

# CS1100: Access Reports

A (Very) Short Tutorial on Microsoft  
Access Report Construction

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# Reports

- Reports are formatted output of the results of queries.
- Access has two ways to create reports:
  - Custom Reports
  - Report Wizard
- In both cases, you need a query that contains the information you want to put into the report.

# The *Orders* Database

- The database contains data for orders placed by customers.
- For each order we collect what was ordered, how much of that item was ordered, and at what price.
- For each order we track who placed that order.
- For each customer (called a contact) we store where they live.
- For each product that we sell we track the product's description and price.

# The OrderInvoice Report

Matthew's Computer Store  
Sudbury, MA 01776

Customer:

Eleanor Milgrom  
7245 NW 8 Street  
Margate, FL 33063

Order Number: O0008

Order Date: 4/22/1999

Quantity	Product Name	UnitPrice	Extended Price
1	CD-ROM: 32X	\$249.00	\$249.00
2	4 GB SCSI Hard Drive	\$1,245.00	\$2,490.00
4	20" Multisync Monitor	\$1,599.00	\$6,396.00
3	Pentium II/450 MHz	\$2,299.00	\$6,897.00
1	Pentium II/300 MHz	\$1,599.00	\$1,599.00

Order Total \$17,631.00

Wednesday, June 22, 2011

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# Parameterized Query

- Allows user to input a specific value for a query.
  - E.g. ask user what name, zip code, product, etc. they would like information about.
- In the criteria field, set an attribute that does not exist in any joined tables.

# Parameterized Query

- In the criteria field, set an attribute that does not exist in any joined tables.

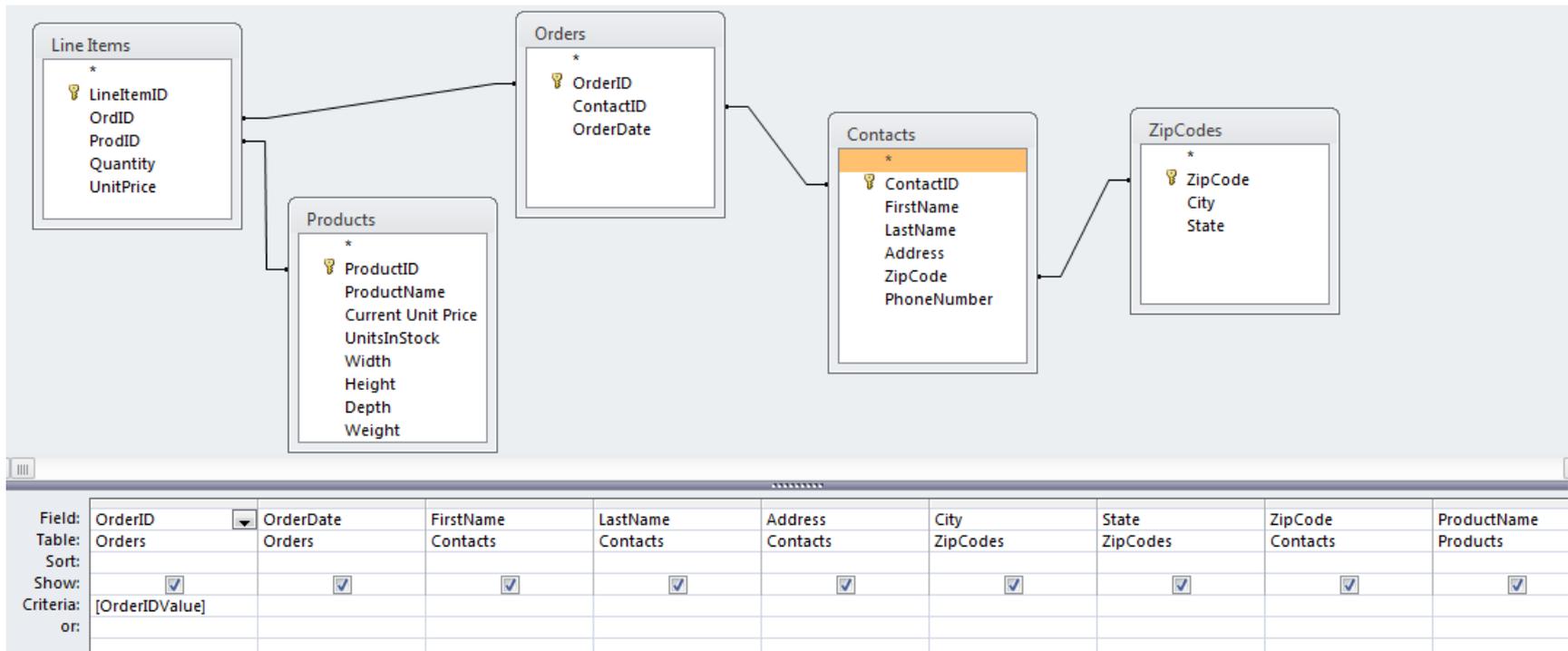
The screenshot illustrates the process of creating a parameterized query in Microsoft Access. It shows the 'Criteria' field in the query design grid set to '[LastNameValue]'. A dialog box titled 'Enter Parameter Value' is displayed, where the user has entered 'Lee' in the 'LastNameValue' field. The resulting query results show a record with 'Lee' as the last name and '45501' as the zip code.

