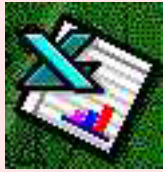


INTRODUCTION TO EXCEL 97



This session will introduce you to some of the uses of Microsoft Excel. Excel is a spreadsheet program that will calculate, chart, graph, sort, filter, and manipulate data. The items we will cover in this course will be:

- Basic Layout and Terminology
- Adjusting Columns and Rows
- Formatting Cells (including text and numerical)
- Calculations
- Sorting
- Creating Graphs
- Printing

The Spreadsheet Workspace

Shown is the Excel Window, terms are defined in the list following the image.

The screenshot shows the Microsoft Excel 97 window titled "Microsoft Excel - Book1". The interface includes a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help), a toolbar with various icons, a format bar (Arial, 10, Bold, Italic, Underline, text alignment, number formatting), and a formula bar (A1, =). The main workspace is a grid of columns (A-I) and rows (1-19). A cell in column A, row 3 is highlighted and labeled "Cell". A vertical line in column C is labeled "Column". A horizontal line in row 10 is labeled "Row". A vertical scroll bar on the right is labeled "Scroll Bar". An "Office Assistant" icon (a paperclip) is visible in the bottom right. At the bottom, the status bar shows "Ready" and "NUM".

Labels on the left side of the image:


- Title Bar
- Menu Bar
- Tool Bar
- Format Bar
- Formula Bar
- Worksheet Tabs
- Status Bar

Basic Layout and Terminology

Column	The entire up and down area under one heading.
Row	The entire side to side area beside one number.
Cell	One box on the worksheet. Named with column and row headings (A1, B3, etc)
Tool Bars	Provide easy access to many of the most commonly used functions.
Status Bar	Lets you see visually some of the options currently in use.
Office Asst.	This “paper clip” waits for you to need help and offers suggestions for greater productivity.
Label	A word or group of words usually used to label data.
Value	A number typed into a cell.
Formula	An equation typed into a cell, describing which values should be used for calculations.
Function	A complex formula already programmed into the application.
Highlighting	Selecting a cell, group of cells, column(s) or row(s), usually selected by using the mouse.

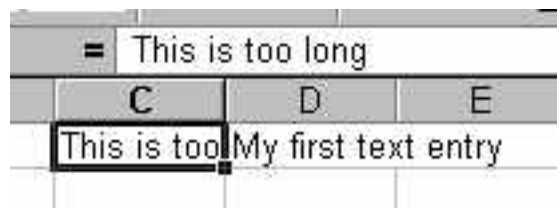
Each spreadsheet is divided into columns and rows. The columns are labeled with letters, and the rows by numbers. This allows each cell to have a unique name. A1 is the cell in the upper left hand corner. The letter always precedes the number.

Creating a New Document

When Excel opens, you will get a blank workbook, consisting of 3 worksheets. (This number can be adjusted by choosing Tools/Options and clicking the General Tab) At any time during your Excel session, you can create a new workbook by choosing File/New, pressing Ctrl+N, or clicking this button: 

Entering/Editing Information

Entering information is as simple as going to the cell, and typing in what you want. Notice that exactly what you enter is in two places: In the cell, and in the bar at the top of the screen. If you want to totally replace what you did, just retype in the same cell. If you want to correct a small error, you need to do this in the editing bar above.



Also notice that text that is too long for a cell doesn't look just right. Hitting enter will let the extra flow into the adjoining cells, if they are empty. If they are not empty, Excel will cut off the extra text from view. The text is still there, but not visible.

Row Height

Most of the time, you will not need to change the height of the rows. The information is usually short and to the point. However, you may want to make the row taller for some reason. You can change the row height in two ways:

1. Use Format/Row Height to numerically change the height of all highlighted rows. (You can also hide or unhide rows here)



2. Use your mouse to drag down the bottom border of the row. (You can only do one at once here.)

Column Width

You can change the width of the columns in many ways, also. Each method has good and bad points, so it is up to the individual to see which way works best for them.

