ACCESS 2013

9

Customizing Reports

LESSON OUTLINE

Importing a Report into a Database
Adding a Subreport to a Main Report
Creating a Report from a Subreport
Numbering Items in a Report
Creating Calculated Controls on a Subreport
Setting Page Breaks and Customizing Controls
Analyzing Report Performance
Concepts Review
Reinforce Your Skills
Apply Your Skills
Extend Your Skills
Transfer Your Skills

LEARNING OBJECTIVES

After studying this lesson, you will be able to:

- Import a report into a database
- Add a subreport to a main report
- Create a report from a subreport
- Create calculated controls on a subreport
- Set page breaks, customize controls, and analyze report performance

Database reports summarize the data contained in tables or displayed in query results and enable you to provide information in a page layout suitable for printing. Although forms and reports serve two different purposes within the context of a relational database, the techniques used to customize them are similar. By now, you have most likely created reports using both the Report Wizard and Design View and have customized elements of a report. In this lesson, you will import reports from other databases and use additional features to create custom reports.

CASE STUDY

Billing Customers

The company manager of Winchester Web Design, a small web page design company, wants you to improve its invoice report for customer billing. After reviewing invoices from several companies, the company manager has sketched out a design for the new invoice report layout. Your job is to create a sample of the new invoice report for company administrators.


Winchester Website Design

Customer Invoice

3/25/2013

Invoice Number	13	Invoice Date	9 /3 /2012
Last Name	Blaser	Customer ID	Blaser H
First Name	Helen	Customer Phone	(941) 555-1991
Street Address	600 Fowler	Email	BladingHel@email.com
City	Tampa		
State	FL		
ZIP	33802		

Invoice Details:

1	01HP	Home Page, Nav, CSS, Design	$400.00	1	$400.00
2	02SP	Secondary Page	$200.00	12	$2,400.00
3	03BL	Blog, Integrated into Site	$300.00	1	$300.00
4	05IM	Image, Custom Designed	$40.00	6	$240.00
5	06HR	Hourly Rate for Modifications	$80.00	7	$560.00
				Invoice Total:	$3,900.00

Customer Signature ____________________

Date ____________________

Comments ____________________

Thank you!

Importing a Report into a Database

Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0901

Access offers a variety of ways to create reports. In addition to using the Report Wizard or starting from scratch in Design View, you can also import reports from another database. Because most companies require some type of invoice to send with customer orders, locating a sample invoice report to import is not difficult.

Sometimes you have the report you want, but during design it may have become corrupted, either due to inadvertent changes to the report itself or changes to an underlying query. That's when backups are invaluable. If a report becomes corrupted, you can restore it by importing database objects from a backup copy of a database. The record source should already match and there should be no need to edit properties and field names.

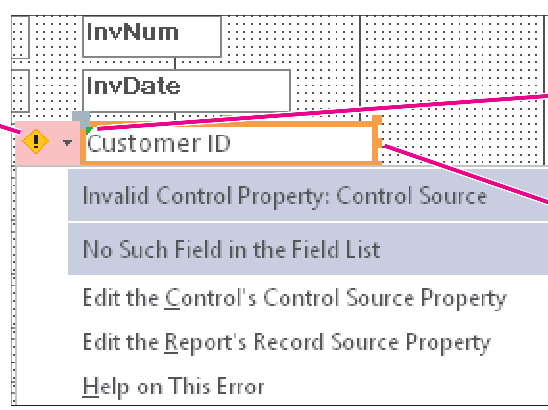
Identifying Report Record Sources

Reports that you import retain two connections to their original database: the source database table or query name, shown in the Record Source property, and field names, which appear in report text boxes. As a result, when you import a report from another database, you often must establish new control sources to the destination database. You can accomplish this by:

- Editing the imported report's Record Source property to link to a table or query in the destination database.
- Editing, if necessary, the field names in the imported report's text boxes to match those shown in the new record source table or query.

Using Smart Tags

Many times, when Access identifies a conflict between an available data or control source and the one currently identified in the Record Source control, you will see smart tags attached to the fields affected. Smart tags indicate actions that may be taken if certain conditions are met or if a control has a problem. Clicking a smart tag will display a list of possible actions for that control, such as providing easy access to the correct Control Source property or Report Record Source property.



DEVELOP YOUR SKILLS AC09-D01

Import a Report and Edit the Record Source

In this exercise, you will import a report from a backup copy of a database. You will rename the report and view data from an existing table using the imported report.

1. Open **AC09-D01-WinWebDesign** from your **AC2013 Lesson 09** folder and save it as `AC09-D01-WinWebDesign-[FirstInitialLastName]`.

   Replace the bracketed text with your first initial and last name. For example, if your name is Bethany Smith, your filename would look like this: AC09-D01-WinWebDesign-BSmith.

2. Choose **External Data→Import & Link→**.

   The Get External Data dialog box opens.

3. Click **Browse**, navigate to the **AC2013 Lesson 09** folder, and double-click **AC09-D01-WinWebDesign–Backup**.

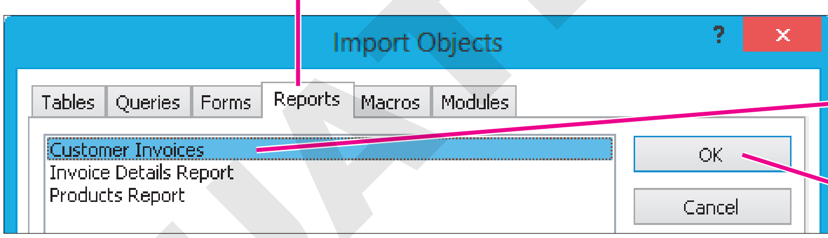
   This database is a backup copy of the WinWebDesign database.

4. Choose **Import Tables, Queries, Forms, Reports, Macros, and Modules into the Current Database** and click **OK**.

   Access opens the Import Objects dialog box and displays object names contained in the backup database.

5. Follow these steps to select the report to import:

A Click the **Reports** tab.



B Choose **Customer Invoices**.

C Click **OK**.

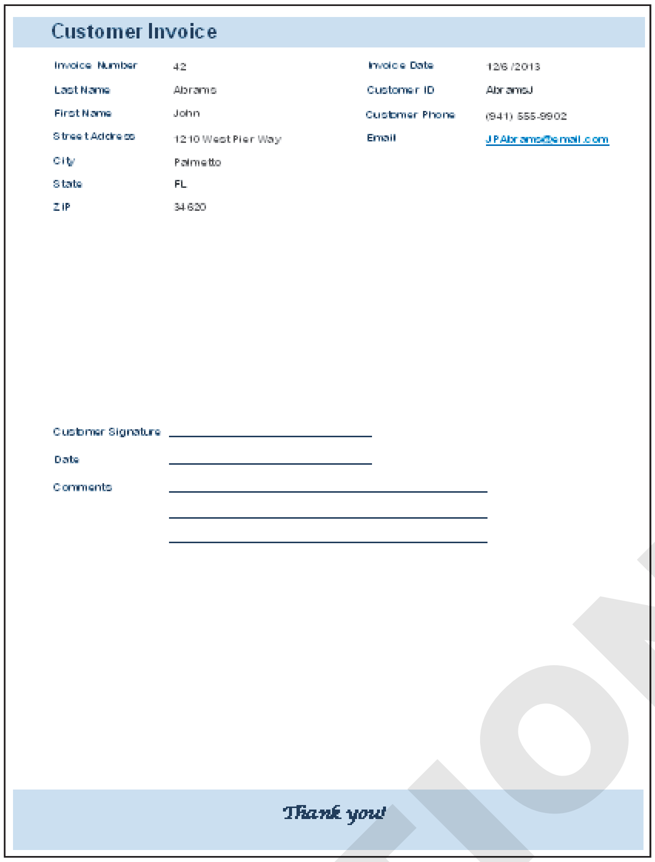
6. Leave the Save Import Steps checkbox unchecked and click **Close** in the Get External Data dialog box.

Rename and View the Report

7. From the Navigation Pane, right-click the imported **Customer Invoices** report and choose **Rename**.

8. Type `Customer Invoice Report` and tap [Enter].

9. Right-click **Customer Invoice Report** and choose **Print Preview**.


Customer Invoice

Invoice Number	42	Invoice Date	12/6/2013
Last Name	Abrams	Customer ID	AbramsJ
First Name	John	Customer Phone	(941) 555-9902
Street Address	1210 West Pier Way	Email	JPAbrams@email.com
City	Palmetto		
State	FL		
ZIP	34620		

Customer Signature

Date

Comments

Thank you!

The empty area below the customer information is where you will insert the subform/subreport that includes the invoice detail lines.

10. Navigate through the pages.

11. Click Close Print Preview to close **Print Preview**.

Unless directed otherwise, keep Access and any databases or database objects being used open at the end of each exercise.

Adding a Subreport to a Main Report

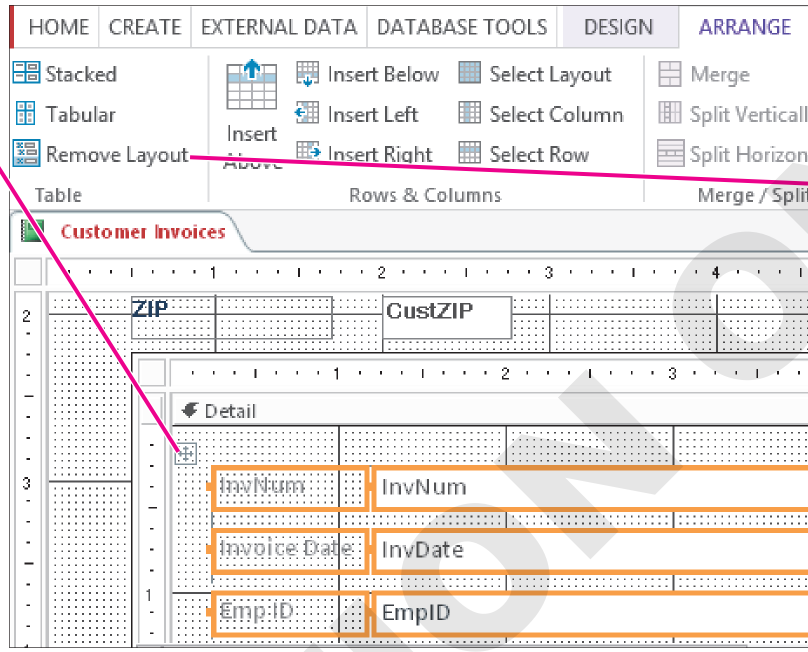
Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0902

Subreports display subsets of data in reports and are derived from related database tables, similar to subforms on forms. However, a subreport can display table data by using a table, query, form, or another report as its source object. Because forms are frequently created before reports, and they may already display the desired data from multiple tables, using a subform to create a subreport streamlines report design and layout.

FROM THE RIBBON
Arrange→Table→Remove Layout to remove grouping

Creating a subreport from a quick form may present challenges. When you create a quick form from the Create tab on the Ribbon, Access ties—or groups—all controls in the Detail section as one object. Because of these ties, if you resize *one* text box in the Detail section, *all* text boxes are resized. If you want to modify or delete *individual* controls, you must first remove the ties, or grouping.

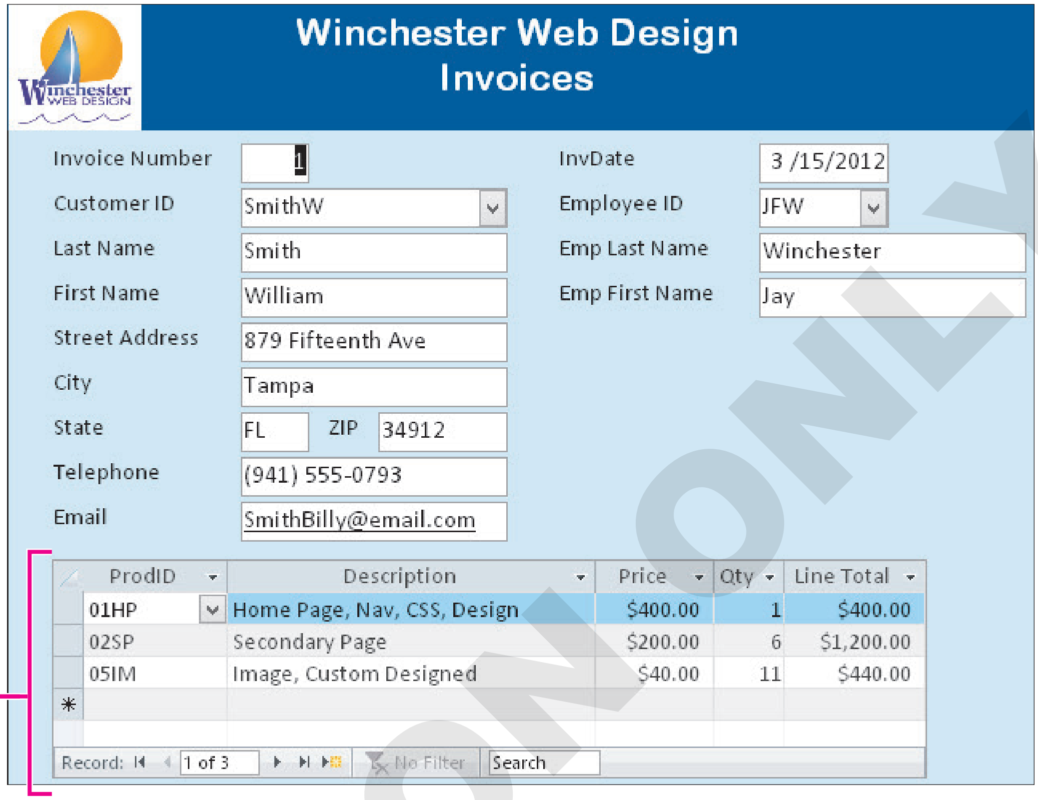
The selection button selects all tied subreport controls.