Field:	ContactID	LastName	ZipCode
Table:	Contacts	Contacts	Contacts
Sort:			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		[LastNameValue]	

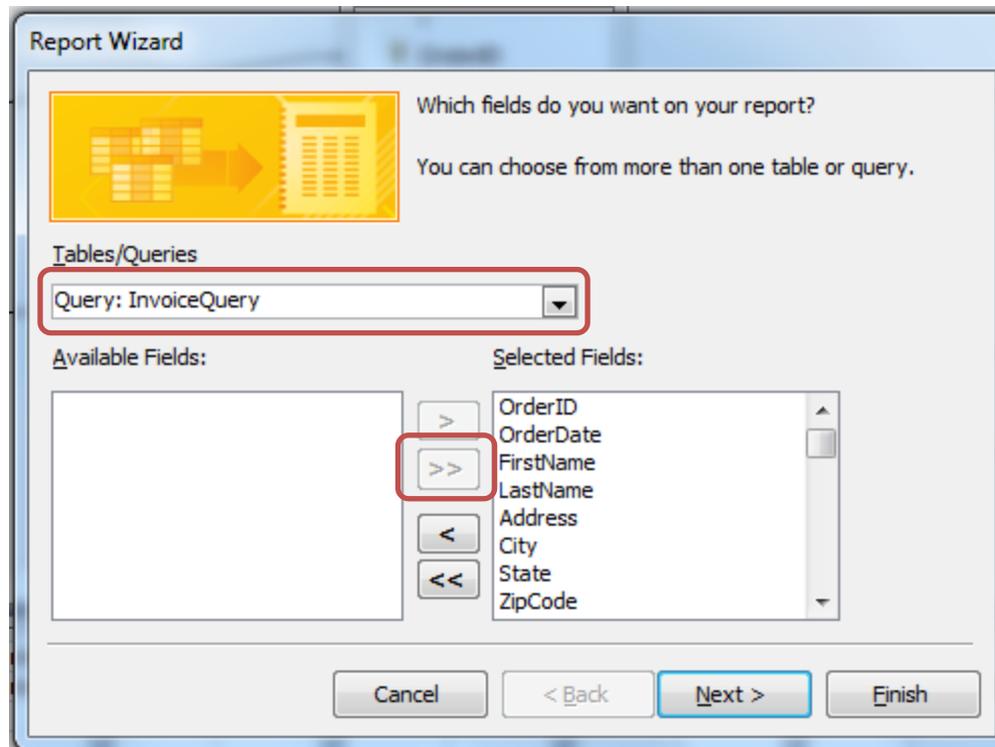
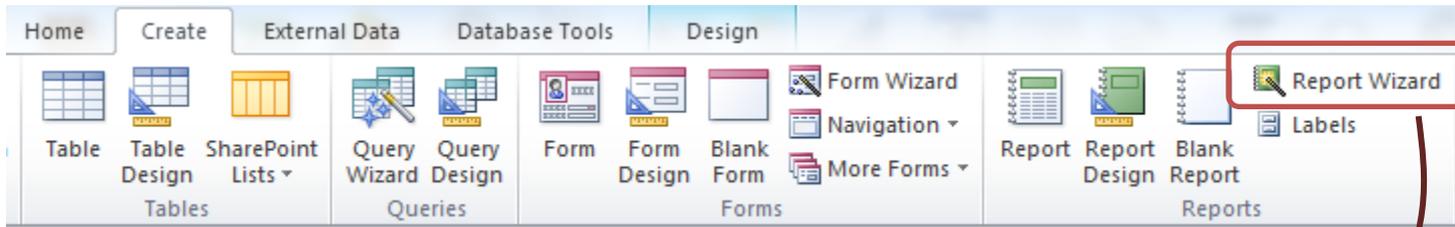
ContactID	LastName	ZipCode
(New)	Lee	45501

