

CGS 2545: Database Concepts Fall 2010

LAB #3

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Lab #3

- The objective of this lab is to familiarize yourself with forms and reports in Access.
- Again, we will use the sample Northwind sample database from webCourses.

NOTE: In the slides that follow, if the call-out symbol is outlined in red, it means that there is something for you to try, if the call-out is outlined in blue, I am simply giving you some information about what is displayed on that page.



Forms

- Forms are primarily designed to allow users to enter data into tables in a user-friendly format that requires little if any knowledge about the actual database.
- Forms are also a way to display the data in a table in a more user-friendly format than is available in the Table view which looks are raw data.
- Often forms are designed to resemble a paper form that is utilized by a company and thereby provide a sense of familiarity for the individuals who actually enter the data.
- All forms contain **controls** (objects) that accept and display data, perform a specific action, decorate the form, or add descriptive information. There are three types of controls:
 - A **bound control** (see next page) has a data source (a field in an underlying table) and is used to enter or modify data in that field.
 - An **unbound control** has no data source. Unbound controls are used to display labels, titles, lines, graphics, or pictures.
 - A **calculated control** has as its data source an expression rather than a field.



Forms

The Suppliers form is a very basic form that contains the same information as found in the Suppliers table, although it is displayed in a more user-friendly, one supplier at a time format. This format is often more preferable to an end-user than is the design-view or Table view.

Unbound control

Bound control

Supplier ID: 1

Company Name: Exotic Liquids

Contact Name: Charlotte Cooper Title: Purchasing Manager

Address: 49 Gilbert St.

City: London Region:

Postal Code: EC1 4SD Country: UK

Phone: (171) 555-2222 Fax:

Home Page:

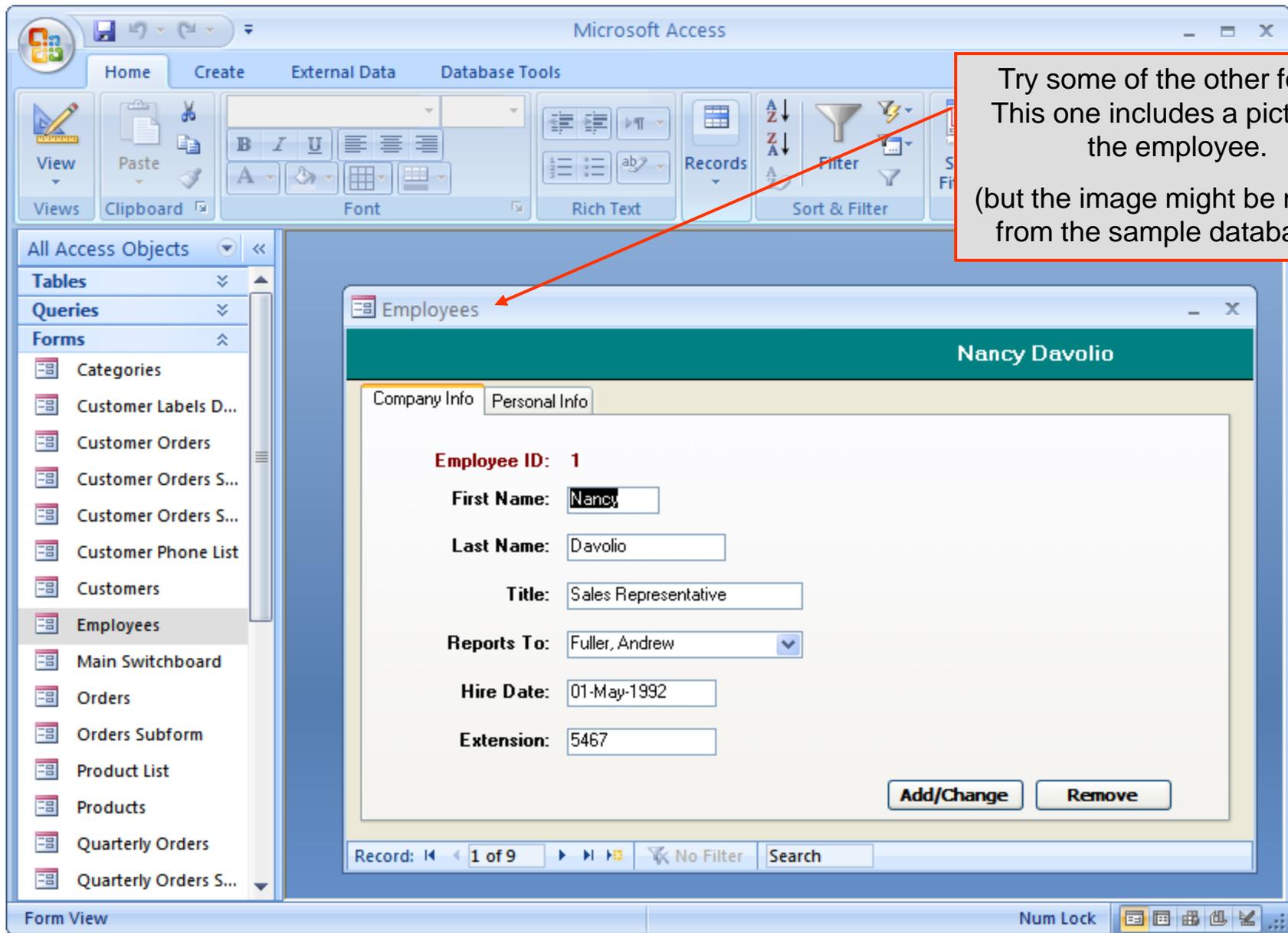
Review Products Add Products

Record: 1 of 30 No Filter Search

Form View Num Lock

Switch back and forth between the table view and the form view to verify that the same information about suppliers appears in both formats.





Try some of the other forms.
This one includes a picture of
the employee.
(but the image might be missing
from the sample database !!)



Microsoft Access

Home Create External Data Database Tools

View Paste Font Rich Text

Navigation Pane

Orders

Bill To: **Alfreds Futterkiste** Ship To: Alfreds Futterkiste

Obere Str. 57 Obere Str. 57

Berlin 12209 Berlin 12209

Germany Germany

Salesperson: Suyama, Michael Ship Via: Speedy United Federal

Order ID: 10643 Order Date: 25-Aug-1997 Required Date: 22-Sep-1997 Shipped Date: 02-Sep-1997

Product	Unit Price	Quantity	Discount	Extended Price
Spegesild	\$12.00	2	25%	\$18.00
Chartreuse verte	\$18.00	21	25%	\$283.50
Rössle Sauerkraut	\$45.60	15	25%	\$513.00
*			0%	

Print Invoice

Subtotal:	\$814.50
Freight	\$29.46
Total:	\$843.96

Record: 1 of 830 No Filter Search

Select or type a customer's name. Num Lock

The Orders form was designed to look like the order form that the company would normally use. Again, compare this with the Table view of the orders table.

Which view would you rather see?

Notice that the form contains more information that is available in the Order table.

Where did the other information in this table come from?



Microsoft Access

Home Create External Data Database Tools

MS Sans Serif 8

View Paste

Font Rich Text

Records

All Access Objec... <<

Tables >>

Queries >>

Forms <<

- Categories
- Customer Labe...
- Customer Orders
- Customer Orde...
- Customer Orde...
- Customer Pho...
- Customers
- Employees
- Main Switchbo...
- Orders
- Orders Subform
- Product List
- Products
- Quarterly Orders

Orders

Bill To: Alfreds Futterkiste Ship To: Oberer Str. 57

Oberer Str. 57

Berlin 12209 Berlin 12209

Record: 1 of 830 No Filter Search

Orders Subform

Product	Unit Price	Quantity	Discount	Extender
Queso Cabrales	\$14.00	12	0%	
Singaporean Hokkien Fried Mee	\$9.80	10	0%	

Same entry as in Products table. Num Lock

The answer is, this form is a more complicated form that includes a subform. In this case the subform uses the Order Details table to add this additional information to the form. We'll deal with this type of form in more detail in a later lab.



Creating A Simple Form

- Before we look at reports, let's create a simple form.
- Remember that the basic reason for creating a form is to allow a user to enter data into a table in a more user-friendly environment although it also enhances the viewing of the data as well.
- Forms are based on tables so to create a form, go back to the Tables view of the database.
- Let's build a simple form based on the Shippers table.
- From the Table view, select the Shippers table then select Create tab as shown on the next slide.



Microsoft Access

Home Create External Data Database Tools

Table Table Templates SharePoint Lists Table Design

Form Split Form Multiple Items More Forms Form Design

PivotChart Blank Form Form Design

Report Labels Blank Report Report Wizard Report Design

Query Wizard Query Design Macro Design

Other

All Access Objec... <<

Tables

Categories

Customers

Employees

Order Details

Orders

Products

Shippers

Suppliers

Switchboard Items

Queries >>

Forms >>

Reports >>

Pages >>

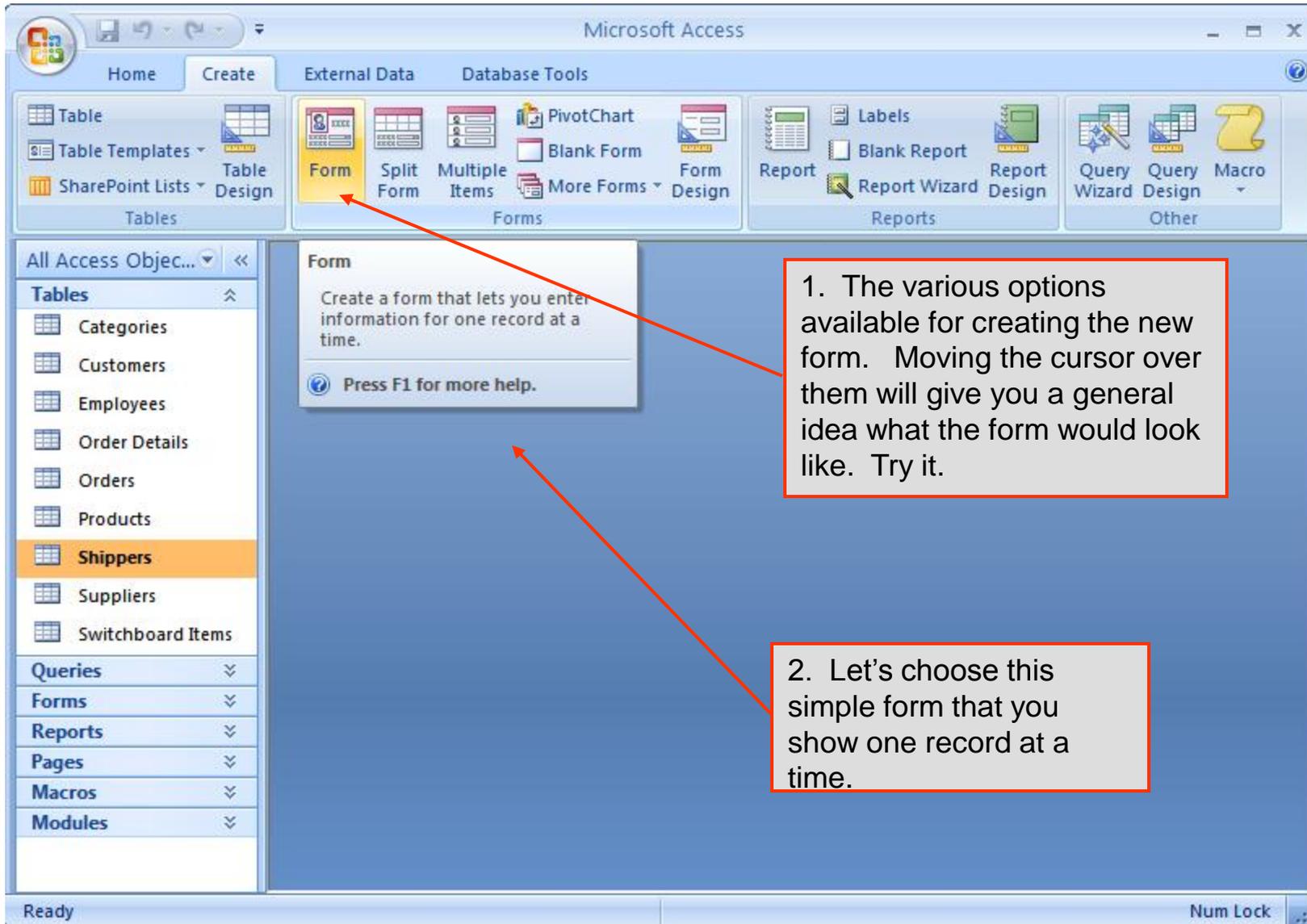
Macros >>

Modules >>

Ready Num Lock

1. Expand Tables view and select Shippers table.
2. Click the Create tab.
3. You can see various options in Forms section.

