Introduction to Microsoft Excel

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COURSE OUTLINE

- What to use a spreadsheet for

- Exploring Excel's menus and toolbars

- Columns and Rows

- Workbook vs. worksheet

- Planning your worksheet

- Entering your worksheet

- Using formulas

- Speeding up functions with the Fill and AutoSum commands

- Formatting your worksheet with lines/color, etc

- Creating charts

- Picking the right chart

- Formatting your charts

- Copying charts or spreadsheet information to other programs such as
  PowerPoint or Word

- Recording and using Macros

WHEN TO USE A SPREADSHEET

Spreadsheets are primarily used for organizing and calculating a series of related data including numbers and text.

It can use formulas to summarize and analyze the numerical data. It also has the ability to create graphic charts from the spreadsheet data.

Spreadsheets remain one of the main computer programs for business. Common applications are:
o   Sales summaries
o   Performance tracking
o   Invoice creation
o   Research analysis
o   Budgets and other financial data

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E X P L O R I N G   E X C E L

What you will learn from this lesson

- Explore the workbook window.
- Navigate through the workbook.
- Open an existing file.
- Create an Excel worksheet.
- Save your work to a file.
- Quit Excel.

Starting Excel 97/2000

1. Click the **Start** button in the lower-left corner.
2. Position the mouse pointer on **Programs.**
3. Click **Microsoft Excel.**

Exploring the Excel 97/2000 window

When you start working in Excel, you begin using a workbook that contains screens called *worksheets.* They are identified as Sheet1, Sheet2, and so on. As you become more familiar with the available options in Excel, you can customize the menus and add buttons to the toolbars.

Moving around in the Excel 97/2000 worksheet

There are a number of ways to move around in a worksheet. Moving from one cell to another in Excel is quick and easy. The ways to move from cell to cell include clicking a cell or using the **Go To** command, the scroll bars, the arrow keys, or the HOME, END, PAGE UP, and PAGE DOWN keys.

Moving within a window

- ❖ To select any cell, click it. For example, click cell A1.
- ❖ To move one cell to the right, press TAB, or to move one cell to the left, press SHIFT+TAB.
- ❖ To move one cell down, right, up, or left, use the arrow keys.
- ❖ To move to the first column of the worksheet, press HOME.

Moving around the worksheet

1. To move one screen down, press PAGE DOWN.
2. To move one screen up, press PAGE UP.
3. To move to the uppermost-left cell, A1; press CTRL+HOME.
4. To move to any cell, on the **Edit** Menu, click **Go To,** and type *J18* or any cell number.
5. Press CTRL+HOME to return to cell A1.

Creating an Excel 97/2000 workbook

1. On the **File** menu, click **New.**
2. On the **General** tab, double-click **Workbook** to open a new one.
3. Click cell B2, and type *Student List*.
4. On the **File** menu, click **Save**, type *Book 1*, and click **OK**.

Note
There is a difference between a workbook and a worksheet. A workbook can contain many worksheets. Each worksheet can contain up to 256 columns across and 65,536 rows down.

Saving your work
When you create a workbook, regardless of which method you use, you must save your work in a logical place on the computer. Just like filing a document in a file drawer, storing a computer document requires some attention to how you name the document and where you place it so you can easily find it again.

Unless you specify otherwise, Excel 97/2000 saves all workbooks to a default folder on your computer called My Documents.

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Saving for the first time
When you save the file for the first time, you should name the file as descriptively but as briefly as possible.

Saving a new workbook

1. On the **File** menu, click **Save.**

2. Click the **Save In** arrow, and choose a location for your workbook.

3. In the **File name** box, type *Student List*.

4. To save the workbook, click **Save.**

Saving an existing workbook
Saving an existing file to the same file name, location, and format

1. On the **File** menu, click **Save.**

2. Click **OK.**

3. Close the workbook.

Opening a workbook from inside Excel 97/2000
Opening an existing file with the menu bar

1. On the **File** menu, click **Open.**
   – or –
   Press CTRL+O.

2. Double-click **Book 1** (or any file you want to open).
   – or–
   Select the file name, and click **Open.**

Quitting Excel 97/2000
There are several ways to quit Excel 97/2000. Always follow proper procedures, or your work may not be saved. All Office 97/2000 applications prompt you to save changes if you try to quit a program without saving your open workbooks.

GATHERING DATA FOR SIMPLE CALCULATIONS

What you will learn from this lesson

- Start a new workbook.
- Enter and format a title.
- Modify the text style and font size.

- Enter column headings and adjust column width.
- Move data.
- Edit data.

Starting new workbooks

1. Open a new worksheet.
2. On the **File** menu, click **Save As.**
3. Type *Technology* as the file name.
4. Click the **Save** button.

Entering and formatting titles

Using titles on the worksheets makes it easier to read and understand the information shown. You can retain the existing styles, create your own styles, or customize your own workbook template. The next exercise illustrates how easy it is to enter and modify font styles and sizes in your worksheet.

Entering and formatting a title on the worksheet

1. With the Technology worksheet open, move the pointer to cell E3, type *Technology Challenge*, and then press ENTER.
2. Click cell E3.
3. On the Formatting toolbar, click the **Font** box, and click **Arial.** (You may have to use the down arrow next to the **Font** box to find Arial.)
4. On the Formatting toolbar, click the arrow next to the **Font Size** box, click **14,** and then click the **Bold** button.

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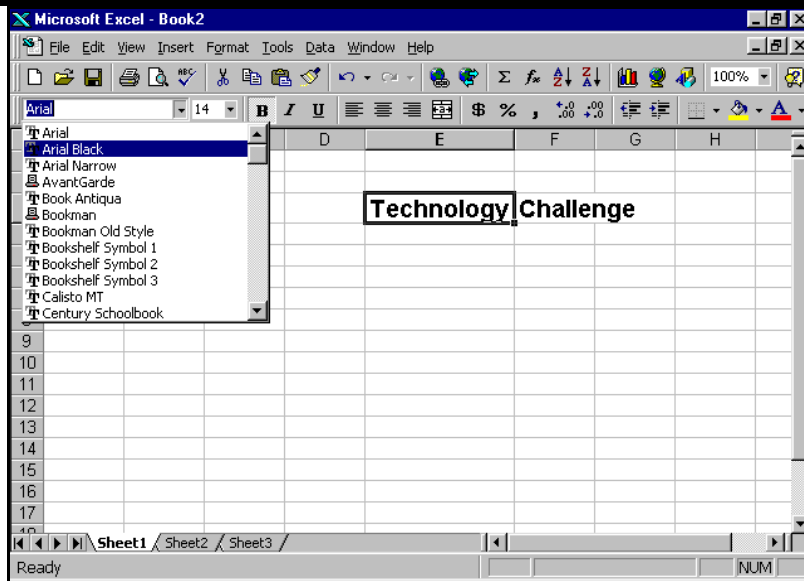
Entering column headings and adjusting widths

Column headings help you and others understand the data or information you have entered on your worksheet. Sometimes the column heading is too large to fit into a column. ***Even though it does not show the entire title or formula, the cell still contains everything you entered into it***. This exercise shows you how to increase or decrease the column width to fit the information you are entering.

