Microsoft Excel 2010

Handout 0

CMPS 209

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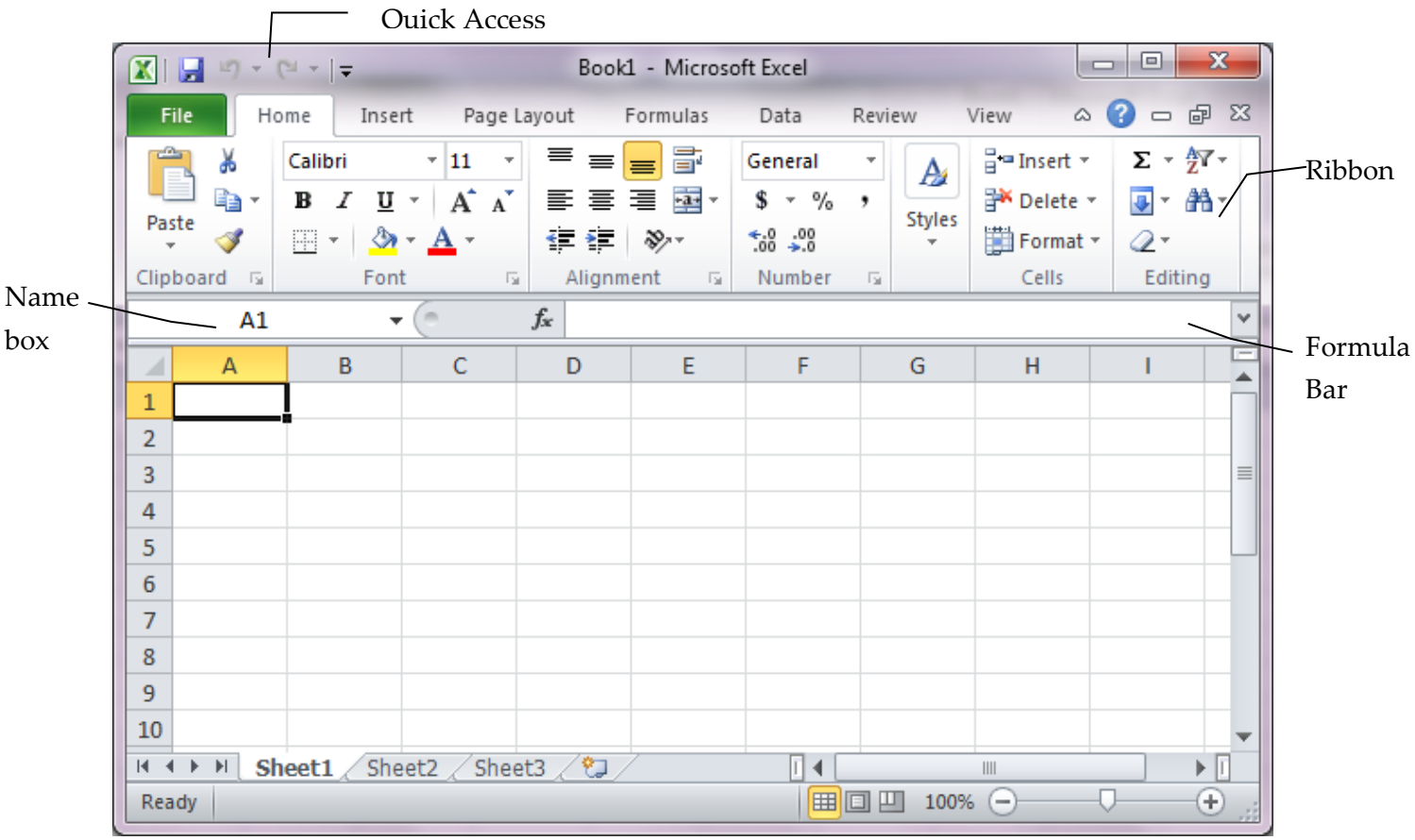
Introduction

What is Excel?

