



University Information
Technology Services

Microsoft Excel 2010

Level 3



University Information Technology Services

Outreach, Training, Learning Technologies &
Video Production

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Excel 2010 Level 3

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Introduction

Although this is an advanced level document, the material is no more difficult to master than most of the beginning and intermediate level concepts. You will learn timesaving features such as macros and templates that will make your work easier and you will learn the quickest way to troubleshoot problems with your spreadsheets.

Learning Objectives

- Automating repetitive tasks with macros
- Saving time with templates
- Using Excel as a database
- Analyzing data with pivot tables
- Auditing worksheets
- Sharing workbooks over a network
- Using Sparklines and Slicer

Using Macros

This section will explain how to use Macros. *Figure 1* show terms and definitions encountered when working with macros:

Term	Definition
Macro	A series of Excel commands and instructions that you group together as a single command to accomplish a task automatically.
Visual Basic (for Applications)	Built-in programming language that enables a user to automate simple tasks (using macros).
Visual Basic Editor	A text editor built into Visual Basic that can be used to write and edit macros attached to Microsoft Excel workbooks.

Figure 1 - Macros

Recording a Macro

The following example describes how to record a macro and how to add header information to a worksheet. Steps 1-5 below explain how to add the *Developer* tab to Excel:

1. Click the *File* tab in the top-left corner of the screen.
2. Select *Options* from the menu that appears.
3. The *Excel Options* dialogue box will open (see *Figure 2*). Click the option *Customize Ribbon*, located on the left side of the window.
4. Click to place a check next to *Developer* (see *Figure 2*) in the lower-right area of the window.

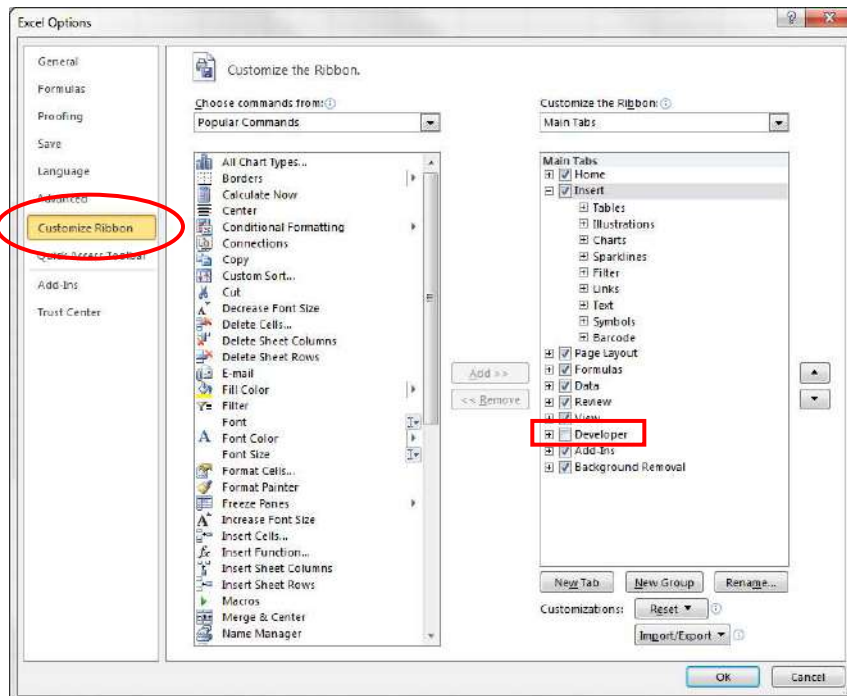


Figure 2 – Excel Options

5. Click *OK*. The *Developer Tab* will now be displayed on the Ribbon (see *Figure 3*).

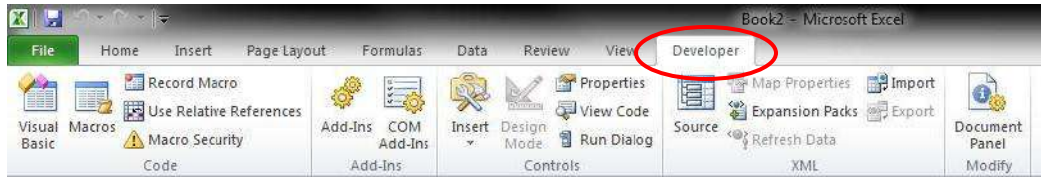


Figure 3 – Developer Tab

6. On the *Developer Tab*, in the *Code* group, Click *Record Macro* (see *Figure 4*).

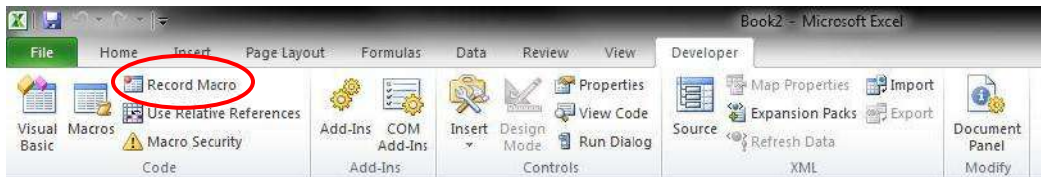


Figure 4 – Developer Tab

7. The *Record Macro* dialog box will appear.

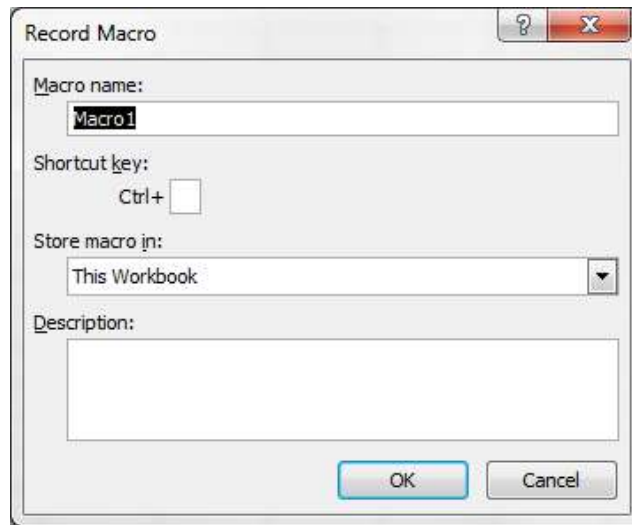


Figure 5 – Record Macro dialogue box

8. Enter a name for the macro in the *Macro name* field.
9. Enter a shortcut key in the *Shortcut key* field.
10. Click the down arrow next to the *Store macro in* field, and select where you want the macro to be stored (if you plan to use a macro with more than one workbook, select the *Personal Macro Workbook* option).
11. Enter a description of the macro in the *Description* field.

- Click *OK*. The *Stop Recording* option (see *Figure 6*) will appear in the *Developer* tab. You are ready to record the steps of the macro.



Figure 6 – Stop Recording button

- On the *Insert* tab (see *Figure 7*), click *Header and Footer*.



Figure 7 – Header & Footer button

- With your mouse pointer, click in the area marked *Click to add header* so that a cursor appears in this location.
- Enter text in the text box (example: *Kennesaw State University*).
- Then, click to select any cell (example: B2) within the spreadsheet.
- On the *Developer* tab, click the *Stop Recording* option (see *Figure 6*).

Running a Macro

The following explains how to run a Macro:

- On the *Developer* tab, select *Macros* (see *Figure 8*).

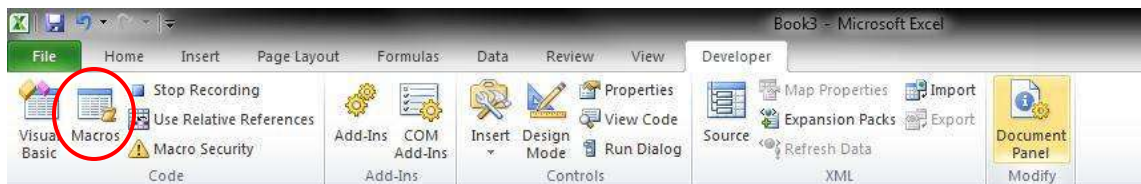


Figure 8 – Macros

- From the *Macro Dialog Box*, select the name of the macro that you want to run.
- Click the *Run* button.

Note: You can also run the macro by using the shortcut key that you assigned to the macro.

Editing a Macro

The following explains how to edit a macro:

1. On the *Developer* tab, select *Macros* (see *Figure 8*).
2. From the *Macro* dialog box, select the name of the macro that you want to edit.
3. Click the *Edit* button.
4. If the macro you selected is saved in the Personal Macro Workbook ("PERSONAL.XLSB"), you may get the message in *Figure 9*. If so, follow steps a-c below. Otherwise, proceed to step 5.
 - a. Click *OK*, close the *Macro Dialog Box*.
 - b. On the *View Tab*, in the *Window group*, select *Unhide*.
 - c. Repeat steps 1 through 3 above.