The Remove Layout button removes control ties so you can edit individual controls.

Examining Database Objects

Invoices normally display a list of all the items ordered or services performed, in addition to the customer name and address. There are several tables in the WinWebDesign database that contain the data required for the complete invoice—the Customers table, the Products table, and the Invoices and InvoiceDetails tables. Fields from all these tables appear in the Winchester Web Design Invoices Form—and the detail fields you want to add to the report appear in the InvoiceDetails subform. So if you use the existing InvoiceDetails subform for the subreport, creating the invoice report is easier and more efficient.

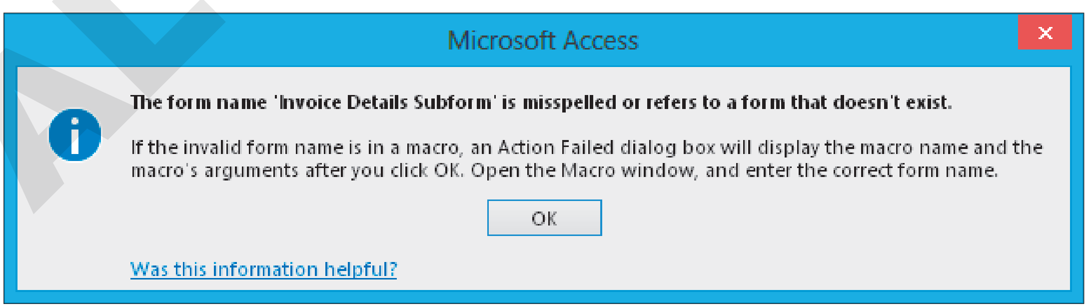


The InvoiceDetails subform contains the data you want to include on the Customer Invoice Report.

Adding a Subreport

The procedures used to add a subreport to a report are basically the same as those used to add a subform to a form. You can create the subreport using the Report Wizard or add an unbound subreport control to the report. Then you identify the database object containing the fields you want to display as a subreport.

Access might warn you that the table, query, or form specified in the report does not exist in this database. This is more likely to occur with imported objects, but might be due to a typing error. You can fix this by modifying the Record Source property, importing the missing object, or correcting the typo.



Error message warns that an object needed to run a report or form might be missing from the database.

To change the Record Source, click the smart tag list arrow and choose Edit the Report's Record Source Property.

DEVELOP YOUR SKILLS AC09-D02

Add a Subreport to a Report

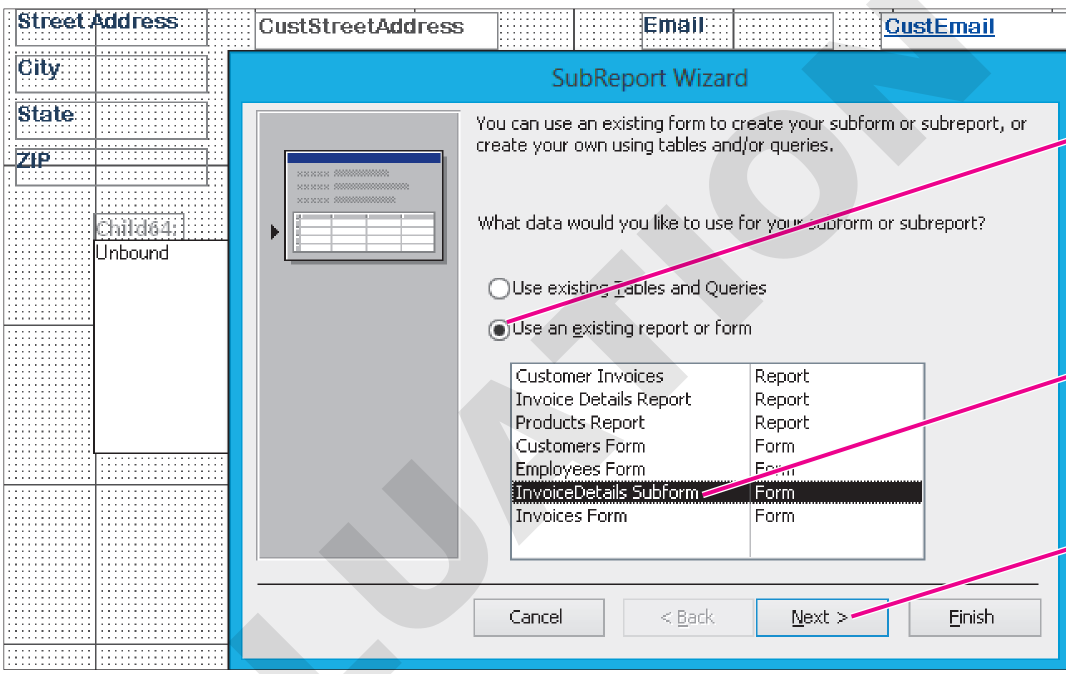
In this exercise, you will add a subreport to the Customer Invoice Report. You will use the InvoiceDetails Subform as the source for the subreport.

1. Display the **Customer Invoice Report** in **Design View**.
2. Choose **Design→Controls→Subform/Subreport**.
3. Click and draw a subreport in the **Detail** section just below the **ZIP** label.
   Access opens the SubReport Wizard.

TIP

If the wizard doesn't launch, the Control Wizard was likely toggled off. Choose Design→Controls and choose Use Control Wizards from the drop-down menu to toggle it back on.

4. Follow these steps to create the subreport control:



A Choose **Use an Existing Report or Form**.

B Click the **InvoiceDetails Subform**.

C Click **Next**.

5. Click **Next** to accept the default links, keep the default name InvoiceDetails Subform, and click **Finish**.
6. Click the **Property Sheet Data** tab and ensure that **Form.InvoiceDetails Subform** is in the Source Object property box.

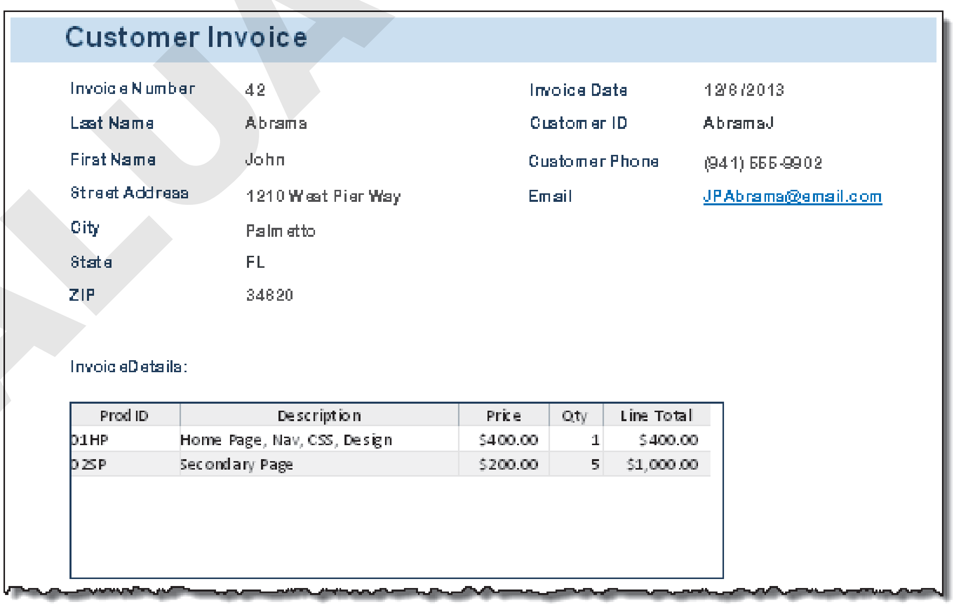
7. Click the **Property Sheet Format** tab and enter these property values:

Property	Value
Width	5.6”
Height	1.5”
Top	2.9”
Left	.5”
Border Color	Blue, Accent 5, Darker 50%

8. Select the subform label (**InvoiceDetails Subform**) and enter these property values:

Property	Value
Caption	Invoice Details:
Width	1.2”
Height	.25
Top	2.5
Left	.5
Font Name	Arial Rounded MT Bold
Font Size	10
Fore Color	Blue, Accent 5, Darker 50%

9. Click the **Report selector button** in the top-left corner of the report where the horizontal and vertical rulers meet to select the report.
10. Type **7.9"** for the **Width** property.
11. Switch to **Print Preview**.



12. Click the navigation buttons at the bottom of the window to display several report invoices.
13. Click Close Print Preview.
14. **Save** the Customer Invoice Report.

Creating a Report from a Subreport

Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0903

Using a subform as the record source for a subreport is convenient because the subform already includes all needed data. However, when a subreport uses a form as the record source, any changes made to the subreport layout are reflected in the source form. If you don't want the source form to be changed, you can save the subreport as a separate report in the database, change the main report's Record Source property to the new report object, and then edit the subreport.

Access allows you to save an existing form as a new form, and an existing report as a new report. When a subform is used as the record source for a subreport, you can open the subreport in a separate window and save it as a separate report.

QUICK REFERENCE | **SAVING A SUBREPORT AS A REPORT**

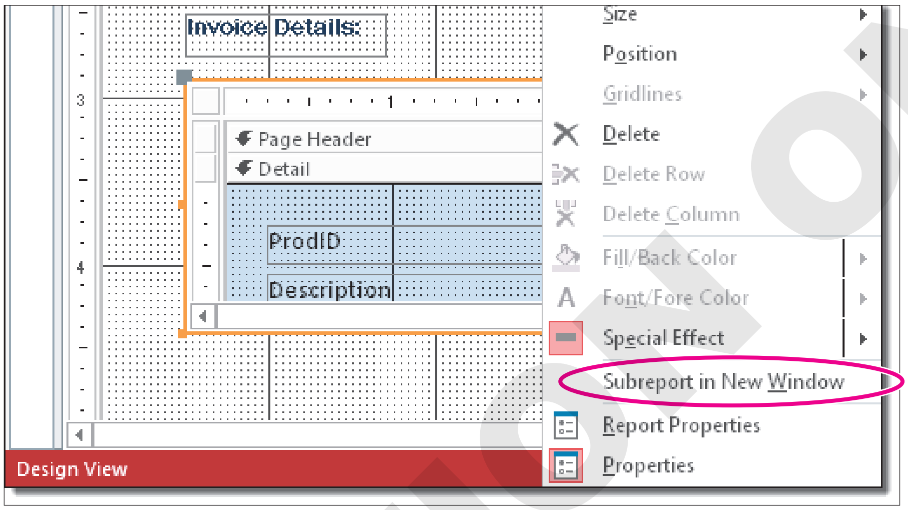
Task	Procedure
Open a subreport in a separate window	■ Right-click the subreport on the report in Design View. ■ Choose Subreport in New Window.
Save a subreport as a new report	■ Open the subreport in a new window. ■ Choose File→Save Object As. ■ Type the name of the new report, select Report from the Save Object As list, and click OK.

DEVELOP YOUR SKILLS AC09-D03

Create a New Report Using a Subreport

In this exercise, you will create and save a new report based on the subreport from the Customer Invoice Report and then edit the source object property in the Winchester Web Design Customer Invoice report to display the new report.

1. Display the **Customer Invoice Report** in **Design View**.
2. Right-click the subreport control and choose **Subreport in New Window**.

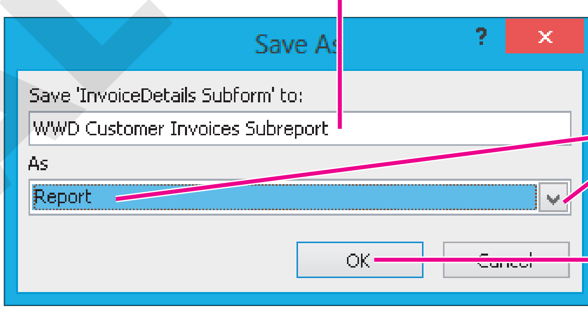


If you don't see the Subreport in New Window command, click an area of the main report and then right-click the subreport control again, or choose Design→Tools→Subreport in New Window.

Access opens the the InvoiceDetails Subform in a separate window.

3. Choose **File→Save As→Save Object As→** Save As.
4. Follow these steps to save the form as a report:

A Type **`WWD Customer Invoices Subreport`**.



B Choose **`Report`** from the menu.

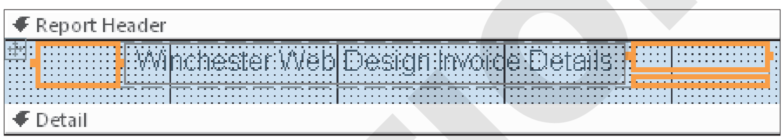
C Click **OK**.