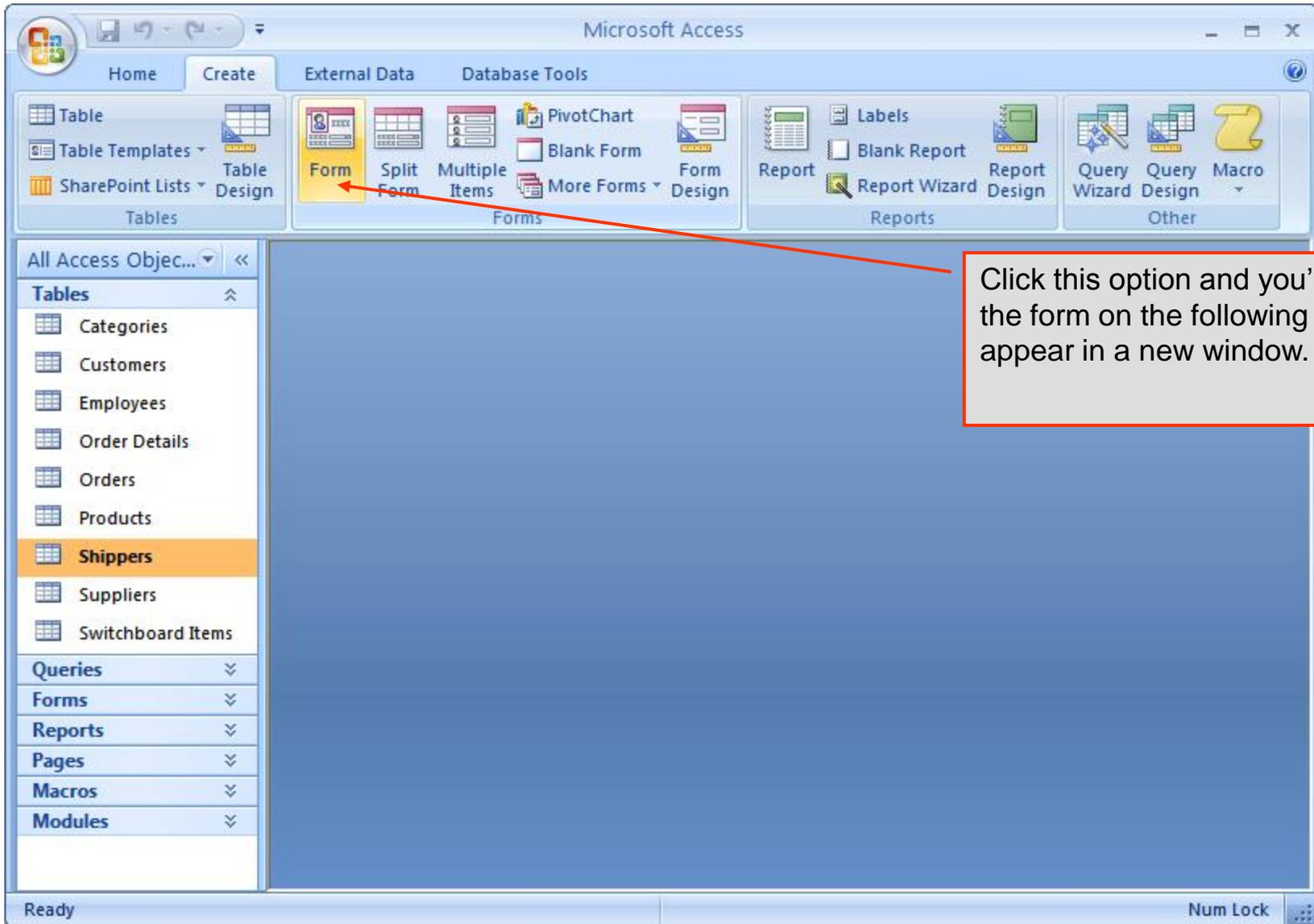




1. The various options available for creating the new form. Moving the cursor over them will give you a general idea what the form would look like. Try it.

2. Let's choose this simple form that you show one record at a time.





Click this option and you'll see the form on the following page appear in a new window.



Microsoft Access

Home Create External Data Database Tools

View Paste Font Rich Text Records Sort & Filter Window Find

Shippers2

Shippers

Shipper ID: 1

Company Name: Speedy Express

Phone: (503) 555-9831

Order I	Customer	Employee	Order Dat	Required Dat	Shipped Dat	Fr
10249	Tradição Hipermercados	Suyama, Michael	05-Jul-1996	16-Aug-1996	10-Jul-1996	\$:

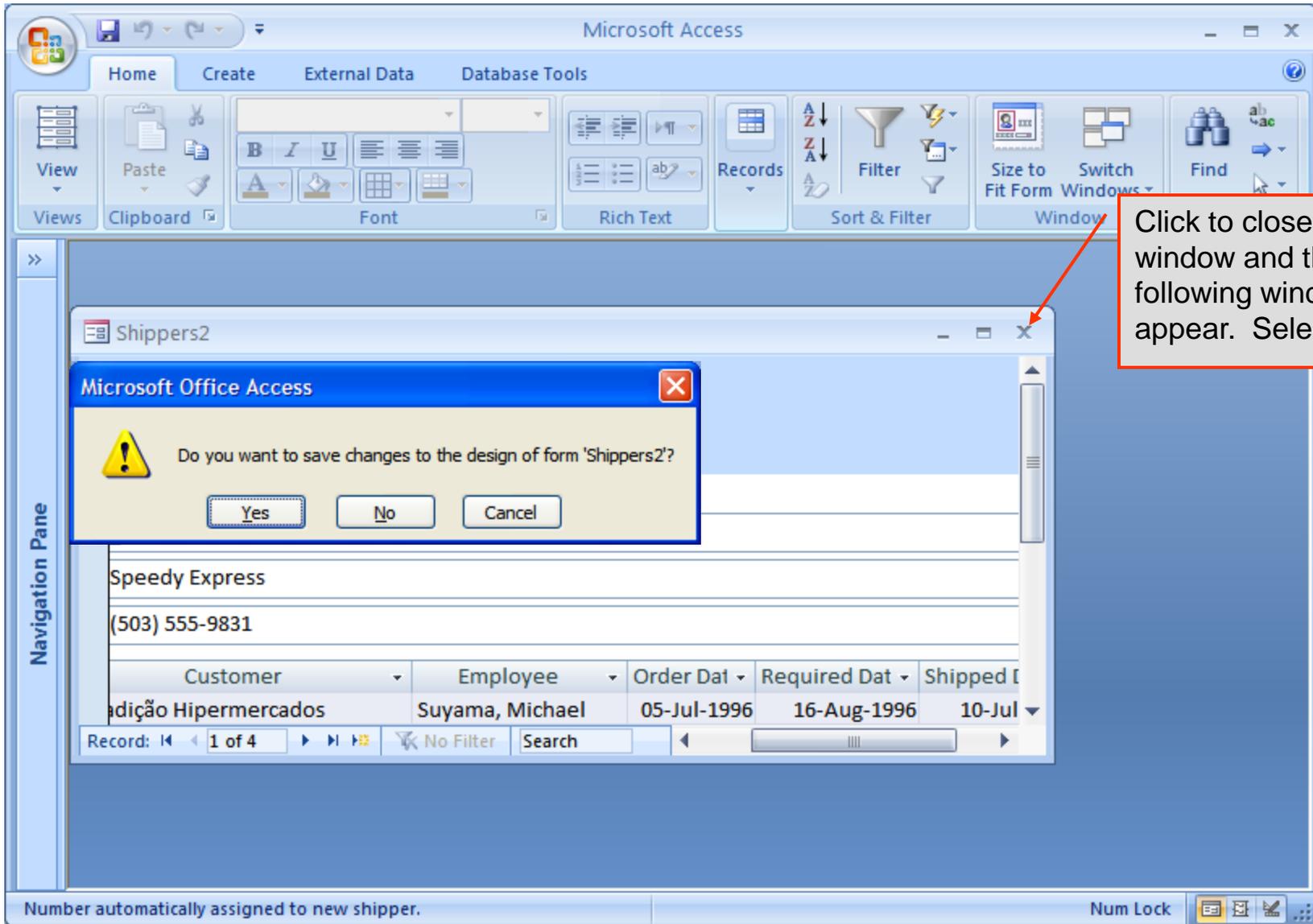
Record: 1 of 4 No Filter Search

Number automatically assigned to new shipper.

The newly created form, shown with data from the first row of the underlying table.

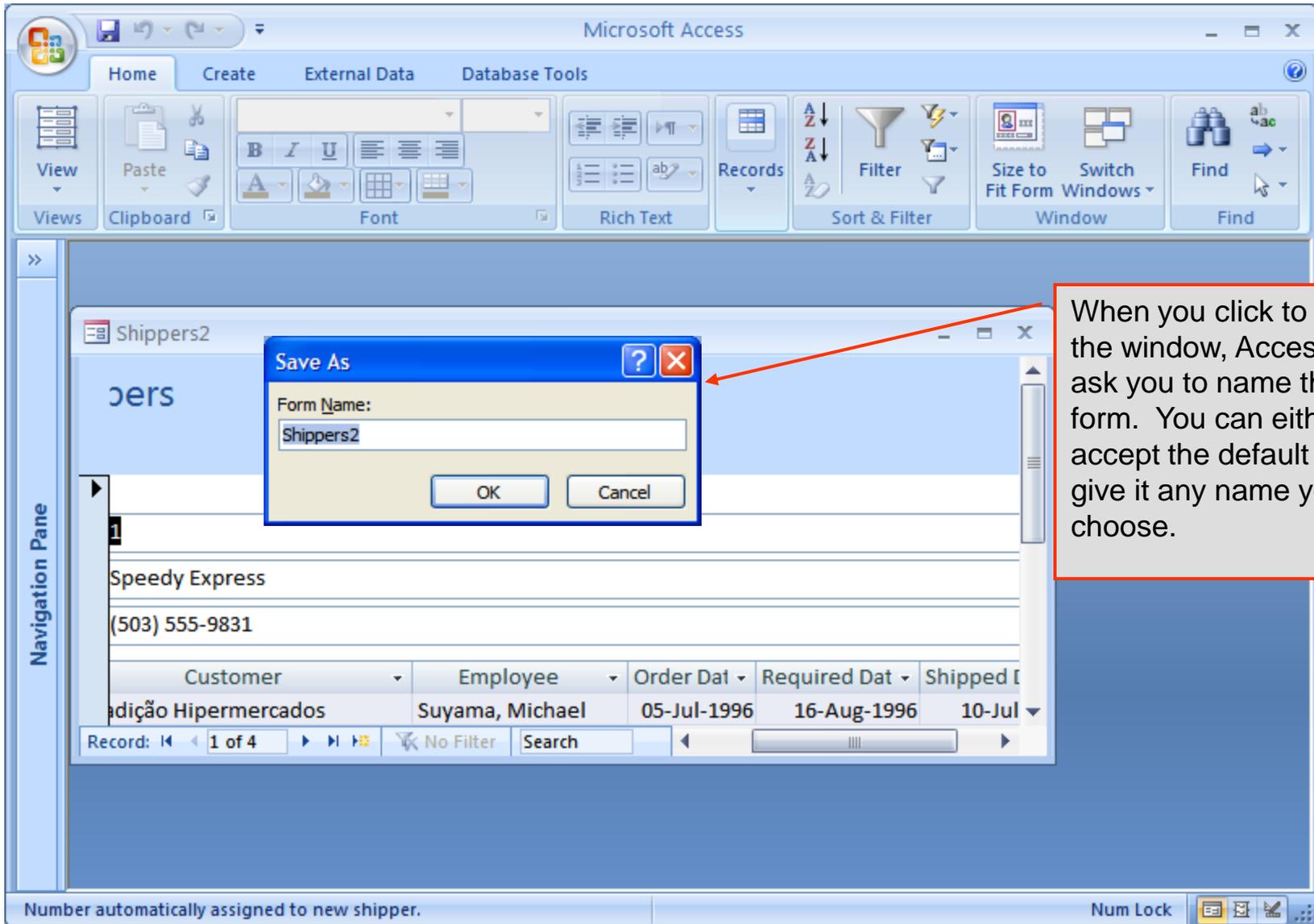
You might have to click "Form View" to see this screen.





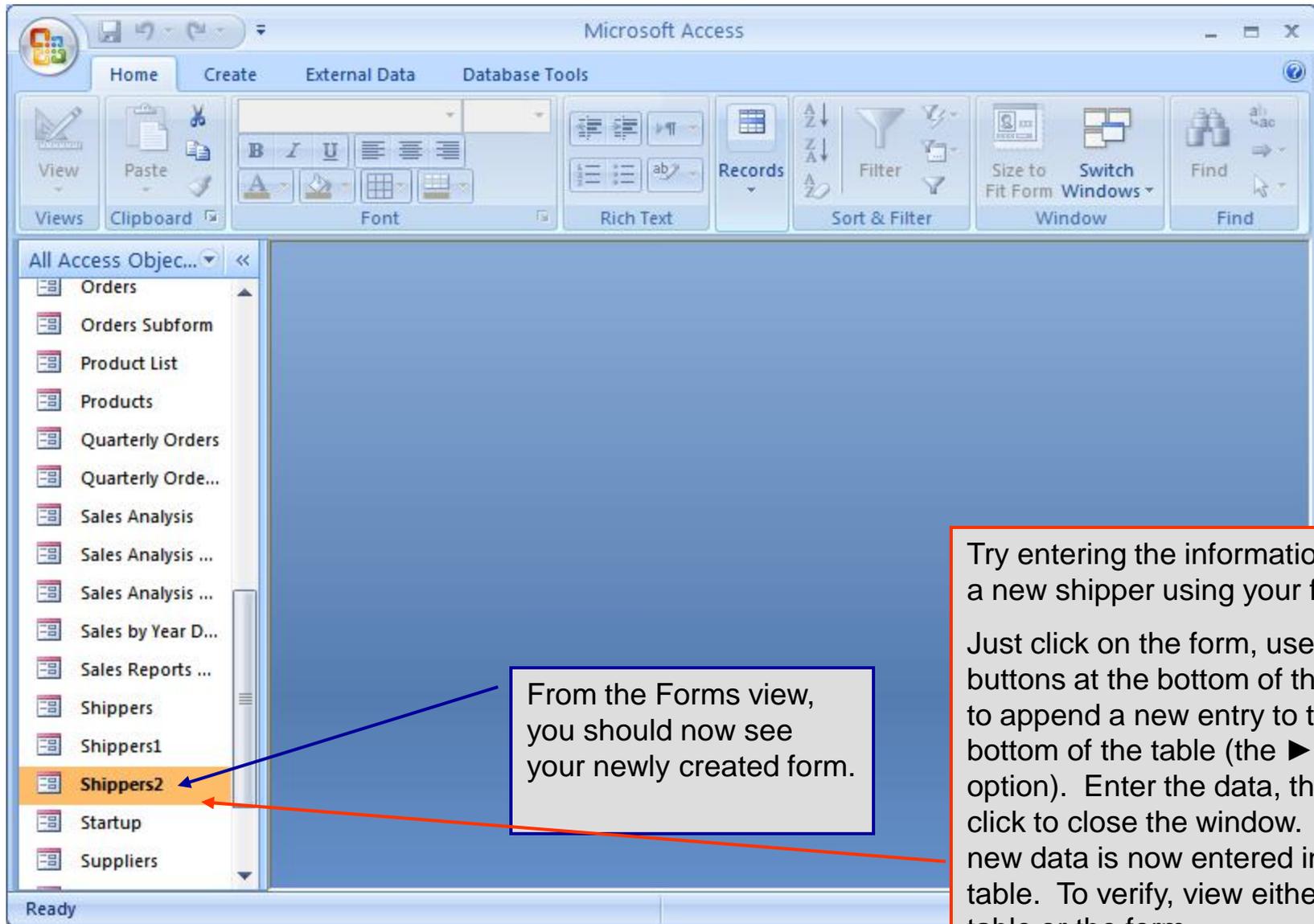
Click to close the window and the following window will appear. Select YES.





