Introduction to Microsoft Excel 2007

Screen Elements

- Quick Access Toolbar
- The Ribbon
- Microsoft Office Button
- Formula Bar
- Expand Formula Bar
- Vertical Scroll Bar
- Horizontal Scroll Bar
- Worksheet Navigation Tabs
- Insert Worksheet Button
- Normal View
- Page Layout View
- Zoom
- Page Break Preview
The Ribbon
The Ribbon is designed to help you quickly find the commands that you need to complete a task. Commands are organized in logical groups, which are collected together under tabs. Each tab relates to a type of activity, such as writing or laying out a page. To reduce clutter, some tabs are shown only when needed. For example, the Picture Tools tab is shown only when a picture is selected.

Microsoft Office Button
Here you will find the same basic commands available in earlier releases of Microsoft Office to open, save, and print your file.

Quick Access Toolbar
The place to keep the items that you not only need to access quickly but want to be immediately available regardless of which of the Ribbon's tabs you're working on. If you put so many items on the Quick Access Toolbar that it becomes too big to fit on the title bar, you can move it onto its own line.

Formula Bar
A place where you can enter or view formulas or text.

Expand Formula Bar Button
This button allows you to expand the formula bar. This is helpful when you have either a long formula or large piece of text in a cell.

Worksheet Navigation Tabs
By default, every workbook has 3 sheets. You are able to navigate the sheets by clicking on the sheet tab.

Insert Worksheet Button
Click the Insert New Worksheet button to insert a new worksheet in your workbook.

Normal View
This is the “normal view” for working on a spreadsheet in Excel.

Page Layout View
View the document as it will appear on the printed page.

Page Break Preview
View a preview of where pages will break when the document is printed.

Zoom Level
Allows you to quickly zoom in or zoom out of the worksheet.

Horizontal/Vertical Scroll
Allows you to scroll vertically/horizontally in the worksheet.
Navigating in the Excel Environment

Below is a table that will assist you with navigating/moving around in the Excel environment.

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARROW KEYS</td>
<td>Move one cell up, down, left, or right in a worksheet. SHIFT+ARROW KEY extends the selection of cells by one cell.</td>
</tr>
<tr>
<td>BACKSPACE</td>
<td>Deletes one character to the left in the Formula Bar. Also clears the content of the active cell. In cell editing mode, it deletes the character to the left of the insertion point.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Removes the cell contents (data and formulas) from selected cells without affecting cell formats or comments. In cell editing mode, it deletes the character to the right of the insertion point.</td>
</tr>
<tr>
<td>END</td>
<td>Moves to the cell in the lower-right corner of the window when SCROLL LOCK is turned on. Also selects the last command on the menu when a menu or submenu is visible. If the cursor is in the formula bar, CTRL+END moves the cursor to the end of the text. If the cursor is in the lower-right corner. If the cursor is in the formula bar, CTRL+SHIFT+END selects all text in the formula bar from the cursor position to the end—this does not affect the height of the formula bar.</td>
</tr>
<tr>
<td>ENTER</td>
<td>Completes a cell entry from the cell or the Formula Bar, and selects the cell below (by default).</td>
</tr>
<tr>
<td>ESC</td>
<td>Cancels an entry in the cell or Formula Bar. Closes an open menu or submenu, dialog box, or message window.</td>
</tr>
<tr>
<td>HOME</td>
<td>Moves to the beginning of a row in a worksheet. CTRL+HOME moves to the beginning of a worksheet.</td>
</tr>
<tr>
<td>PAGE DOWN</td>
<td>Moves one screen down in a worksheet.</td>
</tr>
<tr>
<td>PAGE UP</td>
<td>Moves one screen up in a worksheet.</td>
</tr>
<tr>
<td>SPACEBAR</td>
<td>In a dialog box, performs the action for the selected button, or selects or clears a check box. CTRL+SPACEBAR selects an entire column in a worksheet. SHIFT+SPACEBAR selects an entire row in a worksheet. CTRL+SHIFT+SPACEBAR selects the entire worksheet.</td>
</tr>
<tr>
<td>TAB</td>
<td>Moves one cell to the right in a worksheet.</td>
</tr>
</tbody>
</table>
Highlighting/Selecting Areas Using the Mouse

To Select Cells: Click and drag using the big puffy cross.

To Select a Column:
Click on the column letter.

To Select a Row:
Click on the row number.

To Select the Entire Worksheet:
Click above row 1 and to the left of column A.

Moves a cell’s contents:
Activates the Autofill feature.

Entering Text
Any items that are not to be used in calculations are considered, in Excel’s terminology, labels. This includes numerical information, such as phone numbers and zip codes. Labels usually include the title, column and row headings.