- ***Excel*** is a spreadsheet program.
- Spreadsheets are very useful to create and handle information data for *business documents* like financial statements and expense reports, *personal documents* like budgets, or shopping lists, and *scientific data* like experimental observations and medical charts.
- Spreadsheet programs allow the user to create, edit, and analyze data that is organized into lists or tables.
- With Excel, the user can:
    - perform calculations
    - analyze data
    - create colorful charts to attractively present data results

Microsoft Excel Environment



Excel Basics

Workbooks & Worksheets

An excel file is also known as a workbook. A worksheet is always stored in a workbook.

A worksheet or a spreadsheet is a grid of cells where you type your information, functions, and formulas. In other words it is your workspace. Excel's grid divides your worksheet into rows and columns. The smallest unit in your worksheet is the cell. A cell is the intersection of a row and a column. Cells are identified by a column heading followed by the row number. For example B4 is the address of a cell in column B and row 4.

By default, Microsoft Office Excel provides three worksheets. You can insert additional worksheets (and other types of sheets, such as a chart sheet, macro sheet, or dialog sheet) or delete them as needed.

Insert Worksheets

Insert	*How?*
one worksheet at the end of the existing worksheets	Click the **Insert Worksheet** tab at the bottom of the screen.
One worksheet before an existing worksheet	Select that worksheet, and then on the **Home** tab, in the **Cells** group, click **Insert**, and then click **Insert Sheet**. OR Right-click the tab of an existing worksheet, and then click **Insert**. On the **General** tab, click **Worksheet**, and then click **OK**.
Multiple worksheets at once	1. Hold down SHIFT, and then select the same number of existing sheet tabs of the worksheets that you want to insert in the open workbook. 2. On the **Home** tab, in the **Cells** group, click **Insert**, and then click **Insert Sheet.**

Rename Worksheets

On the **Home** tab, in the **Cells** group, click the arrow next to **Format**, and then under the **Organize Sheets** click **Rename Sheet** and type a new name.

OR

On the Sheet tab bar, right-click the **sheet tab** that you want to rename, click **Rename,** and then type the new name.

Hide or Unhide Worksheets

To hide a worksheet, right-click the sheet tab that worksheet, and then click **hide.**

To unhide a worksheet, right-click on any sheet tab within the workbook, click **unhide,** and then select the name of the worksheet you want to unhide from the list of hidden worksheets.

Delete Worksheets

On the **Home** tab, in the **Cells** group, click the arrow next to **Delete**, and then click **Delete Sheet**.

OR

Right-click the sheet tab of the worksheet that you want to delete, and then click **Delete.**

Move or Copy Worksheets

On the **Home** tab, in the **Cells** group, click the arrow next to **Format**, and then under the **Organize Sheets** click **Move or Copy Sheet**.

OR

Right-click the sheet tab of the worksheet that you want to move or copy, and then click **Move or Copy Sheet**.

Selecting Cells

The following table shows how to select cell ranges in a worksheet.

Select Cells, Ranges, Rows, or Columns

Select	*How?*
A single cell	Click the cell, or press the arrow keys to move to the cell.
A range of cells	Click the first cell in the range, and then drag to the last cell, or hold down SHIFT while you press the arrow keys to extend the selection.
All cells on a worksheet	Click the **Select All** button on the top left corner of the sheet. or press CTRL+A.
Nonadjacent cells or cell ranges	Select the first cell or range of cells, and then hold down CTRL while you select the other cells or ranges.
An entire row or column	Click the row or column heading.
Adjacent rows or columns	Drag across the row or column headings. Or select the first row or column; then hold down SHIFT while you select the last row or column.
Nonadjacent rows or columns	Click the column or row heading of the first row or column in your selection; then hold down CTRL while you click the column or row headings of other rows or columns that you want to add to the selection.

Working With Rows and Columns

Inserting Columns

To insert	*Step1*	*Step2*
a single column	Select the column or a cell in the column immediately to the right of where you want to insert the new column	On the **Home** tab, in the **Cells** group, click the arrow next to **Insert**, and then click **Insert Sheet Columns**.
multiple columns	Select the columns immediately to the right of where you want to insert columns. Select the same number of columns as you want to insert	
nonadjacent columns	Hold down CTRL while you select nonadjacent columns.	

