Tutorial 7
Creating Custom Reports
Objectives

• Session 7.1
  – View, filter, and copy report information in Report view
  – Modify a report in Layout view
  – Modify a report in Design view
Objectives (Cont.)

• Session 7.2
  – Design and create a custom report
  – Sort and group data in a report
  – Add, move, resize, and align controls in a report
  – Add lines to a report
  – Hide duplicate values in a report
Objectives (Cont.)

• Session 7.3
  – Add the date, page numbers, and title to a report
  – Create and modify mailing labels
Customizing Existing Reports

• Case - *Chatham Community Health Services*

  Creating Custom Reports for Chatham Community Health Services

• User wants to make some changes to an existing report in the database and requested a new report that will be used to produce a printed list of all invoices for all visits

  - Report customization includes:
    • Grouping data
    • Calculating totals
    • Adding lines to separate report sections
Customizing Existing Reports (Cont.)

STARTING DATA FILES

Access2

Tutorial
Clinic.accdb (cont.)

Review
Supplier.accdb (cont.)

Case1
Task.accdb (cont.)

Case2
Tutoring.accdb (cont.)

Case3
Rosemary.accdb (cont.)

Case4
Ecotour.accdb (cont.)
Customizing Existing Reports (Cont.)

This report is displayed in Layout view.

Each column in the report is a field from a table or query.

The name of the report is in the tab.

The report is grouped by PatientID.

Subtotals sum the values in the grouped columns.

The text box containing the date is in the Page Footer section and appears at the bottom of every page in the report.

A report title is placed in either the Report Header section or the Page Header section.

The margin guides show the edges of the margins, which can help you to position the elements inside the page margins.

The column headings and line are in the Page Header section and will appear at the top of every page in the report.

When you select multiple objects, you can resize or format them together.

The text box containing the page number is in the Page Footer section and appears at the bottom of every page in the report.

The grand total is included when subtotals are added.
Customizing Existing Reports (Cont.)

• A report is a formatted output (screen display or printout) of the contents of one or more tables in a database
  – Although you can format and print data using datasheets, queries, and forms, reports offer greater flexibility and provide a more professional, readable appearance

• You need to produce a custom report whenever the Report tool or the Report Wizard cannot automatically create the specific report you need, or when you need to fine-tune an existing report to fix formatting problems or to add controls and special features
Customizing Existing Reports (Cont.)

Viewing a Report in Report View

- You can view reports on screen in Print Preview, Layout view, Design view, and Report View
- Report view provides an interactive view of a report
  - You can use Report view to view the contents of a report and to apply a filter to its data
  - You can also copy selected portions of the report to the Clipboard and use the selected data in another program
Choosing the View to Use for a Report

You can view a report on screen using Report view, Print Preview, Layout view, or Design view. Which view you choose depends on what you intend to do with the report and its data.

- Use Report view when you want to filter the report data before printing a report, or when you want to copy a selected portion of a report.
- Use Print Preview when you want to see what a report will look like when it is printed. Print Preview is the only view in which you can navigate the pages of a report, zoom in or out, or view a **multiple-column report**, which is a report that prints the same collection of field values in two or more sets across the page.
- Use Layout view when you want to modify a report while seeing actual report data.
- Use Design view when you want to fine-tune a report’s design, or when you want to add lines, rectangles, and other controls that are available only in Design view.
Customizing Existing Reports (Cont.)

Figure 7-1  Filter options for a Text field in Report view

- PatientID 22514
- VisitID 1576
- Click this area to close the menu and submenus
- Text Filters submenu filter options
- Shortcut menu filter options

Figure 7-2  Filter applied to the report in Report View

- Report lines that match the chosen filter option
- Report filter has been applied
Customizing Existing Reports (Cont.)

Figure 7-3 After selecting the filtered report in Report view

- Copy button
- Toggle Filter button is activated
- Click here to begin the selection
- Filtered report selected

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Customizing Existing Reports (Cont.)

