir
94	Supplier F	Andrew Cencir
95	Supplier D	Andrew Cencir

3. Review the record sort results.

All records containing Supplier A appear at the top of the table.

Supplier ID	Created By	
101	Supplier A	Andrew Cencir
90	Supplier A	Andrew Cencir
111	Supplier A	Andrew Cencir
99	Supplier A	Jan Kotas
110	Supplier A	Jan Kotas
107	Supplier A	Michael Neipp
102	Supplier A	Nancy Freehafi
96	Supplier A	Steven Thorpe
92	Supplier B	Andrew Cencir
100	Supplier B	Anne Hellung-I

Values in the Created By column are arranged alphabetically for each supplier.

4. Clear all sort orders and click any value in the Purchase Order ID column to deselect both columns.

5. Follow these steps to sort on the same two columns and obtain different results:

A Drag the Created By column so that it appears to the left of the Supplier ID column.

B Select both columns and choose Home→Sort & Filter→Ascending on the Ribbon.

Purchase Order ID	Created By	Supplier ID
101	Andrew Cencir	Supplier A
90	Andrew Cencir	Supplier A
111	Andrew Cencir	Supplier A
99	Jan Kotas	Supplier A
110	Jan Kotas	Supplier A
107	Michael Neipp	Supplier A

Notice that the arrangement of all records created by one person with suppliers arranged alphabetically for each person before the next person's records appear.

6. Close the table. Choose No when prompted to save the changes.

Locating and Deleting Records Using Table Datasheets

The navigation buttons found at the bottom of tables and forms provide an efficient way to move among records when the number of records in a database is relatively few. When a database contains large volumes of data, finding a more efficient way to locate records becomes important. Both tables and forms are the primary objects used to locate records for updating and deleting.



QUICK REFERENCE: DELETING RECORDS

Task	Procedure
Delete a record	<p>Use one of the following procedures to delete a record:</p> <ul style="list-style-type: none"> Click the record selector button at the left end of the record and press <input type="checkbox"/> on the keyboard to remove the record. Then choose Yes when warned that you are about to delete a record. Choose Home→Records→Records <input type="checkbox"/> on the Ribbon and choose Delete.

Using Find and Replace

The Find and Replace tool in Access improves the efficiency of maintaining a database that constantly changes. Using the tool, you can locate records easily and then delete them or edit them.

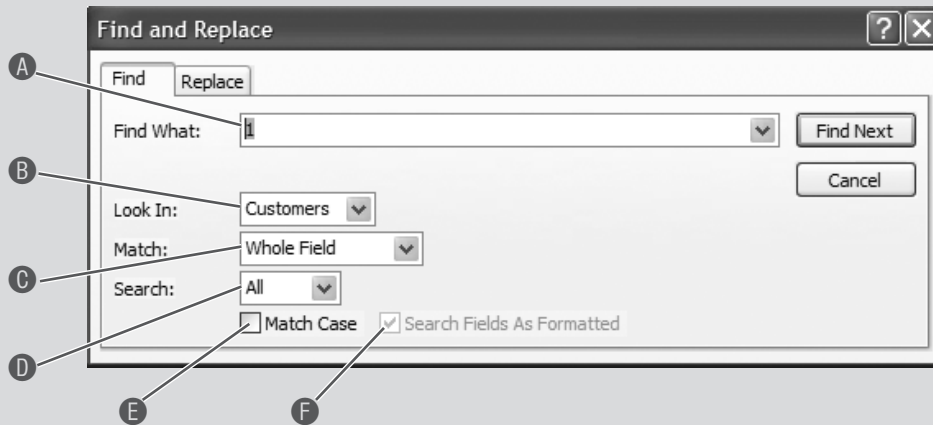
The Find feature in Access enables you to locate records containing data that you need to edit or to locate records that you want to delete. The Find page of the Find and Replace dialog box contains a few features similar to those found in other Microsoft applications. Because data stored in a database is somewhat different from the text and data stored in other files, you will find some unique fields as you work in Access.

FROM THE KEYBOARD

+ to open the Find page of the Find and Replace dialog box



QUICK REFERENCE: USING FIND AND REPLACE



Item	Feature	Description
A	Find What	Contains the text, numbers, dates, and other values you want to locate.
B	Look In	Tells Access where in the data to search for the text. The data in the field that was active when the Find command is issued appears in the Look In box. You can change the location by clicking the down arrow and selecting the table name from the Look In list.
C	Match	Allows you to locate records where the search text appears as the only data in the field (whole field), anywhere in the field value, or at the beginning of the field.
D	Search	Tells Access which direction to search from the active cursor—forward to the end of the table, backward to the beginning of the table, or the whole table.
E	Match Case	Locates data that matches the exact capitalization pattern you type.
F	Search Fields As Formatted	Searches for data as it is displayed in the datasheet rather than as you typed it. For example, if you check the box, you would search for data, such as March 5, 2007, as it appears in the datasheet even though you might have entered the data as 3/5/2007.



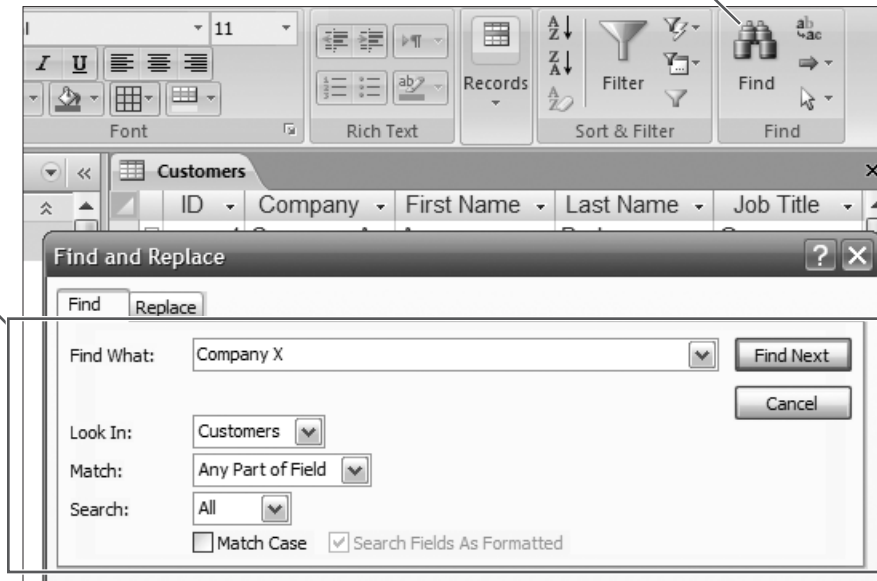
Hands-On 2.6 Locate and Delete Records in a Table

In this exercise, you will use Find to locate a record in a table and delete it.

1. Open the Customers table in the Labyrinth Exports database.
2. Follow these steps to find the record to delete:

A Choose Home→Find→Find on the Ribbon to display the Find and Replace dialog box.

B Enter the values shown in each textbox of the Find page of the dialog box and then click Find Next to start the search.



