

**Computer Application**

**Prak-Sastri 2<sup>nd</sup> Year  
Course/Paper.10**

## **INTRODUCTION TO MS OFFICE**



**CENTER OF DISTANCE & ONLINE EDUCATION**

*(Formerly Directorate of Distance Education)*

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<b>Unit – I Introduction to MS – Word</b>
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**1.0.Objective**

Microsoft word is part of Microsoft’s office suite of software. It is a word processor, which is world’s leading word processing application. The primary objective is to enable students to create and edit document, save it to view or edit later and print document and many more features.

Microsoft Word 2007 has a completely redesigned user interface. The standard menus along the top have been removed and replaced with a series of toolbars Microsoft calls “The Ribbon.” The tool bars are changed using tabs at the top and try to automatically adjust themselves to the content you are working with. If you select an image it will automatically switch to the picture tools. The new layout seems to offer easier access to most of the features of Word allowing for more complex documents to be created quicker.

**1.1. Creating and saving document**


The first thing most people will need to relearn is where to go to open a document, create a new one, save your document and print. Clicking the Office logo at the top left of the screen will provide most of the items formerly found under the file menu including those listed above. Beside the logo you also will find a disk icon to save your document as well as the undo and redo buttons.

**To create a new blank document:**

1. Click the Microsoft Office button.
2. Select New. The New Document dialog box appears.

3. Select Blank document under the Blank and recent section. It will be highlighted by default.
4. Click Create. A new blank document appears in the Word window.  
Start a document from a template

**To use a template as a starting point, do one of the following:**

1. In Microsoft Office Word 2010, 2013 or 2016, click File, and then click New. In Microsoft Office Word 2007, click the Microsoft Office Button , and then click New.
2. Under Templates, do one of the following:
  - If you are using Microsoft Office Word 2007, click Installed Templates to select a template that is available on your computer. If you are using Microsoft Office Word 2010, look in Available Templates
  - In Microsoft Office Word 2007, click one of the links under Microsoft Office Online. In Microsoft Office Word 2010, click Office.com Templates. In Microsoft Office Word 2013 and 2016, all available installed templates are shown when you click File, and then click New and additional templates can be discovered by using the Search for online templates search box.
3. Double-click the template that you want.

**To save a copy of your file, do the following**

1. Click the Microsoft Office Button, and then click Save As, or press CTRL+S. In the File name box, enter a new name for the file.
2. Click Save.

**Note:** If you don't see the Microsoft Office Button, click Save As on the File menu.

- **Opening a file (CTRL+N)**

1. Click the Microsoft Office Button, and then click Open.
2. In the File of type list, click OpenDocument Text.
3. Click the file you want to open, and then click Open.

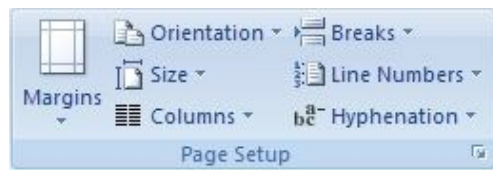
- **Page layout**

The Page Layout Tab lets you control the look and feel of your document in Microsoft Word, a global design to your document by using one of the available themes and colour schemes. Changing the document orientation, page size, margins, indentation, line spacing and paragraph settings can be performed.

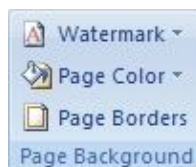


- Themes:** The themes section provides a quick way to format your document. By choosing a theme you will have a set colour scheme, font combinations, and effects. You can choose one of the provided themes, modify a provided them or create your own. Be aware that changing your theme after creating a document may require you to reformat some items as themes also include some layout options.

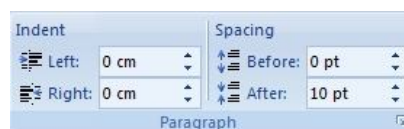
**1.1. Page Setup:** Page setup provides you with the tools to change margins, size, orientation, columns, breaks, line numbers and hyphenation in the document.



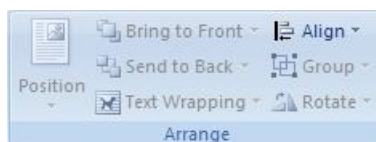
- Page Background:** The page background section allows you to change the background colour of the document, watermark and draft or confidential document or add borders to your document.



- Paragraph:** The paragraph section in the page layout tab allows changes to a paragraphs spacing and indentation.



- **Arrange:** The arrange section is also found in the image toolbar when an image is selected. Here you can change an images position, how text moves around the image, the alignment, grouping and rotation or the image.



### 1.2. Formatting Text

Formatting text in Microsoft Word involves tasks like bolding the text, italicising it, and changing the font and size. The commands to perform all of these formatting tasks are found on the Home tab in the Font group. Select your text and then click on the required formatting button to see the effects.

#### 1.2.1. Setting font size

### 1. Selecting Text

The first step in formatting any amount of text or an entire document is selecting the portion of text that needs **formatting**. For formatting text, the following should be known

- Boldface a section
- Add italics
- Underline
- Change the colour
- Change the font
- Highlight
- Cut/copy and paste
- Add bullets

To do any of this, you must first select the text that the formatting will be applied to within the document. Selecting text is easy and done in three easy steps.

1. Move the cursor to the beginning of the text that you want to select.
2. Click and hold in the left button on your mouse.
3. Drag it over the text you want to select. It will highlight the selected text in **blue**. Simply release the mouse button when you are finished selecting text.

If you want to **select the entire document**, simply click on the '**Home**' tab and click '**Select**' on the far right. You will then select '**select all**'. This will highlight all your text for formatting. Also note that you can select objects or text with similar formatting as your selected text when clicking on '**Select**'.

### **Applying a Font**

You can apply a font to either an entire document or to certain portions of a document. The choice is yours. To apply a font, click on the **Home** tab. You'll see the toolbars, or groups.

The type of font you're currently using will appear. In the picture above, the current type of font is Calibri. The notation of (body) after Calibri lets the user know that it's the font used in the body of text, not in headers, footnotes, etc. You can click on the arrow in that window to display other types of font available to use. To change the type of font within a document or for the entire document, simply select the text to be formatted, then select your new font. It's really that easy.

**Note:** You can also do all font formatting by selecting the arrow key beside the word Font, located directly above the document body. By clicking on this arrow, you can also alter character spacing.

### **Changing Font Size**

Next to the type of font under the 'Home' tab is a box that states the size of font currently being used. Using the picture above, the font size is 12. Once again, you can use the down arrow key to either enlarge or reduce the font size. To change the size of the font, simply select the text that you want to change, then select the new font size. You can change an entire document or just a portion. The choice is yours. You can also use the two uppercase A's beside the font size box to change the size of fonts you're currently using. Pushing the larger A will increase your font size by one for each time it's clicked. On the other hand, clicking the smaller A will decrease the font size by one for each time it's clicked.

### Font Attributes

As we discussed earlier, you may want to select text to either boldface, italicize, or underline a section of text. The boldface command in MS Word is represented by an uppercase, boldfaced B. Italics are represented by an uppercase, italicized 'I', and underline by an uppercase U with a line under it. These buttons are located directly below the font type window. To add *italic*, **boldfaced** or underlining to any portion of a text within a document, select the desired text, then click the appropriate button (ctrl + **B** for boldfaced, ctrl + **I** for italic, or ctrl + **U** for underline.)

Next to the commands for boldfaced, italics, and underline, you'll see an 'abc' with a line through it. (~~abc~~) This is for strikethrough. When clicking on this button, it will put a line through any text you have selected.

Next to the strikethrough command, you'll see 'X<sub>2</sub>'. This simply puts smaller text below the text line of the normal text. This command was used when typing X<sub>2</sub> into this course. X<sup>2</sup> is just the opposite, putting smaller text above the text line. This makes creating footnotes easier than it had been with previous versions of Word.

The uppercase A and lowercase A that are situated side by side allow you to change the case of selected text. You can change from lowercase to uppercase or vice versa, toggle tHeCaSe, or select other common capitalizations.

### 1.2.2 Font Color

Changing the font color is as simple as changing the font. Look for the uppercase A with a black bar under it as pictured below. It's just to the right of the Aa that allows you to capitalize portions of text. Select your text, then click on the button to choose the colour you want to apply to the selected text. You can also highlight selected text. To the left of the font colour button, you'll see a lowercase 'ab' with a marker near it. It is highlighted in yellow. Simply select the portion of text you want to highlight, click the button, and select the colour of highlight that you want to apply.

### 1.2.3. Formatting paragraph

When you format paragraphs within a document, you can change the look of the entire document. Formatting a paragraph allows you to change line spacing, indent lines, and alter all of your paragraphs or just a few so that



they look the way you want them. Many of the tools you can use to format your paragraphs will be located in the '**Page Layout**' tab of the Ribbon in the '**Paragraph**' group.

### **i) Aligning text**

As with all word processing programs, you can either left, right, center or justify your text. You can either do one of these things to a portion of text or to the entire document.

For example the below text which is aligned to the left and center

This is text that is aligned to the right.

This text is centered.

**Justified text:** it is aligned between the left and right margins, adding space between letters if necessary. It gives the document a clean look. The buttons or commands for aligning text are located under the 'Home' tab above the 'Paragraph'.

The Home tab consists of the left alignment button beside it is the center, then right, and then justify. To use these, simply select the text you want to align, and click on the appropriate button.

### **ii) Aligning line spacing**

Line spacing Adjusting line spacing changes the amount of space between lines of text. Line spacing can be single, 1.5, double; multiple or you can choose your own size. Adjusting line spacing

- Select the text that you want to adjust the line spacing on. If you want to change the whole document, choose Select then Select All from the Editing group
- Click the arrow button to the right of the Paragraph group to open the Paragraph dialog box
- Select the Indents and Spacing tab
- Click on the down arrow below line spacing. Select a new size  
Click OK.

### 1.3.Headers and Footers

Header and footer can make your document look professional and polished by utilizing the header and footer sections. The header is a section of the document that appears in the top margin, while the footer is a section of the document that appears in the bottom margin. Headers and footers generally contain information such as page number, date, and document name.

#### To insert a header or footer:

- Select the Insert tab.
- Click either the Header or Footer command. A menu appears with a list of built-in options you can use.
- Left-click one of the built-in options, and it will appear in the document.

OR

- Left-click Blank to select it.
- The Design tab with Header and Footer tools is active.
- Type information into the header or footer.

#### To insert the date or time into a header or footer:

- With the header or footer section active, click the Date & Time command.
- Select a date format in the dialog box that appears.
- Click OK. The date and time now appear in the document.

#### Other header and footer options

There are many other header and footer options you can use to design these sections of your document. From the Header and Footer Tools Design tab, you can see all of your design options.

##### 1.3.1. Page numbering

1. On the Insert tab, in the "Header & Footer" group, click Page Number.
2. Click Top of Page, Bottom of Page, or Page Margins, depending on where you want page numbers to appear in your document.

3. Choose a page numbering design from the gallery of designs.
4. On the Design tab, in the "Options" group, choose Different First Page.

Page numbering in header and footer can be set for alignment similar to that of a paragraph like center/left/right based on the requirement which is available in the header and footer options

## 1.4. Hyperlink and Book Marks

### 1.4.1. Hyperlink

A **hyperlink** is a piece of **text** or an **image** in an electronic document that can connect readers to another portion of the document or a different webpage. In addition, a hyperlink can be used to connect to and open an email client window.

Have you noticed the **active links** on webpages that allow you to **jump from one page to another**? You just used one to open this lesson. These are called **hyperlinks**. You can use these in electronic versions of your Word documents, just like you do in webpages. In this lesson, you will learn the **basics of working** with hyperlinks, including how to insert and remove them in your Word document.

To insert a hyperlink:

- Select the **text or image** you want to make a **hyperlink**.
- Select the **Insert** tab.
- Click **Hyperlink** in the Links group. The Insert Hyperlink dialog box appears. If you selected text, the words will appear in the **Text to display:** field at the top.
- Type the address you want to link to in the **Address:** field.
- Click **OK**. The text or image you selected will now be a hyperlink.

To make an email address a hyperlink:

- Type the **email address**.
- Highlight the text, and select the **Insert** tab.

- Click **Hyperlink** in the Links group, and the Insert Hyperlink box appears.
- On the left of the box where it says **Link to:** click **Email Address**.
- The **Insert Hyperlink** box will change to the one shown above.
- Type the email address you want to connect to in the **Email Address** box, then click OK.

To remove a hyperlink:

- Select the **hyperlink** you want to deactivate.
- Select the **Insert** tab.
- Click **Hyperlink** in the Links group. The Edit Hyperlink dialog box appears
- Click **Remove Link**.

#### 1.4.2. Book mark

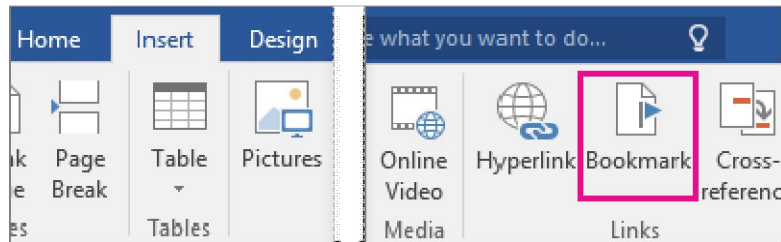
The bookmarks are the HTML elements that mark some locations in a document to enable the browsers to visit these locations immediately by activating so-called links. The bookmarks usually mark the headers of chapters and sections, the citations, the index entries etc.

A bookmark in Word works like a bookmark you might place in a book: it marks a place that you want to find again easily. You can enter as many bookmarks as you want in your document or Outlook message, and you can give each one a unique name so they're easy to identify.

To add a bookmark, you first mark the bookmark location in your document. After that, you can jump to the location or add links to it within your document or Outlook message. You can also delete bookmarks from a document or Outlook message.

#### **Bookmark the location**

1. Select text, a picture, or a place in your document where you want to insert a bookmark.
2. Click **Insert > Bookmark**.



3. Under **Bookmark name**, type a name and click **Add**.

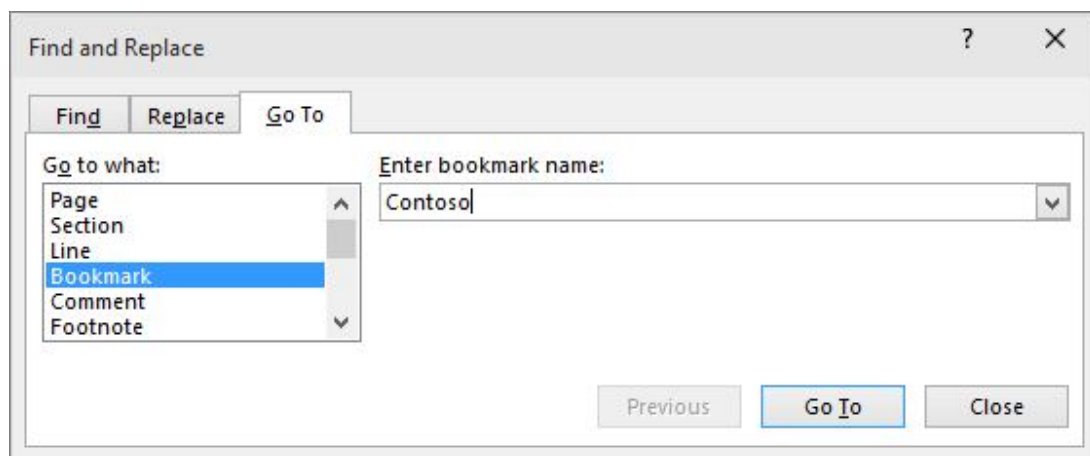
Note: Bookmark names need to begin with a letter. They can include both numbers and letters, but not spaces. If you need to separate words, you can use an underscore(\_). For example first\_heading

### Go to the bookmarked location

After creating your bookmarks, you can add links to them within your document or jump to them at any time.

### Jump to a bookmark


Type Ctrl+G to open the **Go To** tab in the **Find and Replace** box. Under **Go to what**, click **Bookmark**. Enter or select the bookmark name, and then click **Go To**.



### Link to a bookmark

You can also add hyperlinks that will take you to a bookmarked location in the same document.

1. Select the text or object you want to use as a hyperlink.

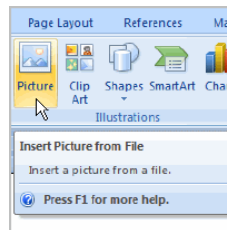
2. Right-click and then click **Hyperlink** .
3. Under **Link to**, click **Place in This Document**.
4. In the list, select the heading or bookmark that you want to link to.
5. Click **OK**..

### Delete a bookmark

1. Click **Insert > Bookmark**.
2. Click either **Name** or **Location** to sort the list of bookmarks in the document.
3. Click the name of the bookmark you want to delete, and then click **Delete**.
4. If you have inserted a hyperlink to the deleted bookmark, right-click the linked text and then click **Remove Hyperlink**.