Entering column headings and adjusting their widths

1. Using the Technology worksheet, click cell B5, and type *Dates* in cell B5.

2. Press TAB to go to cell C5, and then type *Elementary Schools*.

3. Press TAB to go to cell D5, and then type *Secondary Schools*.

4. *Schools*. One cell will overlap the other.

5. Press ENTER.

6. At the top of the worksheet, position the pointer at the top of the grid between columns **C** and **D** until the pointer changes into a double-arrow line and then double-click.

7. Repeat steps 4 and 5 between cells **D** and **E**.

8. Select the words *Technology Challenge,* and move the + pointer to a cell line until it changes to an arrow.

9. Click and drag the text to begin in cell C3.

> **Note**
> The pointer becomes a
>
> ⊞
>
> or double-arrow when it is placed between columns at the top of a chart.

Arranging text with the Copy, Paste, and Cut commands

With Excel 97/2000, it is easy to modify data. When you use the features in Excel 97/2000 to create a table, you may decide on a different order of column heads or you may want to revise them. It is important to make changes before you build a formula for the chart in order to maintain correct calculations.

Using the Cut, Paste, and Copy commands to arrange text

1. Using the Technology worksheet, right-click cell C3, and click **Cut.**

2. Right-click cell C1, and click **Paste.**

3. Right-click cell D5, and click **Cut.**

4. Right-click cell D10, and click **Paste.**

5. Right-click cell C5, and click **Cut.**

6. Right-click cell D5, and click **Paste.**

7. Right-click cell D10, and click **Cut.**

8. Right-click Cell C5, and click **Paste.**

9. Try dragging cell C5 and cell D5 to new locations as you did in the previous exercise.

Note
Usually **Cut** is used to move the contents of a cell or cells to a different location. **Copy** is used to duplicate the contents of a cell or cells in another location.
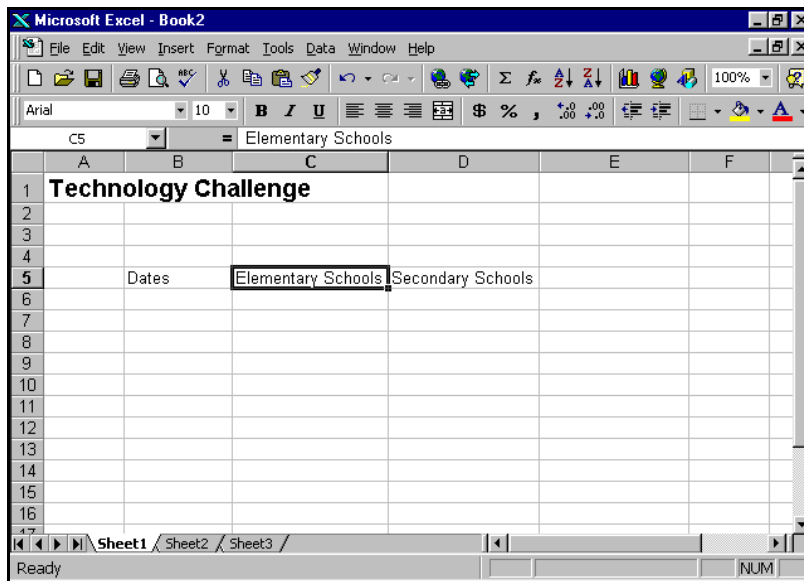
Entering data

Using Excel 97/2000 is a powerful way to enter and display data or text. For example, you can have Excel 97/2000 display a date showing the month, day, and year with the time, or showing only the first letter

of the month, followed by a two-digit year. Numbers can be displayed as whole numbers, numbers with decimals, or numbers written in scientific notation.

Entering data for growth of World Wide Web sites in U.S. schools

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1. Open the Technology workbook.

2. Starting in cell B6, type the following information into the worksheet, under the corresponding headings.

3. Save your file.

Dates	Elementary	Secondary
1/1/95	85	110
4/1/95	160	360
7/1/95	225	380
10/1/95	250	660
1/1/96	425	900
4/1/96	800	1400
6/1/96	1100	1720

Note
When you enter data in a column format, you may find it easier and faster to highlight the data area first, then just push TAB on your keyboard after each entry.

Performing simple calculations
Using Excel 97/2000, you can perform a wide range of mathematical calculations and functions according to what you need from your data. To calculate sums (totals) and percentages, use the mathematical operation of adding numbers to get a total, and then divide each number that was just added by that total.

Calculating the sum of schools with Web sites

1. In the Technology workbook, click cell E5, type *Total Sites*, and press ENTER.

2. Click cell E5 again, and on the Formatting toolbar, click the **Bold** button.

3. Click cell E6, and on the Formula toolbar click the **Edit Formula** button (the = sign).

4. Click the **Functions** arrow, and choose **Sum.** (C6:D6 appears in the window.)

5. Click **OK.**

6. To sum each pair of numbers, click E6 and drag the fill handle from E6 to E12.

Calculating the percentage of schools with Web sites by category

1. Click cell F5, type *% of Elem schools,* and then press ENTER.

2. Click cell F5 again, and then click the **Bold** button on the Formatting toolbar.

3. Click cell G5, type *% of Sec schools,* and press ENTER.

4. Click cell G5 again, and on the Formatting toolbar click the **Bold** button.

5. Click F6, and click the **Edit Formula** button (the = sign).

6. Type *C6/E6,* and click **OK.**

7. On the Formatting menu, click **Cells.** On the **Number** tab, choose **Percentage,** and then type *2* in the decimal places.