When you click to close the window, Access will ask you to name the form. You can either accept the default or give it any name you choose.





From the Forms view, you should now see your newly created form.

Try entering the information for a new shipper using your form. Just click on the form, use the buttons at the bottom of the form to append a new entry to the bottom of the table (the ►☀ option). Enter the data, then click to close the window. The new data is now entered in the table. To verify, view either the table or the form.



Assessment Point #1

- At this point, examine some of the other pre-defined forms that are available and also try some of the other options available for creating a simple form using the shippers table as we just did.
- When you looked at several different options, then continue on and we'll start looking at reports.



Reports

- A report is typically a printed form (although it may remain in electronic form) that displays information from a database.
- All reports are based on an underlying table or a query. For now we'll concentrate on table based reports and look at query based reports later.
- A report displays the data or information in a more attractive fashion because it contains various headings and/or other decorative items that are not present in either a table or a query.

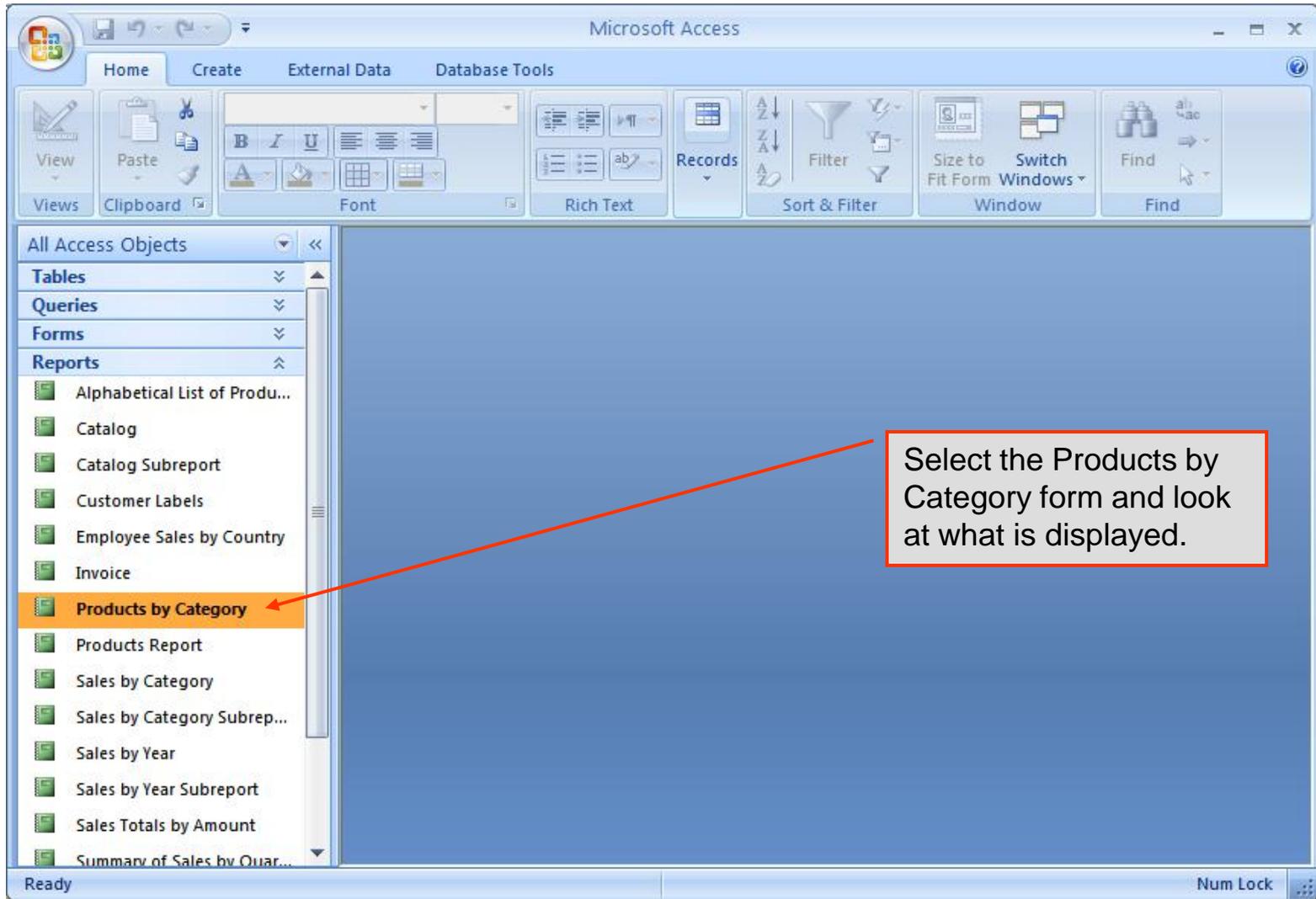


Reports

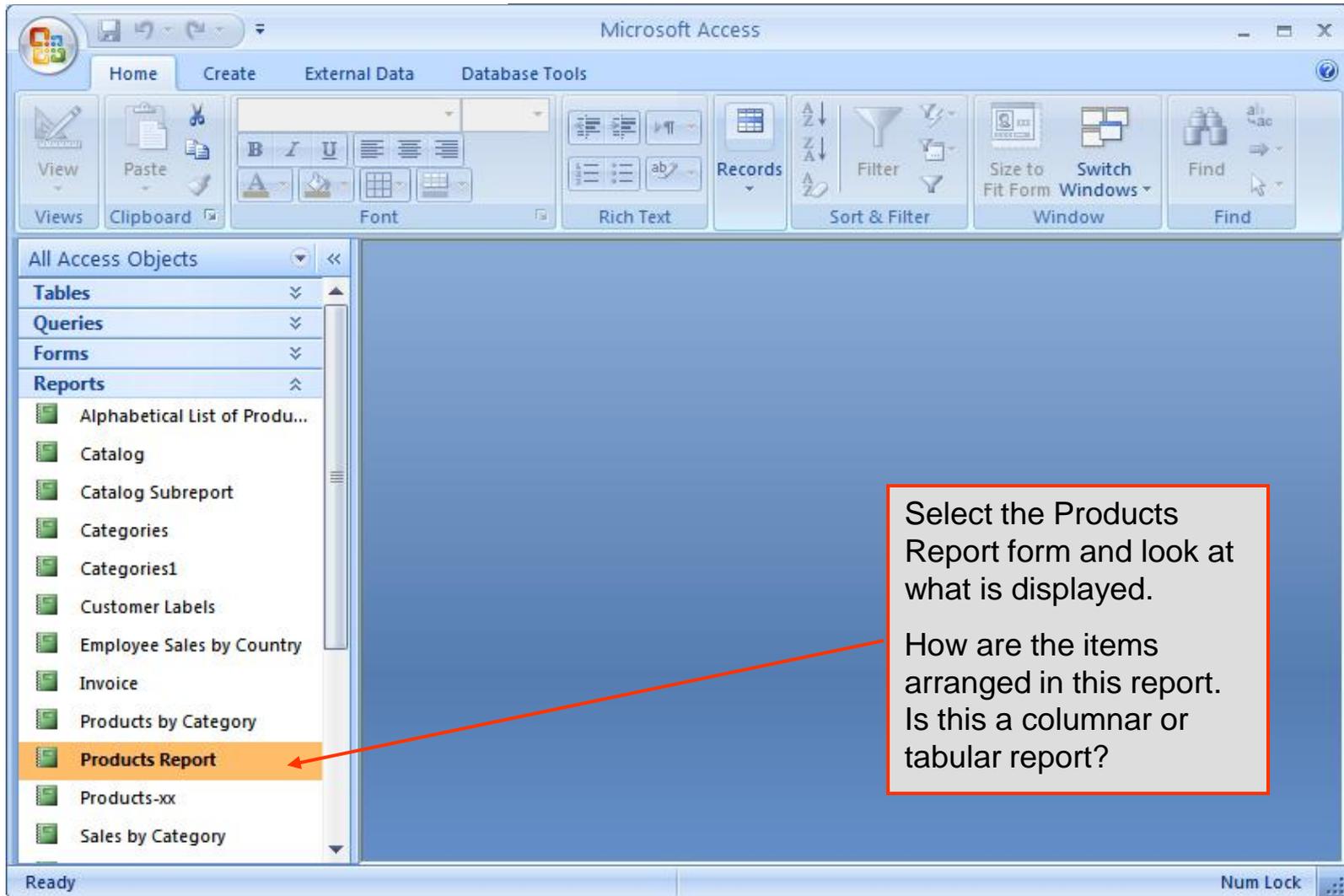
- A report is typically produced in printed form (although it may remain in electronic form) that displays information from a database.
- The **stacked report** is the simplest type of report available in Access. It lists every field for every record in a single column. The records in this type of report are also displayed in the same sequence as the records in the table on which the report is based.
- The **tabular report** displays fields in a row rather than in a column. Each record in the underlying table is printed in its own row. Unlike, the columnar report, only selected fields are displayed, so a tabular report is more concise than a columnar report. Additionally, tabular reports allow the designer a great deal of flexibility in how the information is to be displayed in terms of grouping and selection criteria.
- Let's begin by looking at some of the pre-defined reports in the sample database.



Reports

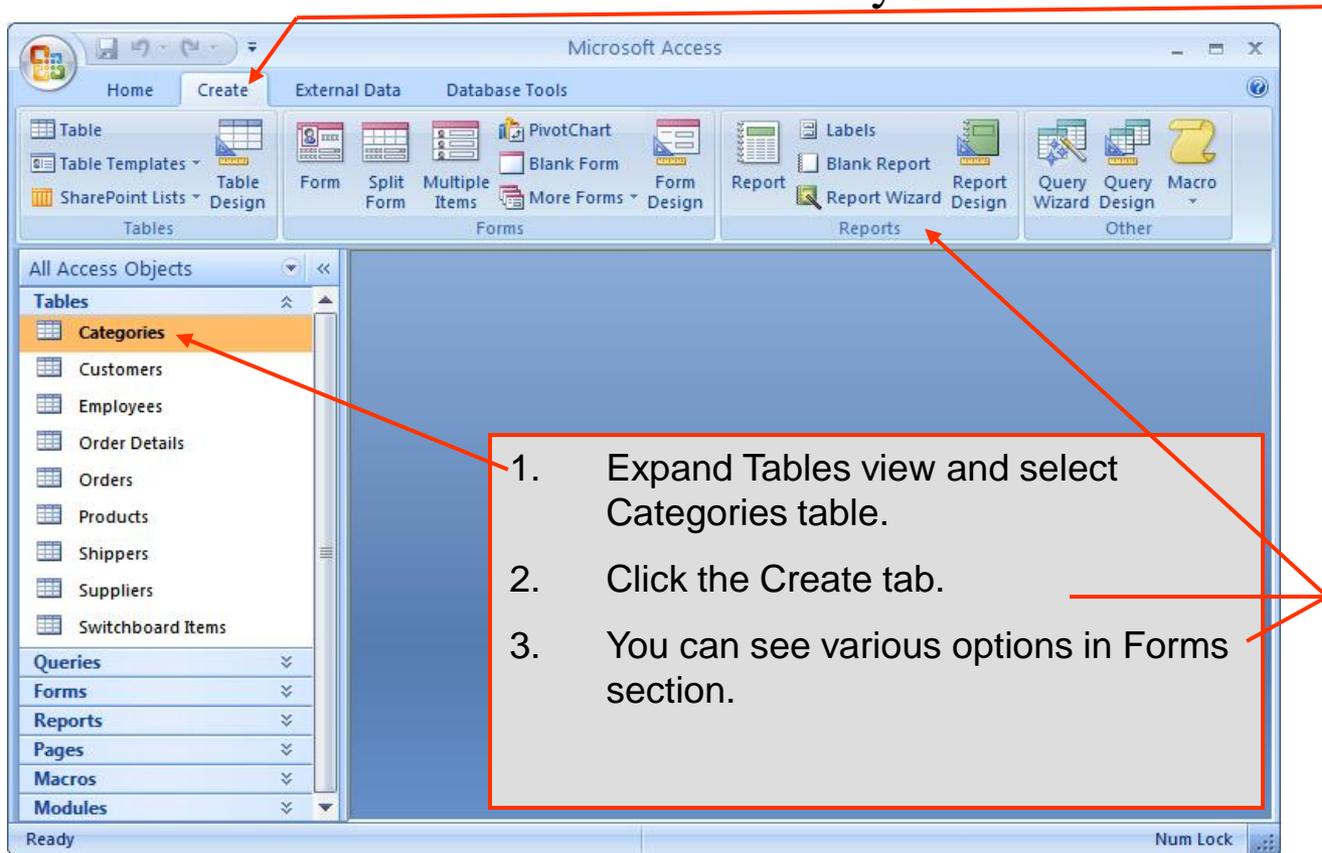


Reports



Creating A Simple Report

- Let's create a simple report based on a table in the sample database.
- Remember that the basic reason for creating a report is to see the data/information in a more user-friendly format.