### 1.5. Inserting and Editing pictures

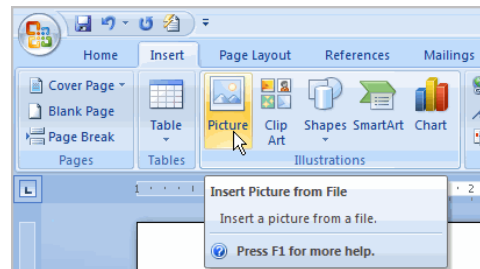
Pictures can be added to Word documents and then formatted in various ways. The **picture tools** in Word 2007 make it easy to incorporate images into your documents and **modify these images** in innovative ways.



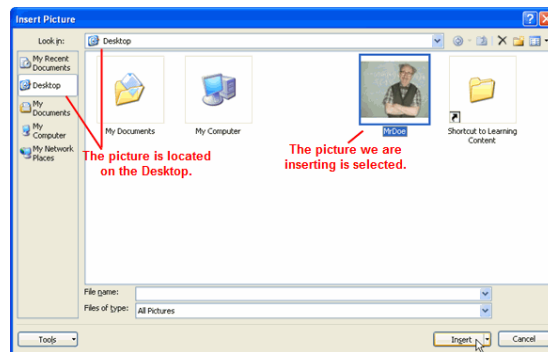
### Inserting and modifying pictures

To insert a picture:

- Place your **insertion point** where you want the image to appear.
- Select the **Insert** tab.
- Click the **Picture** command in the **Illustrations** group. The Insert Picture dialog box appears.



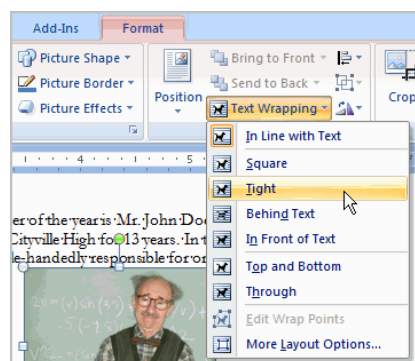
- Select the image file on your computer.



- Click **Insert**, and it will appear in your document.

### To wrap text around an image:

- Select the image.
- Select the **Picture Tools Format** tab.
- Click the **Text Wrapping** command in the Arrange group.

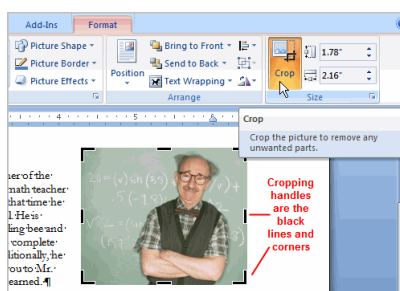


- Left-click a menu option to select it. In this example, we selected **Tight**.

- Move the image around to see how the text wraps for each setting.
- The **Position** button has predefined text wrapping settings. The Position button is located to the left of the Text Wrapping button.
- Click the Position button, and a drop-down list of text wrapping options will appear. Hover over an option to see what it does.

### To crop an image:

- Select the image.
- Select the **Format** tab.
- Click the **Crop** command. The black cropping handles appear.



- Left-click and move a **handle** to crop an image.
- Click the **Crop** command to deselect the crop tool.

## 1.6. Tables

A table is made up of rows and columns. The intersection of a row and column is called a cell. Tables are often used to organize and present information, but they have a variety of uses as well. You can use tables to align numbers and create interesting page layouts.

### 1.6.1. Creating Table, inserting and deleting rows and columns

#### Creating tables

Table can be easily made in MS Word. The following is the procedure to create table.



Click the New File icon to create a new document if necessary. To Create a Table:

- Click the Insert tab on the Ribbon
- Click the Table button
- Select Insert Table
- Click the arrows to select the desired number of columns
- Click the arrows to select the desired number of rows
- Click OK

**Formatting a Table:** Using Microsoft Word you are able to format a table by changing table lines and colors, shading tables, adjusting row and column size as well as alignment.

**To Shade the Cells/Table:**

- Position your cursor in the table
- Click the Layout tab on the Ribbon
- Click the Select button in the Table group
- Choose the item you wish to format
- Click the Design tab on the Ribbon
- Click the Shading button
- Select a shading color.

**To Adjust the Line Style of a Cell/Table:**

- Position your cursor in the table
- Click the Layout tab on the Ribbon
- Click the Select button in the Table group
- Choose the item you wish to format
- Click the Design tab on the Ribbon
- Select the Line Style drop-Down Arrow
- Select a style
- Click your mouse in the table where you want to apply the line style to
- Press ESC key on the keyboard when you are finished applying the style.

### **Inserting, deleting and merging rows and columns**

#### **a) To Insert a Row:**

- Position the cursor in the table where you would like to insert a row
- Select the Layout tab on the Ribbon
- Click either the Insert Row Above or the Insert Row Below button in the Rows & Columns group

#### **b) To Insert a Column**

- Position the cursor in the table where you would like to insert a column
- Select the Layout tab on the Ribbon
- Click either the Insert Columns to Left button or the Insert Columns to Right button in the Rows & Columns group

#### **c) To Delete a Row**

- Position your cursor in the row that you would like to delete
- Select the Layout tab on the Ribbon
- Click the Delete button in the Rows & Column group
- Select Delete Rows

#### **d) To Delete a Column**

- Position your cursor in the column that you would like to delete
- Select the Layout tab on the Ribbon
- Click the Delete button in the Rows & Column group
- Select Delete Columns

#### **e) To Merge Cells in a Table**

- Select the cells that you would like to merge in the table
- Click on the Layout tab on the ribbon
- Click the Merge Cells button in the Merge group

### **Deleting table**

Keep in mind that deleting the table deletes all its contents as well.

- Click the mouse inside the table. The Table Tools appear.
- If the Layout tab is not displayed, click to display it.
- Choose Delete—Table. This command is located in the Rows & Columns group on the Layout tab.

### 1.7 Mail merge

Mail merge is a tool which allows you to create form letters, mailing labels and envelopes by linking a main document to a set of data or data source. It is the process of combining a list of data with a template. The mail merge process involves the following:

**The Main Document:** Contains the text and graphics that are the same for each version of the merged document.

**Data Source:** A file that contains the information to be merged into a document. For example, the names and addresses of the recipients of a letter.

#### Mail Merge– Form Letters

- Open Microsoft Word. Type the letter with all needed text and formatting leaving areas for the data source data blank (ex name, address...)
- Click the Mailings tab
- Click Start Mail Merge
- Click Step by Step Mail Merge Wizard

The Mail Merge task pane appears on the right of your screen. There are 6 steps involved in Mail Merge.

#### Step 1

- Click Letters for the document type
- Click Next: Starting document

#### Step 2

- Click Use the current document under Select starting document
- Click Next: Select recipients

**Step 3**

The recipients can come from either an existing Excel file, or Access table or you can create a new list.

**a) If Using an Existing List:**

- Click Use an existing list under Select recipients
- Click Browse
- Select the file
- Click Open Mail Merge Recipients opens showing the names and addresses from your file
- Click OK
- Click Next: Write your letter

**b) To Type a New List:**

- Click Type a new list under Select recipients
- Click Create
- Click Customize Columns to modify the list of fields
- Delete any unnecessary field names and/or add new ones
- Click OK
- Type records here hitting TAB to advance to the next field and to continue adding new records
- Click OK
- Click Save

The recipients list will be saved as a separate file as a Microsoft Access file type. It is saved in the My Data Sources folder. It is recommended to save the file in this folder.

- Click Next: Write your letter

**Step 4**

- Click the location in your document where the data from the mail merge fields need to be inserted
- Click Address block...
- Select the address elements you want included
- Click OK

The field name will look like this: <> The Address block will insert the following fields including any necessary punctuation: First Name, Last Name, Company, Address 1, Address 2, City, State, Postal Code. If your fields do not match the ones listed above or you have additional fields, click More items...

- Click on the field from the list
- Click Insert
- Click Close The field name will look like this - «First\_Name»
- Repeat this step until all fields have been inserted. Remember to put spaces and punctuation where needed.
- Click Next: Preview your letters

### Step 5

Here is where you can preview the first page with the fields filled in. Click Next: Complete the merge

### Step 6

- To Complete the Merge:
- Click Print to send directly to the printer
- Click Edit individual letters to create a new file Remember to save your document as you go. The next time you open your document and click on Step by Step Mail Merge, the data file will be attached

### Mail Merge – Labels

- Open a new blank document
- Click the Mailings tab
- Click Start Mail Merge
- Click Step by Step Mail Merge Wizard

### Step 1

- Click Labels for the document type
- Click Next: Starting document

### Step 2

- Click Label options under Change document layout
- Choose the label style you are using
- Click OK
- Click Next: Select recipients 6

### Step 3

- Click Use an existing list under Select recipients
- Click Browse
- Select the file that contains the names and addresses
- Click OK
- Click Next: Arrange your labels

### Step 4

- Click in the first label box and click on either Address block or More items to insert the data fields
- Click Update all labels to include the fields on all labels
- Click Next: Preview your labels Step 5 Here is where you can preview the labels. Click Next: Complete the merge Step 6 Click Print to send directly to the printer OR Click Edit individual labels to create a new file

## 1.8. Printing documents

Once document is prepared now its time to print the document. Now let us see how to it can be done.

1. **Open or create a Microsoft Word document.** To do so, click on the blue app with a white document icon and bold "W," then click on **File** in the menu bar at the upper-left of the screen. Click on **Open...** to open an existing document or **New...** to create a new one.
  - When you are ready to print, open the Print dialog box.  
**Click on File.** It's in the menu bar at the upper-left of the screen or a tab at the upper-left of the window.  
**Click on print.....** The print dialog box will open.

Select printing options. Use the selections in the dialog box to select such as number of copies to print, the size of paper to print on, the number of pages to print per sheet, margins etc.

**Click on print or ok.**

## 1.9. Summary

- Microsoft Word is an industry-standard and world's most used word processing software. The program is used by educators, students, firstline workers, businesses, and enterprises.
- While it is very common for schools, companies, and offices to have the program installed on their computers
- Microsoft Word is also built and designed for personal use, and aims to help users view, edit, create, and share beautiful documents
  - **To create a new blank document:**
    - Click the Microsoft Office button.
    - Select New. The New Document dialog box appears.
    - Select Blank document under the Blank and recent section. It will be highlighted by default.
    - Click Create. A new blank document appears in the Word window.
    - Start a document from a template
  - A **hyperlink** is a piece of **text** or an **image** in an electronic document that can connect readers to another portion of the document or a different webpage.
  - The bookmarks are the HTML elements that mark some locations in a document to enable the browsers to visit these locations immediately by activating so-called links. The bookmarks usually mark the headers of chapters and sections, the citations, the index entries etc.
  - Formatting text in Microsoft Word involves tasks like bolding the text, italicising it, and changing the font and size. The commands to perform all of these formatting tasks are found on the Home tab in the Font group.

- Header and footer can make your document look professional and polished by utilizing the header and footer sections. The header is a section of the document that appears in the top margin, while the footer is a section of the document that appears in the bottom margin
- A table is made up of rows and columns
- **Mail Merge– Form Letters** :Open Microsoft Word. Type the letter with all needed text and formatting leaving areas for the data source data blank (ex name, address...)

#### 1.10. SAQ

1. What is MS-Word?
2. List characteristics of MS-Word?
3. Explain what is Text Wrapping?
4. Explain what is WYSISYG?
5. Briefly explain about page set up?





<b>Unit – II MS – Power Point</b>
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**Structure****2.0. Objective****2.1. Basics****2.2. Creating Presentation****2.3. Menus and Tool bar****2.4. Opening a presentation**

## 2.4.1. Creating

## 2.4.2. Inserting, Deleting and Saving Power point

## 2.4.3. Copying new slide

**2.5. Slide numbering****2.6. Animation and Transition****2.7. Summary****2.8. SAQ**

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**2.0. Objective**

The main objective of this MS Power Point to make the student perfect in creating presentation, deleting unnecessary slides, slide numbering, inserting graph, picture, sound and video organization chart. Even assigning transition and timing for slide. How to print slide

**2.1. Basics**

PowerPoint is the presentation program included in the Microsoft Office suite. With PowerPoint, you can create engaging presentations that can be presented in person, online, or as self-running slideshows. Your presentations can include graphics, audio and video clips, and links to external websites. PowerPoint 2007 has a different interface from previous versions of the program.

**2.1.1. Features of MS Power Point**

PowerPoint is a highly innovative and versatile program that can ensure user a successful communication whether you're presenting in front of potential investors, a lecture theatre or simply in front of your colleagues. Below are five features you should be using. They will improve

your presentation skills and allow you to communicate your message successfully.

- Adding smart art
- Inserting shapes
- Inserting an image
- Slide transitions
- Adding animation

## 2.2. Creating presentation

To create a new presentation with PowerPoint 2007:

1. Launch PowerPoint 2007. The program will open up with a new blank presentation already created for you.
2. To save the presentation, click on the new Office button and choose Save (or click on the Save button in the Quick Access Toolbar).
3. Enter a file name for your new presentation and select a save location.
4. Click on Save. PowerPoint 2007 uses a different file format than previous versions of the program. However, you can save a copy.

PowerPoint 2007 presentation that is backward-compatible with older versions of the program. To do this, click on the Office button and select Save As > PowerPoint 97-2003 Presentation. You should save often as your work on your presentation to avoid losing your changes. A quick way to save changes as you work is to use the keyboard shortcut Control + S. If you want to save a copy of your presentation with a different name, click on the Office button, choose Save As > PowerPoint Presentation and enter a different name in the File name field at the bottom of the Save As window.

**Another way to create a new presentation:** By clicking on the Office button and choosing New. This will open the New Presentation window, where you will have the following options on the left side:

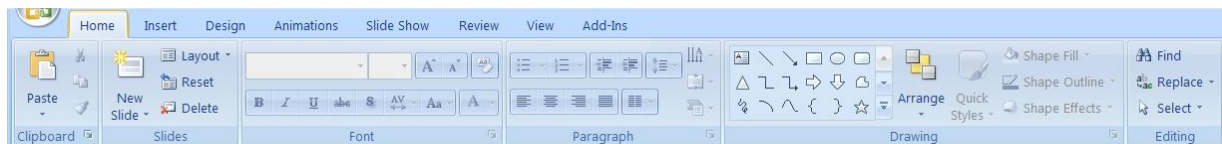
- Blank and recent: click on Blank Presentation on the right to create a blank presentation with no formatting applied to it.
- Installed Templates: these are the built-in presentation designs included with PowerPoint 2007.

- Installed Themes: similar to templates, but also include formatting such as colors, fonts and effects to give your presentations a consistent look.
- Microsoft Office Online: these are templates you can download from the Microsoft website if you have an internet connection. Once you've chosen a template or theme, click on Create or Download. The formatting options included in the template or theme will be applied to the new presentation created by PowerPoint 2007

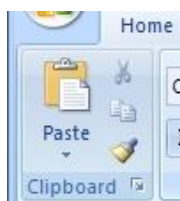
### 2.3. Menus and Toolbar

menu's most common options are Properties, Inspect Document, Mark as Final and Run Compatibility Checker. The properties option allows you to setup metadata for the document like Author, Title, keywords, comments and others. Inspect Document will scan the document for any hidden data like comments and annotations, and any hidden collaboration data. This is very useful when making a previously private document public. It will help you find any comments or changes made previously that should not be made public. Mark as Final will mark the document as a final copy and make it read only so changes cannot be made.

#### The Home Tab



The home tab the basic formatting tools found in PowerPoint 2007. You will find five sections, Clipboard, Slides, Font, Paragraph and Editing. Clicking the down arrow beside any of the icons here will drop down more options for that tool. Each section except slides also contains an arrow in the bottom right corner which will open a window containing the options found in that section.



#### Clipboard

The Clipboard allows you to cut, copy, paste and copy formatting from one place to another.



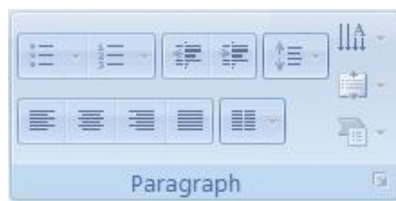
### Slides

The slides section has tools to add new slides, change the layout of a slide, also reset or delete a slide. Both the New Slide and Layout sections offer drop down menus with predefined slide layouts to use.



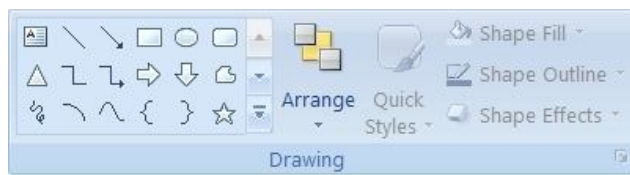
### Font

The font section of the ribbon provides a section to handle the basic text formatting. Items such as bold, underline, strikethrough, highlight and font type can be changed here. There are also some items like character spacing and text shadow. Some items from this section and some items from the paragraph section are also available by highlighting text and moving your cursor slightly above the highlighted text. This saves having to move your cursor all the way to the top of the screen for some common formatting items.



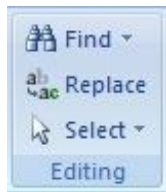
### Paragraph

The paragraph section provides icons for bullets, lists, justify, line spacing, indents and text direction. You can also access tools to align the text vertically within a section and add smartArt graphics.