8. Click F6, and drag the fill handle to F12 to calculate the percentage for each pair of numbers. Click **OK.**

9. Repeat steps 3 through 8 for Secondary Schools using the formula *D6/E6* to calculate the percentage.

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U SING N UMBERS , F ORMULAS , AND F UNCTIONS

What you will learn from this lesson

- Practice using the Sort function.
- Create a one-input data table.
- Create a budget for a school function.

Sorting functions of Excel 97/2000

Recording names and addresses can be a full-time job. Just as soon as you have everyone in the correct order, you have a new person whose last name starts with the letter *C*. With Excel 97/2000, sorting the names by last name, city, or even by birthday is quick and easy.

Alphabetizing names

1. Starting with the column headings in cell A3, create a list of names on your worksheet. Enter each name, e-mail address, and city in separate columns, similar to the example shown below. Highlight your worksheet from the A3 cell down and across to the C10 cell.

#	A	B	C
3	**Name**	**e-mail address**	**City**
4	Juanita	Juanita@gj.net	Delta
5	John	John@iti2.net	GJ
6	Roy	Roy@gj.net	GJ
7	Tom	Tom@aol.com	Fruita
8	Kim	Kim@gj.net	Mack
9	Sean	Sean@aol.com	GJ
10	Georgia	Georgia@gj.net	Clifton

2. Select the data table.

3. On the **Data** menu, click **Sort.**

4. Under **Sort by,** select **Name,** and then click **Ascending.**

5. Click **OK.**

Creating a one-input data table

Using Excel 97/2000, you can learn the costs associated with making payments on purchases. You can easily calculate monthly payments based on interest and balance due on purchases. In the next exercise, you can calculate monthly payments based on interest and total cost of a car, showing how the loan term and interest rates affect monthly payments.

Calculating car payments

1. Open a new workbook.

2. Click **Sheet2** at the bottom of the window.

3. In cell C2, type *Car Payment Schedule*.

4. Type the following text and formulas in the cells shown in the chart:

| Row #	Column C	Column D
2	Car Payment Schedule	
3		
4	Down Payment	None
5	Interest Rate	8%
6	# of Months (term)	36
7	Loan Amount	$5000
8		
9		
10	Payments	

Note
When you enter a formula and press ENTER, the result appears in the cell, and the formula is displayed in the **Formula** box.

5. Click cell C11, and on the Formula toolbar, click the **Edit Formula** button (the = sign).

6. Click the **Functions** arrow, and click **PMT**, if visible. or – Click **More Functions.**

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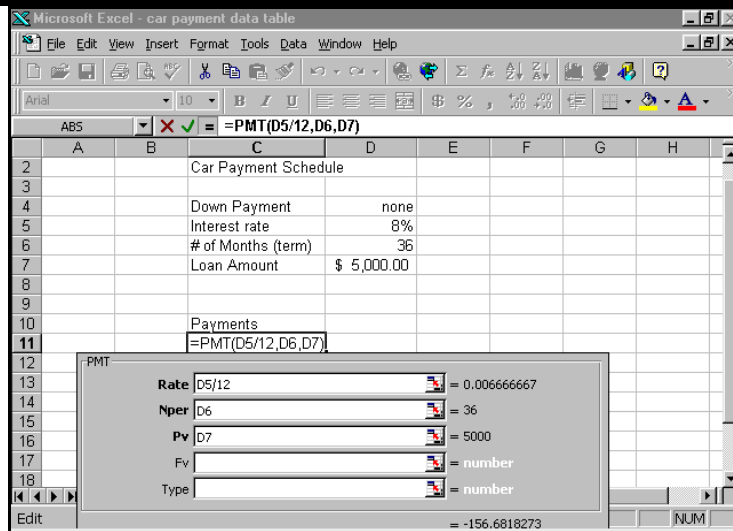
7. In the **Function** category, click **Financial.**

8. In the **Function name,** click **PMT,** and then click **OK.**

9. Click the **Shrink** button at the right of the input area, click D5 on the worksheet, and then press ENTER.

10. In the **Rate** box, click after D5, and type */12*.

11. Click the **Nper** window, and click the **Shrink** button.

12. Click D6 on the worksheet, and press ENTER.

13. Click the **Pv** window, and click the **Shrink** button.

14. Click D7 on the worksheet, and press ENTER.

15. Click **OK.**

16. To change the months of the loan to 24, type *24* in cell D5.

17. To change the interest rate to 12.5 percent to demonstrate how the payment changes, type *12.5* in cell D4. Try several combinations on your own, and see how it works.

18. Close the workbook without saving it.
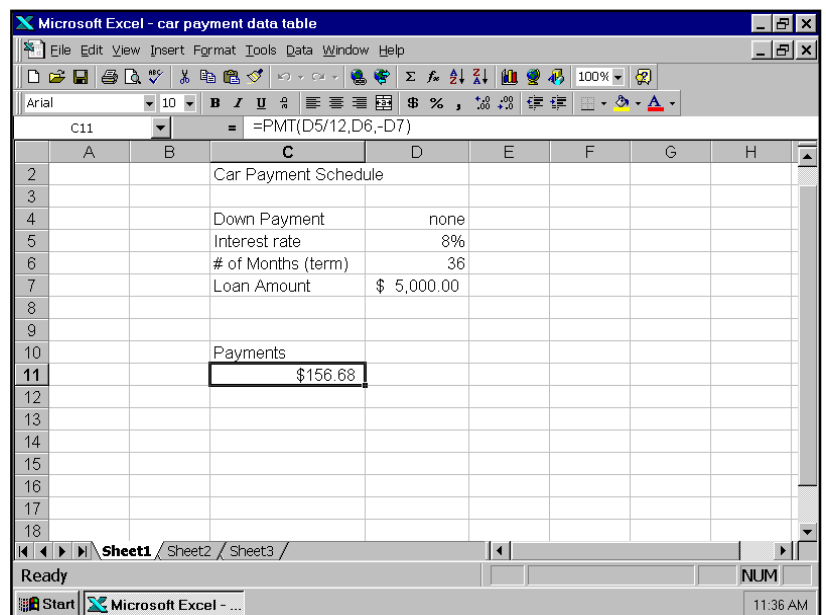
Order of calculation in Excel 97/2000

You have just discovered one easy formula in Excel 97/2000. There are many others that help you calculate or analyze everything from finances to statistical sampling plans. When you combine several mathematical steps in a formula, they are performed in a specific order. Excel 97/2000 will start calculating from the left to the right according to the following order of operations:

- ()   Parentheses
- \-   Negative number if used with one operand
- %   Percentage
- ^   Exponentiation
- * and /   Multiplication and division
- + and -   Addition and subtraction
- &   Connects two text values to produce a continuous text value
- =,<,<=, >, >=, <>   Comparison operators

For reference, the Comparison operators are:

- =   Equal to
- <   Less than
- <=   Equal to or less than
- >   Greater than
- >=   Equal to or greater than
- <>   IS Not equal to

C REATING A BUDGET

Entering budget categories

Creating a budget involves entering the categories and specific items into the worksheet. The first step to creating a budget in Excel 97/2000 is to determine the budget categories and enter them in the worksheet.