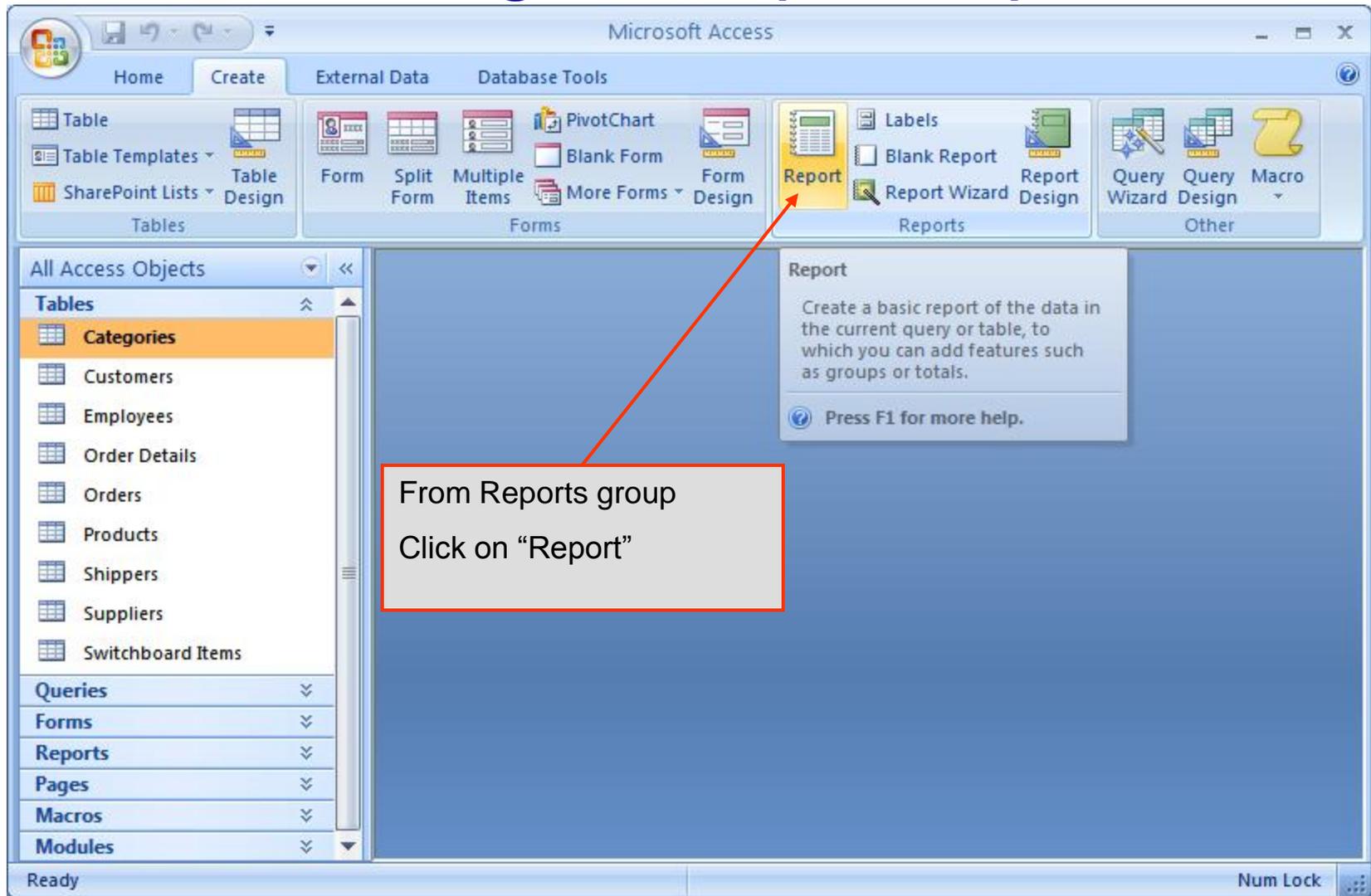


The screenshot shows the Microsoft Access interface. The 'Create' tab is selected in the ribbon, and the 'Reports' group is highlighted. The 'All Access Objects' pane on the left shows the 'Categories' table selected under the 'Tables' section. A red box highlights the 'Create' tab and the 'Reports' group in the ribbon. A red box highlights the 'Categories' table in the 'All Access Objects' pane. A red box highlights the 'Reports' group in the ribbon. A red box highlights the 'Categories' table in the 'All Access Objects' pane. A red box highlights the 'Reports' group in the ribbon. A red box highlights the 'Categories' table in the 'All Access Objects' pane.

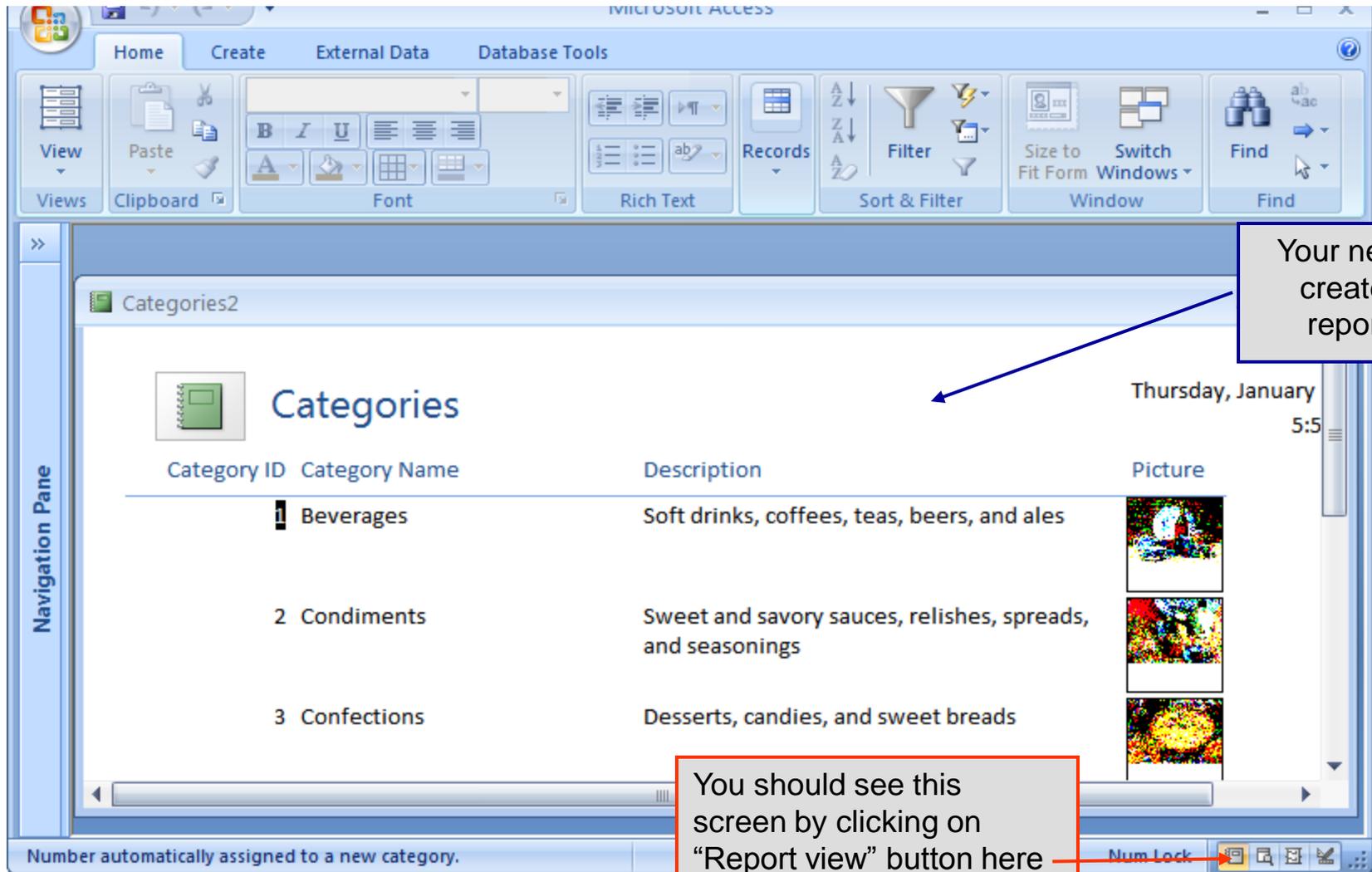
1. Expand Tables view and select Categories table.
2. Click the Create tab.
3. You can see various options in Forms section.



Creating A Simple Report



Creating A Simple Report



Your newly created report!

You should see this screen by clicking on "Report view" button here or the "Views" group on the menu ribbon.



Assessment Point #2

- At this point create several different reports using the various options available on the reports creation menu.



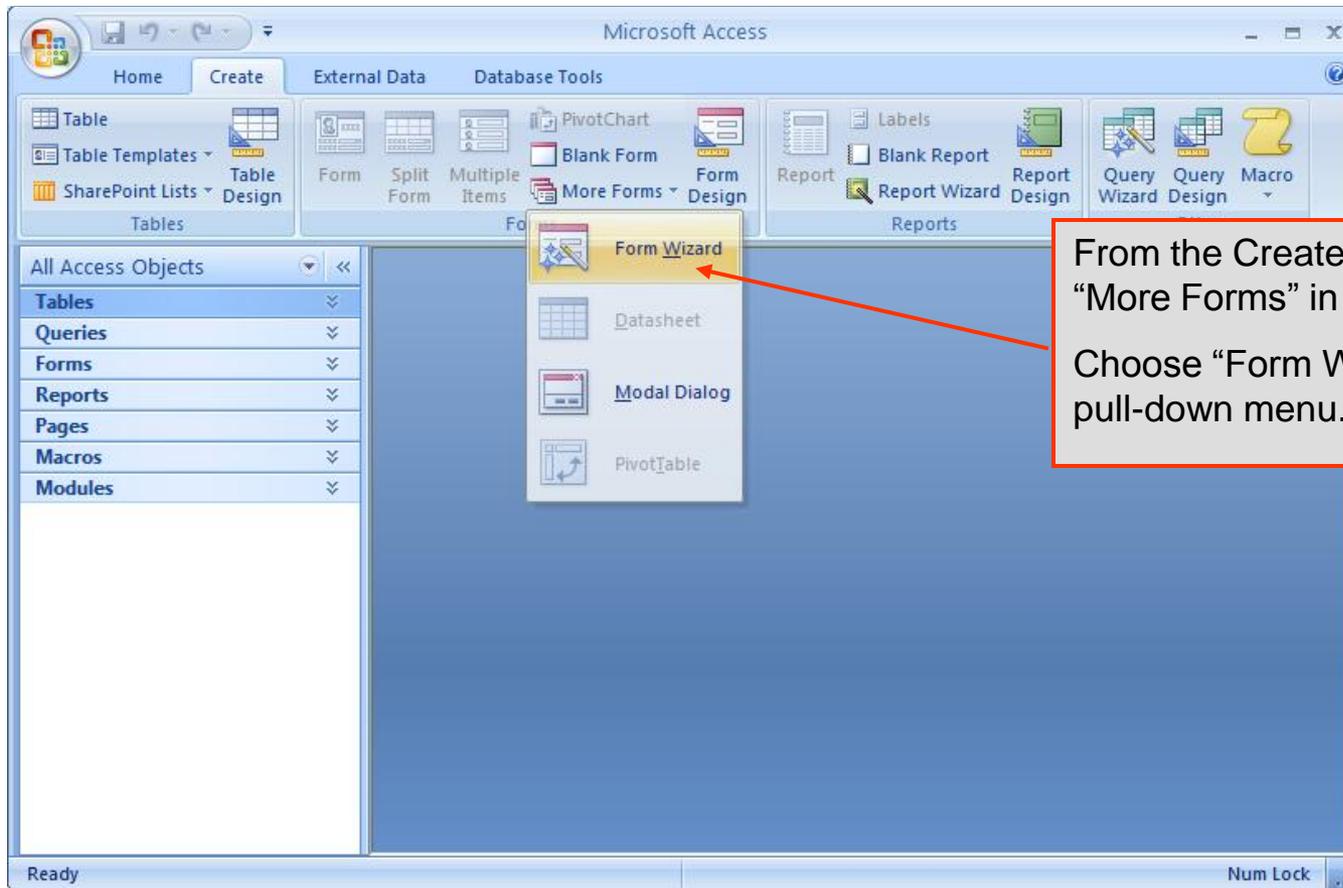
Wizards

- You may have already notice on some of the various windows the wizards that are available in Access to help you create basic queries, forms, and reports.
- Now we are going to use both the form and report wizards to help us create a form and a report.
- The wizards make it fairly easy to create a semi-custom form or report with little headache, however, for a truly custom report only the design view will give the developer the true flexibility they need for customization. We'll examine this capability in a later lab.