# The Query for the Report

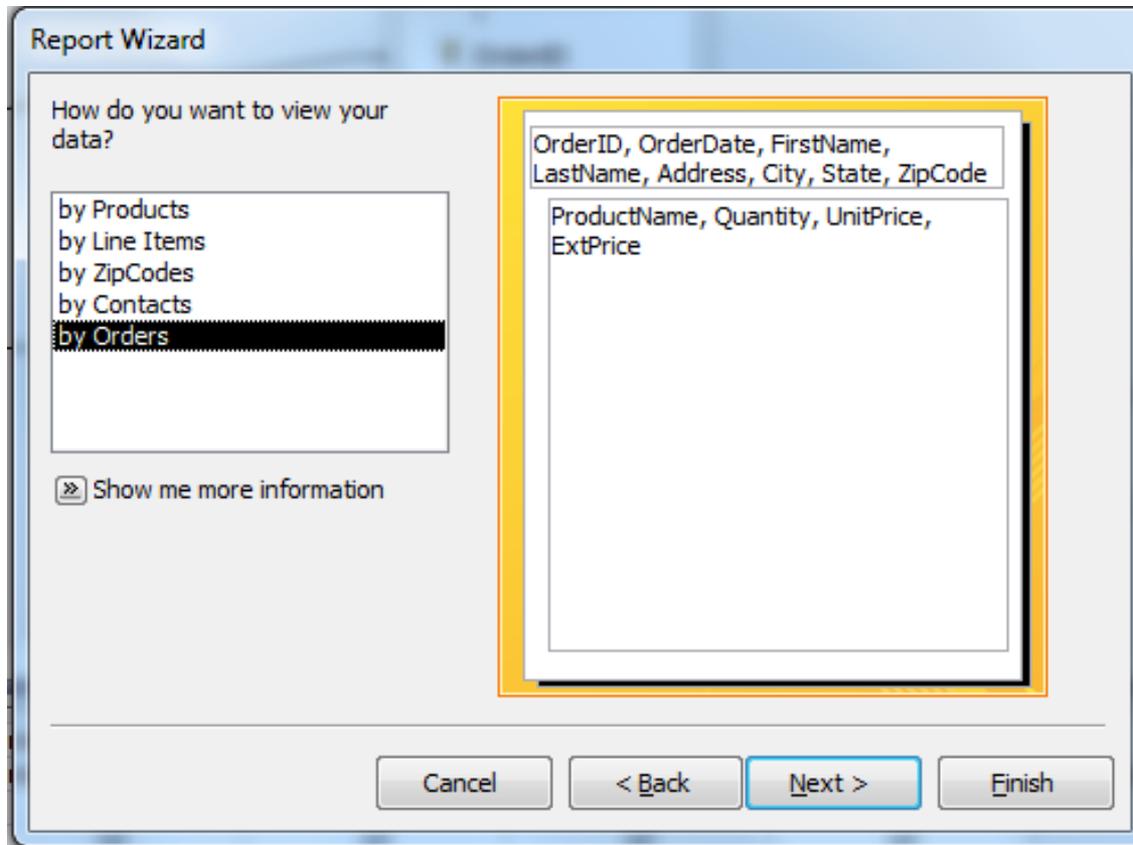
- What fields do we need for this report?



