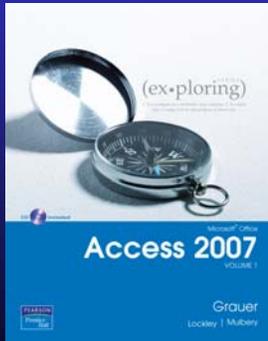


# Exploring Microsoft Office Access 2007



## Chapter 4: Create, Edit, and Perform Calculations in Reports

Robert Grauer, Keith Mulbery, Maurie Wigman Lockley

*Committed to Shaping the Next Generation of IT Experts.*

This chapters focus is on the creation of reports in Access.

# Objectives

- Plan a report
- Use different report views
- Create and edit a report
- Identify report elements, sections, and controls
- Add grouping levels in Layout View
- Add Fields to a report
- Use the Report Wizard

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

2

The objectives of this chapter are:

1. Plan a report
2. Use different report views
3. Create and edit a report
4. Identify report elements, sections, and controls
5. Add grouping levels in Layout View
6. Add Fields to a report
7. Use the Report Wizard

# Reports

Employee Name	Business Phone	Home Phone	Mobile Phone
<b>C</b> Andrew Cencini	(123)456-7890	(123)456-7890	
<b>F</b> Nancy Freehafer	(123)456-7890	(123)456-7890	
<b>G</b> Laura Giussani	(123)456-7890	(123)456-7890	

- Printed documents that display information from the database
- Allow the layout of data in a useful and attractive manner

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

3

Reports are printed documents that display information from the database. They allow us to layout data in a useful and attractive manner.

# Planning a Report

- Reports take careful planning in advance
  - Consider information to include
  - Decide overall look
  - Determine if any grouping levels will be needed
  - What kind of calculations will be needed
  - Determine how the report will be distributed



Copyright © 2008 Pearson Prentice Hall. All rights reserved.

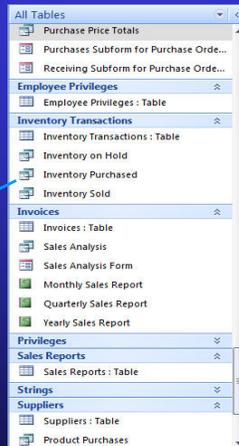
4

You should take the time to plan your report in advance. Just a few of the things you should take time to consider before you begin creating your report are:

1. Information to include
2. Overall look
3. Grouping levels
4. Calculations that will be needed
5. How the report will be distributed

# Identify Data Sources

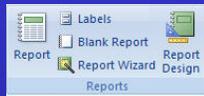
Determine the underlying data source or sources for your report



- May be based off of one or more tables or queries

Reports may be based off of one or more tables or queries. Before beginning your report, you should have already determined what the underlying source or your report will be.

# Report Tools – Report Tool



Report Tool

ID	Last Name	First Name	Student Organization Affiliation
2	Ginny	Murphy	National Honor Society
3	James	Ingels	Future Business Leaders of Amer
4	Emmanuel	Ferdinand	Student Government
5	Susan	Futch	Skills USA
6	James	Blalock	National Honor Society
7	Amos	Smith	Future Business Leaders of Amer
8	Greer	Johnson	Skills USA
9	Kayla	Jones	Skills USA
10	Lori Beth	Gloss	Future Business Leaders of Amer
11	Brian	Joyner	Future Business Leaders of Amer
12	Eric	Mitchell	National Honor Society
13	Glenda	Jenkins	Future Business Leaders of Amer
14	Terry	Smyth	National Honor Society
15	Denlian	King	Skills USA
16	Carmelita	Hanson	Student Government

- Generates a basic table based on one table/ query
- Shows all fields in the data source

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

6

The Report tool creates a very basic report and only allows for the use of one table or one query. In order to choose the data source for the report, the table or query you wish to use must be selected in the Navigation pane before choosing the Report Tool icon. The Report tool icon is located in the Reports Group of the Create tab. After clicking the Report icon, the report will automatically generate.

