

10-IT-PART-B-Subject Specific Skills

Part-B-Unit-1-Digital Documentation (Advanced)-(8m)-mb

We have study in this unit:

Chapter [1] : Applying **Styles** in a Document

Chapter [2] : **Adding Graphics** in a Document

Chapter [3] : Working with **Templates**

Chapter [4] : Using a **Table of Content (TOC)**

Chapter [5] : Using **Mail Merge**

Part-B-Unit-1-Digital Documentation (Advanced)-

Chapter [1] : Applying **Styles** in a Document

Q [] Styles

Ans : (i) A style is a **Predefined Combination of various formatting features**, like **Font style, Colour,** and **size**; that is **applied to the selected text** in a document to quickly change its appearance.

(ii) When you apply a style, you can apply a group of formatting effects together in one simple step that makes the text effective and readable.

Q [] Style Categories:

Ans : There are five categories of Style available in Word

[1] Paragraph : This style is used to control all the aspects of a paragraph's appearance, such as Text alignment, Tab stops, Line spacing, and so on.

[2] Character : The character style affects the character only, for example, it enables you to set the font and size of text, or bold and italic formats.

[3] Linked (Paragraph and Character) : This style can be applied to both the Paragraph & Characters

[4] Table : The Table style is applied to change the appearance of tables, such as apply shading to the cells and format the border of the table.

[5] List : The list is used to select, format, and insert numbers or bullets in lists.

Applying Styles:

Word provides various predefined styles to apply on the text in a document.

There are two methods to apply styles on the selected text.

[1] Style Groups or Style gallery

[2] Style Pane

[1] Applying styles from Style Groups :

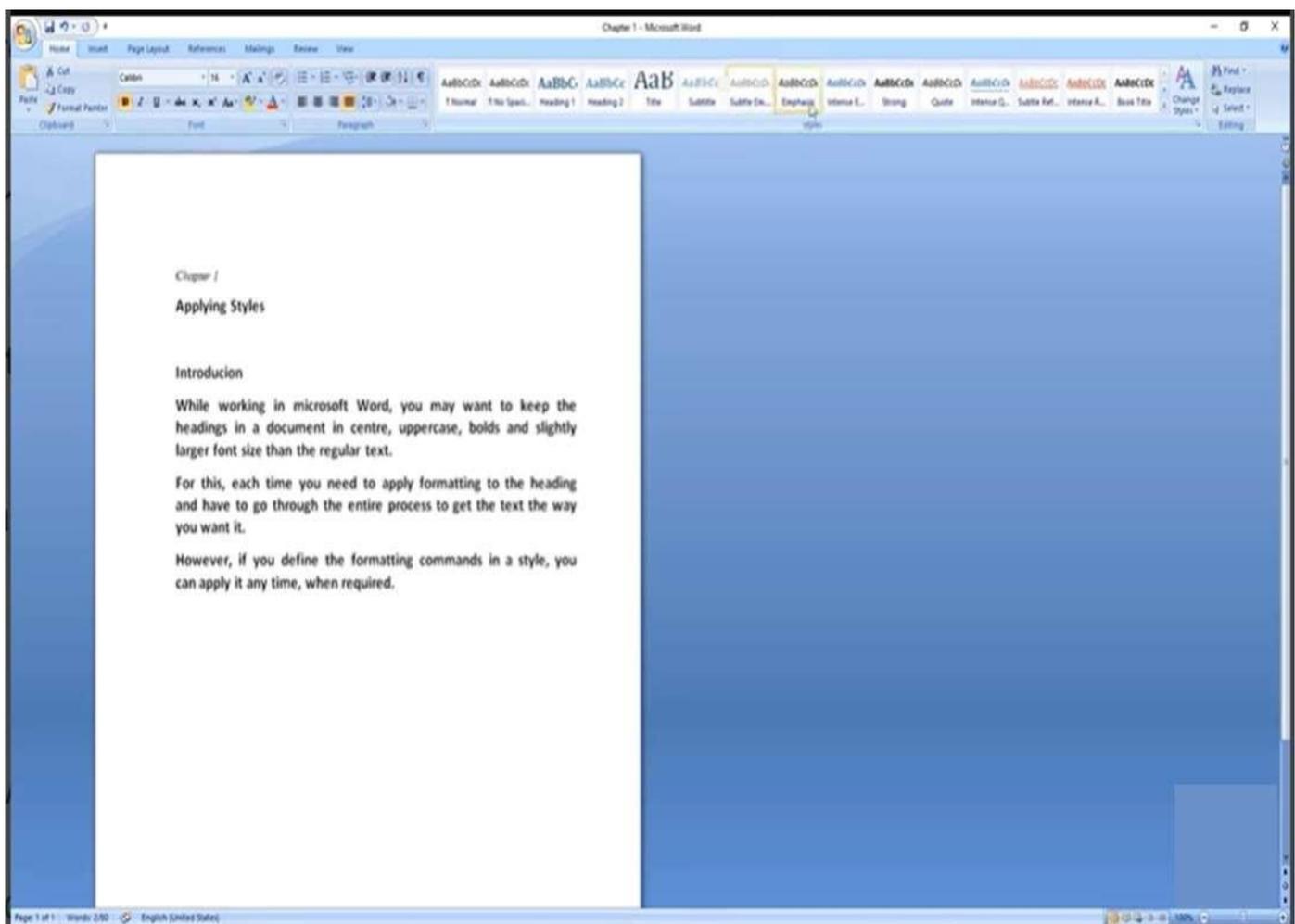
You can apply built in Styles group of the Home Tab.

(i) Open a blank document in Word and type the text you want.

(ii) Select the text on which you want to apply a style.

(iii) Move mouse pointer over the predefined styles in the Styles group of the Home Tab, to preview the effect of each style on the selected text.

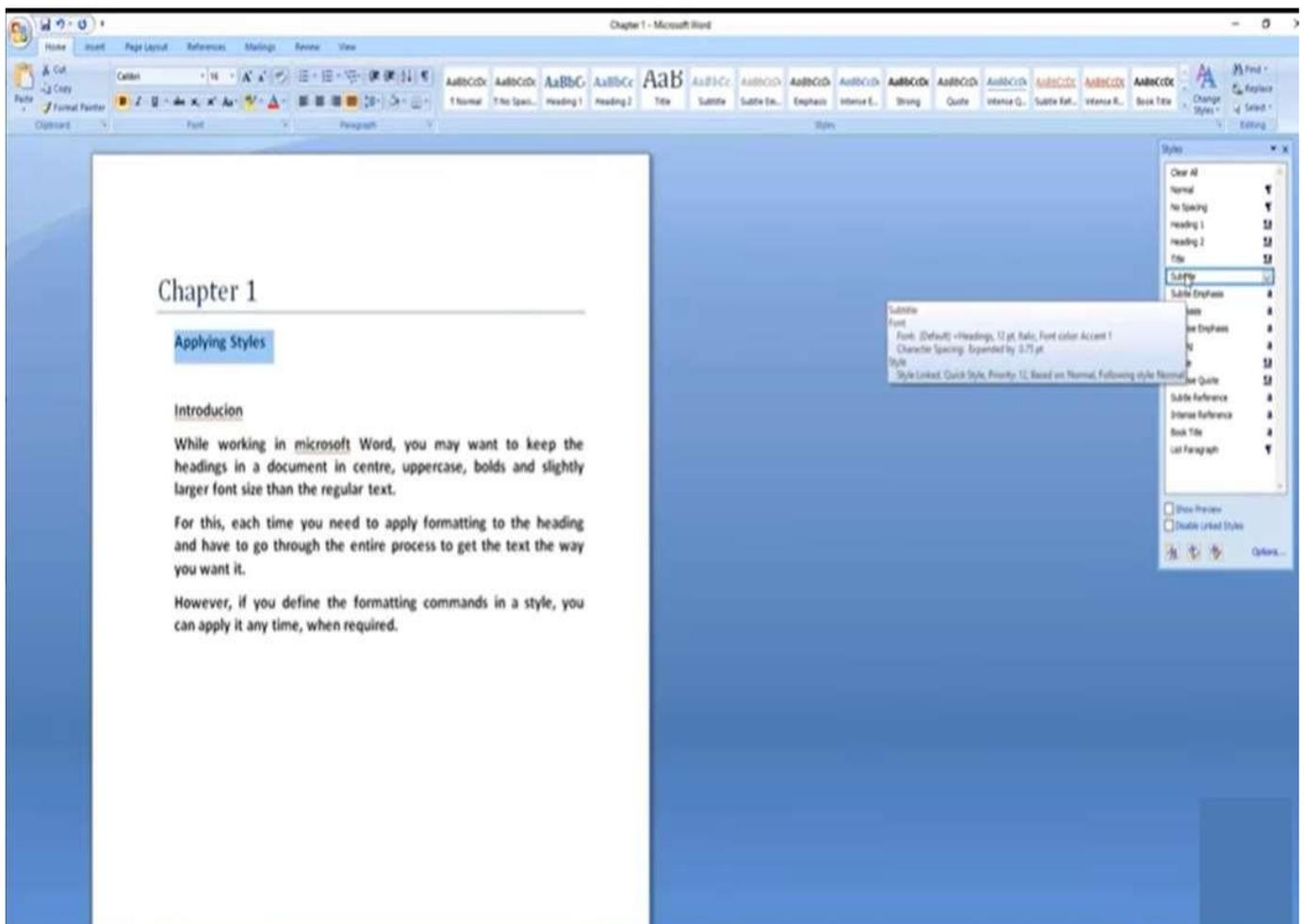
(iv) Click on a required Style, to apply it to the selected text.



[2] Applying styles from Styles Pane :

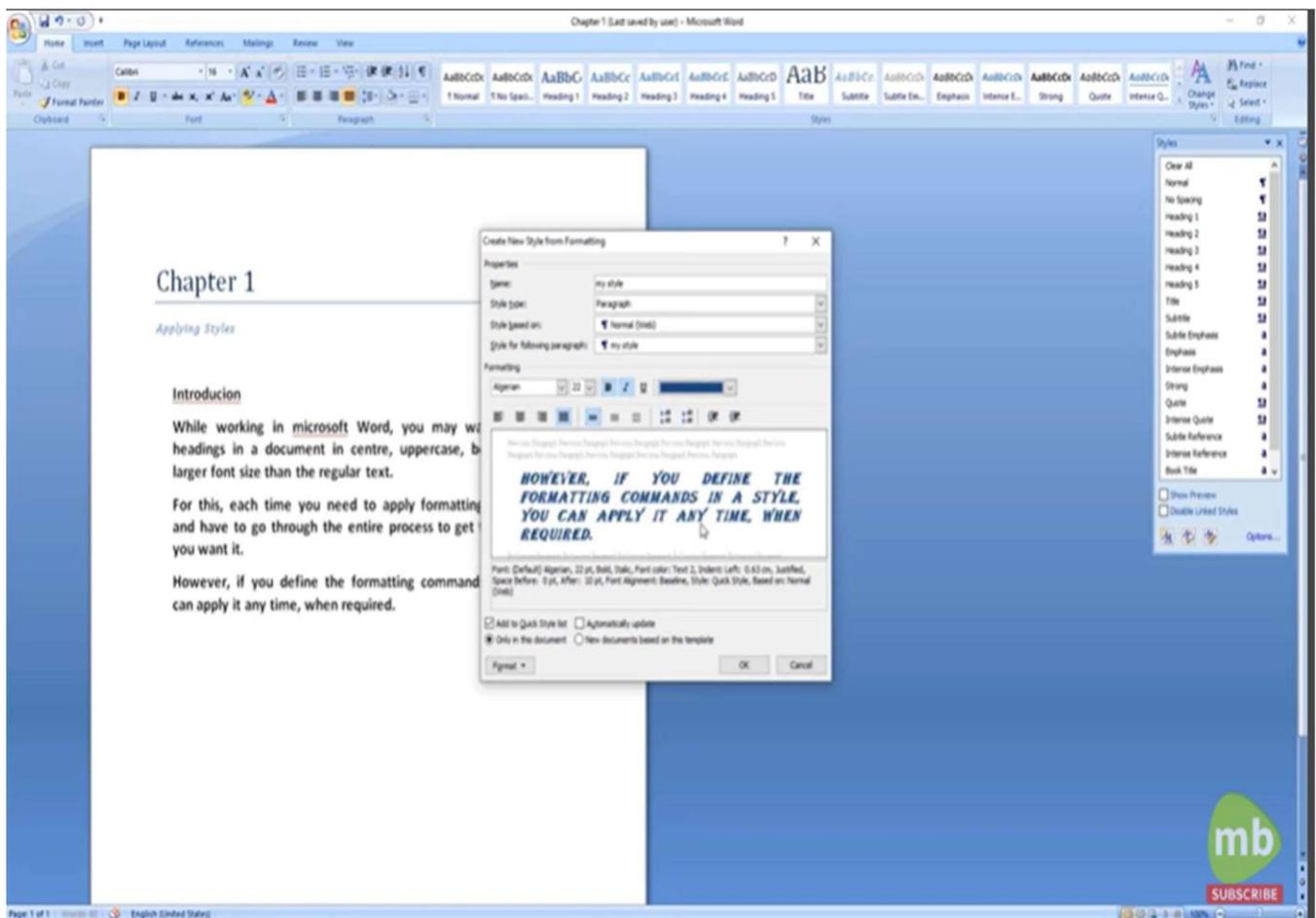
It is a floating and dockable Pane

- (i) Click on the Dialog box Launcher of the Style group of the Home Tab.
(by me- ie Select Home tab, then Style Group, Dialog box Launcher)
- (ii) Then Style Pane opens with variety of styled listed in it.
- (iii) Then select the text in the document on which you want to apply the style.
- (iv) Then select or click on any style from the Style Pane.
- (v) Then selected style will be applied to the text.



Creating a New Styles:

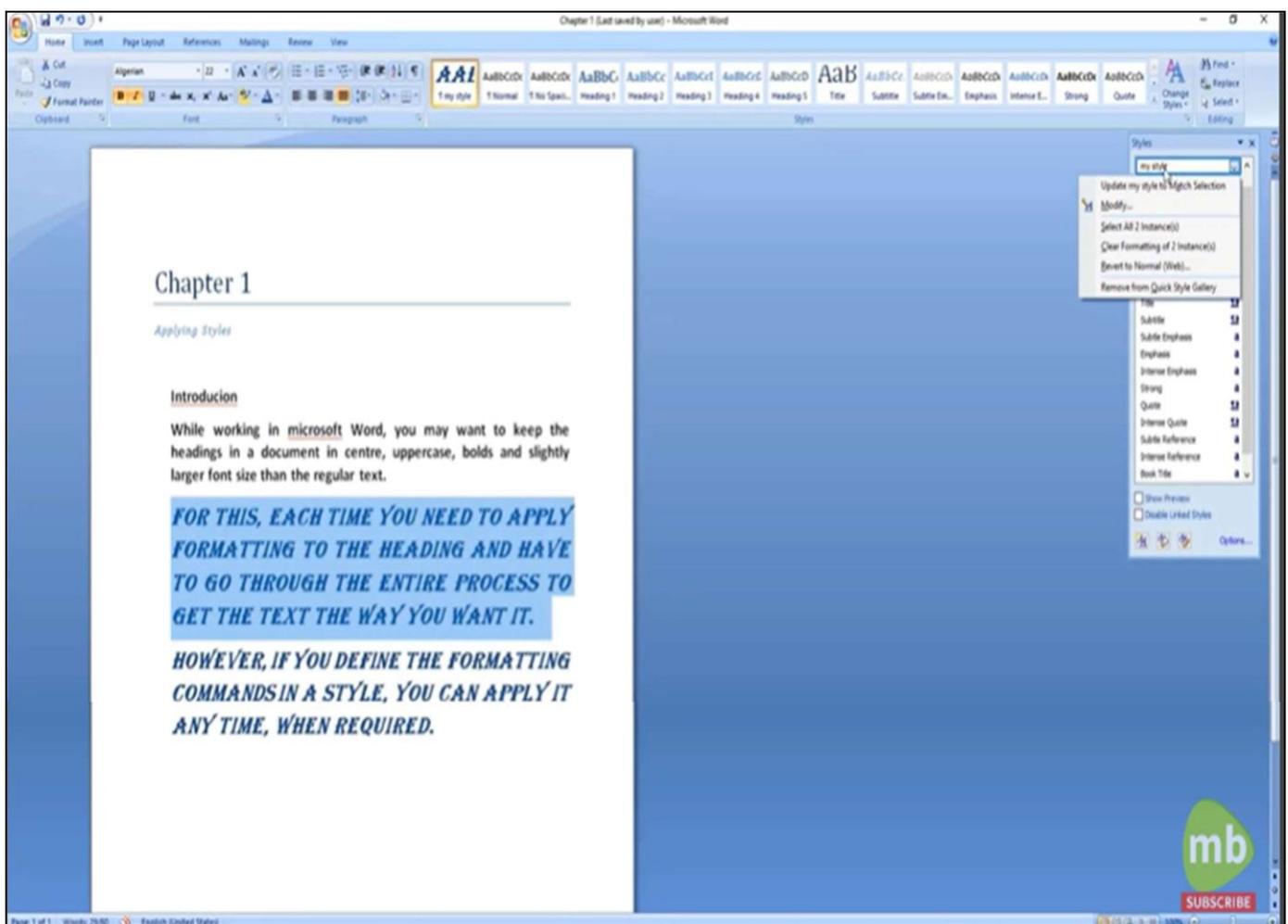
1. Click on the dialog box launcher in the styles group. The styles pane opens.
2. Click on the New Style button located at the bottom of the style pane.
3. The Create New Style from Formatting dialog box opens.
4. Set the properties of the style, such as Name, Style type, and others in the Properties section.
5. You can select the formatting options, such as Font Style, Style Colour, Alignment, etc., from the Formatting section.
6. Observe that the Add to Quick Style list checkbox is selected, by default. This means that the style that you have created will be added to the styles gallery.
7. Click OK button.