### Drawing

The main part of the drawing section gives you a large number of shapes, lines arrows and flowchart pictures. The arrange icon is used to bring an item forward or backwards on the screen or group and ungroup objects. The quick styles icon gives a drop down with predefined shape style options or you can use the shape fill, shape outline, or shape effects icons to create your own styles.

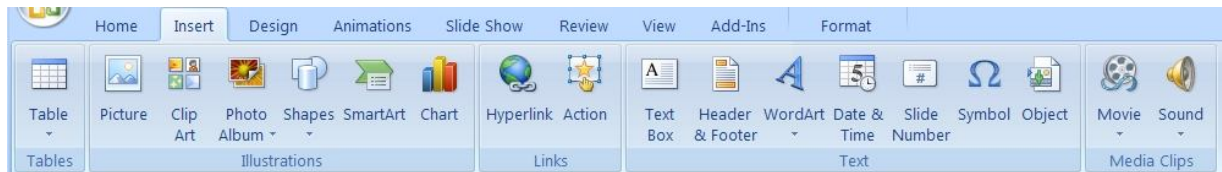


### Editing

The Editing section of the toolbar allows you to find, replace and select items. The select option gives you the ability to select all, select objects or select text with similar formatting.

This last option gives you the ability to quickly change everything in your document with one style to another style without having to manually find all of that text and change each area separately.

### Insert Tab



The insert tab has five sections for inserting most types of objects. The sections are tables, illustrations, links, text and media clips.



### Table

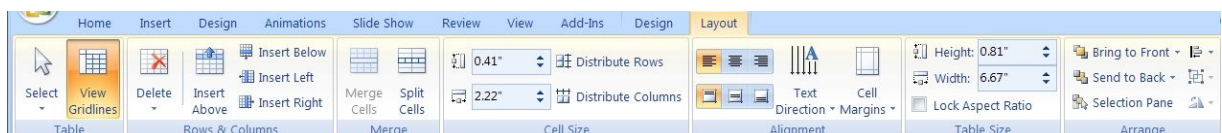
The table section only has a drop down menu which offers a grid to create a new table, insert table, draw table, convert text to table for selected text, Excel spreadsheet, and some predefined “Quick Tables” that have formatting already setup for you. When

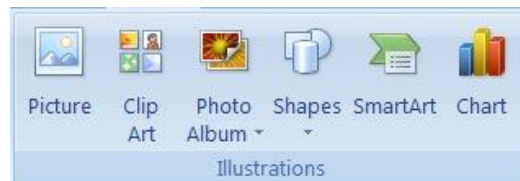
working on a table you will have two additional tabs along the top of the ribbon, the design and layout tabs. There are screenshots of both directly below.

### Table Design



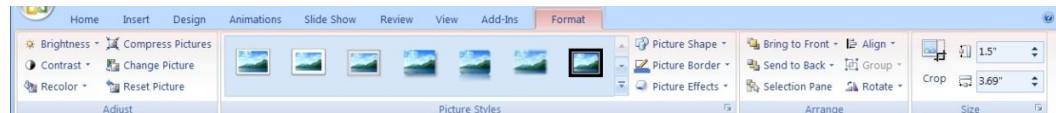
### Table Layout





### Illustrations

The Illustrations section allows you to insert pictures, clipart, photo albums shapes, SmartArt and charts. After inserting or selecting a picture you are provided with a new

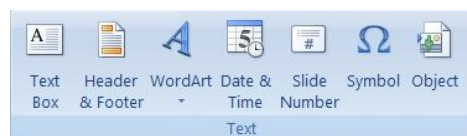


toolbar along the top shown here. This toolbar gives you the ability to change the brightness, contrast, shape, position, text wrapping and other options for the picture. Clicking off the picture or on one of the other tabs will take you back to the standard toolbars. The Shapes option of the Illustrations section allows you to insert lines, arrows, boxes, basic flowchart shapes and a number of others. The SmartArt option provides features like org charts, flow charts, illustrated lists and processes. The Chart option is similar to PowerPoint 2003 but it offers more options for your charts.



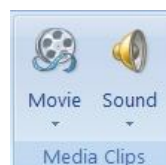
### Links

The links section provides options for inserting hyperlinks, or actions. The actions option allows you to link an item to a hyperlink, program, sound or macro.



### Text

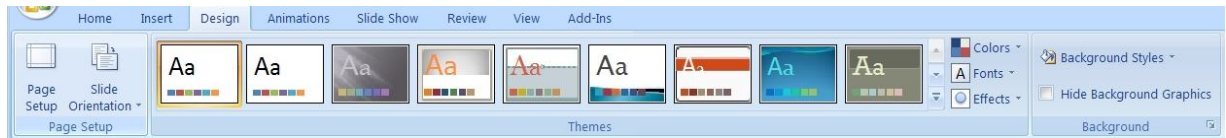
Options in the text section include text box, Header and Footer, WordArt, date and time, slide numbers, symbols and objects. There are a lot of option in here to setup on your own or you can use Words predefined options.



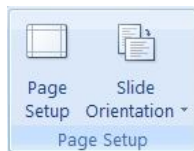
### Media Clips

Sounds or movies can be added through this section. A large number file types can be added here including, mp3, midi, wav, wma, wmv, avi and many others.

## Design Tab



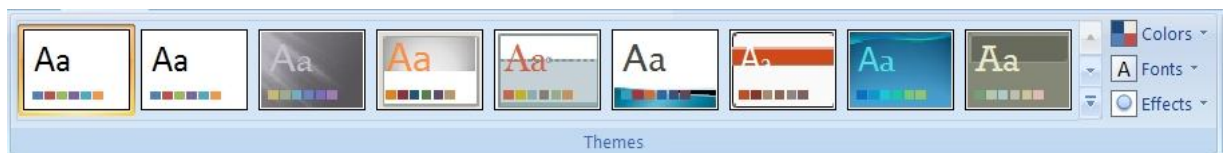
The design tab has three sections, Page Setup, Themes and Background.



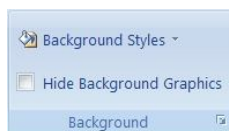
### Page Setup

Page setup provides you with the tools to slide size and orientation. The slide size option allow for some predefined sizes like letter, legal, overhead, and tv aspect ratios like 4:3 standard resolution and 16:9 widescreen.

### Themes



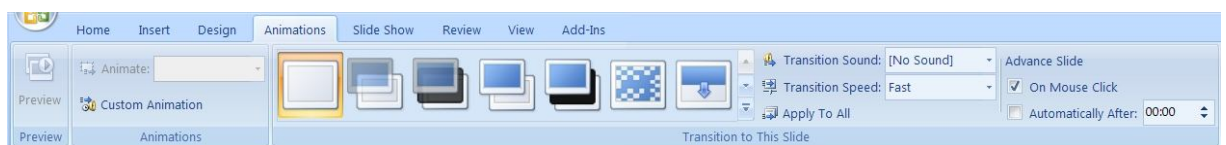
The themes section gives predefined colour, fonts and effects or you can choose your own.



### Background

The background section lets you choose a background style or hide the background on the selected slide..

## Animations Tab

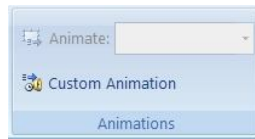


The animations tab contains three sections, preview, animations and transitions to this slide.



### Preview

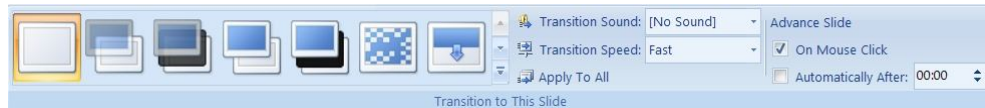
The preview section will show you're the current slides animation to allow you to check it is the way you want it.



### Animations

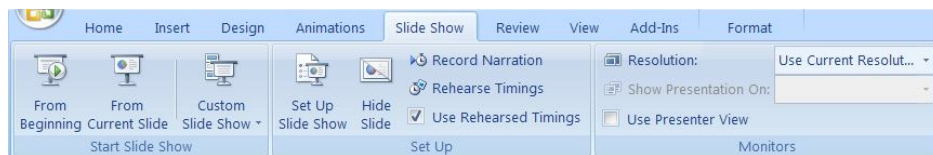
Here you can create your own animations for use in the slide.

### Transition to This Slide

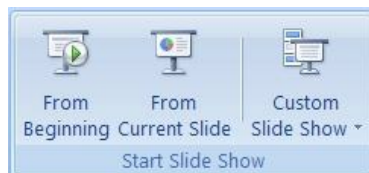


The remainder of the Animations tab is taken up by the Transition to This Slide section. Here you can apply different transitions to be used between slides like fades, slides and many more. You can set options for speed, sounds, and timing.

### Slide Show Tab



The Slide Show tab contains three sections, start slide show, set up and monitors.



#### Start Slide Show

The start slide show section is used to start your slide show either from the beginning or the current slide. You can also use this section to create a custom slide show. Custom

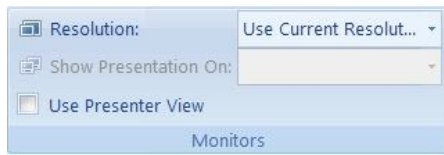
slide shows can be used to create one thirty minute presentation and one sixty minute presentation using the same set of slides but omitting some for the shorter show.



#### Set Up

The main features of this section are setup a slide show, record narration and rehearse timings.

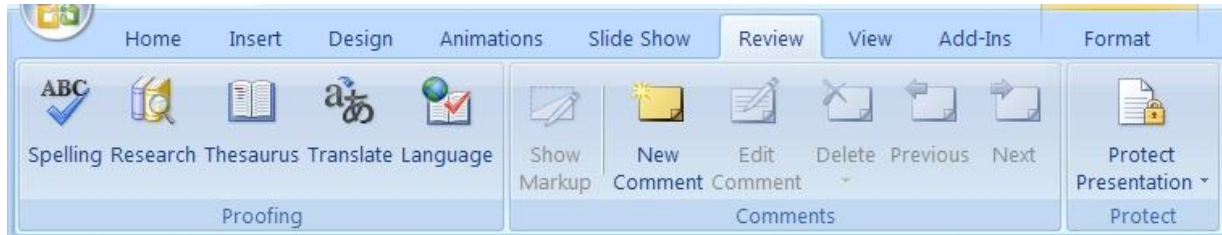




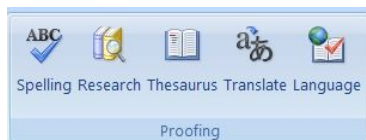
### Monitors

This section provides the tools to change the resolution of the slide show choose which monitor to display it on if you have multiple monitors and use presenter view if you have multiple monitors.

### Review Tab



The review tab offers three sections which include proofing, comments, and protect.



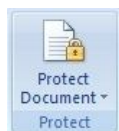
### Proofing

The proofing section provides the standard spelling check, a thesaurus, research tools that include MSN search and Microsoft Encarta encyclopedia. You will also find translation tools to help with single words or the whole document. The translation of the entire document is done by an online service called Wordlingo.



### Comments

The comments section allows you to add comments to a document for easier collaboration. You can cycle through the comments to find out what notes you left for yourself or others and you can delete a comment that was made when it is no longer relevant.



### Protect

The protect section gives you options to add a password and protect the document. You can restrict changes to formatting and editing or the whole document. If you use Windows Live you can also manage permissions for specific users who also have Windows Live.

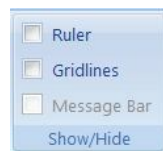
## View Tab



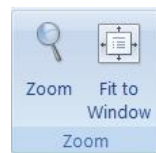
The view tab offers six sections which include presentation views, show/hide, zoom, Color/Greyscale, window and macros.

**Presentation Views**

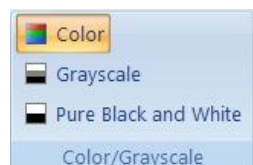
The presentation views section switches you between normal, slide sorter, notes page, slide show, slide master, handout master and notes master. Normal shows you one slide in the centre with thumbnails of all slides to the left of the screen. Slide sorter fills the centre with thumbnails of all slides which you can drag around to sort them. The notes page view shows the slide on the top section and notes you add in a bottom section. Slide show will start the slide show from the beginning. The Slide master, handout master and notes master views allow you to change what the presentations themes will follow by working with a master setup. Each of these master views also provide another tab to the ribbon.

**Show/Hide**

The show/hide section will toggle certain tools on or off the screen including rulers, gridlines and message bar. The rulers will show along the top and left side of the screen. Gridlines will cover your entire document inside the margins. They will be visible on screen but don't print. The message bar can only be displayed when there is a message to be displayed. One common reason for the message bar to display is when macros have been enabled or disabled.

**Zoom**

The zoom section provides tools to zoom into or out of the document. You can choose your own zoom factor or use one of the predefined zoom factors.

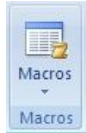
**Color/Greyscale**

This section allows you to switch between color, grayscale or pure black and white. This will allow you to see how slides will look when printed on a black and white printer.



### Window

The new window button will open your current document in a new window. The arrange all button will take your currently open windows and stack them one on top of the other. This is also where you can easily switch between windows.



### Macros

The macros section provides the tools required to work with and create basic macros. You can view existing macros or record your own. Choose record macro from the drop down and then perform the functions you do often, like change the page layout, and style of the document. Once you have done those tasks then stop recording. You will be able to use that macro over again to shorten the steps you need to take every time you need to perform that set of tasks.

## 2.4. Opening a presentation

The Open window gives you more options for opening an existing presentation than the New from Existing window does. You'll find these options useful in certain situations, such as when you want to protect an existing presentation by opening it in read-only mode, read through all the slides to make sure it's the one you want, and *then* save a copy.

To open an existing presentation using the Open window:

- Choose Office button → Open (or press Ctrl+O).
- The Open window appears
- Select the file you want to open, either by clicking the folder icons you see on the left side of the window, or by clicking the "Look in" drop-down menu. When the PowerPoint file you're looking for appears in the list, click it to select it.

### 2.4.1. Creating a presentation

To create a new presentation with PowerPoint 2007:

1. Launch PowerPoint 2007. The program will open up with a new blank presentation already created for you.

2. To save the presentation, click on the new Office button and choose Save (or click on the Save button in the Quick Access Toolbar).
3. Enter a file name for your new presentation and select a save location.
4. Click on Save. PowerPoint 2007 uses a different file format than previous versions of the program. However, you can save a copy.

PowerPoint 2007 presentation that is backward-compatible with older versions of the program. To do this, click on the Office button and select Save As > PowerPoint 97-2003 Presentation. You should save often as your work on your presentation to avoid losing your changes. A quick way to save changes as you work is to use the keyboard shortcut Control + S. If you want to save a copy of your presentation with a different name, click on the Office button, choose Save As > PowerPoint Presentation and enter a different name in the File name field at the bottom of the Save As window.

**Another way to create a new presentation:** By clicking on the Office button and choosing New. This will open the New Presentation window, where you will have the following options on the left side:

- Blank and recent: click on Blank Presentation on the right to create a blank presentation with no formatting applied to it.
- Installed Templates: these are the built-in presentation designs included with PowerPoint 2007.
- Installed Themes: similar to templates, but also include formatting such as colors, fonts and effects to give your presentations a consistent look.

Microsoft Office Online: these are templates you can download from the Microsoft website if you have an internet connection. Once you've chosen a template or theme, click on Create or Download. The formatting options included in the template or theme will be applied to the new presentation created by PowerPoint 2007.

#### **2.4.2. Inserting and deleting a presentation**

**Working with slides:** To add a slide to your presentation, open the Home tab in the Ribbon and click on the New Slide button. This will add a new slide with the same layout as the previous slide. To change the layout of a slide after you've added it to your presentation, click on Layout in the Home tab

and choose a different layout from the menu. To duplicate an existing slide, select the slide in the Slide Pane, right-click on it and choose Duplicate Slide.

To move a slide so it appears at a different point in the presentation, use drag and drop to move the slide's thumbnail in the Slides Pane (on the left side of the window) until it is in the desired location. If you have a long presentation with many slides, the Slide Sorter may provide a better view while you reorder your slides.

### **Another way of adding slide to the presentation**

How to Add Slides to a Presentation

1. Click the New Slide button on the Formatting toolbar.
2. From the list of Slide Layouts, select the layout you want to apply to the new slide.
3. You may now begin adding content using the placeholders in the layout.

### **How to Change the Layout for any Slide**

PowerPoint will try to guess what layout you want to use for new slides that are added to the presentation. If you want a different layout for the slide you can quickly change the layout for any slide.

1. Display the slide that you want to change in the Slide Pane (work area in the center of the window).
2. Choose Format > Slide Layout to display the Slide Layout task pane.
3. Click on the layout you want to apply to the slide.
4. PowerPoint will attempt to fit existing content into the new layout, but you will probably have to make additional changes.

### **How to Add Slides in the Outline Tab**

Create new slides while working in the Outline tab. By default the Outlining toolbar should display, but if it does not, select View > Toolbars > Outlining.

1. Display the Outline tab by clicking on Outline in the pane on the left.
2. Place the cursor at the end of the text in the slide you wish the new slide to follow.
3. Click the New Slide button to insert a new slide.

To delete a slide, press the Delete key on your keyboard with the slide selected in the Slide Pane. To hide a slide, right-click on it in the Slide Pane and select Hide Slide.