Manual Adjustment- Use your mouse on the right border of the column in the bar at top. Not accurate, can only do one column at a time.

Format/Column Width- Will numerically change width in characters on all highlighted rows. Accurate, multiple rows can be done.



Best Fit- Double click on the right border of the column in the column bar at top. Will automatically adjust to hold the widest entry in the column.

Moving Around

There are a variety of methods used to move around the spreadsheet,

To Move:

One Cell Right	Press Tab or the right arrow
One Cell Left	Press Shift/Tab or the left arrow
One Cell Down	Press Return or the down arrow
One Cell Up	Press Shift/Return or the up arrow

To Enter Value, but remain in the current cell, Press Enter on the keypad.

Labels Vs. Values Vs. Formulas

Anything typed into a cell of the spreadsheet will be considered a label, (a text box is unable to be calculated):

It begins with an equal sign (=) or it contains only numbers and any of these symbols:

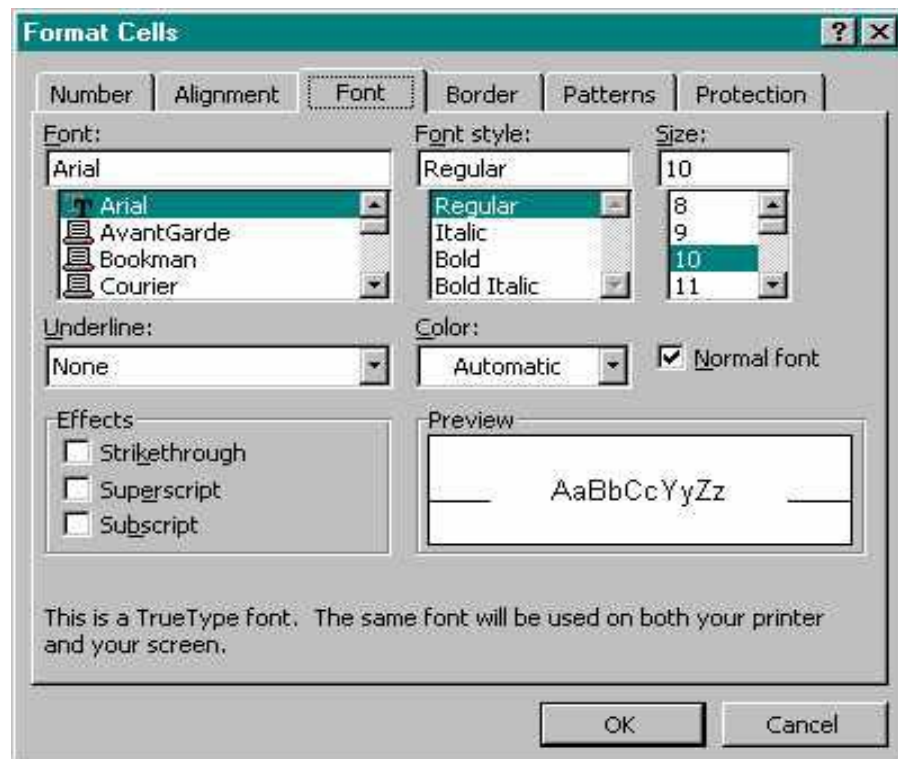
+ - * / ^ () .

A value is a number typed in. Calculatable.

A formula is a mathematical computation. Can be stand-alone, or involve other cells.

Formatting Cells (including text and numerical)


Individual cells or groups of cells are formattable, just as text is in WordPerfect. In the Format/Cells dialog box,



the different tabs affect different text attributes.