Entering categories for a budget

1. Open a new workbook

2. Click cell A2, type the title *Budget: Awards Dinner*, click **Budget,** and then, on the Formatting toolbar, click the **Bold** button.

3. Increase the width of column **A** to **23.**

4. Click **Budget,** drag it to cell D2, and then click the **Merge and Center** button.

5.   Click cell B3, and type *Items*; click cell C3, and type *Budget*; and in cell D3, type *Actual*.

6.   Click cell A4, and type *Supplies*; click cell B4, and type *Paper Products*; and then click cell B5, and type *Decorations*.

7.   Double-click between columns **B** and **C** to fit the text to the cell.

8.   Click cell A7, and type *Food*; click cell B7, and type *Meals*; and click cell B8, and type *Beverages*.

9.   Click cell A10, and type *Awards*; click cell B10, and type *Certificates*.

10. Click cell A13, and type *Miscellaneous*; and then click cell B13, and type *Custodial*.

11. Click in cell A16, and type *Totals*; on the Formatting toolbar, click the **Align Right** button.

12. Click cell B3, drag it to cell D3, and then click the **Bold** button on the Formatting toolbar.

13. Click cell A4, drag it to cell A16, and then click the **Bold** button on the Formatting toolbar.

Entering budgeted amounts and formulas

Placing budgeted amounts in formulas

1.   In the Budget workbook from the previous lesson, click cell C4 and type *50.00*.

2.   Click cell C5, and type *25.00*.

3.   Click cell C7, and type *250.00*.

4.   Click cell C8, and type *30.00*.

5.   Click cell C10, and type *75.00*.

6.   Click cell C13, and type *65.00*.

7.   Click cell C4, drag it to cell C16, and then click **Currency Style ($).**

8.   Click cell C16, click the **Edit Formula** button (the = sign), and on the Formula bar, click **Sum.**

9.   In **Sum Number1,** type *C4:C13*, and click **OK.**

Entering actual amounts

Completing the budget process with actual amounts

1. In the Budget workbook from the previous lesson, click cell D4, and type *43*

2. Click cell D5, and type *30*

3. Click cell D7, and type 238.

4. Click cell D8, and type *27*

5. Click cell D10, and type *60*

6. Click cell D13, and type *60*

7. Click cell D4, drag it to cell D16, and then click the **Currency Style** button ($).

8. Click cell C16, drag it to cell D17, and then press ENTER.

EMPHASIZING YOUR POINT WITH CHARTS

What you will learn from this lesson

- Create charts with worksheet data.
- Modify standard graphs.
- Create do-it-yourself (DIY) charts.
- Use pie charts with your data.

Starting the Chart Wizard

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The Chart Wizard shows each step along the path from entering raw data to completing a professional-looking graph. You can transform numbers into graphs, illustrating the power of visually oriented information to strengthen presentations.

Using the Chart Wizard to get started

1. Select all of the data in the Technology worksheet, including the headings, but not the main title or totals.

2. On the Standard toolbar, click the **Chart Wizard** button.

3. On the **Standard Types** tab, in **Chart type**, click **Column.**

4. In **Chart sub-type**, click **Clustered column with a 3-D visual effect.**

5. Click the **Press and hold to view sample** button to see a sample of your data in the clustered column 3-D format.

6. Click **Next** twice.
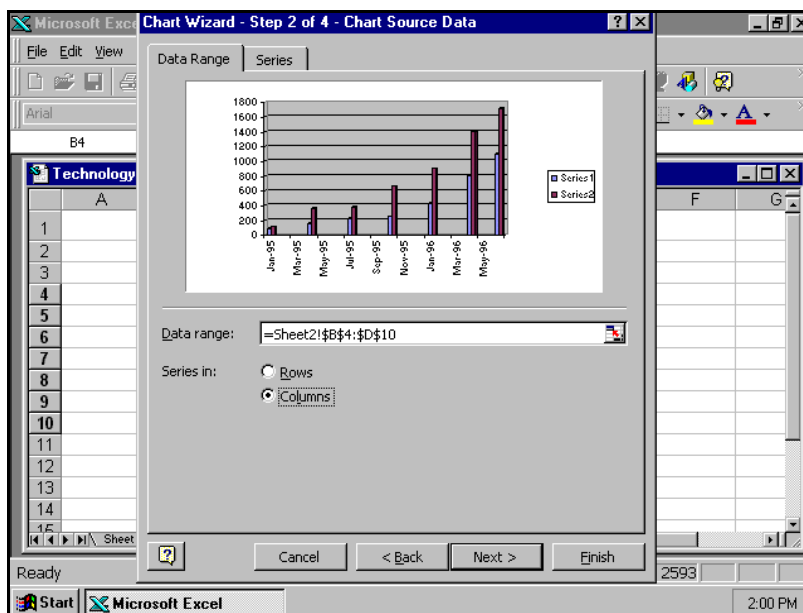
Adding titles
A graph title identifies what the graph presents and explains the data.

1. With the Technology workbook open, on the **Title** tab, in **Chart title,** type *Technology Challenge*.

2. In the **Value (Z) axis,** type *Number of Web Sites*. (The Z-axis title is available but not the Y-axis, because the Y-axis extends back into the chart.)