Modifying a Report in Layout View

• You can make report changes in Layout view
• Modifying a report in Layout view is similar to modifying a form in Layout view
Customizing Existing Reports (Cont.)

**Figure 7-5** After resizing columns in Layout view

- **widths of the columns reduced**
- **Amount values formatted Standard**
- **values are at the left margin**
- **right-margin guide**

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Customizing Existing Reports (Cont.)

Figure 7-6  After resizing columns in Layout view

- width of Reason field values increased
- width of Reason field heading increased

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Customizing Existing Reports (Cont.)

Figure 7-8 After adding subtotals and a grand total of the Amount field values
Customizing Existing Reports (Cont.)

Figure 7-9  Viewing the rptVisitsAndInvoices report in Print Preview

- Report displayed in Print Preview view
- Zoom In button
- Zoom slider control
- Zoom Out button
- Grand total is displayed
- Click to close Print Preview view

New Perspectives on Microsoft Access 2013
Modifying a Report in Design View

• A report in Design view is divided into seven sections:
  – **Report Header section**—appears once at the beginning of a report and is used for report titles, company logos, report introductions, dates, visual elements such as lines, and cover pages
  – **Page Header section**—appears at the top of each page of a report and is used for page numbers, column headings, report titles, and report dates
  – **Group Header section**—appears before each group of records that share the same sort field value, and usually displays the group name and the sort field value for the group
  – **Detail section**—contains the bound controls to display the field values for each record in the record source
Modifying a Report in Design View

A report in Design view is divided into seven sections:

- **Group Footer section**—appears after each group of records that share the same sort field value, and usually displays subtotals or counts for the records in that group

- **Page Footer section**—appears at the bottom of each page of a report and is used for page numbers, brief explanations of symbols or abbreviations, or other information such as a company name

- **Report Footer section**—appears once at the end of a report and is used for report totals and other summary information
Customizing Existing Reports (Cont.)

Figure 7-10  \textit{rptVisitsAndInvoices} report in Design view

- Report Header section
- Page Header section
- Group Header section
- Detail section
- Report Footer section
- Page Footer section (group footer section has 0 height)
- Current date function
- Report title
- Page number
Customizing Existing Reports (Cont.)

Figure 7-11 After modifying the rptVisitsAndInvoices report in Design view

- Line added
- Right-aligned page number and Reason text boxes
Designing a Custom Report

- The InvoiceItem Group Header section contains the text box for the InvoiceItem value. Records with a common InvoiceItem value will be grouped together in the report.

- Two lines are added above the grand total to form a double line.

- The InvoiceItem Group Footer section contains items that will appear at the bottom of each InvoiceItem group.

- The detail items are sorted in ascending order beneath each group item.

- You hide duplicate field values using the Hide Duplicates field property.

- The expression used to calculate the subtotal for the InvoiceItem group is placed in the InvoiceItem Group Footer section.

- The group band field is a field that is used to group the detail items.

- The group band items are sorted in ascending order.

- Subtotals aggregate the values using =Sum().

- You can hide or show checkboxes in a report.

- A yes/no or true/false field is represented with check boxes in a report.

- The field heading labels are in the Page Header section and appear at the top of each page.

- The line that appears above each subtotal is in the Group Footer section.
Designing a Custom Report  (Cont.)

Decision Making: Guidelines for Designing and Formatting a Report

When you plan a report, you should keep in mind the following report design guidelines:

- Determine the purpose of the report and its record source. Recall that the record source is a table or query that provides the fields for a report. If the report displays detailed information (a detail report), such as a list of all visits, then the report will display fields from the record source in the Detail section. If the report displays only summary information (a summary report), such as total visits by city, then no detailed information appears; only grand totals and possibly subtotals appear based on calculations using fields from the record source.
- Determine the sort order for the information in the report.
- Identify any grouping fields in the report.
- Consider creating a sketch of the report design using pen and paper.