# Report Tools – Report Wizard



Student Organization Affiliation	Last Name	First Name
Future Business Leaders of America		
	Lori Beth	Gloss
	James	Ingers
	Glenda	Jenkins
	Brian	Joyner
	Amazé	Smith
National Honor Society		
	James	Blacklock
	Eric	Mitchell
	Ginny	Murphy
	Terry	Smith
Skills USA		
	Susan	Futch
	Greer	Johnson
	Kayla	Jones
	Demian	King
Student Government		
	Emmanuel	Ferdinand

- Allows use of multiple tables and queries
- All fields in the table do not have to be used
- Capable of summarizing or detailing data

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

7

The Report Wizard allows you to use multiple tables and queries in a report. Unlike the Report Tool, all fields in the table do not have to be used when creating a report with the wizard. The Report Wizard also add the capability of summarizing or detailing data.

# Report Views – Changing Views



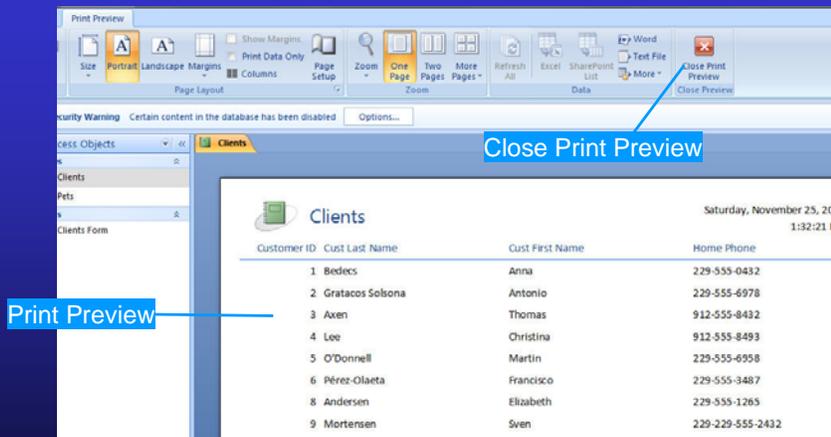
- To change views, click the Views icon, select the View desired

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

8

To change views when working with a report, click the Views icon and select the View desired.

# Report Views – Print Preview



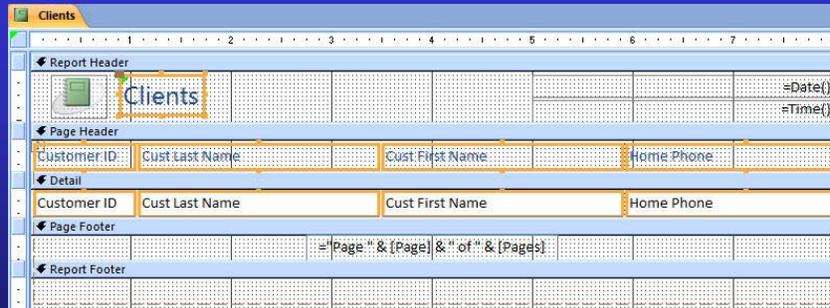
- Displays the report as it will appear when printed

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

9

Print Preview displays the report as it will appear when printed. Exit Print Preview by selecting the Close Print Preview icon located in the upper right section of the ribbon bar.

# Report Views – Design View



- Shows only the structure of the report
- Allows you to customize report elements

Design View shows only the structure of the report while allowing you to customize individual elements of the report. Keep in mind that you do not see any report data when using this view.