Access finds the record for Company X.

3. Click Cancel to close the Find and Replace dialog box, and then follow these steps to delete the Company X record:

A Point to the record selector button at the left end of the record to select the record for Company X and right-click to display the shortcut menu.

B Select Delete Record and then click Yes when Access warns you that you are about to delete a record.



Leave the table open.


Using Forms to Locate and Edit Records

Tables are one type of object you can use to update or delete records from a database. You can also use forms to edit and delete records. The basic procedures required to locate records using a form are the same as those used to locate records in a table.




Hands-On 2.7 Locate and Edit Records in a Form

In this exercise, you will locate a record using a form and update the data contained in the record.


1. Open the Customer Details form in the Labyrinth Exports database.
2. Choose Home→Find→Find  on the Ribbon and follow these steps to locate the record to edit:

A Type Company N in the Find What text box.

B Notice that other settings match those you last used.



C Click Find Next.

3. Click Cancel to close the Find and Replace dialog box and then type the following new values in the First Name and Last Name fields to replace the current contact name:
Viktor Alonzo.
4. Close  the form.

Using Find and Replace to Update Records

FROM THE KEYBOARD

Ctrl+**H** for Find and Replace

When you have specific edits to make to individual records, locating the records and making the edits works well. There are times when you need to update the data in one table field for multiple records with the identical replacement data. For example, when the area code for a city changes, multiple records would need to be updated with the same value. The Replace command enables you to update records in cases such as this by replacing existing data with new data. Because you are already familiar with the options on the Find page of the Find and Replace dialog box, you'll find the Replace page of the dialog box very familiar. The Replace action buttons are used to:

- **Replace:** Replace text for each occurrence of the search text one at a time.
- **Replace All:** Replace all occurrences of the search text with the new text at the same time.



TIP! *In general, the Replace All command should be used with great caution to avoid unexpected results. For example, if you search for a string of characters such as the and replace those letters with the single character a using Replace All, you may find that Access will replace the characters in their so that it becomes air. Both are valid words.*

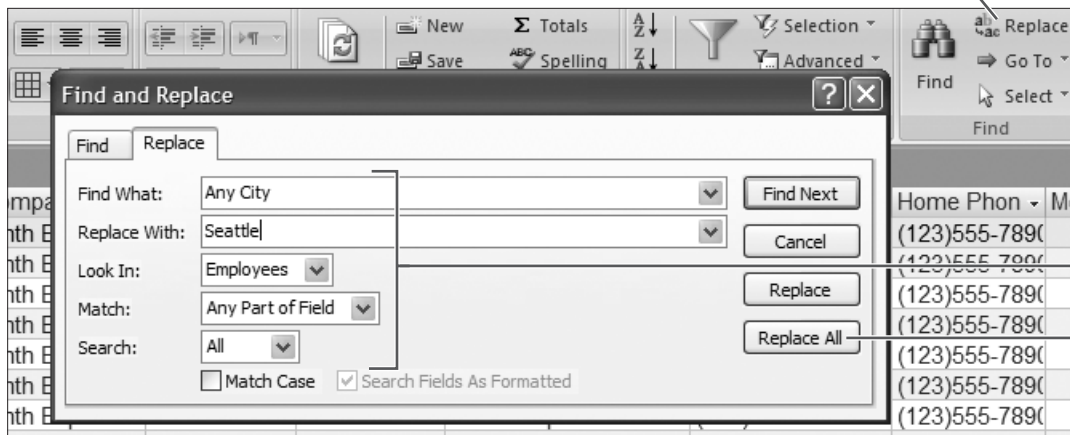


Hands-On 2.8 Update Multiple Records Using Find and Replace

In this exercise, you will use the Find and Replace dialog box to update multiple records with the same data.

1. Open the Employees table in the Labyrinth Exports database.
2. Follow these steps to locate and replace text with new values:


A Choose Home→Find→Replace on the Ribbon to open the Replace page of the Find and Replace dialog box.



B Type **Any City** in the Find What text box and set other options as shown.

C Click **Replace All** to replace all occurrences of the search text at one time.

Access presents a warning message advising you that you will not be able to undo this action.

3. Choose Yes in response to the warning prompt, click Cancel to close the dialog box, and then scroll to the right to ensure that the value in the City field for all records (except your record) shows Seattle.
4. Close  the table.

Filtering Records

So far, you have sorted records to place them in an order that they are more easily reviewed, and have used the Find and Replace features to delete and update records. In both cases, you worked with all records contained in the table. When you work with large volumes of table data, there will be times when you want to locate a group of records that contain specific values in specific fields. Filtering enables you to select a subset of records contained in the table to make working with the records more efficient.

Using the Filter Tools

The Filter tool enables you to identify a value in any table field and tell Access to select only those records in the datasheet that contain the same value in the selected field. This process applies a *filter* to the table that hides records when the data in the active field contains different data. For example, if you work with a database that contains thousands of records for consumers across the country, you could apply a filter to identify all the people who live in a specific state.

Access provides two types of methods for filtering records: Filter by Selection and Filter by Form.

- **Filter by Selection:** Selects records on the basis of the value contained in the active field for the active record.
- **Filter by Form:** Selects records on the basis of values or conditions (criteria) that you type in one or more form fields. Again, Access searches only the fields you specify to find the match.

You will explore both techniques in this section.

Filtering Records by Selection

When you filter database records by selection, you have two options. You can instruct Access to select all records containing data that matches the value or selected text in the active field of the selected record. You can also instruct Access to select all records containing any value other than the one selected. Access searches only the active field to find the matches.

Removing a Filter

When you filter records in a table, Access recognizes the change to the display. As a result, if you close the table without removing the filter, Access prompts you to save changes to the table. Many times, you do want to save changes—such as when you widen or hide columns. Normally, filtering data in a table is temporary while you work with the data, so you do not want to save a filtered table. You remove a filter using the Toggle Filter tool.

Using the Toggle Filter Tool

The Toggle Filter  tool in the Sort & Filter section of the Ribbon serves two purposes:

- After you apply a filter, clicking the Toggle Filter  button removes the filter and displays all records.
- After removing a filter, clicking the Toggle Filter  button reapplies the last filter applied.

In addition, when you point to the Toggle Filter button, a ToolTip displays to let you know what action you are performing. For example, when you point to the Toggle Filter button after applying a filter, the ToolTip shows *Remove Filter*. When you point to the Toggle Filter button after removing a filter, the ToolTip shows *Apply Filter*.