To Enter Text/Labels:
1) Click in cell
2) Type text
3) Press Enter

NOTE: By default, pressing the Enter key will move you to the cell below the active cell.

The label actually “lives” in the cell you typed it into, if you type long text it might appear to be in multiple columns. It is important to understand this concept when trying to apply formatting to a cell. Using the formula bar will confirm where the label actually “lives.”

Autofill
Frequently, it is necessary to enter lists of information. For example, column headings are often the months of the year or the days of the week. To simplify entering repetitive or sequential lists of information, Excel has a tool called Autofill. This tool allows preprogrammed lists, as well as custom lists, to be easily added to a spreadsheet. Some examples of the automatic auto fill lists are months, days, etc.
**Entering Values**

Numerical pieces of information that will be used for calculations are called **values**. They are entered the same way as labels. It is important NOT to type values with characters such as “,” or “$”.

**To Enter Values:**
1) Navigate to a cell
2) Type a Value
3) Press Enter

**Creating Formulas**

In order to calculate the values for the remaining rows, we will create **formulas**. It is possible to create formulas in Excel using the actual values, such as “4000*4.” However, one of the benefits of using a spreadsheet program is the ability to create a formula in one cell and copy it to other cells. Most spreadsheet formulas use a concept called **relative referencing**.

This is the explanation of relative referencing from Excel’s help file:
“A relative cell reference in a formula, such as A1, is based on the relative position of the cell that contains the formula and the cell the reference refers to. If the position of the cell that contains the formula changes, the reference is changed. If you copy the formula across rows or down columns, the reference automatically adjusts. By default, new formulas use relative references. For example, if you copy a relative reference in cell B2 to cell B3, it automatically adjusts from =A1 to =A2.”

It is also important to know the operators Excel uses for formulas:

<table>
<thead>
<tr>
<th>Operator (Key)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Begins all Excel functions and formulas</td>
</tr>
<tr>
<td>+</td>
<td>Addition</td>
</tr>
<tr>
<td>-</td>
<td>Subtraction</td>
</tr>
<tr>
<td>*</td>
<td>Multiplication</td>
</tr>
<tr>
<td>/</td>
<td>Division</td>
</tr>
</tbody>
</table>

**To Create a Formula:**
1) Click in a cell
2) Press the `=` key
3) Type the formula
4) Press Enter
Copying Formulas

Like many things in Excel, there is more than one way to copy formulas. This class will show you some of the methods; feel free to choose which one(s) work best for you.

To Copy Formulas Using Autofill:
1) Click in the cell that contains a formula
2) Position the mouse on the Autofill handle (a skinny black cross will appear)
3) Click and drag to copy the formula

To Copy Formulas Using Copy and Paste:
1) Click in the cell that contains a formula
2) Select Copy button on Home Ribbon in the Editing Section
3) Highlight the cells where you would like to paste the formula
4) Select Paste button on Home Ribbon in the Editing Section

ALTERNATE METHODS

<table>
<thead>
<tr>
<th>Keyboard:</th>
<th>Ribbon:</th>
<th>Mouse:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press CTRL + C</td>
<td></td>
<td>Right-click and choose Copy</td>
</tr>
</tbody>
</table>

Autosum Function

The most common formula in Excel is SUM, or the addition of multiple values. In this example, we could create a formula that reads =C6+D6+E6+F6+G6+H6. That’s a lot of typing! Instead, we can use the SUM function and specify a range of cells.

Functions, as explained previously, are more complex formulas that are invoked by typing their name. In this example, we will use the SUM function. Excel has over 200 functions that can be used. Because SUM is the most common function, it is the only one with its own toolbar button.

A range is a group of cells that are specified by naming the first cell in the group and the last cell. For example, A1:D1 is a range that includes cells A1, B1, C1 and D1.

To Create the Total Column’s Values Using Autosum:
1) Click in the cell where you would like the Total to be located
2) Press the Autosum button on the Home Ribbon
The Autosum function automatically looks for cells that have values in them. It will read values until the first blank cell. Autosum will always first look for values in the cell above it, then to the left of it. This means that you need to be aware of what cells will be in the formula. Autosum will give you the choice of what cells to use by showing you what it thinks it should use before completing the formula.

3) Press Enter

**Saving a Worksheet**

When working in Excel it is necessary to save your files. It is also very important that while working, your file is saved frequently. When naming a file, you are restricted to 255 characters. Avoid most punctuation; spaces are acceptable.

**To Save the File:**

1) Select the **Office Button**
2) Select **Save**
3) Type **a file name**
4) Click **Save**

**Editing Cells**

Excel provides a major enhancement over earlier spreadsheet products in its ability to edit cells easily. There are various methods for cell editing, including double-clicking in the cell, using the F2 key, and typing in the formula bar.