# Report Views – Layout View



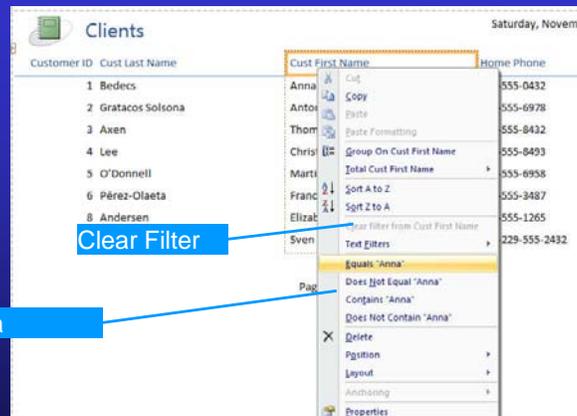
The screenshot shows a report titled "Clients" in Layout View. The report header includes the title "Clients" and the date and time "Saturday, November 25, 2006 1:33:40 PM". The data is presented in a table with the following columns: Customer ID, Cust Last Name, Cust First Name, Home Phone, and Address. The table contains 9 rows of data. The report is displayed on a white background with a blue border. The text "Page 1 of 1" is visible at the bottom of the report area.

Customer ID	Cust Last Name	Cust First Name	Home Phone	Address
1	Bedecs	Anna	229-555-0432	4343Doe Street
2	Gratacos Solsona	Antonio	229-555-6978	7865 Cherry Creek
3	Axen	Thomas	912-555-8432	12 Park Lane
4	Lee	Christina	912-555-8493	456 Stoffer Dr. Apt B
5	O'Donnell	Martin	229-555-6958	1265 Sussex Drive
6	Pérez-Olaeta	Francisco	229-555-3487	8 Landon Circle
8	Andersen	Elizabeth	229-555-1265	3242 Jone Street
9	Mortensen	Sven	229-229-555-2432	89 Winchester Hill

- Allows alteration of the report while viewing the data
- Spacing adjusts automatically

Reports can be altered in Layout View. This view differs from Design View in that the data can be seen while report elements are adjusted. Even though this view presents the data to the user, Print Preview should still be used to judge the final look of the report before printing.

# Create a Filter in a Report



- Select the criteria desired from the shortcut menu
- Clear the filter by choosing Clear filter from “Field Name”

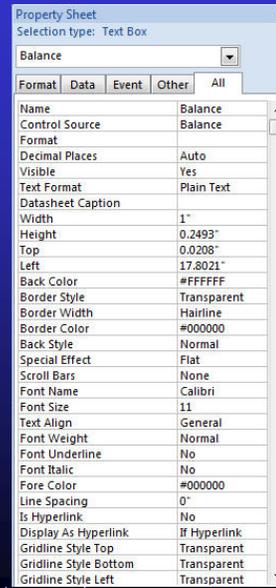
Copyright © 2008 Pearson Prentice Hall. All rights reserved.

12

To create a filter in a report, right click a field name in layout view and select the criteria desired from the shortcut menu. You can clear the filter by choosing Clear filter from “Field Name” from the shortcut menu. Note that this option is only available once a filter has been applied.

# Format Report Elements - Property Sheet

- Accessed by right-clicking on the report or an individual element in a report
- Allows you to change all available properties of an element or report



Copyright © 2008 Pearson Prentice Hall. All rights reserved.

13

The property sheet can be accessed by right-clicking the report or an individual element in a report.

It allows you to change all available properties of an element or report.

# Insert Graphical Elements

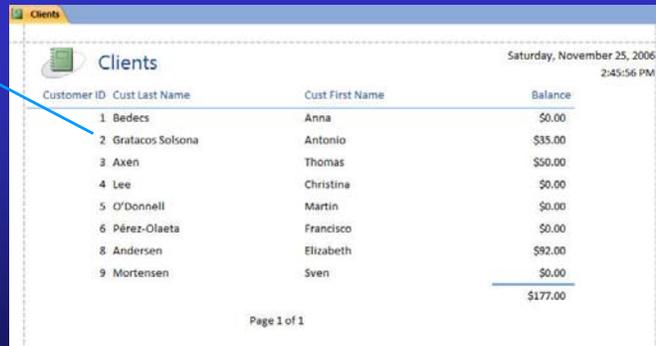


- Default graphical element on a basic report is a report binder logo
- This element can be changed by:
  - Selecting the Formatting tab, choose the Logo icon
  - Selecting an image from the Insert Picture dialog box

By default, the graphical element on a basic report is a report binder logo. This element can be changed by selecting the Formatting tab, choosing the Logo icon and selecting the desired image from the Insert Picture dialog box.