3. Click the **Gridlines** tab to select type of lines to show on your graph.

4. In **Category (X) axis,** check **Major gridlines,** and click again to remove.

5. To see how the graph could look, in **Value (Z) axis,** check **Major gridlines.**

6. To move the legend to the bottom, click **Bottom** on the **Legend** tab.

7. On the **Data Labels** tab, click **Show value, Show label,** and then **None.**

8. On the **Data Table** tab, click the **Show data table** option to see a table, and click again to remove the table.

9. Click **Next** for **Chart Location.**

10. Click **As new sheet.**

11. Click **Finish** to complete the chart process.

Attaching the graph as a new sheet makes it easier to print a chart. You now have a readable and easy-to-understand chart. Attaching the chart as an object has the advantage of providing an immediate view of changes to the chart as you change the data.
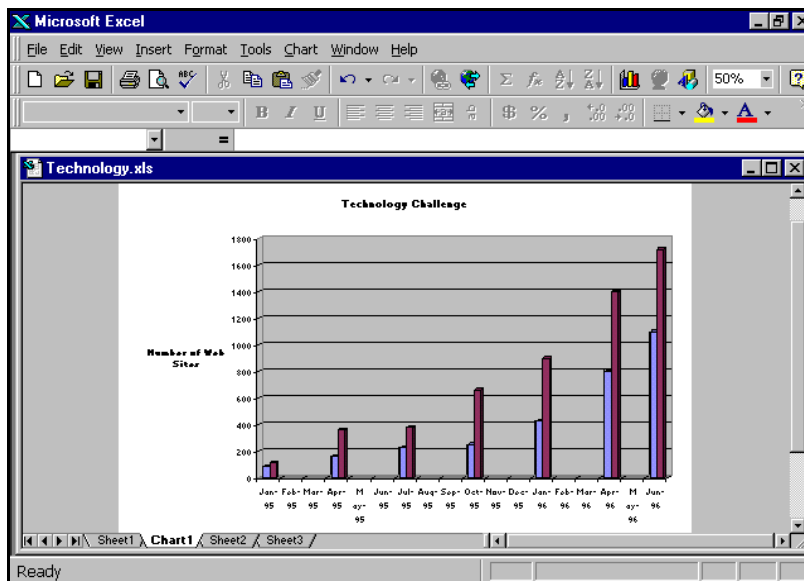
Rotating Z-axis titles and enlarging chart titles
The Z-axis title might look cleaner if it were rotated. The main graph title would be easier to read if it were a larger font size. You can change them both.

Rotating Z-axis titles and enlarging chart titles

1. In the chart from the previous lesson, click the chart title.

2. On the Formatting toolbar, change the font size to 18.

3. Click the title, and position the pointer on the bottom line of the title, and move the title to the top center of the chart.

4. Right-click Number of Web Sites.

5. Click the **Format axis title** dialog box.

6. On the **Alignment** tab, click the **Red Diamond** text line, and drag it up to the top of the semicircle.

7. Click the **Font** tab, and change the text to bold and 14-point.

8. Click **OK.**

9. Right-click the "Technology Challenge" chart title.

   a) Click **Format Chart.**

   b) Click the **Font** tab, and change the text to bold and 20-point.

   c) Click **OK.**

Adding texture to your background

The plain, gray background can be changed to a colorful texture. If you have a color printer, a textured background will emphasize your chart.

Adding texture to your background

1. On the graph background, right-click **Walls.**

2. Click Format Walls.

3. On the Patterns tab, click Fill Effects.

4. On the **Texture** tab, click the **Parchment** color block in the third column of the first row.

5. Click **OK** to close the **Fill Effects** window.

6. Click **OK** to close the **Patterns** tab.

7. On the graph background, right-click **Floor.**

8. Click Format Floor.

9. On the Patterns tab, click Fill Effects.

10. On the **Texture** tab, click the **Green marble** color block in the first column of the third row.

11. Click **OK** to close the **Fill Effects** window.
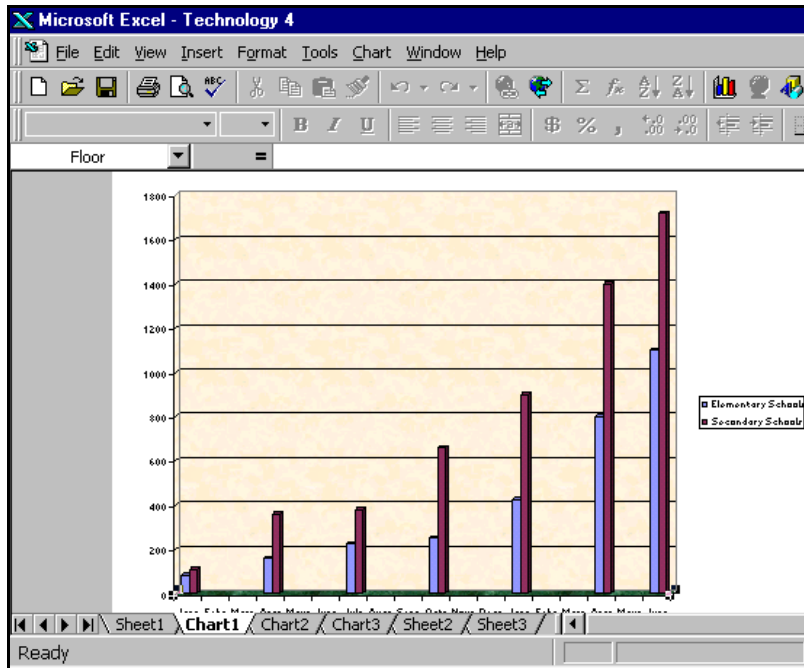
12. Click **OK** to close the **Patterns** tab.

13. On the **File** menu, click **Save.**

Changing colors of data bars
It is easy to change data bar colors to enhance your chart.