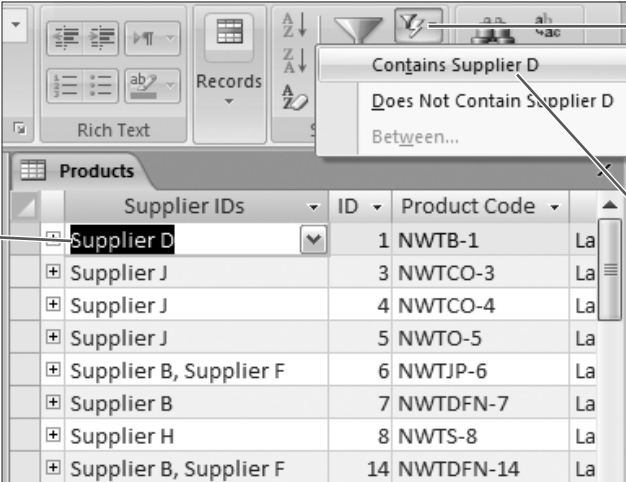


Hands-On 2.9 Filter Records by Selection

In this exercise, you will use tables to filter records and review the results before clearing the filter.

1. Open the Products table in the Labyrinth Exports database.
2. Follow these steps to set a filter:

A Locate the Supplier IDs field column and select a record that contains the value Supplier D.




B Choose Home→Sort & Filter→Selection on the Ribbon.

C Select Contains Supplier D from the Selection menu.

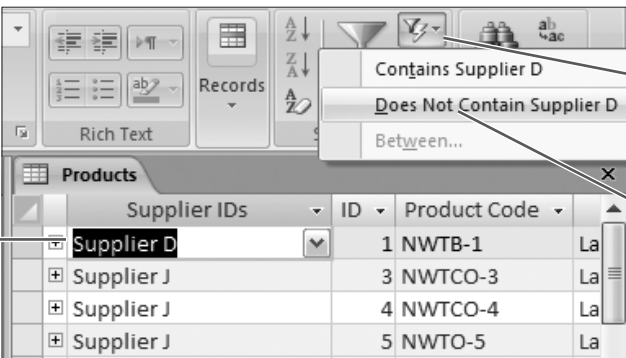
Supplier IDs	ID	Product Code	
Supplier D	1	NWTB-1	La
Supplier J	3	NWTCO-3	La
Supplier J	4	NWTCO-4	La
Supplier J	5	NWTO-5	La
Supplier B, Supplier F	6	NWTJP-6	La
Supplier B	7	NWTDFN-7	La
Supplier H	8	NWTS-8	La
Supplier B, Supplier F	14	NWTDFN-14	La

Access applies the filter immediately and displays three records that contain the value.

3. Click the Toggle Filter  button to remove the filter and display all table records.
4. Follow these steps to display all records in the table that contain values other than Supplier D:



A Locate the Supplier IDs field column and select a record that contains the value Supplier D.



B Choose Home→Sort & Filter→Selection on the Ribbon.

C Select Does Not Contain Supplier D from the Selection menu.

Supplier IDs	ID	Product Code	
Supplier D	1	NWTB-1	La
Supplier J	3	NWTCO-3	La
Supplier J	4	NWTCO-4	La
Supplier J	5	NWTO-5	La

Access applies the filter immediately and displays 42 records that contain the value.

5. Close  the table. Choose No when prompted to save changes.

Filtering Records by Form

Filtering records by form enables you to set criteria in fields of a blank form. Access then filters the database to select only the records that contain values set in fields on the form.

One advantage to using the Filter By Form feature is that you can select records on the basis of values in multiple fields without rearranging the layout of table fields. Another advantage is that you can use comparison indicators to locate records that fit within a range of values.

When you filter by form, Access remembers the sort criteria. As a result, it is important to clear all filters after you apply this filter.

Identifying Logical Operators

When you use the Filter By Form feature in Access, you will often apply comparison operators so that Access can locate records that contain the data you want to find. These operators are identified and described in the following table.



QUICK REFERENCE: DEFINING COMPARISON INDICATORS AND SYMBOLS

Comparison Symbol	Description
=	■ Records in the table must contain a value that matches exactly the value you enter in the form for the field set.
<	■ Records in the table must contain a value less than the value you enter in the form for the field set.
>	■ Records in the table must contain a value greater than the value you enter in the form for the field set.
<>	■ Records in the table must contain a value different from the value you enter in the form for the field set.
<=	■ Records in the table must contain a value less than or equal to the value you set for the field.
>=	■ Records in the table must contain a value greater than or equal to the value you set for the field.

The format of the Filter By Form entry palette depends on whether you are filtering from a table or from a form. If you are filtering from a table, a datasheet palette opens.

Notice that the table name appears in the Filter by Form tab.

When you filter from a table datasheet, a blank datasheet for the table opens.

Down arrows on active fields enable you to select values on the basis of valid table values.

If you are filtering from a form, a blank form opens.

Notice that the form name appears in the Filter by Form tab.

Down arrows on fields enable you to select values from a list of valid table values.

Using Wildcards

Because database users often want to locate records that contain data in a specific field but may also contain additional text or data, Access accepts the use of *wildcards*, such as the asterisk, for setting criteria. Valid wildcards and how Access uses them are identified in the following table.

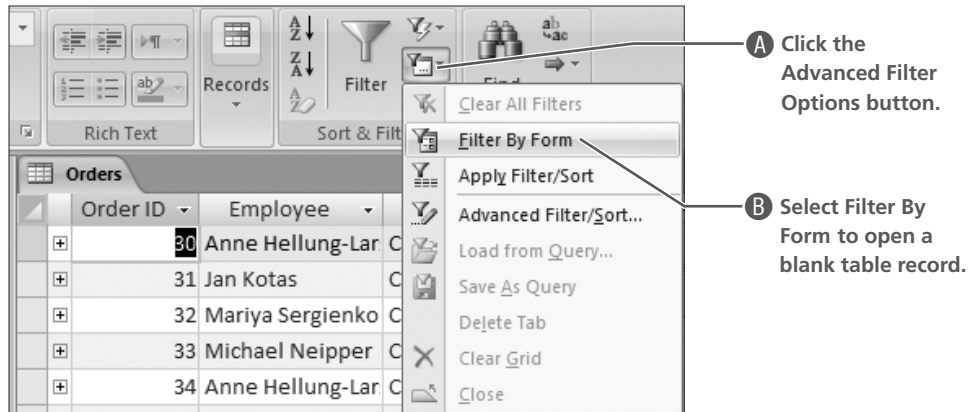
Wildcard	Example	Description
*		Appears in a position where any number of additional characters may appear in a search string.
	Graham	Locates all records with the string of text <i>graham</i> somewhere in the field value. The asterisk allows text and other data characters to appear before the search string as well as after the search text, regardless of how many characters appear.
	Graham*	Locates all records with the string of text <i>graham</i> at the beginning of the field value regardless of how many characters follow it.
	*Graham	Locates all records with the string of text <i>graham</i> at the end of the field value regardless of how many characters precede it.
	Gra*ham	Locates all records with the string of text beginning <i>gra</i> and ending <i>ham</i> regardless of how many characters appear between the search strings.
?		Each question mark represents a character and limits the search to a specified number of characters on the basis of the number of question marks that appear.
	Gra?am	Locates all records with the string of text <i>gra</i> at the beginning of the field value and <i>am</i> at the end of the field value with only one letter between the instances of the letter <i>a</i> in the search string.
	Gra???	Locates all records with the string of text <i>gra</i> at the beginning of the field value followed by three additional characters.