# Divisions of a Report – Detail Section

Detail Section



The screenshot shows a report window titled 'Clients' with a table of customer data. The table has four columns: Customer ID, Cust Last Name, Cust First Name, and Balance. The data is as follows:

Customer ID	Cust Last Name	Cust First Name	Balance
1	Bedecs	Anna	\$0.00
2	Grafcos Solsona	Antonio	\$35.00
3	Axen	Thomas	\$50.00
4	Lee	Christine	\$0.00
5	O'Donnell	Martin	\$0.00
6	Pérez-Olaeta	Francisco	\$0.00
8	Andersen	Elizabeth	\$92.00
9	Mortensen	Sven	\$0.00
			\$177.00

Page 1 of 1

- Data repeats once for each record in the source

In the Detail section of a report, data repeats once for each record that exists in the source data for the report.

# Divisions of a Report – Page and Report Headers

Report Header

Page Header

Customer ID	Cust Last Name	Cust First Name	Balance
1	Bedecs	Anna	\$0.00
2	Gratacos Solsona	Antonio	\$35.00
3	Axen	Thomas	\$50.00
4	Lee	Christina	\$0.00
5	O'Donnell	Martin	\$0.00
6	Pérez-Olaeta	Francisco	\$0.00
8	Andersen	Elizabeth	\$92.00
9	Mortensen	Sven	\$0.00
			\$177.00

Page 1 of 1

- Report headers: printed only once
- Page headers: print at the top of every page

Report headers are printed only once - at the beginning of the report. Page headers print at the top of every page.

# Divisions of a Report – Group Headers and Footers

Student Organization Affiliation	ID	Last Name	First Name	Hours Worked
<b>Future Business Leaders of America</b>				
	3	James	Ingels	13
	7	Amos	Smith	10
	10	Lori Beth	Gloss	20
	11	Brian	Joyner	14
	13	Glenda	Jenkins	32
Summary for "Student Organization Affiliation" = Future Business Leaders of America (5 detail records)				
Sum of Hours Worked:				89
<b>National Honor Society</b>				
	2	Ginny	Murphy	12
	6	James	Blalock	5
	12	Eric	Michajil	25
	14	Terry	Smith	21
Summary for "Student Organization Affiliation" = National Honor Society (4 detail records)				
Sum of Hours Worked:				63

- Group Headers appear at the start of a new grouping
- Group Footers appear at the end of a grouping

Group Headers appear once at the start of a new grouping. Group Footers appear once at the end of a grouping.

## Divisions of a Report – Page and Report Footers

The screenshot shows a report titled "Clients" with a table of customer data. The table has four columns: Customer ID, Cust Last Name, Cust First Name, and Home Phone. The data is as follows:

Customer ID	Cust Last Name	Cust First Name	Home Phone
1	Bedece	Anna	229-555-0432
2	Gratacos Solsona	Antonio	229-555-6978
3	Axen	Thomas	912-555-8432
4	Lee	Christina	912-555-8493
5	O'Donnell	Martin	229-555-6958
6	Pérez-Olaeta	Francisco	229-555-3487
8	Andersen	Elizabeth	229-555-1265
9	Mortensen	Sven	229-229-555-2432

At the bottom of the report, there is a "Report Footer" area containing the text "End of Report" and a "Page Footer" area containing the text "Page 1 of 1".

- Page footers: at the end of each page
- Report footers: at the end of the report

Page footers print once at the end of each page. Report footers print only once - at the end of the report.

## Working with Controls

- Controls allow you to position, display, format and calculate report date
- Controls are manipulated in Design View
- Two types of controls
  - Bound – tied to an underlying source
  - Unbound – not tied to an underlying source

Controls allow you to position, display, format and calculate report date. They are manipulated in Design View. There are two types of controls: bound – tied to an underlying source and unbound – not tied to an underlying source.