Adding colors to enhance data bars

1. Right-click the first data bar.

2. Click **Format Data Series.**

3. On the **Patterns** tab, click **Bright yellow** in the fourth row.

4. Click **OK**.

5. Right-click the second data bar.

6. Repeat steps 1 through 4, and click **Bright green** in the fourth row.

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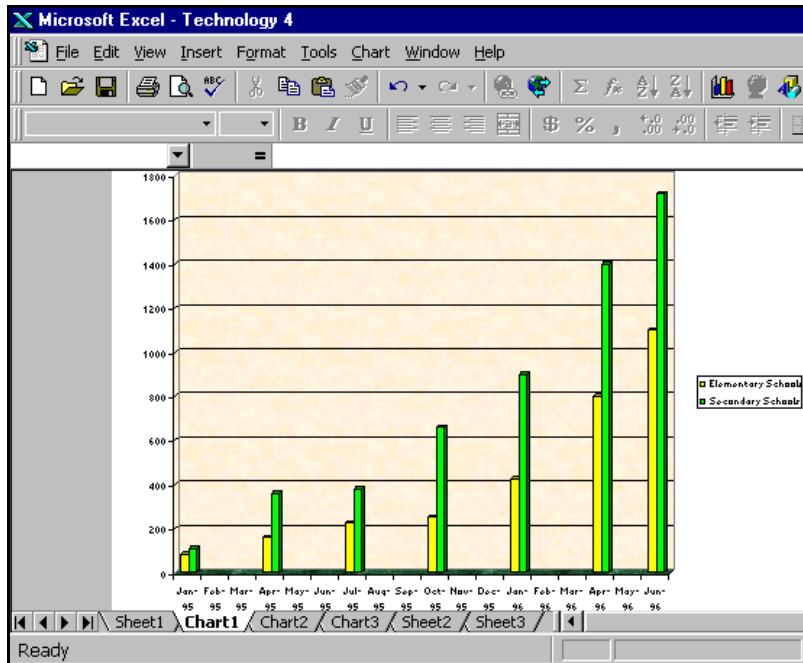
Rotating charts

Sometimes it is easier to understand a chart if it is viewed in 3-D. Using Excel 97/2000 you can modify your chart to show it from any view—top, bottom, right, left—or you can create 3-D charts.

Rotating charts

1. Right-click **Walls.**

2. Click 3-D View.

3. In the **Elevation** dialog box, type *15*.

4. In the **Rotation** dialog box, type *40*.

5. Click the Auto scaling and the Right angle axes boxes.

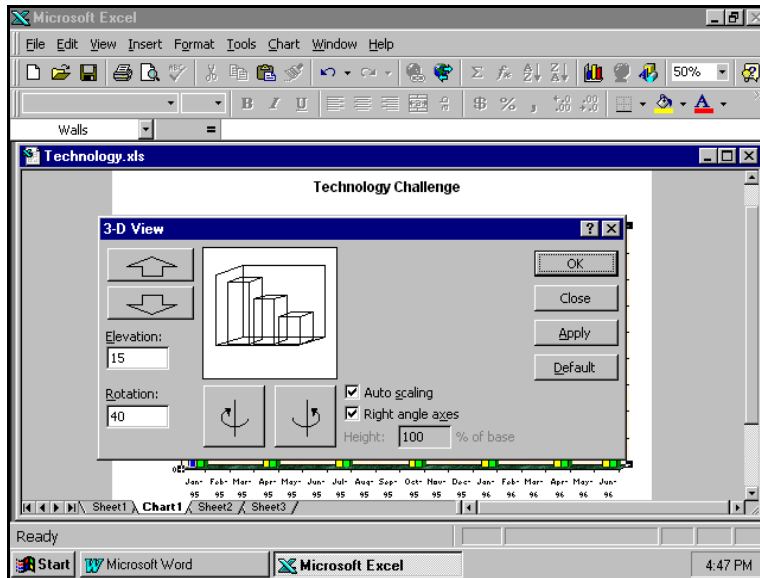6. Click **Apply.**

7. Click **OK.**

Adding depth to charts

The illusion of depth adds dimension to your chart. Using Excel 97/2000 you can easily modify your charts to show depth.

Adding depth to your chart

1. Click the second bar on your chart.

2. Press CTRL+1 to open the **Format Data Series** window.

3. Click the **Options** tab.

4. In the **Gap depth** dialog box, type *170*.

5. In the **Gap width** dialog box, type *90*.

6. In the **Chart depth** dialog box, type *699*.

7. Click **OK.**

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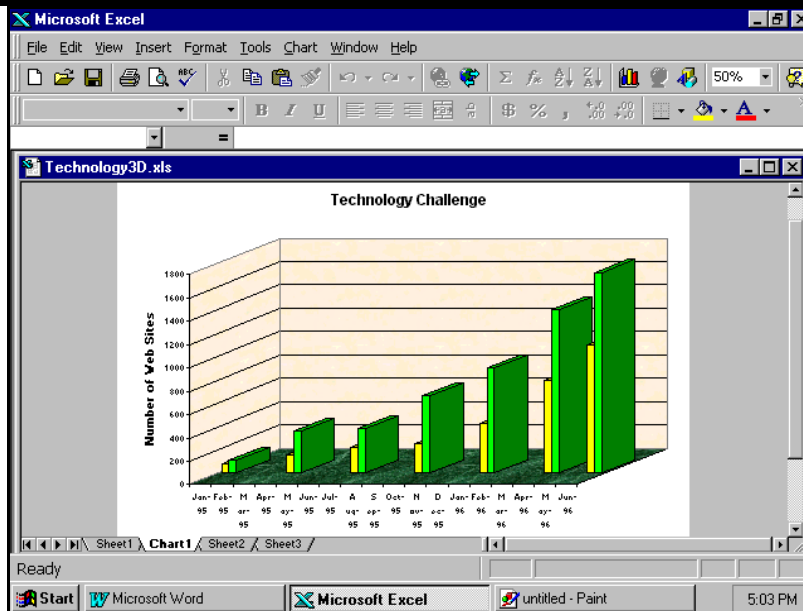
Viewing data with pie charts

Pie charts are easy to understand, and with Excel 97/2000 and they are easy to make.

Creating pie charts

Visually presenting data with Excel 97/2000 pie charts

1. With the Technology workbook open, click cell B3, and then press SHIFT while you click B10.

2. Press CTRL while you click cell D3 and drag the pointer to select cells D3 through D10.

3. Click the **Chart Wizard** button.

4. Under **Chart type,** click **Pie,** and In **Chart sub-type,** click **Pie with a 3-D visual effect** (first row, second chart).