**To Edit a Cell in the Worksheet:**

1) Position yourself in a cell you would like to edit
2) Press the **F2** key on the keyboard
3) Use the backspace or delete keys to edit the cell
4) Press **Enter** when you have finished editing the cell
Formatting a Worksheet
The topics in this section will cover the following:

- Undo
- Clearing Cells
- Formatting Values
- Formatting Labels
- Format Painter
- Centering Text Across Columns

**Undo**
Excel and other Windows applications have a convenient method of correcting mistakes known as **Undo**. In many applications, including Excel, you can undo an almost limitless number of commands. The Undo button has a small down-pointing arrow next to it. When pressed, it will display a list of actions that can be undone. **Redo** works in the same way, allowing you to repeat actions.

Excel will undo actions in reverse chronological order, meaning that the most recent command is reversed first, then the one prior to that, and so on. You cannot reverse an earlier action using Undo without first undoing the actions that were performed after it.

**NOTE**: The list of commands to undo is reset after the file is saved. You cannot use Undo to fix an error after the file is saved.

To Undo a Command:
Click **Undo**

**Clearing Cells**
As we begin to look at formatting, it is important to understand what makes up the contents of a cell. There are three distinct items that can be in a cell:

- Contents
- Formats
- Comments

These allow items to be formatted properly, even if the values change. However, when trying to delete or clear a cell, it can be a bit tricky. Excel stores formats and contents separately, simply deleting the contents does not delete the format.
To Clear a Cell Format:
1) Click in the cell that contains formatting
2) Select the arrow on the Clear button on the Home Ribbon (Editing Section)
3) Select Clear Formats

Formatting Values
Applying formats to any cell can be done either using the Format menu or using the Formatting toolbar, which has the most commonly used formatting options on it.

To Apply the Currency Format:
1) Highlight cells
2) Click on the Currency Style button $ on the Home Ribbon
3) If necessary, click on the Increase or Decrease Decimal button on the Home Ribbon

To Apply the Comma Format:
1) Highlight cells
2) Click on the Comma Style button , on the Home Ribbon
3) If necessary, click on the Increase or Decrease Decimal button on the Home Ribbon
Formatting Labels

A Label, or text formatting is applied virtually the same way it is done in word processing programs.

To Format the Title Labels:
1) Highlight the cell(s)
2) Select a font from the Font Section of the Home Ribbon
3) Select a Point size from the Font Section of the Home Ribbon
**Format Painter**

Frequently, you will need to take a format that is applied to one cell and apply it to other cells. A quick way to do this is by using the Format Painter.

**To Apply a Format to Cells:**

1) Highlight cell(s)
2) Format the cell(s) to the desired format
3) Select the formatted cell(s)
4) Click the **Format Painter** from the **Clipboard Section** of the **Home Ribbon**
5) Highlight the cells you wish to format

**Tips and Tricks:** If you would like the Format Painter to remain active, double-click the Format Painter. It will remain active until you press the **Esc** key.

**To Change a Cell’s Alignment:**

1) Highlight the cell(s)
2) Click the orientation button on the **Alignment Section** of the **Home Ribbon**
3) Select an alignment
Centering Text Across Columns
When it comes to titles, it may be preferable to have the information centered across the document, rather than in only one cell. Excel uses the feature **Merge Cells** to accomplish this.

To Center the Title Across Columns:
1) Highlight cell(s)
2) Click the **Merge and Center button** on the Alignment Section of the Home Ribbon

**NOTE: Each cell must be done individually. Excel will delete the contents of all but the top most cell if multiple cells are selected.**

This option basically takes all the cells in the highlighted range and merges them into one large cell. For example, the range A1:F1 became cell A1 after the Merge Cells button was selected. There is no cell B1, C1, etc. any longer.

Creating a Basic Chart
1) Highlight the data to be charted
2) Select the Insert Ribbon

3) Select a **Chart Type**
4) Select a **Chart Style**
To Move your Chart:
Click and drag the chart to a new location on the worksheet

The Ribbon at the top of the screen has changed so chart options are just a click away. If you do not see the chart icons on your Ribbon, click on your chart to select it.

- **To Adjust the Chart Style:**
  Select a different style from the Ribbon
- **To Adjust the Chart Type:**
  Select a different chart type from the Ribbon
- **To Change the Chart Layout (the location of the Title/Legend)**
  Select a different layout from the Ribbon

*Note: you are able to scroll in the Layout section and see other chart layouts that you can apply.*

To Enter a Title on your Chart:
1) Make sure you have selected a chart layout that includes a Title area.
2) Double click where you see the text Chart Title
3) Enter a Title

To Size the Chart:
1) Position your mouse on one of the corners of the chart
2) Click and drag your mouse to either increase of decrease the size of the chart
Excel Functions
As we have previously seen, the power of Excel lies in its ability to perform calculations. The real strength of this is shown in Functions. Functions are more complex formulas that are executed by using the name of a function and stating whatever parameters the function requires.