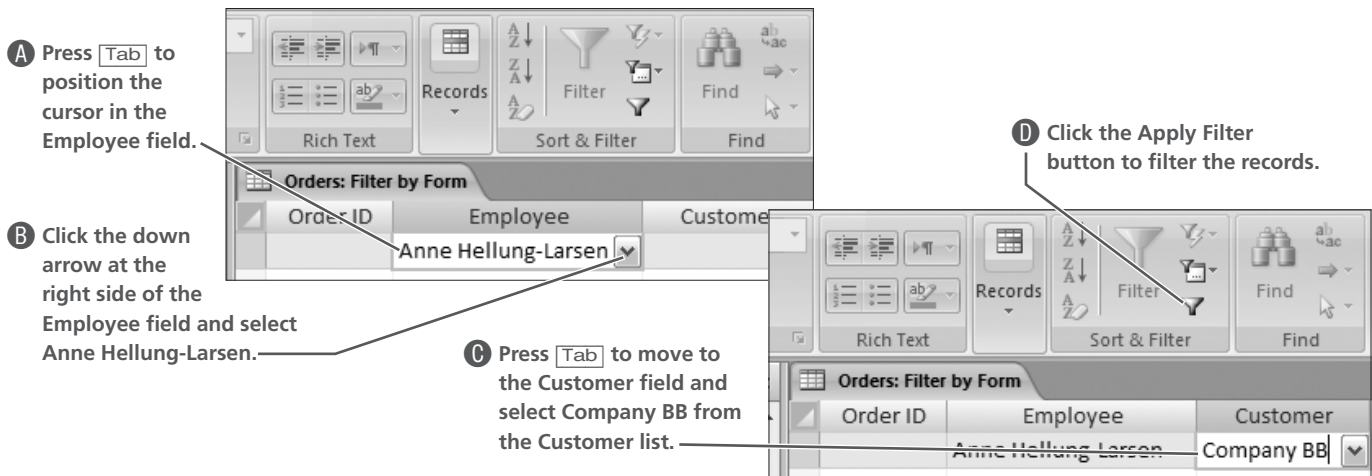
Hands-On 2.10 Filter Records by Form

In this exercise, you will use both tables and forms to filter records by form.



1. Open the Orders table in the Labyrinth Exports database.
2. Follow these steps to open Filter by Form:



3. Follow these steps to filter and select all records in the Orders table that locate orders for one sales rep for a specific company:

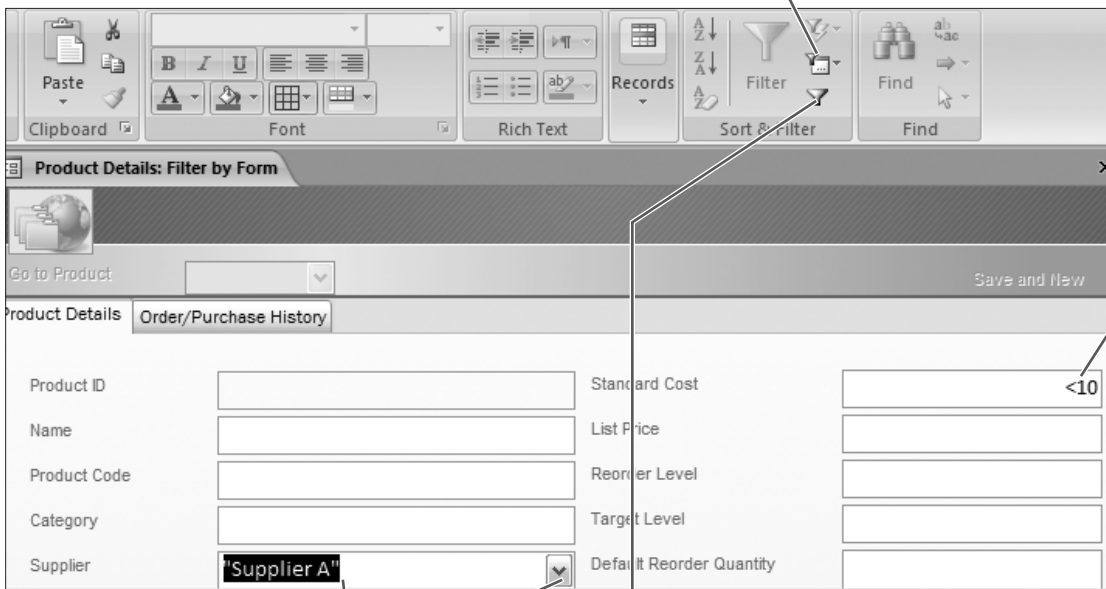


Access locates two records that meet the criteria set and places a filter icon beside each field name for the filter values set.

4. Choose Home→Sort & Filter→Advanced Filter Options  on the Ribbon and select Clear All Filters to display all records and remove criteria from the Filter By Form window.
5. Close  the Orders table. Choose No when prompted to save the changes.
6. Open the Product Details form.

7. Follow these steps to apply a filter by form to select products from a supplier that cost less than a specified value:

A Click the Advanced Filter Options button and select Filter By Form.



B Click the Standard Cost field and type <10 in the field.

C Click the Supplier field down arrow and select "Supplier A."

D Click the Apply Filter button.

E Use the navigation buttons at the bottom of the form to display each record found.

Access locates six records that match the criteria set.

8. Click the Remove Filter  button to remove the filter, and then close  the form.

Previewing and Printing Data

Reports are considered a primary output format for Access databases because they summarize data and display it as meaningful information. There may be times when you want to print raw data contained in a table or query results datasheet, or data contained in specific fields in a database table. You may also want to print a single record within a database in form layout. Access provides tools for printing all of these objects.

Setting Up Data to Print

Earlier in this lesson you learned how to adjust the column layout on a datasheet, how to search for records containing specific data, and how to filter out records that contain data different from the values you want to display. Each of these activities changes the display of data in a datasheet. When you print from a table datasheet, Access prints the data that actually appears in the datasheet when you issue the print command. You can hide columns to prevent them from printing, change the page layout settings to print the datasheet in landscape layout, and change the margins to fit a datasheet on a single sheet of paper.

Examining the Preview Window

Previewing data before you print helps determine adjustments that need to be made to ensure that the datasheet prints on the page as you want it to. You can view multiple pages in print preview to see how columns line up, what columns appear on separate pages, and so forth, so that you can make the necessary adjustments to the datasheet.