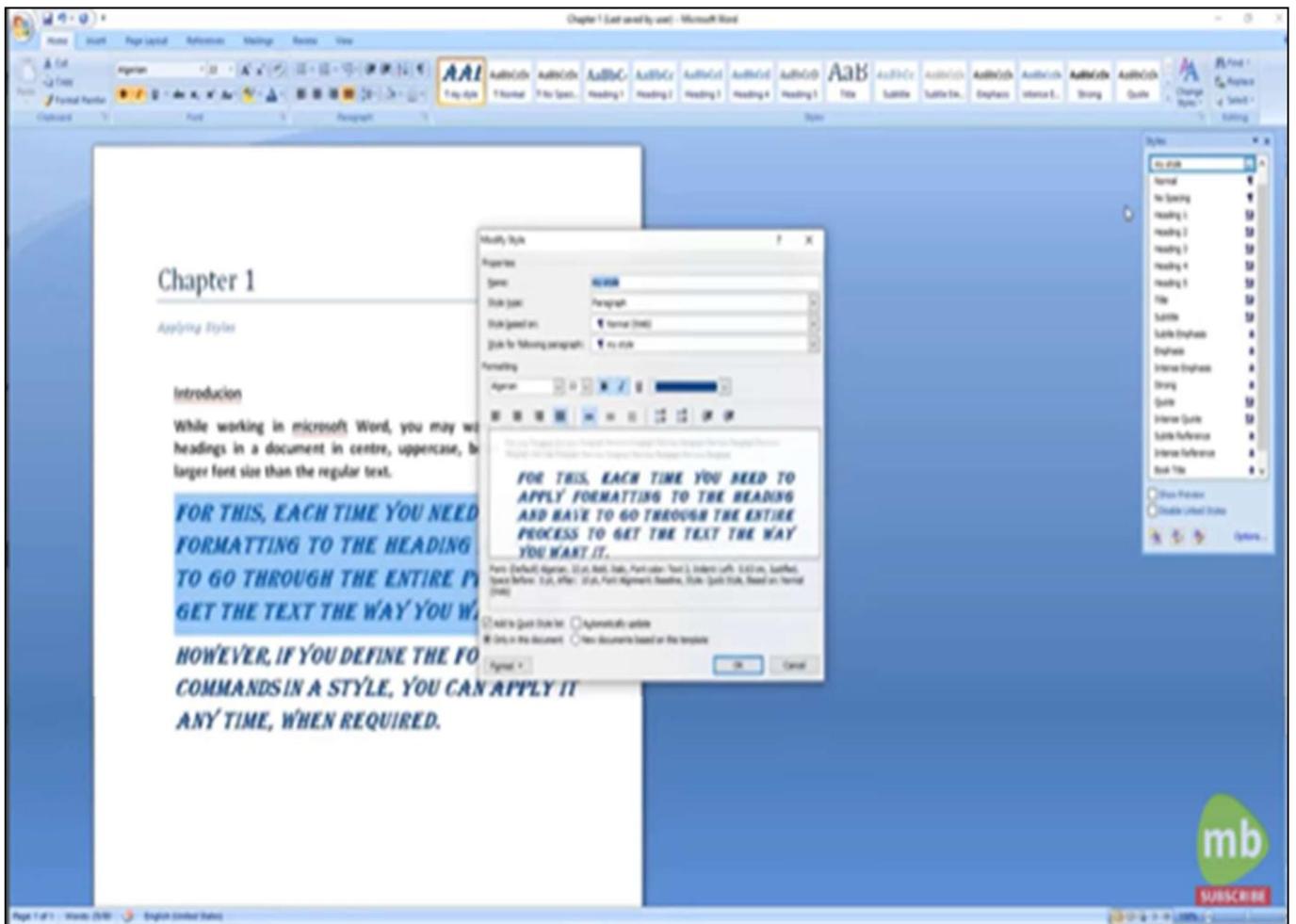


Modifying a Style:

- You can make the changes in the style that you have created. To do this, follow the given steps:

1. Right-click on the style that have created from the Styles gallery. A shortcut menu appears.
2. Select the Modify option. The Modify Style dialog box appears.
3. Make the required changes in the style such as Name, Type, Font, Size, Colour, Alignment, etc., and click on Ok.
4. Select any of the two options given at the bottom of the Modify Style dialog box.
5. Click on OK.The required changes will be applied in the style.

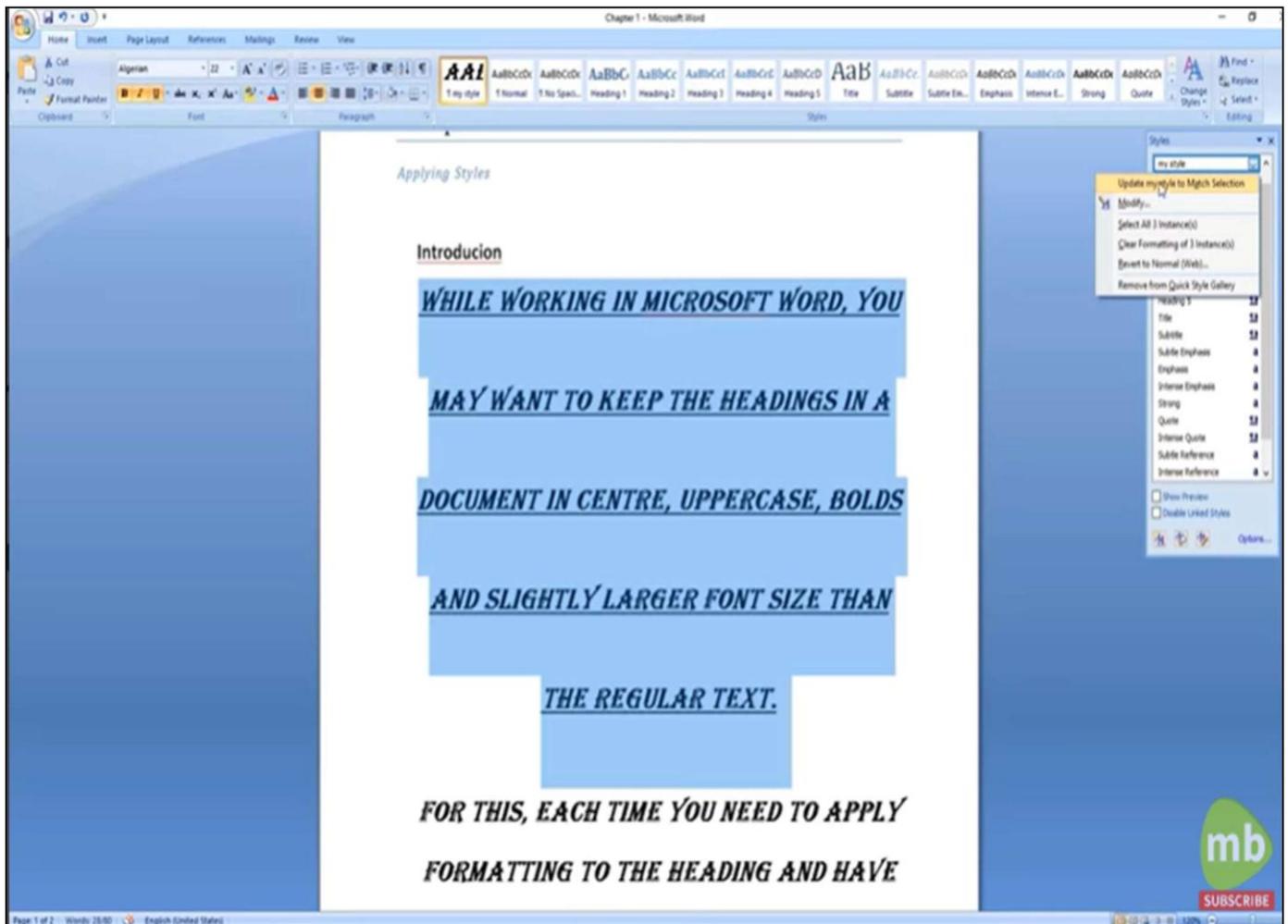




Updating a Style:

- To update a style from selection, follow the given steps:

1. Open the document and select an existing paragraph.
2. Format the paragraph as per your choice. For example, change font properties, alignment, and so on. Make sure that all the properties in a paragraph are uniform.
That means you cannot keep different font size in a paragraph.
3. Now, in the Styles pane, right-click on the style that you want to update.
4. Click on the update "Style Name" to match selection option from the shortcut Menu here, "Style Name" is the name of the style that you want to update.
5. You can observe that the selected style will be updated with the new formatting effects.



Importing a Style From Another Document :

It means, you have created a style in one document & want to apply it to another document.

This process includes 3 steps.

[1] Creating New Styles in document with base formatting.

[2] Importing Styles to another document

[3] Applying the Styles

Let us understand these steps with the help of an example.

Step 2 : Importing Styles from another document

(i) Now, open the document where you want to apply these styles, for example

“Chapter1.docx”

(ii) Click on the dialog box Launcher in the Styles group of the Home tab.

(iii) The Styles pane opens. Click on the **Manage Styles** button from the bottom of the pane

(iv) The Manage Styles dialog box displays.

(v) Click on the **Import/Export** button given at the bottom of the Manage Styles dialog box

(vi) The **Organizer** dialog box displays.

(vii) Click on the **Close File** button on the right side of the dialog box.

As soon as you click this button, the button changes to **Open File** button.

Click on **Open File** button.

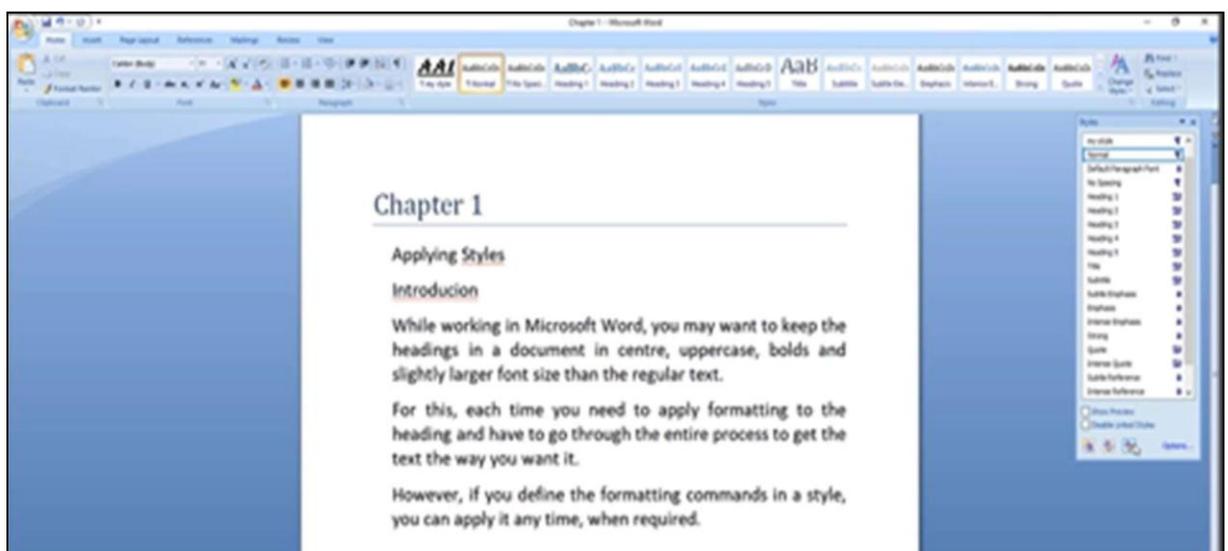
(viii) In **Open** dialog box, click on the down arrow of the **All Word Templates** box.