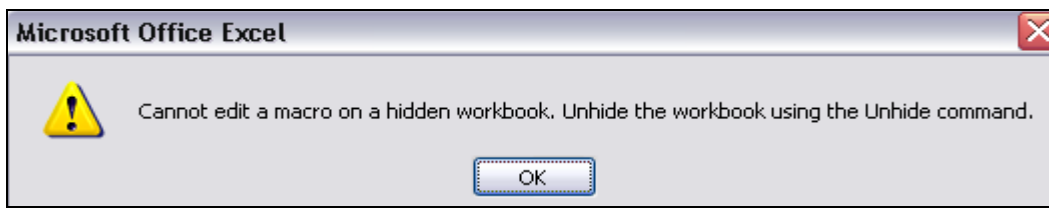


Figure 9 – Excel Message

5. The Visual Basic editor starts, showing the Footer macro in a module window (see *Figure 10*).

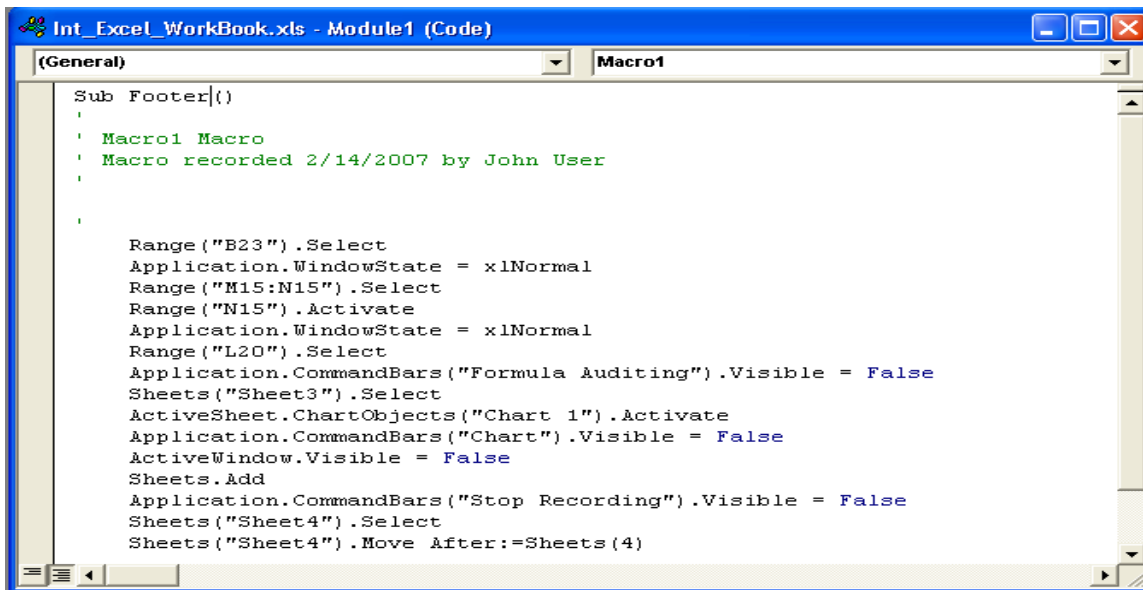


Figure 10 – Visual Basic Editor

6. Scroll down in the module window until you see the line: **CenterFooter = ""**
7. Double-click the quote marks to the right of "CenterFooter = " and type the following:
KSU
8. Click *File* and then click *Close and Return to Microsoft Excel*.
9. To save, follow the steps below:
 - A. Click the *File* tab in the upper-left area of the screen.
 - B. Click *Save As*.
 - C. The *Save As* dialogue box will appear.
 - D. Enter the *file name* for the document. Then, for *Save as type*, change this from **Excel Workbook** to **Excel Macro-Enabled Workbook**.
 - E. Click *Save*.

Advanced Formulas

Following are some of the advanced formulas available within Microsoft Excel. *Figure 11* contains some of the terms and definitions used with advanced formulas:

Term	Definition
Formula Palette	A window that opens when you choose a function from the Paste Function dialog box, and helps you build the function you select.
Argument	The values a function uses to perform operations or calculations--- numeric values, cell references, etc.
Nested Function	A function within a function. A function's argument is another function.

Figure 11 – Advanced Formula Terms

Using the Insert Function and the Formula Palette

The following explains how to use the Insert Function and the Formula Palette:

1. On the *Formula Bar*, click the *Insert Function* button (see *Figure 12*).

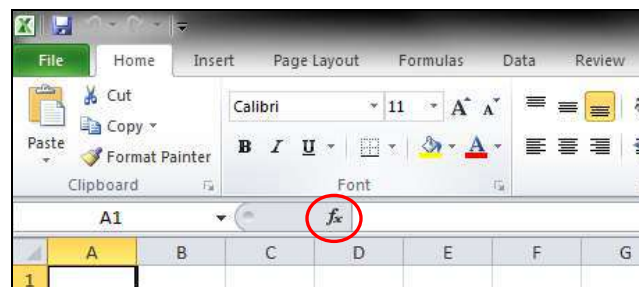


Figure 12 – Insert Function Button

2. Select the function that you want to use from the *Insert Function* dialog box.
3. The *Formula Palette* for the chosen function appears (see *Figure 13*).

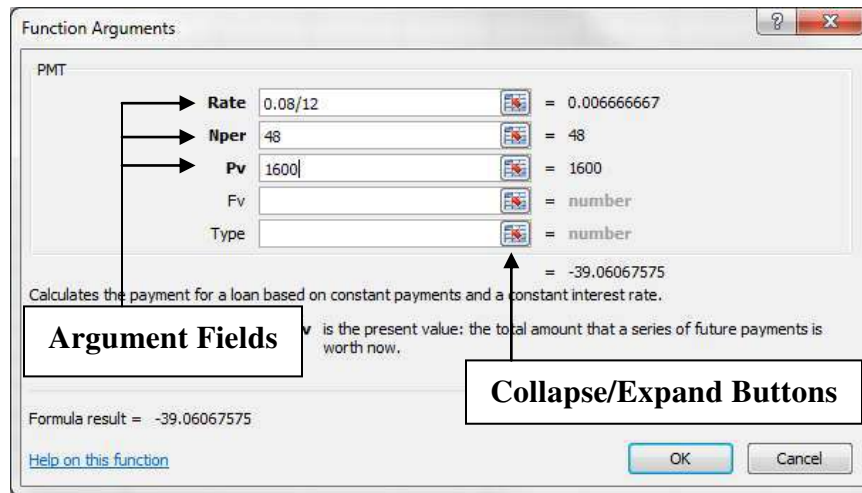


Figure 13 – Formula Palette

Note: The example above illustrates the PMT function. There are five function argument fields; the ones listed in bold type are required, the others are optional. Notice that the result of the formula is given at the bottom of the *Formula Palette*.

4. Enter the argument for each field and click *OK*. You can also select the arguments from the spreadsheet if you choose. If the **Formula Palette** obscures cells that you want to select, click any of the *Collapse/Expand* buttons.

Creating Nested Functions

The following example is an illustration of a nested function:

=SUM(SUM(A1:A5),AVERAGE(C1:C5))

The formula (which is located at cell E1 in *Figure 14*) adds the **sum of cells A1 through A5** to the **average of cells C1 through C5**.

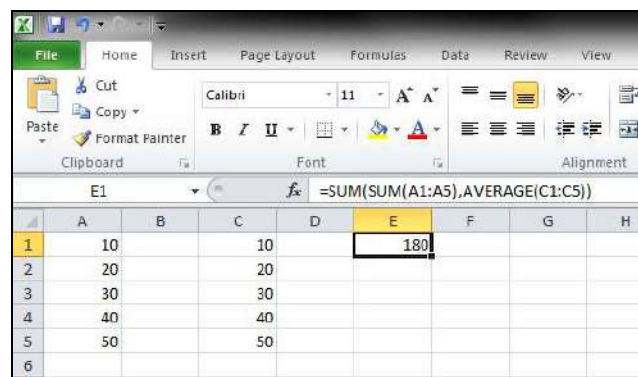


Figure 14 – Nested Functions

Auditing Worksheets

Excel's *Formula Auditing* features allows you to show the flow of formulas on the worksheet. This makes it easier to find the source of problems. *Figure 15* contains terms and definitions frequently encountered when auditing worksheets:

Term	Definition
Precedents	Cells that are referred to by a formula.
Dependents	Cells containing formulas that refer to other cells.
Tracer Arrows	Graphically show the flow of data between cells containing values and those containing formulas. Point in the direction of the data flow.

Figure 15 – Definitions

1. On the *Formulas* tab, in the *Formula Auditing* group, you are able to access all the formula auditing options (see *Figure 16*).



Figure 16 – Formula Auditing Options

In the example in *Figure 17*, we will display what makes up the total in cell G4.

	A	B	C	D	E	F	G	H
1	ABC Company Sales							
2								
3	Name	January	February	March	April		Total	
4	Eastern Region	\$ 110.00	\$ 175.00	\$ 140.00	\$ 168.00		\$ 593.00	
5	Western Region	\$ 200.00	\$ 210.00	\$ 240.00	\$ 288.00		\$ 938.00	
6	Southern Region	\$ 300.00	\$ 180.00	\$ 295.00	\$ 354.00		\$ 1,129.00	
7	Northern Region	\$ 220.00	\$ 195.00	\$ 185.00	\$ 222.00		\$ 822.00	
8								
9	Total	\$ 830.00	\$ 760.00	\$ 860.00	\$ 1,032.00		\$ 3,482.00	
10								

Figure 17 – Auditing a Worksheet

2. Select cell G4.

3. In the *Formula Auditing* group, select the *Trace Precedents* option (see *Figure 18*).
4. The *Trace Arrow* indicates that cells B4 through E4 are the cells referred to in the formula in cell G4 (see *Figure 18*).

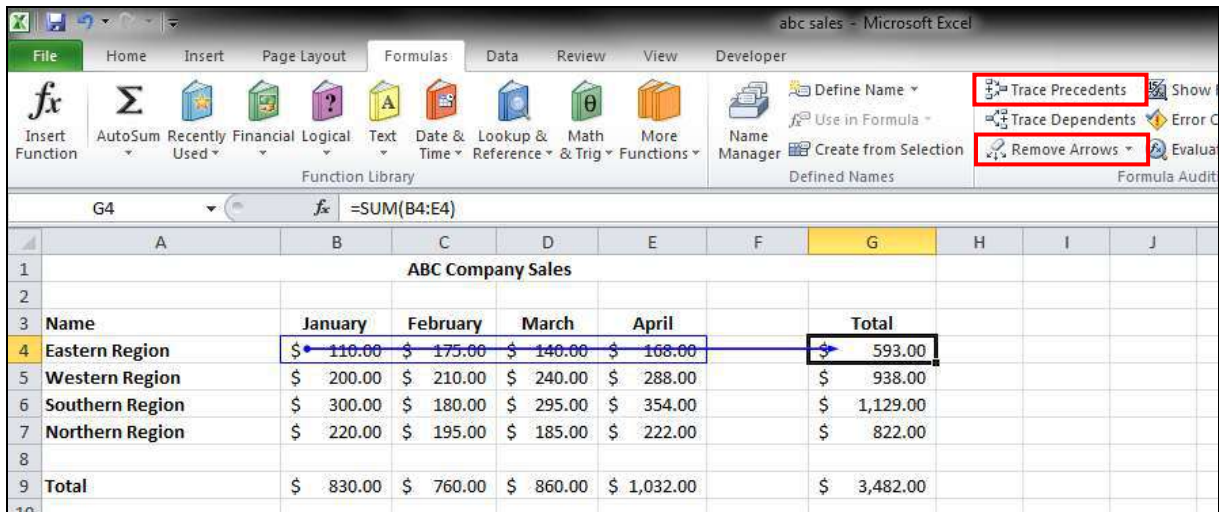


Figure 18 – Auditing a Worksheet

5. To remove the arrow from the spreadsheet, click the *Remove Arrows* button (see *Figure 18*).

In the example in *Figure 19*, we will display the dependents of cell E4.