- Number** Changes category of number for easy formatting.
- Alignment** Controls horizontal, vertical, angular alignment, as well as wrap.
- Font** Affects font, size, style, etc.
- Border** Will place a variety of borders around a selection.
- Patterns** Will shade the cell area.
- Protection** Will lock or unlock cells on a protected worksheet (used mostly for forms to be filled in on a template)

Numbers:

The numerical format of a cell can be changed from currency, to a fixed number of decimal places, to rounded to a place, to almost anything you can think of. In the Format/Number... dialog box, you can change the selected cells' formats in a variety of ways. Or choose from the toolbar buttons: 

They do, in order, change the selected cells to Currency, Percents, Standard Number with commas and two decimal places, increase the number of decimal places by one and decrease the number of decimal places by one. The decimals will always be rounded to the number of places showing. That is, if you input 3.14159 in a cell and just show 3 decimal places, it will show 3.142.

Naming Worksheets

Instead of having the tabs at the bottom read "Sheet 1", Sheet 2", etc, you can name them using any scheme you want. Just double-click on the tab and you will be allowed to rename the sheet. Good for keeping track of what information is on each sheet of a workbook.

Adding Worksheets

By choosing Insert/Worksheet, you will add another blank sheet in front of the currently selected sheet.

Moving Worksheets

To rearrange the order of your worksheets, click and drag on the tab and place it in the location you want to switch it to.

Calculations

Inserting a calculation will take you back to 9th grade algebra. You can do many basic calculations, and many advanced calculations in a cell. All will be calculated using the standard order of operations. To create a formula:


1. Start with an = (equals sign).
2. Use cell references as variables. (if I wanted to add the contents of A1, A2, and A3, I would write =A1+A2+A3)
3. Add & Subtract are still + and -, Multiply is *, Divide is /, Exponents are ^
4. There are some shortcuts (functions) you might like to use.

Sum(A1:A5)	adds the values in cells A1, A2, A3, A4, and A5
Average(A1:A5)	averages the values in those cells.
Max(A1:A5)	gives the maximum value in cells A1 to A5
Min(A1:A5)	same, but minimum value

There are many more.

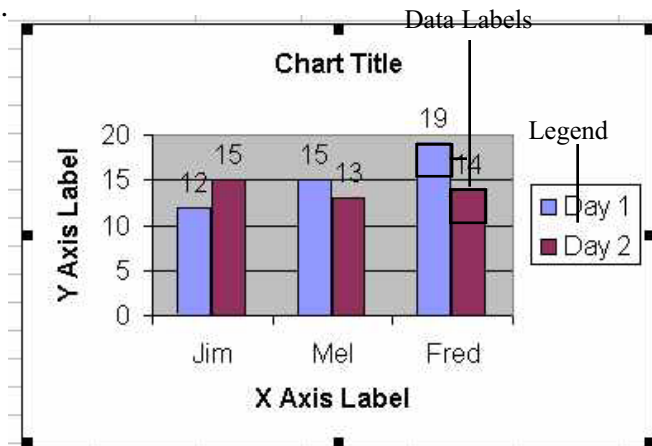
Creating Graphs

A graph can be created once the information is entered. A handy tool called a Chart Wizard will help you along the way. The steps you use to create a chart are:

1. Enter the information you want graphed in rows or columns.
2. Highlight the information, including column or row headers.
3. Click the “Chart Wizard” button on the toolbar. 

Steps in the Chart Wizard:

1. Choose the type and sub-type of chart you wish to use.
2. Check that the range of cells in your chart is correct (it should be) You can, at this point, use different series from different spreadsheets if you wish.
3. Edit the chart options on the different tabs.
4. Select a location for your chart (new sheet or current sheet).
5. Click Finish.



Each individual element of the chart can be formatted and edited separately, most easily by double-clicking on that element. That includes a data series (bars, in this case), a label, a title, or even the background. Editing usually involves a single click on the element (titles and labels), at which time you will get an “I-Beam”, then make the selection and re-type.