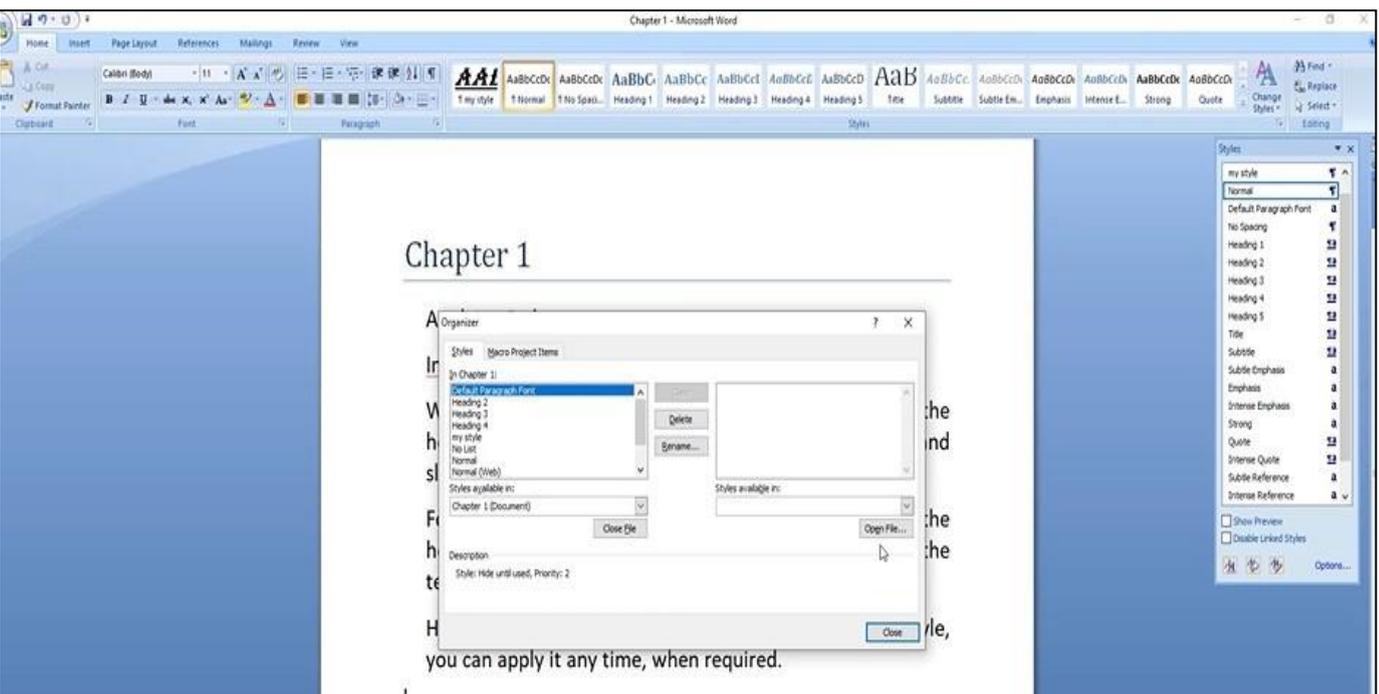
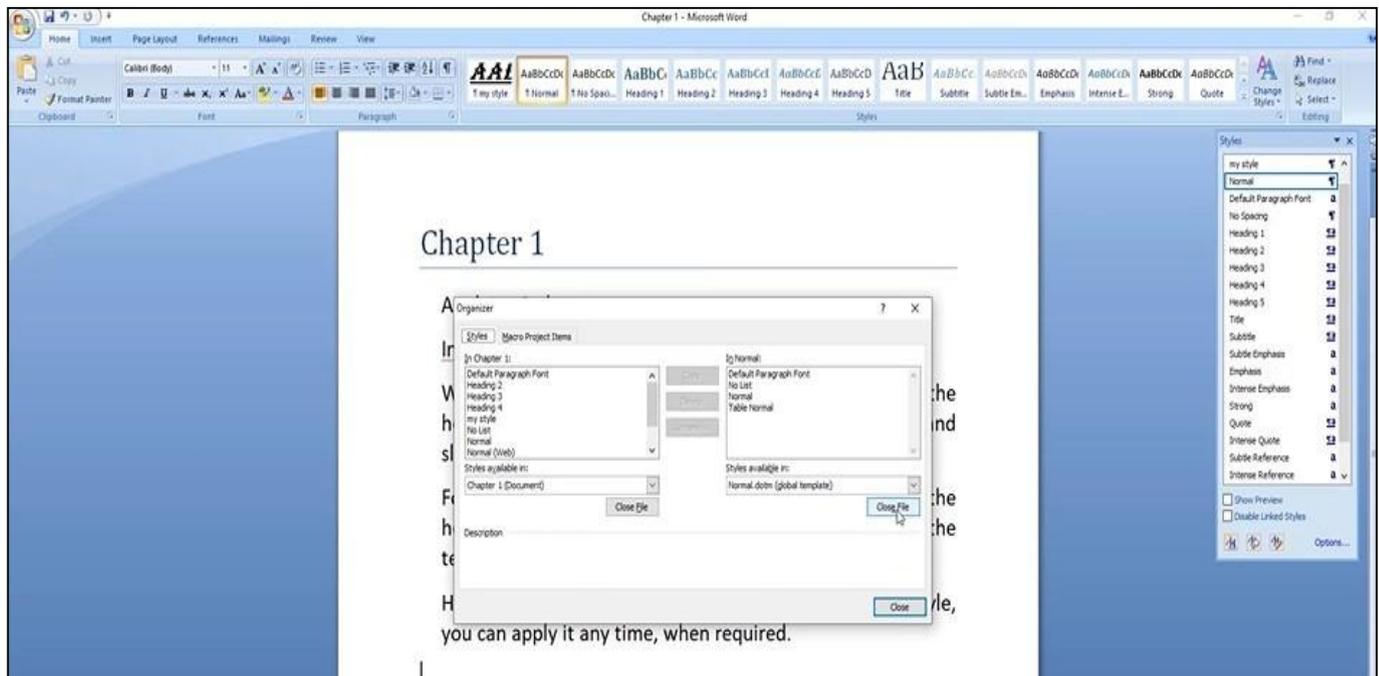
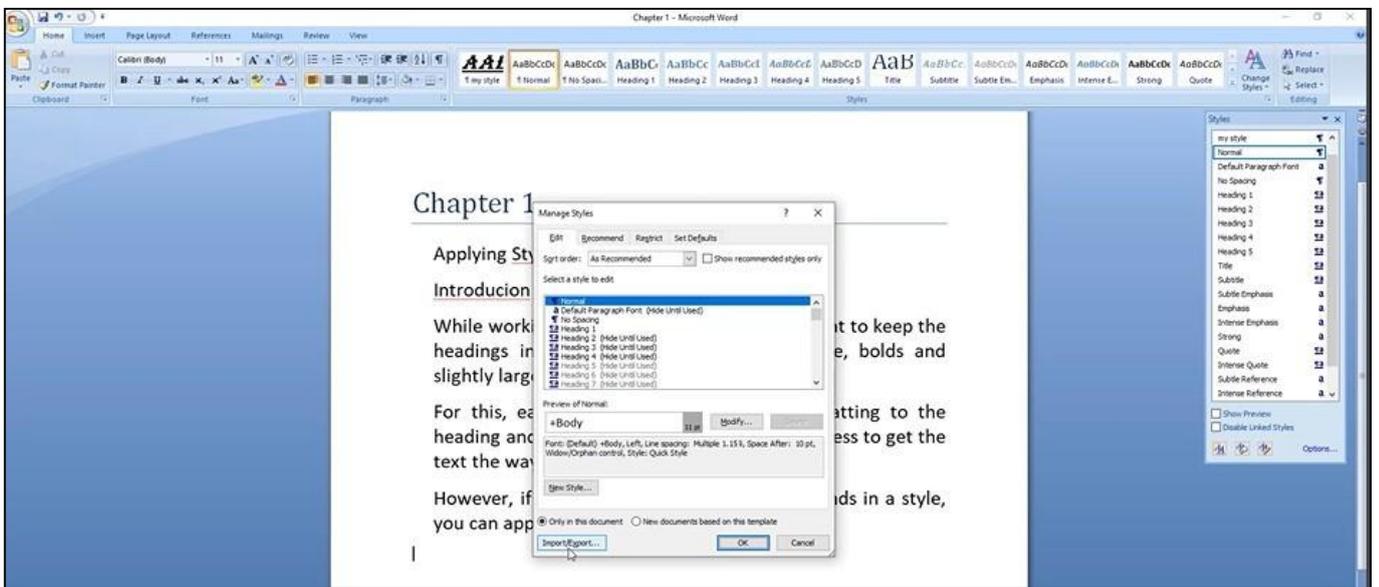
Select **All Word Documents** from the list.

(ix) Locate the file from where you want to import new style for example, “magnet.docx”.

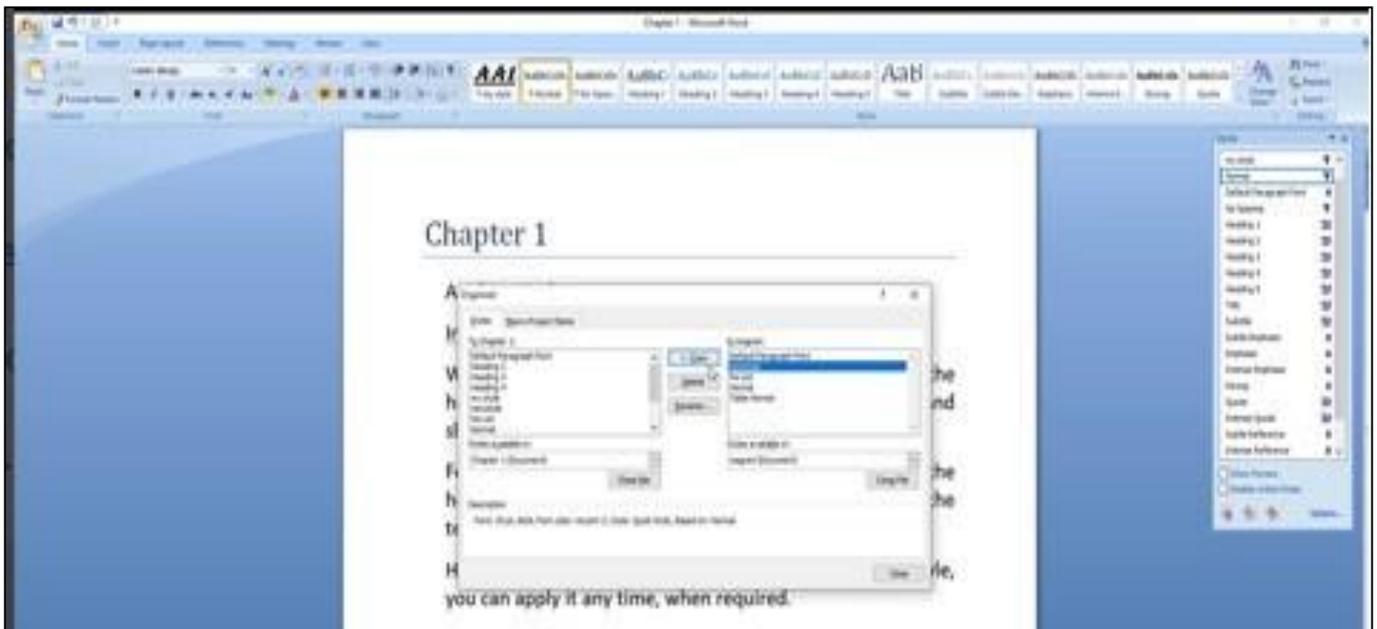
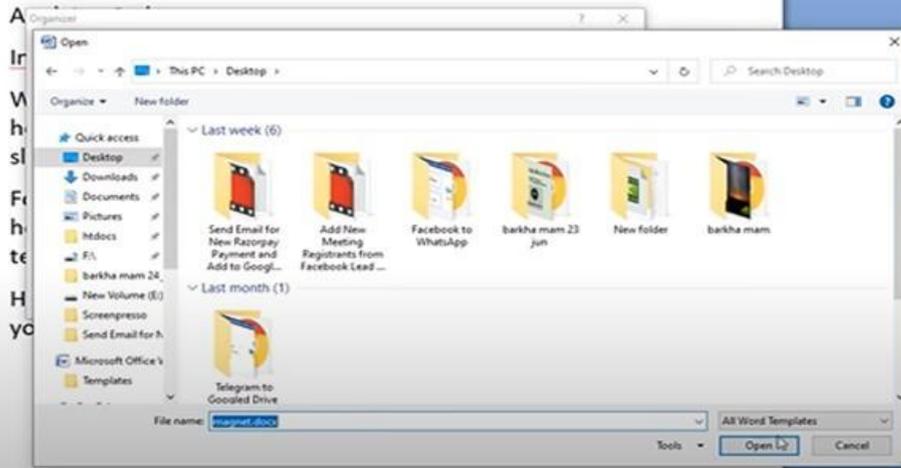
(x) The styles of the file including the new styles that you have created will open on the right side of the **Organiser** dialog box.

Practical:



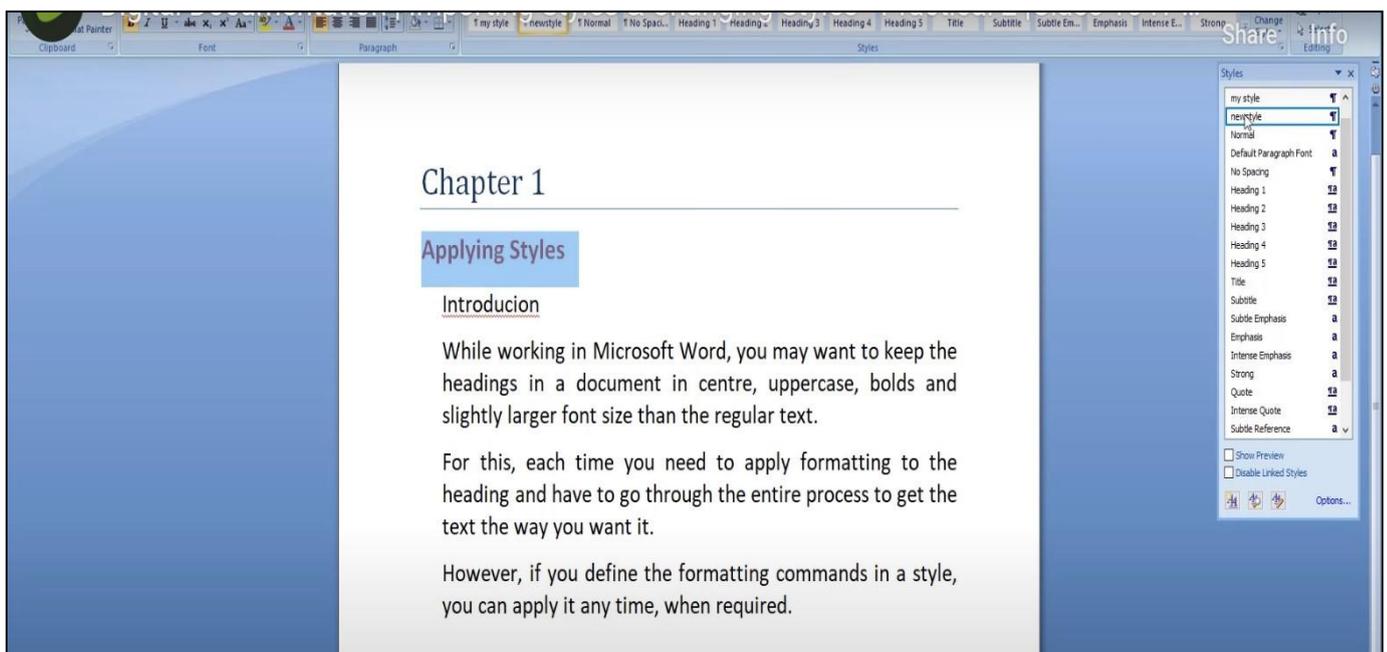
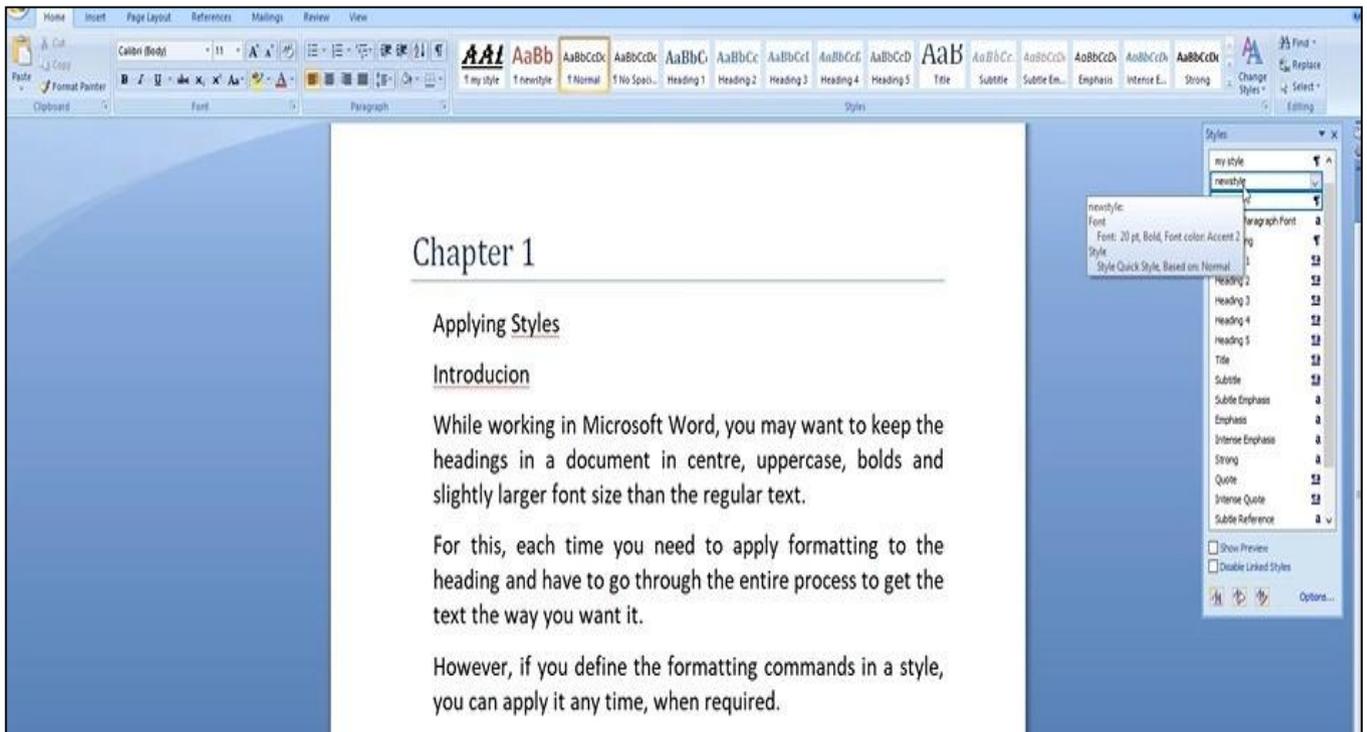


Chapter 1



Step 3 : Applying Styles

- (i) Click on **Newstyle** by holding the **Ctrl** key.
- (ii) Click on the **Copy** button and observe the styles being copied / imported to the “ Chapter.docx
- (iii) Close the **Organizer** dialog box.
- (iv) Now, you can apply the newly imported styles in your document.