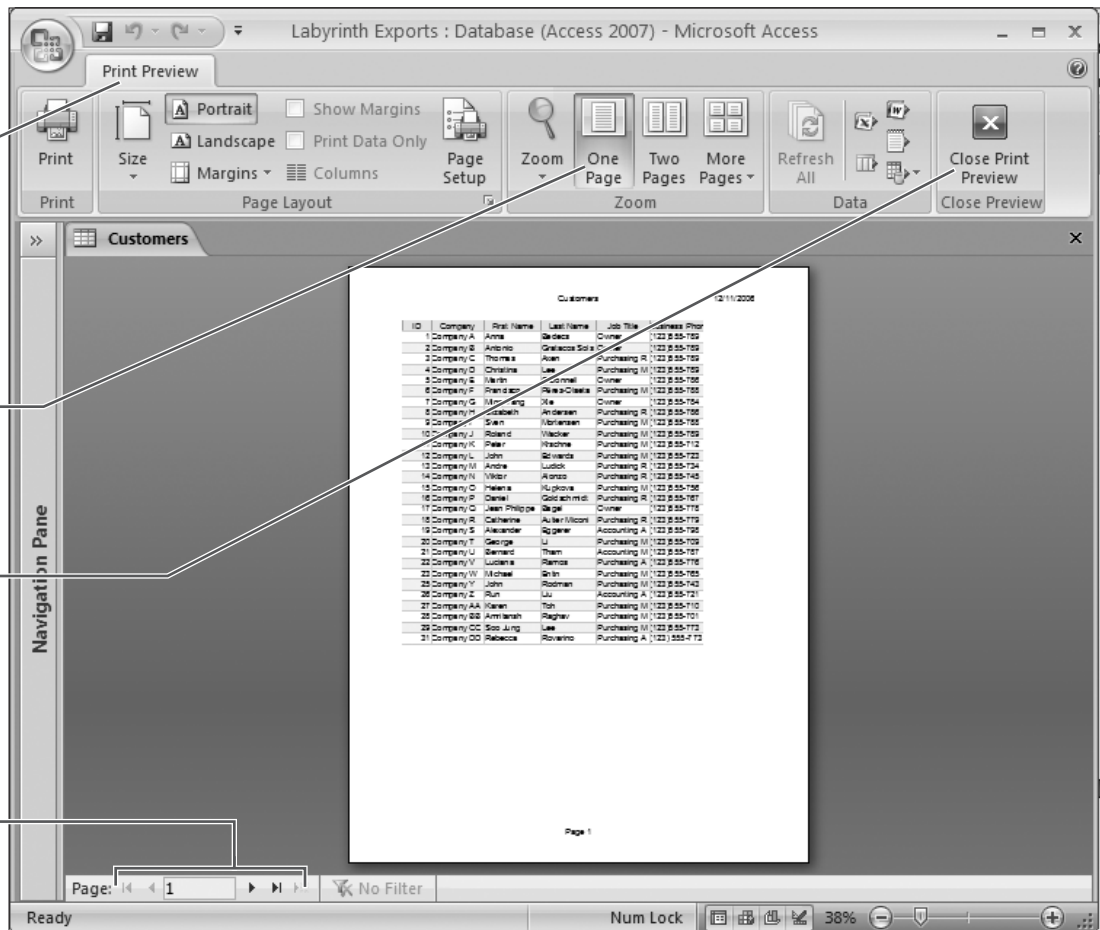
Because the layout of database objects differs, options available in the Print dialog box vary depending on what you are printing. However, the basic procedures used to preview and print database objects are the same and are similar to the procedures used to print files in other applications. When you preview an object, the Print Preview tools appear on the Ribbon. These tools are used to change the layout of the page on which you print.

The Print Preview Ribbon contains tools for changing the layout of the printed document.

Preview settings enable you to change the number of pages displayed onscreen at one time.

Close Print Preview restores the access object window.

Navigation buttons enable you to review all pages as they will print.





Hands-On 2.11 Preview and Print Data

In this exercise, you will preview and print a database table.

1. Open the Customers table and follow these steps to preview the datasheet:

A Click the Office button.

B Point (don't click) on the Print menu button. If you click the Print command on the Office list, Access prints without previewing.

C Choose Print Preview.

2. Follow these steps to view pages that will print:

A Click the Next Page navigation button and review all pages of the document. As long as the Next Page button is active, another page is required to print the datasheet.

B Click the middle of the preview document to zoom in on the page.

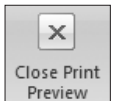
3. Choose Print Preview→Close Preview→Close Print Preview button on the Ribbon as shown to close the preview window.


4. Follow these steps to hide seven fields of data:

	Fax Number	Address	City	State/Province	ZIP/Postal Code	Web Page	Notes	Add New
	(123)555-7890	123 Any Street	Any City	TN	99999			
	(123)555-7890	123 Any Street	Any City	TN	99999			
	(123)555-7890	123 Any Street	Any Town	TN	99999			

A Click the Fax Number field column heading.

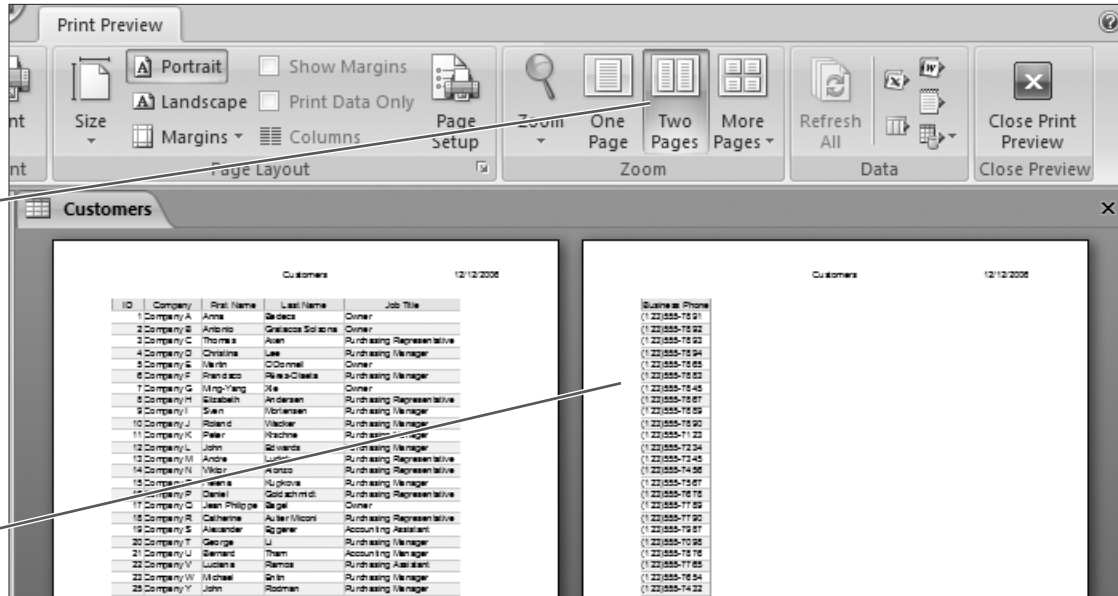
B Hold down the [Shift] key and click the Notes field column heading to select the two fields and those in between.




