

## Lecture 8

## EXCEL

Excel is a spreadsheet (all originally developed for bookkeeping and accounting). It is very useful for any mathematical or tabular operations. It allows you to make quick changes in input and see how the results are impacted.

Let's start off the same way we did with Word by looking at the initial screen. Many of the buttons look very similar to what we had with Word and will perform the same functions.

The toolbars at the top are the standard toolbar and the formatting toolbar.

### Std

New	Auto Sum
Open	Paste function
Save	2-sort
Print	Chart
Print Preview-different	Map
Spelling	Drawing
Cut	Zoom
Copy	Office Assistant
Paste	
Format Painter	
Undo	
Redo	
2-hyperlink	

### Formatting

Font	Decrease}	indent
Size	Increase }	
B	Borders	
I	Fill	
U	Font Color	

3-alignments	Merge & Center
Currency }	
% }	styles
,	}

Increase }	decimal
Decrease}	

Below the 2 toolbars, we have the name/equation bar:

<b>name box</b>	<b>edit formula</b>	<b>formula bar</b>
	<b>(cell address)</b>	<b>button</b>
		<b>create or edit cell formula</b>

At the bottom are the sheet designators – think of a book with many pages.

At the bottom is the status bar with the mode indicator (Ready) and the NUM indicator.

The workspace in Excel is divided into numbered rows and lettered columns. An intersection of a row and column defines a cell such as C3.

### Moving Around the Spreadsheet

Either with mouse or keyboard. Move cursor to point and click to activate the cell or can use keys. Note how the Row/Column indicator is bolded and the cell appears in the name box.

### Scrolling

**CNTRL HOME** – top of spreadsheet

**HOME** - beginning of row

The spreadsheet size is quite large - 256 columns and 65,536 rows.

**PAGE DOWN** – moves down 1 page

**ALT PAGE DOWN** – right one full window

**ALT PAGE UP** – left one full window

**END** → - moves to last used cell in row

**END** ↓ - last used cell in column

### Entering Data

In a cell, you can enter text, numbers or formulas

< illustrate text, numbers >

Note status changes to enter

As soon as you started to type, a new set of buttons comes up

**cancel**    **enter**    **formula edit**

When done typing, click ✓ or press enter. To cancel press **X**. To delete an existing entry – press **delete** when over cell.

### Editing an Entry

To correct an entry in a cell, double click on it. STATUS bar shows EDIT and mouse pointer changes to an I beam.

**HOME** – beginning } of entry

**END** - end }

One of the important features in Excel is the ability to copy, move and work with blocks of data or formulas.

### Copying Data (Cell contents)

Can move by cutting them and pasting them in a new location. Can be copied and pasted also, using icons on std toolbar.

In order to copy/move data, we must select it. When you are on a cell and press copy, a moving border indicates the source has been copied.

Cancel moving border by pressing ESC. Moving border indicates contents can be pasted again.

We can also move/copy a block of data called a range. Drag mouse from one corner to another.

A specialized way to copy is to FILL – only works with adjacent cells.

Select entire range including master cell

**EDIT**

**FILL**

**RIGHT**

**CNTRL R** right } filling

**CNTRL D** down}

A shortcut for the fill command is to grab the fill handle (black box in lower right corner). Cursor changes to + (on source range) then drag mouse to extend

### Formulas

For maximum utilization – formulas.

- entry that performs an operation
- formula always begins with equal (=) sign which defines it as a numeric entry

- + / \* ^ (exponent)

other complex operations – use ( )

Page 16 – temperature conversion

Table Exercise 1

### Filling a Series of Numbers

Note in Exercise 1, The values of °F are in increments of 50 . Rather than type these numbers individually, we can have the program put them in.

Place first number i.e. 50 in cell A4

2<sup>nd</sup> number 100 in cell below

Drag fill handle over range to be filled.

- Increasing values
- Decreasing values

Note the little marker to the side which tells you what the value is in the cell you are over.

You can specify the type of series if not obvious:

Jan 96

Feb 96

Mar 96

Jan 96

Jan 97

Jan 98

Hold down the right mouse button when going over range – upon release a list of series will appear – pick by year.

### Back to Formulas

Now we have our °F formula in, how do we have the program calculate the °C? The formula to convert °F to °C is:

$$C = \frac{5}{9} (F-32)$$

In Excel, all formulas begin with an = (equal) sign

= (5/9) \* (B4-32)

↑  
relative  
cell reference

Note : Use ( ) to group things

50  
100

10  
37.7778

using = on bar

Let's keep everything in whole numbers – so hit the decrease decimal button until we have 38 instead of 37.7778.

We would not want to type the formula everytime – so let's copy it. Remember to hit escape ESC if you want to remove the moving outline box on the original formula copied.

What if we do not want the cell address to change? This would be called an absolute cell reference – place a \$ sign in front of cell reference parts.

Format for no decimal placed

**FORMAT  
CELL**

Number

Number

(also alignment etc.)

Formula Editing (continuation of Editing)

Double click on cell with formula or press F2. Formula components are color coded to correspond to colors borders in spreadsheet – Range Finder feature

-Quick review of saving – similar to Word  
opening – similar to Word

Printing – Print Preview

PRINT PREVIEW – if not good

SETUP

FIT to

Or change size till fits

Cell Ranges

Cell ranges are groups of cells in a rectangular form. Each cell range has a beginning and ending address. Top LH corner is beginning and lower Rh corner is ending address.

To specify a range, enter the two cell addresses separated by a : (colon).

You can also specify a range by highlighting.

- draw mouse with left button down over range.

We will see what we can do with cell ranges a little later.