5. Close the **InvoiceDetails Subform**; display the **WWD Customer Invoices Subreport** in **Design View**.

6. Click the **All** tab on the Property Sheet and type **`Customer Invoices Subreport`** as the caption.
7. Choose **Design→Header/Footer→Title**.
   Access places a title and empty placeholder controls in the Report Header.
8. Type **`Winchester Web Design Invoice Details`** in the **Title control** and tap Enter.
9. For the new **Title control**, enter these property values:

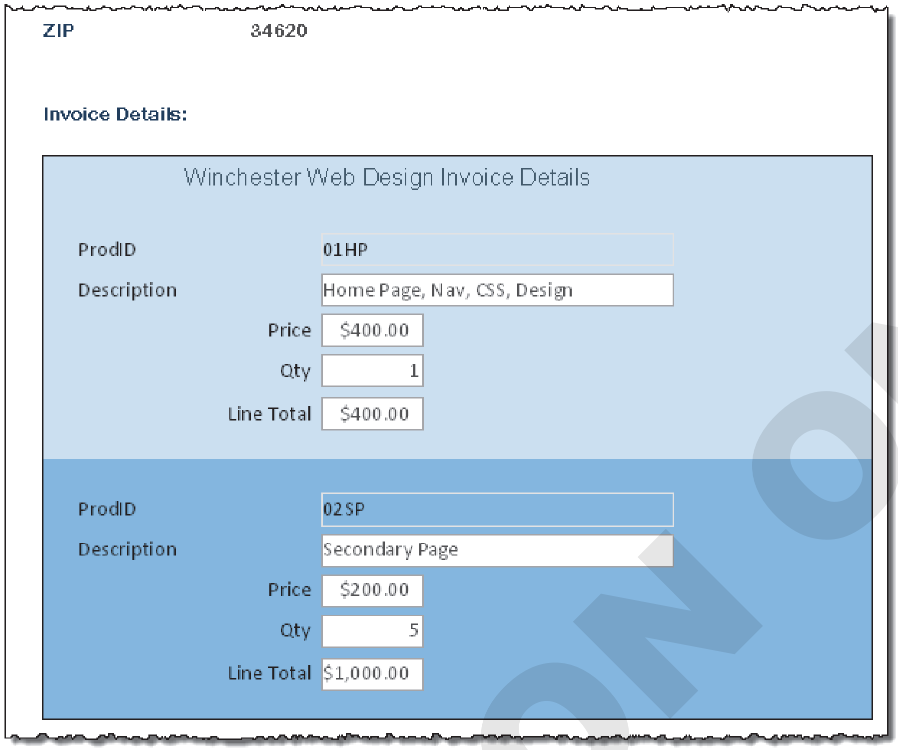
Property	Value
Width	3"
Height	.25"
Left	1"
Top	0"
Font Name	Arial
Font Size	12
Text Align	Center

10. Delete any empty placeholder controls in the Report Header section that were automatically inserted with the title, such as placeholders for a logo or date.



11. Click the **Report Header section bar** in the subreport and type **`.3"`** for the **Height**.
    Because the empty placeholders inserted with the Title control extend the width of the report, you will now reset the width of the subreport back to 5.6"
12. Click the **Report selector button** and type **`5.6"`** for the **Width** property.
13. Save and close the **WWD Customer Invoices Subreport**.
14. Return to the **Customer Invoice Report** in **Design View**.
15. Display the **Property Sheet** and then display the **Data** tab.
16. Select the subreport, click in the **Source Object** property line, and choose **Report.WWD Customer Invoices Subreport** from the drop-down menu.
17. Click the **Detail** section bar in the subreport.
18. Choose **Blue, Accent 5, Lighter 80%** for the **Back Color** property.
19. Choose **Blue Accent 5, Lighter 60%** for the **Alternate Back Color**.

20. Switch to **Print Preview** and review the report and subreport.



The new subreport will appear on the main report. Notice that because the subreport is not in Datasheet View, it appears differently on the page and takes up far more vertical space.

21. Navigate through the report.

Because the new subreport is much longer than the subform, it throws off the page alignment. To fix this, you can set the source of the subform/subreport back to the InvoiceDetails Subform.

22. Close **Print Preview**; then save and close the **Customer Invoice Report**.

Numbering Items in a Report

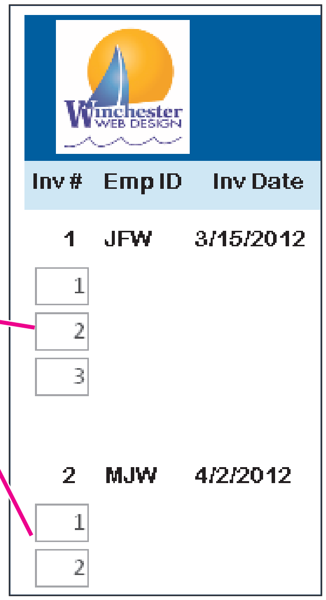
Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0904

As the number of records in a table grows, the length and number of records in a report or subreport also grows. You can number the records in a report to help track items listed. If a report is grouped, you can set the count to restart numbering at the beginning of each group.

Setting Properties to Number Items

By adding a text box to the Detail section and setting its Control Source property to **=1**, you can automatically number items in a report. In addition, you can set the Running Sum property to identify the portion of a report for which you want to count items. For example, suppose you have an invoice report that groups services by invoice number. You can set the Running Sum property to count the items in each group and then start counting again with the next group.

Items are numbered sequentially within each report group.



Numbering Subreports Separately

Access does not permit numbering items in a subreport control on a main report. However, because you saved the subreport as a separate report, you can add the numbering controls directly to the subreport by opening it in a separate window. Any edits you make when it is open as a separate item are reflected in the main report the next time you open it.

QUICK REFERENCE	NUMBERING REPORT ITEMS
Task	**Procedure**
Add a text box control to number report items	■ Display the report or subreport in Design View. ■ Choose Design→Controls→Text Box ab|. ■ Click the position in the Detail section on the report or subreport to place the text box control. ■ On the Property Sheet Data tab, set the Control Source to =1 and the Running Sum to Over Group.

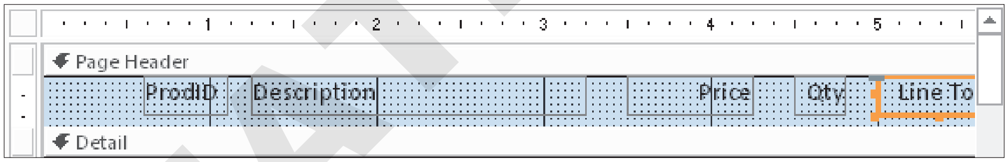
DEVELOP YOUR SKILLS AC09-D04

Number Items in a Report and Subreport

In this exercise, you will reposition controls in the Page Header of the WWD Customer Invoices Subreport and then add a text box control to count the number of line items.

1. Display the **WWD Customer Invoices Subreport** in **Design View**.
2. If the subreport does not show the Page Header and Page Footer section bars, right-click the **Detail** section bar and choose **Page Header/Footer**.
3. Click the **Page Header** section bar and change the **Height** to **.3"** on the Property Sheet.
4. Select the **ProdID** label in the **Detail** section and use Ctrl + X to cut the control.
5. Click in the **Page Header** section and use Ctrl + V to paste the label.
6. With the **ProdID** label still selected, type **.5"** for the **Width** and **.5"** for the **Left** property.
7. Add the following labels to the **Page Header** section; use the **Width** and **Left** property values shown.

Label	Width Property	Left Property
Description	2"	1.25"
Price	.75"	3.5"
Qty	.3"	4.5"
LineTotal	.75"	5"



Move and Resize Report Text Box Controls

8. Set these property values for the text boxes in the **Detail** section.

Text Box Control	Width	Top	Left
ProdID	.5"	.1"	.5"
ProdDescription	2"	.1"	1.25"
Price	.75"	.1"	3.5"
Qty	.3"	.1"	4.5"
LineTotal	.75"	.1"	5"

9. Click the **Detail** section bar and type **.5"** for the **Height**.
10. Click the **Selection Type** menu button at the top of the Property Sheet and choose **Report**.
11. Type **6"** for the **Width** property.

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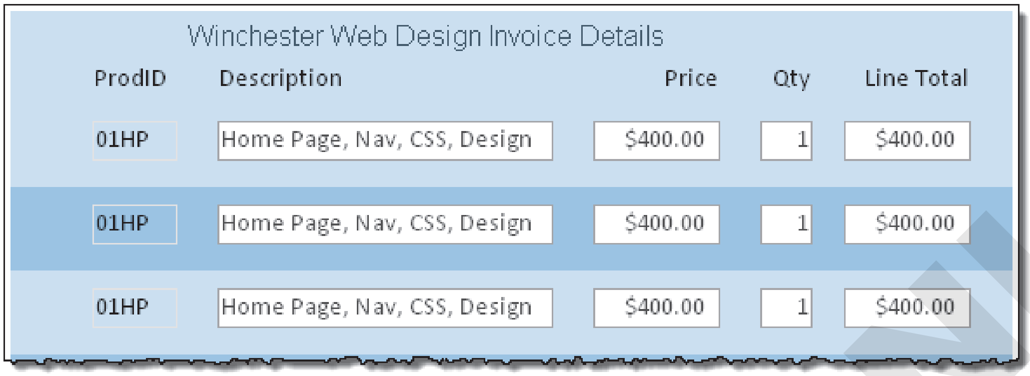
12. Switch to **Report View**.



There is room for a small field to the left of the Product ID field.

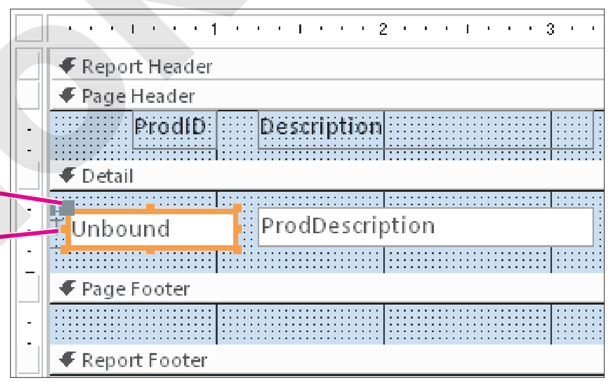
Add and Format a Text Box

13. Switch to **Design View** and choose **Design→Controls→Text Box** ab|.

14. Follow these steps to add the text box control to the **Detail** section:

A Click to the left of the **ProdID** text box. The associated label appears behind the Unbound text box control.

B Click the associated label control and tap Delete.

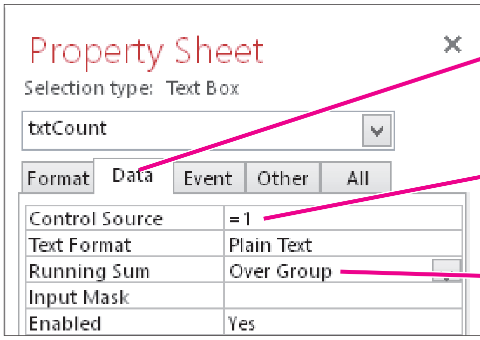


15. Click the new text box control and set these property values:

Property	Value
Name	txtCount
Width	.3"
Top	.1"
Left	.1"

Set Control Properties to Sum

16. Follow these steps to set the data properties for the control:

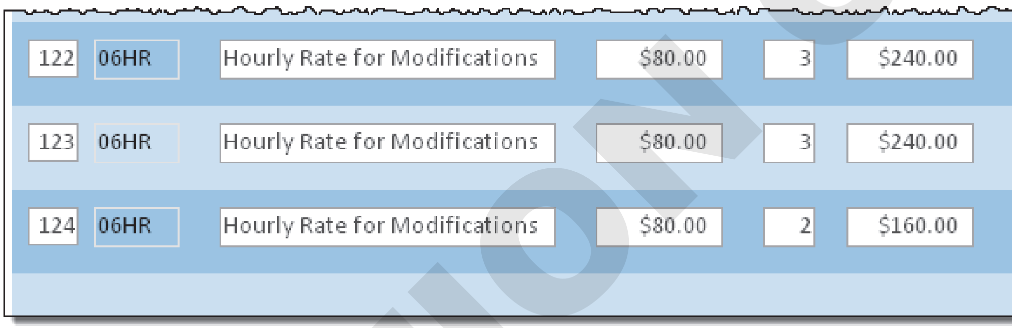


Ⓐ Click the **Data** tab.

Ⓑ Type **=1** in the **Control Source** property.

Ⓒ Set the **Running Sum** property to **Over Group**.

17. Switch to **Report View** and scroll to the end of the report.



Access counts each line item in the report—from 1 to 124.

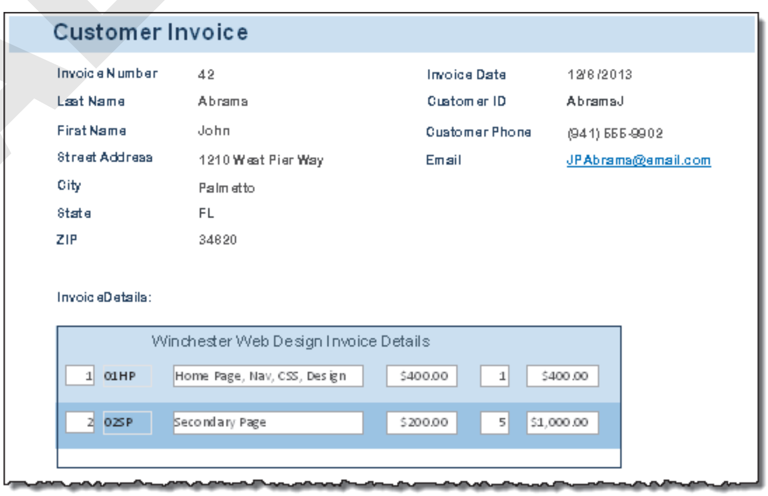
18. Save and close the **WWD Customer Invoices Subreport**.