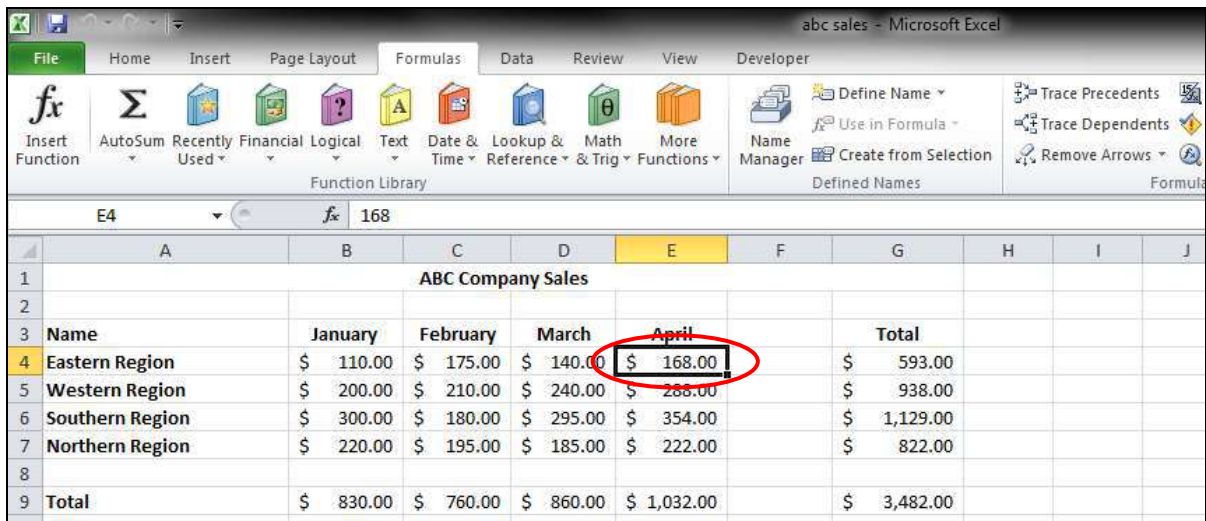


Figure 19 – Auditing a Worksheet

1. Select cell E4.
2. In the *Formula Auditing* group, select the *Trace Dependents* option (see *Figure 20*).
3. The *Trace Arrow* in *Figure 20* indicates that the formulas in both cells E9 and G4 depend on the value in cell E4.

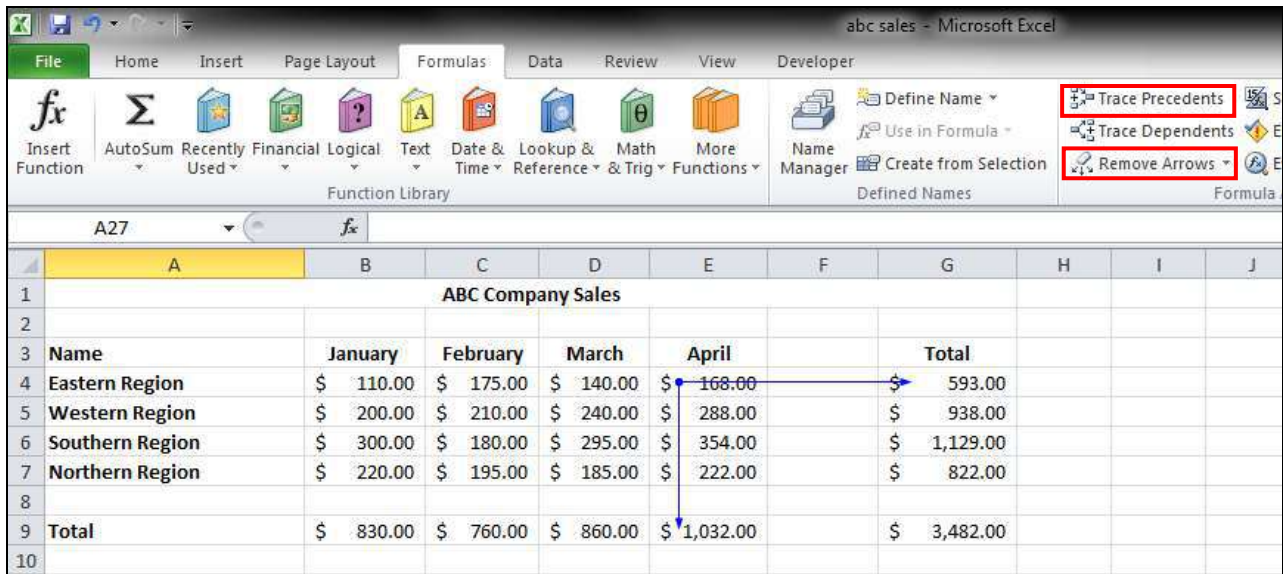


Figure 20 – Auditing a Worksheet

- To remove the arrow from the spreadsheet, click the *Remove Arrows* button (see *Figure 20*).

Figure 21 shows a mistake in the spreadsheet. In cell B11, the person is attempting to get an average of sales in January (cells B4 through B7). However, the person accidentally is attempting to average cells A4 through A7 (instead of B4 through B7). The following steps show how auditing can be used to locate errors like this one:

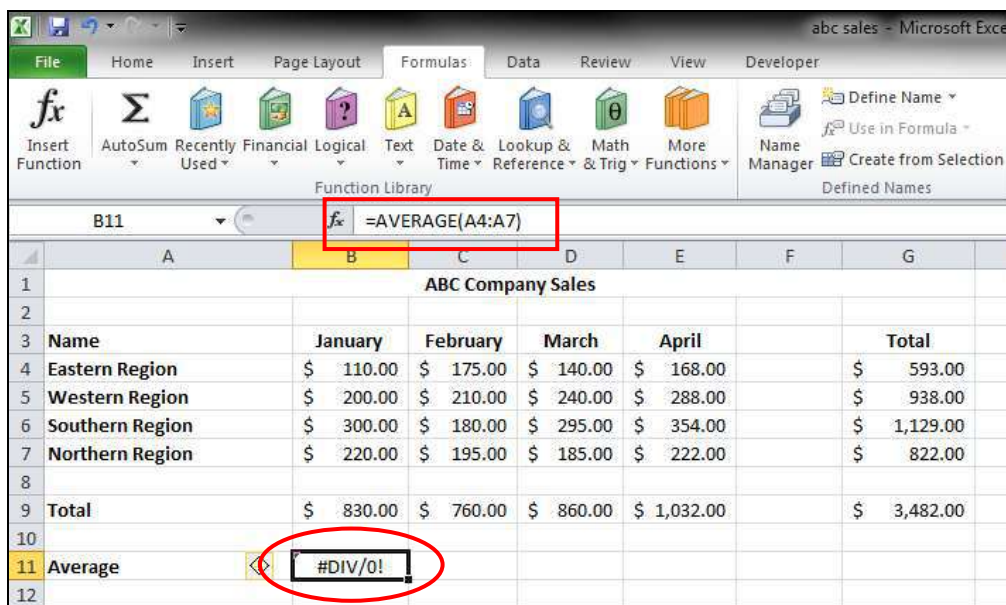


Figure 21 – Auditing a Worksheet

- Select cell B11.

2. In the *Formula Auditing* group, click the down arrow to the right of the *Error Checking* option (see *Figure 22*).
3. Select the *Trace Error* option. The Trace Arrow indicates that cells A4 through A7 are being used for the formula in cell B11. The **correct** formula should use cells **B4 through B7** instead.

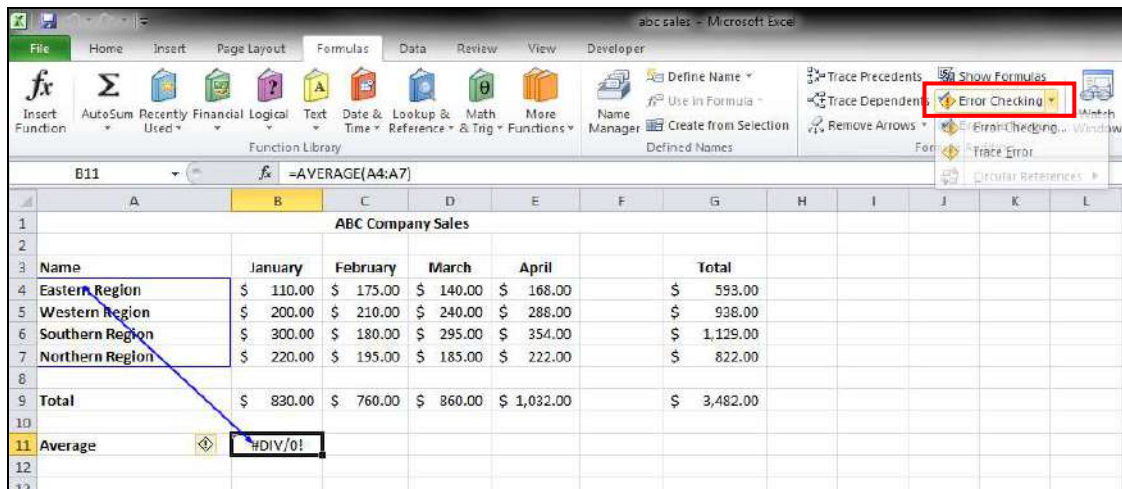


Figure 22 – Auditing a Worksheet

4. To remove the arrow from the spreadsheet, click the *Remove Arrows* button (see *Figure 20* on the previous page).

Using Database Functions

This section describes the use of database functions within Excel. *Figure 23* contains terms and definitions used in conjunction with databases:

Term	Definition
List	A series of worksheet rows that contain related data. Excel term for a database.
Record	A row in a worksheet containing all facts about an item in the list.
Field	A single fact in a record.
Filtering	The process of selecting records meeting certain criteria from a list.