<table>
<thead>
<tr>
<th>Function Defined</th>
<th>Defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>=SUM(range of cells)</td>
<td>returns the sum of the selected cells</td>
</tr>
<tr>
<td>=AVERAGE (range of cells)</td>
<td>returns the average of the selected cells</td>
</tr>
<tr>
<td>=MAX(range of cells)</td>
<td>returns the highest value of the selected cells</td>
</tr>
<tr>
<td>=MIN(range of cells)</td>
<td>returns the lowest value of the selected cells</td>
</tr>
<tr>
<td>=COUNT(range of cells)</td>
<td>returns the number of values of the selected cells</td>
</tr>
</tbody>
</table>

To Enter the SUM Function:
1) Click in a cell
2) Type =SUM(
3) Highlight the range of cells that are to be added (The colon means “through”)
4) Type a closed parentheses
5) Press ENTER

To Insert the Average Function into the Worksheet:
1) Click in a cell
2) Type =average(
3) Highlight the range of cells be calculated
4) Type a closed parentheses
5) Press ENTER
To Insert the MAX Function into the Worksheet:
1) Click on a cell
2) Type =max( 
3) Highlight the range of cells to be calculated
4) Type a closed parentheses
5) Press ENTER

To Insert the MIN Function into the Worksheet:
1) Click on a cell
2) Type =min( 
3) Highlight the range of cells to be calculated
4) Type a closed parentheses
5) Press ENTER

To Insert the COUNT Function into the Worksheet:
1) Click on a cell
2) Type =count( 
3) Highlight the range of cells to be calculated
4) Type a closed parentheses
5) Press ENTER
Printing a Worksheet
Open the file you would like to print.

To View the Spreadsheet in Print Preview:
1) Click on the Office button on the Ribbon
2) Select the arrow to the right of Print
3) Choose Print Preview

The spreadsheet shows as it will be printed. You can proceed to print the document from here, or, you can change things to make the printed output look different.

Page Setup
The Page Setup option is used to set various printing specifications. It can be accessed from Print Preview

Click the Page Setup button in the Print Preview window
The dialog box has 4 tabs – Page, Margins, Header/Footer and Sheet.
To Change Page Settings:
  1) Select Landscape
  2) Click the Margins page tab

Margins Tab
This tab is used to set the individual margins – top, bottom, left and right – of the printed output. You can also choose to have the spreadsheet centered, vertically and/or horizontally, on the page.

To Change the Margins Settings:
  1) Click on the Margins tab
  2) Enter a value in the Left, Right, Top or Bottom margin field
Header/Footer
A header/footer is something that repeats at the top or bottom of every printed page. We use headers/footers for printing the date, page number, file name (etc) in our spreadsheet.

To Create Headers and Footers:
Click on the Headers/Footer tab

You are able to select from one of the already created headers/footers or you can create your own custom one.

To Create a Custom Footer:
Click the Custom Footer button

This area is made of three sections – left, center and right. Any information added in these sections will appear in that area (left, center or right) in the Header or Footer. You will also see a row of buttons in this dialog box. The commonly used ones are listed below:

<table>
<thead>
<tr>
<th>Button Image</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>🎨</td>
<td>Font selection – size, typeface, style</td>
</tr>
<tr>
<td>#</td>
<td>Page Number</td>
</tr>
<tr>
<td>📚</td>
<td>Total Number of Pages</td>
</tr>
<tr>
<td>🕒</td>
<td>Date</td>
</tr>
<tr>
<td>🕒</td>
<td>Time</td>
</tr>
<tr>
<td>📄</td>
<td>Filename</td>
</tr>
<tr>
<td>📋</td>
<td>Sheet Name</td>
</tr>
</tbody>
</table>
1) Click in a section to position your cursor
2) Enter text/fields
3) Click OK when finished

Sheet Tab

The **Sheet** tab allows a print area to be set. By default, Excel will always print the entire contents of the spreadsheet. A print area allows you to specify only a portion of the spreadsheet to be printed.

The Sheet tab also allows rows and columns to be repeated on multiple pages. This is important in large spreadsheets. For example, if a spreadsheet includes all the months of the year and some of the months print on a second page, you can choose to have the first column's information be printed on the second page as well. Finally, there are other miscellaneous settings, such as printing the gridlines and the row and columns headings.
To Print the Document:
1) Click Print
2) Click OK