# Bound vs. Unbound Controls

The screenshot shows an Access report with the following sections and controls:

- Report Header:** Contains the report title 'Part-Time Organizational Workers', which is an unbound control.
- Page Header:** Contains the report title 'Part-Time Organizational Workers', which is an unbound control.
- Detail:** Contains a table with columns 'ID', 'Last Name', 'First Name', and 'Hours Worked'. The 'Hours Worked' column is a bound control.
- Page Footer:** Contains a 'Grand Total' row with a calculated field 'Sum([Hours])', which is a bound control.

Annotations in the image:

- A blue box labeled 'Unbound Control' points to the report title in the Report Header.
- A blue box labeled 'Bound control' points to the 'Hours Worked' column in the Detail section.

- Unbound Controls: report titles or explanatory text added to the report
- Bound controls: calculations made from underlying table or query, records in the detail section

Examples of Unbound Controls include report titles or explanatory text added to the report.

Examples of bound controls include calculations made from the data in the underlying table or query and records in the detail section.



# Group and Sort Tool



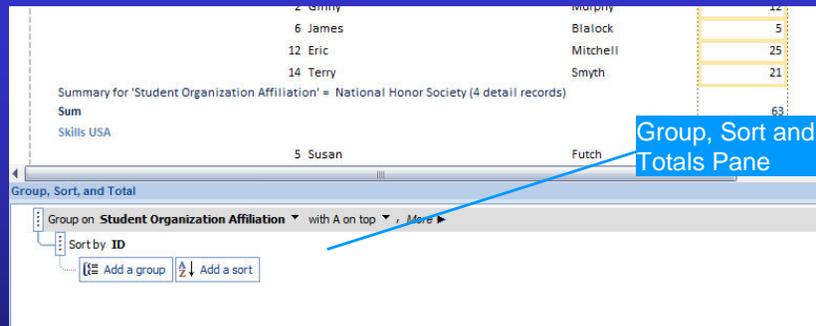
Group and Sort Tool

Student Organization Affiliation	ID	Last Name	First Name	Hours Worked
Future Business Leaders of America				
	3	James	Ingels	13
	7	Amos	Smith	10
	10	Lori Beth	Gloss	20
	11	Brian	Joyner	14
	13	Glends	Jenkins	32
Summary for 'Student Organization Affiliation' = Future Business Leaders of America (5 detail records)				
Sum of Hours Worked:				89
National Honor Society				
	6	James	Blalock	5
	12	Eric	Mitchell	25
	14	Terry	Smyth	21
Summary for 'Student Organization Affiliation' = National Honor Society (4 detail records)				
Sum of Hours Worked:				63

- Allows summarization of data by displaying the Group/Sort/Total pane in the bottom of the report

The Group and Sort tool allows you to summarize data by displaying the Group, Sort and Total pane in the bottom of the report.

# Group, Sort, and Total Pane



- Allows selection of primary/secondary/group and sort fields
- Adds levels beyond primary groupings

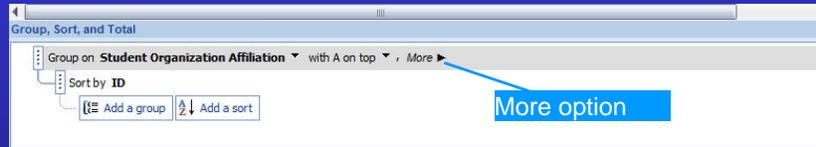
Copyright © 2008 Pearson Prentice Hall. All rights reserved.

23

The Group, Sort and Totals Pane allows you to select primary as well as secondary grouping fields.

Adding additional grouping levels beyond a primary grouping level results in nested groups.

