

# Introduction to Microsoft Excel Part One

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## **I. EXCEL -- Spreadsheet Software Defined**

Spreadsheet software simulates an accountant's worksheet by performing mathematical operations on numbers arranged in columns (256) and rows (65,536). This type of program is ideal for accounting and other record keeping. Moreover, in EXCEL many kinds of charts can be generated from selected (or highlighted) spreadsheet data.

## **II. A Look at the EXCEL screen**

### **Standard Toolbar:**

Next is the Standard Toolbar, which contains several icons that act as shortcuts to executing certain commands. All of these commands can also be found in the pull down menus on the menu bar. By slowly moving your mouse over these icons, you should see a little box appear with instructions on what that icon does.

### **Formatting Toolbar:**

The next bar, below the Standard Toolbar, is the Formatting Toolbar. This bar contains different document settings in which to choose from (e.g. font, font size, etc.). Again, this bar is to provide a visual shortcut for changing the look of your document. Highlight the text that you wish to manipulate then click on the icon you are interested in. Another way to do this is to click the icon first, do your typing, then click on the icon again to turn it off. It's as easy as that.

### **Other Toolbars:**

The **Formatting Toolbar** is an optional toolbar that may not be automatically displayed when you start Excel. There are several other toolbars that can be put to use, but the aforementioned toolbars are most commonly used. If you would like to access/use other toolbars, or if your **Formatting Toolbar** is not displayed, then do the following:

1. Click on **View**.
2. Click on **Toolbars**.
3. Click next to the title of the bar that you wish to display.

### **Scroll Bars:**

Next, on the right side of your document's workspace and along the bottom are two Scroll bars. These bars have a blue box followed by arrows at the end of

the scroll bar. By clicking on an arrow, you will either move through a document line by line or column by column; however, clicking-and-dragging the blue box moves you through the document *much* quicker in either direction.

Also located to the left of the bottom scroll bar are two arrow icons pointing left, and two arrow icons pointing right. These are the “**Tab scrolling buttons**”. Notice that the one farthest to the left and the one farthest to the right have a line in front of them. This will take you to the very first or very last sheet tab in a workbook. This only works when there more sheets that are not visible in the list.

### **Status Bar:**

The gray bar at the very bottom of the Excel screen is called the Status Bar. This bar lets you know whether CAPS LOCK or NUM LOCK is on. It also displays information about a command or operation in progress.

### **Spreadsheet Layout:**

The Excel spreadsheet is called a *worksheet*. You may have up to 256 worksheets in a file. A saved file is called a *workbook* in Excel. Tabs at the bottom of the screen denote these worksheets. The tabs for a worksheet can be renamed by control-clicking the tab that you want to rename, choosing **Rename**, typing the name you want to call it, and pressing enter. When you control-click a tab, you may also do such things as **Insert** a new worksheet, **Delete** an entire worksheet, or **Move/Copy** a worksheet.

Each worksheet is made up of rows and columns. The rows have numbered headings, and the columns have lettered headings. The intersection of any row and column is called a *cell*. A *cell address* is the letter and number of an intersection (i.e., B4 or AZ1245). A *cell range* is denoted by the first and last cell address of the range (i.e., B4:G65). NOTE: The colon between 2 cell addresses means 'to'. For example, B4:G65 means B4 'to' G65.

## **III. Opening a Worksheet and Entering Data**

### **A. Open a Worksheet**

**EXERCISE:** Do the following to open PRACTICE WORKSHEET.xls.

1. Open your web browser
2. Go to <http://www.tamucc.edu/~compserv/training/handouts/pract1.xls>

3. Make sure that you are on the **HANDS ON PRACTICE** worksheet. If you are not, -click the **HANDS ON PRACTICE** worksheet tab.

- B. Entering Data into a Blank Cell:** To enter data into a blank cell in a worksheet, just click on the cell where you want the data to go and start typing. That's all there is to it.
- C. Entering Data into a Full Cell:** To enter data into a cell that already has something in it, just click on the cell where you want the data to go and start typing. The old data will be replaced with the new data as soon as you start typing.