19. Display the **Customer Invoice Report** in **Design View**.

20. Choose the **InvoiceDetails Subform** from the **Selection Type** list at the top of the Property Sheet.

21. Type **6"** for the **Width** property.

22. Switch to **Print Preview** and navigate through the report. Then display **page 2**.



23. Close **Print Preview**.

24. Save and close the **Customer Invoice Report**.

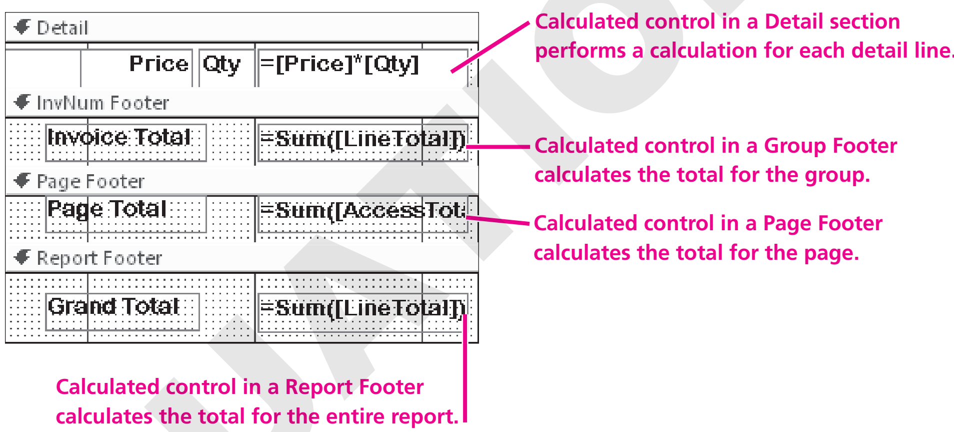
Creating Calculated Controls on a Subreport

Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0905

Reports summarize data contained in tables and queries to present useful, organized information. This typically means that calculated fields must be added to a report for subtotals, grand totals, and averages.

Positioning Calculated Controls

Calculated controls are built on reports by using the Control Source property of an unbound text box control to which you add the formula for the calculation. The placement of the calculated control determines how Access performs the calculation.



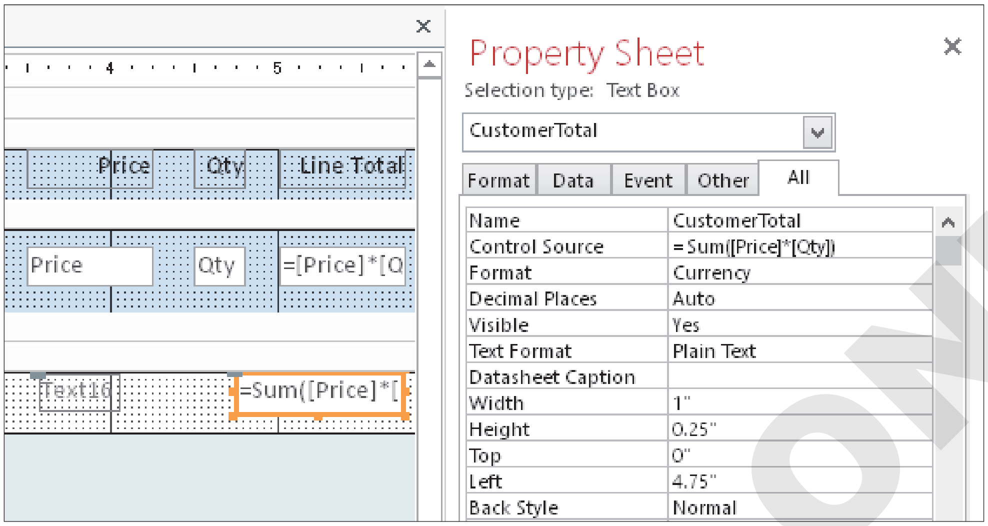
DEVELOP YOUR SKILLS AC09-D05

Create a Calculated Control

In this exercise, you will add a calculated control to the Report Footer section of the WWD Customer Invoices Subreport.

1. Display the **WWD Customer Invoices Subreport** in **Design View**.
2. Click the **Report Footer** section bar and type `.3"` for the **Height** property.
3. Choose **Design→Controls→Text Box** and draw a text box in the **Report Footer** section of the subreport under the **Line Total** text box.
4. Type `CustomerTotal` for the **Name** property.
5. Type `=Sum([Price]*[Qty])` for the **Control Source** property.

6. Enter the property values shown to format the CustomerTotal calculated field:



7. Select the associated label for the **CustomerTotal** text box and enter these property values:

Property	Value
Caption	Invoice Total
Width	1.2"
Height	.25"
Top	0"
Left	3"
Fore Color	Text 1

8. Save and close the **WWD Customer Invoices Subreport**.

9. Display the **Customer Invoice Report** in **Print Preview** and navigate through the report. Then display **page 2**.

10. Save the **Customer Invoice Report**.

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Growing a Subreport

Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0906

When the number of records or amount of data displayed in a subreport varies, you can set the Can Grow property setting to allow the subreport space to expand so more data displays vertically. You can also change the orientation of the print layout to allow more horizontal space on each report page.

QUICK REFERENCE	SETTING MARGINS, ORIENTATION, AND CAN GROW/CAN SHRINK PROPERTIES
Task	**Procedure**
Set report margins	■ From Design/Layout View: Choose Page Layout→Page Size→Margins. ■ From Print Preview: Choose Print Preview→Page Size→Margins.
Set orientation	■ From Design/Layout View: Choose Page Layout→Page Layout and then choose Portrait or Landscape. ■ From Print Preview: Choose Print Preview→Page Layout and then choose Portrait or Landscape.
Set Can Grow property	■ Click the subreport control. ■ Display the Property Sheet, if necessary, and click the Format tab. ■ Set the Can Grow property to Yes.
Set Can Shrink property	■ Click the subreport control. ■ Display the Property Sheet and click the Format tab. ■ Set the Can Shrink property to Yes.

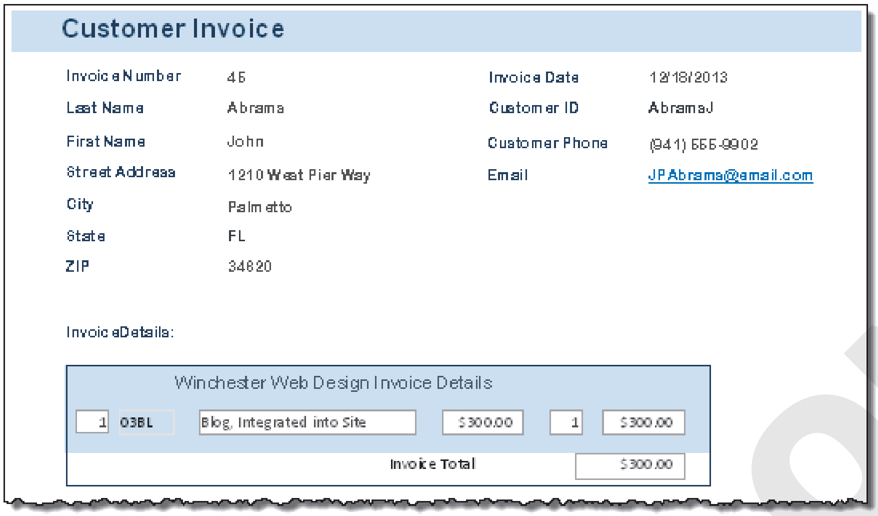
DEVELOP YOUR SKILLS AC09-D06

Set the Report Layout and Grow/Shrink Properties

In this exercise, you will adjust the margins of the Customer Invoice Report and set the Can Grow and Can Shrink properties to adjust the size of the subreport to fit the contents, which may vary in size.

1. Display the **Customer Invoice Report** in **Design View**.
2. Choose **Page Setup→Page Size→Margins** and choose **Narrow**.
3. Select the **InvoiceDetails Subreport** and click the **Format** tab on the Property Sheet to set the following properties:
   - Set the **Can Grow** property to **Yes**, if necessary.
   - Set the **Can Shrink** property to **Yes**.
4. Save the **Customer Invoice Report**.
5. Switch to **Print Preview** and navigate through the report.
   The subreport grows and shrinks to best fit the contents.

6. Display **page 2**.



7. Close **Print Preview**.

Setting Page Breaks and Customizing Controls

Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0907

As you view the Winchester Web Design Customer Invoice Report in Report View, you may notice that the number of invoice records displayed on each screen varies depending on the number of items ordered. To ensure that each customer invoice starts on a new page, you can add a page break control. By default, when you view a report in Print Preview, data for each customer/record automatically appear on a separate page; however, multiple records appear on the same page when the report is displayed in Report View.

To add a title or general company information to an invoice, place title controls in the Page Header section rather than the Report Header, which only prints on the first page.

Positioning the Page Break Control

To ensure that each invoice record prints on a separate sheet of paper, you can set page breaks. When you set page breaks, add the break at the end of the Detail section so Access knows to start a new page before printing the next page header.

QUICK REFERENCE	ADDING PAGE BREAK CONTROLS
Task	**Procedure**
Add a page break control	■ Drag the Page Footer section bar down to provide space at the bottom of the Detail section. ■ Click the bottom of the Detail section where you want the break. ■ Choose Design→Controls→Insert Page Break.

DEVELOP YOUR SKILLS AC09-D07

Add Logo, Title, Date, and Page Break Controls

In this exercise, you will modify the Winchester Web Design Customer Invoice Report. You will add a title, insert the company logo and current date, and set page breaks to print each invoice on a separate page.

1. Display the **Customer Invoice Report** in **Design View**.
2. Select the **Customer Invoice** title control in the **Page Header** section.
3. Follow these steps to edit the title:

Ⓐ Click the title control to position the insertion point just before the existing text.

Ⓑ Type **`Winchester Web Design`** in front of *Customer* and press [Shift]+[Enter].

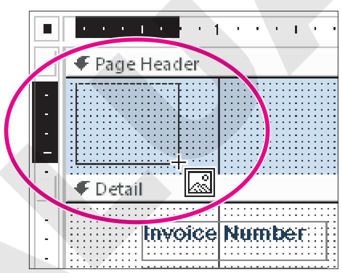
4. Tap [Enter]; type **4″** for the **Width** and **2″** for the **Left** property.

Add a Logo to the Page Header

5. Click the **Page Header** section bar, choose **Design→Controls→** Insert Image, navigate to the **AC2013 Lesson 09** folder, and choose **WWD-Logo.bmp**.

   If you choose Design→Header/Footer→Logo instead, Access inserts the image in the Report Header section and placeholders for title, date, and time controls. The empty placeholders are normally deleted.

6. Draw the logo on the far left side of the **Page Header** section.



7. Type **.9″** for the **Width** and **Height** properties. Type **.05″** for the **Top** property and **.2″** for the **Left** property.

Add a Date Control to the Report

8. Choose **Design→Header/Footer→** Date and Time and choose the **MM/DD/YYYY** Date format; *do not* include the time.

   Access places the new date control in the Report Header section.

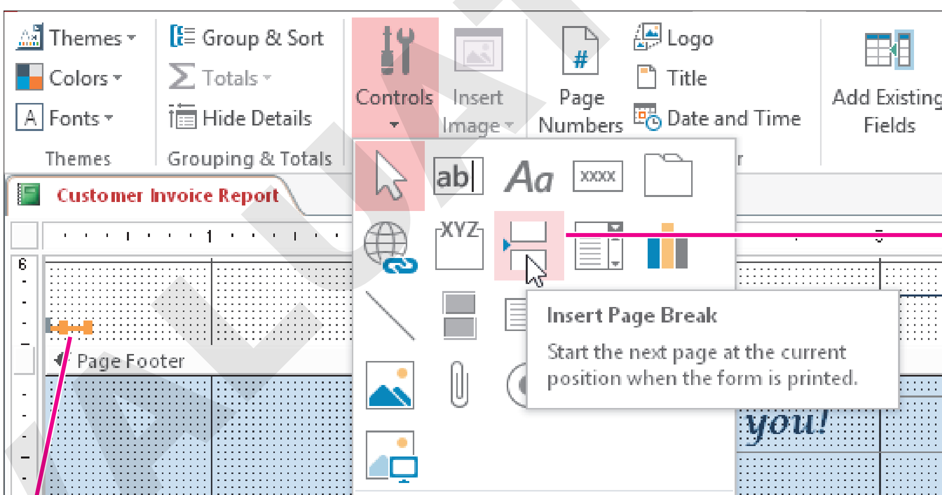
9. Select the date control and press [Ctrl]+[X] to cut the control from the **Report Header**.
10. Click the **Page Header** section bar and press [Ctrl]+[V] to paste the control into the Page Header.

11. Enter these property values for the **Date** control:
    - `2"` for the **Width** property
    - `.75"` for the **Top** property
    - `.2"` for the **Height** property
    - `3"` for the **Left** property
12. Choose **Center** for the **Text Align** property.
13. Right-click the **Report Header** section bar and choose **Report Header/Footer**. Click **Yes** to delete all controls in the section.
14. Switch to **Print Preview**.

If every other page is blank, the report might be too wide or there might be a control placed beyond the margin. Remedy this by shortening or moving the errant control to the left and dragging the right edge of the report to the left.

Add a Page Break Control

15. Switch to **Design View** and scroll down to the bottom of the **Detail** section.
16. Follow these steps to position a page break:



A Choose **Design→ Controls→Insert Page Break**.

B Place the Page Break in the **Detail** section just above the Page Footer section bar.

17. Switch to **Print Preview** and page through the report.
    There are times when adding a page break to a report may cause an extra page to print for each record. So if the page break isn't needed, do not add it.
18. Save and close the **Customer Invoice Report**.