The Form Wizard

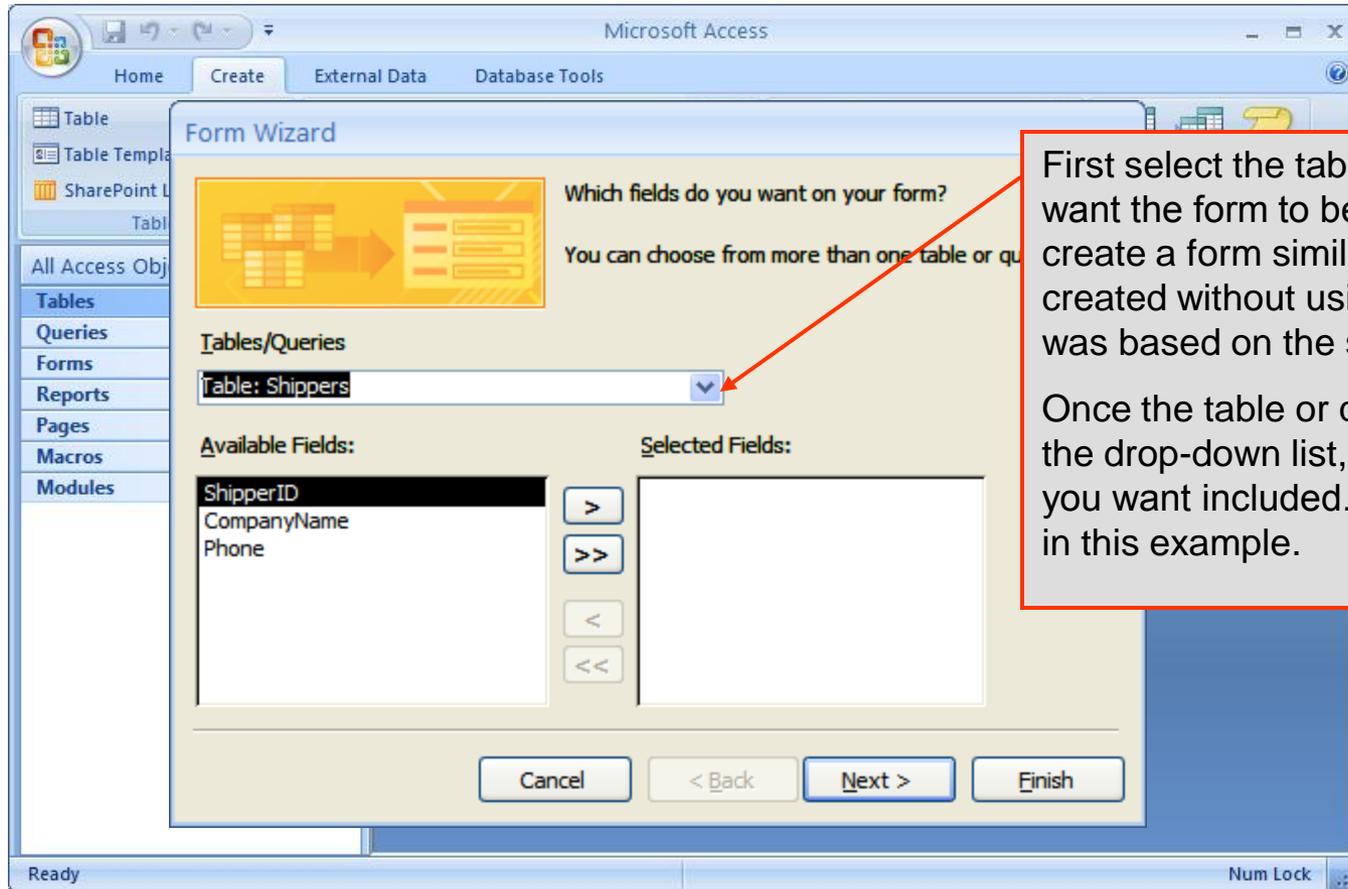
- The form wizard helps you to create a semi-custom form. Let's try one.



From the Create tab, select “More Forms” in Forms group. Choose “Form Wizard” from the pull-down menu.



The Form Wizard

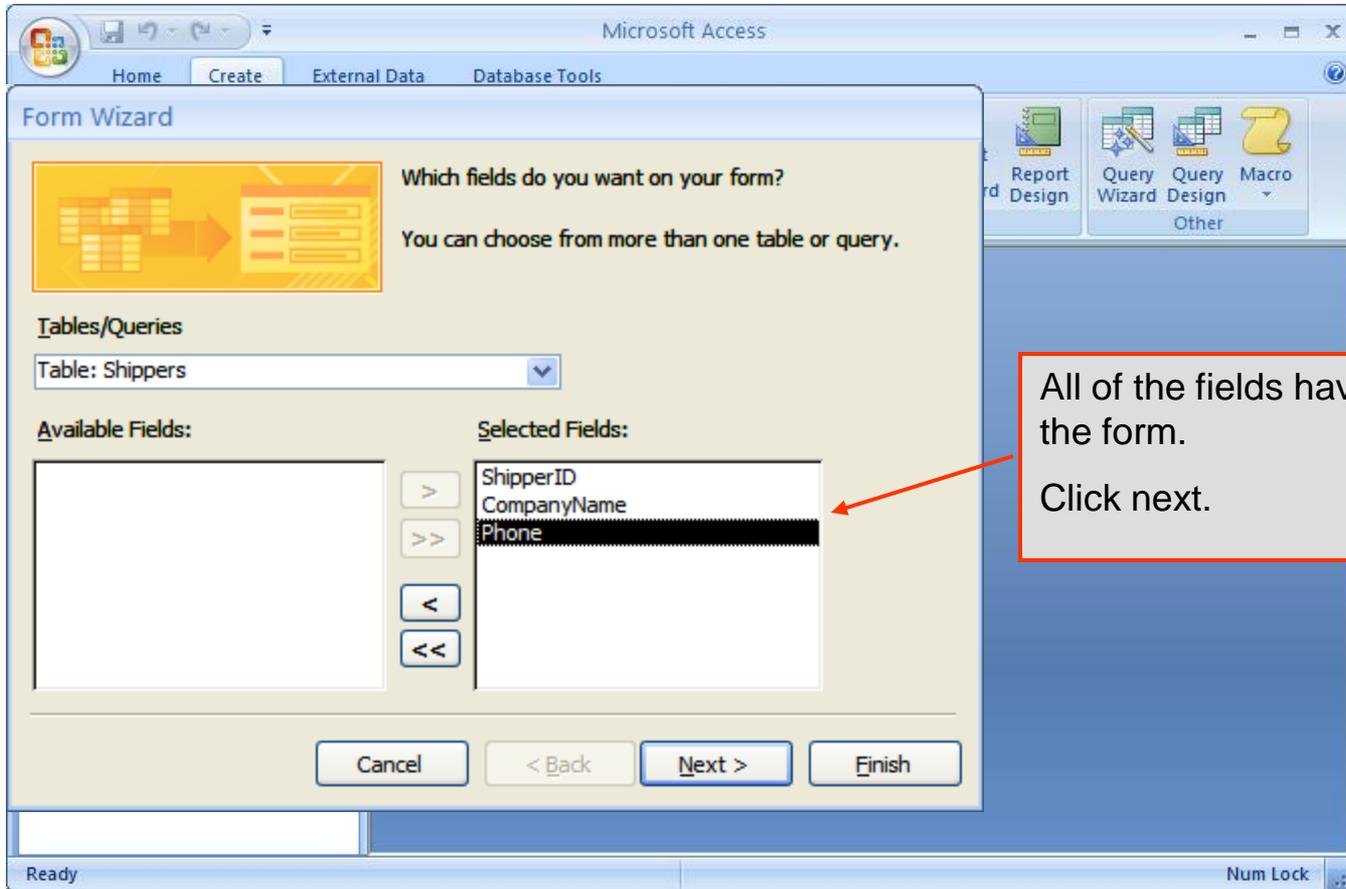


First select the table or query that you want the form to be based upon. Let's create a form similar to the first one we created without using the wizard which was based on the shippers table.

Once the table or query is selected from the drop-down list, then select the fields you want included. Let's select them all in this example.



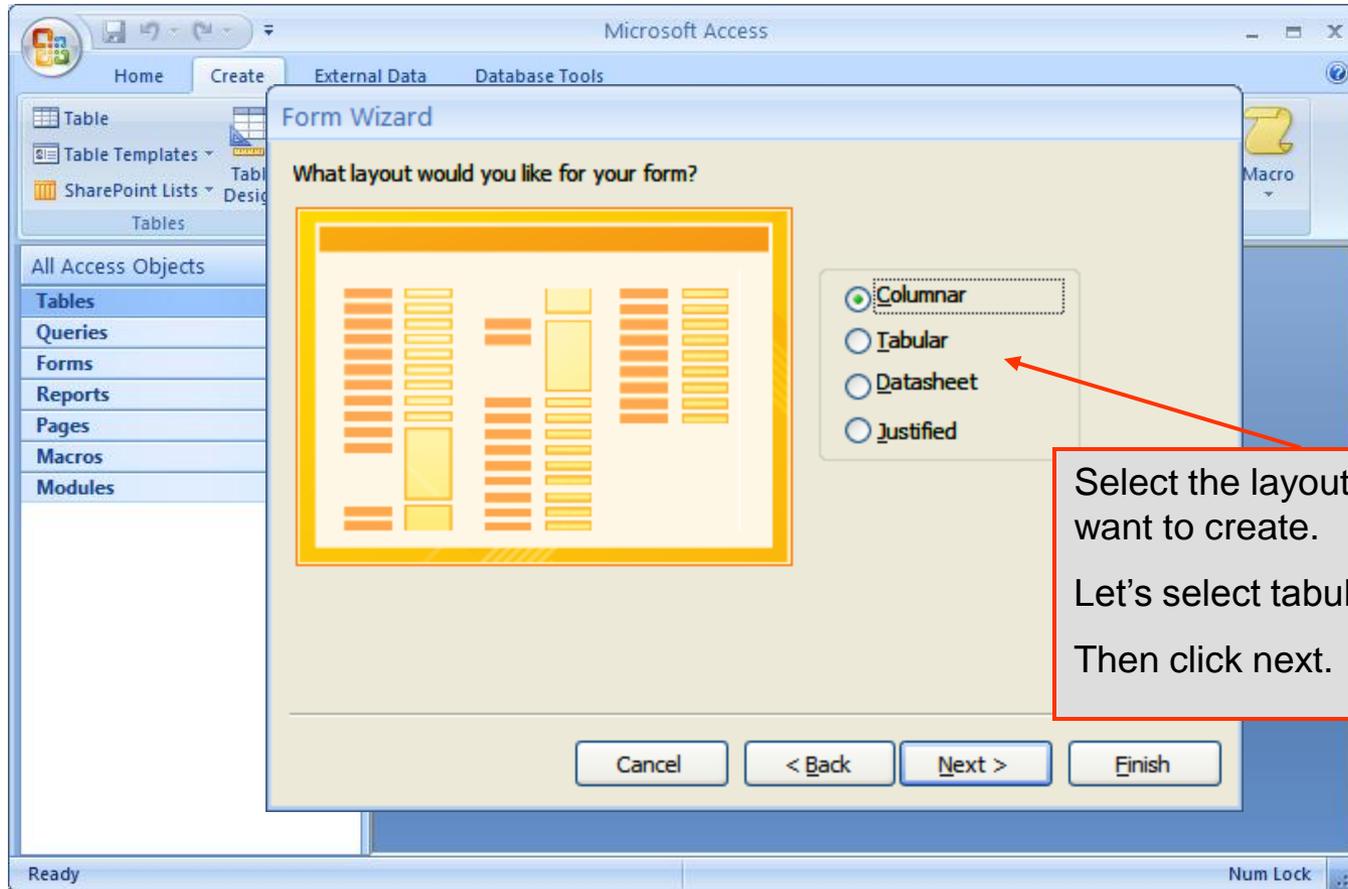
The Form Wizard



All of the fields have been included in the form.
Click next.



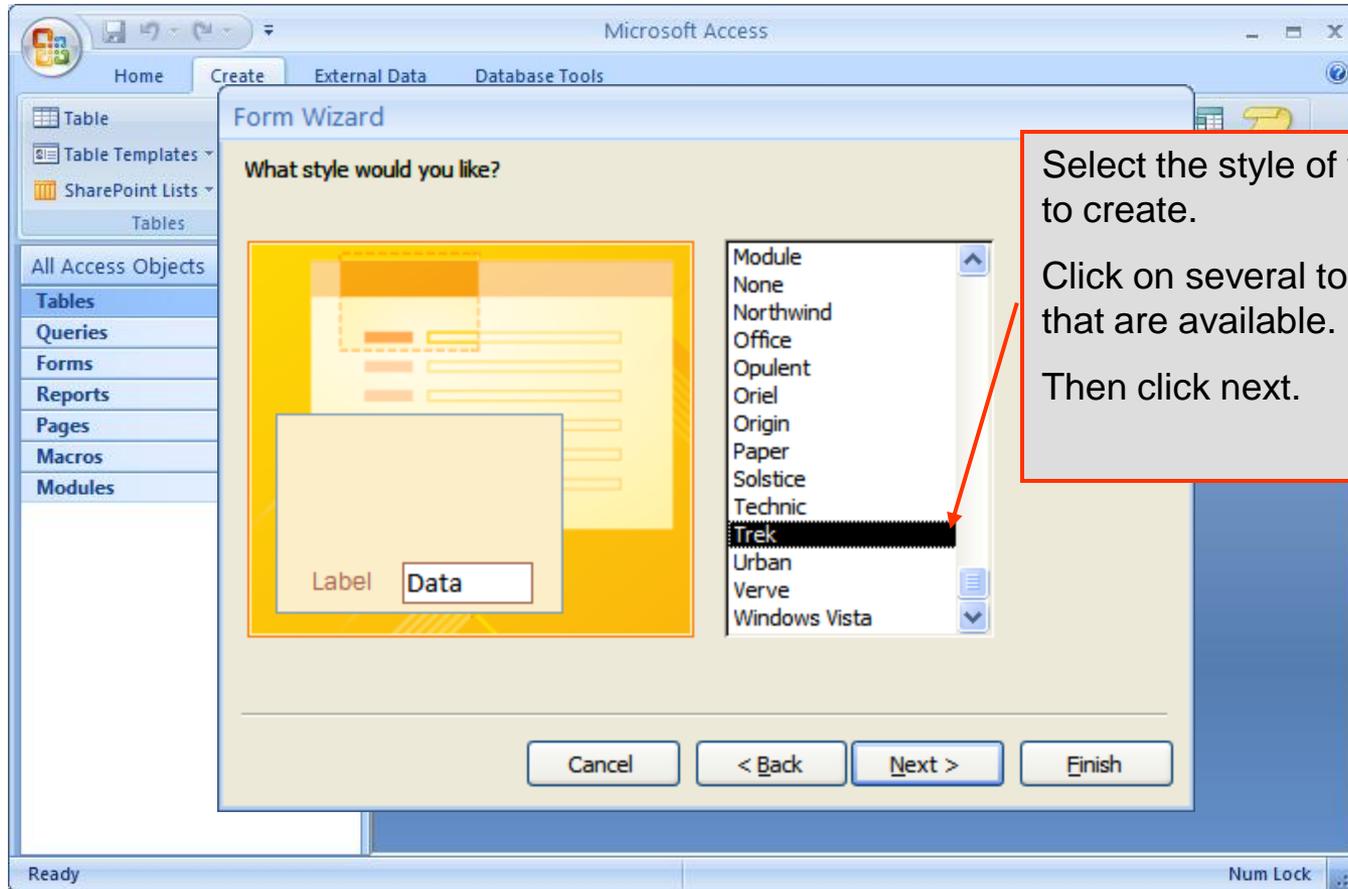
The Form Wizard



Select the layout of the form that you want to create.
Let's select tabular.
Then click next.



