

## Lab 06

### CREATING CHARTS AND USING ADVANCED SPREADSHEET MODIFICATION

#### Objective:

To become familiar with the **MS EXCEL** Environment.

- **How to make charts in excel.**
- **How to print workbook sheet.**

#### Charts in Excel

Microsoft Excel no longer provides the chart wizard. Instead, you can create a basic chart by clicking the chart type that you want on the Insert tab in the Charts group. Charts are used to display series of numeric data in a graphical format to make it easier to understand large quantities of data and the relationship between different series of data.

To create a chart in Excel, you start by entering the numeric data for the chart on a worksheet. Then you can plot that data into a chart by selecting the chart type that you want to use on the Insert tab, in the Charts group. Worksheet data Chart created from worksheet data

A chart has many elements. Some of these elements are displayed by default, others can be added as needed. You can change the display of the chart elements by moving them to other locations in the chart, resizing them, or by changing the format. You can also remove chart elements that you do not want to display.

1. The **chart area** is the entire chart and all its elements
2. The **plot area** is the area of the chart bounded by the axes.
3. The **data points** are individual values plotted in a chart represented by bars, columns, lines, or pies.
4. The **horizontal** (category) and **vertical** (value) **axis** along which the data is plotted in the chart.
5. The **legend** identifies the patterns or colors that are assigned to the data series or categories in the chart.
6. A **chart and axis title** are descriptive text that for the axis or chart.
7. A **data label** provides additional information about a data marker that you can use to identify the details of a data point in a data series.

#### Create a Chart

1. On the worksheet, arrange the data that you want to plot in a chart. The data can be arranged in rows or columns. Excel automatically determines the best way to plot the data in the chart.
2. Select the cells that contain the data that you want to use for the chart.  
**NOTE:** If the cells that you want to plot in a chart are not in a continuous range, you can select nonadjacent cells or ranges as long as the selection forms a rectangle. You can also hide the rows or columns that you do not want to plot in the chart.
3. Go to the **Insert** tab, in the **Charts**
4. Click the chart type, and then click a chart subtype from the drop menu that will appear.
5. Click anywhere in the embedded chart to activate it. When you click on the chart, **Chart Tools** will be displayed which includes the **Design**, **Layout**, and **Format** tabs.
6. The chart will automatically be embedded in the worksheet. A chart name will automatically be assigned.

#### Move Chart to New Sheet

1. On the **Design** tab, in the **Location** group, click **Move Chart**.
2. Under **Choose where you want the chart to be placed**, click on the **New sheet** bubble
3. Type a chart name in the **New sheet** box.

#### Change Chart Name

1. Click the chart.
2. On the **Layout** tab, in the **Properties** group, click the **Chart Name** text box.
3. Type a new chart name and Press ENTER.

### **Change Chart Layout**

1. Click anywhere in the chart.
2. Go to the **Chart Tools**, the **Design** group
3. In the **Chart Layouts**, click the chart layout that you want to use. To see all available layouts, click **More**.

### **Change Chart Style**

1. Click anywhere in the chart.
2. On the **Design** tab, in the **Chart Styles** group, click the chart style that you want to use. To see all predefined chart styles, click **More**.

### **Chart or Axis Titles**

To make a chart easier to understand, you can add titles, such as chart and axis titles.

#### **To add a chart title:**

1. Click anywhere in the chart.
2. On the **Layout** tab, in the **Labels** group, click **Chart Title**.
3. Click **Centered Overlay Title** or **Above Chart**.
4. In the **Chart Title** text box that appears in the chart, type the text that you want.
5. To remove a chart title, click **Chart Title**, and then click **None**.

**NOTE:** You can also use the formatting buttons on the ribbon (**Home** tab, **Font** group). To format the whole title, you can right-click it, click **Format Chart Title**, and then select the formatting options that you want.

#### **To add axis titles:**

1. Click anywhere in the chart.
2. On the **Layout** tab, in the **Labels** group, click **Axis Titles**.
3. Do one or more of the following:
  - a. To add a title to a primary horizontal (category) axis, click **Primary Horizontal Axis Title**, and then click the option that you want.
  - b. To add a title to primary vertical (value) axis, click **Primary Vertical Axis Title**, and then click the option that you want.
4. In the Axis Title text box that appears in the chart, type the text that you want.
5. To remove an axis title, click **Axis Title**, click the type of axis title to remove, and then click **None**.

### **Data Labels**

1. On a chart, do one of the following:
  - a. Click on the **chart area** to add a data label to all data points of all data series
  - b. Click in the **data series** to add a data label to all data points of a data series
  - c. Click on a specific **data point** to add a data label to a single data point in a data series
2. On the **Layout** tab, in the **Labels** group, click **Data Labels**, and then click the display option that you want.
3. Text boxes will appear in the area of your chart based on your selection.
4. Click on the text box to modify the text.
5. To remove data labels, click **Data Labels**, and then click **None**.

**NOTE:** Depending on the chart type that you used, different data label options will be available.

### **Legend**

When you create a chart, the legend appears, but you can hide the legend or change its location after you create the chart.