5. Click **Next.**

6. On the **Series** tab, click **Next,** and on the **Title** tab, click **Next.**

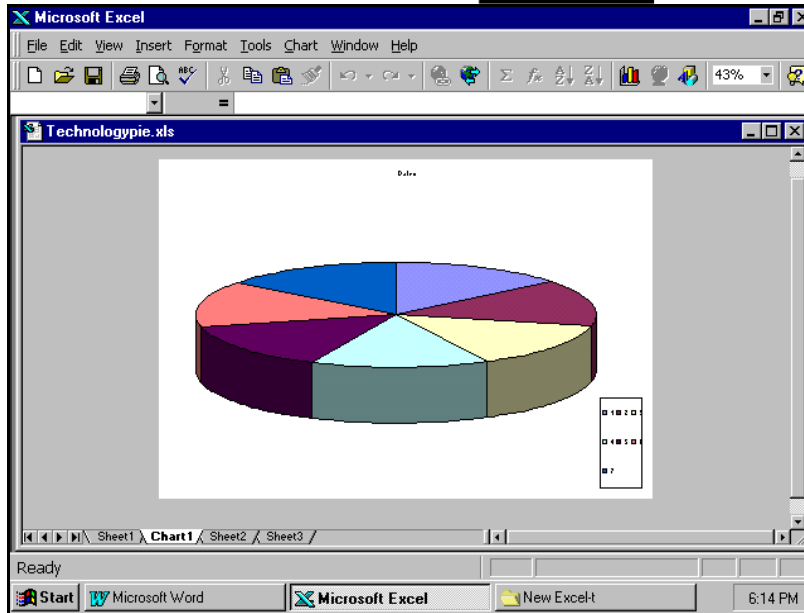7. Click **As new sheet.**

8. Click **Finish.**

Modifying pie charts

Emphasizing data and text in your pie charts

1. Click **Title.**

2. Right-click (chart) **Title** to open the **Format Chart Title** dialog box.

3. On the **Font** tab, click **Bold,** change the point size to 36, and then click **OK.**

4. Right-click the **Legend** box to open the **Format Legend** dialog box.

5. On the **Font** tab, click **Regular,** and then change the point size to 16.

6. On the **Placement** tab, click **Bottom,** and click **OK.**

7. Click the **Legend** box.

8. Click the size handle at the bottom, and drag it down to increase the length of the **Legend** box.

9. Click the size handle at the side of the **Legend** box, and drag it left to increase the width of the box.

10. Right-click inside **Pie** to open the **Format Data Series** dialog box.

11. On the Data Labels tab, click Show value.

12. Click Show legend key next to label, and click OK.

13. Right-click one of the **Data Labels** to open the **Format Data Labels** dialog box.

14. On the **Font** tab, click **Regular,** click **14,** and click **OK.**

Microsoft Excel Essentials

Your chart should match the following example:
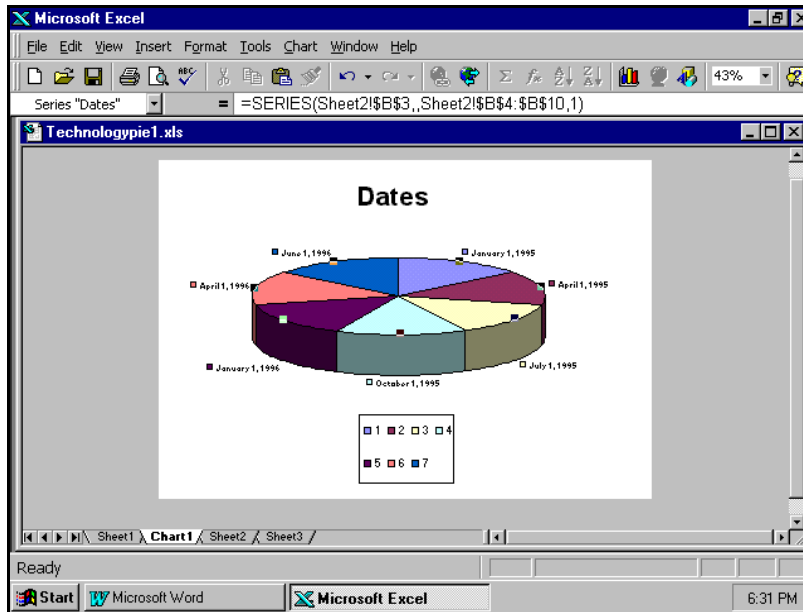
PUTTING IT ALL TOGETHER WITH EXCEL

What you will learn from this lesson

- Insert and link Excel graphs into your report.
- Insert and link Excel charts into your report.

Creating linked data charts

Data from a worksheet can be linked into a Word document. Every time the numbers in the worksheet change, the corresponding numbers in the Word document will be updated.

Linking data charts into a Word document

1. Open the Word document that you want to use for your report.

2. Open the Excel 97/2000 worksheet named Technology, which you saved earlier.

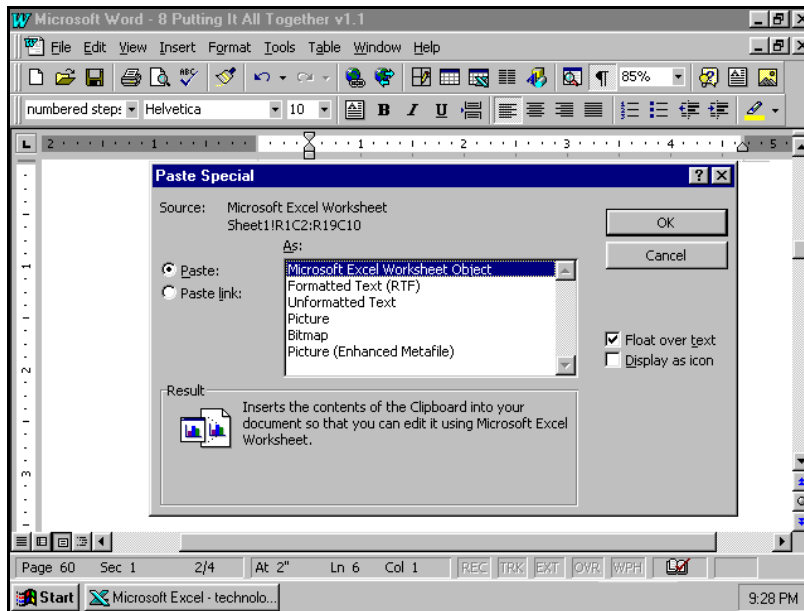3. Select the area of the worksheet to be copied into the Word document.

4. Press CTRL+C.

– or –

On the Standard toolbar, click the **Copy** button.