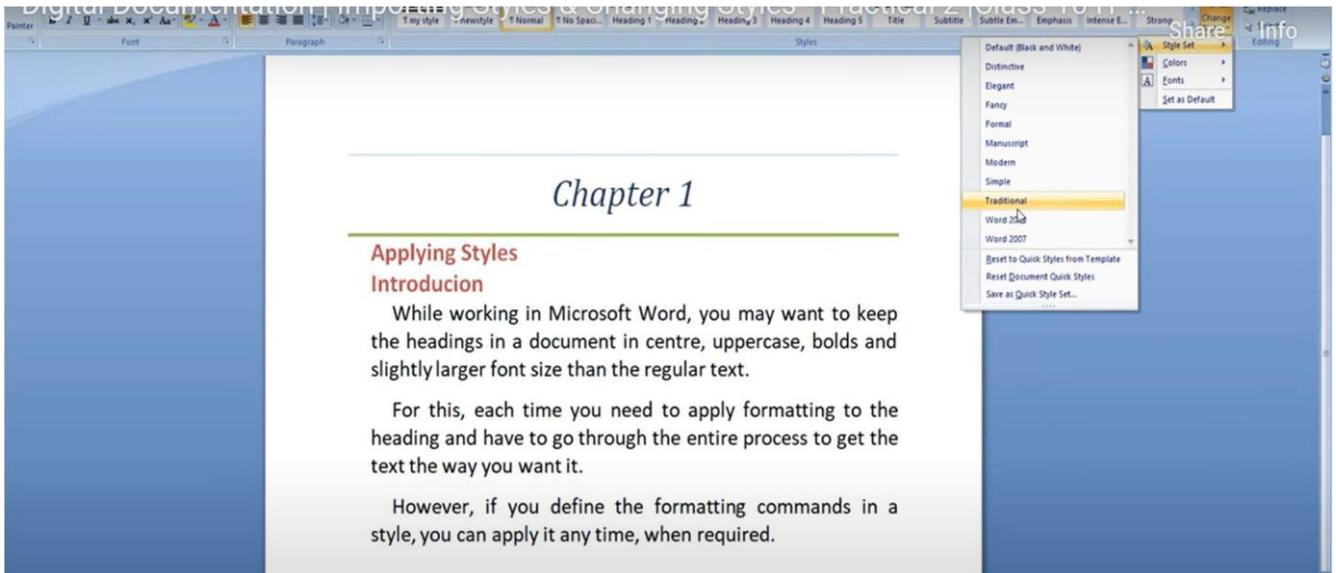


Changing Styles:

The styles you apply in document can be changed by using the **Change Styles** button on the **Styles** group of the **Home** tab. It has four options as listed below:

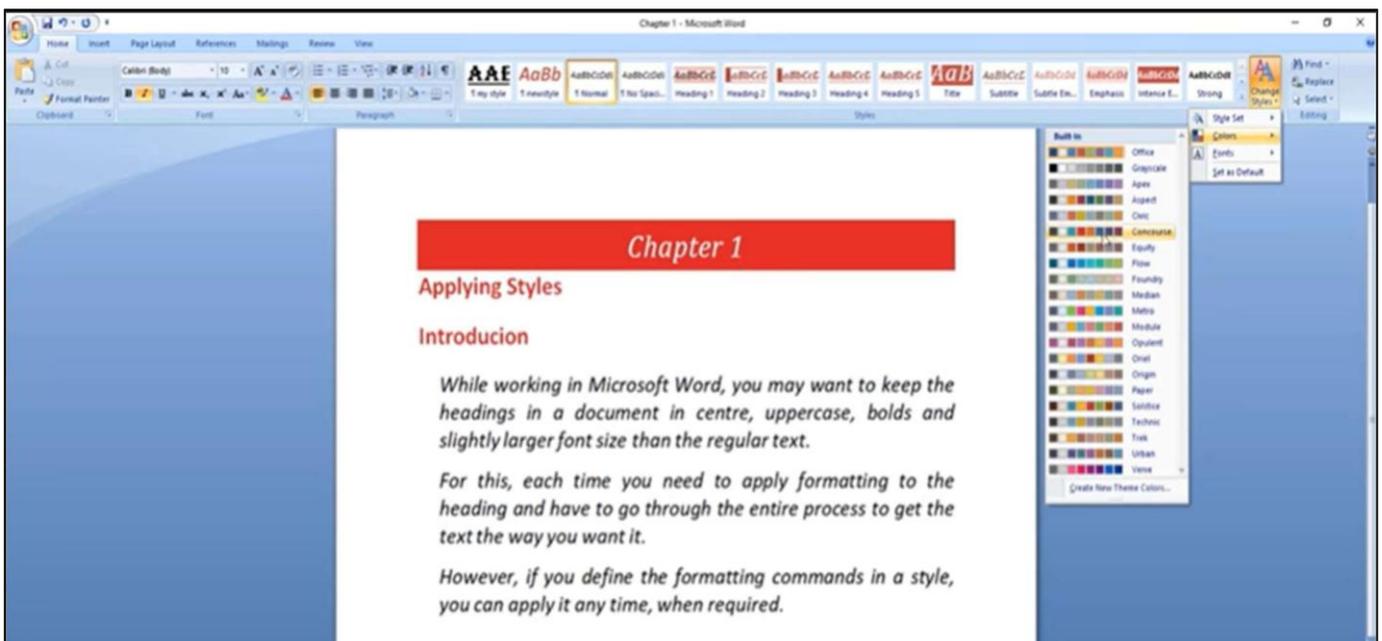
[1] Style Set :

Style set is a combination of Title, Heading & Paragraph styles. It helps you format all the elements of the document in one step only, rather than formatting them separately.



[2] Colors :

You can select a set of built-in colours themes for your document from the **Colors** list. You can also create your own colours theme by selecting the **Create New Theme Colors** option given at the bottom of the **Colors** drop-down list.



[3] Fonts :

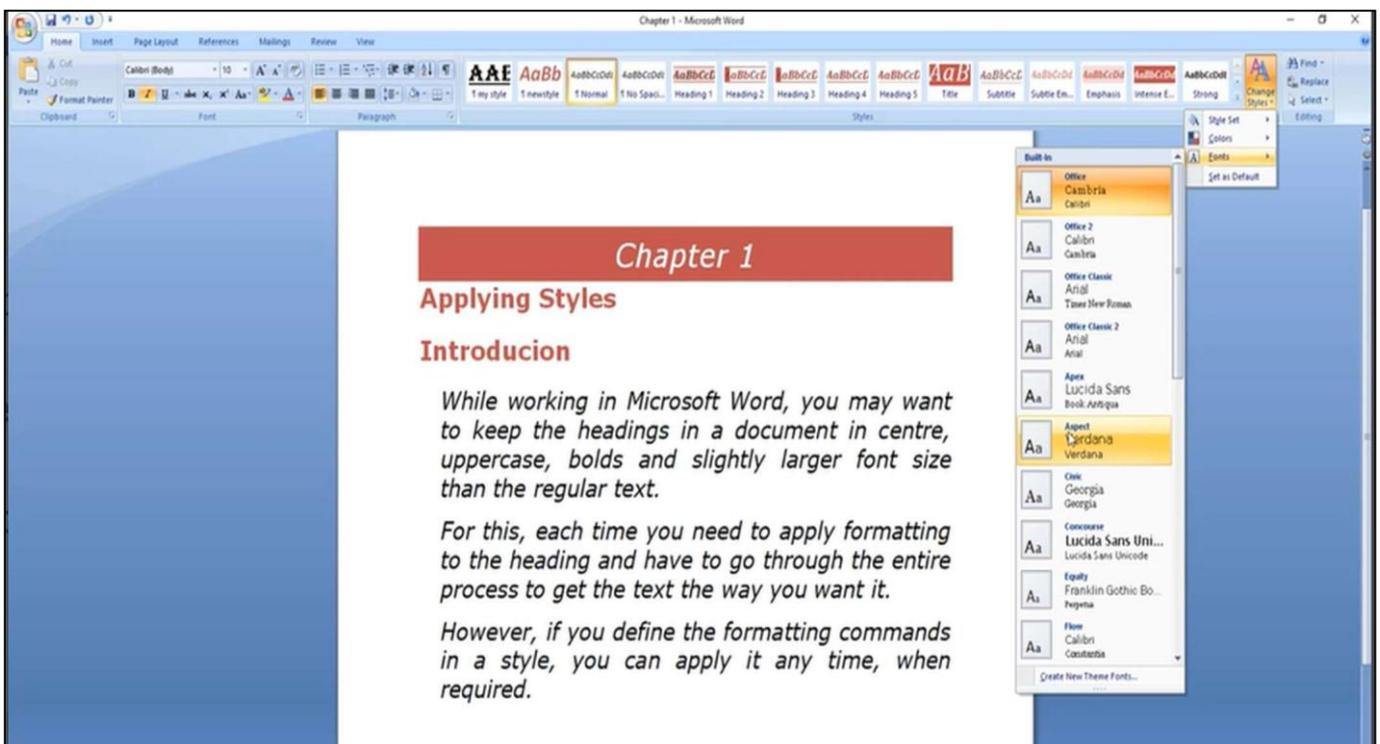
Fonts list displays the built-in theme fonts that you can apply in the document.

You can create a new theme font by clicking on the **Create New Theme Fonts** option at the bottom of the **Fonts** drop-down list.

[4] Paragraph Spacing :

You can set the paragraph spacing of the whole document by selecting any option displayed in the **Paragraph Spacing** list.

You can also set the paragraph spacing, according to your own requirement, by using the option **Custom Paragraph Spacing** in the **Paragraph Spacing** drop-down list.



Assessment :

[A] Select the correct option

(1) It is a predefined combination of various formatting features.

- a. Paragraph b. Style c. Font

Ans : b. Style

(2) The Styles group is available under the..... Tab.

- a. Insert b. Page Layout c. Home

Ans : c. Home

(3) The.....styles are used to control all the aspects of paragraph's appearance.

- a. Character b. Paragraph c. Frame

Ans : b. Paragraph

(4) What operation do you perform in the current document to change a style ?

- a. Change Style b. Load Style c. Modify Style

Ans : c. Modify Style

[B] True or False

- (i) The styles pane opens on the left of the window, by default. - True
(ii) The Styles pane is a floating or dockable pane. - True
(iii) Page Styles include page size, margins, headers & footers, borders, and backgrounds - True
(iv) You can not modify the predefined styles in word. - False
(v) Style set is a combination of title, heading and paragraph styles. - True

[C] Answer the following questions.

Q(1) What are Styles ?

Ans : A Style is a predefined combination of various formatting features, like Font style, Colour & size, that is applied to the selected text in a document to quickly change its appearance.

Q(2) What is the difference between Paragraph and Character styles ?

- Ans: (i) **In Design, a Paragraph style** is a collection of both Character and Paragraph formatting attributes that may applied to one or more paragraphs.
(ii) **A Character Style** is a collection of Character formatting attributes that may be applied to one or more characters or words within a paragraph.
(iii) **A Paragraph Style** may therefore contain one or more character styles.
(iv) **A Character Style** should never be used for a full paragraph or multiple paragraphs.

Q(3) How can you apply a Style to the selected text ?

Ans: (i) Select the text you want to format, or place your cursor at the beginning of the line.

(ii) In the Styles group on the Home tab, click the more drop-down arrow.

(iii) Select the desired style from the drop-down menu.

(iv) The text will appear in the selected style.

Q[4] How do you create a custom style?

Ans: (i) Right-click the text (style name- by me) on which you want to base a new style.

(ii) A mini toolbar appears, **Click Style**, and then click **Create a Style**.

(iii) In the **Create New Style from Formatting** dialog box, gives your style a name
and Click **OK**

(iv) Your new style will now appear in the Styles Gallery.

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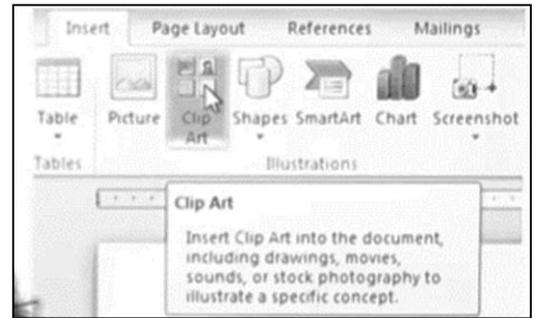
Chapter – 02 : Adding Graphics in a Document

2.1 Introduction:

* When you create a text document using Word, you may need to include some graphics, such as images, shapes and other drawing objects.

* Graphics are added in the text documents to support the description provided in the text, images and pictures

provide an immediate visual impact to the content, catch attention of the readers & stimulate better understanding of the content.



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* In Words, there are several ways to insert images in a Word document.

[1] Inserting an image **From a File**

[2] Inserting a **Scanned Image**

[3] Inserting an image **From Clip Art**

[4] Inserting an image **Using Drag & Drop method**

[5] Inserting an image **From the Clipboard**

.....

* Modify Images:

Sometimes, you need to modify the inserted images in a document. For example, you want to adjust the size of the image, remove unwanted area from the image, rotate an image, add artistic effects, and so on.

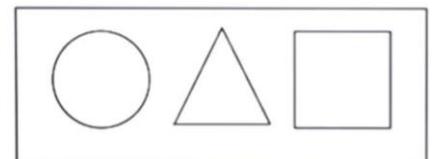
You can modify the images using options available in the **Format tab** that appears under the **Picture Tools** contextual menu.

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*Drawing Objects In a Document:

In MS Word, Shaper is a drawing feature that helps you to draw different objects like banners, callouts, connectors, etc. with the help of these shapes, you can draw attention and provide impact to your message.

INSERT → SHAPES



* Positioning Images in the Text:

You need to set the position of an image with respect to the Text & other images while insertion it in a text document. The placement of Graphics is an important aspect in a word document.

There are various methods to position an image in a document:

- (1) Wrapping Text
- (2) Arranging Images
- (3) Aligning Images



(1) Wrapping Text:

Wrapping text means, surrounding an image or drawing object within the text. The Wrap text options is used for this purpose, i.e. to wrap text around an image.

It is available in **Arrange Group** of **Format tab**. Various options are available in the Wrap text drop-down menu. Some of them are listed as follows:

(i) In line with Text : This is the default option. This option places the image within the same line as that of the text.

(ii) Square: This option wraps the text around the square border of the image.

(iii) Tight: This option is used with irregular or round shapes to wrap the text around it.

(iv) Through: This option is similar to the Tight option as it also places the text around the image only.

(v) Top and Bottom: By selecting this option, the text will be placed on the top & bottom of image

(vi) Behind Text: The image is displayed behind the text (like a watermark) with this option.

(vii) In front of Text: This option displays the image over the text.

(2) Arranging Images:

While working with the multiple drawing objects, it may happen that one shape overlaps the other. MS Word provides two options- Bring Forward & Send Backward that enables you to change the order of the objects in your document.

These options are available in the **Arrange Group** of the **Format Tab**.

Bring Forward: This option brings a particular drawing object on the top of the other object.