The hidden slide will be indicated by a square around the slide number in the Slides Pane. To unhide the slide, right-click and select Hide Slide one more time.

**Adding Content to Slides:** The fastest way to add content in PowerPoint is by selecting a slide layout and entering your content into one of the text placeholders. For example, if you select the Title Slide layout, you can enter a title for your slide by clicking on the placeholder text at the top of the Slide Canvas and entering your own text.

You can also add content to a slide by copying it from another document the following step should be implemented

- Select the content you wish to copy in the other document and copy it to the clipboard. In most programs this is done by choosing Edit > Copy (if you are copying from a Microsoft Office document, click on the Copy button in the
- Clipboard group of the Home tab). Place your cursor inside the text placeholder where you want to paste the copied content.
- Click on the Paste button in the Clipboard group of the Home tab. Many slide layouts also includes bulleted lists. To add text to a bulleted list, click the placeholder text next to the first bullet and begin adding the desired text. A new item will be added to the list each time you press the Enter key on your keyboard. To go to the next line without adding another bullet, hold down the Shift key while pressing Enter.

Many slide layouts also include bulleted lists. To add text to a bulleted list, click the placeholder text next to the first bullet and begin adding the desired text. A new item will be added to the list each time you press the Enter key on

your keyboard. To go to the next line without adding another bullet, hold down the Shift key while pressing Enter

### **Saving Power Point**

Office button includes a lot of options that used to be found under the file menu, such as save and print. Once new presentation with Power Point 2007 is launched by open up with a new blank presentation/already created by the user, the presentation should be saved or save as action should be taken place. The following are the steps for saving a presentation

1. To save the presentation, click on the new Office button and choose Save (or click on the Save button in the Quick Access Toolbar).
2. Enter a file name for your new presentation and select a save location.
3. Click on Save.

PowerPoint 2007 uses a different file format than previous versions of the program. However, you can save a copy of your PowerPoint 2007 presentation that is backward-compatible with older versions of the program. To do this, click on the Office button and select Save As > PowerPoint 97-2003 Presentation. You should save often as your work on your presentation to avoid losing your changes. A quick way to save changes as you work is to use the keyboard shortcut Control + S. If you want to save a copy of your presentation with a different name, click on the Office button, choose Save As > PowerPoint Presentation and enter a different name in the File name field at the bottom of the Save As window.

#### **2.4.3. Copying a slide**

A quick way to use slides from one presentation in another presentation is to copy the slides that you want to use and paste those slides into the new presentation.

1. Open both presentations to show them at the same time on the screen. The original presentation contains the slides you plan to copy, and the destination presentation is where they will go. The destination presentation may be an existing presentation or a new presentation.

2. On the ribbon, go to the **View** tab.
3. In the **Window** group, select **Arrange All**.
4. In the **Slides pane** of the original presentation, right-click the thumbnail of the slide to be copied.
5. Choose **Copy** from the shortcut menu.
6. In the destination presentation, right-click a blank area of the **Slides** pane where you want to place the copied slide. It can be placed anywhere in the sequence of slides in the presentation.
7. Choose a Paste option

### **2.5. Slide numbering**

Slide numbers are like page numbers. They show the number of the current slide. Slide numbers are easy to add, but they can be frustrating, as well. The following steps are considered for adding slide number.

#### **Step 1: Insert slide number**

The simplest way to insert a slide number in PowerPoint is to navigate to the 'Insert' tab, and then click the icon to 'Insert Slide Number'. Clicking this option opens a pop-up where you check 'Slide Number' and then 'Apply to all'

#### **Step 2: Add footers in the Slide Master**

If step one didn't work, let's level up our slide number skills. Navigate to the View tab, and then open the Slide Master. Once you're in the Slide Master you'll notice that you still have the Insert Slide Number option you did in the normal PowerPoint view. For some reason of explicit wizardry, this option doesn't work.

When you open up the Slide Master it will default onto the page layout for the page you we're viewing in the normal view. If you are struggling to get slide numbers on this page it could be because the 'Footers' option isn't checked. Checking this should bring up a number of pre-programmed footers on your slide.



**Step 3: Edit the Master Layout**

Step two works if things have been deleted or moved (often by accident) from a particular template in your master, but sometimes there are page numbers missing across multiple layouts. So to fix this, we go back and open up the Slide Master from the View tab and select the main layout.

Right click and select 'Master Layout'.

This will bring up a number of options, one of which... drum roll please... will be the option to add a slide number. Make sure this box is checked and it should bring up your slide numbers in all their collective glory.

**2.6. Animation and Transition**

Already we have seen that MS PowerPoint, a presentation tool was used to create effective and eye-catching presentations in a matter of minutes. It gives you a step-by-step creation of a simple presentation, besides introducing you to the various features available in PowerPoint. It also details the way in which you could make your presentation attractive by changing the font (type, size and colour), adding pictures, diagrams and animation. Here now we study how animation makes our presentation an eye-catching one.

**• Transitions**

To add a transition to a slide:

1. Choose the slide in the Slides Pane.
2. Open the Animations tab of the Ribbon.
3. Hover over the transition icons in the Transition to This Slide group to see a preview of each transition in the Slide Canvas. When you find one you like, click on the icon for that transition.
4. Use the pulldown menus to the right of the transition icons to add sound and change the transition speed.
5. Click on "Apply To All" if you wish to apply the currently selected transition to all slides in your presentation.

To advance the current slide automatically when you present, check the box next to “Automatically After” and enter the number of seconds in the field to the right.

- **Animation**

To animate any object in the Slide Canvas:

1. Select the object you wish to animate.
2. Select an animation from the Animate pulldown menu in the Animations tab of the Ribbon. You will see a preview of the animation in the Slide Canvas.
3. If you wish to create more complex animations, choose Custom Animation at the bottom of the Animate pulldown menu. This will open the Custom Animation pane on the right side of the window.
4. Click on Add Effect and choose the type of animation you wish to add (Entrance, Emphasis, Exit, or the new Motion Path animation). Clicking on each animation type will open a submenu with the animations available under that category.
5. Once you’ve added an animation, use the pulldown menus under Modify to set when the animation will start (On Click, With Previous or After Previous) and the animation speed. Depending on the animation type you select, you may see additional pulldown menus for changing the animation direction or path.
6. Use the arrows under the animations list to change the order in which the animations will be executed when you play the slide. To remove an animation, select it from the list and click on the Remove button at the top of the pane.
7. Click on Play to preview your animation in the Slide Canvas.

**Motion paths:**

Motion paths allows you to select a path that will apply to the selected object or text. Various options are available and are detailed further in this unit.

Motion paths is the ability to animate an object so it moves along a path. To add a motion path animation:

1. Select the object you wish to animate.
2. Choose Custom Animation from the Animate pulldown menu of the Animations tab. The Custom Animation task pane will open on the right side of the window.
3. Click on Add Effect and choose Motion Paths.
4. Select a path from the list or select Draw Motion path to draw the path yourself.
5. Each path will have a start point and an end point.

**Selecting the desired effect:** By applying one or more of these to see the effect on the object, item, or text and choose the one that appeals the most.

Effects available under each of the categories are shown below.

**Entrance**

- (1) Blinds
- (2) Box
- (3) Checkerboard
- (4) Diamond
- (5) Fly In

**Emphasis**

- (1) Change Font
- (2) Change Font Size
- (3) Change Font Style
- (4) Grow/Shrink
- (5) Spin

**Exit**

- (1) Blinds
- (2) Box
- (3) Checkered box

- (4) Diamond
- (5) Fly In

**Motion Paths**

- (1) Diagonal Down Right
- (2) Diagonal Up Right
- (3) Down
- (4) Left
- (5) Right
- (6) Up

2.7. Summary

- In this unit, you have studied that a PowerPoint presentation consists of individual slides arranged in a sequential manner. New slides can be inserted, existing slides can be deleted and slides can be re-ordered within a presentation. Presentations can then be saved in the default directory (which can be changed, if required) with a **.ppt** extension.
- You can also customize your presentation and control the appearance by adding pictures, objects and animation to it thereby giving it an attractive look.

**2.8 SAQ**

1. Write short notes on commonly used slides in Power Point?
2. Write short notes on how to implement animation in Power Point?
3. How to insert graphs in Power Point?
4. Discuss the steps involved in inserting sound and video in Power Point?
5. Discuss how to create presentation?



<b>Unit – III Introduction to MS Excel</b>
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## Structure

## 3.0. Objective

## 3.1. Basics

3.1.1. Creating, inserting and deleting a worksheet

3.1.2. Menus

## 3.2. Formatting

## 3.3. Renaming and Labeling a worksheet

## 3.4. Finding and Replacing the data

## 3.5. Summary

## 3.6. S.A.Q

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**3.0. Objective**

Students should be able to

- Identify the MS Excel screen layout and its components, and
- Identify various menus and their functions.
- know the MS Excel Standard Toolbar and the Formatting Toolbar and its components, and
- Learn various functions and formulas of MS Excel.

**3.1. Basics**

MS Excel is a powerful spreadsheet program through which you can create tables of any kind. These tables may contain numeric values, text data or formulas. You can use Excel to automate simple tasks like giving lists or to create sophisticated analysis tables for calculating the future trends in the stock market.

**• Excel features**

**Conditional Formatting:** You can format cells/data according to condition and can get glimpse of entire data within seconds.

**VBA, Macros & automation:** This would make computer work for you. You can automate mundane job for you.

**Pivot Tables:** Worried about how you'll interpret data. Let excel do it for you. This is to must know feature of excel.

**Lookup Formulas:** This formula is deadly. Combination of it with match, index can help in doing wonders.

**Power Pivot:** It helps in querying the huge data effectively. Has been introduced in recent version.

### **Add Header and Footer**

MS Excel allows us to keep header and footer in our spreadsheet document.

### **Find and Replace Command**

MS Excel allows us to find the needed data (text and number) in the workbook and also replace the existing data with a new one.

### **Password protection**

It allows user to protect their workbooks by using password from unauthorized access to their information.

### **Data filtering**

Filtering is a quick and easy way to find and work with a subset of data in a range. A filtered range displays only the rows that meet the criteria you specify for a column. MS Excel provides two commands for filtering ranges:

- Auto filter: which includes filter by selection, for simple criteria
- Advanced filter: for more complex criteria

### **Data sorting**

Data sorting is the process of arranging data in some logical order. MS Excel allows us to sort data either in ascending or descending order.

### **Built in formulae**

MS Excel has got many built – in formulae for sum, average, minimum, etc. We can use those formulae as per our needs.

### **Automatically edits the result**

MS Excel automatically edits the result if any changes are made in any of the cell.

### 3.1.1. Creating, inserting and deleting a worksheet

A Work sheet, in the word's original meaning, is a sheet of paper on which one performs work. Microsoft Excel, a popular spreadsheet program, refers to a single spreadsheet as a worksheet, and it refers to a collection of worksheets as a workbook.

**a) Creating new worksheet:** To create new worksheet following steps should be implemented

- Click the file tab.
- Click new
- Under templates, click New from existing.
- In the New from Existing Workbook dialog box.
- Click the workbook, and then click Create New.

#### **b) Inserting and deleting worksheet**

Inserting and deleting worksheets in Excel is a critical skill to possess when working within a workbook in Excel.

To insert a single new worksheet at the end of the current listing of worksheets, click the “New Sheet” button at the right end of the spreadsheet name tabs. Alternatively, you can also click the “Home” tab in the Ribbon. Then click the “Insert” drop-down button within the “Cells” button group. Then select the “Insert Sheet” command from the drop-down menu. Alternatively, you could press the keyboard shortcut of “Shift”+“F11” on your keyboard to automatically insert a new worksheet. If using these last two methods, however, note that the new worksheets will always be inserted to the left of the worksheet name that appears in bold when the sheet is inserted.

Deleting old worksheets that you no longer use can reduce worksheet clutter in workbooks. You can easily delete worksheets in Excel. Simply select the worksheet name tabs of the sheet or the sheets that you want to delete. Then click the “Delete” button in the “Cells” group on the “Home” tab in the Ribbon. Then click the “Delete Sheet” choice in the button’s drop-down menu to delete the selected worksheets.

The following are the instructions for inserting and deleting worksheets in Excel

- To insert a single new worksheet at the end of the current listing of worksheets, click the “New Sheet” button at the right end of the spreadsheet name tabs.
- Alternatively, click the “Home” tab in the Ribbon.
- Then click the “Insert” drop-down button within the “Cells” button group.
- Then select the “Insert Sheet” command from the drop-down menu.
- Alternatively, you could also press the keyboard shortcut of “Shift”+“F11” on your keyboard to automatically insert a new worksheet.
- If using these last two methods, however, note that the new worksheets will always be inserted to the left of the worksheet name that appears in bold when the new sheet is inserted.
- To delete worksheets in Excel, select the worksheet name tabs of the sheet or the sheets you want to delete.
- Click the “Delete” button in the “Cells” group on the “Home” tab in the Ribbon and choose the “Delete Sheet” choice from the button’s drop-down menu.

### **c) saving worksheet in Excel**

#### **Save As**

To save your work often or you risk losing your Excel data if the computer crashes or the power goes out. When you save a workbook for the first time, you see the Save As dialog box. The appearance and functionality of the Save As dialog box varies depending on whether you are running Excel 2007, 2010 and so on. Follow these steps to save your workbook when running Excel 2007.

1. Click the Office button and choose Save. The Save As dialog box appears.
2. Click the Browse Folders button (with the triangle pointing downward) to expand the Save As dialog box if necessary.



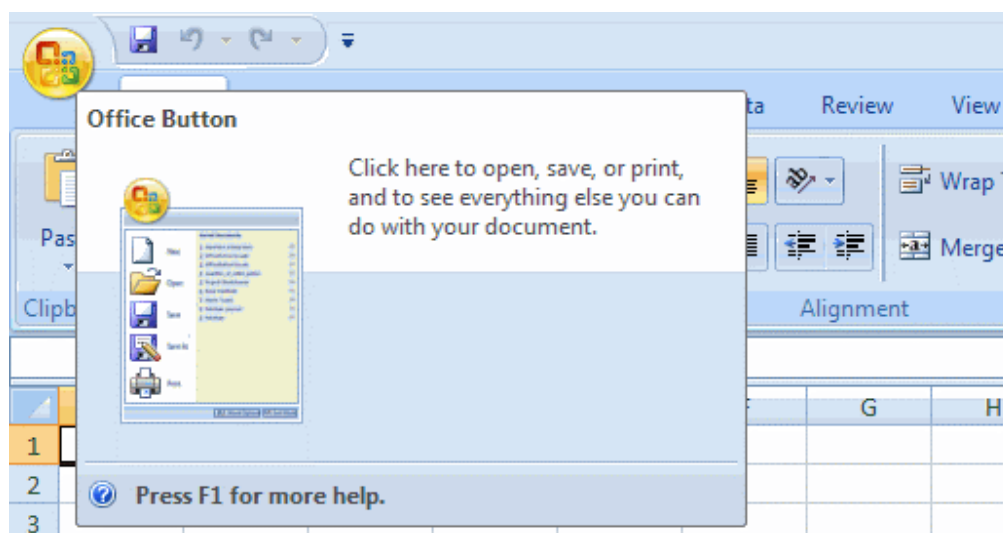
3. When you expand the Save As dialog box, the dialog box displays the Navigation Pane, where you can select folders listed in the Favorite Links or Folders sections.
4. In the Navigation Pane, select the folder in which you want to save the file. Type a descriptive name for the file in the File Name box.
5. Click the Save button to save the file in the selected folder.

**Save :**Follow these steps to save your workbook when running Excel 2007 on Windows XP:

6. Click the Save In drop-down list button and select the folder in which you want to save the file.
7. Type a descriptive name for the file in the File name box.
8. Click the Save button to save the file in the selected folder.

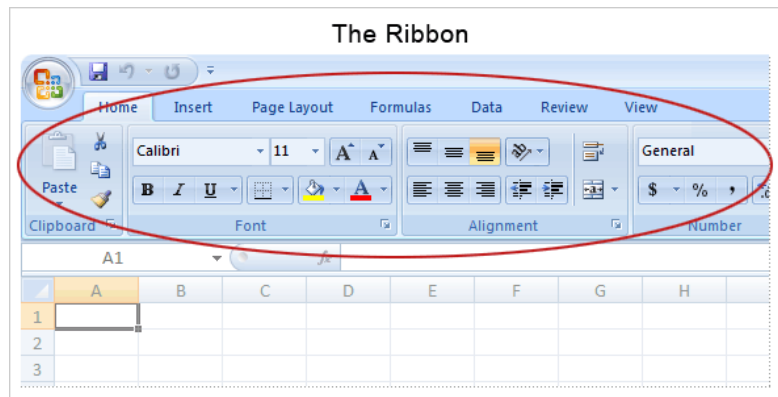
### 3.1.2. Menus

The office button is at the top left-hand corner of the Ribbon. It replaces the File Menu of earlier versions of Office and Excel. It is used to Open, Save, Print and Close files.



### THE RIBBON

The commands are organized by Tab and Group. At the highest level is the Ribbon for each Tab. Here this is shown for the Home Tab.