Figure 23 – Database Definitions

Creating a List

This section explains how to enter data that will be used as a database:

1. Enter the field names (column headings) in the first row of the spreadsheet (example: Last Name, First Name, Address, etc.), beginning with cell A1 (see *Figure 24*).

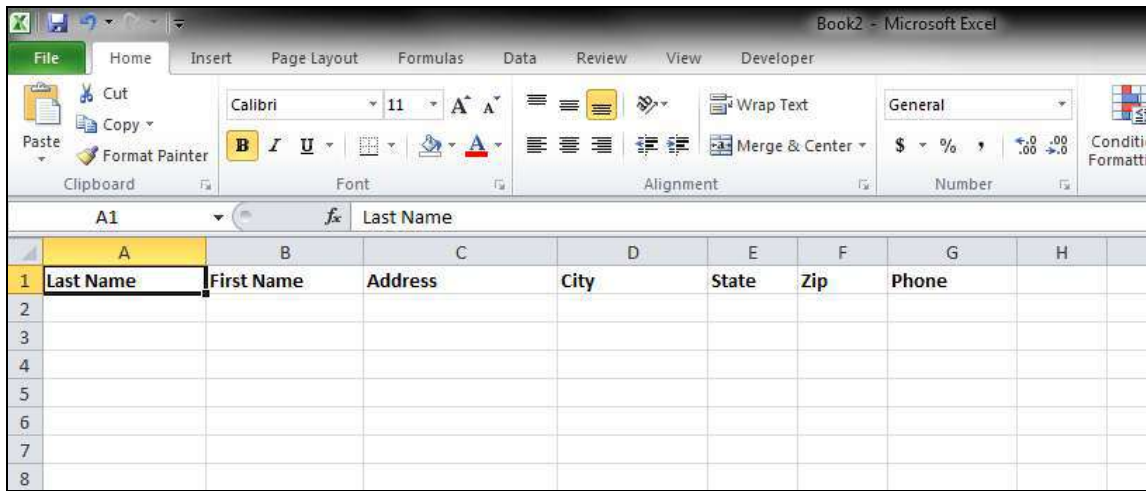


Figure 24 – Field Names for a Database

2. Select (highlight) the field names and bold the text.
3. **AutoFit** the column width for each column by positioning the mouse pointer on a column border between the columns heading area (the arrow turns into a pointed cross) and double click. It is best to do this after some data has been entered into the cells.

Using a Form to Enter Data

The following explains how to use a form to enter data:

1. Click the *File* tab in the top left corner of the screen.
2. Next, select *Options*.
3. Select *Quick Access Toolbar*.
4. Click the down arrow to the right of the *Choose Commands From* field (see Figure 25).
5. Select *Commands Not in the Ribbon* (see Figure 25).

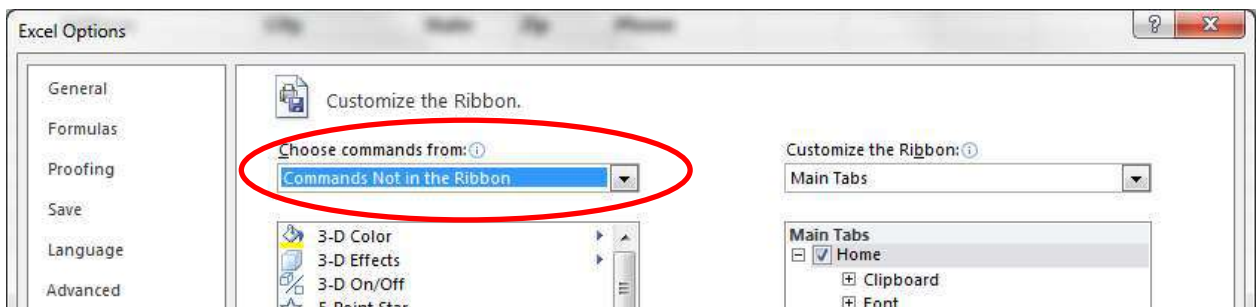


Figure 25 – Excel Options

6. In the options on the left side of the window, select *Form* (see *Figure 26*).

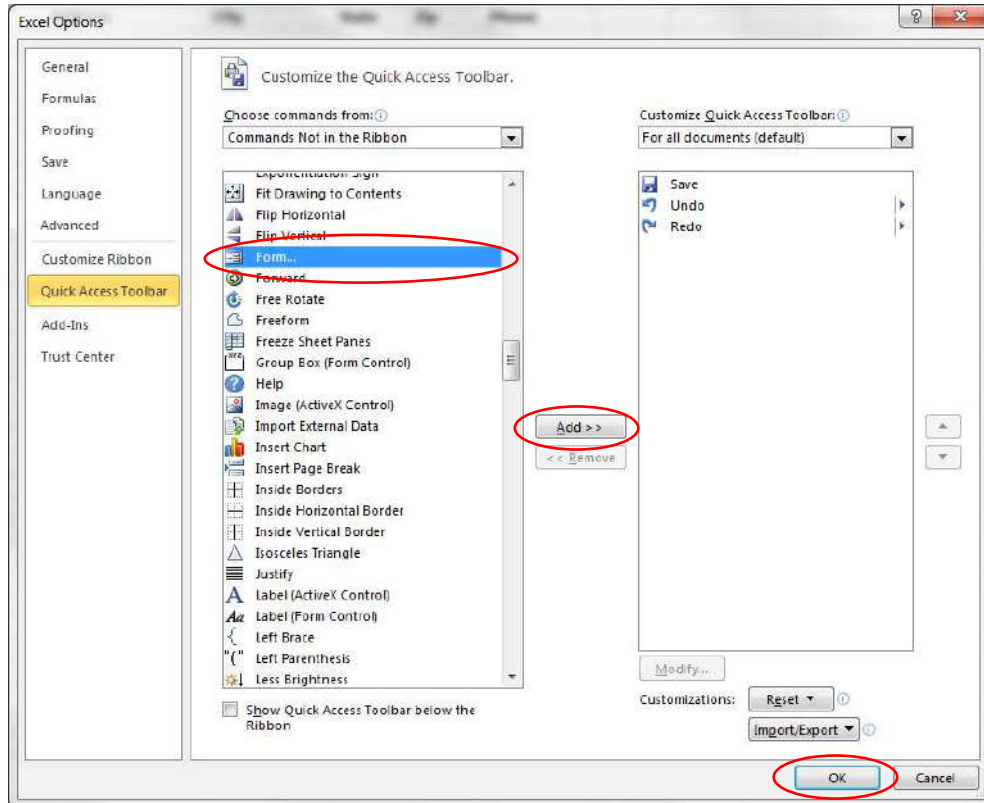


Figure 26 – Excel Options

7. Next, click the *Add* button (see *Figure 26*).

8. Click the *OK* button (see *Figure 26*) to close the *Excel Options* window.

9. The *Form Icon* is now added to the *Quick Access* toolbar at the top of the screen (see *Figure 27*).

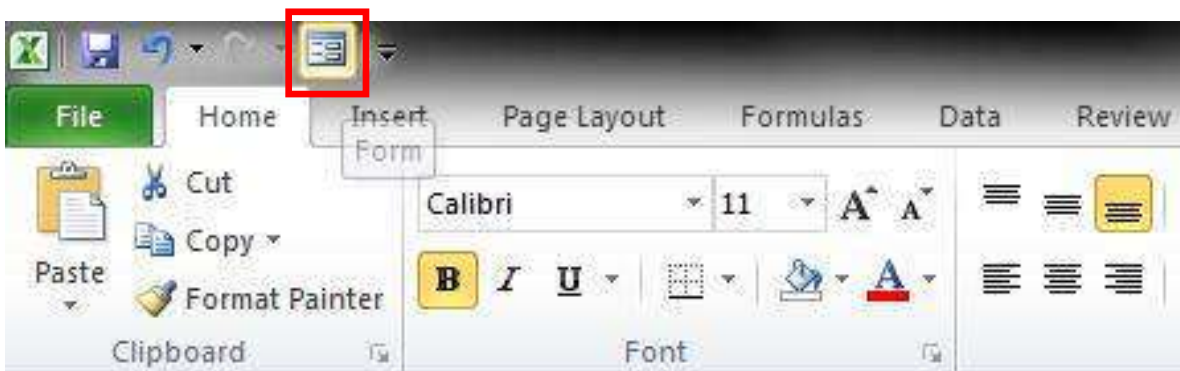


Figure 27 – Quick Access Toolbar

10. Click to select any of the data column headings (Last Name, First Name, etc).

11. Click the *Form Icon* that we just added to the *Quick Access Toolbar* (see *Figure 27*). If the message in *Figure 28* appears, click OK.

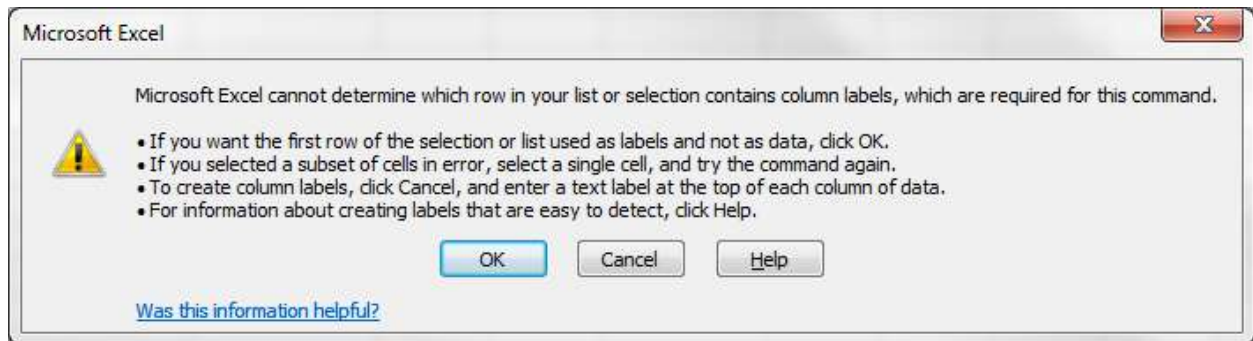


Figure 28 – Excel Message

12. The form dialog box will appear; enter the data for the first record.
13. After entering the data, click *New*.
14. Continue adding data and clicking *New* until all new records are added, then click *Close*.