Access 2013

Analyzing Report Performance

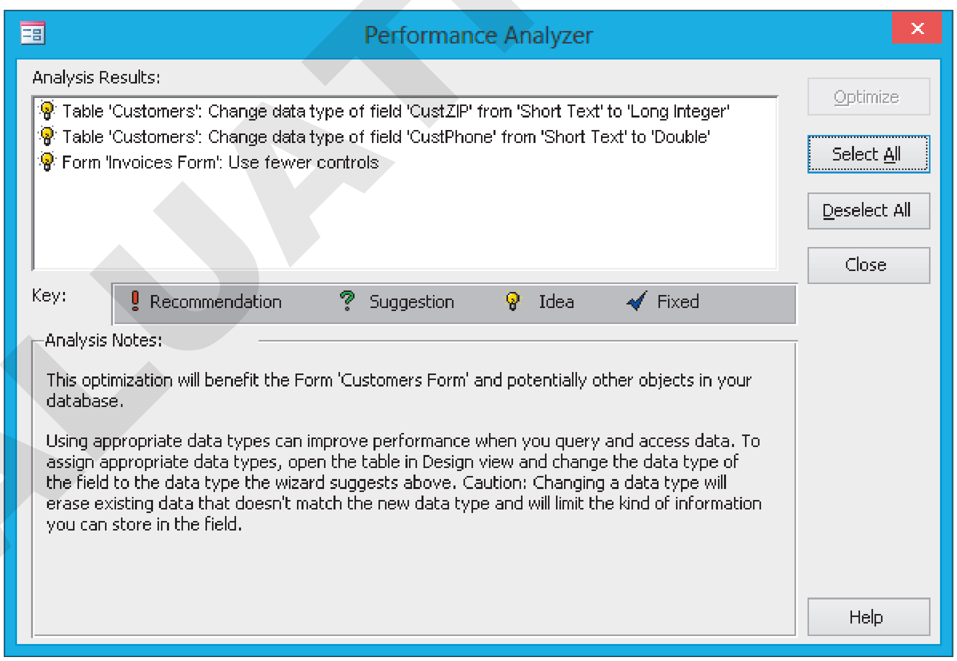
Video Library: http://labyrinthelab.com/videos Video Number: AC13-V0908

Access tracks each database object and identifies how tables, queries, forms, and reports are related. Any changes you make by importing a report, editing the report structure, creating a subreport based on a form, and then saving the form as a report may have an impact on the performance of the database.

What the Performance Analyzer Analyzes

To ensure that all objects in a database work together in an efficient manner, you can run the Performance Analyzer. The Performance Analyzer:

- Analyzes database performance by reviewing each database object, identifying potential errors, and recommending modifications to maintain optimum efficiency in the database.
- Compares relationships between database tables and identifies data redundancy.
- Identifies items such as mismatched field definitions and displays a list of these instances so that you can consider modifications.
- Locates errors that could result in inaccurate data analysis and any disconnects between forms/subforms and reports/subreports.
- Identifies fields and property settings that can slow down the running of queries and the generation of reports.



A sample Performance Analyzer report.

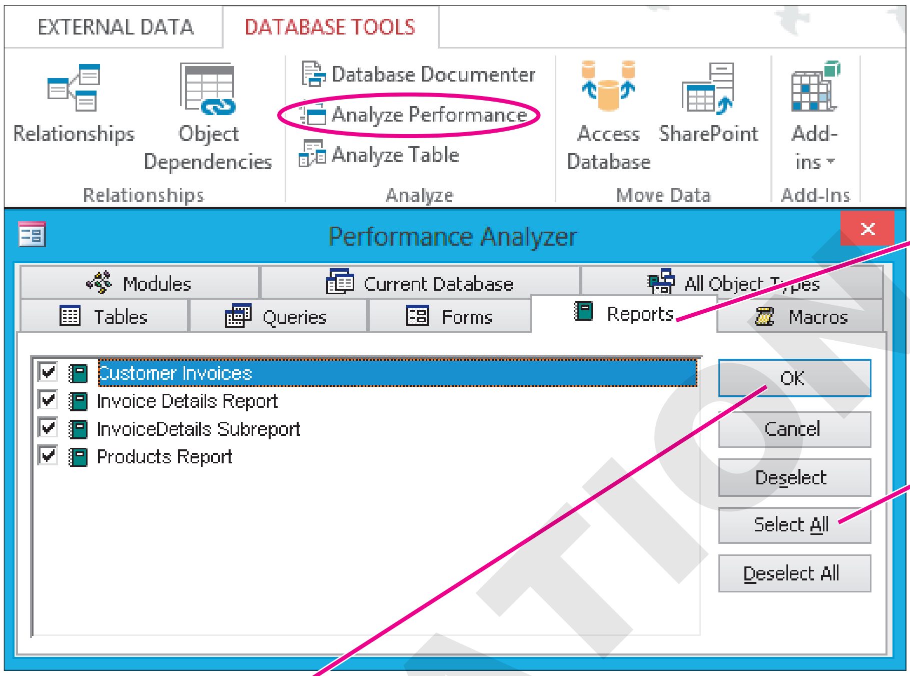
You can use the Performance Analyzer to analyze all objects in a database or selected objects. You can also instruct the analyzer to make corrections for you.

DEVELOP YOUR SKILLS AC09-D08

Analyze Report Performance

In this exercise, you will run the Performance Analyzer to analyze report performance in the Winchester Web Design database.

1. Choose **Database Tools→Analyze→** Analyze Performance to start the Performance Analyzer.
2. Follow these steps to run the Performance Analyzer on all database reports:



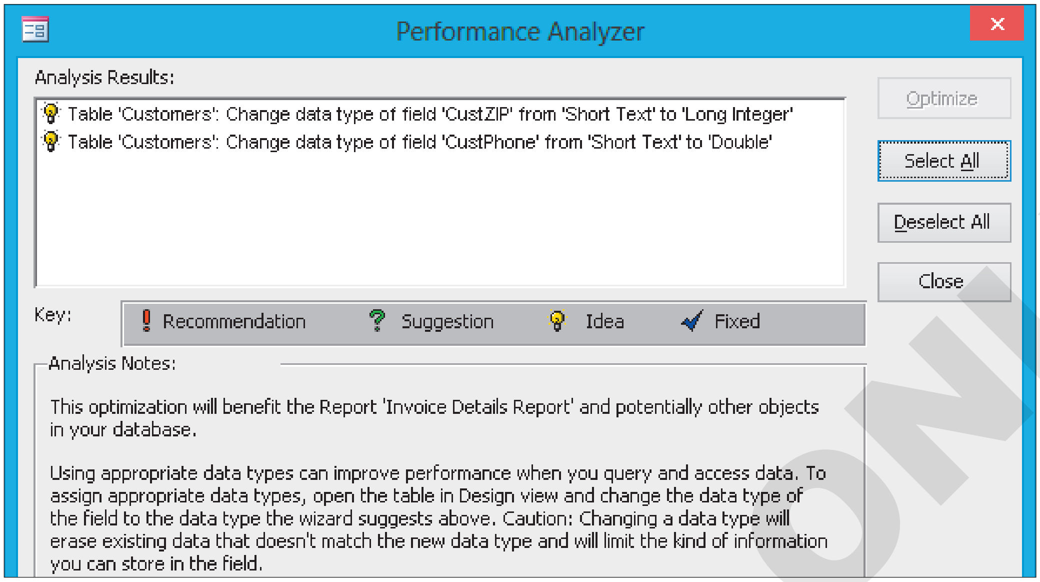
A Click the **Reports** tab.

B Click **Select All** to mark every checkbox.

C Click **OK**.

Access runs the Performance Analyzer and displays analysis results.

Access 2013



The analysis notes about each idea that appear in the bottom part of the Performance Analyzer dialog box indicate that the optimization will benefit the Invoice Details Report and potentially other objects in your database.

3. Close the **Performance Analyzer** dialog box and close the database. Exit **Access**.

Concepts Review

To check your knowledge of the key concepts introduced in this lesson, complete the Concepts Review quiz by choosing the appropriate access option below.

If you are...	Then access the quiz by...
Using the Labyrinth Video Library	Going to http://labyrinthelab.com/videos
Using eLab	Logging in, choosing Content, and navigating to the Concepts Review quiz for this lesson
Not using the Labyrinth Video Library or eLab	Going to the student resource center for this book

Reinforce Your Skills

REINFORCE YOUR SKILLS AC09-R01

Work with Reports and Subreports

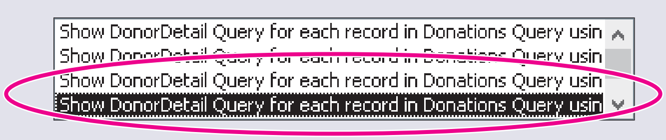
Kids for Change needs a report that breaks down donors and their donations by month. In this exercise, you will import a report that includes space for a subreport that contains donor detail information. You will save the subreport as a new report and then add a report control that numbers the activities that have available volunteers.

Import a Report

1. Start **Access**. Open **AC09-R01-K4C** from your **AC2013 Lesson 09** folder and save it as `AC09-R01-K4C-[FirstInitialLastName]`.
2. Choose **External Data→Import & Link→**Access.
   The Get External Data dialog box opens.
3. Click **Browse**, navigate to the **AC2013 Lesson 09** folder, and double-click **AC09-R01-K4C–Backup**.
   This database is a backup copy of the K4C database.
4. Choose the **Import Tables, Queries, Forms, Reports, Macros, and Modules into the Current Database** option, and click **OK**.
   Access displays object names contained in the backup database.
5. Click the **Reports** tab and choose **Monthly Donations Report**.
6. Click **OK** and click **Close** in the Get External Data dialog box.
7. Display the newly-imported **Monthly Donations Report** in **Design View**.
   The Detail section contains no controls. This is where you will insert the subreport.

Add a Subreport

8. Choose **Design→Controls→Subform/Subreport**.
9. Draw a subreport control in the **Detail** section of the newly-imported **Monthly Donations Report**.
   The SubReport Wizard starts.
10. Choose **DonorDetail Subform** from the Use an Existing Report or Form list and click **Next**.
11. Scroll through the list and choose **Show DonorDetail Query for each record in Donations Query using DonationDate**.



The Show items are too long to display completely in the list, but the highlighted one is shown in the box below the list.

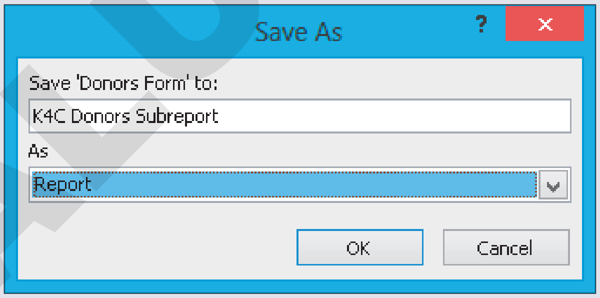
12. Click **Next**, keep the default name, and click **Finish**.
13. Click the **DonorDetail Subform label** and tap Delete.
    If you don't see the subform label, it might be hidden behind the subform. If necessary, click the Selection Type menu button at the top of the Property Sheet, choose DonorDetail Subform label, and tap Delete.
14. Click the subreport control and enter these properties on the Property Sheet:

Property	Value
Width	6.5"
Height	.5"
Top	0"
Left	.5"
Border Style	Transparent

15. Click the **Detail section bar** and type `.5"` for the **Height**.
16. Save the **Monthly Donations Report** and switch to **Print Preview**.
    The report with subreport should include each detail line in subform layout.

Create a Report from a Subreport

17. Switch to **Design View**.
18. Right-click the left side of the subreport control and choose **Subreport in New Window**.
    Access opens the subreport (in this case, the DonorDetail Subform) in a separate window. If you don't see the Subreport in New Window choice on the shortcut menu, click an area of the main report then right-click the subreport control again.
19. Choose **File→Save As→Save Object As→**Save As.
20. Type **`K4C Donors Subreport`** in the **Save…To** box and choose **Report** from the **As** menu.



21. Click **OK** and close the **K4C Donors Subreport**.
    The DonorDetail Subform is saved as a separate report so that any changes made to it are not reflected in the original DonorDetail Subform.
22. Display the **Monthly Donations Report** in **Design View**.
23. Display the **Property Sheet** and then display the **Data** tab.

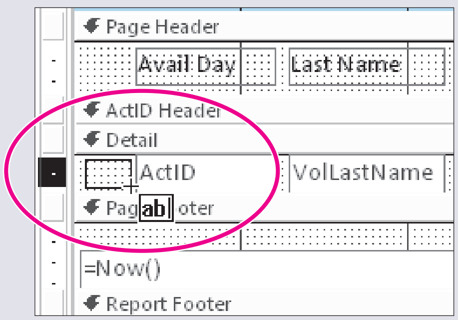
24. Select the subreport, click in the **Source Object** property line, and choose **Report.K4C Donors Subreport** from the drop-down menu.

25. Save and close the **Monthly Donations Report**.

Number Report Items

26. Display the **Volunteers Report** in **Design View**.

27. Choose **Design→Controls→Text Box** ab| and draw a new text box in the Detail section to the left of the ActID text box.



28. Delete the associated label control.

29. Click the new text box control and set these property values:

Property	Value
Name	txtCount
Control Source	=1
Width	.3”
Top	0”
Left	0”
Running Sum	Over All

30. Switch to **Report View**.
Access numbers the detail lines consecutively for each activity having a volunteer.

31. Save and close the **Volunteers Report**. Close the database and exit **Access**.

32. Submit your final file based on the guidelines provided by your instructor.
To see examples of how your file or files should look at the end of this exercise, go to the student resource center.

REINFORCE YOUR SKILLS AC09-R02

Add Fields and Controls, and Analyze Database Performance

Kids for Change wants to improve their Monthly Donations Report. In this exercise, you will add a field to calculate the total monthly donations for each donor. You will set the subreport to grow and shrink, depending on the contents, add custom controls and a page break to a report, and finally, run the performance analyzer on the database reports.