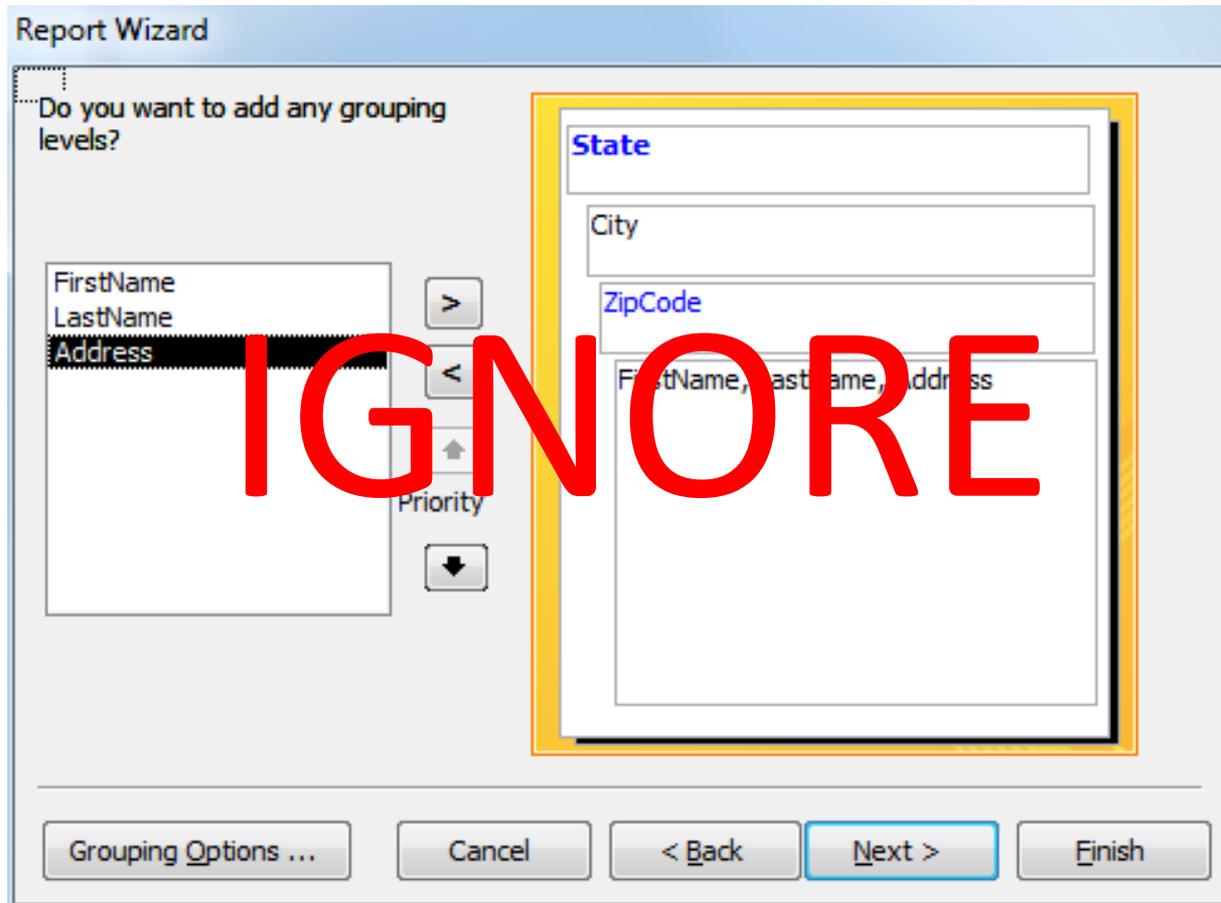
# Report Wizard



# Grouping Data in Reports



# Grouping Levels



# Sorting and Layout

Report Wizard

What sort order do you want for detail records?

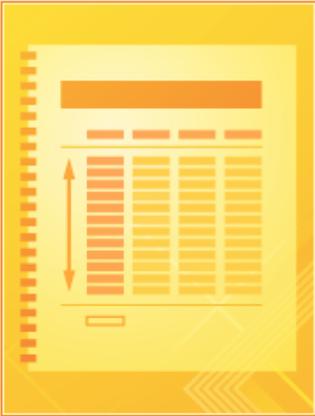
You can sort records by up to four fields, in either ascending or descending order.

1  Ascending

2  Ascending

3  Ascending

4  Ascending



Cancel < Back Next > Finish

Report Wizard

How would you like to lay out your report?

Layout

Stepped

Block

Outline

Orientation

Portrait

Landscape

Adjust the field width so all fields fit on a page.



Cancel < Back Next > Finish

# Report Design

Report Header											
Orders											
Page Header											
OrderID	Date	FirstName	LastName	Address	City	State	Zip	Product Name	Quantity	UnitPrice	ExtPrice
OrderID Header											
OrderID	Order	FirstName	LastName	Address	City	State	Zip				
Detail											
								Product Name	Quantity	UnitPrice	ExtPrice
Page Footer											
=Now()						="Page " & [Page] & " of " & [Pages]					
Report Footer											

# Report Design

The screenshot shows the Report Design view of an 'Orders' report. The report is divided into several sections:

- Report Header:** Contains the report title 'Orders'.
- Page Header:** Contains a list of fields: OrderID, Date, FirstName, LastName, Address, City, State, Zip, Product Name, Quantity, Unit Price, and Extended Price.
- OrderID Header:** Contains a list of fields: OrderID, Order, FirstName, LastName, Address, City, State, and Zip. An arrow points to this section.
- Detail:** Contains a list of fields: Product Name, Quantity, Unit Price, and Extended Price.
- Page Footer:** Contains the expression `=Now()` and the page number expression `="Page " & [Page] & " of " & [Pages]`.
- Report Footer:** (Empty)

**Headers and footers are for data/labels that describe the section (e.g. Order ID for the header, and Order Total for the footer)**

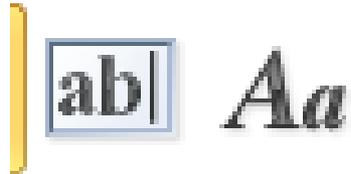
# Report Design

Report Header											
Orders											
Page Header											
OrderID	Date	FirstName	LastName	Address	City	State	Zip	Product Name	Quantity	Unit Price	Extended Price
OrderID Header											
OrderID	Order	FirstName	LastName	Address	City	State	Zip				
Detail											
								Product Name	Quantity	Unit Price	Extended Price
Page Footer											
=New()								="Page " & [Page] & " of " & [Pages]			
Report Footer											