5. Click in your Word document where you want to insert the data table

6. On the **Edit** menu, click **Paste Special.**

7. Click **Paste link, Microsoft Excel Worksheet Object,** and **Float over text.**

8. Click **OK,** and save your Word 97/2000 document**.**

Your data chart is now part of your document. This method of linking the data chart to your document uses the least amount of system memory. Any changes you make in the Excel 97/2000 worksheet will be reflected in your Word document.

Creating linked graphs

Linking a graph from Excel 97/2000 is an easy way to ensure that any changes to your graph in Excel 97/2000 are carried over to your graph in a Word 97/2000 document.

Linking a graph

1. Using the same Word document you used in the previous lesson, click the location in that Word document where you want to insert your graph.

2. Click the graph tab at the bottom of the Excel 97/2000 screen to select the colorful graph. (Sheet1 contains the actual data. If you made several graphs, confirm which one is saved under which general name.)

3. Click the outside edge of the graph to select it. Sizing handles will appear, marking the graph corners and side boundaries. They can be grabbed to move or change the size of the graphic.

4. On the Standard toolbar, click the **Copy** button, or press CTRL+C. A moving dotted line will outline your graph.

5. On the **Edit** menu, click **Paste Special.**

6. Click **Paste Link** and **Float over text**, and then click **OK,** just as in the previous exercise.

7. Size your graph, and move it into position in your document.

8. Save the Word document and the Excel workbook, and close the documents.

Excel 97/2000 has linked your chart and graphic from your worksheet to your document. You can edit through Word 97/2000 into Excel 97/2000, but it may be slower than entering the changes directly in Excel 97/2000, depending on your computer speed and system memory.

MACROS

In Excel, if you perform a task repeatedly, you can automate it with a macro. A macro is a stored list of commands and keystrokes. They are automatically executed when you *run the macro*. Before you record or write a macro,
- ✓ Plan the steps and commands you want the macro to perform.
- ✓ Any keystroke you make while recording a macro, is recorded. This includes
- ✓ mistakes!
- ✓ Macros can be stored so they are available for all workbooks, or only the workbook
- ✓ open when it is created.
- ✓ Macros can be edited after they are created.
- ✓ Macros are great for many things including
- ✓ Creating Headers and footers that are used repeatedly in different workbooks or
- ✓ worksheets
- ✓ Formatting cells
- ✓ Printing a range

● Record Macros
You create a macro by recording it. There are two steps:
- ✓ Step 1: Name the Macro
- ✓ Step 2: Record the keystrokes and commands included in the macro.
  1. Click Tools on the menu bar.
  2. Point to Macro.
  3. Click Record Macro. A window opens.
  4. In the Name box, type a name for the macro.
- ✓ The first character of the macro name must be a letter.
- ✓ Other characters can be letters, numbers, or underscore characters.

✓　Spaces are not allowed

5. If you wish to want to assign a shortcut key to the macro, type a letter in the Shortcut Key text box.

✓　The shortcut key can be an uppercase or lowercase letter. It cannot be anumber or special character.

✓　.To assign a small letter, that you access using CTRL+ the letter, just type the letter.

✓　To assign a uppercase letter, that you access using CTRL+SHIFT+ the letter. hold down the SHIFT key and type the letter.

✓　Don't use a default Excel shortcut key! The shortcut key will override any default Microsoft Excel shortcut keys while the workbook that contains the macro is open.

6. In the Store macro in box, click the location where you want to store the macro.
To make the macro available whenever you use Excel,
Click the arrow at the right side of the Store Macro In box.
Select Personal Macro Workbook
To make the macro available for this worksheet only,
Click the arrow at the right side of the Store Macro In box.
Select This Workbook.

7. Click in the description box and type a short description of the macro's function.

From NOW ON, until you stop recording, every keystroke is being recorded!!!

8. Perform the actions you wish the Macro to record. Do them in the order you want them performed.

9. When all actions are completed:
If the Macro toolbar is displayed, click the Stop Recording button
Or
Click Tools on the menu bar.
Point to Macros
Click Stop Recording

● Run a Macro

You can run Macros from

✓　Tools menu

✓　Shortcut key if it was assigned

Run the Macro Using a Shortcut Key

1. Open the workbook in which you wish to run the macro.
2. To run the macro using a short cut key
Hold down the CTRL key and press the shortcut key
Or
If the shortcut key was uppercase, hold down the CTRL and the SHIFT key and press the shortcut key.

Run a Macro From the Menu Bar

1. 1. Open the workbook in which you wish to run the macro.
2. 2. Click Tools on the menu bar.
3. 3. Point to Macro.
4. 4. Click Macros.
5. 5. Click the name of the macro you wish to run.
6. 6. Click Run

● Assign a Shortcut Key After a Macro Has Been Created

7. 1. Click Tools on the menu bar.
8. 2. Point to Macro.
9. 3. Click Macros.
10. 4. Select the macro where you wish to create the shortcut key.
11. 5. Click the Options button.

12. 6. Type a letter in the Shortcut Key text box.
13. 7. Click OK.

● Edit Macros

Macros are edited using the Visual Basic Editor. This is a program Excel uses to create macros.

14. Click Tools on the menu bar.
15. Point to Macro
16. Click Macros.
17. Select the macro you wish to edit.
18. Click the Edit button. The macro code appears in the window in the Visual Basic editor. IT is written in a Visual Basic language. Unless you know the language, it is often easier to just record the macro again, instead of editing it.
19. Make any corrections.
20. When changes are complete, Click File on the menu bar.
21. Click Close. Changes are automatically saved.

● Delete Macros

22. Click Tools on the menu bar.
23. Point to Macro.
24. Click Macros.
25. Select the macro you wish to edit.
26. Click the Delete button in the Macro window.
27. Click Yes in response to the prompt asking if you really wish to delete the macro.

● Attach Macros to Buttons or Drawing Objects

Macros can be attached to buttons or drawing objects. When you click the button or drawing object, the assigned macro automatically runs.

Attach a Macro to a Button

28. This assumes the macro is already created.
29. Click View on the menu bar.
30. Point to Toolbars.
31. Click Forms to display the Forms toolbar.
32. Click the Button icon.
33. On the worksheet, move the cursor to the desired location for the button.
34. Drag to create the button. When you release the button, the Assign Macro window opens.
35. Click on the macro that you wish to attach to the button.
36. Click OK.
37. To change the default name on the button
38. Click on the button with the right mouse button.
39. Click Edit text.
40. Edit the text as desired. Click outside the button to deselect it.