Eventually we want to get to commands that we use. From the Ribbon the sequence is

1. **Tabs:**

- The seven tabs are Home, Insert, Page Layout, Formulas, Data, Review, View.
- The above example uses the Home tab.

2. **Groups:**

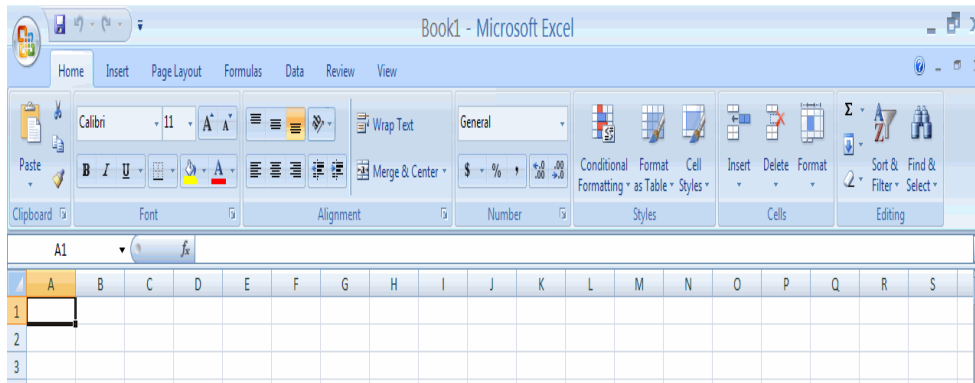
- These show related items together.
- For example, there is the Font group (within the Home tab).

3. **Commands**

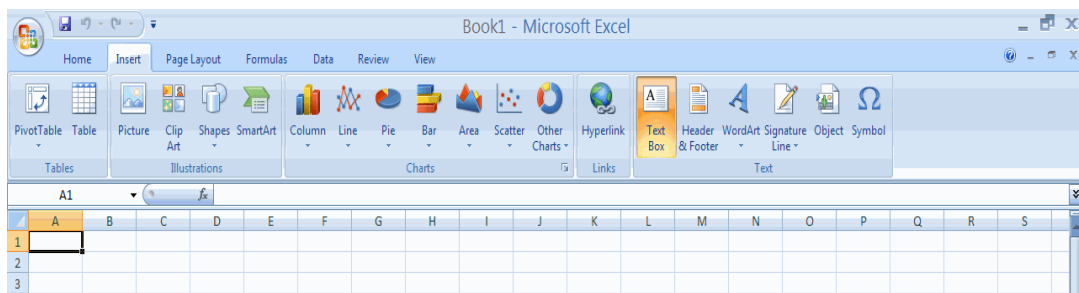
- A command is a button, a box to enter information, or a menu.
- For example, there is the B button (in the Font group in the Home tab) to make text bold.
- The **Dialog Box launcher** is a small arrow that gives additional commands (e.g. at bottom right of the Font group).

### THE RIBBON FOR EACH OF THE SEVEN TABS

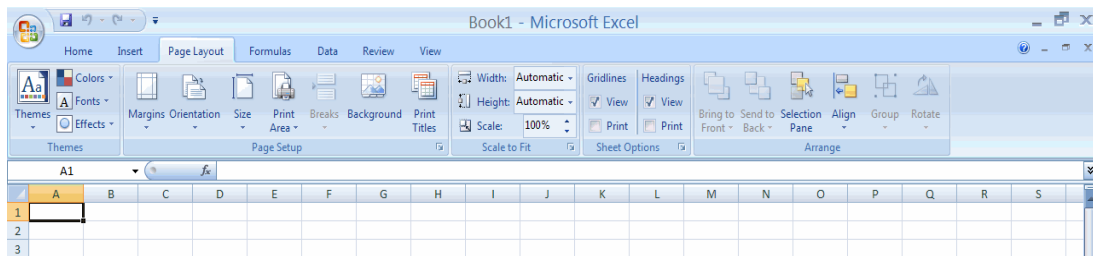
1. **Home Tab** - Use to read in data and save data in various formats.



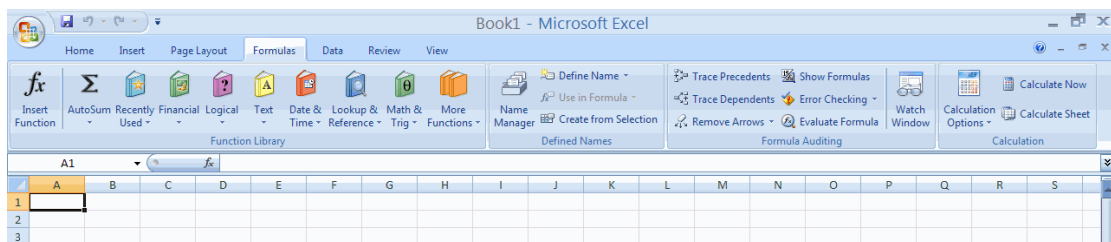
**2. Insert Tab - Use to create Charts.**



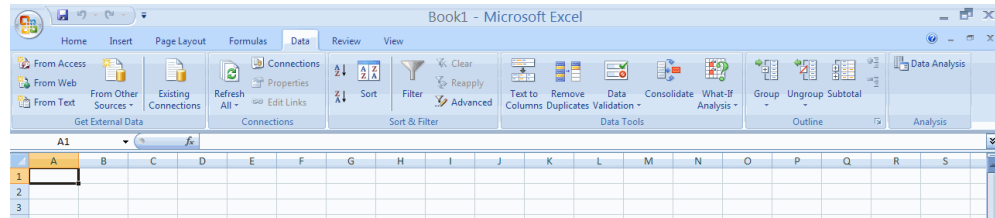
**3. Page Layout Tab**



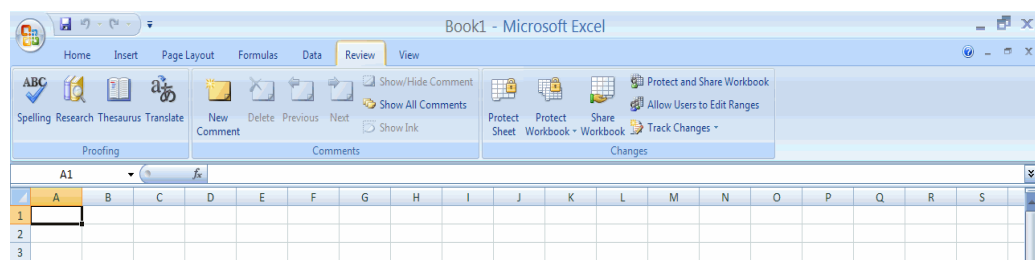
**4. Formulas Tab**



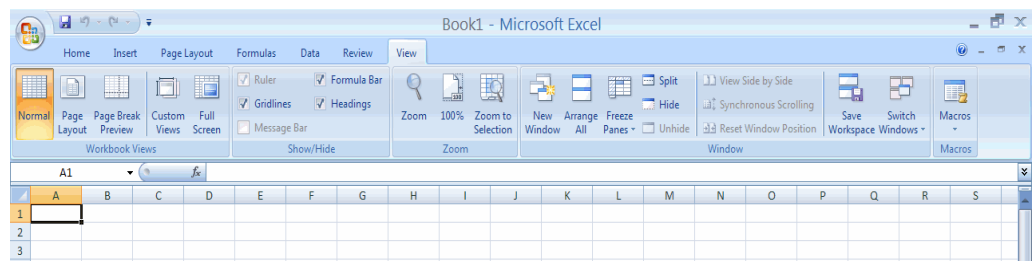
### 5. Data Tab - Use the Data Analysis add-in for histograms, descriptive statistics, regression, ....



### 6. Review Tab



### 7. View Tab



### 3.2. Formatting

Excel makes available numerous formatting options to give your worksheet a polished look. You can change the size, colour and angle of fonts, add colour to the borders and backgrounds of cells, and have the format of a cell change, based on its value. You will see that some of the formatting features in MS Excel are same as you have used in MS Word.

#### USING FORMATTING TOOLBAR

Formatting helps to make our work more presentable. It also helps the viewer/reader to understand the worksheet more easily with respect to its

purpose. There are three locations where the Excel 2007 formatting tools are available.

1. In the home tab
2. In the mini toolbar that appears when you right click a range or a cell
3. In the format cells dialog box.

**Home Tab and the Formatting Tools:** Home tab provides the quick access to the most commonly used options with respect to the formatting requirements. You can select a cell or a range and then use the tool as per the need like Font, Alignment or Number groups. To understand the proper and best use of such tools, only way is to use them and experience their effect. Some of the controls are further expandable like drop-down lists etc. If you see some small arrow along with a button. The button will expand to display the available choices.

**In the Mini Toolbar:** shortcut menu appears when you right click a cell or a range selection. A mini toolbar also appears above the shortcut menu. The Mini toolbar contains controls for common formatting:

- Font type
- Font Size
- Decrease Font
- Increase Font
- Accounting Number Format
- Comma Style
- Font Color
- Format Painter
- Bold
- Italic
- Center

- Percent Style
- Borders
- Merge And Center
- Increase Decimal
- Decrease Decimal
- Fill Color

**Using the Format Cells dialog box:**

Although most of the formatting related requirements gets fulfilled by the controls available on the Home tab of the Ribbon, some special types of formatting are fulfilled by using Format cells dialog box.

This dialog box allows to apply more or less any type of formatting style and number formatting. The formats selected from Format Cells Dialog box will be effective to the cells which are selected at the time.

To use Format Cells dialog box, select the cell or a range to apply formatting. Now choose any of the following methods

- Press the combination of Ctrl+1, i.e., Control key and numeric 1 key.
- Click the dialog box launcher in Home → Font, Home → Alignment, or Home → Number. A small down word pointing arrow icon will be displayed to the right. In the Excel Ribbon, these arrow marks are known as dialog box launcher. Choose Format Cells from the shortcut menu after you Right-click the selected cell or range.
- Click the More command in some of the drop-down controls in the Ribbon. For example, the Home → Number → General → More Number Formats... drop-down includes an item named More Number Formats.

**5.5.1 Cell FORMATTING**

There are six tabs in Format Cells dialog box: Number, Alignment, Font, Border, Patterns and Protection.

**Number tab:** The data type can be selected from the options on this tab. Select the range you would like to format and click on one of the category number. And apply that style to your numbers.

**Alignment tab:** These options allow you to change the position and alignment of the data with the cell. The Format Cells dialog box offers you more options than the alignment buttons on the Formatting toolbar. For example, you can change the orientation of the text.

**Font tab:** All of the font attributes are displayed in this tab including font face, size, style, and effects. Using Formatting toolbar you can bold, italicize, and underline your cell entries. For even more formatting options you can use the Format Cells dialog box.

#### **Border and Pattern tabs:**

You can use the Formatting toolbar for adding borders, cell shading, and font colour. These buttons are actually tear-off palettes. When you click on the picture portion of the button, the format of the picture displayed will be applied to the contents of the cell(s) you have selected in the worksheet. You can change the picture displayed on the button by clicking on the button's small drop-down arrow to access the palette of samples from which to choose.

Follow these steps to apply a border and colour to a selection using the options in the Format Cells dialog box.

1. Select Format→Cells to display the Format Cells dialog box.
2. Select the Border tab.
3. In the Presets area, choose None, Outline, or Inside to specify the location for the border.
4. Choose any of the following options for the border:

- In the Border area, click on any of the buttons to toggle its border.
  - Choose the border's line style in the Style area.
  - If necessary, select a colour for the border in the Color Palette.
5. Select the Patterns tab, and then choose any of the following options:
- Select a colour for the background of the selection in the Color palette.
  - If necessary, select a pattern for the background of the selection in the Pattern palette.
6. Choose OK to apply the border and colour.

### **Dates and Times**

If you enter the date “January 1, 2001” into a cell on the worksheet, Excel will automatically recognize the text as a date and change the format to “1-Jan-01”. To change the date format, select the Number tab from the Format Cells window. Select “Date” from the Category box and choose the format for the date from the Type box. If the field is a time, select “Time” from the Category box and select the type in the right box. Date and time combinations are also listed. Press OK when finished.

### **Formatting Columns and Rows:**

Sometimes the contents of the columns do not fit in its width. So, to adjust them within the width of the column, we can use AutoFit feature.

### **Steps to AutoFit Columns:**



- Click on Column Header/or any other cell in the column to change its width.
- Click Home tab.
- Select format from the cells group on the ribbon.
- Click on AutoFit Column Width.

Similarly you can apply AutoFit for row also.

- Click on Row Header/or any other cell in the Row to change its Height.
- Click Home tab.
- Select format from the cells group on the ribbon.

Another way of automatically adjusting columns and rows is by way of best fit. Follow the below steps:

- Place your pointer on or near the right edge of a column header of the column you wish to adjust. Notice that in this area your pointer changes to a double-headed arrow.
- Double click your pointer, and the column to the left of it will automatically adjust to fit the data entries within it. Similarly, pointing to a row header changes pointer to a double headed arrow. Double clicking results in a best fit (taller or shorter rows).

### **Hide Selected Column(s) or Row(s)**

Hide - Hides the selected column(s) or row(s), though the data is still there. Hiding column(s) or row(s) will help you to prevent unwanted changes. To hide a column, follow these steps:

- Select the column you want to hide by clicking on the column header.
- Right Click on the Column to hide and click on the Hide option.

### **Unhide Selected Column(s) or Row(s)**

To unhide the column follow these steps:

- Select the visible range of columns that includes the hidden column(s).
- Now Right Click on the selected Columns. Select Unhide from the pop-up menu.

### **FORMATTING WORKSHEETS USING CELL STYLES AND APPLYING STYLES:**

Excel 2007 provides cell styles to quickly format a cell by choosing from predefined styles. Styles help to give a professional look to your worksheets. In Excel, all styles are cell styles. However, a defined style can be applied to an entire worksheet. Cell styles can include any of the formatting that can be applied to a cell using the options available. We can also define our own cell styles.

- Select the cells to apply a style on.
- Choose Home tab. From Styles group, Click on Cell Styles.

### **A few of the effects are discussed below**

- Comma - Adds commas to the number and two digits beyond a decimal point.
- Comma [0] - Comma style that rounds to a whole number.
- Currency - Formats the number as currency with a dollar sign, commas, and two digits beyond the decimal point.
- Currency [0] - Currency style that rounds to a whole number.
- Normal - Reverts any changes to general number format.
- Percent - Changes the number to a percent and adds a percent sign.

### **Deleting Styles:**

- Right click on the style (say if you want to remove Bad Style)
- Choose delete.

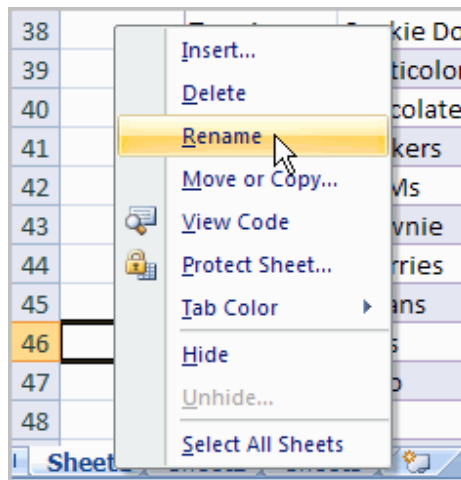
### 3.3. Renaming and labeling a worksheet

#### Naming worksheets

When you open an Excel workbook, there are **three sheets by default**, and the default name on the tabs are Sheet1, Sheet2, and Sheet3. These are not very informative names. Excel 2007 allows you to create a meaningful name for each worksheet in a workbook so you can quickly locate information.

To name a worksheet:

- Right-click the **sheet tab** to select it.
- Choose **Rename** from the menu that appears. The text is highlighted by a black box.



- Type a new name for the worksheet.

46		Toppings	Nuts
47		Toppings	Oreo
48		<b>Toppings Total</b>	

Sheet1 Sheet2 Sheet3

- Click off of the tab. The worksheet now assumes the descriptive name defined.  
OR
- Click the **Format** command in the **Cells group** on the Home tab.

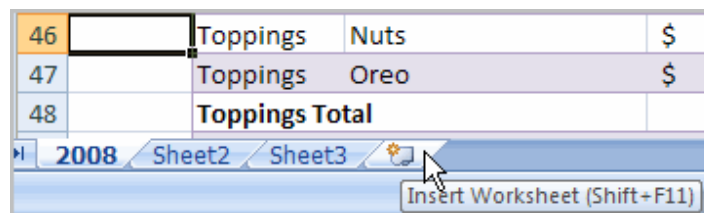
- Select **Rename Sheet**. The text is highlighted by a black box.
- Type a new name for the worksheet.
- Click off of the tab. The worksheet now assumes the descriptive name defined.

### Inserting worksheets

You can change the default number of sheets that appears by clicking the **Microsoft Office button** and choosing **Excel Options**. You also have the ability to **insert new worksheets** if needed while you are working.

To insert a new worksheet:

- Left-click the **Insert Worksheet** icon. A new sheet will appear. It will be named Sheet4, Sheet5, or whatever the next sequential sheet number may be in the workbook.