Inserting Rows

To insert	*Step1*	*Step2*
a single row	Select the row or a cell in the row above which you want to insert the new row.	On the **Home** tab, in the **Cells** group, click the arrow next to **Insert**, and then click **Insert Sheet Columns**.
multiple rows	Select the rows above which you want to insert rows. Select the same number of rows as you want to insert	
nonadjacent rows	Hold down CTRL while you select nonadjacent rows.	

Hide Rows or Columns

1. Select the rows or columns that you want to hide.
2. Method A:
   - On the Home tab, in the Cells group, click Format.
   - Under Visibility, point to Hide & Unhide, and then click Hide Rows or Hide Columns.

   OR

   Method B: right-click a row or column (or a selection of multiple rows or columns), and then click **Hide**.

Unhide Rows or Columns

1. Do one of the following:
   - To display hidden rows, select the row above and below the rows that you want to display.
   - To display hidden columns, select the columns adjacent to either side of the columns that you want to display.
   - To display the first hidden row or column on a worksheet, select it by typing **A1** in the **Name Box**.
2. On the **Home** tab, in the **Cells** group, click **Format**.
3. Do one of the following:
   - Under Visibility, point to Hide & Unhide, and then click Unhide Rows or Unhide Columns.
   - Under Cell Size, click Row Height or Column Width, and then type the value that you want in the Row Height or Column Width box.

Delete Rows or Columns

1. Select the rows, or columns that you want to delete.
2. On the Home tab, in the Cells group, do one of the following:
   - To delete selected rows, click the arrow next to Delete, and then click Delete Sheet Rows.
   - To delete selected columns, click the arrow next to Delete, and then click Delete Sheet Columns.

Or

3. You can also right-click a selection of cells, rows, or columns, click **Delete** on the shortcut menu, and then click the option that you want.

Adjust Height of Rows or Width of Columns

Adjust Width of Column(s)	***How?***
To a specific value	1. Select the row(s) or column(s) that you want to change. 2. On the Home tab, in the Cells group, click Format. 3. Under Cell Size, click row height or column Width. 4. In the row height box or column width box, type the value that you want.
To fit the contents (Auto Fit)	1. Select the column(s) that you want to change. 2. On the Home tab, in the Cells group, click Format. 3. Under Cell Size, click AutoFit Column Width. OR double-click the column heading
To the width of another column	1. Select a cell in the column. 2. On the Home tab, in the Clipboard group, click Copy, and then select the target column. 3. On the Home tab, in the Clipboard group, click the arrow below Paste, and then click Paste Special. 4. Under Paste, select Column widths.

Note that the same applies for adjusting row heights.

Delete Cells

1. Select the cells that you want to delete.
2. On the Home tab, in the Cells group, click the arrow next to **Delete**, and then click **Delete Cells**.
3. In the **Delete** dialog box, click **Shift cells left**, **Shift cells up**, **Entire row,** or **Entire column.**

AutoComplete & Auto fill

Automatic Complete (Auto Complete)

If the first few characters that you type in a cell match an existing entry in the column of that cell, Excel automatically enters the remaining characters for you. This is called *AutoComplete***.**

- Automatic Complete works with entries containing text or a combination of text and numbers. Entries that contain only numbers, dates, or times are not automatically completed.
- No empty cells between the values.

Automatic Complete Using pick from list

When the text values are too long or the first few letters are similar, it is more convenient to using auto complete through pick from list. How?

- Right click on the cell >> then choose pick from list

Automatic Fill (AutoFill)

You can drag the *fill handle*, or use the **Fill** command On the **Home** tab, in the **Editing** group to fill the active cell or a selected range with the contents of an adjacent cell or range. This is called AutoFill.

Automatic Fill (AutoFill) Using the Fill Handle

The *fill handle* allows you to do different things depending on the type of entry in cells. Into adjacent cells, you can fill:

- data (with different auto fill options like copy, fill with or without formatting, …)
- formulas
- a series of numbers
- dates
- built-in series items
- custom series items

To choose how you want to fill the selection, click **Auto Fill Options**, and then click the option that you want. Note that if you drag the fill handle up or to the left of a selection and stop in the selected cells without going past the first column or the top row in the selection, Excel deletes the data within the selection. You must drag the fill handle out of the selected area before releasing the mouse button.