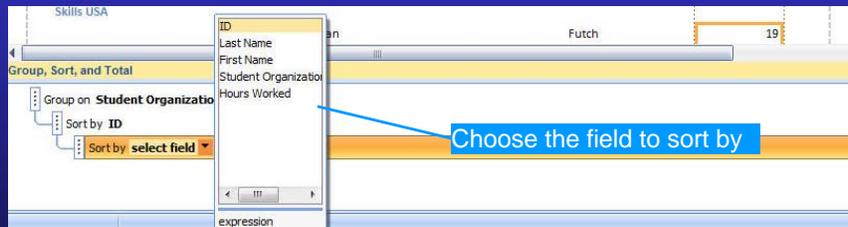
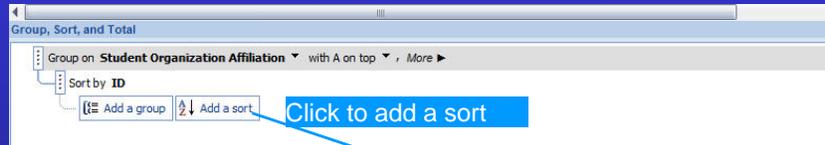
# Expanding Options in the Group, Sort, and Total Pane



- Select More to expand options

Selecting the More option in the Groups, Sort and Total pane expands the options for the group.

# Add a Sort



- After selecting, choose the desired field from the field list

After selecting the Add a sort option, choose the desired field from the displayed field list.

## Removing Groups, Sorts, and Totals

- To remove groups, sorts or totals
  - Display the groups, sort and total pane and strike delete
- Click Yes if a warning box appears
  - Notification that all controls in group will be deleted

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

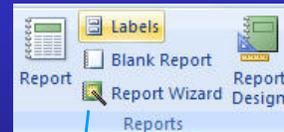
26

To remove groups, sorts or totals, display the groups, sort and total pane and strike delete.

Click Yes if a warning box appears that tells you the group has a header or footer section and the controls there will be deleted as well.

# Using the Report Wizard

- The Report Wizard creates a report based on answers that you provide
- Allows application of predefined styles

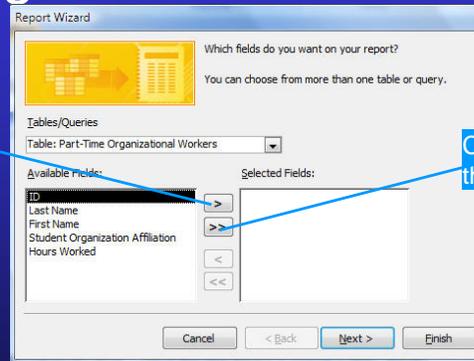


Click to use the Report Wizard

The Report Wizard creates a report based on answers that you provide to a series of questions given in the form of dialog boxes. .It also allows you to apply a predefined style to your report.

# Using the Report Wizard – Choosing Fields

Choose a field and click to add individual fields to the report



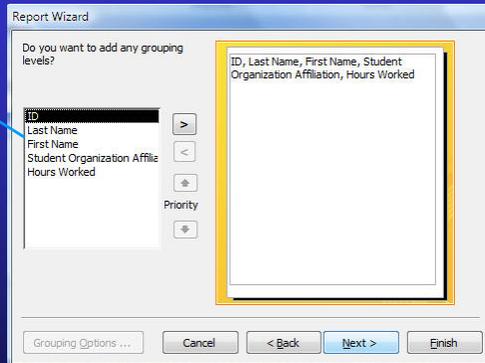
Click to add all fields to the report

- Choose or more tables and/or queries for your report

The first dialog box allows you to choose one or more tables and/or queries that your report will be based on as well as the individual fields for your report.

## Using the Report Wizard – Grouping Levels

Choose a field to group by



- Specify primary and secondary grouping
- Change grouping order of precedence

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

29

In the second dialog box of the Report Wizard, you can specify primary and secondary grouping levels and change their order of precedence in the report.