**EXERCISE:** (Refer to "**Cursor Movement in Spreadsheets**" on p.6)

- a. Enter the following in the corresponding cells:
- A5 RENT
  - A6 UTILITIES
  - A7 GAS
  - A8 FOOD
- b. Enter the following in a full cell:
- A9 MISC

#### **IV. Highlighting (Selecting) Cells with the Mouse and Cursor Movement**

##### **A. General Info**

In this exercise we will be using the mouse extensively to highlight cells or cell ranges that we want to underline, bold or cut and paste. By 'highlighting' a cell/cell range, we actually mean 'selecting' a cell/cell range. We will call it 'highlighting' because the selected area is offset by a different color (usually blue). The trick to doing this is:

1. Position your mouse pointer on the first cell of the cell range that you want to highlight, and click.
2. Click the mouse button down and hold.
3. Drag the mouse across the entire range of cells you want to highlight. To select only one cell, click on the cell.
4. Then, release the mouse button. If you are selecting only one cell, then the cell will be white and outlined. If you are selecting a cell range, the entire range, except for the first cell in the range, will be highlighted.
5. Now execute the command or effect you want to use.

**B. Spreadsheet pointers on highlighting --** We will use the "Practice III&IV" part of the worksheet to do this section.

1. **SHIFT + click** will highlight from original cursor position to the point where you **SHIFT + click**.

**EXERCISE:** Highlight cells A1:D10.

- a. Click cell A1.
- b. Position cursor on cell D10 and **SHIFT + click**.
- c. After you have seen how this works, **click** anywhere to un-highlight these cells.

2. **APPLE + click** will allow you to highlight more than one cell or range of cells (i.e., A1, and B4:I4, and A5:A9). **APPLE + click** the first cell in a range then **SHIFT + click** the last cell in the range, or **APPLE + click** individual cells. (This comes in handy when you want to format several areas at the same time. For instance, you may want the column titles and the row titles to be bolded. You can use this method to format both at the same time.)

**EXERCISE:** Highlight these cells/cell ranges: A1, and B4:I4, and A5:A9.

- a. **APPLE + click** cell A1.
- b. Now **APPLE + click** cell B4.
- c. Position cursor on cell I4 and **SHIFT + click**.
- d. **APPLE + click** cell A5.
- e. Position cursor on cell A9 and **SHIFT + click**.
- f. Now click the **Bold** icon on the Formatting toolbar.
- g. **Click** anywhere to un-highlight these cell ranges, and to see the effect of bolding (formatting) several cell ranges at one time.

**C. Cursor Movement in Spreadsheets**

**\*\*Please take a moment to try out some of the movements in the following table.**

| I want to...               | How to                         |
|----------------------------|--------------------------------|
| Move to the right one cell | Use the TAB key or right arrow |
| Move to the left one cell  | Use SHIFT + TAB or left arrow  |
| Move down one cell         | Press ENTER or down arrow      |
| Move up one cell           | Use up arrow                   |
| Move up one screen         | Use PAGE UP key                |
| Move down one screen       | Use PAGE DOWN key              |

|  |   |
|--|---|
| Move right one screen                                      | Use OPTION + PAGE DOWN key  |
| Move left one screen                                       | Use OPTION + PAGE UP key  |
| Go to cell A1 (home cell) from anywhere in the spreadsheet | Use CONTROL + HOME  |
| Go all the way to the left in a row                        | Use the HOME key  |
| Go all the way to top/bottom/left/right in a worksheet     | Use the APPLE key + the arrow pointing in the direction that you want to go   |
| Go right to first intersection of an empty and full cell   | Use CONTROL + right arrow   |
| Go left to first intersection of an empty and full cell    | Use CONTROL + left arrow  |
| Go up to first intersection of an empty and full cell      | Use CONTROL + up arrow  |
| Go down to first intersection of an empty and full cell    | Use CONTROL + down arrow  |
| Go to a particular cell in the spreadsheet                 | Click in the name box on formula bar, type cell address, press enter, or press F5 and type the cell address in the <b>Go to</b> box |

V. **Hands On --** We will use the "Practice III&IV" part of the worksheet to do this section.

A. **Copying the Contents of a Cell or a Range of Cells** (Refer to section IV-A "General Info", p. 5)

1. Highlight cell or range of cells that you want to copy.
2. Click **Edit** on the menu bar.
3. Click **Copy**.
4. Then click on **destination cell**.
5. Click **Edit** on the menu bar.
6. Click **Paste**.
7. Click anywhere to un-highlight the copied cell range.
8. Press the **ESC** key to remove the moving border from the original cell range.

**EXERCISE:** Use the steps above to copy cell range A1:I9 to destination cell range A12:I20. Hint: Your destination cell is cell A12.

B. **Moving Cells or a Range of Cells**

1. Highlight cell or range of cells that you want to move.
2. Click **Edit** on the menu bar.
3. Click **Cut**.
4. Then click on **destination cell**.
5. Click **Edit** on the menu bar.