Add a Calculated Field to a Report

1. Start **Access**. Open **AC09-R02-K4C** from your **AC2013 Lesson 09** folder and save it as `AC09-R02-K4C-[FirstInitialLastName]`.
2. Display the **K4C Donors Subreport** in **Design View**.
3. Choose **Design→Controls→Text Box** and draw a new text box in the Page Footer section, under the Amount text box.
4. Select the associated label and tap Delete.
5. Click the new text box and enter these values on the Property Sheet:

Property	Value
Name	MonthTotal
Control Source	=Sum(Amount)
Format	Currency
Width	1.3”
Height	.2”
Top	0”
Left	5”
Font Name	Arial Rounded MT Bold
Text Align	Right

6. Save and close the **K4C Donors Subreport**.

Grow and Shrink a Subreport

7. Display the **Monthly Donations Report** in **Design View**.
8. Select the **K4C Donors Subreport**.
9. Choose **Yes** for the Can Grow property, if necessary; choose **Yes** for the Can Shrink property.
10. Save the **Monthly Donations Report**.

Add a Logo, Title, Date, and Page Break to a Report

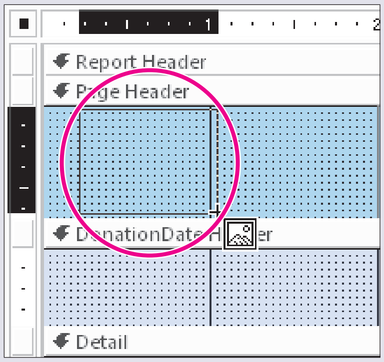
11. Select the title control.
12. Click in the title control to position the insertion point just before the existing text. Type `Kids for Change` in front of *Monthly Donations Report*.
13. Press Shift + Enter to bump *Monthly Donations Report* to a second line.

14. Tap [Enter]; type **4"** for the **Width**, type **2"** for the **Left** property, and choose **Center** for **Text Align**.

15. Click the **Page Header** section bar.

16. Choose **Design→Header/Footer→**Insert Image, navigate to the **AC2013 Lesson 09** folder; choose **All Files (*.*)**, and choose **K4C-Logo.bmp**.

17. Draw the logo on the far left side of the **Page Header** section.



18. Type **.8"** for the **Width** and **Height** properties. Type **.1"** for the **Top** property and **.5"** for the **Left** property.

    Now you will add a Date control to the Page Header section and center it under the title.

19. Choose **Design→Header/Footer→**Date and Time and choose the **MM/DD/YYYY** format; *do not* include the time.

    By default, Access places the new date control at the far right side of the Report Header.

20. Select the date control and press [Ctrl]+[X]. Then click the **Page Header** section bar and press [Ctrl]+[V].

21. Delete all empty placeholder controls in the Report Header section. Drag up the **Page Header section bar** to meet the Report Header section bar.

    This report will not include a Report Header section because the titles are in the Page Header section so they will appear at the top of every report page.

22. Enter these property values for the Date control:

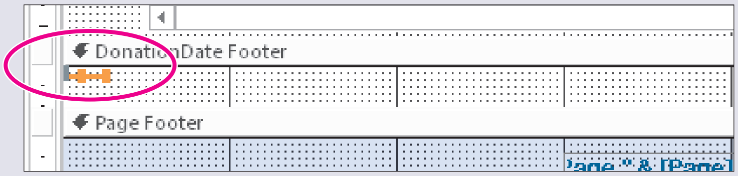
Property	Value
Width	2”
Height	.2”
Top	.75
Left	3”
Text Align	Center

23. Switch to **Print Preview**.

    The date will be centered in the Page Header section.

24. Close **Print Preview**.

25. In **Design View**, choose **Design→Controls→Insert Page Break** and click in the left side of the **DonationDate Footer** section.



Access places the page break control on the report.

26. Type `0"` for the **Top** property of the page break control.

27. Click the **DonationDate Footer section bar** and type `.001"` for the **Height**.
This will make the DonationDate Footer section as short as possible so that the page break doesn't push down the DonationDate header on the next page.

28. Switch to **Print Preview** and navigate to the **April** donations.
Each month's donations appear on a separate page.

29. Close **Print Preview**.

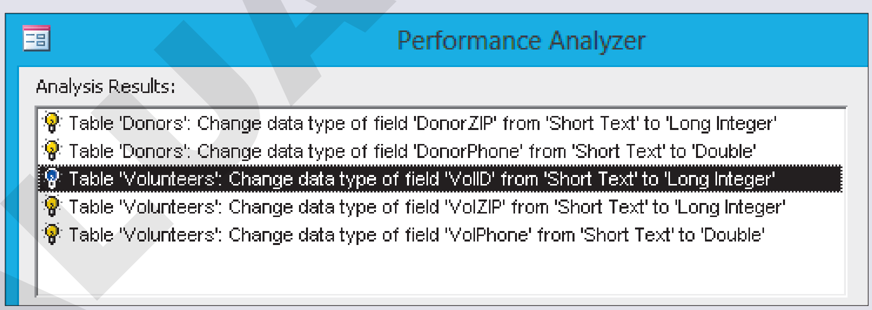
30. Save and close the **Monthly Donations Report**.

Analyze Report Performance

31. Choose **Database Tools→Analyze→** Analyze Performance.

32. Click the **Reports** tab, if necessary; click **Select All**, and click **OK**.
Access analyzes every report in the database and presents an analysis that shows relevant recommendations, suggestions, and ideas about data types, relationships, and design.

33. Click the third item in the list to see the recommendation that the analyzer has made.



The optimization will benefit the Volunteers Report and potentially other objects in your database. It suggests that you change the data type of the VolID field in the Volunteers table to Long Integer. No changes are needed because each current data type is valid.

34. Close the **Performance Analyzer** dialog box. Close the database and exit **Access**.

35. Submit your final file based on the guidelines provided by your instructor.
To see examples of how your file or files should look at the end of this exercise, go to the student resource center.

REINFORCE YOUR SKILLS AC09-R03

Work with Reports and Analyze Database Performance

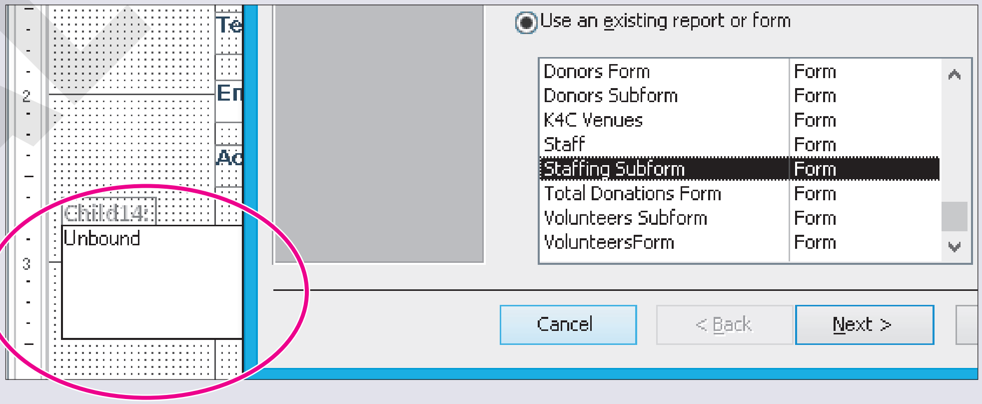
Kids for Change needs a report that presents activity staffing assignments. In this exercise, you will import a report that includes room for a subform containing activity detail information and save the subreport as a separate report. You will add a count of donations per donor and modify a report. You will set a subreport to accommodate its data, add custom controls and a page break to a report, and analyze report performance.

Import a Report

1. Start **Access**. Open **AC09-R03-K4C** from your **AC2013 Lesson 09** folder and save it as **`AC09-R03-K4C-[FirstInitialLastName]`**.
2. Choose **External Data→Import & Link→**Access.
   The Get External Data dialog box opens.
3. Click **Browse**, navigate to the **AC2013 Lesson 09** folder, and double-click **AC09-R03-K4C-Backup**.
   This database is a backup copy of the K4C database.
4. Choose the **Import Tables, Queries, Forms, Reports, Macros, and Modules into the Current Database** option, and click **OK**.
   Access displays object names contained in the backup database.
5. Click the **Reports** tab and choose **Staff Report**.
6. Click **OK** and click **Close** in the Get External Data dialog box.
7. Display the newly-imported **Staff Report** in **Report View**.
   The empty space in the Detail section is where you will insert the subreport.

Add a Subreport

8. Switch to **Design View** and choose **Design→Controls→Subform/Subreport**.
9. Draw a subreport control under the existing controls in the **Detail** section.

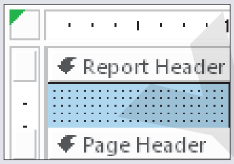


10. Scroll down the **Use an Existing Report or Form** list, choose **Staffing Subform**, and click **Next**.

Access 2013

11. Ensure that **Choose From a List** is the linking option.
12. Click **Next**, keep the default name, and click **Finish**.

    A small green triangle in the Report selector indicates a possible error. Click the triangle to view the Smart tag, which lists the error and possible solutions. In this case, the report is wider than a page. The next few steps will eliminate the error.



13. Click the **Staffing Subform label** and tap Delete.
14. Click the subreport and enter these properties on the Property Sheet:

Property	Value
Width	7.7"
Height	.5"
Top	3"
Left	0"
Border Style	Transparent

15. Click the **Report selector** and type `7.8"` for the **Width** property of the report.

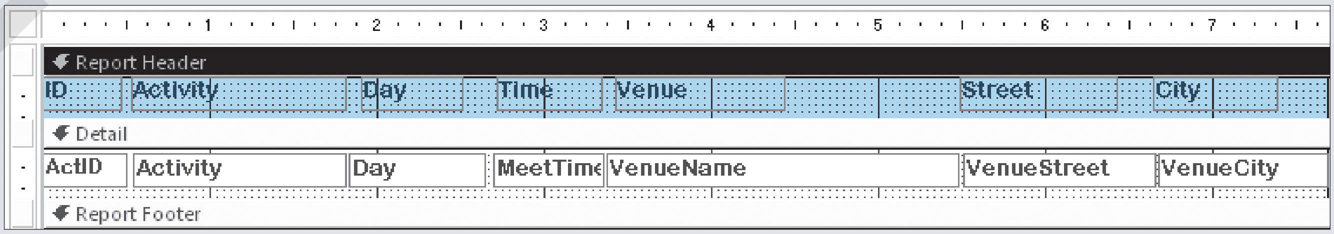
    The green Smart tag indicator should be gone now.
16. Save the **Staff Report** and switch to **Print Preview**.

    The report should include the activity detail line under each staffer's information.

Create a Report from a Subreport

17. Close **Print Preview** and switch to **Design View**.
18. Right-click the subreport control and choose **Subreport in New Window**.

    The Staffing Subform subreport opens in a separate window. If you don't see the Subreport in New Window choice, click any area of the main report then right-click the subreport again.
19. Choose **File→Save As→Save Object As→** Save As.
20. Type `K4C Staffing Subreport` in the **Save...To** box, choose **Report** from the **As** drop-down menu, and click **OK**.
21. Close the subform.
22. Display the **K4C Staffing Subreport** in **Design View**. Then click the **Detail section bar** and type `.3"` for the **Height**.
23. Right-click the **Detail section bar** and choose **Report Header/Footer**.
24. Choose **Blue, Accent 1, Lighter 80%** for the **Back Color** of the Report Header section.
25. Choose **Design→Controls→Label** Aa to add the seven labels to the Report Header section.



26. Select all the labels and enter these properties:

Property	Value
Height	.2”
Top	0”
Font Name	Arial Rounded MT Bold
Font Size	10
Fore Color	Blue, Accent 1, Darker 50%

27. Save and close the **K4C Staff Subreport**.

28. Display the **Staff Report** in **Design View**.

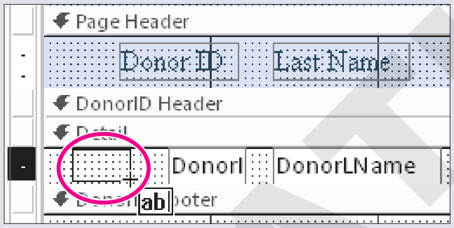
29. Select the subreport, type `Staffing Subreport` for the **Name** property, click in the **Source Object** line, and choose **Report.K4C Staffing Subreport**.

30. Save and close the **Staff Report**.

Number Report Items

31. Display the **Donations Report** in **Design View**.

32. Choose **Design→Controls→Text Box** ab and draw a new text box in the Detail section to the left of the DonorID text box.



33. Delete the associated label control.

34. Click the new text box control and set these property values:

Property	Value
Name	txtCounter
Control Source	=1
Width	.3”
Top	0”
Left	.3”
Border Style	Transparent
Font Name	Arial
Font Weight	Semi-Bold
Running Sum	Over All

35. Switch to **Report View**.

Access numbers the detail lines consecutively for each individual donation.

36. Save the **Donations Report**.

Add a Calculated Field to a Report and Change Page Layout

37. Switch to **Design View**, click the **Selection Type** menu button, and choose **Report**.

38. Drag the right edge of the report to the right to the **10″ mark** on the horizontal ruler.

39. Choose **Design→Controls→Text Box** and draw a new text box in the Detail section, to the right of the Amount text box.

40. Select the associated label and tap Delete.

41. Click the new text box and enter these values on the Property Sheet:

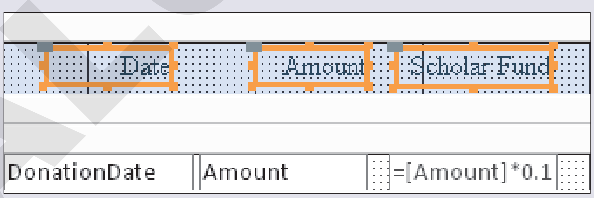
Property	Value
Name	ScholarFund
Control Source	=Amount*.1
Format	Currency
Width	.75”
Height	.25”
Top	0”
Left	7.9”
Border Style	Transparent

42. Choose **Design→Controls→Label** and draw a new label control above the ScholarFund text box.

43. Type `Scholar Fund` in the new label.

44. Click the **Amount** label, choose **Home→Clipboard→Format Painter**, and click the new **Scholar Fund label** to paint the same formatting.