# Using the Report Wizard – Sorting and Summarizing

The image shows two overlapping dialog boxes from a software application. The 'Report Wizard' dialog box is in the foreground, titled 'What sort order and summary information do you want for detail records?'. It contains four rows, each with a dropdown menu for field selection and a radio button for 'Ascending' or 'Descending' order. A blue callout box points to the first dropdown menu with the text 'Choose one or more fields to sort by'. Below the rows is a 'Summary Options ...' button. The 'Summary Options' dialog box is partially visible behind it, titled 'What summary values would you like calculated?'. It features a table with columns for 'Field', 'Sum', 'Avg', 'Min', and 'Max'. The 'Hours Worked' field is selected in the 'Field' column. A blue callout box points to the 'Sum' checkbox for 'Hours Worked' with the text 'Choose the summary value desired'. Below the table are radio buttons for 'Detail and Summary' (selected), 'Summary Only', and a checkbox for 'Calculate percent of total for sums'. At the bottom of the 'Report Wizard' dialog are 'Cancel', '< Back', 'Next >', and 'Finish' buttons. A blue callout box at the bottom of the wizard dialog says 'Clicking the Summary Options buttons brings up the Summary Options dialog box'. A blue square bullet point is located above the text 'Allows you to specify sorting and summary options'.

Choose one or more fields to sort by

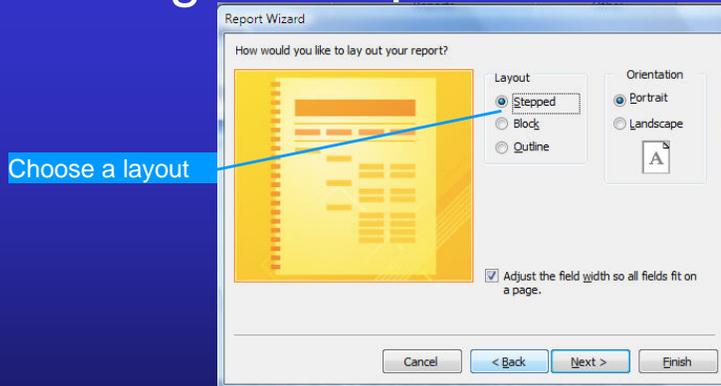
Choose the summary value desired

Clicking the Summary Options buttons brings up the Summary Options dialog box

- Allows you to specify sorting and summary options

The Report Wizards third dialog box allows you to specify sorting and summary options.

## Using the Report Wizard - Layout

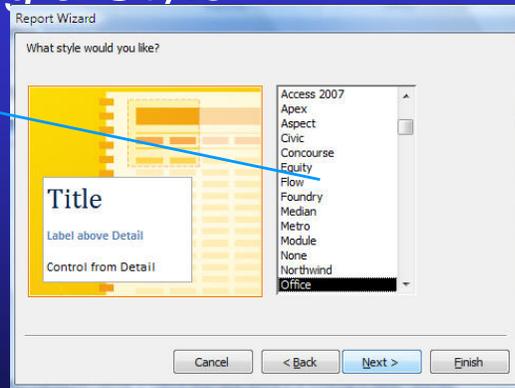


- Pick a layout
- Choose landscape or portrait

The next Report Wizard dialog box asks you to pick a layout. You can also choose whether your report orientation will be landscape or portrait.

## Using the Report Wizard – Choosing a Style

Choose a style



- Choose from several predetermined styles in this Report Wizard dialog box

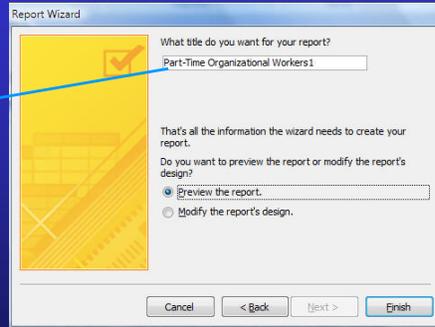
Copyright © 2008 Pearson Prentice Hall. All rights reserved.

32

Choose from several predetermined styles in the next Report Wizard dialog box. The Office style is selected by default.

# Using the Report Wizard – Naming your Report

Enter a title for your report



- Enter a title for your report
- Choose whether to preview the report or proceed to modify the design

Copyright © 2008 Pearson Prentice Hall. All rights reserved.

33

The last dialog box allows to name your report. You can also choose whether to preview the report or proceed to modify the design.



Copyright © 2008 Pearson Prentice Hall. All rights reserved.

34