- Right-click one of the selected field column headings and select Hide Columns from the shortcut menu.
- Adjust the column widths of the remaining columns.
- Choose Office  → Print menu ► → Print Preview, and then follow these steps to display multiple pages in the preview window:

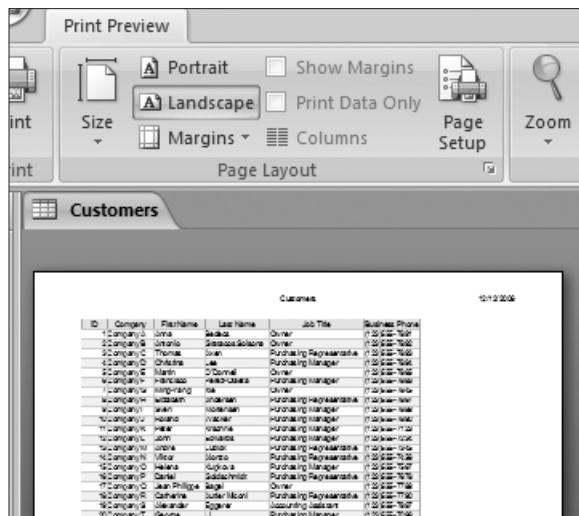
A Click this button to display two pages of the printout together onscreen.

B Click the column of the datasheet that appears on the second page to zoom in on it.



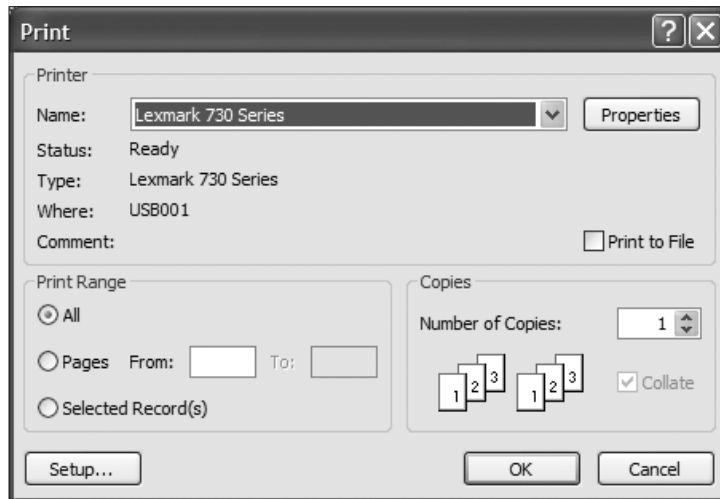
NOTE! The appearance of buttons and features on the Ribbon varies depending on screen resolution and size as well as the size of the application window.

- Choose Print Preview → Page Layout → Landscape  on the Ribbon to display the complete datasheet on one page.




Landscape layout displays all columns together on a sheet.

9. Choose Print Preview→Print→Print  on the Ribbon to open the Print dialog box.



The Print dialog box you see may be different from the one shown here because of the difference in the printer that is active.


10. Select options in the Print dialog box to print one copy of all pages.
11. Close  the table. Choose No when prompted to save changes.
12. Close any other database objects that are open and close the Navigation Pane.

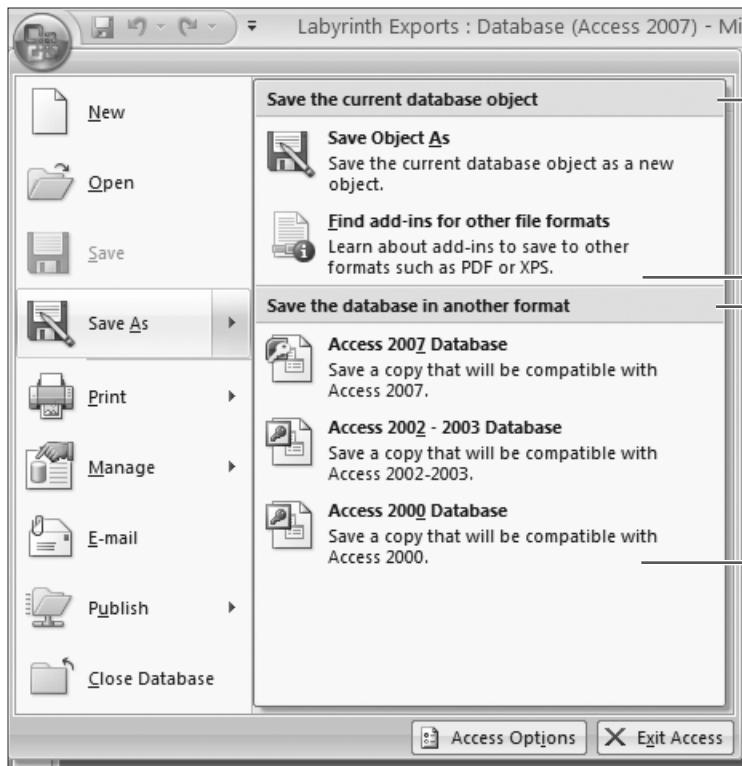
Saving a Database as a New File

Anytime you change a file, you need to save it to prevent unwanted loss of data. Access automatically saves each database record as you enter it and also prompts you to save each object as you modify or change it in any way. As a result, the data stored in a database saves regularly as you work. Existing files often make good files on which to create new files.

Using the Save As Command

2007
new!

You can use the Office →Save As menu ► command to save an existing database as a new database using a different filename just as you would with any other Microsoft Office application. Saving a database as a new file is not only a good way to quickly create a new database for a different purpose, but it is also a good way to create a backup of your data to protect it. Because many databases contain numerous objects, the Access Save As command also contains options for saving each of the database objects as new objects within the existing database.



Commands for saving the active or selected database object as a new object in the active database.

Commands for saving the database as a new file using various Access formats.

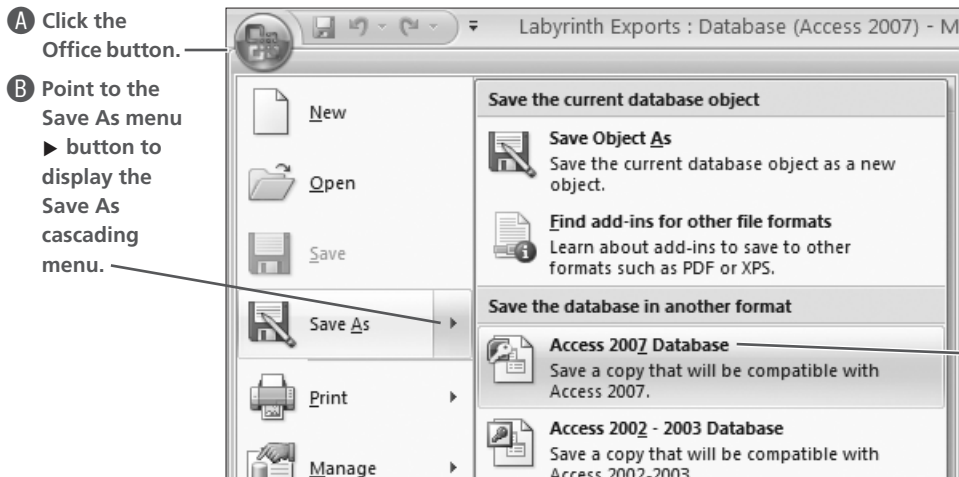
The Office  → Save As commands.