At the same time you are designing a report, you should keep in mind the following report formatting guidelines:

- Balance the report’s attractiveness against its readability and economy. Keep in mind that an attractive, readable, two-page report is more economical than a report of three pages or more. Unlike forms, which usually display one record at a time in the main form, reports display multiple records. Instead of arranging fields vertically as you do in a form, you usually position fields horizontally across the page in a report. Typically, you set the detail lines to be single space in a report. At the same time, make sure to include enough white space between columns so the values do not overlap or run together.
- Group related fields and position them in a meaningful, logical order. For example, position identifying fields, such as names and codes, on the left. Group together all location fields, such as street and city, and position them in their customary order.
- Identify each column of field values with a column heading label that names the field.
- Include the report title, page number, and date on every page of the report.
- Identify the end of a report either by displaying grand totals or an end-of-report message.
- Use few colors, fonts, and graphics to keep the report uncluttered and to keep the focus on the information.
- Use a consistent style for all reports in a database.

By following these report design and formatting guidelines, you’ll create reports that make it easier for users to conduct their daily business and to make better decisions.
Creating a Query for a Custom Report (Cont.)

Figure 7-12  Finished qryInvoicesByItem query in Design view

- Field lists for four tables
- Field list for a query
- Primary and secondary sort fields
Creating a Custom Report

**Figure 7-13** Blank report in Layout view

- Blank report
- Only tables can be listed in the Field List pane initially

**Figure 7-14** After adding fields to the report in Layout view

- Fields added in a tabular layout
- Field list values are the fields in the data source

New Perspectives on Microsoft Access 2013
Creating a Custom Report (Cont.)

Figure 7-15 After resizing and renaming columns in Layout view

- Column widths increased
- Column heading renamed and width decreased
- Text box does not display the entire text
Sorting and Grouping Data in a Report

- Access lets you organize records in a report by sorting them using one or more sort fields
  - Each sort field can also be a grouping field which can include a Group Header section and a Group Footer section for the group

Reference:
- Display the report in Layout view or Design view.
- If necessary, on the DESIGN tab, in the Grouping & Totals group, click the Group & Sort button to display the Group, Sort, and Total pane.
- To select a grouping field, in the Group, Sort, and Total pane click the Add a group button, and then click the grouping field in the list. To set additional properties for the grouping field, on the group field band click the More button.
- To select a sort field that is not a grouping field, in the Group, Sort, and Total pane click the Add a sort button, and then click the sort field in the list. To set additional properties for the sort field, on the sort field band click the More button.
Creating a Custom Report (Cont.)

Figure 7-16 After selecting Invoiceltem as a grouping field in Layout view

- Group & Sort button
- Group band header
- Group band
- Detail records are unsorted
- Invoiceltem is the grouping field
- The More option
- Group band options for the Group Header section
Creating a Custom Report (Cont.)

Figure 7-17 After expanding the group band

- Detail records are sorted by Invoice Date
- Click here to expand or collapse the group band options
- Header section is the group band

Figure 7-18 After setting properties in the group band

- Subtotal and line added to the Group Footer section
- Property settings changed in the group band options
- Close button for the Group, Sort, and Total pane
Creating a Custom Report (Cont.)

Figure 7-19  After moving all controls to the left in the report

Select All button

selected form controls moved to the left

InvoiceItem text box is not selected
Working with Controls in Design View

- Design view gives you greater control over the placement and sizing of controls than Layout view
  - It lets you add and manipulate many more controls
  - This power comes at the expense of not being able to see live data in the controls to guide you as you make changes.

Figure 7-20  After reducing the width of the report
Working with Controls in Design View (Cont.)

Figure 7-21  After resizing and spacing controls in Design view

Figure 7-22  Reviewing the report changes in Print Preview
Working with Controls in Design View (Cont.)

Figure 7-23  After removing borders and the alternate row color
Adding Lines to a Report

- You’ve used the Line tool to add lines to a form or a report
Hiding Duplicate Values in a Report

- Use the **Hide Duplicates property** to hide a control in a report when the control’s value is the same as that of the preceding record in the group.

