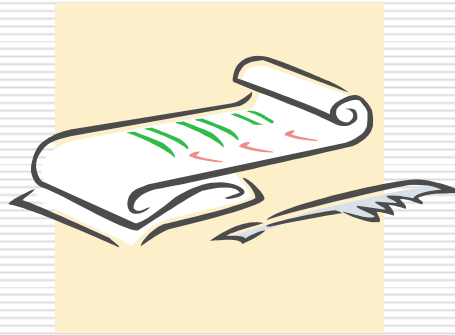# Tutorial 5

Lists

Lists

☐ Excel provides features that allow you to maintain lists of information such as customer lists, telephone lists, inventory lists, and so on. An **Excel list** is a collection of rows and columns that contain similar data.

☐ In a worksheet, each column represents a **field** of data and each row represents a **record** of data. The first row of the list always contains the name of the fields and is called a field **header** row.

Open the Vehicle Spreadsheet in Tutorial 5 in the LMAYER
instructor folder for CIS143.

Figure 5-1 Portions of the vehicles list

Freeze rows and columns

- □ worksheet, you can move data off the screen.
- □ If you prefer to have portions of data remain on the screen at all times, such as the column and/or row headings, you can freeze a portion of the list so that it remains while the rest of the data scrolls.
- □ To freeze rows and columns:
  - ■ Click in a cell to select it
  - ■ Click Window on the menu bar, and then click Freeze Panes to freeze the rows above the selected cell, and the columns to the left of the selected cell
  - ■ Excel will display dark vertical and horizontal lines to indicate the rows and columns that are frozen

Split panes

Similar to Freeze Panes, but each section is scrollable.

Zoom

Find and replace values in a worksheet (under Edit menu)

• The Find command allows you to search through the data in a worksheet for a particular character string.

• Optionally, you can choose to replace the character string with another string.

> • For example, you might want to find every occurrence of ACCT and replace it with Accounting. (Called Find and Replace)

The Find and Replace dialog box
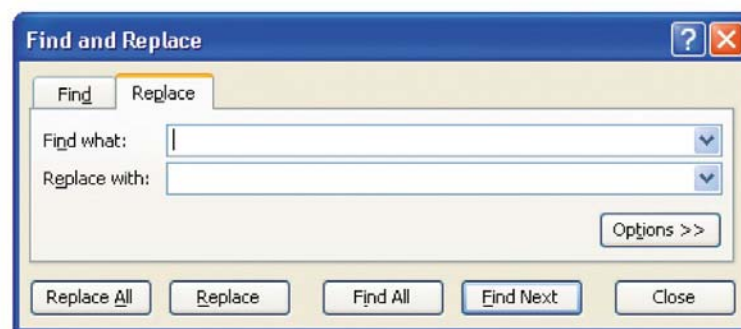
Sort data in a list (Data Menu)

- ☐ Excel makes it easy to sort a list in ascending or descending order based on any field(s) in the list.
- ☐ The field(s) selected on which to sort are called the sort fields or the sort keys.
- ☐ You may choose to sort the data on a single field or on a collection of fields.

Sort using a single sort key

Vehicles list sorted by DEPARTMENT ASSIGNED   Figure 5-8

Sort using multiple keys

Figure 5-11 Sort dialog box

primary sort field

specify secondary sort field here

specify third sort field here

click to specify a custom sort
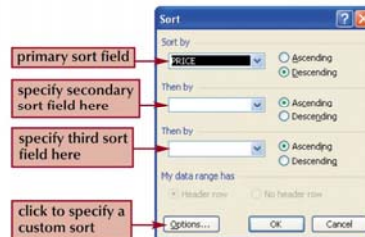
Use a data form to enter, search for, edit, and delete records

☐ Sometimes it is easier to view the data in a list through a data form. A data form is a dialog box that you can use to arrange data to view one record at a time.

☐ You can use the data form to display records, to search for records, to modify records, and to delete records from the Excel list.

☐ Use "criteria" to view specific records.