Hands-On 2.12 Save a Database as a New File

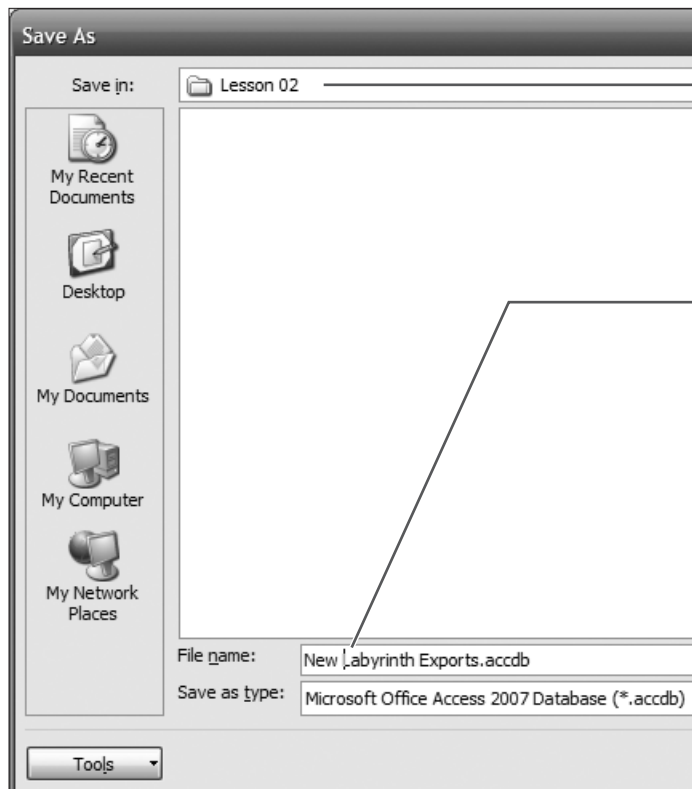
In this exercise, you will save the Labyrinth Exports database as a new database file.

1. Close all database objects, if you have objects open.
2. Follow these steps to save the file as a new database file:



Access opens the Save As dialog box.

3. Follow these steps to save your file as a new database file:



A Navigate to and open the folder in which you are storing your class files.

B Choose the File Name text box and type the name of the new file shown.

C Click Save.

4. Close the database and exit Access.



Concepts Review

True/False Questions

1. To locate records containing data for a specific field by selecting a value from a list of data entries, you must use the Filter By Form feature. **TRUE FALSE**
2. When you rearrange columns in a datasheet and then print the datasheet, the printed document shows the columns in their original order. **TRUE FALSE**
3. In the Find and Replace dialog box, you could change the Search setting to tell Access to search the entire table. **TRUE FALSE**
4. The Replace button appears only on the Find tab page of the Find and Replace dialog box. **TRUE FALSE**
5. After you hide a column in a datasheet, there is no way to redisplay the column. **TRUE FALSE**
6. You can use both tables and forms to add records to database tables. **TRUE FALSE**
7. One of the main purposes of a database is to be able to retrieve data quickly and efficiently. **TRUE FALSE**
8. Access contains two tools for locating data in a database: Find and Replace. **TRUE FALSE**
9. Only one column of data can be sorted at a time. **TRUE FALSE**
10. Filtering helps you narrow down a search for data by displaying only the records that contain values you want to consider. **TRUE FALSE**

Multiple Choice Questions


1. Which Access feature would you use to locate a record containing specific data without hiding any of the records?
 - a. Find
 - b. Find and Replace
 - c. Sort
 - d. Filter
2. What happens to a table design (or structure) when you reposition a field in the datasheet?
 - a. The field is repositioned in the table design.
 - b. Access displays a warning message.
 - c. Access deletes the field that originally appeared in the column.
 - d. Nothing
3. Which sort order arranges records alphabetically from A to Z?
 - a. Sort numerically
 - b. Sort alphabetically
 - c. Sort ascending
 - d. Sort descending
4. What happens to a datasheet when you save it after sorting it?
 - a. Nothing
 - b. Access resorts it.
 - c. The new sort order is saved as part of the datasheet format.
 - d. Both b and c




Skill Builders

Skill Builder 2.1 Adjust Datasheet Layout

The sb-Valley Hospital database has been updated to contain additional data in each table. In this exercise, you will adjust the widths of columns in each table to display data appropriately, reposition fields displayed on the datasheet, and hide other fields to obtain a printout of specific data. After you make the changes required, you can print the datasheets.

1. Start Access, and then open the sb-Valley Hospital database from the Lesson 02 folder in your file storage location.
2. Enable content, and choose Office  → Save As → Access 2007 Database.
3. Save the file using the filename **sb-Valley Hospital-end** in the Lesson 02 folder.

Adjust the Datasheet Column Width

4. Open the Patients table and press **Ctrl+A** to select all fields and data in the datasheet.
5. Point to the border between two of the column headings so the mouse pointer appears as a double-arrow, and then double-click the right column headings border between the column headings to widen all the columns to fit the data.
6. Click the Save  button to save changes to the table layout.

Enter Data into the Datasheet


7. Click the New Record  button to create a new blank record and enter the following data to create two additional records:

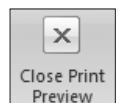
First Name	Last Name	Street	City	State	ZIP	Telephone	DOB
Alex	KELLY	Olson Avenue	COLUMBUS	OH	43221	6145551024	9/14/1975
Bryan	SANDERS	Quaker Ridge Lane	CHARLESTON	WV	25301		11/22/1946

Now you will hide one of the columns.

8. Right-click the Telephone column heading to display the shortcut menu and select Hide Columns.

Preview and Print the Table

9. Choose Office  → Print menu ► button → Print Preview to view the datasheet as it would print and then print the document (optional).
10. Click the Close Print Preview button to close the preview, and then close the table, saving changes if prompted.




Skill Builder 2.2 Locate, Filter, and Print Records

A new record needs to be added to the Employees table in the sb-Valley Hospital—end database. In this exercise—after entering the new record using the Employee Personnel File form—you will locate all records for employees in the department and preview and print a copy of the two forms.



1. Open the sb-Valley Hospital-end database created in Skill Builder 2.1, if necessary, and expand the Forms list in the Navigation Pane.

Create a New Record



2. Open the Employee Personnel File form and click the New (Blank) Record  to create a new blank form.
3. Type the data shown in the following table to create a new record seven in the database, substituting your name and fictional data in fields indicated.

ID #	First Name	Middle Initial	Last Name	Street Address	City	State	ZIP	Department	Salary Level
EX490	Yours	Yours	Yours	Fictional	Yours	Yours	Yours	Office Adm.	O3

Find and Filter Records

4. Choose Home→Find→Find  on the Ribbon and type **Office Adm** in the Find What text box, select Employees Personnel File from the Look In drop-down list, and then choose Find Next.
5. Click Cancel to close the Find and Replace dialog box.
6. Choose Home→Sort & Filter→Selection  on the Ribbon and select the Equals “Office Adm.” command to filter the records.
Access locates only two records that contain the value.