OR

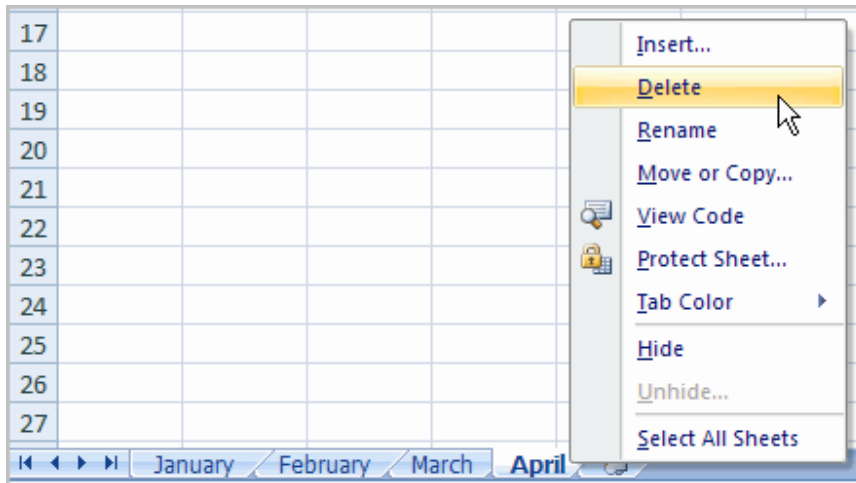
- Press the **Shift** and the **F11** keys on your keyboard.

### Deleting worksheets

Any worksheet can be **deleted** from a workbook, including those that have data in it. Remember, a workbook must contain at least one worksheet.

To delete one or more worksheets:

- Click on the sheet(s) you want to delete.
- Right-click the sheet(s), and a menu appears.
- Select **Delete**.



OR

- Select the sheet you want to remove.
- Click the **drop-down arrow** next to **Delete** in the Cells group on the Home tab.
- From the menu that appears, select Delete Sheet

### 3.4. Finding and Replacing the data

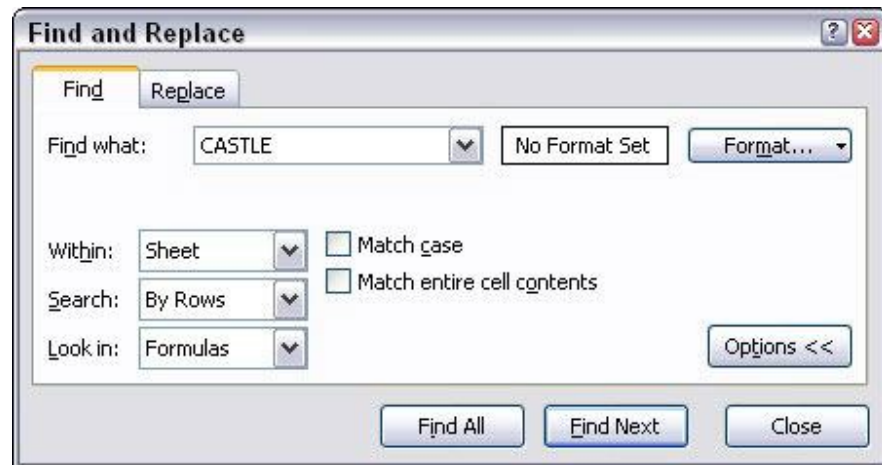
Excel 2007's Find and Replace feature can be a powerful tool. Use Find and Replace to locate and optionally replace text or values in a worksheet. You can narrow the search results by specifying formatting to look for as well as other search options, including Match Case.

#### Finding data

Follow these steps to locate data in a worksheet:

1. Choose Find & Select in the Editing group on the Home tab, and then select Find (or press Ctrl+F).  
The Find and Replace dialog box appears, with the Find tab on top.
2. In the Find What box, enter the data you want to locate.
3. (Optional) Click the Options button to expand the dialog box and specify any desired options.
  - **Within:** Search just the current worksheet or the entire workbook.

- **Search:** Select whether to search first across the rows or down the columns.
- **Look In:** Select whether you want to search through the values or formula results, through the actual formulas, or if you want to look in the comments.
- **Match Case:** Check this box if you want your search to be case-specific.
- **Match Entire Cell Contents:** Check this box if you want your search results to list only the items that exactly match your search criteria.



Specify search options on the Find tab in the Find and Replace dialog box.

4. Click Find Next.

Excel jumps to the first occurrence of the match. If this isn't the entry you're looking for, click Find Next again. Excel advises you if it doesn't find the data you're searching for.

5. Click Close when you've located the entry you want.

**Note:** use wildcards to search for data in your worksheets. Use the ? (question mark) to indicate a single unknown character, or the \*(asterisk) to indicate multiple unknown characters.

## Replacing data

To find and replace data in a worksheet, follow these steps:

1. Choose Find & Select in the Editing group on the Home tab, and then select Replace (or press Ctrl+H).

The Find and Replace dialog box appears with the Replace tab on top.

2. In the Find What box, enter the data you want to locate.
3. In the Replace With box, enter the data with which you want to replace the found data.



Use the Find and Replace feature to exchange data in Excel 2007.

4. (Optional) Click the Options button and specify any desired options.
5. Click Find Next to locate the first occurrence or click Find All to display a list of all occurrences.

You can sort the results of a Find All search by clicking a column heading.

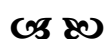
6. If you want to use the replacement data, click Replace.  
Excel performs the replacement and locates the next occurrence.
7. If you want to replace all occurrences at the same time, click Replace All.  
Excel displays an information box indicating the number of replacements made.
8. Click OK in the alert box and then click Close.

### 3.5. Summary

- MS Excel is a powerful spreadsheet program through which you can create tables of any kind.
- Excel features: You can format cells/data according to condition and can get glimpse of entire data within seconds. Pivot tables, lookup formulas, power pivot, add header and footer, find and replace, password protection, data filtering, built in formulae and many more.
- **Formatting Columns and Rows:**
- Sometimes the contents of the columns do not fit in its width. So, to adjust them within the width of the column, we can use AutoFit feature.

### 3.6. SAQ

1. What is Excel? List features of Excel?
2. Explain how to create, insert and save a worksheet?
3. What is formatting a cell? Explain?





**Unit IV MS Excel****Structure****0.4. Objective****4.1. Sorting****4.2. Functions****4.3. Creating and Editing charts and Graphs****4.4. Printing Worksheets****4.5. Steps involved in problem solving****4.6. Algorithm****4.7. Flowchart****4.8. Summary****4.9. SAQ**

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**4.0. Objective**

Already we have studied the basic concepts of MS Excel such as formatting toolbar, its components, menus etc. Let us learn about sorting the data in ascending or descending order, functions and formulas of MS Excel, how to print worksheets, flowcharts and graphs. Finally we learn about algorithms which help in designing the problem solving operations in programming.

**4.1. Sorting**

Data sorting is the process of arranging data in some logical order. MS Excel allows us to sort data either in ascending or descending order. If your Excel 2007 worksheet has become quite large, using the Sort dialog box to sort on multiple columns can make it easier to find the data you need. The Sort dialog box lets you tell Excel what column to sort on next if two cells in the main sort column contain the same value or data. The following are the steps involved in sort the data.

**1. Select or click in the list of data you want to sort.**

You can select only a single column of data if you want to sort that column independently of the rest of the data. However, in most cases, you likely want to sort the entire list.



**2. Click the Sort button in the Sort & Filter group on the Data tab.**

The Sort dialog box appears. If your data includes column headings, make sure the My Data Has Headers option is checked. Excel can usually detect the correct setting automatically.



**3. From the Sort By drop-down list, select the column by which you want to sort.**

This drop-down list includes the column headings for each column in the list.

**4. From the Sort On drop-down list, choose Values.**

Notice that you also can perform the sort on Cell Color, Font Color, or Cell Icon. Typically, you will perform a sort based on values rather than formatting.

**5. From the Order drop-down list, select how you want to sort the data.**

The options that appear in this list change based on the contents of the sort column. Choose A to Z or Z to A to sort text values, Smallest to Largest or Largest to Smallest to sort numeric data, or Oldest to Newest or Newest to Oldest to sort by dates.

**6. Click the Add Level button.**

Additional drop-down list boxes appear for the secondary sort column.



7. From the Then By list, select the secondary column you want to sort on.

This is the column Excel will sort by if two or more items are identical in the first Sort By option.

8. Select how you want to sort the second data criteria.

After you specify the options for the secondary sort column, you can add more sort columns as needed. Use the Move Up and Move Down buttons if you decide to change the order of the sort columns.

	Name	City	State	Zip
1	JOHN'S THE JORDON COMPANY	BIRMINGHAM	AL	35201
2	ABC	BIRMINGHAM	AL	35201
3	ROCKE	BIRMINGHAM	AL	35201
4	JOHN JOHN ALDEN LIFE INSURANCE CO	BIRMINGHAM	AL	35201
5	FRANK FUNCTION DIRECTOR	BIRMINGHAM	AL	35201
6	EMILE THE SALLERY COLLECTION	ATLANTA	GA	30308
7	HEATHY RAINBOW FOODS	ATLANTA	GA	30308
8	WANDA ROX INVESTMENT EDUCATION SERVICES	ATLANTA	GA	30308
9	NACOS MICRO MEDICAL SUPPLY INC	ATLANTA	GA	30308
10	WAFITE LIFE TECHNOLOGY SERVICES INC	ATLANTA	GA	30308
11	JOHN JOB PETS	ATLANTA	GA	30308
12	FLUP FLUPIN TRANSACTION SOLUTIONS INC	ATLANTA	GA	30308
13	ELITE ENVOIABLE SYSTEMS INC	ATLANTA	GA	30308
14	CLASH CLOTHING STORES INC	ATLANTA	GA	30308
15	GLERD CLEAR CONNECTION	ATLANTA	GA	30308
16	RENE THE BACK UP	COLUMBUS	GA	31906
17	REYON RETAIL DATA SYSTEMS OF CHICAGO	COLUMBUS	GA	31906
18	WOLF NORTH COUNTRY BUSINESS PRODUCTS	COLUMBUS	GA	31906
19	WOLFF MC GAWLEY SERVICES INC	COLUMBUS	GA	31906
20	GETTO OPTRONICS	COLUMBUS	GA	31906
21	WOLG HISTORY SPIRITS SALLERY	LOUISVILLE	GA	30248
22	SECRET SECRETARY OF STATE	LOUISVILLE	GA	30248
23	FRANER FRONER ICE	LOUISVILLE	GA	30248
24	LET I UZ CLANBORN INC	LOUISVILLE	GA	30248
25	WENNY 800 SHANE SYSTEMS USER GROUP	WANNETTA	GA	30087
26	WENNY WANNETT DEWERT SPINORS	WANNETTA	GA	30087
27	WENNY FIVE STAR SYSTEMS INC	WANNETTA	GA	30087
28	DOCKE DUCKE CLOTHING & SPORTING GOODS	WANNETTA	GA	30087
29	DOCKE COMBANCE COMPUTER CORPORATION	WANNETTA	GA	30087
30	DOCKE WANNETT THE CODES	WANNETTA	GA	30087

9. Click OK.

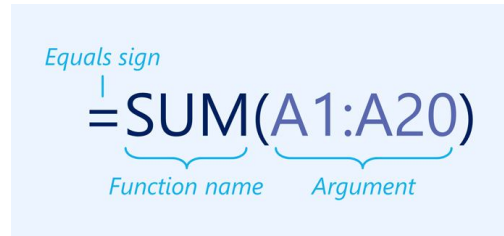
The dialog box closes and Excel performs the sort process.

## 4.2. Functions

A **function** is a **predefined formula** that performs calculations using specific values in a particular order. Excel includes many common functions that can be used to quickly find the **sum**, **average**, **count**, **maximum value**, and **minimum value** for a range of cells. In order to use functions correctly, you'll need to understand the different **parts of a function** and how to create **arguments** to calculate values and cell references.

**5.7.1 Function:** In order to work correctly, a function must be written a specific way, which is called the **syntax**. The basic syntax for a function is the **equals sign (=)**, the **function name** (SUM, for example), and one or

more **arguments**. Arguments contain the information you want to calculate. The function in the example below would add the values of the cell range A1:A20.



**Working with arguments:** Arguments can refer to both **individual cells** and **cell ranges** and must be enclosed within **parentheses**. You can include one argument or multiple arguments, depending on the syntax required for the function.

For example, the function `=AVERAGE(B1:B9)` would calculate the **average** of the values in the cell range B1:B9. This function contains only one argument.

	A	B	C	D	E
1		1			
2		4			
3		5			
4		6			
5		8			
6		2			
7		3			
8		5			
9		6			
10		=AVERAGE(B1:B9)			
11					

Multiple arguments must be separated by a **comma**. For example, the function `=SUM(A1:A3, C1:C2, E1)` will **add** the values of all of the cells in the three arguments.

	A	B	C	D	E	F
1	4		6		20	
2	8		10			
3	12					
4						
5						
6						

**Creating a function:** There are a variety of functions available in Excel. Here are some of the most common functions.

- **SUM:** This function **adds** all of the values of the cells in the argument.
- **AVERAGE:** This function determines the **average** of the values included in the argument. It calculates the sum of the cells and then divides that value by the number of cells in the argument.
- **COUNT:** This function **counts** the number of cells with numerical data in the argument. This function is useful for quickly counting items in a cell range.
- **MAX:** This function determines the **highest cell value** included in the argument.
- **MIN:** This function determines the **lowest cell value** included in the argument.

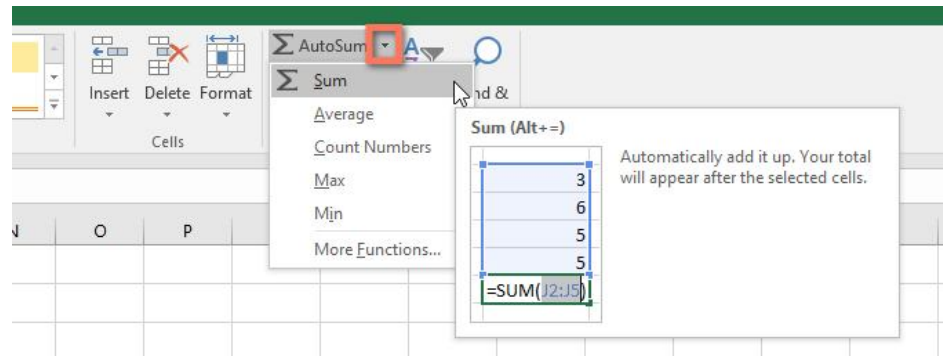
**To create a function using the AutoSum command:**

The **AutoSum** command allows you to automatically insert the most common functions into your formula, including SUM, AVERAGE, COUNT, MIN, and MAX. In the example below, we'll use the **SUM** function to calculate the **total cost** for a list of recently ordered items.

1. Select the **cell** that will contain the function. In our example, we'll select cell **D13**.

	A	B	C	D
2	ITEM	QUANTITY	UNIT PRICE	LINE TOTAL
3	Tomatoes (case of 12)	3	\$17.44	\$52.32
4	Black Beans (case of 10)	5	\$20.14	\$100.70
5	All Purpose Flour (50 lb.)	5	\$14.05	\$70.25
6	Corn Meal/Maza (25 lb.)	5	\$18.69	\$93.45
7	Brown Rice (25 lb.)	5	\$10.99	\$54.95
8	Lime Juice (1 gallon)	5	\$11.99	\$59.95
9	Tomato Juice (case of 10)	3	\$19.49	\$58.47
10	Hot Sauce (1 gallon)	8	\$7.35	\$58.80
11	Salsa, Medium (1 gallon)	12	\$8.47	\$101.64
12	Olive Oil (2.5 gallon)	4	\$28.69	\$114.76
13			TOTAL	
14				

- In the **Editing** group on the **Home** tab, click the **arrow** next to the **AutoSum** command. Next, choose the **desired function** from the drop-down menu. In our example, we'll select **Sum**.



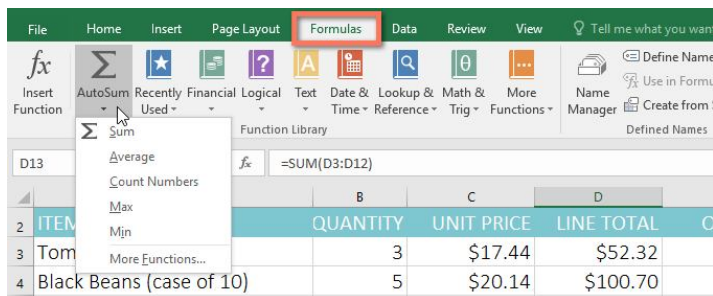
- Excel will place the **function** in the cell and automatically select a **cell range** for the argument. In our example, cells **D3:D12** were selected automatically; their values will be **added** to calculate the total cost. If Excel selects the wrong cell range, you can manually enter the desired cells into the argument.

	A	B	C	D
2	ITEM	QUANTITY	UNIT PRICE	LINE TOTAL
3	Tomatoes (case of 12)	3	\$17.44	\$52.32
4	Black Beans (case of 10)	5	\$20.14	\$100.70
5	All Purpose Flour (50 lb.)	5	\$14.05	\$70.25
6	Corn Meal/Maza (25 lb.)	5	\$18.69	\$93.45
7	Brown Rice (25 lb.)	5	\$10.99	\$54.95
8	Lime Juice (1 gallon)	5	\$11.99	\$59.95
9	Tomato Juice (case of 10)	3	\$19.49	\$58.47
10	Hot Sauce (1 gallon)	8	\$7.35	\$58.80
11	Salsa, Medium (1 gallon)	12	\$8.47	\$101.64
12	Olive Oil (2.5 gallon)	4	\$28.69	\$114.76
13				=SUM(D3:D12)
14				SUM(number1, [number2], ...)