Finding a Record

The following explains how to find a record:

1. Click to select any of the data column headings (Last Name, First Name, etc).
2. Click the *Form Icon* just added to the *Quick Access Toolbar*.
3. On the *Form* window, click *Criteria*.
4. Enter the search criteria in the appropriate field. Then, click *Find Next*.
5. Continue to click *Find Next* until you locate every record that matches your criteria.
6. Once you have located a record, you can delete it if desired by clicking *Delete*.

Sorting by One Field

The following explains how to sort by one field:

1. Click in the column heading (field name) cell of the field by which you want to sort (example: Last Name).

2. On the *Data Tab*, select the *A – Z* option to sort the data in ascending order (see *Figure 29*). You can also sort the data in descending order by selecting the *Z – A*.

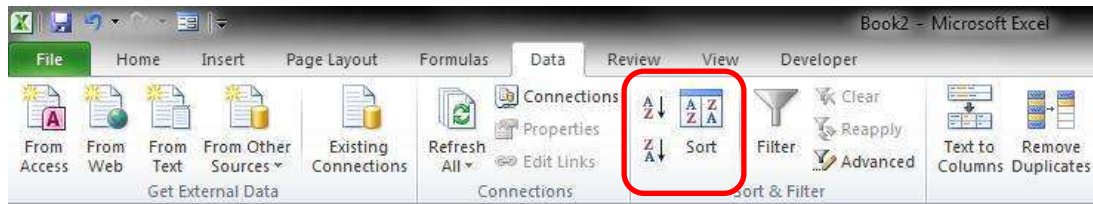


Figure 29 – Sorting

Sorting by Multiple Fields

The following explains how to sort by multiple fields:

1. Click to select any of the data column headings (Last Name, First Name, etc).
3. On the *Data Tab*, select the *Sort* option (see *Figure 29*).
4. The *Sort* window will appear (see *Figure 30*). Click the down arrow in the *Sort By* field and select the field to be sorted.

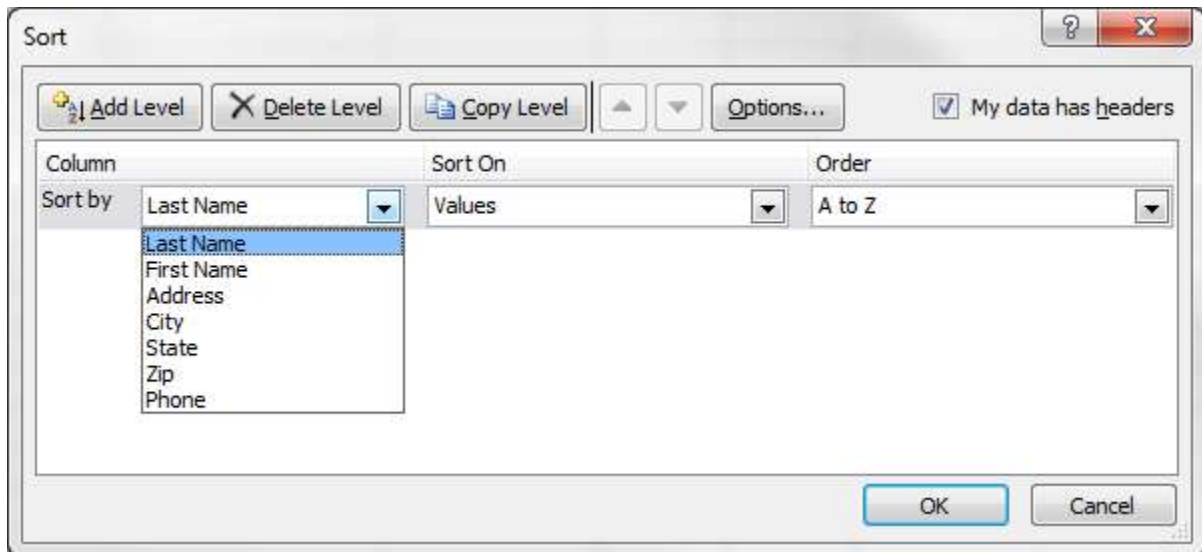


Figure 30 – Sorting

5. Click the down arrow in the *Sort On* field and select from the available options.
6. Click the down arrow in the *Order* field and select from the available options.
7. If you want to sort the list further, click the *Add Level* button to add another sorting level.
8. Click *OK*.

Filtering Data in a List

The following explains how to filter data in a list:

1. Click to select any of the data column headings (Last Name, First Name, etc).
2. On the *Data Tab* to select the *Filter* option (see *Figure 31*).

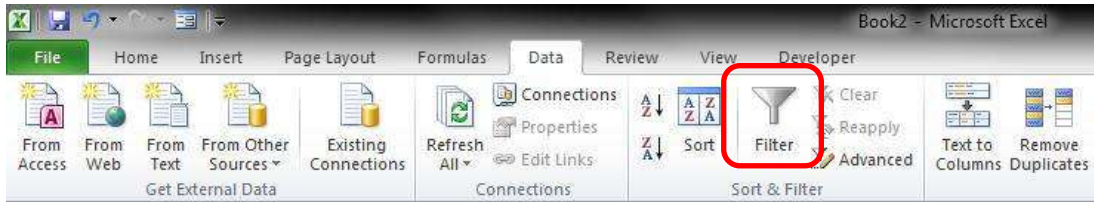


Figure 31 – Filter

2. A down arrow will appear next to each field name.
3. Click the down arrow for the field that contains the criteria that you want to filter. A drop-down list box appears containing all entries for that field.
4. Select the item that you want to filter. Excel will return a list containing only the items that match your criteria.

To return the list to its original state, click the down arrow in the same field again and select *All* from the drop-down list box.

Analyzing Data with Pivot Tables

A pivot table is an interactive table that summarizes and analyzes data from existing lists and tables. The following explains how to use Pivot Tables:

1. Click to select any of the data column headings in *Figure 32* (January, February, etc.).
2. On the *Insert* tab, select the *Pivot Table* option (see *Figure 32*).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	ABC Company Sales														
2															
3	Name	January	February	March	April	Total									
4	Eastern Region	\$ 110.00	\$ 175.00	\$ 140.00	\$ 168.00	\$ 593.00									
5	Western Region	\$ 200.00	\$ 210.00	\$ 240.00	\$ 288.00	\$ 938.00									
6	Southern Region	\$ 300.00	\$ 180.00	\$ 295.00	\$ 354.00	\$ 1,129.00									
7	Northern Region	\$ 220.00	\$ 195.00	\$ 185.00	\$ 222.00	\$ 822.00									
8															
9	Total	\$ 830.00	\$ 760.00	\$ 860.00	\$ 1,032.00	\$ 3,482.00									
10															
11															
12															
13															
14															

Figure 32 – Pivot Tables

3. Confirm the selected data to be added to the Pivot Table (see *Figure 33*).

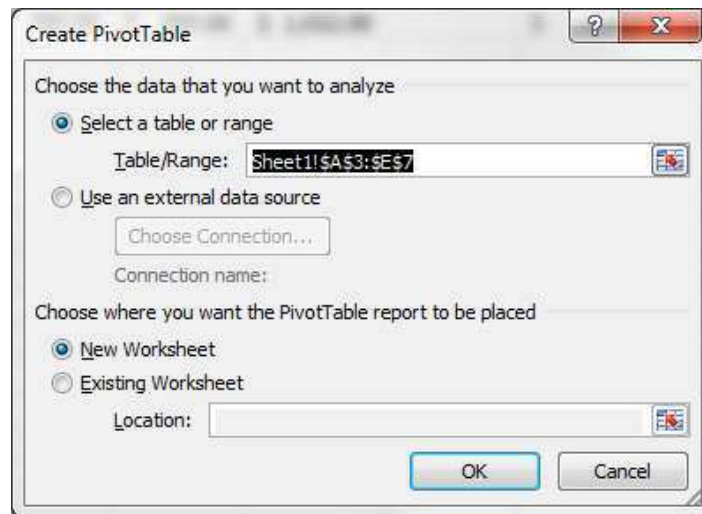
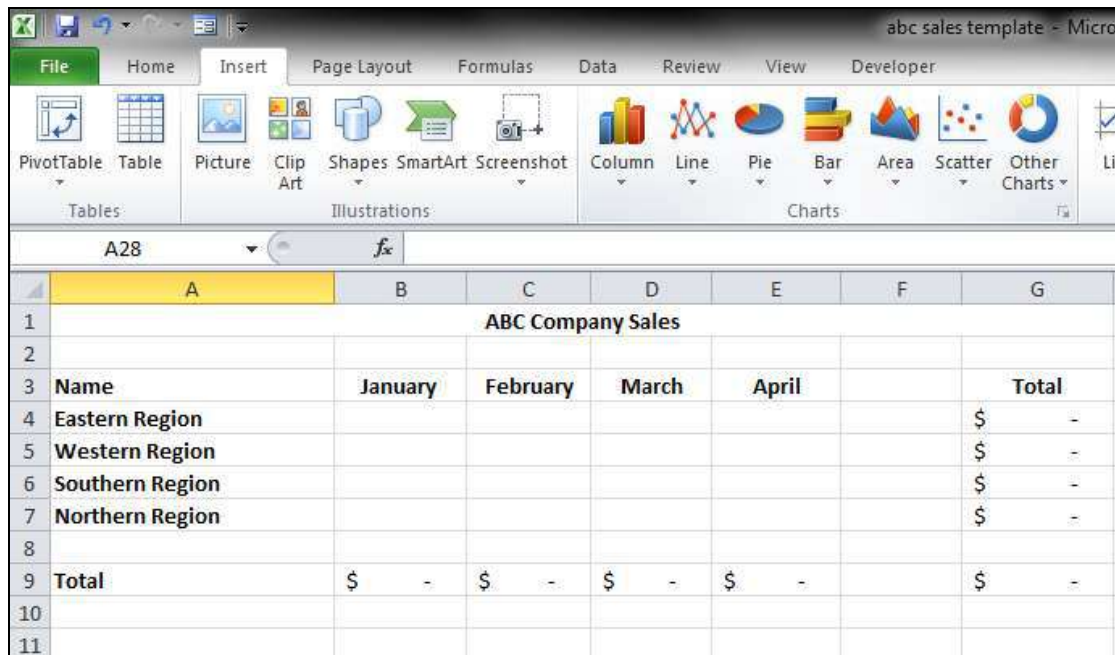


Figure 33 – Pivot Tables

4. Click *OK*.
5. The Pivot Table will appear in a new worksheet.
6. The *Pivot Table Field List* will appear on the right of the screen.
7. Drag-and-drop the column heading to the *Column Labels*, the *Row Labels*, or the *Values boxes* below the field list.
8. The results will appear on the left side of the screen.