Preview and Print Records


7. Choose Office →Print menu ►→Print Preview to preview the form print page.
8. Choose Print Preview→Print→Print  on the Ribbon to print the forms.
9. Choose the Pages option in the Print dialog box, enter From **1** to **1** and click OK to print the two records.
10. Close the print preview window and the form.

Skill Builder 2.3 Sort and Print Datasheets and Reports

One of the benefits of storing data in a database is the ease with which you can sort the data. The US Postal Service requires that bulk mail be sorted and arranged by ZIP code before it will be accepted. Businesses, of course, often send letters to their customers and clients. Valley Hospital wants to use the database to organize records by ZIP code before using it to print envelope labels. In this exercise, you will sort the records by ZIP code and save changes to the table settings so that the records will remain organized in this sort order. In addition, because you have added a new employee to the database, you need to print a copy of the Employee Phone List report.

1. Open the sb-Valley Hospital-end database, if necessary, and open the Patients table (not the Patient Information form).
2. Hide the Street column in the datasheet.

Sort Records

3. Place the cursor in the ZIP field for any record.
4. Choose Home→Sort & Filter→Ascending  on the Ribbon to sort the records.
Access sorts records so that all records with no data in the ZIP field appear at the top of the datasheet.
5. Press **Ctrl+S** to save changes to the table and close it.
6. Open the Patients table again to ensure that the sort order was saved, and then print a copy of the datasheet.

Preview and Print a Report

7. Close the table and open the Employee Phone List report; preview and print the report.
 8. Close all open database objects and then close the database.
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Assessments

Assessment 2.1 Edit Records and Save as a New File



Sales from the Rich Homestead have been doing well; therefore, in this exercise, you will need to update the database to remove records. By first filtering the records by form, you can narrow the list of records displayed to make the update process easier. As you work, you will need to adjust datasheet column widths to fit column contents. You will notice that the data is just raw data; for example, dollar signs have not been added.

1. Launch Access and open the as-Rich Homestead database from the Lesson 02 folder in your file storage location.
2. Enable content, and save the database to the Lesson 02 folder as a new file named **as-Rich Homestead-end** using the current file format.

Format Table Layout and Sort Data

3. Open the Records table, and adjust the column widths of all fields in the table to fit the contents.
4. Scroll to the right side of the table until you see both the Selling Price and Date End field columns, and then move the Date End column and place it just to the left of the Selling Price column.
5. Save changes to the table, and then sort the records alphabetically by the Item Title field.

Filter Records by Form

6. Click the Advanced Filter Options  button and choose Filter By Form to open a blank records form.
7. Type **Decca*** in the Item Title field and **>8/30/07** in the Date End field.
8. Choose Home→Sort & Filter→Apply Filter  on the Ribbon.
Access locates two records.

Select and Delete Records

9. Click the record selector button for the first record and then press **[Shift]** and click the second record selector button to select both records.
10. Press **[Delete]** to delete both records.
Access prompts you to confirm the deletion.
11. Choose Yes to delete both records.
12. Clear the filter criteria using the Advanced Filter Options shortcut menu.
13. Close the Records table. Choose Yes when prompted to save the table.

Assessment 2.2 Locate and Update Data, and Print Datasheets

New items have been located that need to be added to the Rich Homestead store. They fit into two separate categories, Comics and Collectibles. In addition, the item descriptions of some of the comics and books contain extraneous characters that need to be removed. In this exercise, you will be able to print datasheets that display more uniform data.

1. Open the as-Rich Homestead-end database from the Lesson 02 folder in your file storage location and then open the Comics table.
2. Adjust the field column widths of fields containing truncated data and save changes to the layout.

Add Records

3. Add a new record to the table and type the following data into appropriate fields of the new record. Note that not all fields contain data:

Format	A
Title	Marvel-Spider-Man
Category	4542
Store Category	2961949
Quantity	1
Start Price	5
Duration	7
Selling Price	
Gallery Type	Gallery
Shipping Type	Flat
Shipping Service	9
Shipping Service	5
Dispatch Time Max	2

4. Open the List Collectibles form, create a new blank record in the form, and enter the following data for a new item:

Selling Format	s
Accept Offer	y
Item Title	Masonic Ceremonial Sword
Starting Price	25
Selling Price	
Postage	15
Insurance	10
Date Listed	07/28/2007
Duration	30
Date End	08/27/2007

5. Close the List Collectibles form, saving changes if prompted.

Locate and Update Records

6. Open the Comics table, sort the table data alphabetically on the Title field, and locate the records at the top of the table that contain multiple asterisks.
7. Select the Title field of each record containing multiple asterisks and remove the asterisks.



TIP! *If you accidentally delete text other than the asterisks as you update the records, you can reverse the deletion using the Undo command. Simply press **Ctrl**+**Z** to reverse the deletion.*

8. Repeat the instructions outlined in steps 6 and 7 to sort and remove the asterisks from records in the Books table.
9. Print copies of the datasheets for the following tables: Collectibles, Records, Books, and Comics.



Critical Thinking

Critical Thinking 2.1 **Sorting, Filtering, and Locating Records**

In this lesson, you learned how to use a database to sort, filter, and locate records. The ct-Potters League database contains a list of members stored in a table in the database. They want to print a number of lists using data stored in the table. In this activity, you adjust the layout of the table datasheet view and then sort and filter data before printing numerous datasheets. As you work, make the necessary adjustments to show all data contained in each field column and hide those columns that are empty. Save changes you make after adjusting column widths and after hiding the empty columns.

Use the required feature to display and print the datasheet that shows the required data for each of the following list requests:

- A list of all members arranged alphabetically by last name
 - A list of all members arranged by ZIP code
 - A list of all members who have paid their dues
 - A list of all members whose status is active
 - A list of all members whose status is supportive
 - A list of all members who live in Texas, the location for the event this year
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Critical Thinking 2.2 **Sorting and Filtering Data on the Internet**

As you have most likely already discovered, databases are everywhere. As a result, you have many opportunities to sort data contained in databases you find—in online stores, information pools, and other sites. When a website has a Search tool included, you are actually applying a filter to the items or data stored in the online database.

In this exercise, you locate three sites on the Internet and print copies of the original page to show the arrangement of records, and then you use the sort and filter tools available to generate additional printouts.

- Locate at least three sites on the Internet that you believe display data stored in a database. Print a copy of the site page as it appears before you change the arrangement.
 - Sort the data alphabetically on the field you believe provides a good description of the items in the database and print a copy of the sorted page.
 - Filter each site's database to show all records in the database for only one type of listing and print a copy of the filtered page.
-

Critical Thinking 2.3 **Getting Help on Sorting and Filtering**

The Help system in Access provides extensive information about sorting and filtering database data. Review the information provided about both topics to find out how Access handles each of the following:

- Using queries with sorting and filtering
 - What to consider when sorting linked tables
 - The difference between a simple and a complex sort
 - The differences between select queries and filters
 - How to use the Advanced Filter/Sort features
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