- Press **Enter** on your keyboard. The function will be **calculated**, and the **result** will appear in the cell. In our example, the sum of D3:D12 is **\$765.29**.

	A	B	C	D
2	ITEM	QUANTITY	UNIT PRICE	LINE TOTAL
3	Tomatoes (case of 12)	3	\$17.44	\$52.32
4	Black Beans (case of 10)	5	\$20.14	\$100.70
5	All Purpose Flour (50 lb.)	5	\$14.05	\$70.25
6	Corn Meal/Maza (25 lb.)	5	\$18.69	\$93.45
7	Brown Rice (25 lb.)	5	\$10.99	\$54.95
8	Lime Juice (1 gallon)	5	\$11.99	\$59.95
9	Tomato Juice (case of 10)	3	\$19.49	\$58.47
10	Hot Sauce (1 gallon)	8	\$7.35	\$58.80
11	Salsa, Medium (1 gallon)	12	\$8.47	\$101.64
12	Olive Oil (2.5 gallon)	4	\$28.69	\$114.76
13			TOTAL	\$765.29
14				

The **AutoSum** command can also be accessed from the **Formulas** tab on the **Ribbon**.



You can also use the **Alt+=** keyboard shortcut instead of the AutoSum command. To use this shortcut, hold down the **Alt** key and then press the **equals sign**.

#### To enter a function manually:

If you already know the function name, you can easily type it yourself. In the example below (a tally of cookie sales), we'll use the **AVERAGE** function to calculate the **average number of units sold** by each troop.

1. Select the **cell** that will contain the function. In our example, we'll select cell **C10**.

2.

Frontier Kids Cookie Sales		
Troop Name	Troop ID	Units Sold
North Bend	#3506	1004
Silver Lake	#2745	938
Mountain Top	#1038	745
Rocky Trail	#3759	729
Forest Path	#4157	862
Green Valley	#1932	890
River View	#4233	775
Average Units		

3. Type the **equals sign (=)**, and enter the desired **function name**. You can also select the desired function from the list of **suggested functions** that appears below the cell as you type. In our example, we'll type **=AVERAGE**.

Frontier Kids Cookie Sales		
Troop Name	Troop ID	Units Sold
North Bend	#3506	1004
Silver Lake	#2745	938
Mountain Top	#1038	745
Rocky Trail	#3759	729
Forest Path	#4157	862
Green Valley	#1932	890
River View	#4233	775
Average Units		=AVERAGE

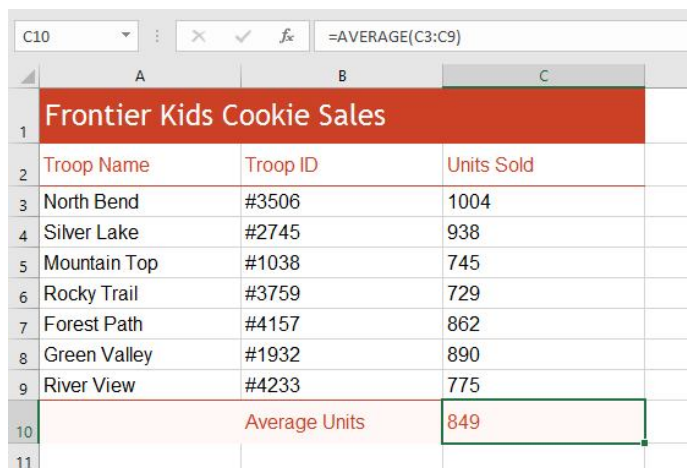
4. Enter the **cell range** for the argument inside **parentheses**. In our example, we'll type **(C3:C9)**. This formula will add the values of cells C3:C9, then divide that value by the total number of values in the range.





Frontier Kids Cookie Sales		
Troop Name	Troop ID	Units Sold
North Bend	#3506	1004
Silver Lake	#2745	938
Mountain Top	#1038	745
Rocky Trail	#3759	729
Forest Path	#4157	862
Green Valley	#1932	890
River View	#4233	775
Average Units		=AVERAGE(C3:C9)

5. Press **Enter** on your keyboard. The function will be calculated, and the **result** will appear in the cell. In our example, the average number of units sold by each troop is **849**.



Frontier Kids Cookie Sales		
Troop Name	Troop ID	Units Sold
North Bend	#3506	1004
Silver Lake	#2745	938
Mountain Top	#1038	745
Rocky Trail	#3759	729
Forest Path	#4157	862
Green Valley	#1932	890
River View	#4233	775
Average Units		849

## The Function Library

While there are hundreds of functions in Excel, the ones you'll use the most will depend on the **type of data** your workbooks contain. There's no need to learn every single function, but exploring some of the different **types** of functions will help you as you create new projects. You can even use the **Function Library** on the **Formulas** tab to browse functions by category, such as **Financial**, **Logical**, **Text**, and **Date & Time**. To access the **Function Library**, select the **Formulas** tab on the **Ribbon**.

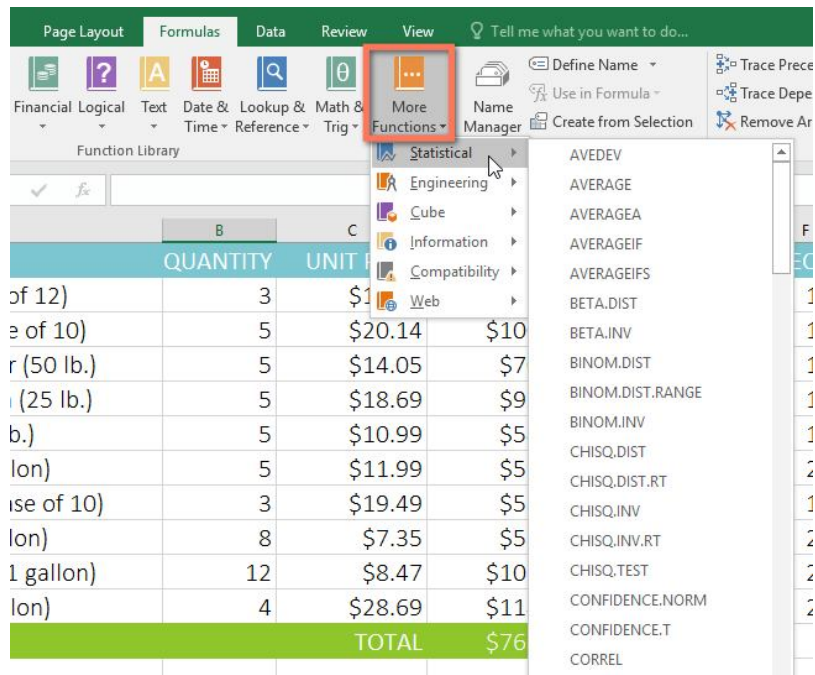
**To insert a function from the Function Library:**

In the example below, we'll use the COUNTA function to count the total number of items in the **Items** column. Unlike COUNT, **COUNTA** can be used to tally cells that contain data of any kind, not just numerical data.

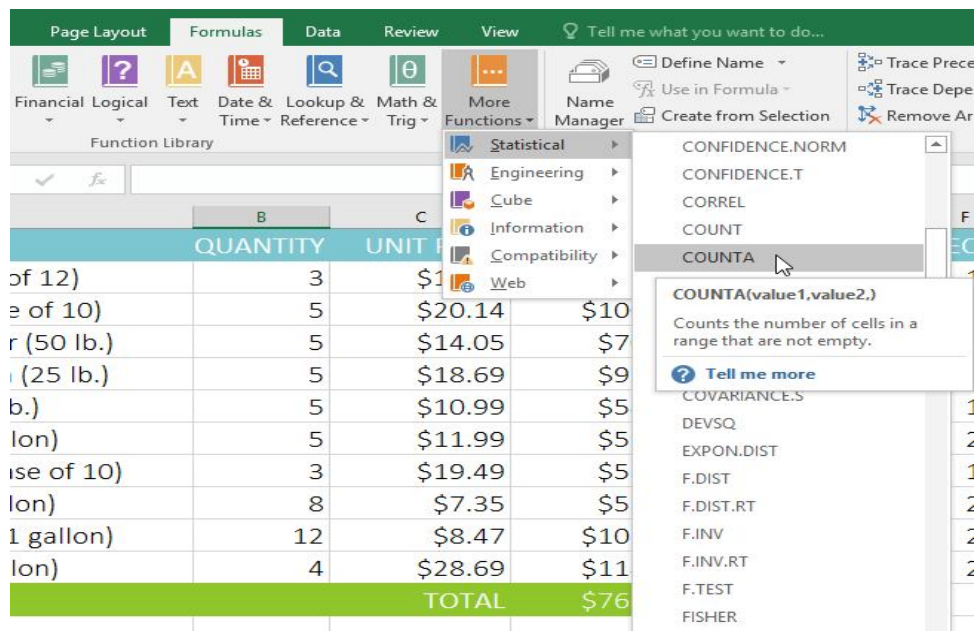
1. Select the **cell** that will contain the function. In our example, we'll select cell **B17**.

	A	B	C	D
2	ITEM	QUANTITY	UNIT PRICE	LINE TOTAL
3	Tomatoes (case of 12)	3	\$17.44	\$52.32
4	Black Beans (case of 10)	5	\$20.14	\$100.70
5	All Purpose Flour (50 lb.)	5	\$14.05	\$70.25
6	Corn Meal/Maza (25 lb.)	5	\$18.69	\$93.45
7	Brown Rice (25 lb.)	5	\$10.99	\$54.95
8	Lime Juice (1 gallon)	5	\$11.99	\$59.95
9	Tomato Juice (case of 10)	3	\$19.49	\$58.47
10	Hot Sauce (1 gallon)	8	\$7.35	\$58.80
11	Salsa, Medium (1 gallon)	12	\$8.47	\$101.64
12	Olive Oil (2.5 gallon)	4	\$28.69	\$114.76
13			TOTAL	\$765.29
14				
15				
16	PURCHASE ORDER SUMMARY			
17	Total items ordered			
18	Most expensive item			
19	Average days in transit			
20				

2. Click the **Formulas** tab on the **Ribbon** to access the **Function Library**.
3. From the **Function Library** group, select the desired **function category**. In our example, we'll choose **More Functions**, then however the mouse over **Statistical**.



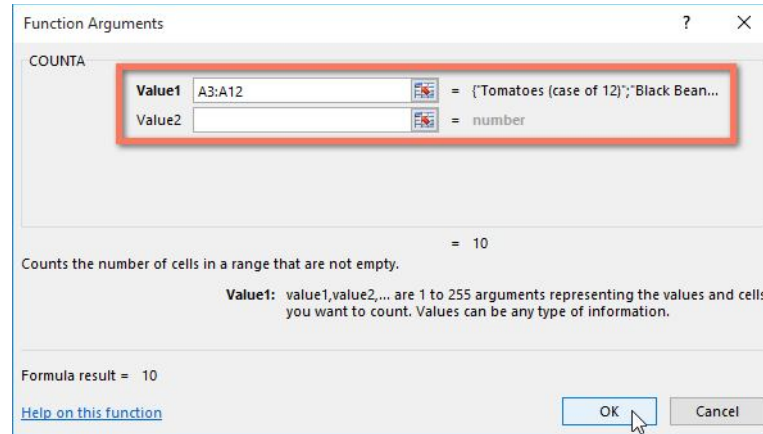
4. Select the **desired function** from the drop-down menu. In our example, we'll select the **COUNTA** function, which will count the number of cells in the **Items** column that are not empty.



5. The **Function Arguments** dialog box will appear. Select the **Value1** field, then enter or select the desired cells. In our example, we'll enter the cell range **A3:A12**. You may continue

to add arguments in the **Value2** field, but in this case we only want to count the number of cells in the cell range **A3:A12**.

6. When you're satisfied, click **OK**.



7. The function will be **calculated**, and the **result** will appear in the cell. In our example, the result shows that a total of **10 items** were ordered.

ITEM	QUANTITY	UNIT PRICE	LINE TOTAL
Tomatoes (case of 12)	3	\$17.44	\$52.32
Black Beans (case of 10)	5	\$20.14	\$100.70
All Purpose Flour (50 lb.)	5	\$14.05	\$70.25
Corn Meal/Maza (25 lb.)	5	\$18.69	\$93.45
Brown Rice (25 lb.)	5	\$10.99	\$54.95
Lime Juice (1 gallon)	5	\$11.99	\$59.95
Tomato Juice (case of 10)	3	\$19.49	\$58.47
Hot Sauce (1 gallon)	8	\$7.35	\$58.80
Salsa, Medium (1 gallon)	12	\$8.47	\$101.64
Olive Oil (2.5 gallon)	4	\$28.69	\$114.76
<b>TOTAL</b>			<b>\$765.29</b>
<b>PURCHASE ORDER SUMMARY</b>			
Total items ordered	10		
Most expensive item			
Average days in transit			

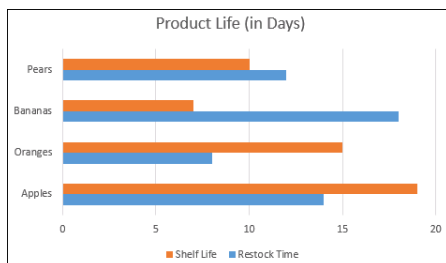
### 4.3. Creating, editing Charts and graphs

In Microsoft Excel, a chart is often called a graph. It is a visual representation of data from a worksheet that can bring more understanding to the data than just looking at the numbers.

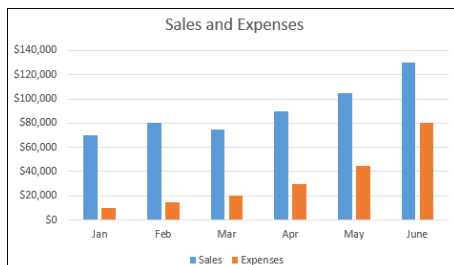
A chart is a powerful tool that allows you to visually display data in a variety of different chart formats such as Bar, Column, Pie, Line, Area, Doughnut, Scatter, Surface, or Radar charts. With Excel, it is easy to create a chart.

The following are some of the types of charts that you can create in Excel.

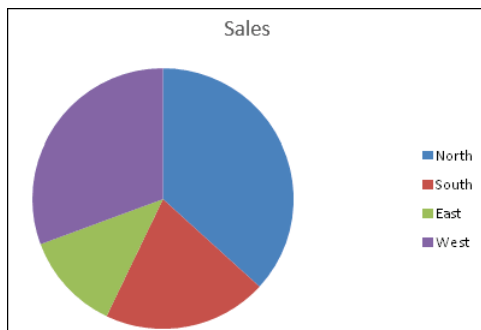
#### Bar Chart



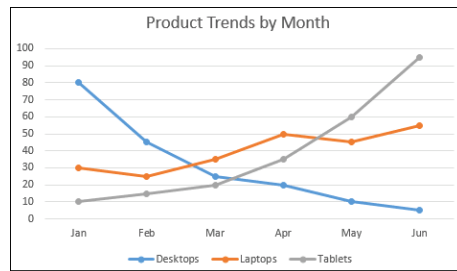
#### Column Chart



#### Pie Chart

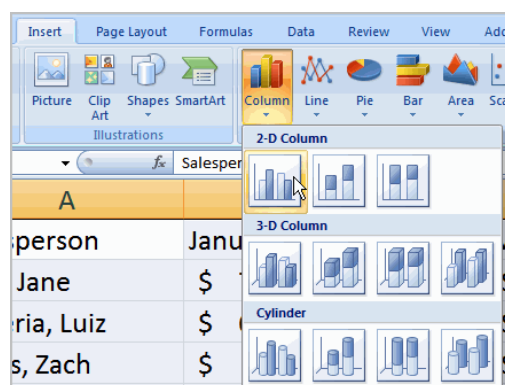


## Line Chart



To create a chart follow the steps given below:

- Select the **worksheet** you want to work with. In this example, we use the **Summary** worksheet.
- Select the **cells** you want to chart, including the **column titles** and **row labels**.
- Click the **Insert** tab.
- Hover over each **Chart option** in the Charts group to learn more about it.
- Select one of the Chart options. In this example, we'll use the Columns command.
- Select a **type of chart** from the list that appears. For this example, we'll use a 2-D Clustered Column. The chart appears in the worksheet.



### Identifying the parts of a chart

Charts are a **visual representation** of data in a worksheet. Charts make it easy to see comparisons, patterns, and trends in the data.

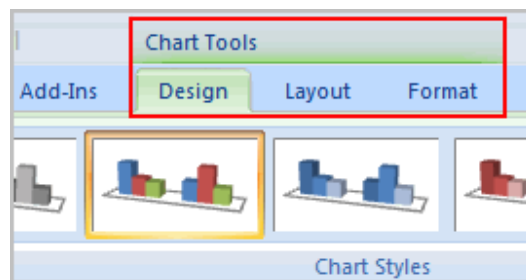


### Source data

The range of cells that make up a chart. The chart is updated automatically whenever the information in these cells changes.