1. Click the chart in which you want to show or hide a legend.

2. On the **Layout** tab, in the **Labels** group, click **Legend**.
3. Do one of the following:
  - a. To hide the legend, click **None**.
  - b. To display a legend, click the display option that you want.
- c. For additional options, click **More Legend Options**, and then select the display option that you want.

**NOTE:** To quickly remove a legend or a legend entry from a chart, you can select it, and then press **DELETE**. You can also right-click the legend or a legend entry, and then click **Delete**.

### **Move or Resize Chart**

You can move a chart to any location on a worksheet or to a new or existing worksheet. You can also change the size of the chart for a better fit.

To move a chart, drag it to the location that you want.

To resize a chart, click on one of the edges and drag towards the center.

### **Advanced Spreadsheet Modification**

Once you have created a basic spreadsheet there are numerous things you can do to make working with your data easier. Some of these elements are hiding, freezing and splitting rows. You can also sort and filter data, these features are quite helpful when working with a large amount of data.

### **Hide or Display Rows and Columns**

You can hide a row or column by using the **Hide** command or when you change its row height or column width to 0 (zero). You can display either again by using the **Unhide** command. You can either unhide specific rows and columns, or you can unhide all hidden rows and columns at the same time. The first row or column of the worksheet is tricky to unhide, but it can be done.

### **Hide Rows or Columns**

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

**NOTE:** You can also right-click a row or column (or a selection of multiple rows or columns), and then click **Hide**.

### **Unhide Rows or Columns**

1. Select the rows, columns or entire sheet to unhide.
2. On the **Home** tab, in the **Cells** group, click **Format**.
3. Under **Visibility**, point to **Hide & Unhide**, and then click **Unhide Rows** or **Unhide Columns**.

**TIP** You can also right-click the selection of visible rows and columns surrounding the hidden rows and columns, and then click **Unhide**.

### **Freezing/Splitting Rows and Columns**

To keep an area of a worksheet visible while you scroll to another area of the worksheet, you can either lock specific rows or columns in one area by freezing panes.

### **Freezing vs. splitting**

When you freeze panes, Microsoft Excel keeps specific rows or columns visible when you scroll in the worksheet. For example, if the first row in your spreadsheet contains labels, you might freeze that row to make sure that the column labels remain visible as you scroll down in your spreadsheet. A solid line indicates that the row is frozen to keep column labels in place when you scroll.

When you split panes, Excel creates either two or four separate worksheet areas that you can scroll within, while rows or columns in the non-scrolled area remain visible. This worksheet has been split into four areas. Notice that each area contains a separate view of the same data. Splitting panes is useful when you want to see different parts of a large spreadsheet at the same time.

**NOTE:** You cannot split panes and freeze panes at the same time.

### **Freeze Panes**

1. On the worksheet, select the row or column that you want to keep visible when you scroll.
2. On the View tab, in the Window group, click the arrow below Freeze Panes.
3. Then do one of the following:
  - To lock one row only, click Freeze Top Row.
  - To lock one column only, click Freeze First Column.
  - To lock more than one row or column, or to lock both rows and columns at the same time, click Freeze Panes.

**NOTE:** You can freeze rows at the top and columns on the left side of the worksheet only. You cannot freeze rows and columns in the middle of the worksheet.

### **Unfreeze panes**

1. On the **View** tab, in the **Window** group, click the arrow below **Freeze Panes**.
2. Click **Unfreeze Panes**.

### **Split Panes**

1. To split panes, point to the split box at the top of the vertical scroll bar or at the right end of the horizontal scroll bar.
2. When the pointer changes to a split pointer or , drag the split box down or to the left to the position that you want.
3. To remove the split, double-click any part of the split bar that divides the panes.

### **Moving or Copying Worksheets**

Sometimes you may need to copy an entire worksheet instead of copying and pasting the data which may or may not paste properly, you can use the steps below to achieve a much better result.

### **Move or Copy Worksheets**

1. Select the worksheets that you want to move or copy.
2. On the **Home** tab, in the **Cells** group, click **Format**, and then under **Organize Sheets**, click **Move or Copy Sheet**.  
You can also right-click a selected sheet tab, and then click **Move or Copy**.
3. A **Move or Copy** dialog box will appear
4. To move a sheet, in the **Before sheet** list:
  - Click the sheet that you want to insert the moved or copied sheets directly in front of.
  - Click **move to end** to insert the moved or copied sheets after the last sheet in the workbook and before the **Insert Worksheet** tab.
5. To copy the sheets, in the **Move or Copy** dialog box, select the **Create a copy** check box.

**NOTE:** When you create a copy of the worksheet, the worksheet is duplicated in the workbook, and the sheet name indicates that it is a copy — for example, the first copy that you make of Sheet1 is named Sheet1 (2).

**NOTE:** To move sheets in the current workbook, you can drag the selected sheets along the row of sheet tabs. To copy the sheets, hold down CTRL, and then drag the sheets; release the mouse button before you release the CTRL key.