An Excel data form

Vehicles data form — Figure 5-14

name of data form matches worksheet name

indicates that the first record in the list is displayed

indicates the total number of records

data form labels match worksheet column headings

Found under the data menu
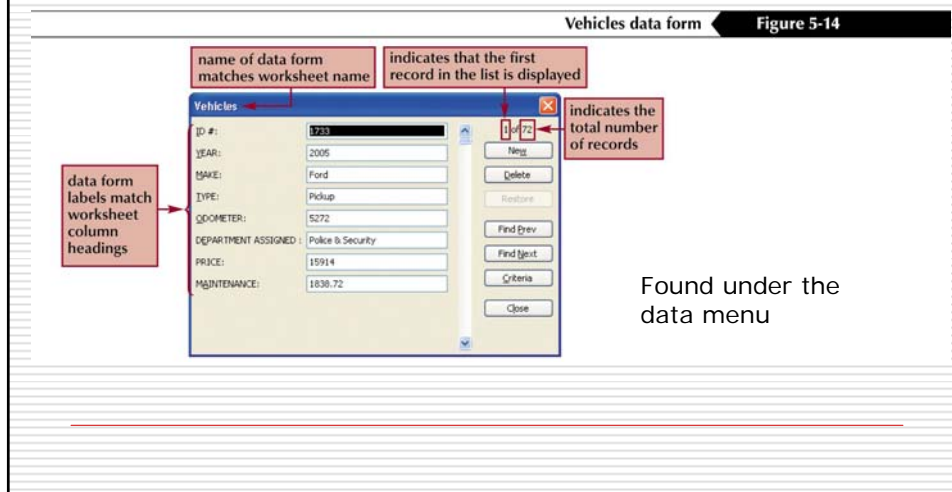
To create a List Range

☐ Click on desired cell within list

☐ Click Data on menu and point to List

☐ Click on Create List option

☐ Click OK to accept settings in dialog box

Create the range list
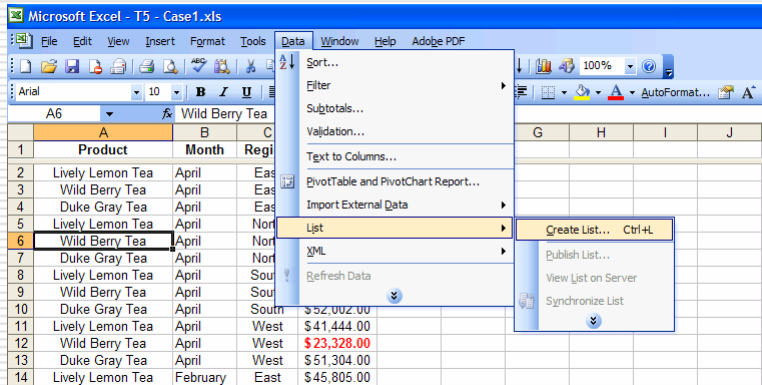
After the range list is created

AutoFilter arrows are automatically added
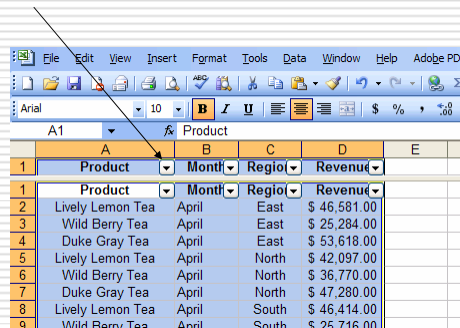
Filter data in a list using AutoFilters

☐ Sometimes you will want to see a portion of the records instead of all of them.

☐ The processing of displaying only those records that meet some criteria is called Filtering.

☐ When data in the list is filtered, records that do not meet your criteria are hidden.

■ These records are not removed from the list and, therefore, can be redisplayed by removing the filter

☐ Simple filters can be specified by clicking the list arrow on any field name cell.

☐ More complex filters must be created using the Custom AutoFilters option.

AutoFilter options

Filtering options for the MAKE field — Figure 5-16

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Insert subtotals into a list

- ☐ The data in a list can be summarized by adding subtotals to the list.
- ☐ You can include summary information such as a count, a sum, an average, a minimum value, and or a maximum value.
- ☐ When the Subtotals command is applied to the list, a subtotal row is automatically added to the list.
- ☐ You can specify that you want the subtotal(s) to apply to the worksheet and/or groups within the worksheet.