Creating Templates

The sample below shows a template for calculating first quarter sales for ABC Company. This template was created by modifying an existing worksheet and saving it as a template file. The template could also have been created from a new worksheet, with the formulas for totals saved in the proper cells.



	A	B	C	D	E	F	G
1	ABC Company Sales						
2							
3	Name	January	February	March	April		Total
4	Eastern Region						\$ -
5	Western Region						\$ -
6	Southern Region						\$ -
7	Northern Region						\$ -
8							
9	Total	\$ -	\$ -	\$ -	\$ -		\$ -
10							
11							

Figure 34 – Templates

1. Click the *File* tab in the top left corner of the screen
2. Then, click *Save As*.
3. In the *Save As* dialog box, from the *Save as type* field, select *Excel Macro-Enabled Template*. This automatically saves the template in the *Templates* folder.
4. Close the spreadsheet.

To use the template, click the *File* tab.

1. Select *New*.
2. Select the *My Templates* option.
3. Select the template from the *New* dialog box.
4. The worksheet created from the template can be saved as an Excel file and the template file will remain unchanged.

Moving and Copying Worksheets

The following explains how to move and copy worksheets:

1. Click to select the worksheet you wish to *Move* or *Copy*.
2. Right-click on the selected worksheet tab and select *Move or Copy* (see *Figure 35*).

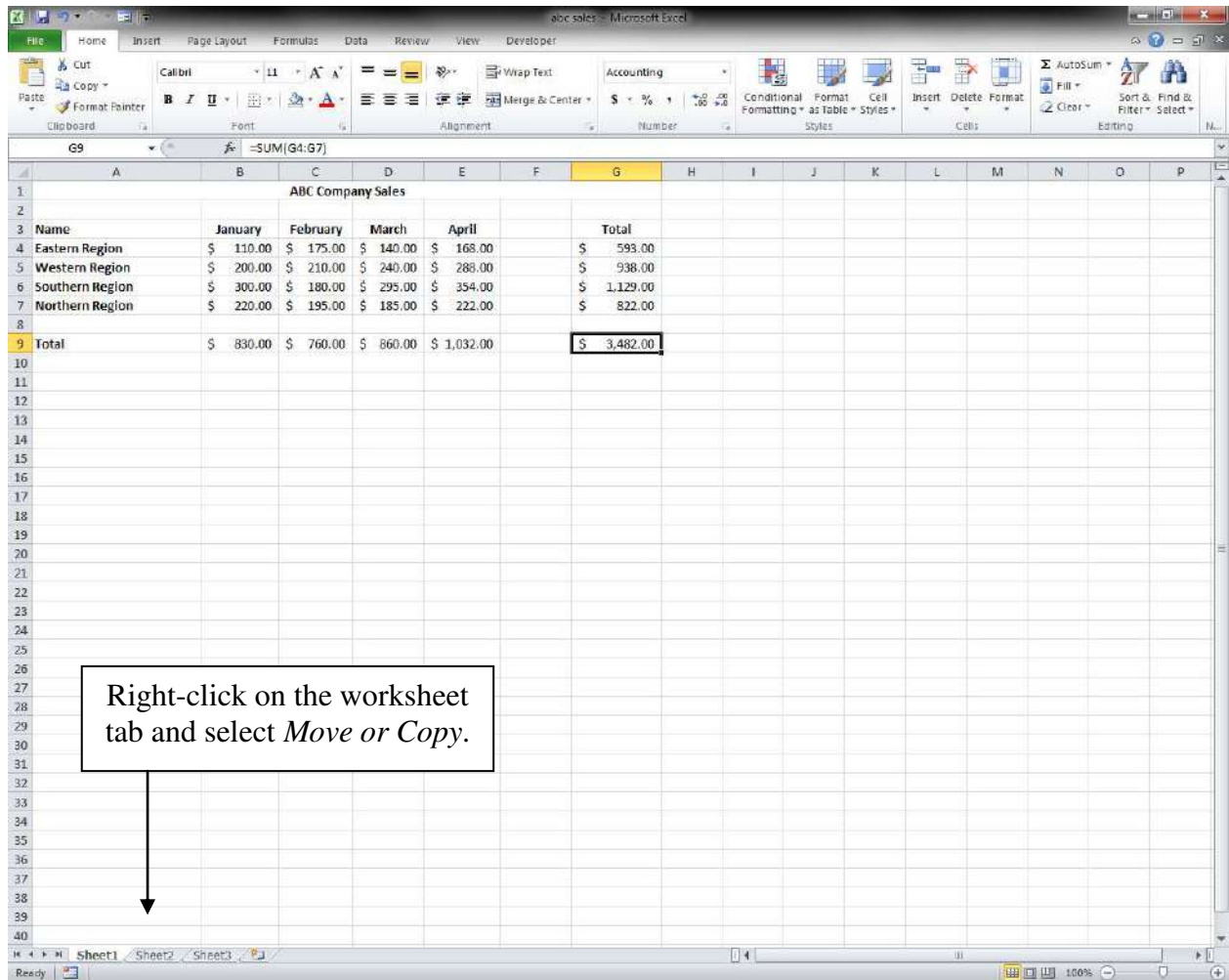


Figure 35 – Worksheets

3. In the dialogue box that appears, select where you want to move the worksheet to and then click *OK*.
4. To make a copy of the worksheet, check the *Create a copy* box first, then click *OK*.

Linking Data

The following explains how to link data between worksheets:

1. Open the worksheets that contain the source data and the target location.

2. Select the cell(s) in the source worksheet that contain the data that you want to link to the target location.
3. On the *Home* tab, select *Copy*.
4. Go to the target location and select the cell(s) where you want to put the source data.
5. From the *Home* tab, click the arrow under *Paste*. Then, select *Paste Special* at the bottom of the menu.
6. In the *Paste Special* dialog box, click the *Paste Link* button.
7. Click *Ok*.

The target location will now be updated whenever the source data is changed.

Adding a Comment to a Cell

The following explains how to add a comment to a cell:

1. Select the cell where you want to add the comment.
2. On the *Review* tab, select *New Comment*.
3. Type your comment in the comment box that appears. Click outside the comment box when done.
4. The commented cell is now indicated by a red triangle in the top right corner of the cell.
5. When the mouse pointer is placed over the cell, the comment box appears.

Sharing Workbooks

The following explains how to share workbooks:

1. On the *Review* tab, select *Share Workbook*.
2. In the *Share Workbook* dialog box, click the option, *Allow changes by more than one user at the same time* on the *Editing* tab (see *Figure 36*).

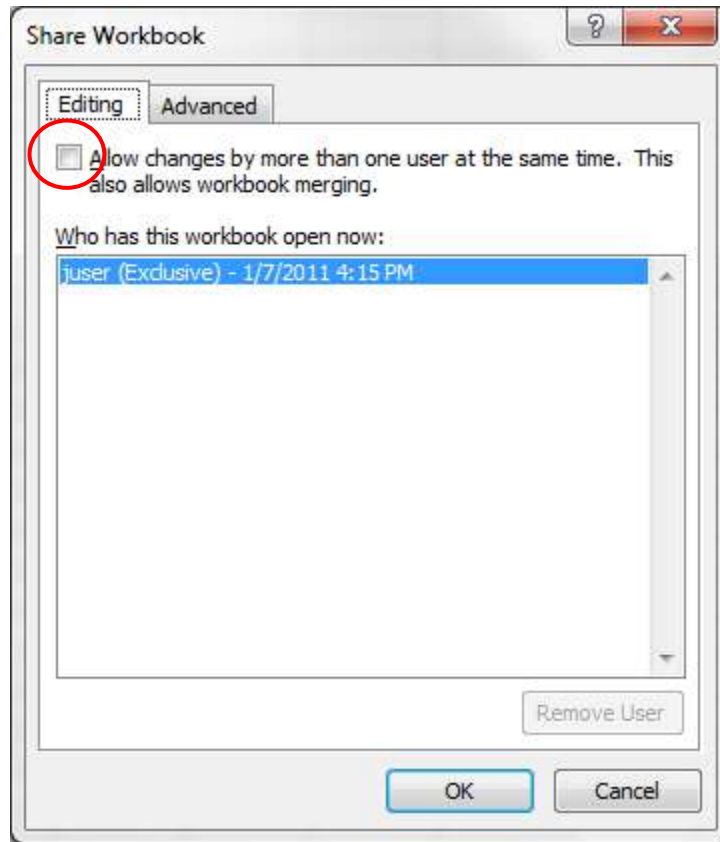


Figure 36 – Share Workbook Dialogue Box

All users who open the workbook will be listed in the, *Who has this workbook open now* section of the dialog box.