6. Click **Paste**.
7. Click anywhere to un-highlight moved cell range.

**EXERCISE:** Use the steps above to move cell range A12:I20 to destination cell range A22:I30. Hint: Your destination cell is cell A22.

### C. Clearing Cells or a Range of Cells

1. Highlight cell or range of cells that you want to clear.
2. Click **Edit** on the menu bar.
3. Click **Clear** (note, you have several options here).
4. Next, click **Contents**.
5. Click anywhere to un-highlight the cell range that has been deleted.

**EXERCISE:** Use the steps above to clear cell range A22:I30.

### To Delete the Entire Worksheet:

1. Click **Edit** on the menu bar.
2. Click **Delete Sheet**.
3. Excel will warn you with the message, "The selected sheet(s) will be permanently deleted." Click **OK** to continue with delete, or click **Cancel** to cancel the deletion.
4. When you delete a worksheet, you will automatically be moved to the sheet to the right of the one that you delete unless the sheet that you delete is the last one in a workbook. Then you will be moved to the sheet to the left of the one that you have deleted.

***CAUTION:** When you delete a sheet, you cannot "UNDO" this command, so it is a very good idea to make sure that you are deleting the worksheet that you really want to delete. Also make sure that you are not deleting a worksheet that contains information or formulas that will affect other worksheets. The changes, however, are not permanent until you save again. If you accidentally deleted the wrong sheet, or decide that you really wanted to keep the sheet you delete, then close the file **without saving**, and re-open it. This will bring the file back as it was at the last point that you saved. This is one reason why you should save often. You should definitely remember to save **before** making drastic changes such as this.*

**EXERCISE:** Use the steps above to delete an entire worksheet.

1. Click on the **DELETE-SHEET** tab to open the second worksheet in this workbook.
2. Follow steps above to delete this sheet.
3. The DELETE SHEET worksheet has been removed and you are now on Sheet 3.
4. Click the **HANDS ON PRACTICE** tab to go back to the sheet we have been working on.
5. Press **CONTROL + HOME** to go back to cell A1.

#### **D. Naming a Cell or Range of Cells**

1. Highlight the cell or cell range that you wish to name.
2. Click inside the **Name** box at the left side of the formula bar.
3. Type in the name that you wish to call the selected cells using the following guidelines.
  - a. The first character in your name must be either a letter or an underscore. The rest of your name can contain letters, numbers, periods, and underscores. You may use either upper or lower case letters or both.
  - b. Your name can be up to 255 characters long.
  - c. No spaces allowed. Use the underscore where spaces are needed.
4. After you have typed in the name that you want to use, press **ENTER**.
5. Click anywhere to un-highlight named cell range.
6. Once you have cells/cell ranges named, you can quickly access those parts of your worksheet by clicking on the down arrow next to the name box, and clicking on the name that you wish to access. The area that you are taken to will be highlighted. Just click anywhere to un-highlight the area.

**EXERCISE:** Use the steps above to name the following cell ranges:

1. Make sure that you are in the HANDS ON PRACTICE worksheet.
2. Name cells A1:I9 "Practice\_III\_IV\_V".
3. Name cells AA1:AE18 "Practice\_Formulas".
4. Name cells AK1:AM4 "Discounts\_Sample".
5. Take a moment to practice going to these areas using the **Name** box. **HINT:** Press F5, click the name of the area that you want to go to, click OK.

6. When you are finished, go back to cell A1.

**E. Hiding a Column or Row**

1. Select a column or row that you wish to hide by clicking on the column/row heading. (The lettered, gray box at the top of a column or the numbered, gray box to the left of a row.) You may also click in any cell in the column/row that you wish to hide. Excel will know whether you are trying to hide columns or rows by the choice you make in the **Format** menu (see #'s 2 and 3 below).
2. Click on **Format**.
3. Click on **Column** for columns or **Row** for rows.
4. Click on **Hide**.

**EXERCISE:** Use the steps above to hide columns B and E. Also hide row 4. You should only see numbers now.

**F. Redisplay a Hidden Column or Row**

1. Highlight the cells to the left and to the right of the hidden column, or highlight the cells above and below the hidden row.
2. Click on **Format**.
3. Click on **Column** for columns or **Row** for rows.
4. Click on **Unhide**.

**EXERCISE:** Use the steps above to unhide columns B and E. Also unhide row 4. You should see the worksheet as it was when you first started.

**NOTE:** To unhide column A or row 1, click between the column/row heading and the gray box (Select All Box) at the top left corner of the worksheet (just above the first row heading and to the immediate left of the first column heading). Next, **Unhide**.