**The Detail section is repeated for each item in the query (e.g. Line Item information)**

# Text vs. Controls

- Note that there are two icons for adding “text” – they are NOT the same:



 The **Text Box** allows you to add a field from the query; must be bound to a field

 The **Label** allows you to add free-form text

# Rearranging the Report

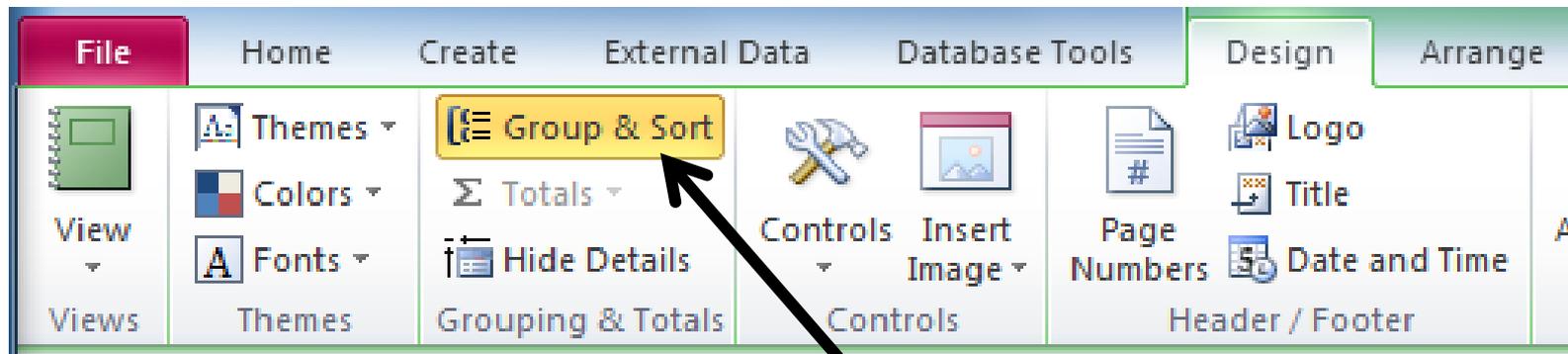
- Move items to where you want them.
- Each item is a field plus a label.
- Fields can contain “expressions”:

The image shows a portion of a report design view in Microsoft Access. It features a dotted background with several text boxes. The top text box is labeled "Customer:" and contains a small grid of dots. Below it, there are three more text boxes, each containing an expression: the first contains `=[FirstName]+" "[LastName]`, the second is labeled "Address" and contains a small grid of dots, and the third contains `=[City]+", "[State]+" "[ZipCode]`. The text boxes are arranged in a grid-like structure.

- Create a new text box for each expression, do not reuse an existing one (will cause errors)

# Adding a Footer

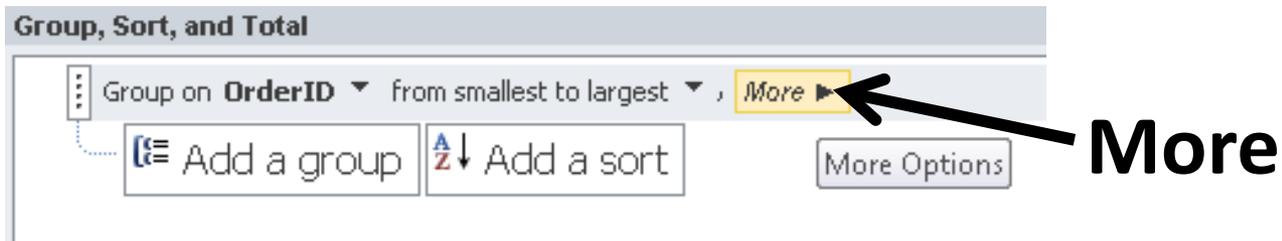
- In Design View, under the Design Tab, click *Group & Sort*