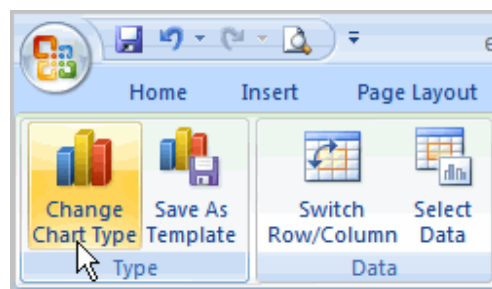
- **Title:**The title of the chart.

- **Legend:** The chart key, which identifies what each colour on the chart represents.
- **Axis:** The vertical and horizontal parts of a chart. The vertical axis is often referred to as the Y axis, and the horizontal axis is referred to as the X axis.
- **Data series:** The actual charted values, which are usually rows or columns of the source data.
- **Value axis:** The axis that represents the values or units of the source data.
- **Category axis:** The axis identifying each data series.
- **Chart tools:** Once you insert a chart, a new set of **Chart Tools**, arranged into three tabs, will appear above the Ribbon. These are only visible when the chart is selected.



#### To change the chart type:

- Select the **Design** tab.
- Click the **Change Chart Type** command. A dialog box appears.



- Select another **chart type**.

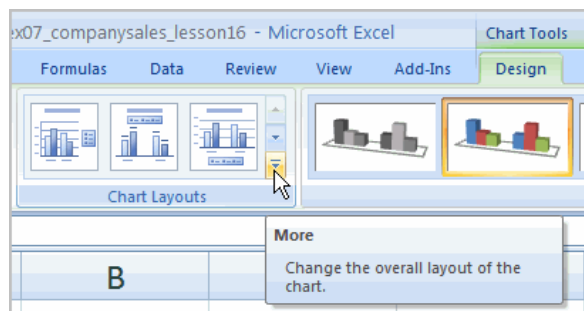


- Click OK.

The chart in the example compares each salesperson's monthly sales to his or her other months' sales; however, you can change what is being compared. Just click the **Switch Row/Column Data** command, which will rotate the data displayed on the **x** and **y axes**. To return to the **original view**, click the Switch Row/Column command again.

#### To change chart layout:

- Select the **Design** tab.
- Locate the **Chart Layouts** group.
- Click the **More** arrow to view all of your layout options.

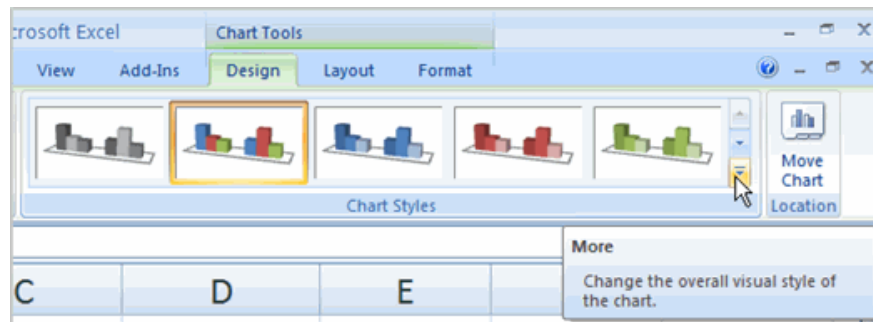


- Left-click a layout to select it.

If your new layout includes chart titles, axes, or legend labels, just insert your cursor into the text and begin typing to add your own text.

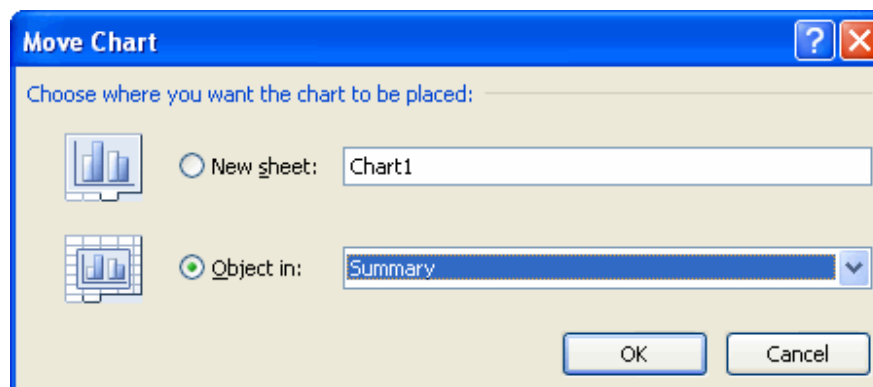
#### To change chart style:

- Select the **Design** tab.
- Locate the **Chart Style** group.
- Click the **More** arrow to view all of your style options.
- Left-click a style to select it.



#### To move the chart to a different worksheet:

- Select the **Design** tab.
- Click the **Move Chart** command. A dialog box appears. The current location of the chart is selected.
- Select the desired location for the chart (i.e., choose an existing worksheet, or select New Sheet and name it).



#### 4.4. Printing worksheets

Before printing a spreadsheet or pivot table, it is used to previewing and adjusting it for better readability. This can be done in different methods. The following are the two methods to page set up and print worksheet in MS Excel 2007.

##### Page Setup

To modify the page setup

- (1) Choose **Page Setup** from the **File** menu. Page Setup allows you to set page options like Margins, Paper Settings, Page Layout and

Document Grid. Options for the same are provided through four tabbed sub-menus.

1. **Page** :You can set your page settings here.
2. **Margins**: You can set the margins here.
3. **Header/Footer** :You can define the header and footer of the page here.
4. **Sheet** :You can define your sheet formatting here.

**(A) Page Settings**

- (a) Click here to define the paper orientation;
  - (b) Click here to define the printer settings;
  - (c) Click here to see the print preview;
  - (d) Click here to define the print options;
  - (e) Click here to define the page scaling;
  - (f) Click here to define the paper size here;
4. Click here to define the print quality; and
- Click here to define the first page number.

**(B) Margin Settings**

- Click here to define the **Top** margin setting;
- Click here to define the **Header** margin setting;
- (c) Click here to define the **Left** margin setting;
- (d) Click here to define the **Right** margin setting;
- (e) Click here to define the **Bottom** margin setting;
- (f) Click here to define the **Footer** margin setting; and
- (g) Click here to define the **Center alignment** of the page.

**(C) Header/Footer**

- (a) Click here to customize your header; and
- (b) Click here to customize your footer.

**(D) Sheet**

- (a) Click here to define the print area;
- (b) Click here to define the column and rows title;
- (c) Click here to print the gridlines, draft quality, row and column heading, cell errors or to print the worksheet in black and white; and

- (d) Click here to define the page order in.

### Print

To print the document or the template.

1. Choose **Print** from the **File** menu to print your worksheet or a selection of your worksheet.
2. Select the Printer name here.
  1. Click here to change the printing options for the selected printer.
  2. Click here to find the network printer based on the printer name, model etc.
  3. Click here to print your document in a file instead of a printer.
3. Click here to select the page or the page range you want to print.

(D) Click here to define the number of copies you want to print.
4. Choose the worksheet or the entire workbook that you want to print.

(E) Click here to see preview of the workbook or the worksheet you have selected to print.
5. Click on **OK** Once you have defined your print settings.

### Print Preview

Displays the full page as it will be displayed on the paper.

- (1) Choose **Print Preview** from the **File** menu to see, how your worksheet or a selection of your worksheet will look like on paper.

(A) This will, how your worksheet or a selection of your worksheet, will look like on paper.

### 4.5. Steps involved in problem solving

A computer is a very powerful and versatile machine capable of performing a multitude of different tasks, yet it has no intelligence or thinking power. The intelligence Quotient (I.Q) of a computer is zero. A computer performs many tasks exactly in the same manner as it is told to do. This places responsibility on the user to instruct the computer in a correct and precise manner, so that the machine is able to perform the required job in a proper way. A wrong or ambiguous instruction may sometimes prove disastrous. In order to instruct a computer correctly, the

user must have clear understanding of the problem to be solved. A part from this he should be able to develop a method, in the form of series of sequential steps, to solve it. Once the problem is well-defined and a method of solving it is developed, then instructing the computer to solve the problem becomes relatively easier task. Thus, before attempt to write a computer program to solve a given problem. It is necessary to formulate or define the problem in a precise manner. Once the problem is defined, the steps required to solve it, must be stated clearly in the required order.

A computer cannot solve a problem on its own. One has to provide step by step solutions of the problem to the computer. In fact, the task of problem solving is not that of the computer. It is the programmer who has to write down the solution to the problem in terms of simple operations which the computer can understand and execute.

The following are the steps involved in problem solving

1. Understanding the problem
2. Analyzing the problem
3. Developing the solution
4. Coding and implementation.

**1. Understanding the problem:** Here we try to understand the problem to be solved in totally. Before with the next stage or step, we should be absolutely sure about the objectives of the given problem.

**2. Analyzing the problem:** After understanding thoroughly the problem to be solved, we look different ways of solving the problem and evaluate each of these methods. The idea here is to search an appropriate solution to the problem under consideration. The end result of this stage is a broad overview of the sequence of operations that are to be carries out to solve the given problem.

**3. Developing the solution:** Here the overview of the sequence of operations that was the result of analysis stage is expanded to form a detailed step by step solution to the problem under consideration.

**4. Coding and implementation:** The last stage of the problem solving is the conversion of the detailed sequence of operations in to a language that the computer can understand. Here each step is converted to its equivalent instruction or instructions in the computer language that has been chosen for the implantation.

#### **4.6. Algorithms**

A set of sequential steps usually written in Ordinary Language to solve a given problem is called Algorithm.

It may be possible to solve to problem in more than one ways, resulting in more than one algorithm. The choice of various algorithms depends on the factors like reliability, accuracy and easy to modify. The most important factor in the choice of algorithm is the time requirement to execute it, after writing code in High-level language with the help of a computer. The algorithm which will need the least time when executed is considered the best.

Steps involved in algorithm development An algorithm can be defined as “a complete, unambiguous, finite number of logical steps for solving a specific problem“.

**Step1:** Identification of input: For an algorithm, there are quantities to be supplied called input and these are fed externally. The input is to be indentified first for any specified problem.

**Step2:** Identification of output: From an algorithm, at least one quantity is produced, called for any specified problem.

**Step3** : Identification the processing operations : All the calculations to be performed in order to lead to output from the input are to be identified in an orderly manner.

**Step4** : Processing Definiteness : The instructions composing the algorithm must be clear and there should not be any ambiguity in them.

**Step5** : Processing Finiteness : If we go through the algorithm, then for all cases, the algorithm should terminate after a finite number of steps.

**Step6** : Possessing Effectiveness : The instructions in the algorithm must be sufficiently basic and in practice they can be carries out easily.

An algorithm must possess the following properties

- 1. Finiteness:** An algorithm must terminate in a finite number of steps
- 2. Definiteness:** Each step of the algorithm must be precisely and unambiguously stated
- 3. Effectiveness:** Each step must be effective, in the sense that it should be primitive easily convert able into program statement) can be performed exactly in a finite amount of time.
- 4. Generality:** The algorithm must be complete in itself so that it can be used to solve problems of a specific type for any input data.
- 5. Input/output:** Each algorithm must take zero, one or more quantities as input data produce one or more output values. An algorithm can be written in English like sentences or in any standard representation sometimes, algorithm written in English like languages are called Pseudo Code.

**Example 1.** Suppose we want to find the average of three numbers?

The algorithm is as follows

**Step 1** Read the numbers a, b, c

**Step 2** Compute the sum of a, b and c

**Step 3** Divide the sum by 3

**Step 4** Store the result in variable d

**Step 5** Print the value of d

**Step 6** End of the program

#### **4.7. Flowchart**

A flow chart is a step by step diagrammatic representation of the logic paths to solve a given problem. Or a flowchart is visual or graphical representation of an algorithm. The flowcharts are pictorial representation of the methods to be used to solve a given problem and help a great deal to analyze the problem and plan its solution in a systematic and orderly manner. A flowchart when translated in to a proper computer language, results in a complete program.

#### **Advantages of Flowcharts**

1. The flowchart shows the logic of a problem displayed in pictorial fashion which facilitates easier checking of an algorithm.
2. The Flowchart is good means of communication to other users. It is also a compact means of recording an algorithm solution to a problem.
3. The flowchart allows the problem solver to break the problem into parts. These parts can be connected to make master chart.
4. The flowchart is a permanent record of the solution which can be consulted at a later time.

Differences between Algorithm and Flowchart



**Algorithms**

1. A method of representing the step-by-step logical procedure for solving a problem
2. It contains step-by-step English descriptions, each step representing a particular operation leading to solution of problem
3. These are particularly useful for small problems
4. For complex programs, algorithms prove to be inadequate

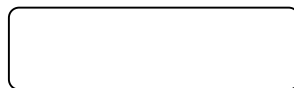
**Flowchart**

1. Flowchart is diagrammatic representation of an algorithm. It is constructed using different types of boxes and symbols.
2. The flowchart employs a series of blocks and arrows, each of which represents a particular step in an algorithm
3. These are useful for detailed representations of complicated programs
4. For complex programs, Flowcharts prove to be adequate

**4.7.1. Symbols used in flowcharts**

The symbols that we make use while drawing flowcharts as given below are as per conventions followed by International Standard Organization (ISO).

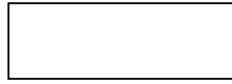
**a. Oval:** Rectangle with rounded sides is used to indicate either START/STOP of the program. ..



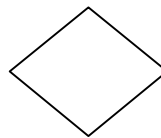
**b. Input and output indicators:** Parallelograms are used to represent input and output operations. Statements like INPUT, READ and PRINT are represented in these Parallelograms.



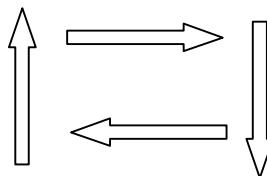
**c. Process Indicators:** Rectangle is used to indicate any set of processing operation such as for storing arithmetic operations.



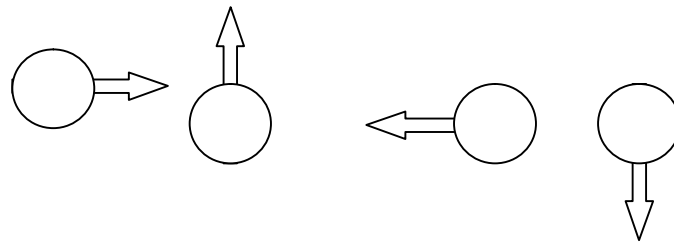
**d. Decision Makers:** The diamond is used for indicating the step of decision making and therefore known as decision box. Decision boxes are used to test the conditions or ask questions and depending upon the answers, the appropriate actions are taken by the computer. The decision box symbol is



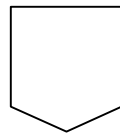
**e. Flow Lines:** Flow lines indicate the direction being followed in the flowchart. In a Flowchart, every line must have an arrow on it to indicate the direction. The arrows may be in any direction



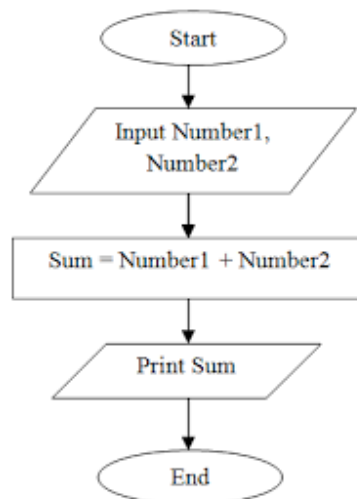
**f. On- Page connectors:** Circles are used to join the different parts of a flowchart and these circles are called on-page connectors. The uses of these connectors give a neat shape to the flowcharts. In a complicated problems, a flowchart may run in to several pages. The parts of the flowchart on different pages are to be joined with each other. The parts to be joined are indicated by the circle.



**g. Off-page connectors:** This connector represents a break in the path of flowchart which is too large to fit on a single page. It is similar to on-page connector. The connector symbol marks where the algorithm ends on the first page and where it continues on the second.



### Simple problem using flow chart



The above flowchart explains about sum of two numbers.

#### 4.8. Summary

- **Steps to AutoFit Columns:**
  - Click on Column Header/or any other cell in the column to change its width.
  - Click Home tab.
  - Select format from the cells group on the ribbon.
  - Click on AutoFit Column Width.
- In Microsoft Excel, a chart is often called a graph. It is a visual representation of data from a worksheet that can bring more understanding to the data than just looking at the numbers.
- A set of sequential steps usually written in Ordinary Language to solve a given problem is called Algorithm
- The flowcharts are pictorial representation of the methods to be used to solve a given problem and help a great deal to analyze the problem and plan its solution in a systematic and orderly manner.

#### 4.9. SAQ

1. Write a short note on functions in Excel?
2. Define Algorithm
3. What is Flowchart?
4. What are the symbols of Flowchart ?
5. Write an Algorithm for perimeter of Triangle ?
6. What are the basic steps involved In problem solving?
7. Differentiate between Algorithm and Flowchart.
8. Write an algorithm to find greatest of given three numbers.