**G. Transposing a Range of Values (from row-wise to column-wise, and vice versa):**

1. Highlight range of cells in the column or row that you want to Transpose.
2. Click on **Edit** on the menu bar.
3. Click on **Copy**.
4. Click on **destination cell**. This cell should be the upper left cell of the paste area. **NOTE:** *The paste area must be completely outside the copy area.*

5. Click on **Edit**.
6. Click on **Paste Special**.
7. Make sure there is a check mark next to “**Transpose**”.
8. Click **OK**.
9. Your transposed data will now be highlighted and displayed in the way that you wanted it transposed. (If you selected a row, it will be displayed column-wise, and if you selected a column, it will be displayed row-wise.) Your original data is still in tact, but there is a moving border around it. To get rid of this border, press the ESC key. Your transposed data is highlighted. Left-click anywhere to un-highlight this area. **CAUTION: DO NOT press ENTER after clicking OK on STEP 9. This will cause your original data inside the moving border to be copied 'as is' into the paste area.**

**EXERCISE:** Use the steps above to transpose cells E4:E9. **HINT:** Your destination cell is D12.

## H. Sorting Columns and Rows

**NOTE:** It is always a good idea to save before sorting in case the sort does not turn out as expected. You may also use the **UNDO** icon (counter clockwise arrow) on the Standard toolbar if your sort does not turn out as expected.

1. Click on the first cell containing info in the column/row that you wish to sort. This means the first name, number, zip code, etc., in the column/row, not the title of the column/row.
2. Click the **Sort Ascending** (AZ up arrow) or **Sort Descending** (ZA down arrow) icon on the Standard toolbar. **NOTE:** If you are sorting a column by name, for example, then the information related to each name in the rows will be moved respective to the name that it is attached to. The same happens if you sort by phone#, zip code, etc.

**EXERCISE:** Use the above steps to do the following:

1. Use the name box to go to the "Practice\_Formulas" area of the worksheet.
2. Remember that the area that you are taken to will be highlighted. Click anywhere to un-highlight this area.
3. Refer to the steps above to sort column AA (EMPLOYEE). Sort Descending first, and then Ascending.

## I. Calculating with Cells

### To create formulas:

1. Select the cell that you want the formula in.
2. To tell Excel that this is a formula (not text or numbers), type an **equal sign** (=). You **MUST** use the equal sign. EXAMPLE: If you type in A1-B1 in cell C1 without the '=', then 'A1-B1' will be displayed in cell C1 instead of the result of A1-B1.
3. Now type in the first cell address to be used or click on the first cell to be used, then type the arithmetic sign (+, -, \*, /) that is involved in the calculation, then type in the next cell address to be used or click on the next cell to be used.
4. The **destination cell** now contains the end result (value) of the formula used. The formula is displayed on the formula bar.

**EXERCISE:** Use the above steps to do the following:

1. Click cell AE5 and type the '='.
2. Now click on cell AC5.
3. Press the '\*' (multiplication symbol).
4. Now click on cell AD5.
5. Press enter.
6. The result of AC5 (29.5) times AD5 (7.75) is now displayed in cell AE4 (228.625).

## J. Copy Formulas Using the Fill Handle

1. Click on the cell that has the formula that you want to copy.
2. Now click and drag the fill-handle (the little blue box in the lower right corner of the cell pointer) over the destination cells that you want to copy that formula to and release.
3. The formula is now copied to the destination cells, and the resulting values are displayed. Click anywhere to un-highlight the cell range.

**EXERCISE:** Use the above steps to do the following:

1. Click on cell AE5.
2. Click and drag fill handle to cell AE18.
3. Click anywhere to un-highlight the cell range.

**NOTE:** The results are now displayed in cells AE6-AE18. The formula has been copied in a respective fashion so that AE6 displays the results of AC6\*AD6, and

AE7 displays the results of AC7\*AD7, and so on.

## K. **Formatting Numbers (different styles...)**

### **FIXED DECIMAL:**

1. Highlight cell or cell range that you wish to format.
2. Click on **Format**.
3. Click on **Cells**.
4. Then click on the **Number** tab.
5. In the **Category** area, click on **Accounting**. Specify the number of **Decimal places** and the **Symbol** (if any) that you would like to use.
6. Click **OK**.
7. Click anywhere to un-highlight the cell range.

**EXERCISE:** Use the above steps to do the following:

1. Display cells AC5:AC18 and cells AE5:AE18 with two fixed decimal places. HINT: Use the APPLE + click option to do both ranges at the same time. (Refer back to section **IV-B "Spreadsheet Pointers on Highlighting"** p.5 if necessary.)
2. Be sure to choose **None** for **Symbol**.