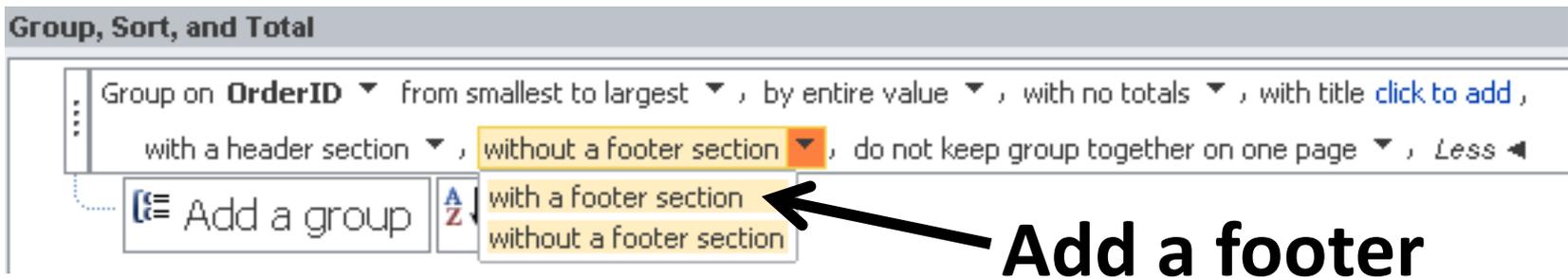
**Group & Sort**

# Adding a Footer

- Select *More* to display OrderID settings:

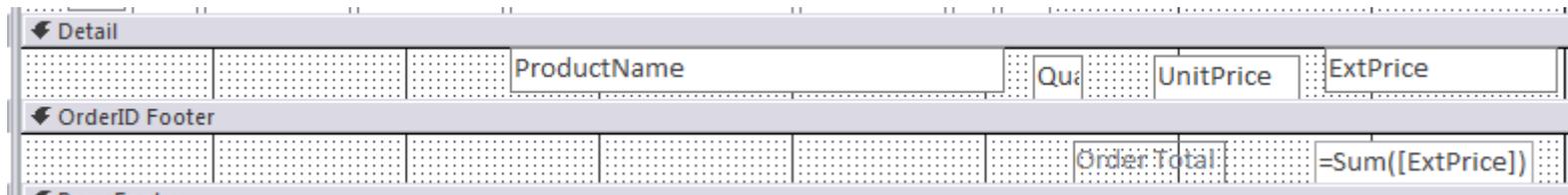


- Select the dropdown to add a footer:



# Aggregating Over Details

- Now that you have added a footer to the group (OrderID) you can aggregate over the details of the group (Line Items).
- Use aggregate functions (things available in the Total field of query design view) in Text Box expressions.



The screenshot shows a query design view with two rows. The first row is labeled 'Detail' and contains fields for 'ProductName', 'Quantity' (abbreviated as 'Qu'), 'UnitPrice', and 'ExtPrice'. The second row is labeled 'OrderID Footer' and contains a text box labeled 'Order Total' with the expression '=Sum([ExtPrice])' entered in it.

Detail			
ProductName	Qu	UnitPrice	ExtPrice
OrderID Footer			
		Order Total	=Sum([ExtPrice])