Send backward: This option sends the selected object behind the other object.

(3) Aligning Images:

You can align drawing images and objects Horizontally and Vertically in a document.

To set the alignment, Select the image, Click on the drop-down arrow of the **Align button** Align in the **Arrange Group** of the **Format Tab** and select any one of the following options:

(i) Align Left: It horizontally aligns the left edges of the selected objects. If only a single object is selected, the left edge of the object is aligned to the left of the page.

(ii) Align Center: It horizontally centres the selected objects. If only one object is selected, the centre of the object is aligned to the centre of the page.

(iii) Align Right: It horizontally aligns the right edges of the selected objects. If only a single object is selected, the right edge of the object is aligned to the right side of the page.

(iv) Align Top: It vertically aligns the top edges of the selected objects. If only one object is selected, then the top edge of the object is aligned to the upper page margin.

(v) Align middle: It vertically centres the selected objects. If only one object is selected, then the centre of the object is aligned to the vertical centre of the page.

(vi) Align Bottom: It vertically aligns the bottom edges of the selected object. If only one object is selected, then the bottom edge of the object is aligned to the lower page margin.

2.2 Inserting Images

[1] Inserting as Image From a File:

- (i) Click on the **Insert** tab and select the **Picture** button in the **Illustrations** group.
 - (ii) The **Insert Picture** dialog box appears.
 - (iii) Browse for the picture you wish to insert
 - (iv) Choose the desired file and click on the **Insert** button.
-

[2] Inserting Images from Clip Art:

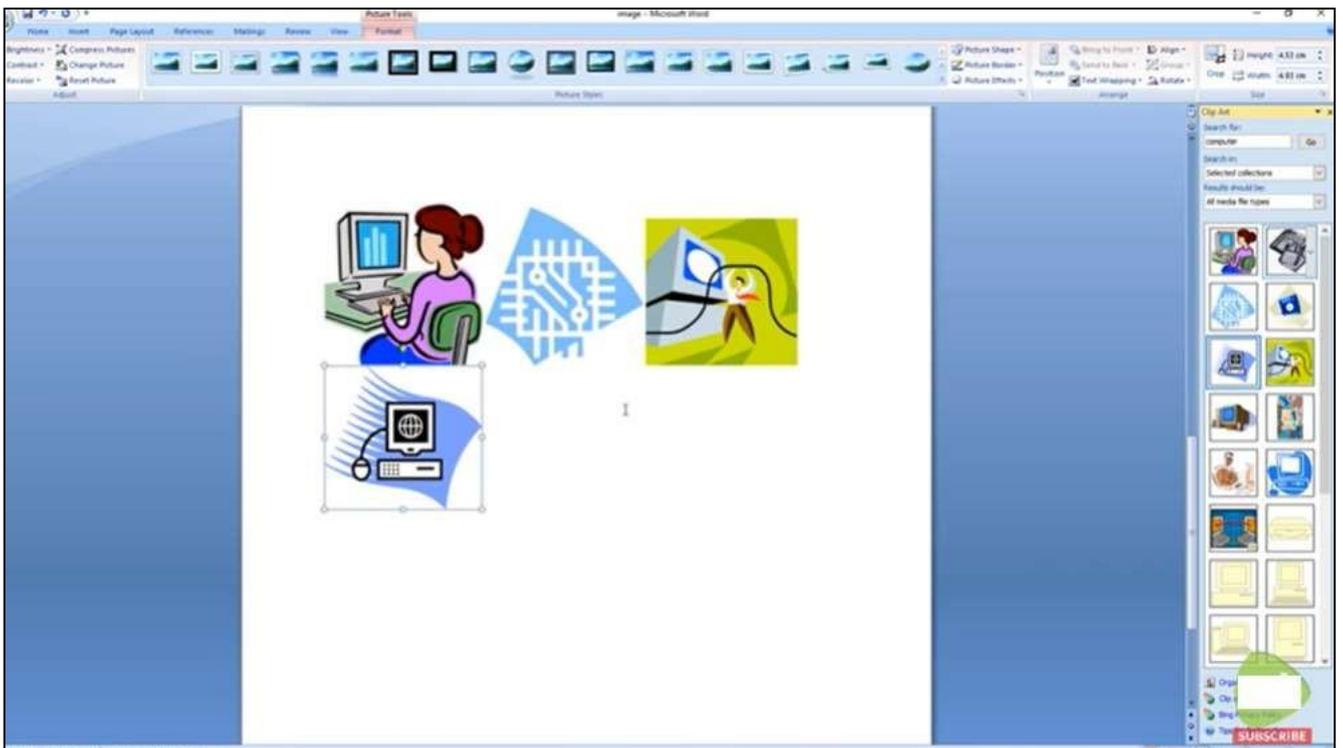
- (i) Click on the **Insert tab**, in the **Illustration group**, click on the **Clip Art** option.
- (ii) The **Clip Art** gallery appears in the task pane on the right.
- (iii) Enter the keyword in the **Search for**, type the file name of the Clip Art.
- (iv) Click on **Go** button. In the displayed list of results, select the desired clip art to insert it in the document.

Or

Click on the drop-down arrow next to an image in the task pane and select, **Insert, Copy** or any other options from the list.

Note :

- We can insert a clip just by **left click on the required clip**.
- Or **right click on clip** and then **select insert**.



[3] Inserting Images From a Scanner:

(i) Select **Start > Microsoft office > Microsoft Clip Organizer**

The **Favorites – Microsoft Clip Organizer** window appears.

(ii) Click on the **File** tab. Then, select **Add Clips to Organizer > From Scanner of Camera.**

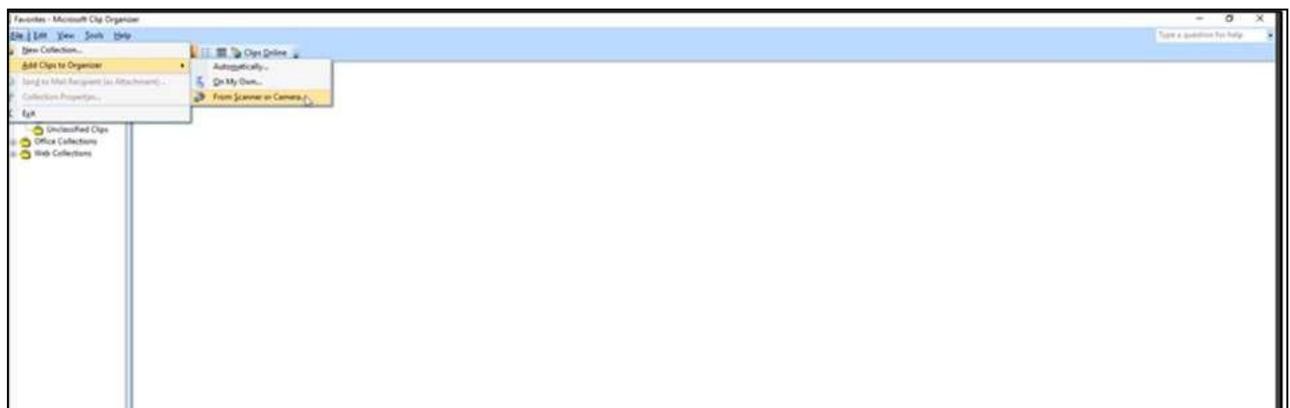
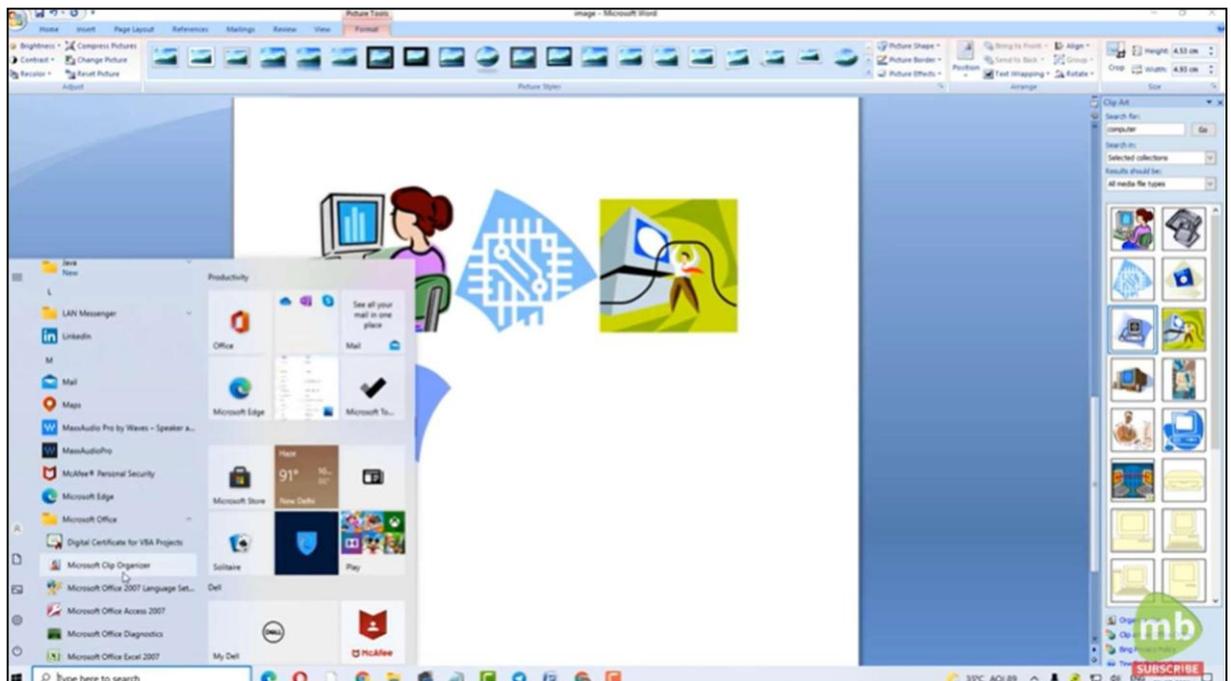
(iii) Select the scanner device and resolution quality and then click on the **Insert tab.**

(iv) Wait until the scanning is done and then click on the folder with your scanner name under **My Collections** section. You can see the scanned image in it.

Close **Microsoft Clip Organizer.**

(v) Now, open the Word document. In the **Clip Art** pane, click on the **Go** button.

The scanned image appears. Click on the image to insert it into your document.



[4] Inserting an Image using Drag and Drop Method:

Drag and Drop means selecting an image from a particular location and dragging and dropping it in the document where required. The steps are as follows,

- (i) Open a word document and move the cursor to the location where you want to insert the image
 - (ii) Now, locate the image on your computer, which you want to insert.
 - (iii) Select the image and drag it in your document. The image will be inserted in the document.
-

[5] Inserting an image from the Clipboard:

- (i) Open the document in which image already exists.
 - (ii) Click on the image and press **Ctrl+C** to copy it. The image gets copied to the clipboard.
 - (iii) Now, open the other document and place the cursor where you want to paste the image.
 - (iv) Press **Ctrl+V**. The copied image is pasted in the document.
-

2.3 Modifying Images:

- * Sometimes, we need to modify the inserted images in a document. For example, you may want to adjust the size of the image, remove unwanted area from the image, rotate an image, add artistic effects, and so on.....
- * We can modify the images using options available in the **Format** tab, that appears under the **Picture Tools** contextual menu.

[1] Resizing an Image:

To resize an image, follow the given steps:

- (i) Select the image that you want to resize. You will notice **four corner handles & four side handles**
 - (ii) Drag any **Side handle** in or out to shrink or stretch it in a direction.
OR Drag any **Corner handle** in or out to make it smaller or bigger resp. Corner handles enable you to increase and decrease the size diagonally.
-

[2] Cropping an image:

Cropping means removing the unwanted area from an image. Steps are as follows,

- (i) Select the image that you want to crop.
- (ii) Click on the **Crop** button in the **Size** group of the **Format** tab.
- (iii) Eight **Crop handles** will appear. Drag a **Side crop** or **Corner crop** handle to the image.
- (iv) We can drag as much as you like. The **Corner crop** handles will crop the image **diagonally**, whereas using a **Side crop** handle, we can crop an image in **horizontal or vertical direction**.

[3] Rotating an Image:

To rotate an image or a shape, follow the given steps,

- (i) Select the image that you want to rotate.
- (ii) Click on the **Rotate** option in the **Arrange** group of the **Format** tab.
- (iii) A **rotation handle** appears. Bring the pointer on the **rotation handle** and drag it clockwise or anticlockwise to rotate the image or shape.



[4] Using Picture Color tab:

Using the options given under this tab, you can adjust the colour of the picture by adjusting the various settings, such as colour saturation percentage, colour tone percentage and recolor options like Grayscale, Black & white, Tan, etc.

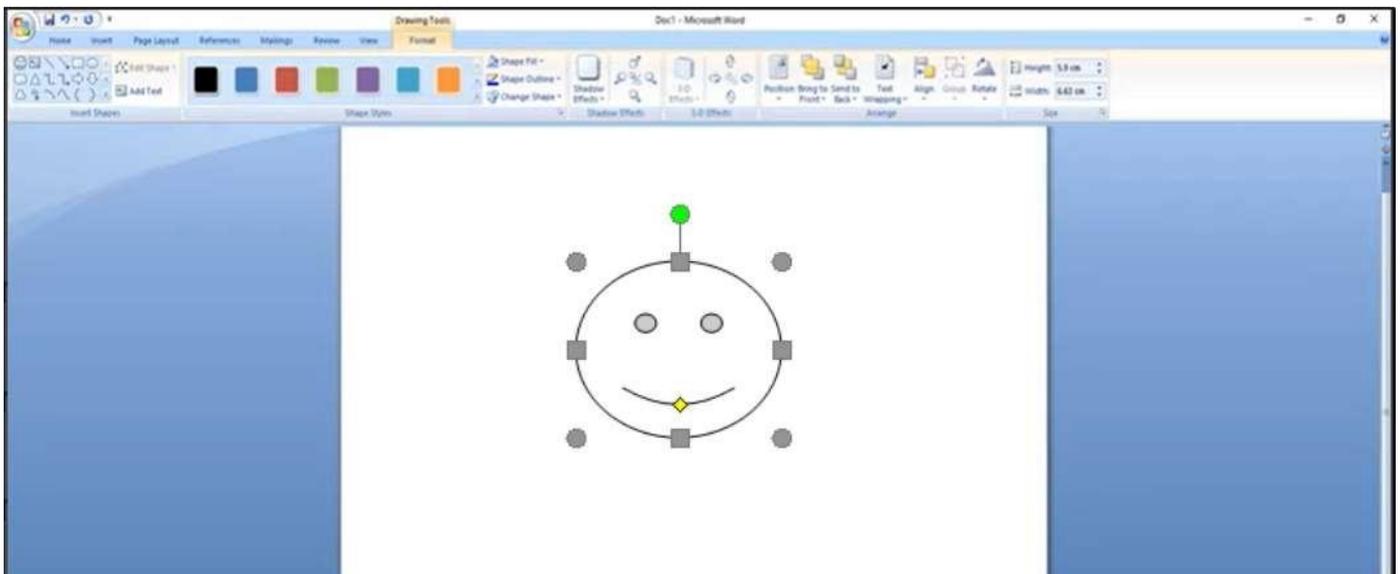
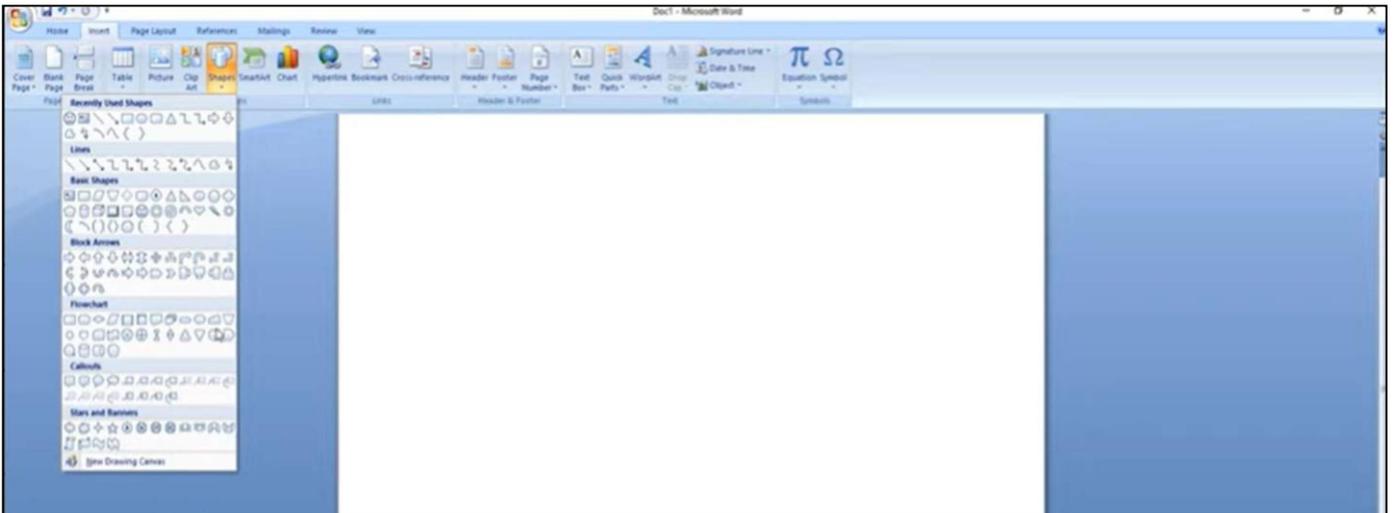
[5] Using Artistic Effects Tab:

You can easily apply some professional looking effects, such as Marker, Pencil Grayscale, Pencil Sketch, etc to the pictures by using the options given under the **Artistic Effects** tab. Note that you can apply only one effect to the picture at a time.