45. Select all labels in the **Page Header section**.



46. Choose **Arrange→Sizing & Ordering→Align→Top**.

47. Choose **Arrange→Sizing & Ordering→Size/Space→To Shortest**.

48. Add a text box to the right of the ScholarFund text box, delete the associated label, and enter these properties for the new NetDonation text box:

Property	Value
Name	NetDonation
Control Source	=Amount-ScholarFund
Format	Currency
Width	1"
Top	0"
Left	8.8"
Border Style	Transparent

49. Choose **Design→Controls→Label**. Draw a new label control above the ScholarFund text box named **`Net Donation`**.
50. Click the **Amount** label and paint its format on the new **Net Donation label**.
51. Align and size the **Net Donation label** to the other labels as above.
52. Choose **Page Setup→Page Size→Margins** →**Narrow**.
53. Choose **Page Setup→Page Layout→Landscape** .
54. Choose **Report** from the **Selection Type** list at the top of the Property Sheet and type **`10"`** for the **Width** property.

    The layout is wider and the Report Header should be centered on the report.
55. Select all the controls in the **Report Header section** and tap → until the left edge of the titles are at the **3" mark** on the horizontal ruler.
56. Switch to **Print Preview**.

    The report should include the Count running down the left side and the two new currency text fields and labels on the right.
57. Save and close the **Donations Report**.

    Now, you will modify the subreport in the Staff Report to grow and shrink depending on how many detail lines it contains.
58. Display the **Staff Report** in **Design View**.
59. Select the **K4C Staffing Subreport** and click the **Format** tab of the Property Sheet.
60. Choose **Yes** for the **Can Grow** property on the Property Sheet, if necessary; choose **Yes** for the **Can Shrink** property.
61. Save the **Staff Report** and leave it in **Design View**.

Add a Logo, Title, Date, and Page Break to a Report

62. Display the **Volunteers Report** in **Design View**.
63. Select all the controls in the Report Header section of the **Volunteers Report**.

64. Press Ctrl+C to copy the selected controls, click the **Page Header section bar** of the **Staff Report**, and press Ctrl+V to paste the controls.

65. Tap ↓ twice to move down the pasted controls slightly.

66. Close the **Volunteers Report**.

67. Select the logo and type `6.5"` for the **Left** property.

68. Select the two title controls and type `2"` for the **Left** property.

69. Select the **Date control** and type `3.5"` for the **Left** property.

70. Highlight the text in the **Volunteers subtitle**, type `Staff Report`, and tap Enter.

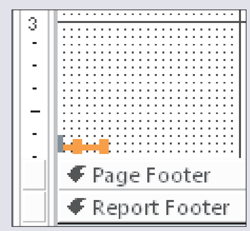
The Page Header with the new heading controls and Staff Report as the subtitle.

71. Switch to **Print Preview**.

The report will be displayed with the new subtitle.

72. Switch to **Design View**. Choose **Design→Controls→Insert Page Break** and click in the bottom-left side of the Detail section of the main report.

Access places the page break control on the report.



73. Switch to **Print Preview**.

The report should display each staffer on a separate page.

74. Close **Print Preview**, and save and close the **Staff Report**.

Analyze Report Performance

75. Choose **Database Tools→Analyze→**Analyze Performance.

76. Click the **Reports** tab, click **Select All**, and click **OK**.

Access provides more detail about how to optimize database performance with respect to each specific result. In the case above, the analyzer presents some "ideas" about changing field data types; however, each current data type is valid and acceptable.

77. Close the **Performance Analyzer** dialog box. Close the database and exit **Access**.

78. Submit your final file based on the guidelines provided by your instructor.

Apply Your Skills

APPLY YOUR SKILLS AC09-A01

Work with Reports and Subreports

In this exercise, you will help Universal Corporate Events, Ltd. create a report that breaks down revenue by venue, including numbered detail lines for each event. You will save the subreport as a separate report, and add a text box to count scheduled events at each venue.

Import a Report

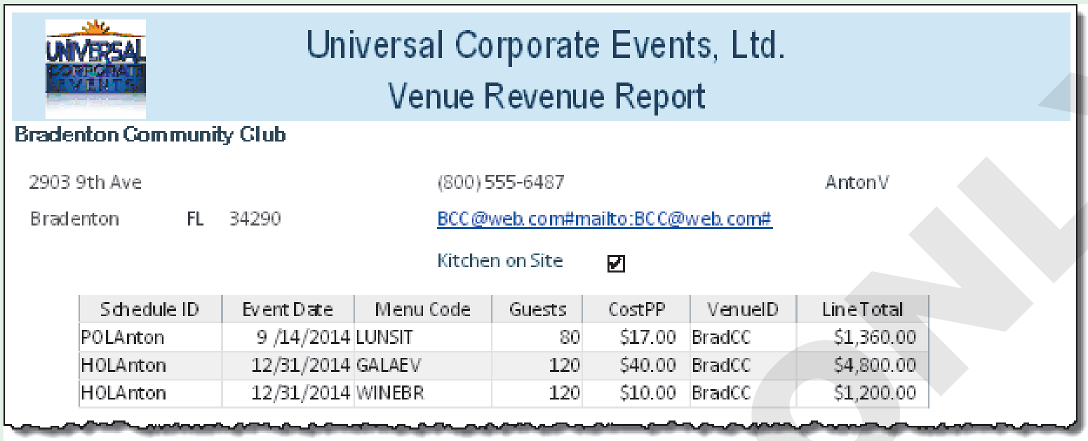
1. Start **Access**. Open **AC09-A01-UCE** from your **AC2013 Lesson 09** folder and save it as `AC09-A01-UCE-[FirstInitialLastName]`.
2. Choose **External Data→Import & Link→** Access.
   The Get External Data dialog box opens.
3. Click **Browse**, navigate to the **AC2013 Lesson 09** folder, and double-click **AC09-A01-UCE-Backup**.
   This database is a backup copy of an older UCE, Ltd. database.
4. Choose the **Import Tables, Queries, Forms, Reports, Macros, and Modules into the Current Database** option and click **OK**.
   Access displays object names contained in the backup database.
5. Click the **Reports** tab and choose **Venue Revenue Report**.
6. Click **OK** then close the **Get External Data** dialog box.
7. Display the newly imported **Venue Revenue Report** in **Design View**.
   The space in the VenueID Header section is where you will insert the subreport.

Add a Subreport

8. Draw a subreport control in the **VenueID Header** section under the other controls.
9. Choose **VenueRevenue Subform** and click **Next**.
10. Choose the **Show Statement Linking By VenueID**.
11. Click **Next**, keep the default name, and click **Finish**.
12. Delete the **VenueRevenue Subform label**.
13. Click the subreport control and enter these properties on the Property Sheet:

Property	Value
Width	7”
Height	1.5”
Top	1.3”
Left	.25”
Border Style	Transparent

14. Click the **VenueID Header section bar** and type **3″** for the **Height** property.
15. Save the **Venue Revenue Report** and switch to **Print Preview**.



Universal Corporate Events, Ltd.
Venue Revenue Report

Bradenton Community Club

2903 9th Ave (800) 555-6487 AntonV
Bradenton FL 34290 BCC@web.com#mailto:BCC@web.com#
Kitchen on Site ☑

Schedule ID	Event Date	Menu Code	Guests	CostPP	VenueID	LineTotal
POLAnton	9 /14/2014	LUNSIT	80	$17.00	BradCC	$1,360.00
HOLAnton	12/31/2014	GALAEV	120	$40.00	BradCC	$4,800.00
HOLAnton	12/31/2014	WINEBR	120	$10.00	BradCC	$1,200.00

Create a Report from a Subreport

16. Switch to **Design View**, right-click the left side of the subreport control, and choose **Subreport in New Window**.
    Access opens the subreport in a separate window.
17. Choose **File→Save As→Save Object As→Save As**.
18. Type **`VenueRevenue SubReport`** in the **Save...To** box, choose **Report** from the **As** menu, and click **OK**. Close the **VenueRevenue SubReport**.
    Access returns to the Venue Revenue Report in Design View.
19. With the subreport control selected, click in the **Source Object** line of the Property Sheet and choose **Report.VenueRevenue SubReport**.
20. Save the **Venue Revenue Report** then switch to **Print Preview**.
    The subreport will be displayed.
21. Close **Print Preview** and close the **Venue Revenue Report**.
    Next, you will resize the labels and move them from the Detail section into the Report Header section.
22. Display the **VenueRevenue SubReport** in **Design View** and drag the right edge of the report to the right a couple of inches.
23. Select all labels and text boxes, choose **Transparent** for the **Border Style** property, and choose **Text 1** (black) for the **Fore Color** property.
24. Reduce the size of each label to just fit its caption.
25. Click the **Report Header section bar** and type **.3″** for the **Height**.
26. Cut each label, in order, from the Detail section and paste them into the Report Header section, spacing them horizontally across the section.
27. Click and drag each text box within the Detail section to line up horizontally under each label, resizing them as necessary.

28. Right-align the **Line Total label**, the **Detail section calculated control**, and the **Report Footer section calculated control**.
29. Click the **Detail section bar** and type **.3"** for the **Height** property.
30. Switch to **Layout View** and resize and move the controls as shown.

VenueID	Schedule ID	Event Date	Menu Code	Guests	CostPP	Line Total
PalmCt	BRTLuna	10/12/2014	BARSNK	50	$7.50	$375.00
WMinst	HOLMiller	1/1/2015	CHFBRK	100	$16.00	$1,600.00
Meadow	HOLMiller	7/2/2014	DESSRT	25	$13.00	$325.00
ClubLK	HOLBreen	12/11/2014	DESSRT	50	$13.00	$650.00
WMinst	HOLMiller	1/1/2015	DESSRT	100	$13.00	$1,300.00

31. Save the subreport.

Number Report Items

32. Switch to **Design View**, and then type **6"** for the **Width** property of the subreport.
33. Select all report controls and tap [→] to nudge them just to the right edge of the subreport.
34. Draw a new text box in the Detail section to the left of the **VenueID** text box. Delete the associated label control.
35. Click the new text box control and set these property values:

Property	Value
Name	txtCount
Control Source	=1
Width	.2"
Top	0"
Left	0"
Border Style	Transparent
Running Sum	Over All

36. Save and close the **VenueRevenue SubReport**.
37. Display the **Venue Revenue Report** in **Print Preview**.
    The detail lines for each venue are counted.
38. Save and close the reports. Then close the database and exit **Access**.
39. Submit your final file based on the guidelines provided by your instructor.
    To see examples of how your file or files should look at the end of this exercise, go to the student resource center.

APPLY YOUR SKILLS AC09-A02

Add Fields and Controls, and Analyze Database Performance

Universal Corporate Events, Ltd. wants to refine their database reports and analyze report performance. In this exercise, you will add a field to calculate the total of all the venues' revenues; modify a subreport to ensure that all venue detail lines will display; add custom Report Header controls and a page break to another report, and run the analyze report performance.

Add a Calculated Field to a Report

1. Start **Access**. Open **AC09-A02-UCE** from your **AC2013 Lesson 09** folder and save it as **`AC09-A02-UCE-[FirstInitialLastName]`**.
2. Open the **Venue Revenue Report** in **Design View**.
3. Click the **Report Footer section bar** and type **`.4"`** for the **Height** property.
4. Draw a new text box in the **Report Footer** section, under the right end of the subreport.
5. Select the associated label and enter these values on the Property Sheet:

Property	Value
Caption	Grand Total for All Venues
Width	2"
Top	.1"
Left	2"
Font Weight	Semi-Bold
Fore Color	Blue, Accent 1, Darker 50%

6. Click the new text box and enter these property values:

Property	Value
Name	ActivityCost
Control Source	=Sum(Guests*ChgPP)
Format	Currency
Width	1.5"
Top	.1"
Left	5"
Border Style	Transparent
Font Weight	Semi-Bold
Fore Color	Blue, Accent 1, Darker 50%

7. Switch to **Print Preview** and navigate through the report.

   If you get an error message that says section width is greater than page width, click OK, display the report in Design View, and set the Width property of the report to 7.9".
8. Save the **Venue Revenue Report**.

Grow and Shrink a Subreport

9. Display the **Venue Revenue Report** in **Design View**.
10. Select the **VenueRevenue Subform** and click the **Format** tab on the Property Sheet.
11. Choose **Yes** for the **Can Grow** property, if necessary; choose **Yes** for the **Can Shrink** property.

    This ensures that all venue detail lines will be displayed.
12. Save the **Venue Revenue Report**.

Add a Logo, Title, Date, and Page Break to a Report

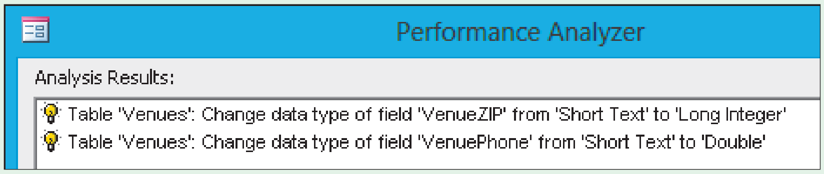
13. Open the **Event Revenue Report** in **Design View**. Delete the title control in the Report Header, click the **Report Header section bar**, and type `0"` for its **Height**.
14. Click the **Page Header section bar** and type `.85"` for its **Height** property
15. Choose **Blue, Accent 1, Lighter 80%** for the **Back Color** of the Page Header section.
16. Copy all the controls in the Report Header section of the **Venue Revenue Report**.
17. Paste the copied controls into the Page Header section **Event Revenue Report**; close the **Venue Revenue Report**.
18. Tap ↓ as necessary to move down the pasted controls in the Page Header.
19. Select the two title controls; type `4"` for the **Width** and `2"` for the **Left** property.
20. Select just the logo and type `.5"` for the **Left** property.
21. Select the **="Page " control** in the Page Footer section and choose **Right** for the Text Align property. Then, right-align the **="Page " control** with the **Total Revenue controls**.
22. Change the subtitle to `Event Revenue Report`, and tap Enter.
23. Choose **Design→Controls→Insert Page Break** and click in the left side of the EventDate Footer under the Total for label.