The Form Wizard



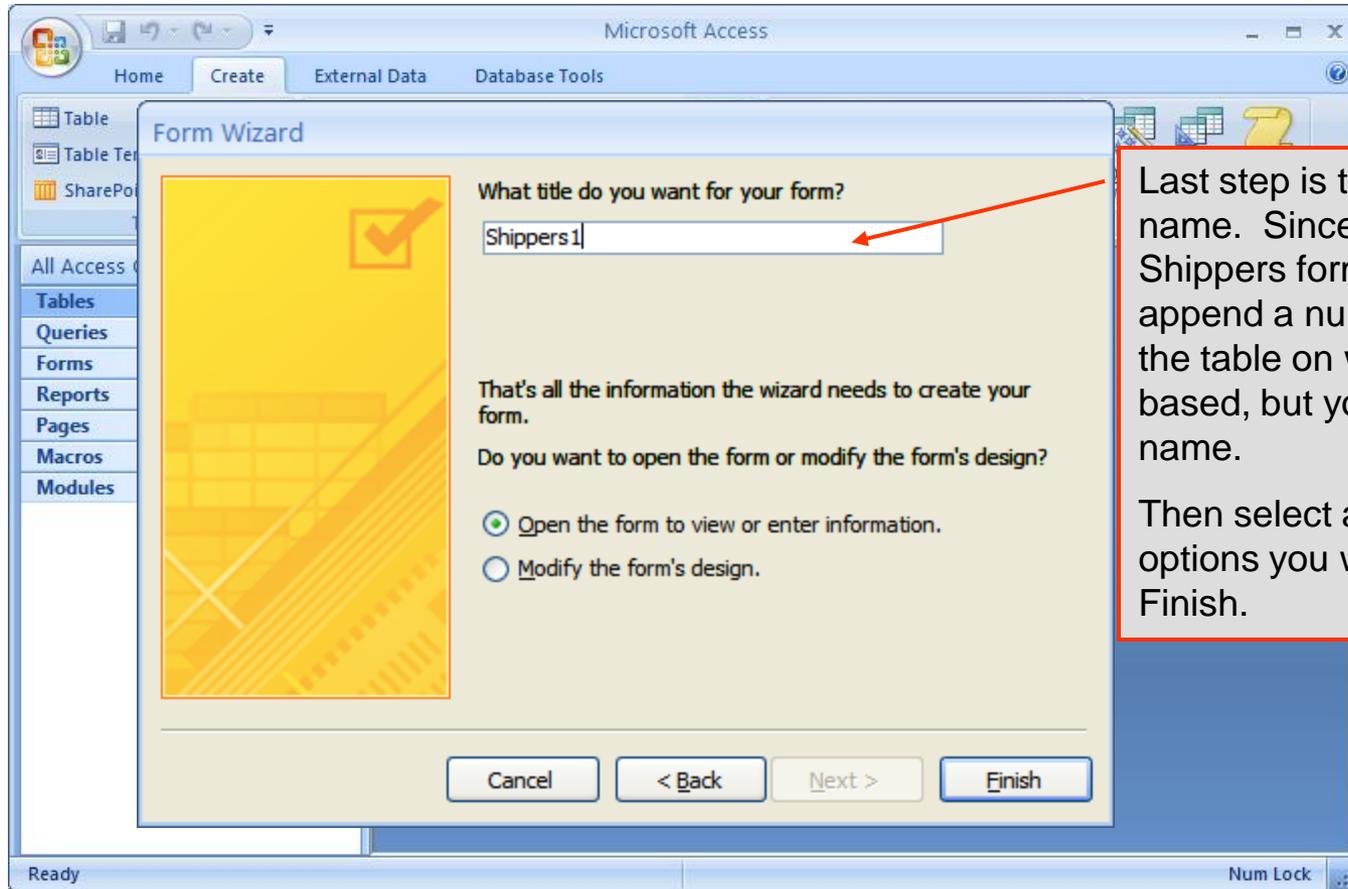
Select the style of the form that you want to create.

Click on several to see the various styles that are available. I selected Trek.

Then click next.



The Form Wizard



The screenshot shows the Microsoft Access interface with the Form Wizard dialog box open. The dialog box has a title bar that says "Form Wizard". On the left side, there is a large yellow square with a white checkmark icon. The main area of the dialog box contains the following text and controls:

What title do you want for your form?

That's all the information the wizard needs to create your form.

Do you want to open the form or modify the form's design?

Open the form to view or enter information.
 Modify the form's design.

At the bottom of the dialog box, there are four buttons: "Cancel", "< Back", "Next >", and "Finish".

Last step is to give the form a name. Since we already created a Shippers form the default will append a number to the same as the table on which the form is based, but you can select any name.

Then select any of the other options you would like and click Finish.



The Form Wizard

Home Create External Data Database Tools

View Paste Font Rich Text Records

Shippers1

Shippers1

Shipper ID	Company Name	Phone
1	Speedy Express	(503) 555-9831
2	United Package	(503) 555-3199
3	Federal Shipping	(503) 555-9931
4	United Shippers Service	407-823-2341
*	(New)	

Record: 1 of 4 No Filter Search

Number automatically assigned to new shipper.

Your form.

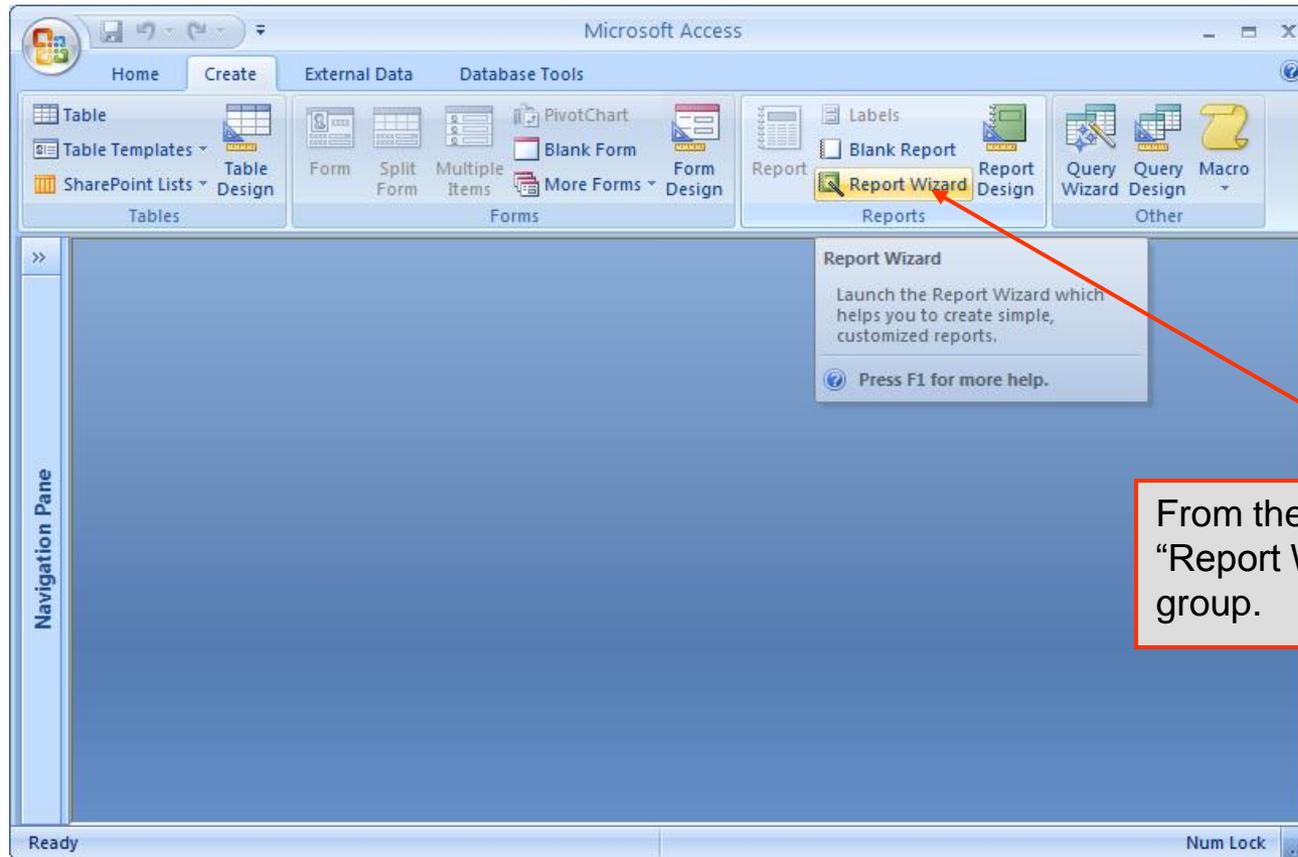
Notice that the new row we added before shows up in the current instance of the table.

Once again, enter some data through your newly created form.



The Report Wizard

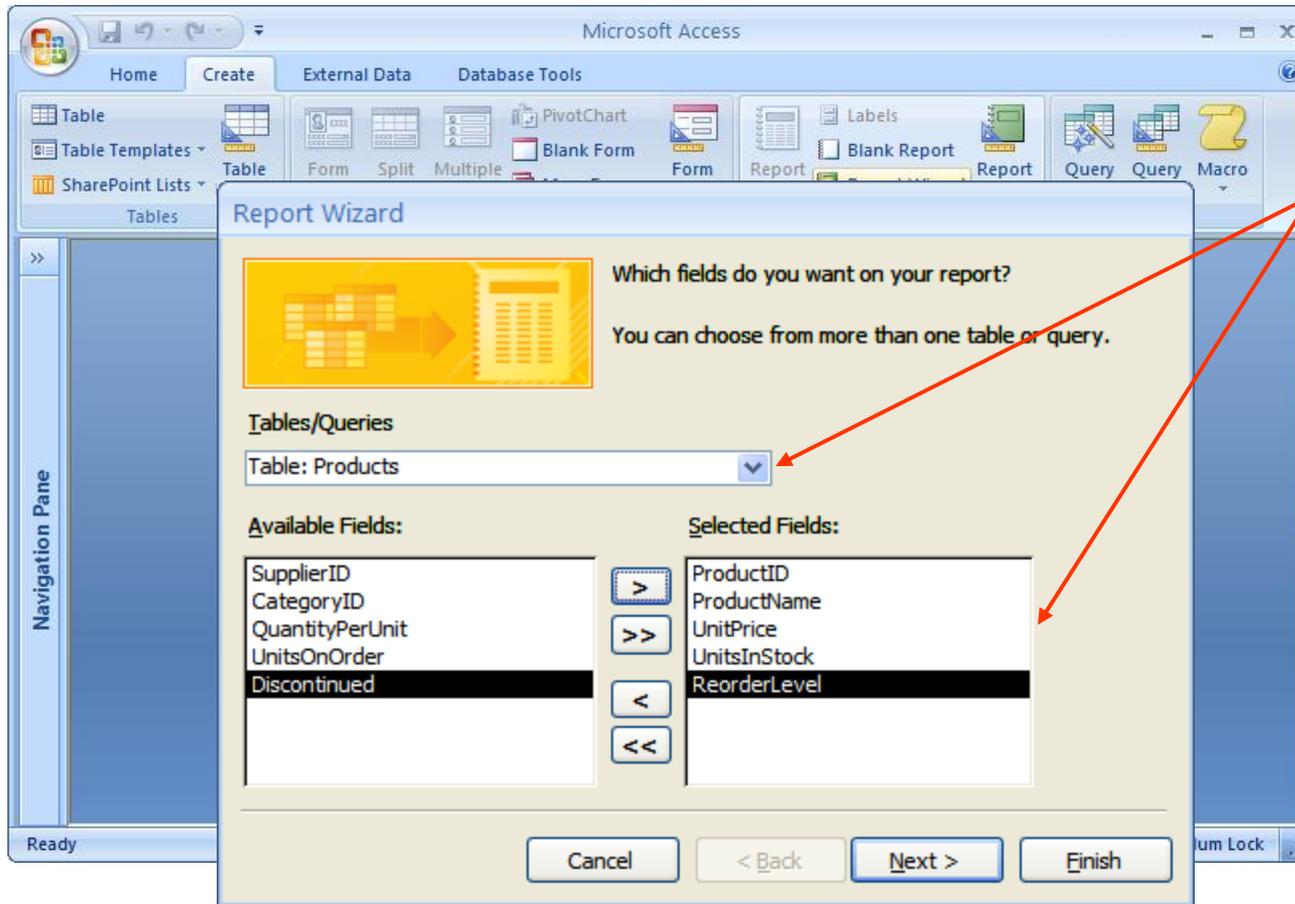
- The report wizard helps you to create a semi-custom report. Let's try one.



From the Create tab, click on "Report Wizard" in Reports group.