2.4 Drawing Object in a Document - Practical

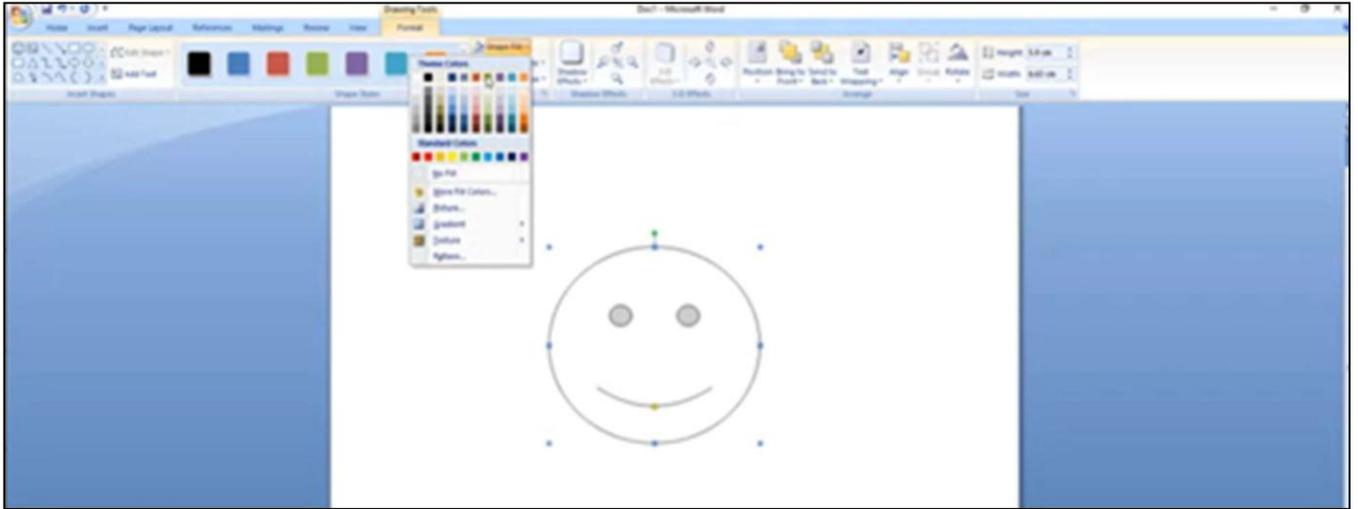
- (i) Click on the **Shapes** button in the **illustrations** group of the **Insert** tab.
- (ii) A drop-down menu displays various options such as **Lines**, **Basic Shapes**, **Block Arrows**, **Equation Shapes**, **Flowchart**, **Stars & Banners**, **Callouts**, etc
- (iii) Move mouse pointer on **Basic Shapes** and click on any shape for example click on **Smiley Face**.
- (iv) The mouse pointer changes to a **cross hair** symbol '+' drag it on a working area to draw a shape
- (v) The **Format** tab automatically appears on the **Ribbon** when you draw the shape.
- (vi) Select any shape style from the displayed list in the Shape Styles group.
- (vii) Click on the More drop-down menu to select and change the overall visual style of the shape.



* Changing the Properties of Drawing Objects:

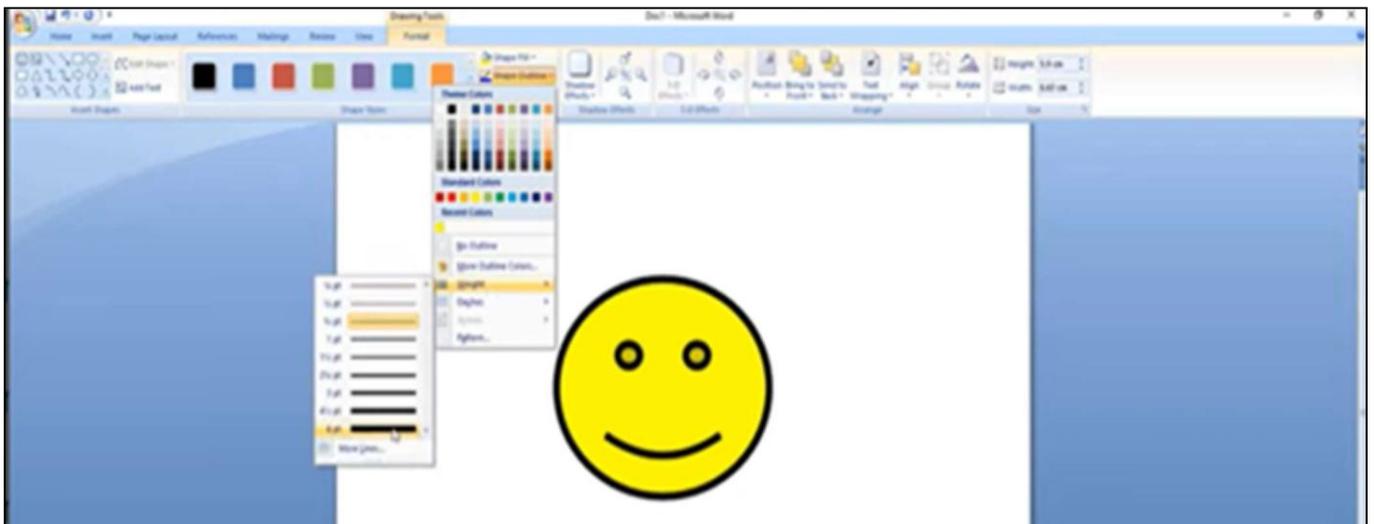
[1] Changing Colour of a Drawing Object:

- (i) Select the drawing object that you want to modify.
- (ii) Click on the **Shape Fill** drop-down button in the **Shape Styles** group of the **Format** tab.
- (iii) Select the required colour and the colour of the shape will be changed immediately.
- (iv) You can also fill the object with a **Picture**, **Texture** or **Gradient**.
- (v) Again, click on the **Shape Fill** drop-down button, Select any option from **Picture**, **Texture** or **Gradient** and make the required changes.



[2] Changing Outline of a Drawing Object:

- (i) Select the shape that you want to modify
- (ii) Click on the **Shape Outline** drop-down button in the **Shape Styles** group under the **Format** tab
- (iii) Select any colour for the outline from the colour palette.
- (iv) You can modify the width of the outline of the shape by selecting the **Weight** option from the **Shape Outline** drop-down arrow.
- (v) Select the required style.



[3] Grouping Drawing Objects:

It is often convenient to group shapes together so that they can be treated as a single object.

- (i) Draw any three basic shapes in a document.
- (ii) Click on the **Home** tab. In the **Editing** group, click on the **Select** drop-down button & choose the **Select Objects** option from the drop-down list.
- (iii) Then, hold down the left mouse button to draw a box over the shapes. All the shapes in this box will be selected. or Press & hold **Shift** or **Ctrl** key while you select the objects.
- (iv) Now, right-click on the selected shapes that you want to group. A shortcut menu appears that have **Group** & **Ungroup** options. Select **Group** options.

OR

Click on the **Format** tab and select the **Group** option from the **Arrange** group.

Further select the **Group** option from the drop-down list.

- (v) You will now see that all the objects are grouped together.

Assessment:

Q[A] Select the correct option.

- (1) You can insert a picture in a document from the group of the insert tab.

- a. Arrange b. Symbols c. Illustrations

Ans: c. Illustrations

- (2) is a collection of pictures or images that are available in Microsoft office gallery.

- a. WordArt b. ClipArt c. Picture

Ans: b. ClipArt

- (3) You can fill colour in a shape by using the..... in the shape styles group of the format tab

- a. Fill Shape b. Shape Fill c. Fill Color

Ans: b. Shape Fill

- (4) Handles are used to resize an image diagonally.

- a. Corner Handles b. Side Handles c. both a & b

Ans: a. Corner Handles

- (5) By using the dialog box, you can make changes in the picture properties.

- a. Format Picture b. Properties c. Image Properties

Ans: a. Format Picture

Q[B] True or False

- (1) You can draw a shape on the document by selecting any shape from the insert tab. - True
- (2) The 'Drawing Object Properties' tab opens when you select an object. - True
- (3) Drawing objects can be grouped together so that they can be treated as a single object - True
- (4) Picture alignment options are available in the insert tab - False
- (5) You can bring any image in front of all the images by using the 'Bring Forward' option. - True

Q[C] Answer the following questions.

Q[1] List the different ways of inserting images in a document

- Ans: [i] Inserting an image **From a File**
[ii] Inserting a **Scanned Image**
[iii] Inserting an image **From Clip Art**
[iv] Inserting an image using **Drag & Drop method**
[v] Inserting an image **From the Clipboard**

Q[2] Why do you group images ?

Ans: By grouping Images, Shapes and other objects together, you can easily move or resize them.

You can also copy and paste them all together, therefore saving you a lot of time and energy.

Q[3] How can you wrap an image with text >

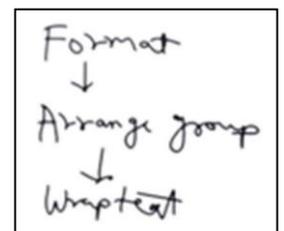
Ans: To wrap text around an image:

(i) Select the image you want to wrap text around.

The **Format** tab will appear on the right side of the Ribbon.

(ii) On the **Format** tab, click the Wrap Text command in the **Arrange** group.

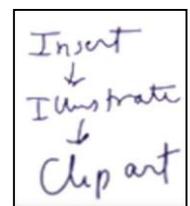
Then select the required text wrapping option.



(iii) The text will wrap around the image.

Q[4] What is Clip Art?

Ans: Clip Art (also written as clipart, clip-art), is a type of graphic art and are pre-made images used to illustrate any medium..... It is generally composed exclusively of illustrations grouped into the insert tab.



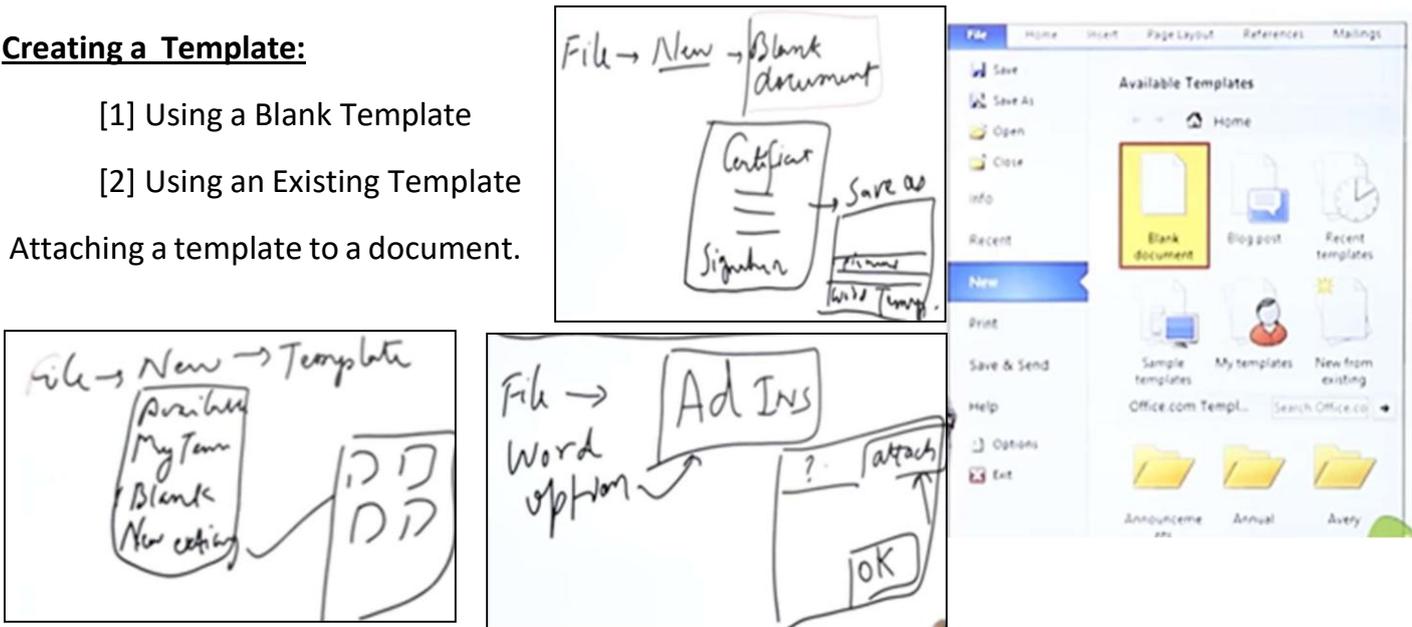
Chapter-03: Working With Templates

3.1- Introduction:

- * A **Template** is a **predefined layout** that contains **sample content, themes, colours, font styles, background styles,** etc. And **gives an initial foundation** to create a document.
- * By using a template, you can quickly create a new document. For example, if you want to create a business letter, you can use a letter template and modify only the required sections.

Creating a Template:

- [1] Using a Blank Template
 - [2] Using an Existing Template
- Attaching a template to a document.