The Subtotal dialog box

Subtotal dialog box   Figure 5-26

make sure only the items you want to summarize are checked

option for printing each subtotaled group on separate pages
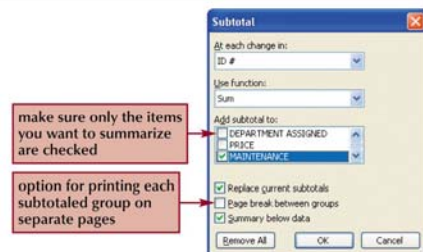
An Excel datasheet with totals added

Figure 5-27 Vehicles list with subtotals
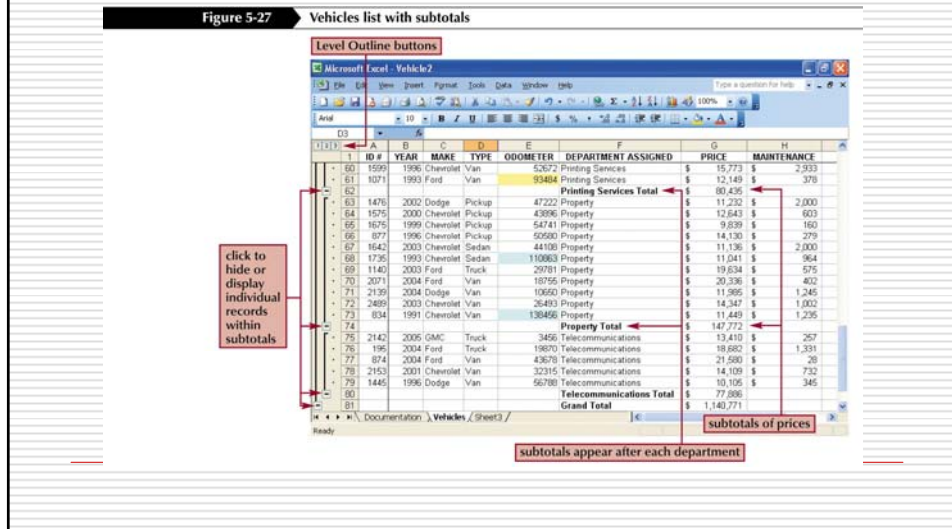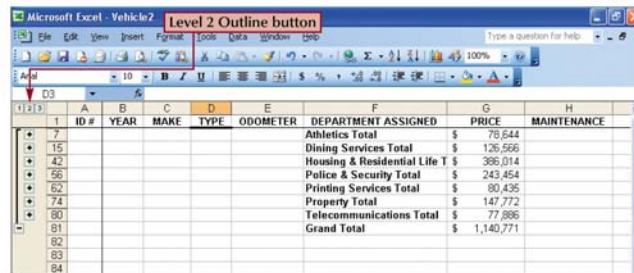
Use the subtotals outline view

- Previously you learned about creating subtotal lines within a worksheet.
- Sometimes, it might be more beneficial to view the summary information only.
- You can do this by displaying the data in Subtotals Outline View.
- You may choose from Level 1, Level 2, and Level 3 outline view.

Totals displayed in Outline view

Subtotals after Level 2 Outline button is selected — Figure 5-28

Summarize a list using a PivotTable and a PivotChart

- ☐ difficult to analyze the data.
- ☐ A PivotTable report provides a meaningful summary of the data in an organized manner.
- ☐ In the PivotTable, data is summarized into categories of data.
- ☐ A PivotChart is associated with a PivotTable report.
- ☐ To create the PivotChart you must specify the data fields to be included in the chart as well as the category fields.

An example of a Pivot Table

Sample PivotTable   Figure 5-29
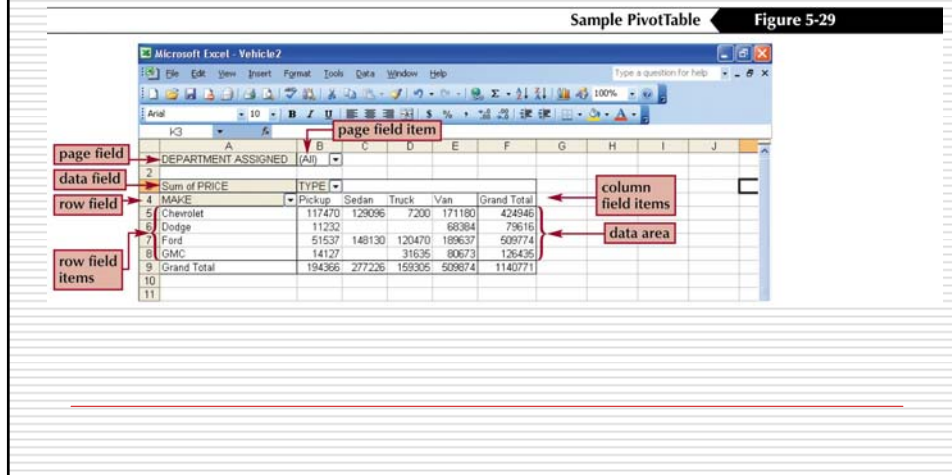
Plan a Pivot Table