### **Move or Copy to a Different Workbook**

1. In the workbook that contains the sheets that you want to move or copy, select the sheets.
2. On the **Home** tab, in the **Cells** group, click **Format**, and then under **Organize Sheets**, click **Move or Copy Sheet**.
3. In the **Move or Copy** dialog box, click the drop down list in the **To book** box, then:

- Click the workbook to which you want to move or copy the selected sheets.
  - Click **new book** to move or copy the selected sheets to a new workbook.
6. To move a sheet, in the **before sheet** list:
- Click the sheet that you want to insert the moved or copied sheets directly in front of.
  - Click **move to end** to insert the moved or copied sheets after the last sheet in the workbook and before the **Insert Worksheet** tab.
7. To copy the sheets, in the **Move or Copy** dialog box, select the **Create a copy** check box.

### Sorting Data

Sorting data is an integral part of data analysis. You might want to arrange a list of names in alphabetical order, compile a list of product inventory levels from highest to lowest, or order rows by colors or icons. Sorting data helps you quickly visualize and understand your data better, organize and find the data that you want, and ultimately make more effective decisions.

### Sort Data in Single Column

1. Select a column of data in a range of cells
2. On the **Data** tab, in the **Sort & Filter** group, do one of the following:
  - To sort in ascending or smallest to largest order, click **Sort A to Z**.
  - To sort in descending or largest to smallest order, click **Sort Z to A**.
3. To reapply a sort after you change the data, click a cell in the range or table and then, on the **Data** tab, in the **Sort & Filter** group, click **Reapply**.

### Sort Data in Multiple Columns or Rows

You may want to sort by more than one column or row when you have data that you want to group by the same value in one column or row, and then sort another column or row within that group of equal values.

1. Select a range of cells with two or more columns of data.
2. On the **Data** tab, in the **Sort & Filter** group, click **Sort**.
3. The **Sort** dialog box will appear.
4. Under **Column**, in the **Sort by** box, select the first column that you want to sort.
5. Under **Sort On**, select the type of sort.
  - To sort by text, number, or date and time, select **Values**.
  - To sort by format, select **Cell Color**, **Font Color**, or **Cell Icon**.
6. Under **Order**, select how you want to sort.
  - For text values, select **A to Z** or **Z to A**.
  - For number values, select **Smallest to Largest** or **Largest to Smallest**.
  - For date or time values, select **Oldest to Newest** or **Newest to Oldest**.
  - To sort based on a custom list, select **Custom List**.
7. To add another column to sort by, click **Add Level**, and then repeat steps four through six.
8. To copy a column to sort by, select the entry and then click **Copy Level**.
9. To delete a column to sort by, select the entry and then click **Delete Level**.
10. To change the order in which the columns are sorted, select an entry and then click the **Up** or **Down** arrow to change the order.
11. To reapply a sort after you change the data, click a cell in the range or table and then, on the **Data** tab, in the **Sort & Filter** group, click **Reapply**.

### Finalizing a Spreadsheet

To complete your spreadsheet there are a few steps to take to ensure your document is finalized.

### Using the "Spell Check" Feature

Excel does not have the same spell check feature as Word and PowerPoint. To complete a Spelling and Grammar check, you need to use the Spelling and Grammar feature.

1. Click on the **Review** tab
2. Click on the **Spelling & Grammar** command (a blue check mark with ABC above it).
3. A **Spelling and Grammar** box will appear, correct any Spelling or Grammar issue with the help of the box.

### Save a Spreadsheet

To save a document in the format used by Excel 2010 and Excel 2007, do the following:

1. Click the **File** tab.
2. Click **Save As**.
3. In the **File name** box, enter a name for your document.
4. Click **Save**.

To save a document so that it is compatible with Excel 2003 or earlier, do the following:

1. Click the **File** tab.
2. Click **Save As**.
3. In the **Save as type** list, click **Excel 97-2003 Document**. This changes the file format to .xls.
4. In the **File name** box, type a name for the document.
5. Click **Save**.

### Help

If you need additional assistance when completing your document, you can use the help feature.

1. Click on the blue circle with the white question mark command
2. A **Help** box will appear.
3. Click in the **Search Help** textbox and type what you need help with
4. Click the magnifying glass next to the text box and the possible solutions will appear.

### Print Preview

Print Preview automatically displays when you click on the **Print** tab. whenever you make a change to a print-related setting, the preview is automatically updated.

1. Click the **File** tab, and then click **Print**. To go back to your document, click the **File** tab.
2. A preview of your document automatically appears. To view each page, click the arrows below the preview.

### Print a Worksheet

1. Click the worksheet or select the worksheets that you want to print.
2. Click **File**
3. Click **Print**.
4. Once you are on the Print screen you can select printing options:
  - To change the printer, click the drop-down box under Printer, and select the printer that you want.
  - To make page setup changes, including changing page orientation, paper size, and page margins, select the options that you want under Settings.
  - To scale the entire worksheet to fit on a single printed page, under Settings, click the option that you want in the scale options drop-down box.
  - To print the specific information, select Print Active Sheets or Print Entire Workbook
5. Click **Print**.

### Assignment

1. Design your timetable.