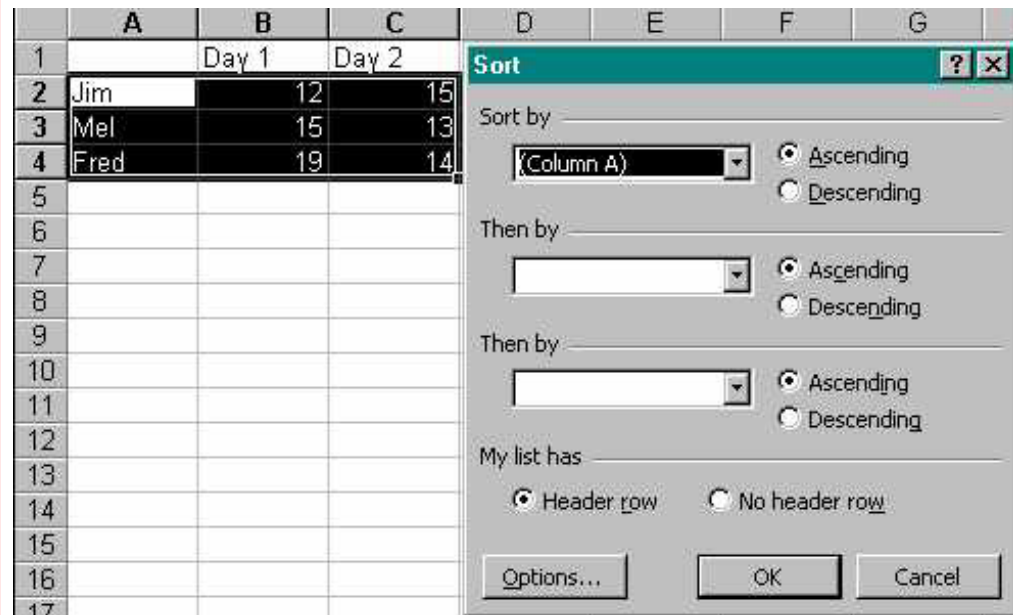
Sorting

You can sort and filter in Excel as a simple database. (Use Data/Sort...) You can use the columns as fields and the rows as records. For example, you can sort...

- Numbers
- Text, and text including numbers (part numbers, codes, etc.)
- Logical values
- Error values
- Blanks

Ascending lists in alphabetical order, and from low to high, then in the order above. Descending reverses the order, except for the blanks, which are always last.

When you choose Data/Sort, you need to have highlighted a cell in the list you want sorted, Excel will guess as to what it thinks your list is. To keep all elements of the list together, be sure they are all included in the selection.. If you are sorting names and birthdays, highlight both columns so the name stays with the correct birthday.



Steps to sorting:

1. Choose an item in your list, or better, select the entire list.
2. Select Data/Sort
3. Make the appropriate selections in this box:

In this example, I used the “dummy” data from creating a chart earlier. I clicked on one cell in the list, and Excel grabbed the rest of the list.

**Note- Excel did not select the Header Row, or titles. In the Sort dialog box, My list has Header row is selected. You should not select this unless the title row has been highlighted.*

Choosing the Options... button allows you to choose more advanced features, like case sensitive, or sort in a different direction. (left to right, etc)

4. When all choices are OK, Choose OK.
5. It should complete the sort, keeping corresponding items together.

Printing

Printing in Excel can be tricky, as there are many options for what to print. Below are listed many of the more popular printing options and how to accomplish them.

To Print

Entire Sheet
 Partial Sheet
 Partial Sheet - Same Area Always

Just a Chart/Graph
 Multiple Sheets

Choose

File/Print - Active Sheet(s) - (Default)
 Highlight Selection, File/Print - Selection
 Highlight Selection, File/Print Area - Set Print Area, File/Print
 Click Chart to Select, File/Print - Selected Chart
 File/Print - Entire Workbook OR Shift-Click multiple sheets, and File/Print - Active Sheet(s)