- Creating a PivotTable requires pre-planning of the data you would like to see summarized in the PivotTable.
- It is often a good idea to create a plan and even sketch the desired table.
- This will help you decide which fields should be placed in the row, column, and data placeholders when running the wizard.

A Pivot Table plan

Figure 5-30	PivotTable plan for calculating average annual maintenance costs

My Goal
Create a table that compares average maintenance costs for each department by type of vehicle

What results do I want to see?
Average departmental maintenance cost for each type of vehicle
Overall average maintenance cost for each department
Overall average maintenance cost for each type of vehicle
Overall average maintenance cost for each vehicle

What information do I need?
The table rows will show the data for each department.
The table columns will show the data for each type of vehicle.
The table will summarize annual maintenance cost.

What calculation method will I use?
The annual maintenance cost will be averaged.

Sketch your Pivot Table

Figure 5-31	Sketch of table to compare average annual maintenance costs

Average Maintenance Cost by Department and Type of Vehicle

| Department	Pickup	Sedan	Truck	Van	Total
Athletics					
Dining Services					
Housing & Residential Life					
Police & Security					
Printing Services					
Property					
Telecommunications					
Total					

Create a pivot table

- ☐ Select Pivot Table/Chart Wizard from under data menu
- ☐ Choose either table or chart
- ☐ Also specify data source (Excel list, or Access database, etc.)
- ☐ verify data range
- ☐ specify location of table/chart
- ☐ complete layout on worksheet or choose layout tab

Modify a Pivot Table

- ☐ After the PivotTable is created you can change the layout of the table.
- ☐ You may want to make changes to the formatting, sort the data, add a field, or add a Page View.
- ☐ You can also easily turn the PivotTable into a chart by clicking the Chart button while the cursor is anywhere in the PivotTable.

An example of a Pivot Chart

Figure 5-51   Clustered-column PivotChart
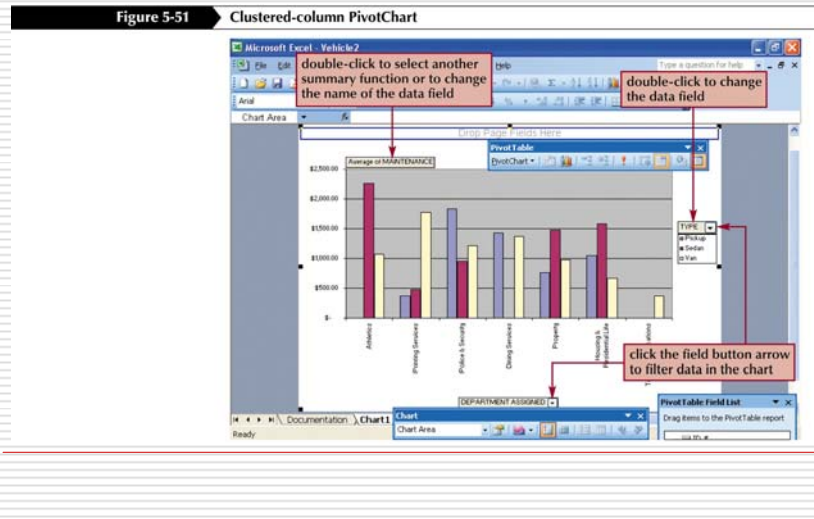
Keep in mind…

- ☐ Formatting: Cell, Column, Row formatting is as expected
- ☐ AutoFormat will list formats specific for Pivot Reports
- ☐ Changing the layout: drag fields under arrow to add or off table to delete
- ☐ Page view allows filters
- ☐ Hide fields by clicking on list arrow then clearing check box
- ☐ You cannot directly change data in a pivot table!!! Use form to edit, add, delete data then click refresh button on Pivot Table toolbar.