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**Figure 7-25** Report in Print Preview with hidden duplicate values
Adding the Date to a Report

The contents in the Report Header section appear at the top of the first page of the report. This Report Header section has a height of 0 and no contents.

The Date function will display the current date.

The Group Footer section contents appear at the bottom of each group.

The Page Footer section contents appear at the bottom of every page. This Page Footer section has 0 height and no contents.

The Report Footer section contents appear at the bottom of the last page of the report.

The page number expression will display the word “Page” and the page number.

The contents in the Page Header section appear at the top of every page.

The Detail Section contains the controls that will be displayed on every page. This usually makes up most of the report contents.

The =SUM(InvoiceAmt) expression in the Group Footer section calculates the total of the values in the InvoiceAmt column for each InvoiceItem group.

The =SUM(InvoiceAmt) expression in the Report Footer section calculates the total of the values in the InvoiceAmt column for the entire report.
Adding the Date to a Report (Cont.)

**Figure 7-26** Completed Date and Time dialog box

- Select these options
- No time option selected
- Your dates and times will be different

**Figure 7-27** Date function added to the Report Header section

- Layout selector
- Empty cells
- Date function
- Section height increased, labels moved down and line added

New Perspectives on Microsoft Access 2013
Adding the Date to a Report (Cont.)

Figure 7-28  Viewing the date in Print Preview

- Current date
- Controls in the Page Header section
- Bottom of Invoiceltem value cut off
- Background in the Report Header section
Adding Page Numbers to a Report

• Display page numbers in a report by including an expression in the Page Header or Page Footer section.
• The inserted page number expression automatically displays the correct page number on each page of a report.

REFERENCE

- Display the report in Layout or Design view.
- In Design view or in Layout view, on the DESIGN tab, in the Header/Footer group, click the Page Numbers button to open the Page Numbers dialog box.
- Select the format, position, and alignment options you want.
- Select whether you want to display the page number on the first page.
- Click the OK button to place the page number expression in the report.
Adding the Date to a Report (Cont.)

Figure 7-29  Completed Page Numbers dialog box

Figure 7-30  Page number expression added to the Page Header section
Adding the Date to a Report (Cont.)

Figure 7-31  Date and page number in the Page Header section

Invoicetem field value fully displayed

[Diagram showing a report with date and page number]
Adding a Title to a Report

Figure 7-32  Report title in the Page Header section

- Title font size
- Report title
- Center handles align with the 4-inch mark

Figure 7-33  Completed rptInvoicesByItem report in Print Preview
Creating Mailing Labels

• A custom report could produce mailing labels, but using the **Label Wizard** is easier and faster way
  – It provides templates for hundreds of standard label formats, each of which is uniquely identified by a label manufacturer’s name and number
  – These templates specify the dimensions and arrangement of labels on each page
  – Standard label formats can have between one and five labels across a page; the number of labels printed on a single page also varies
• Most mailing labels are manufactured by Avery
Creating Mailing Labels (Cont.)

Creating Mailing Labels and Other Labels

- In the Navigation Pane, click the table or query that will serve as the record source for the labels.
- In the Reports group on the CREATE tab, click the Labels button to start the Label Wizard and open its first dialog box.
- Select the label manufacturer and product number, and then click the Next button.
- Select the label font, color, and style, and then click the Next button.
- Construct the label content by selecting the fields from the record source and specifying their placement and spacing on the label, and then click the Next button.
- Select one or more optional sort fields, click the Next button, specify the report name, and then click the Finish button.

Figure 7-34  Selecting a standard label

Image of Label Wizard with options to select Avery product number, make sure those options are selected, and selected manufacturer.
Creating Mailing Labels (Cont.)

Figure 7-35  Completed label prototype

- completed label format
- insert a comma and a space here
- insert a space here

Figure 7-36  Previewing the label content and sequence

- labels printed across-and-then-down sequence
Creating Mailing Labels (Cont.)

Figure 7-37  Column options in the Page Setup dialog box

- Specifies the number of column sets
- Option to print labels down the page
- Option to print labels across the page
- Preview of selected column layout