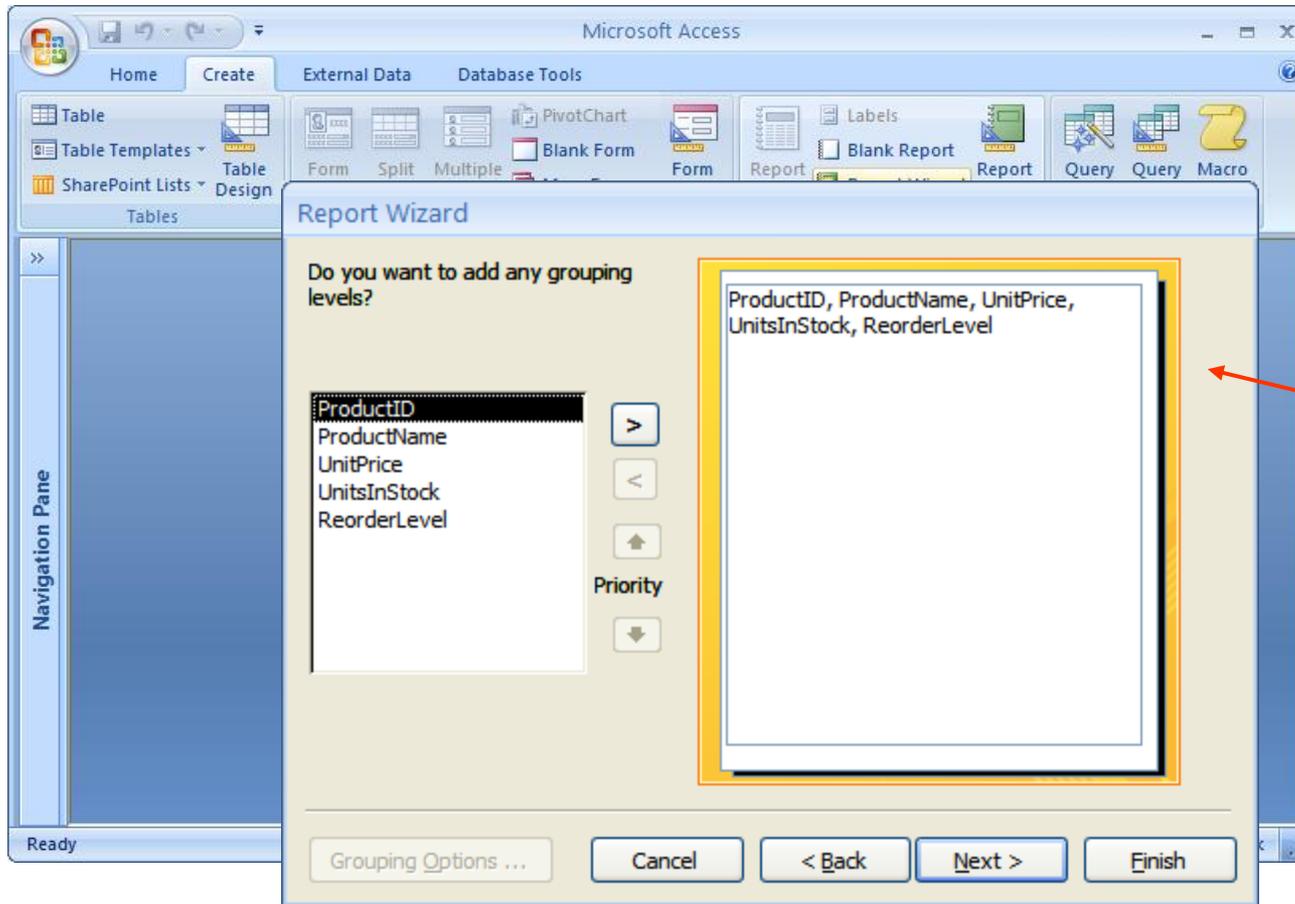
The Report Wizard



Select the Products table for the base of the report, then select some of the fields to be included in the report.
Then click next.



The Report Wizard

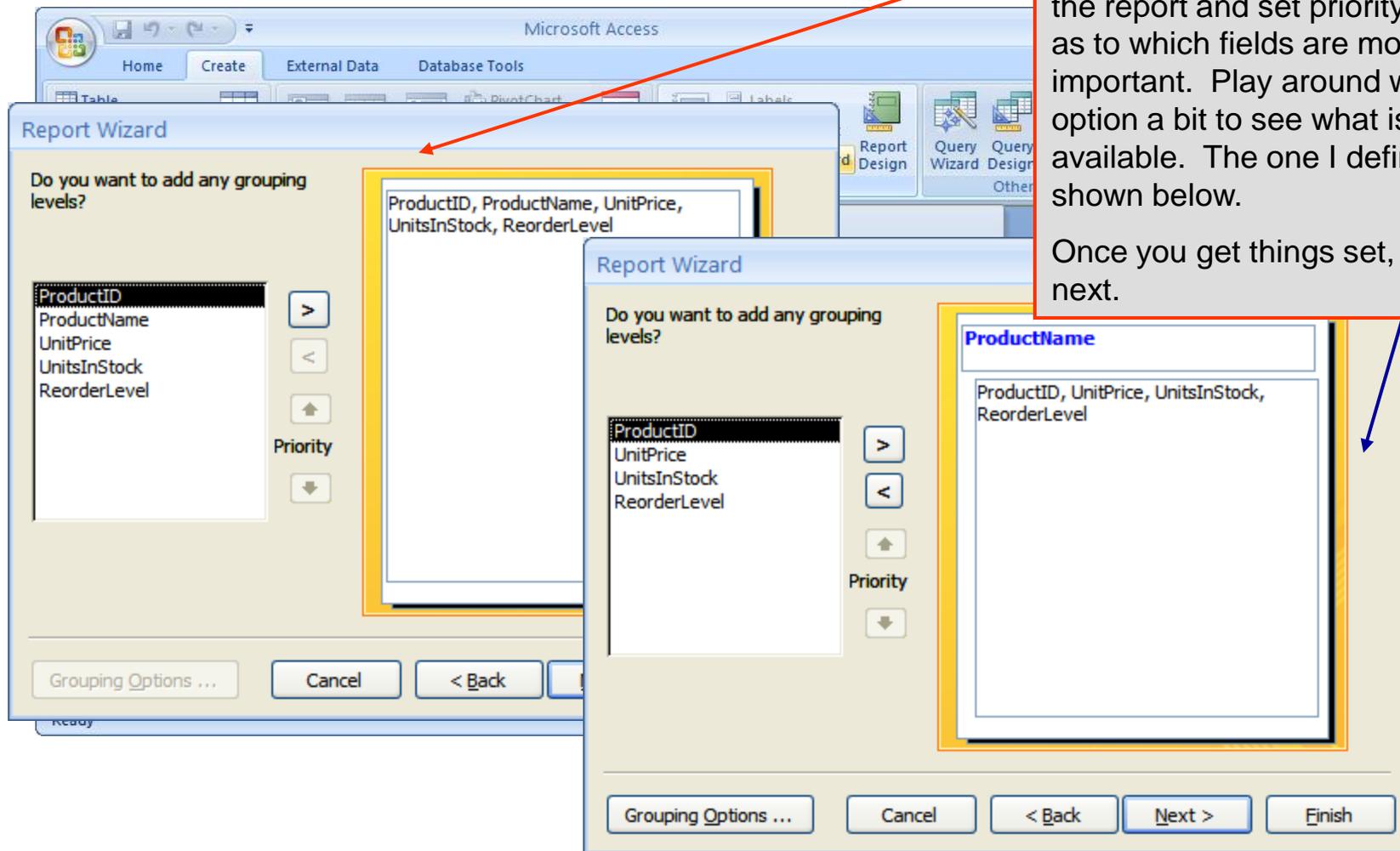


You can specify groupings within the report and set priority levels as to which fields are more important. Play around with this option a bit to see what is available.

Once you get things set, click next.



The Report Wizard

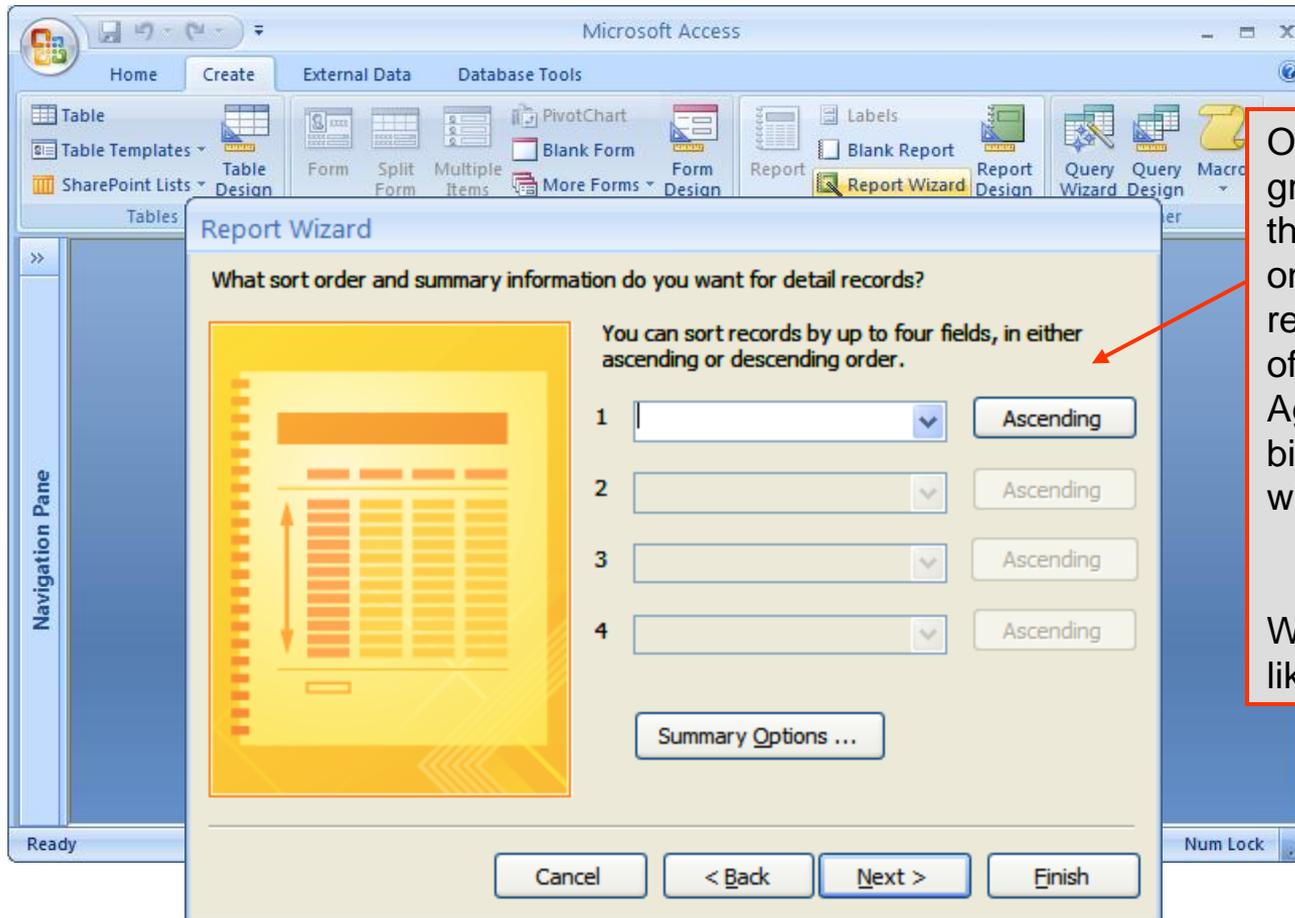


You can specify groupings within the report and set priority levels as to which fields are more important. Play around with this option a bit to see what is available. The one I defined is shown below.

Once you get things set, click next.



The Report Wizard

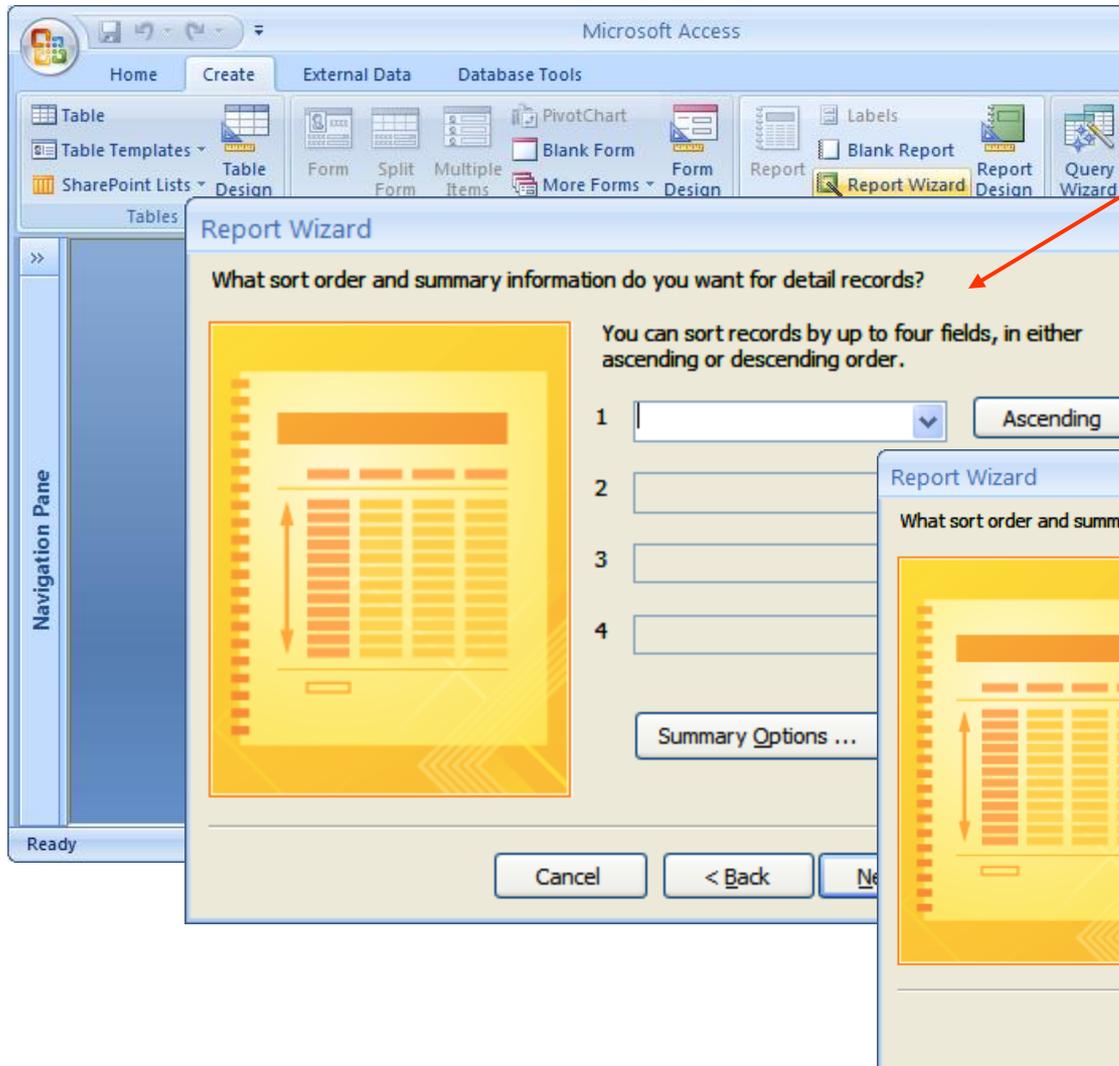


Once you've selected the groupings (if any), you have the options for sorting the data on up to four fields in the report as well as setting some of the summary options. Again, play around with this a bit to see how the reports vary with the different settings.