A quick way, other than using the fill handle, to automatically fill a formula downward, for all adjacent cells that it applies to, is to double-click the fill handle of the first cell that contains the formula.

Fill in a series of numbers, dates, or other built-in series items

Using the fill handle, you can quickly fill cells in a range with a series of numbers or dates or with a built-in series for days, weekdays, months, or years.

1. Type the starting value for the series in a cell, and a value in the next cell to establish a pattern. For example, if you want the series 1, 2, 3, 4, 5..., type 1 and 2 in the first two cells. If you want the series 2, 4, 6, 8..., type 2 and 4. If you want the series 2, 2, 2, 2..., you can leave the second cell blank.
2. Select the cell or cells that contain the starting values.
3. Drag the fill handle across the range that you want to fill.
4. To fill in increasing order, drag down or to the right. To fill in decreasing order, drag up or to the left.

Custom Fill Series or Custom Lists

A custom or user defined fill series can be based on a list of existing items on a worksheet, or you can type the list from scratch.

Creating a custom list based on an existing list of items

1. On the worksheet, select the list of items that you want to use in the fill series.
2. Click the **Microsoft Office Button**, and then click **Excel Options**.
3. Click **Popular**, and then under Top options for working with Excel, click **Edit Custom Lists**.
4. Verify that the cell reference of the list of items that you selected is displayed in the Import list from cells box, and then click **Import.**
5. The items in the list that you selected are added to the Custom lists box.

Creating a custom fill series based on a new list of items

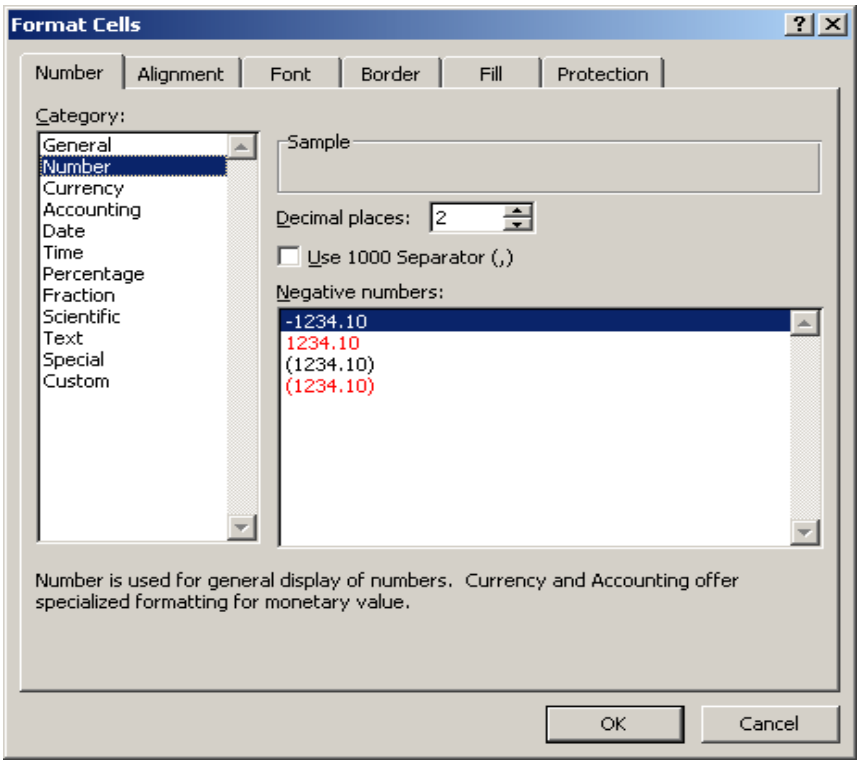
1. Click the **Microsoft Office Button**, and then click **Excel Options**.
2. Click **Popular**, and then under Top options for working with Excel, click **Edit Custom Lists**.
3. In the Custom lists box, click NEW LIST, and then type the entries in the List entries box, beginning with the first entry.
4. Press ENTER after each entry, or type the entries separated by a comma.
5. When the list is complete, click **Add,** and then click OK twice.