    Access places the page break control on the report.
24. Switch to **Print Preview** and navigate to **January 2014**.

    Each month's donations appear on a separate page.
25. Save and close the **Event Revenue Report**.

Analyze Database Performance

26. Choose **Database Tools→Analyze→**Analyze Performance.
27. Choose the **Reports** tab, click **Select All**, and click **OK**.
    Access analyzes the reports and presents an analysis that returns several ideas.



The analyzer presents "ideas" about changing field data types; but each current data type is valid and acceptable.

28. Close the **Performance Analyzer** dialog box. Then close the database and exit **Access**.
29. Submit your final file based on the guidelines provided by your instructor.
    To see examples of how your file or files should look at the end of this exercise, go to the student resource center.

APPLY YOUR SKILLS AC09-A03

Work with Reports and Analyze Database Performance

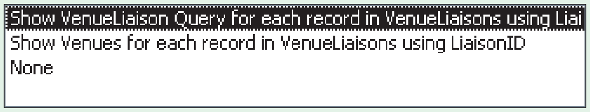
In this exercise, you will help Universal Corporate Events refine existing reports and analyze report performance. You will import a report and add a subreport that shows revenue from each venue liaison. You will create a separate report from the subreport, add a count of UCE's venues, and add a field to calculate revenue by liaison. You will then modify a subreport to grow or shrink, add Report Header controls and a page break, and analyze report performance.

Import a Report

1. Start **Access**. Open **AC09-A03-UCE** from your **AC2013 Lesson 09** folder and save it as `AC09-A03-UCE-[FirstInitialLastName]`.
2. Choose **External Data→Import & Link→**Access.
   The Get External Data dialog box opens.
3. Click **Browse**, navigate to the **AC2013 Lesson 09** folder, and double-click **AC09-A03-UCE-Backup**.
4. Choose the **Import Tables, Queries, Forms, Reports, Macros, and Modules into the Current Database** option, and click **OK**.
   Access displays object names contained in the backup database.
5. Click the **Reports** tab and choose **Liaison Revenue Report**.
6. Click **OK** then close the **Get External Data dialog box**.
7. Display the **Liaison Revenue Report** in **Design View** and open the Property Sheet.
8. Type `Liaison Revenue Report` for the **Caption** property.

Add a Subreport

9. Draw a subreport control in the **Detail** section.
10. Choose **VenueLiaison Subform** as the data source.
11. Choose the **Show VenueLiaison Query** option shown:



12. Click **Next**, keep the default name, and click **Finish**.
13. Delete the **VenueLiaison Subform label**.
14. Click the subreport control and enter these properties on the Property Sheet:

Property	Value
Width	7.5”
Height	2”
Top	2”
Left	.1”
Border Style	Transparent

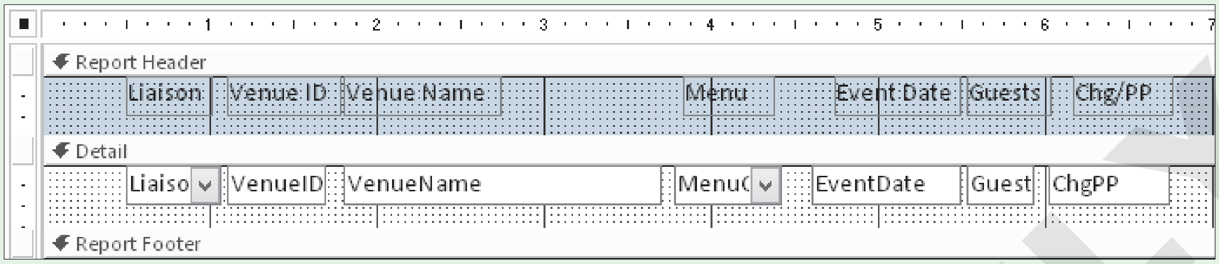
15. Click the **Detail section bar** and type `4"` for the **Height** property.
16. Save the **Liaison Revenue Report** and switch to **Print Preview**.
    The report should list each detail line in datasheet layout. If you get a page width error message, set the report's Width property to 7.9".
17. Close **Print Preview**.

Create a Report from a Subreport

18. Switch to **Design View**, right-click the left side of the subreport control, and choose **Subreport in New Window**.
    Access opens the subreport in a separate window.
19. Choose **File→Save As→Save Object As→Save As**.
20. Type `VenueLiaison SubReport` in the **Save…To** box, choose **Report** from the **As** menu, and click **OK**.
21. Close the subreport. Then, with the subreport control selected, click in the **Source Object** property line and choose **Report.VenueLiaison SubReport**.
22. Save the **Liaison Revenue Report** and switch to **Print Preview**.
23. Close **Print Preview** and close the **Liaison Revenue Report**.
24. Display the **VenueLiaison SubReport** in **Design View**.
25. Select all controls; choose **Transparent** for the **Border Style** and **Black, Text 1** for the **Fore Color**.

Access 2013

26. Resize and align the header controls with the detail controls.



27. Save the **VenueLiaison SubReport**.

Number Report Items

28. Type `7.5"` for the **Width** property of the subreport.
    Report should appear in the Selection Type box at the top of the Property Sheet.

29. Draw a text box in the Detail section to the left of the **Liaison** text box. Delete the associated label control.

30. Click the new text box control and set these property values:

Property	Value
Name	txtCount
Control Source	=1
Width	.3"
Top	0"
Left	.1"
Border Style	Transparent
Fore Color	Text 1, Black
Running Sum	Over All

31. Save the subreport.

Add a Calculated Field to a Report

32. Draw a new text box in the Detail section to the right of the **Chg/PP** text box. Delete the associated label.

33. Click the new text box and enter these property values:

Property	Value
Name	NetAmt
Control Source	= Guests*ChgPP
Format	Currency
Width	.9"
Top	0"
Left	6.6"
Font Weight	Semi-Bold
Fore Color	Blue, Accent 1, Darker 50%

34. Draw a new label in the Report Header section to the right of the **Chg/PP label**.
35. Type **`Net Amt`** in the new label.
36. Use the **Format Painter** to paint the formatting of the other labels onto the new label.
37. Type **`.6"`** for the **Width** and **`6.9"`** for the **Left** property.
38. Save and close the subreport.
39. Display the **Liaison Revenue Report** in **Print Preview**.

    A field that multiplies the number of guests by the charge per person to produce a net amount is added to the subreport. If necessary, switch to Layout View to adjust the size and spacing of the controls for better display.
40. Close **Print Preview**.

Grow a Subreport

41. Switch to **Design View** and click to select the **VenueLiaison SubReport**.
42. Choose **Yes** for the **Can Grow** property, if necessary; choose **Yes** for **Can Shrink**.

    Setting the Can Grow and Can Shrink properties will ensure that all venue detail lines will be displayed, and that the spacing between the final venue total and the grand total will always be the same.
43. Save the **Liaison Revenue Report**.

Add a Logo, Title, Date, and Page Break to a Report

44. Display the **Venue Revenue Report** in **Design View** and copy all controls in the **Report Header** section. Close the report.
45. Display the **Liaison Revenue Report** in **Design View**, delete the existing title control, set the Report Header **Height** property to **`0`**, and paste the copied controls into the Page Header section.
46. Tap [↓] to align the pasted controls in the Page Header.
47. Select the two title controls and type **`2"`** for the **Left** property.
48. Select the logo and type **`.5"`** for the **Left** property.
49. Select the **Date control** and type **`6.75"`** for the **Left** property.
50. Change the subtitle to **`Liaison Revenue Report`**.
51. Click the **Page Header** section bar and choose **Blue, Accent 1, Lighter 80%** for the **Back Color** property.
52. Save the report and switch to **Print Preview**.

53. Close **Print Preview**.

Access 2013

54. Choose **Design→Controls→Insert Page Break** and click in the bottom-left corner of the **Detail section** just below the subform.

    Access places the page break control on the report.

55. Switch to **Print Preview** and navigate through the pages.

    Each liaison's net amount should be displayed on a separate page.

TIP

If every other page is blank, the report might be too wide or there might be a control placed beyond the margin. To fix this, move the errant control to the left and drag the right edge of the report to the left.

56. Save and close the **Liaison Revenue Report**.

Analyze Database Performance

57. Choose **Database Tools→Analyze→**Analyze Performance.
58. Choose the **Reports** tab, click **Select All**, and click **OK**.

    Access analyzes the reports, presents an analysis, and suggests how to optimize performance.

59. Close the **Performance Analyzer** dialog box. Then close the database and exit **Access**.
60. Submit your final file based on the guidelines provided by your instructor.

Extend Your Skills

In the course of working through the Extend Your Skills exercises, you will think critically as you use the skills taught in the lesson to complete the assigned projects. To evaluate your mastery and completion of the exercises, your instructor may use a rubric, with which more points are allotted according to performance characteristics. (The more you do, the more you earn!) Ask your instructor how your work will be evaluated.

AC09-E01 That's the Way I See It

Blue Jean Landscaping needs to modify its database reports. Use the database you used in AC08-E01 or open **AC09-E01-BJL** from the **AC2013 Lesson 09** folder and save it as **`AC09-E01-BJL-[FirstInitialLastName]`**. Import the Customer Sales Report from **AC09-E01-BJL-Backup** in the **AC2013 Lesson 09** folder. (If using your own database, import a report from one of your backups or create a new backup.) Add the CustomerSales Subform to the Customer Sales Report; save the subform as a separate report, and number the lines within the subreport. (If using your own database, insert a related subform in your imported report.) Calculate each customer line total (Price*QtySold) in the Detail section of the subreport. Calculate each customer's total (=Sum(Price*QtySold)) in the Report Footer.

Add appropriate title/subtitles, date, and either the BJL logo or your own. Insert a page break to display each customer on a separate page and, finally, run the performance analyzer on the database reports.

You will be evaluated based on the inclusion of all elements, your ability to follow directions, your ability to apply newly learned skills to a real-world situation, your creativity, and your accuracy in creating objects and/or entering data. Submit your final file based on the guidelines provided by your instructor.

AC09-E02 Be Your Own Boss

In this exercise, you will modify reports for Blue Jean Landscaping. To begin, open **AC09-E02-BJL** from the **AC2013 Lesson 09** folder and save it as **`AC09-E02-BJL-[FirstInitialLastName]`**.

Import the Manufacturer Sales Report from the **AC09-E02-BJL-Backup** database (in **AC2013 Lesson 09**). Insert the ManufacturerSales Subform in the Manufacturer Sales Report and save the subform as a separate report. Number the line items in the subreport and main form. Calculate each line total (Price*QtySold) in the Detail section of the subreport.

Format titles, add the BJL-Logo and date, add a page break to display each manufacturer on a separate page, and analyze report performance.

You will be evaluated based on the inclusion of all elements, your ability to follow directions, your ability to apply newly learned skills to a real-world situation, your creativity, and your accuracy in creating objects and/or entering data. Submit your final file based on the guidelines provided by your instructor.

Transfer Your Skills

In the course of working through the Transfer Your Skills exercises, you will use critical-thinking and creativity skills to complete the assigned projects using skills taught in the lesson. To evaluate your mastery and completion of the exercises, your instructor may use a rubric, with which more points are allotted according to performance characteristics. (The more you do, the more you earn!) Ask your instructor how your work will be evaluated.

AC09-T01 Use the Web as a Learning Tool

Throughout this book, you will be provided with an opportunity to use the Internet as a learning tool by completing WebQuests. According to the original creators of WebQuests, as described on their website (WebQuest.org), a WebQuest is "an inquiry-oriented activity in which most or all of the information used by learners is drawn from the web." To complete the WebQuest projects in this book, navigate to the student resource center and choose the WebQuest for the lesson on which you are currently working. The subject of each WebQuest will be relevant to the material found in the lesson.

WebQuest Subject: Filtering data in reports

Submit your files based on the guidelines provided by your instructor.

AC09-T02 Demonstrate Proficiency

The Stormy BBQ Key West store and restaurant has been enjoying increased sales! You must make some changes to the database reports to produce more useful sales results. Open **AC09-T02-SBQ** from the **AC2013 Lesson 09** folder and save it as `AC09-T02-SBQ-[FirstInitialLastName]`.

Import the Merchandise Sales Report, which lists merchandise by SKU, from **AC09-T02-SBQ-Backup** in the **AC2013 Lesson 09** folder. Insert the MerchandiseSales Subform into the Detail section of the Merchandise Sales Report to add individual sale line items (Choose Show each record in Merchandise using SKU). Save the subform as a report. (Close the subform then open the subreport so the changes you make are not reflected in the subform). Number line items in the subreport and in the main report. Calculate each line total (ListPrice*QtySold) in the Detail section of the subreport. Copy the titles, logo, date, and formatting from the Merchandise Inventory Report into the Merchandise Sales Report, add a page break to display each SKU item on a separate page, and run the performance analyzer.

Submit your final file based on the guidelines provided by your instructor.