When you get something you like, click next.



The Report Wizard



Once you've selected the groupings (if any), you have the options for sorting the data on up to four fields in the report as well as setting some of the summary options. Again, play around with this a bit to see how the reports vary with the different settings. (See below for example.)

When you get something you like, click next.

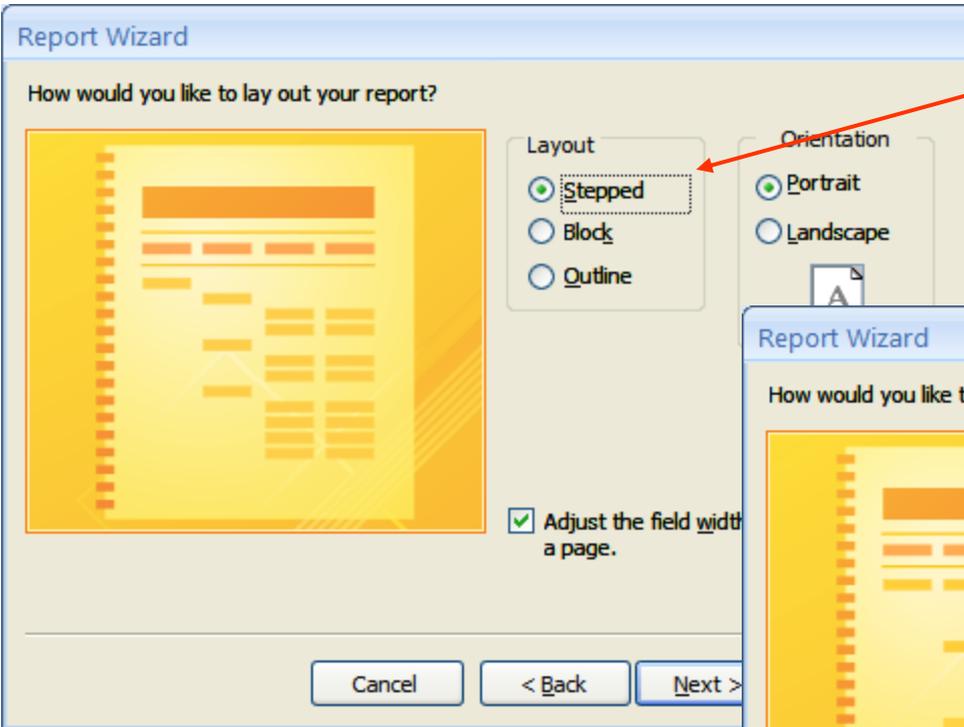


The Report Wizard

Now you're ready to specify the layout of your report. Again, you have a lot of options to pick and choose from so try some out.

(See below for example.)

When you get something you like, click next.



Report Wizard

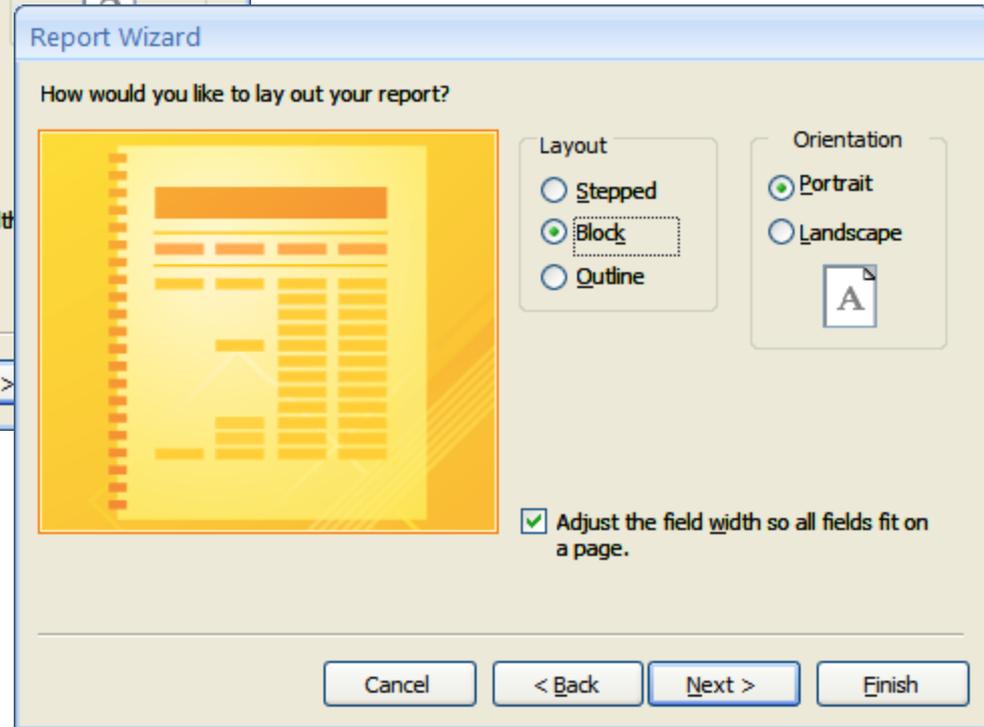
How would you like to lay out your report?

Stepped
 Block
 Outline

Orientation
 Portrait
 Landscape

Adjust the field width a page.

Cancel < Back Next >



Report Wizard

How would you like to lay out your report?

Stepped
 Block
 Outline

Orientation
 Portrait
 Landscape

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

Cancel < Back Next > Finish

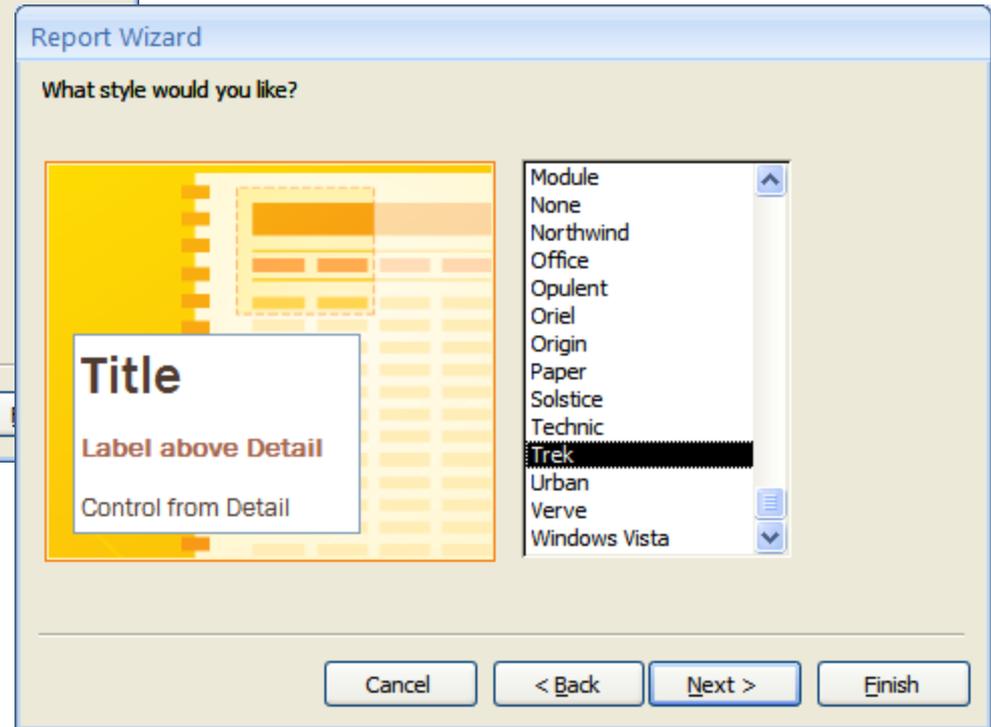


The Report Wizard

Now you can pick a style for your report. Several options are available so try some out.

(See below for example.)

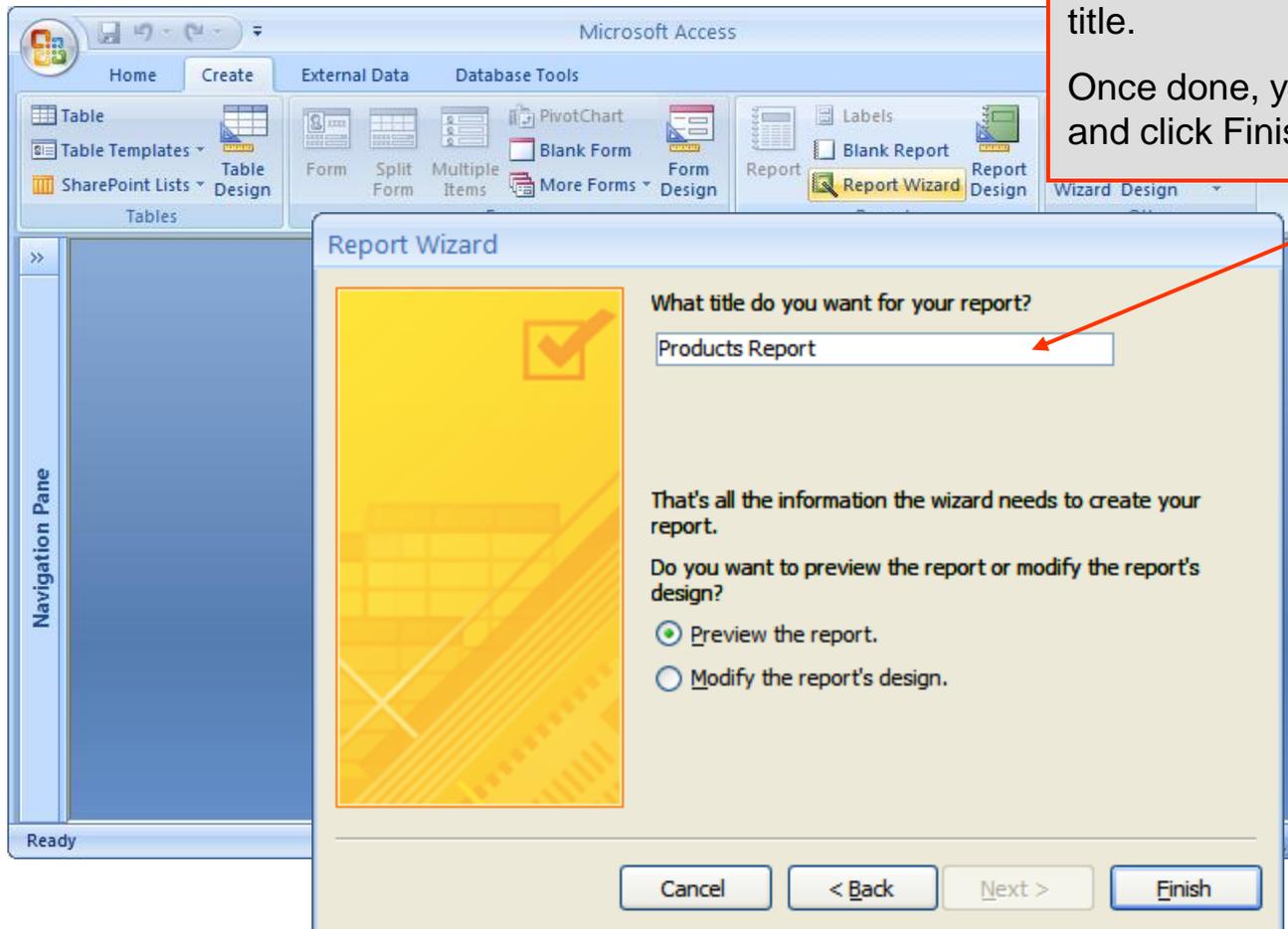
When you get something you like, click next.



The Report Wizard

As a last step you need to give your report a title.

Once done, you can set the other options and click Finish.



The Report Wizard

The screenshot displays the Microsoft Access interface in 'Print Preview' mode. The ribbon includes 'Page Layout' (Portrait, Landscape, Margins, Columns, Show Margins, Print Data Only, Page Setup) and 'Zoom' (One Page, Two Pages, More Pages). A callout box with an arrow points to the report preview area, containing the text 'Preview of the report.' The report itself is titled 'Products Report' and contains a table with the following data:

ProductName	Product ID	Units In Stock	Unit Price	Reorder Level
Alice Mutton	17	0	\$39.00	0
Aniseed Syrup	3	13	\$10.00	25
Boston Crab Me	40	123	\$18.40	30
Camembert Pie	60	19	\$34.00	0
Carnarvon Tiger	18	42	\$62.50	0
Chai	1	39	\$18.00	10
Chang	2	17	\$19.00	25

The interface also shows a 'Navigation Pane' on the left, a status bar at the bottom indicating 'Page: 1' and 'No Filter', and a system tray with 'Num Lock' and '100%' zoom.



Lab Assignment #3

Lab Assignment #3 – Due September 30th by 11:55 pm (WebCourses time) – 25 points

Using the Form Wizard and the Report Wizard create one form (12 points) and one report (13 points) that are different from any of the pre-defined forms or reports available in the sample Northwind database.

Use the same cut and paste method as in previous labs for your submission.

NOTE: Please use the following naming convention for your uploaded files:

HW03_LastNameFirstName.doc or HW03_LastNameFirstName.pdf