Formatting

Formatting Cells

Editing cells allows you to enter data, formulas, or functions on your spreadsheet. However, it doesn't give your spreadsheet the elegant professional look that formatting does.

Formatting allows you to change the look of your entries, their alignment, shading…



Format Cells dialog box

In order to format cells, on the **Home** tab, in the **Cells** group, click the arrow next to **Format**, and then Use the **Format Cells** dialog box to format the contents of selected cells. The format cells dialog box has six tabs as seen in the following dialog box:

The following table summarizes options that can be made from various tabs in the Format Cell Dialog Box.

Format Cell Dialog Box Tab	Options
Number	The selection of a suitable data type from the categories listed on this tab. • If the cell contains text and number, select General. • If the cell contains a number that will be included in functions or formulas, select any numerical category.
Alignment	The selection of the position and alignment of the data within cells.
Font	The selection of Font attributes including font name, size, style, and effects.
Border	The addition of borders
Fill	The addition of shading and background color to cells.
Protection	The protection or hiding of a certain cell in your worksheet

Cell Styles

A cell style is a defined set of formatting characteristics, such as fonts and font sizes, number formats, cell borders, and cell shading. Excel 2010 allows the user to use built in styles that can change with themes, or customized styles.

Why should you use cell styles? Why not only regular formats? The answer to these questions is that if you want to apply several formats in one step, and ensure that cells have consistent formatting, you can use a cell style. To prevent anyone from making changes to specific cells, you can also use a cell style that locks cells.

Working With Cell Styles	How
Apply a cell style	1. Select the cells that you want to format. 2. On the **Home** tab, in the **Styles** group, click **Cell Styles.** 3. Click the cell style that you want to apply.
Create a custom cell style	1. On the **Home** tab, in the **Styles** group, click **Cell Styles.** 2. Click New Cell Style. 3. In the Style name box, type an appropriate name for the new cell style. 4. Click Format. 5. On the various tabs in the Format Cells dialog box, select the formatting that you want, and then click OK. 6. In the Style dialog box, under Style Includes (By Example), clear the check boxes for any formatting that you don't want to include in the cell style.

Remove a cell style	1. To remove a cell style from selected cells without deleting the cell style, select the cells that are formatted with that cell style. 2. On the **Home** tab, in the **Styles** group, click **Cell Styles**. 3. Do one of the following: • To remove the cell style from the selected cells without deleting the cell style, under Good, Bad, and Neutral, click Normal. • To delete the cell style and remove it from all cells that are formatted with it, right-click the cell style, and then click Delete.
Create a cell style by modifying an existing cell style	1. On the **Home** tab, in the **Styles** group, click **Cell Styles**. 2. Do one of the following: • To modify an existing cell style, right-click that cell style, and then click Modify. • To create a duplicate of an existing cell style, right-click that cell style, and then click Duplicate. • In the Style name box, type an appropriate name for the new cell style.

Automatic Table Format (Auto Format)

Microsoft Office Excel 2010 provides numerous predefined table styles (or quick styles) that can be used to quickly format a table. You can choose a table style when you create a table, or apply a table style to an existing table.

1. On the worksheet, select a range of cells that you want to quickly format as a table.
2. On the **Home** tab, in the **Styles** group, click **Format as Table**.
3. Under **Light**, **Medium**, or **Dark**, click the table style that you want to use.

Note Custom table styles are available under Custom after you create one or more of them. You can use Excel's Help to learn more about Create or delete a custom table

Choose table style options to format the table elements

1. On the worksheet, select the table to which you want to apply table style options.
   This displays the Table Tools, adding a Design tab.
2. On the Design tab, in the Table Style Options group, do one of the following:
   - To turn the header row on or off, select or clear the Header Row check box.
   - To turn the totals row on or off, select or clear the Totals Row check box.
   - To display special formatting for the first column of the table, select the First Column check box.
   - To display special formatting for the last column of the table, select the Last Column check box.
   - To display odd and even rows differently for ease of reading, select the Banded Rows check box.
   - To display odd and even columns differently for ease of reading, select the Banded Columns check box.

References

- Microsoft Excel On-line Help
- "Excel 2010: The Missing Manual", Mathew MacDonald, Pogue Press, O'Reilly