3. Click the *Advanced* tab (see *Figure 36*).
4. Select the options desired on the *Advanced* tab, then click *OK* .

Tracking Changes

The following describes how to use the Track Changes feature in Excel:

1. On the *Review* tab, click on *Track Changes* (see *Figure 37*).
2. Select *Highlight Changes*.

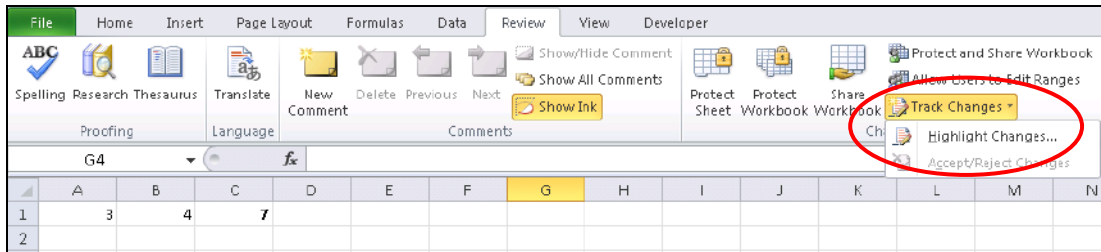


Figure 37 – Track Changes

3. In the *Highlight Changes* dialog box, select the options that you desire (see *Figure 38*).

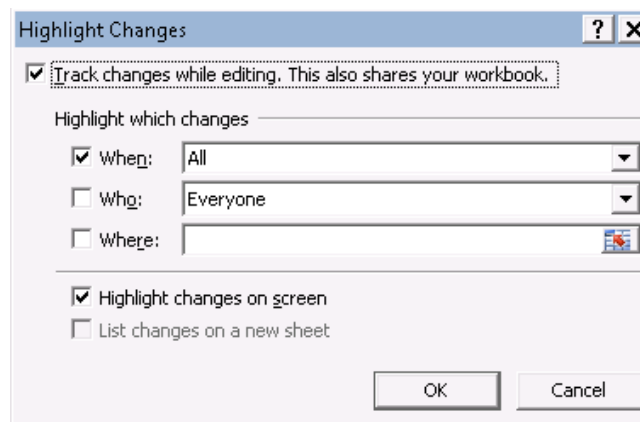


Figure 38 – Track Changes

4. Click *OK*.

	A	B	C	D	E	F	G
1	Personnel Confidential Information						
2							
3	First	Last	Store	City	State	Sales	
4	Julie	Baker	2	Oakland	CA	3873	
5	Brad	Fulson	3	Cocoa Beach	FL	3517	
6	Terri	Goldstein	3	Oak Ridge	TN	2475	
7	Joe	Hughes	2	Pine Bluff	AR	2456	
8	Pete	Hughes	3	Lake Forest	IL	2458	
9	Mary	Kinsey	1	Evergreen	PA	3091	
10							
11							

Change made to cell F7.

Figure 39 – Track Changes

- In the worksheet in *Figure 39*, a change was made in cell F7 and that cell is now highlighted, since the *Highlight changes on screen* option was selected.
- Checking the box in *Figure 38* on the previous page for *List changes on a new sheet* in the *Highlight Changes* dialog box creates a “History” worksheet that lists all changes made in the workbook.

	A	B	C	D	E	F	G	H	I	J	
1	Personnel Confidential Information										
2											
3	First	Last	Store	City	State	Sales					
4	Julie	Baker	2	Oakland	CA	3873					
5	Brad	Fulson	3	Cocoa Beach	FL	3517					
6	Terri	Goldstein	3	Oak Ridge	TN	2475					
7	Joe	Hughes	2	Pine Bluff	AR	2456					
8	Pete	Hughes	3	Lake Forest	IL	2458					
9	Mary	Kinsey	1	Evergreen	PA	3091					
10											
11											

User, 1/7/2011 8:00 PM:
Changed cell F7 from '3876' to '2456'.

Figure 40 – Track Changes

- In *Figure 40*, when the mouse pointer is placed over cell F7, a comment box displays the details of the changes.
5. To review the changes each user has made, on the *Review* tab, click on *Track Changes*.
 6. Select *Accept/Reject Changes*.

7. In *Figure 41*, select the options in the dialog box that you prefer and then click *OK*.

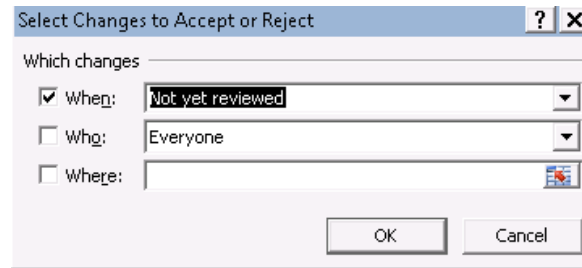


Figure 41 – Track Changes

8. In *Figure 42*, click the appropriate button to accept or reject the changes listed in the dialog box.

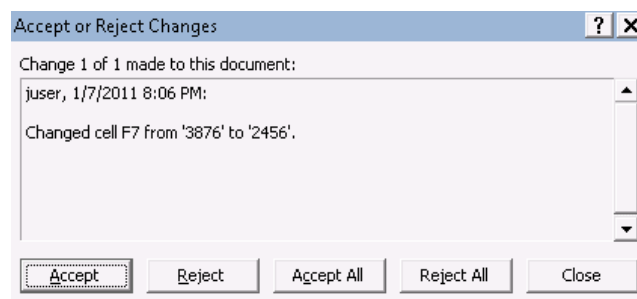


Figure 42 – Track Changes

Creating and Merging Copies

In order to merge copies, the following conditions must be met:

- They must be copies of the same workbook.
- They must have a different filename.
- They must be a shared workbook.
- When copies are made, the *Change History* must be turned on.

The following explains how to create and merge copies:

1. Click the *File* tab in the top left corner of the screen and select *Save As*.
2. Give each copy of the workbook a different name (Review1, Review2, etc.).

After each user has reviewed their copy and made changes, the copies can be merged into the original workbook.

3. Click the *File* tab in the top left corner of the screen.
4. Select *Options* from the menu choices.
5. Select *Quick Access* toolbar.

6. In the *Choose commands from list*, select *All Commands*.
7. Select *Compare and Merge Workbooks*. Then, click the *Add* button.
8. Click *OK*.
9. The *Compare and Merge Workbooks* icon is added to the Quick Access toolbar at the top of the screen (see *Figure 43*).

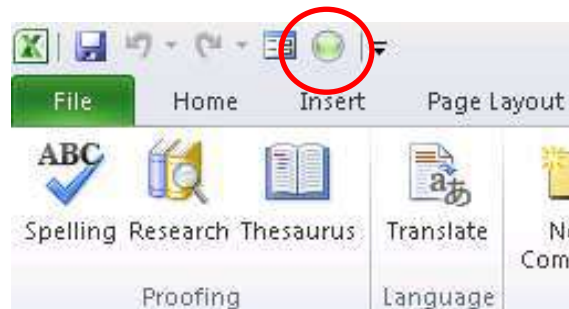


Figure 43 – Compare and Merge Workbooks icon

10. Select the workbook copies to be merged and click *OK*. Changes made to the review copies will overwrite any conflicting data in the original workbook.

Protecting Workbooks and Worksheets

The following explains how to protect workbooks and worksheets:

Protecting Cells

To protect the cells within a spreadsheet, do the following:

1. Remove sharing properties.
2. Select the cells that you want to protect.
3. On the *Home* tab, click on the down arrow under *Format* (see *Figure 44*).



Figure 44 – Protecting Cells

4. Select *Format Cells*.
5. Click the *Protection* tab.

6. Click to place a check by the *Locked* checkbox to prevent changes to cells.
7. Click to place a check by the *Hidden* checkbox to prevent formulas from being seen by other users.
8. Click *OK* to close the dialog box.

NOTE: *Locking or hiding has no effect unless the worksheet is protected.*

To hide rows, columns, or sheets, do the following:

1. From the *Home* tab, click *Format*.
2. Select *Hide & Unhide*.
3. Select either *Row*, *Column*, or *Sheet*.

Protecting Worksheets

The following explains how to protect worksheets:

1. On the *Home* tab, click the down arrow under *Format*.
2. Select *Protect Sheet*.
3. Select the options that you want in the dialog box (see *Figure 45*).

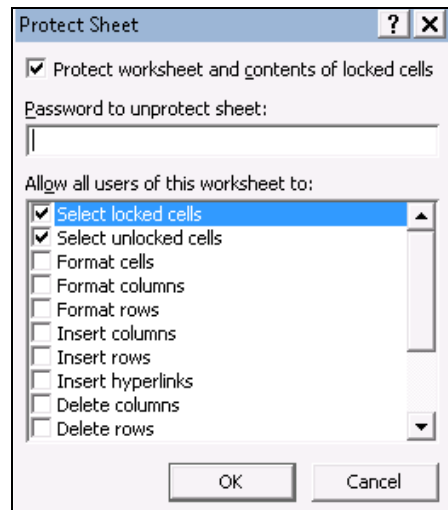


Figure 45 – Protecting Worksheets

4. Enter a password if you wish.

5. Anyone trying to modify the sheet will receive the message in *Figure 46*. The user will be instructed to unprotect the sheet before any changes can be made.

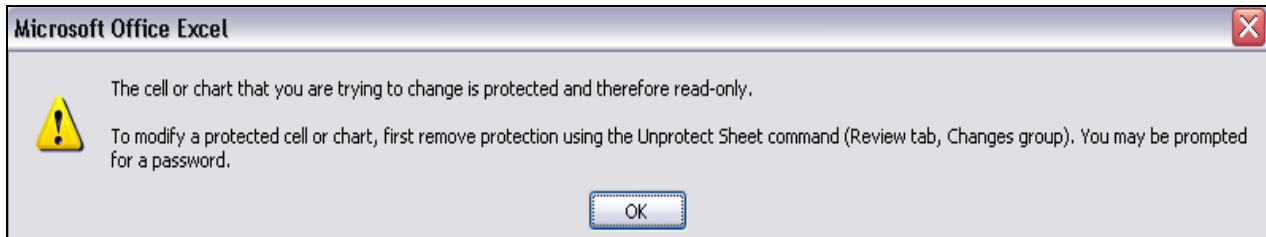


Figure 46 – Protecting Worksheets

Protecting Workbooks

Do the following to protect a workbook:

1. On the *Review* tab, select *Protect Workbook*.
2. Enter a password if you wish.
3. Anyone trying to modify the workbook will be asked to unprotect the workbook before any changes can be made.
4. Click *OK*.