### **CURRENCY:**

1. Highlight cell or cell range that you wish to format.
2. Click on **Format**.
3. Click on **Cells**.
4. Then click on the **Number** tab.
5. In the **Category** area, click on **Currency**. Specify Decimal places, Symbol and Negative numbers as necessary.
6. Click **OK**.
7. Click anywhere to un-highlight cell range(s).

**EXERCISE:** Use the above steps to do the following:

1. Display cells AD5:AD18 and AE5:AE18 in **Currency** format. HINT: Use the APPLE + click option to do both ranges at the same time. (Refer back to section **IV-B "Spreadsheet Pointers on Highlighting"** p.5 if necessary.)
2. Be sure to choose '\$' for **Symbol** and make sure there are 2 decimal places

designated.

### **PERCENTAGE:**

1. Highlight cell or cell range that you wish to format.
2. Click on **Format**.
3. Click on **Cells**.
4. Then click on the **Number** tab.
5. In the **Category** area, click on **Percentage**. Specify **Decimal places**.
6. Click **OK**.

**EXERCISE:** Use the above steps to do the following:

1. Use the name box to go to the "Discounts\_Sample" part of the worksheet. Remember to click anywhere to un-highlight this area.
2. Display cell AL4 as a percentage with no decimal spaces.

### **L. Saving**

1. Click on **File**.
2. Click **Save As**.
3. Type in the name that you want to call your file. (**Practice** for our purposes.)
4. Click the **Save** button.

**Remember to save often!!!!!!**

**NOTE:** For STEPS 1 and 2, you can simply click on the **Save** icon (diskette) on the Standard toolbar; however, if you have already named and saved the file before, you risk over-writing a file. This may or may not be your intention. For instance, you may be working on a new workbook (file), and after you put in so much info, you click the Save icon and are prompted to name your file or accept the default name. You are given this option because the file has never been saved before.

So, you go ahead and name your file. Then you click on **Save**, and you continue working in your new workbook. A little while later, after entering more data, you decide to save again...**JUST IN CASE**. So, you click the **Save** icon again. This time, however, you will not be prompted to name your file. Excel simply over-writes the previously saved file without warning and saves your current file under the same

name.

When can this be a problem? Let's say that you already have a workbook that you would like to modify for a new project. You open up this previously saved file and start modifying it to meet your current needs. Several changes later you decide you'd better save...JUST IN CASE. So, you click the **Save** icon, and ... OH NO!!! You have just over-written your old file that you still needed to finish this year's work. This cannot be undone, and this is why it is usually a good idea to do STEPS 1-4 above instead of using the **Save** icon. REMEMBER THE OLD ADDAGE "HASTE MAKES WASTE". Sometimes a short cut is not the best idea.

#### **M. Printing**

1. Highlight the cell range that you wish to print.
2. Click on **File**.
3. Click on **Print Preview**. This will allow you to view your document before printing. Remember, what you get is what you see. If changes need to be made, now is the time to do it.
4. When you are through previewing your document, click on the **Close** button.
5. Click on **File**.
6. Click on **Print**.
7. Make sure that the correct printer is specified in the Printer field at the top of the **Print** box.
8. When you are through specifying your options, click **Print**.

**NOTE:** If you want to print everything as is, just click on the **Print icon** (printer) on the Standard toolbar. Just remember that printing spreadsheets is a tricky business because spreadsheets keep going even though the edges of the paper have been reached.

#### **VI. Help Section**

##### **A. The Office Assistant**

1. Click on **Help**.
2. Click on **Microsoft Excel Help**.
3. This is the built-in Office Assistant. You may also get help from the assistant by clicking on the Office Assistant icon (question mark/light-bulb) on the right hand side of the Standard toolbar.

To use the office assistant, simply type in the question that you need to ask and click the **Search** button. Excel will then provide a list of topics to choose from. Just scroll to the topics and click on the one that you want to view.

**B. Contents and Index Guide**

1. Click on **Help**.
2. Click on **Contents and Index**.
3. From here, you may go to **Contents** tab to look up broad topics, the **Index** tab to look for help by typing in the first few letters of the word/topic you are looking for.

**C. Show Balloons**

1. Click on **Help**.
2. Click on **Show Balloons**.
3. If you place your cursor on something, Excel will display the info it has about the item your cursor is pointing to.

**D. Online Help**

1. Click on **Help**.
2. Click on **Help on the Web**.