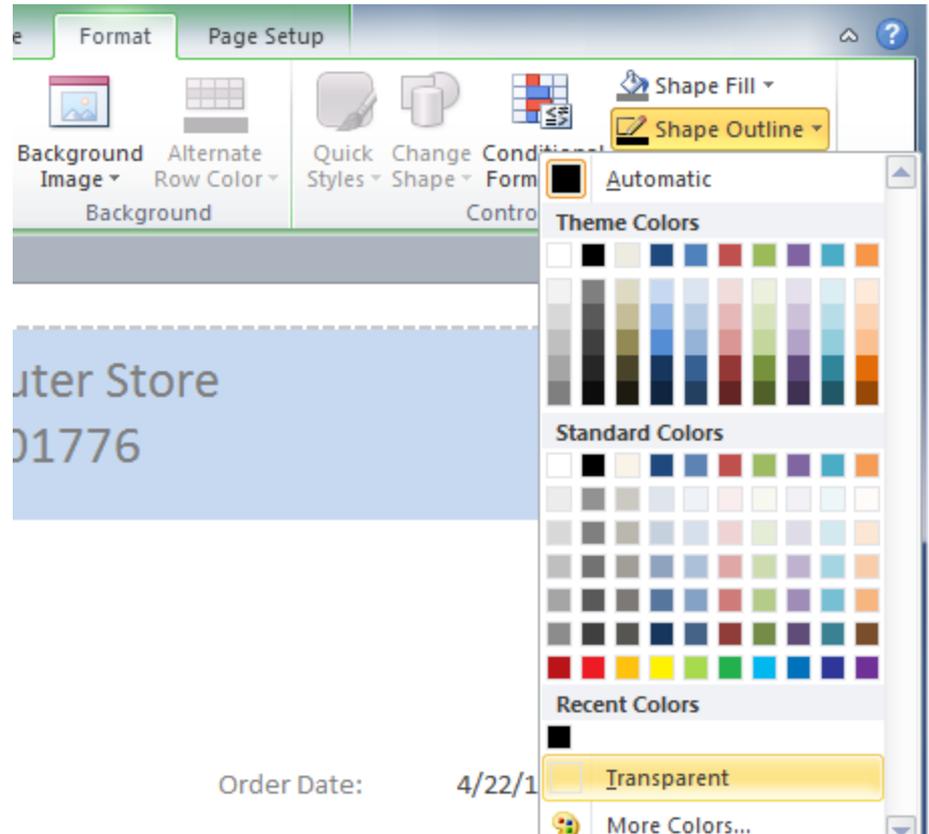
# Aggregating Over Details

- Now that you have added a footer to the group (OrderID) you can aggregate over the details of the group (Line Items).
- Use aggregate functions (things available in the Total field of query design view) in Text Box expressions.

Ink Jet Printer	1	\$249.95	\$249.95
Laser Printer (network)	1	\$1,395.00	\$1,395.00
Pentium II/350 MHz	2	\$1,999.00	\$3,998.00
	Order Total		5642.95

# Fixing Label Borders

- In the Layout View, click the label with the border
- Then go to Format, Shape Outline, and check Transparent



# Changing Colors

- In *Design View*, click on the field or area, then go to the *Format* tab, and click the paint bucket to choose a color.

# Changing Colors

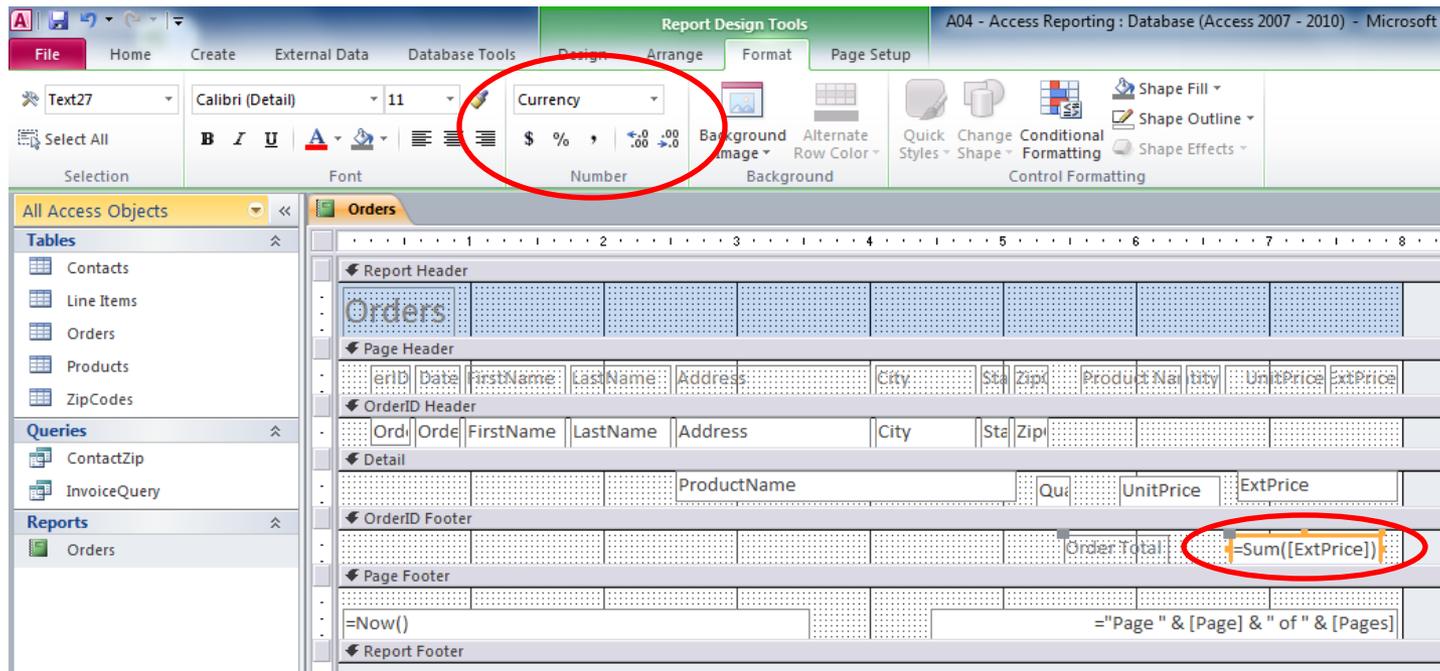
The screenshot displays the Microsoft Access Report Design Tools ribbon, specifically the Format tab. A color selection palette is open, showing Theme Colors, Standard Colors, and Recent Colors. The palette is positioned over a report design grid. The grid contains a table with columns for Quantity, Product Name, UnitPrice, and Extended Price. A text box containing "Computer Store, MA 01776" is visible in the grid. The ribbon includes tabs for Home, Create, External Data, Database Tools, Design, Arrange, Format, and Page Setup. The Format tab is active, showing options for Background, Alternate Row Color, Quick Styles, Change Shape, Conditional Formatting, and Control Formatting. The text "2. Select a color" is overlaid on the ribbon, and "1. Click in the area" is overlaid on the grid. Arrows point from the text to the corresponding actions in the interface.