Limiting Access to Shared Workbooks

The following explains how to limit access to shared workbooks:

1. Click the *File* tab in the top left corner of the screen.
2. Select *Save As*.
3. Click the *Tools* icon (see *Figure 47*) and select *General Options*.

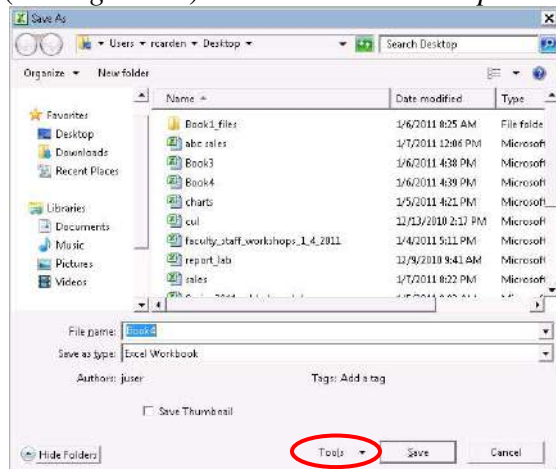


Figure 47 – Save As Dialog Box

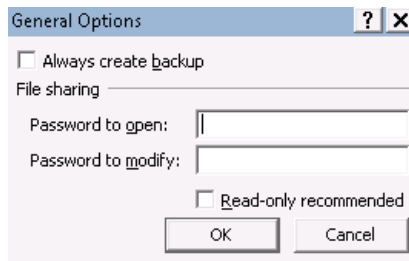


Figure 48 – General Options Dialog Box

- Entering a password in the *Password to open* box (see Figure 48) will require a user to enter the password to open the workbook.
 - Entering a password in the *Password to modify* box will require a user to enter the password before modifying the workbook.
 - Clicking the *Read-only recommended* box gives the user the option of opening the workbook as “read-only” if he or she does not know the password.
4. Click *OK*.
 5. Click *Save*.
 6. Click *Yes* to replace the existing file.

Sparklines

Sparklines, a new feature in Excel 2010, provides for effective data analysis. The following explains how to use Sparklines:

1. In the example in Figure 49, the area of *Column F* next to the data will be selected.

	A	B	C	D	E	F	G
1	ABC Company Sales						
2							
3	Name	January	February	March	April		
4	Eastern Region	\$ 110.00	\$ 175.00	\$ 140.00	\$ 168.00		
5	Western Region	\$ 200.00	\$ 210.00	\$ 240.00	\$ 288.00		
6	Southern Region	\$ 300.00	\$ 180.00	\$ 295.00	\$ 354.00		
7	Northern Region	\$ 220.00	\$ 195.00	\$ 185.00	\$ 222.00		
8							
9	Total	\$ 830.00	\$ 760.00	\$ 860.00	\$ 1,032.00		
10							

Figure 49 – Sparklines

2. From the *Insert* tab, click *Column* (located in the *Sparklines* group).

- The *Create Sparklines* dialogue box will appear (see *Figure 50*). Enter the data range in the first text box. For the example in *Figure 49*, we would enter the following range: **B4:E7**

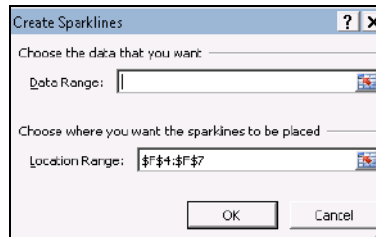


Figure 50 – Sparklines

- Click *OK*. The charts will appear in *Column F*, allowing you to visually analyze your data (see *Figure 51*).

	A	B	C	D	E	F
1	ABC Company Sales					
2						
3	Name	January	February	March	April	
4	Eastern Region	\$ 110.00	\$ 175.00	\$ 140.00	\$ 168.00	
5	Western Region	\$ 200.00	\$ 210.00	\$ 240.00	\$ 288.00	
6	Southern Region	\$ 300.00	\$ 180.00	\$ 295.00	\$ 354.00	
7	Northern Region	\$ 220.00	\$ 195.00	\$ 185.00	\$ 222.00	
8						
9	Total	\$ 830.00	\$ 760.00	\$ 860.00	\$ 1,032.00	

Figure 51 – Sparklines

Slicer

The new Slicer feature in Excel 2010 helps users to break down data in Pivot Tables that would otherwise be very overwhelming. The following steps describe how to use the Slicer feature:

- Select the data on the spreadsheet (see *Figure 52*).

	A	B	C	D	E	F	G	H
1	First Name	Last Name	Department	City	State	Sales		
2	John	Watson	Furniture	Miami	FL	\$ 465.00		
3	Jason	Cook	Electronics	Jacksonville	FL	\$ 755.00		
4	Amanda	Roberts	Communications	Tampa	FL	\$ 856.00		
5	Sarah	Wright	Communications	Miami	FL	\$ 822.00		
6	Wade	Johnson	Furniture	Jacksonville	FL	\$ 801.00		
7	Ryan	Smith	Electronics	Tampa	FL	\$ 742.00		
8								
9								
10								

Figure 52 – Data Selected for a Pivot Table

2. Create a *Pivot Table* by clicking *Pivot Table* from the *Insert* tab.
3. Include the data that you want to analyze (see *Figure 53*).

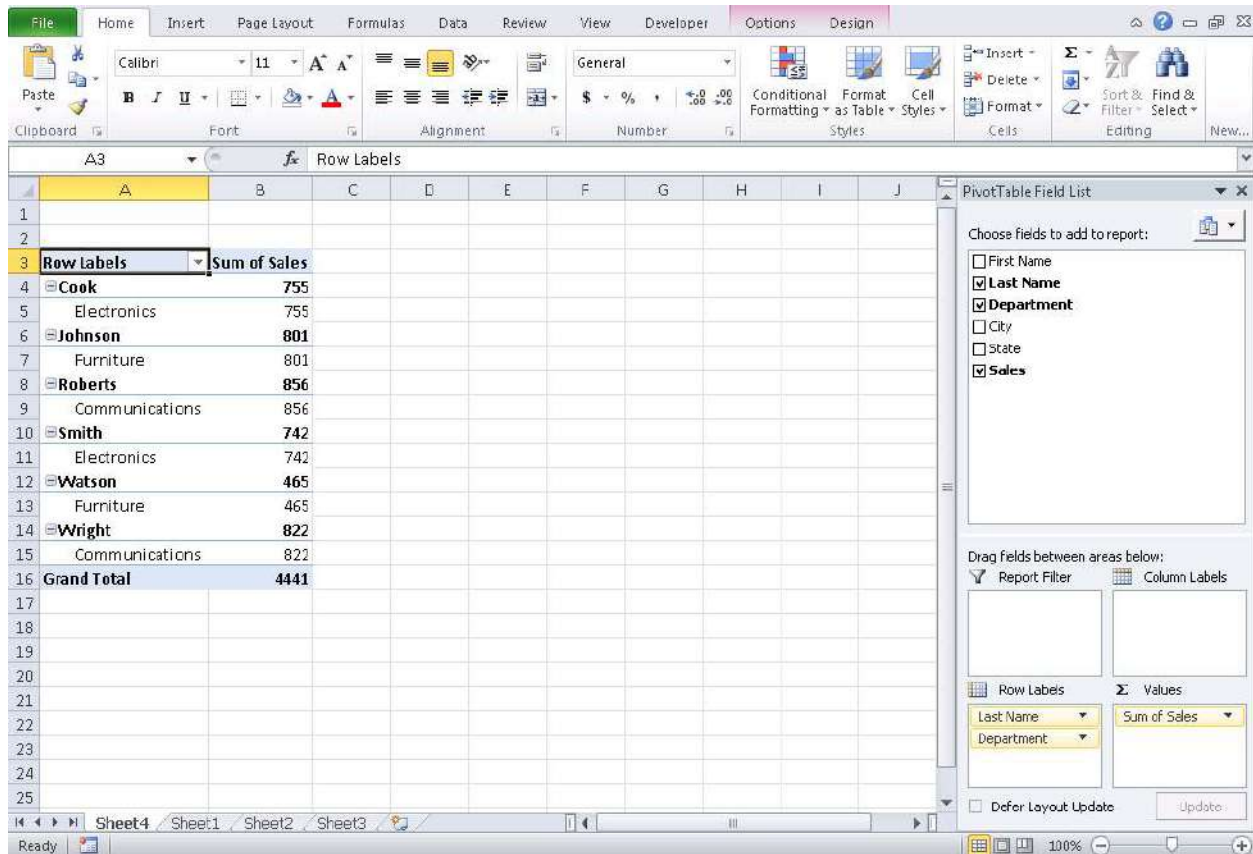


Figure 53 – Pivot Table

4. You are now ready to add *Slicer*. From the *Insert* tab, click *Slicer*.
5. Select the data that you want to slice (see *Figure 54*). For the example in *Figure 54*, *Department* and *City* will be selected so that they can be effectively analyzed.

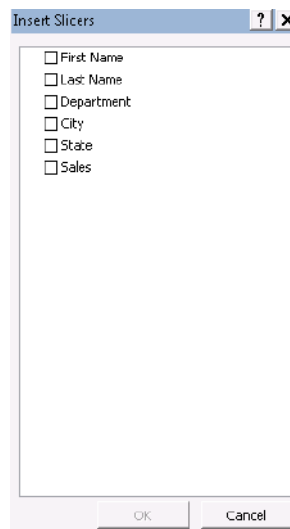


Figure 54 – Insert Slicers Dialog Box

6. The person analyzing the data can now simply click on the options available for *Department* and *City* in *Figure 55*.

Row Labels	Sum of Sales
Cook	755
Electronics	755
Johnson	801
Furniture	801
Roberts	856
Communications	856
Smith	742
Electronics	742
Watson	465
Furniture	465
Wright	822
Communications	822
Grand Total	4441

Figure 55 – Slicer

7. *Figure 56* below shows how the data appears if *Jacksonville* (under *City* in the Slicer window) is selected. To remove the filter so that all of the data again appears on the spreadsheet, click the *Clear Filter* button in the upper-right corner of the Slicer window (see *Figure 56*).

Row Labels	Sum of Sales
Cook	755
Electronics	755
Johnson	801
Furniture	801
Grand Total	1556

Figure 56 – Slicer