**2. Select a color**

**1. Click in the area**

# Formatting Values

- In *Design View*, click on the field or area, then go to the *Format* tab. There is the same formatting pane that there was in Excel.



# Formatting Values

- In *Design View*, click on the field or area, then go to the *Format* tab. There is the same formatting pane that there was in Excel.

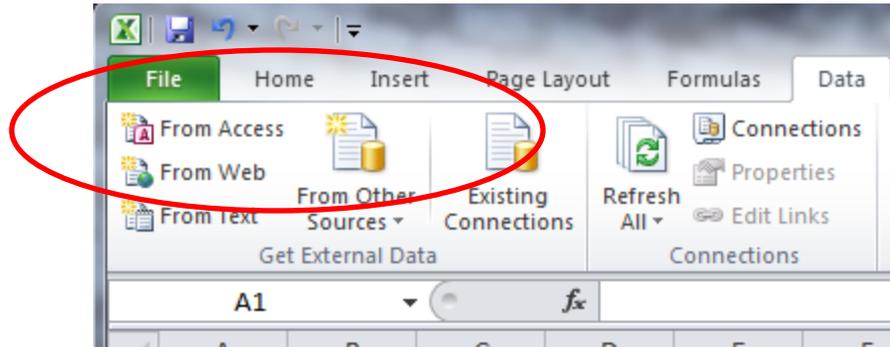
Ink Jet Printer	1	\$249.95	\$249.95
Laser Printer (network)	1	\$1,395.00	\$1,395.00
Pentium II/350 MHz	2	\$1,999.00	\$3,998.00
Order Total			\$5,642.95

# The OrderInvoice Report

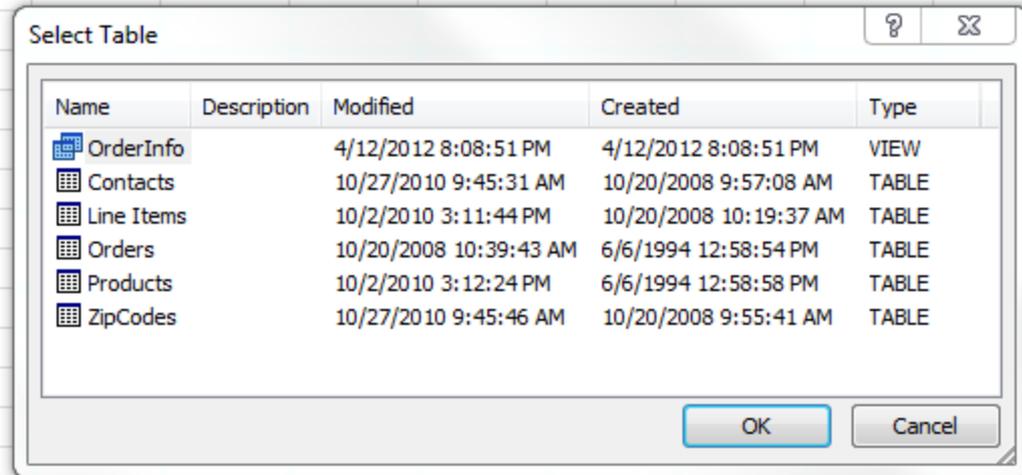
Report Header							
Matthew's Computer Store Sudbury, MA 01776							
Page Header							
Customer:		=[FirstName]+" "+[LastName] Address =[City]+", "+[State]+" "+[ZipCode]					
Order Number:	OrderID					Order Date:	OrderDate
OrderID Header							
Quantity	Product Name				UnitPrice	Extended Price	
Detail							
Quantity	ProductName				UnitPrice	ExtPrice	
OrderID Footer							
					Order Total	=Sum([ExtPrice])	
Page Footer							
=Now()				="Page " & [Page] & " of " & [Pages]			
Report Footer							

# Create a Pivot Table from an Access Table

From the Data Menu, choose “From Access”



Find your Access file and choose the table or query to use in your pivot table.



# Summary

- Queries can have parameters.
- Reports allow information technology professionals to provide data in a more readable format to users.
- The Access Wizard creates reports based on queries.
- The Report Designer allows reports to be designed using simple “drag-and-drop”.

Access Reports

**TRY FOR YOURSELF...**