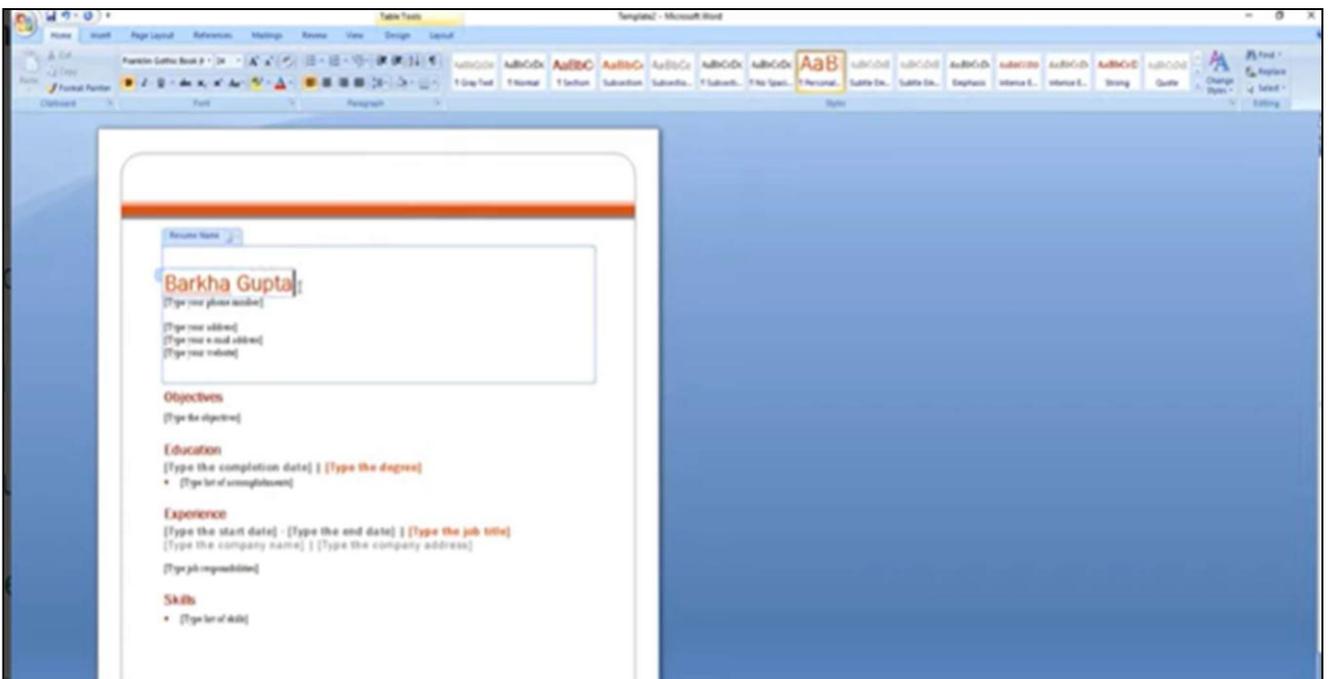
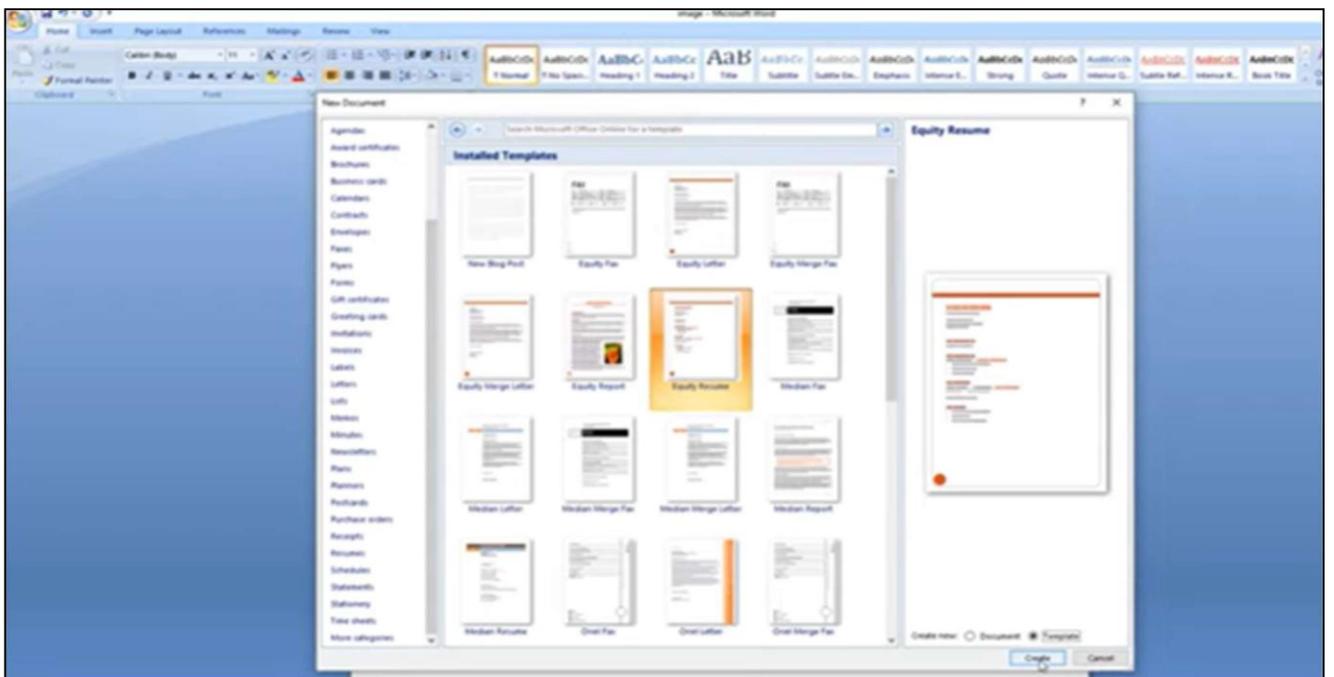
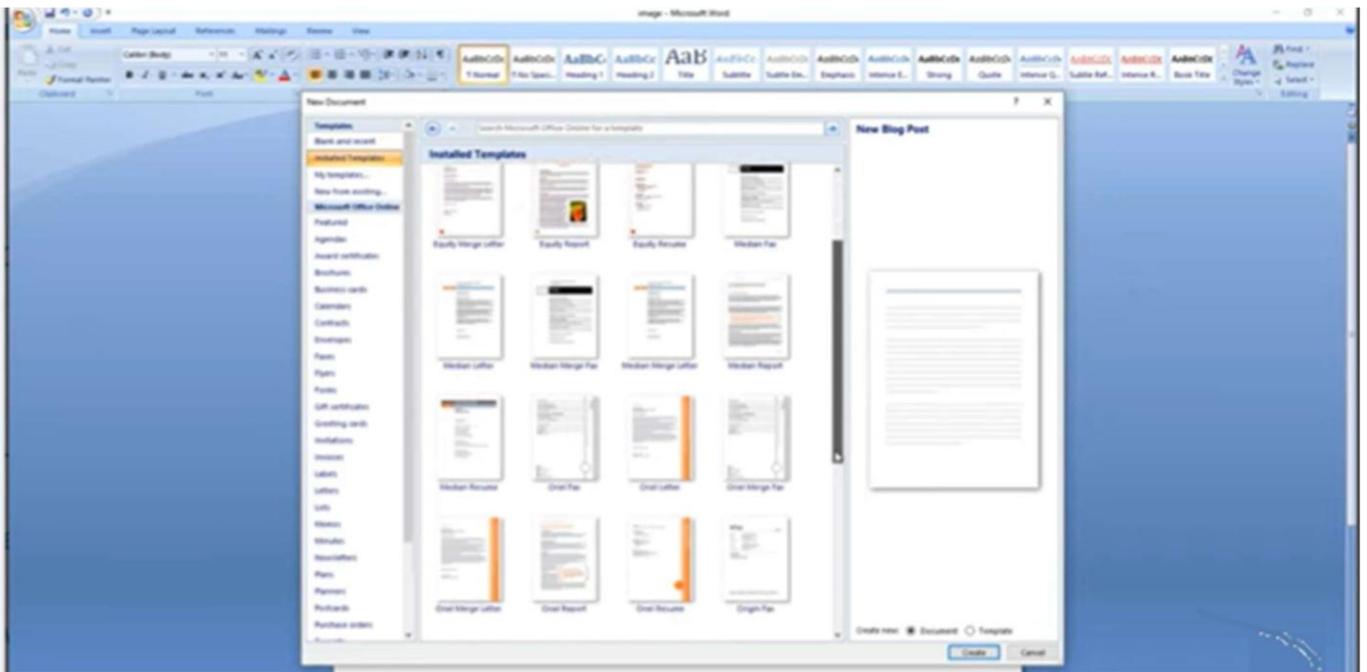
3.2- Using Built-in Templates: (practical)

To use built-in template, follow these steps:

- (1) Click on the **New** option of the **File** tab. A gallery of templates will be displayed.
- (2) Click on the **Templates** option under the **Available templates**.
 - (i) Select the required template. We will find the preview of the selected template in the preview pane present on the extreme right of the window.
 - (ii) Select the **Template radio button** in the Preview pane and click on the **Create** button.
- (3) We can also choose from a wide range of many other templates present under the

Microsoft Office Online Templates.

- (i) To choose a template from office.com Templates section, click on the template category, say 'Event' to open a gallery of templates.
- (ii) Select the required category from the gallery, say 'Holiday Party Invitation' and click on the **Download** button in the preview pane.
- (iii) Now, you can use the downloaded template to create your document.



3.3- Creating Template:

A template can be created in word by saving a document as a **.dotx** or **.dot** file.

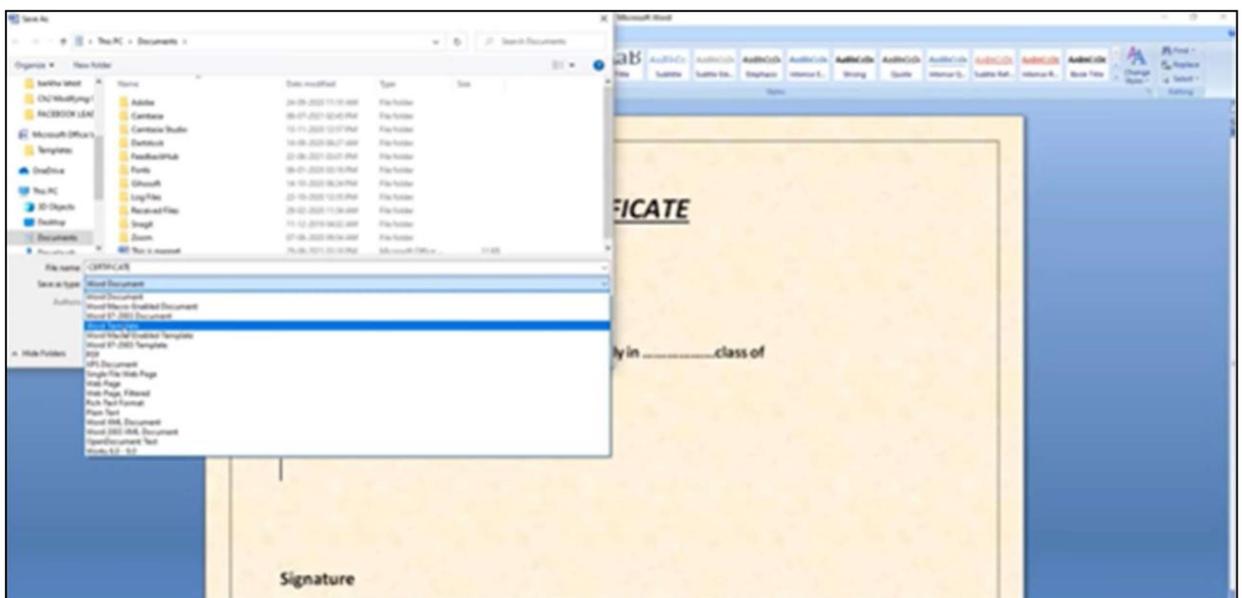
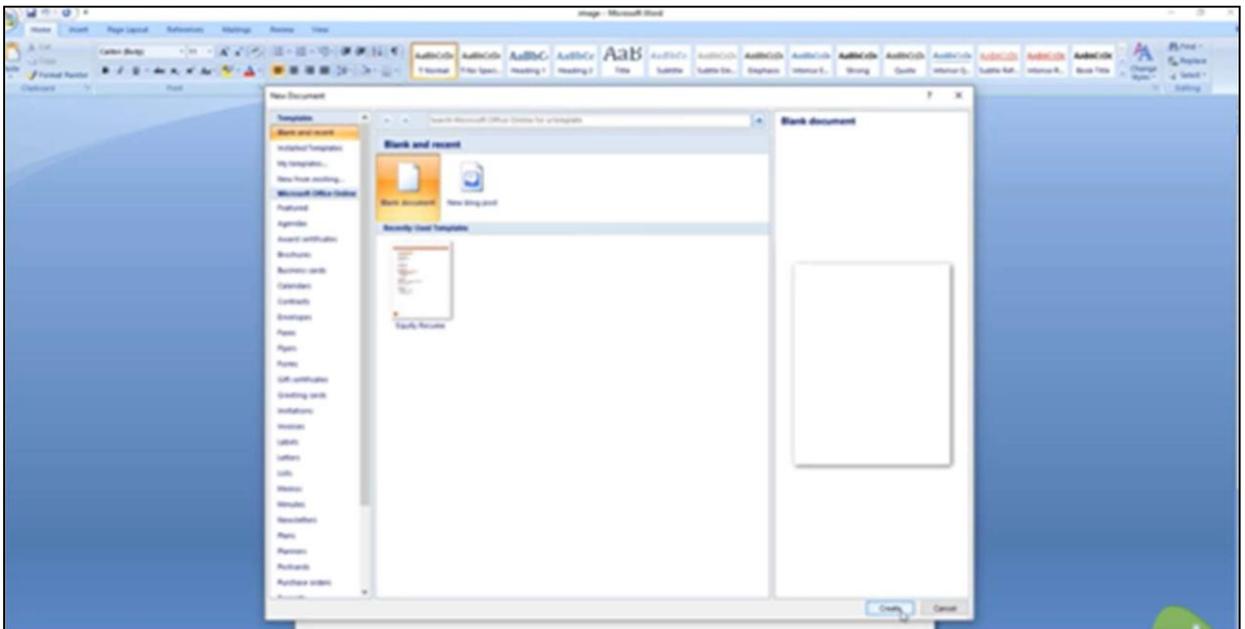
There are two ways of crating a templates

- [1] Using a blank template [2] Using an existing template

[1] Using a blank template:

To create with a blank template, follow these steps

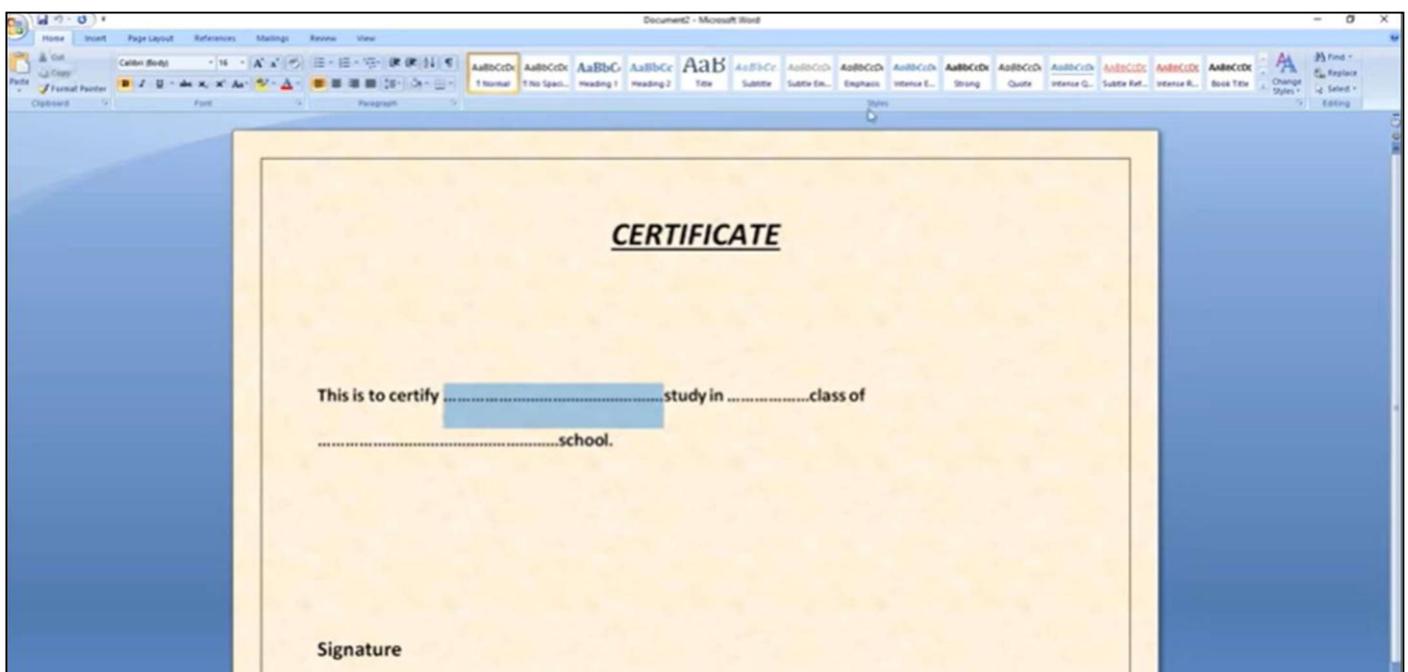
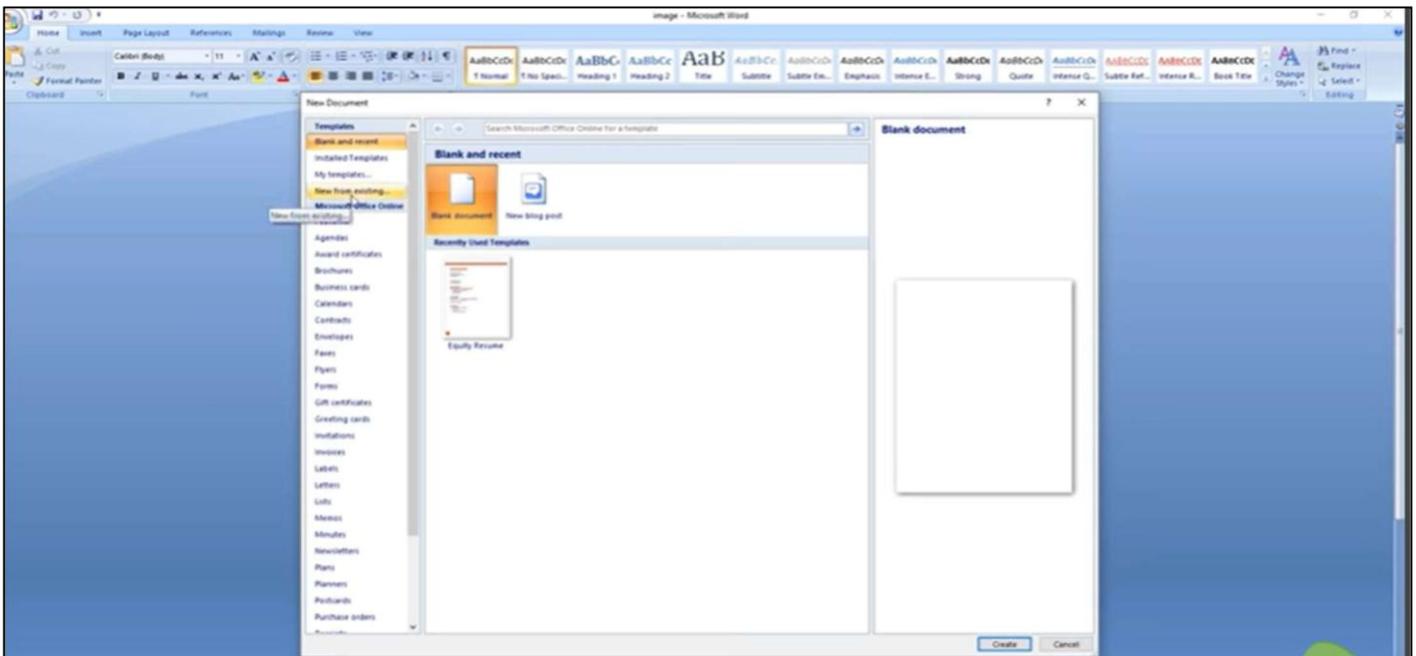
- (i) Click on the **new** option in the **File** tab.
- (ii) By default, the **blank document** option is selected.
- (iii) Click on the **Create button** present on the extreme right task pane.
- (iv) A new document will open. Make the desired changes in the page layout, Like Margin settings, Orientation, Styles, etc.

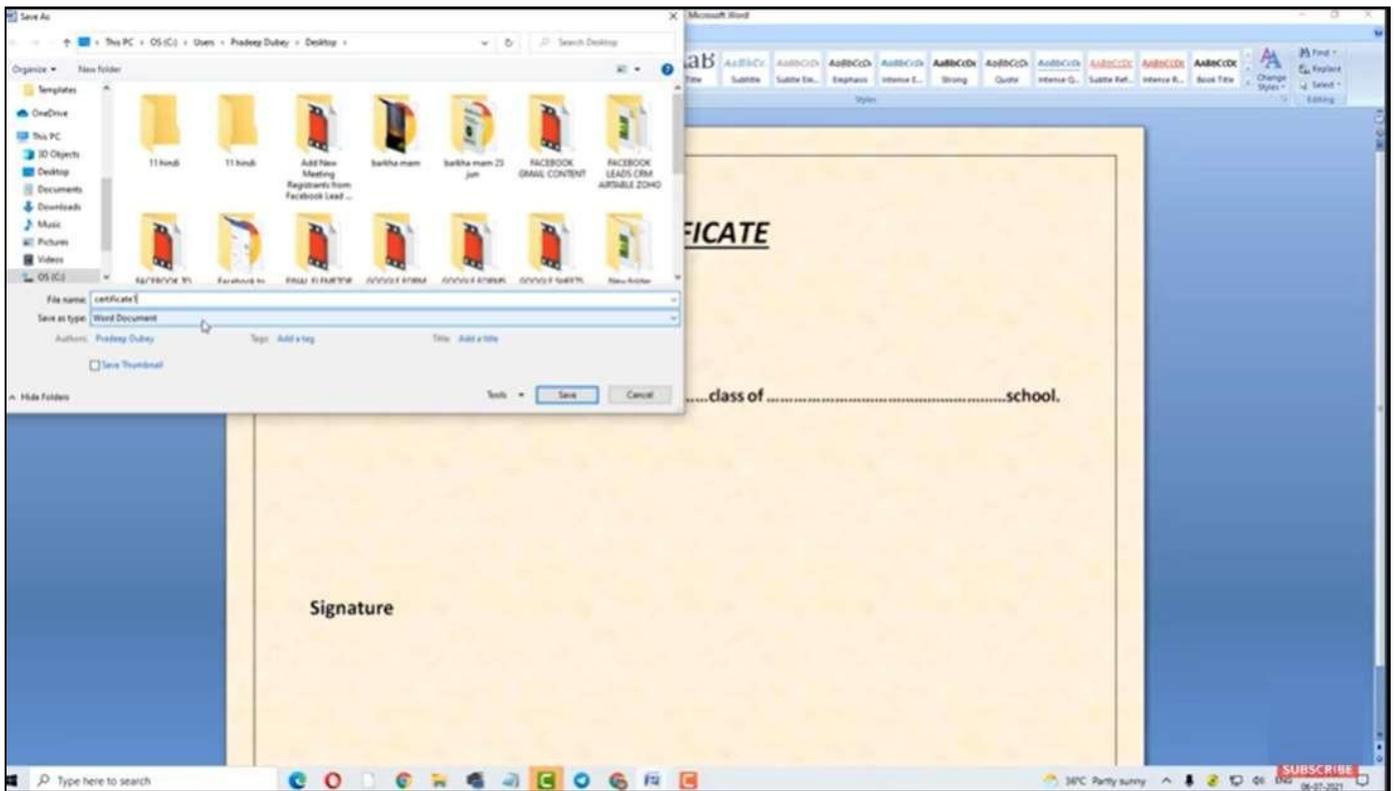


[2] Using an existing Template:

To create a template using an existing template, follow these steps:

- (i) Click on the **New** option in the **File** tab. A gallery of templates will be displayed.
- (ii) Click on the **New** from existing option present under the Available Templates section.
- (iii) The **New from Existing Document** dialog box will open.
- (iv) Locate and select the template or document that you want as a base for your new template.
- (v) Click on the **Create New** button.
- (vi) A new document will be displayed containing the settings of the chosen base template.
- (vii) Make necessary changes (if required) and then click on the **Save As** option in the **File** tab.
- (viii) Specify the name for the template in the File name text box & select Word Template in the Save as type list box.
- (ix) Click on the **Save** button.





3.4- Attaching a Template to a Document:

- (i) Suppose, you have created a document in Word based on a particular template.
- (ii) Later on, if you want to change the attached template, you can do so by using the **Add-Ins** available for Word.
- (iii) **Add-Ins** are the additional programs that are used to extend the capabilities of MS Word by adding custom commands and specialised features.

To use the Add-Ins, follow the given steps:

- [i] Click on the **File tab > Options** command.
- [ii] The Word Options window opens.
- [iii] Click on the **Add-Ins** option in the **Left pane**.
- [iv] The Add-Ins pane opens on the right.
- [v] Click on the drop-down arrow of the **Manage option** at the bottom & select Template option
- [vi] Click on **Go**. The Templates and Add-Ins dialog box opens.
- [vii] The template associated with the current document is displayed in the textbox under the Document Template section.
- [viii] Click on the drop-down arrow of the **Manage option** at the bottom & select Template option
- [ix] Click on **Go**. The Template and Add-Ins dialog box opens.
- [x] The template associated with the current document is displayed in the textbox under the Document template section.
- [xi] To change it, Click on the attach button.

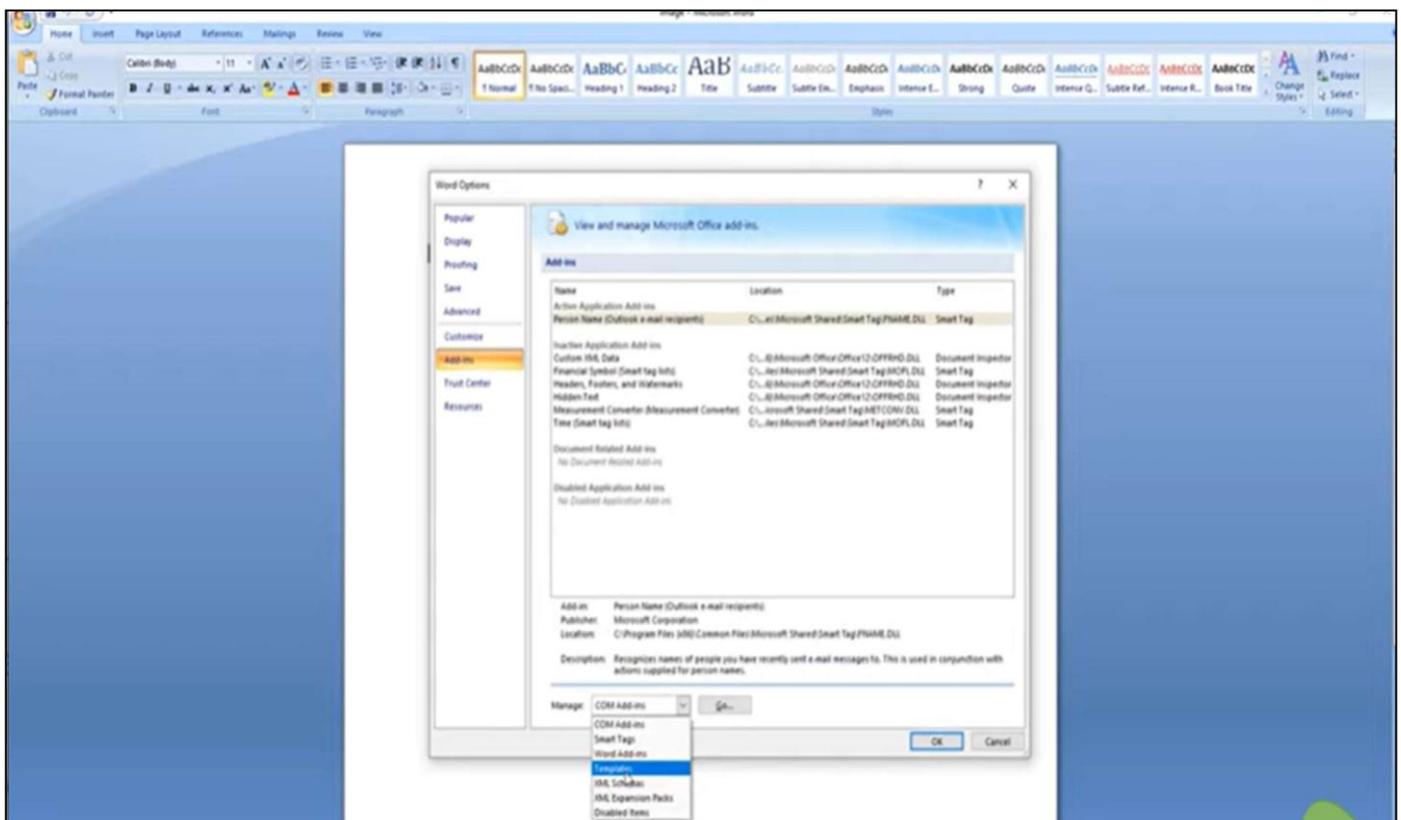
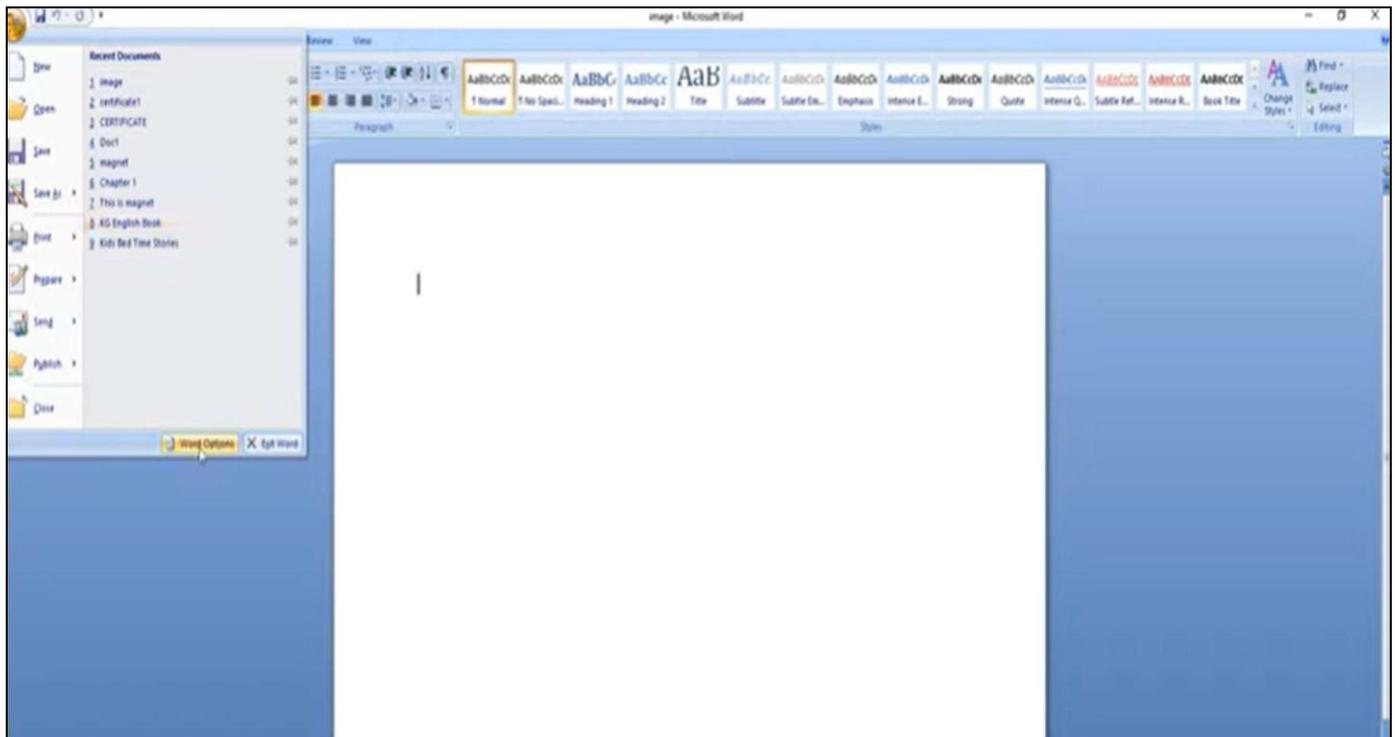
[xi] The attach template window appears

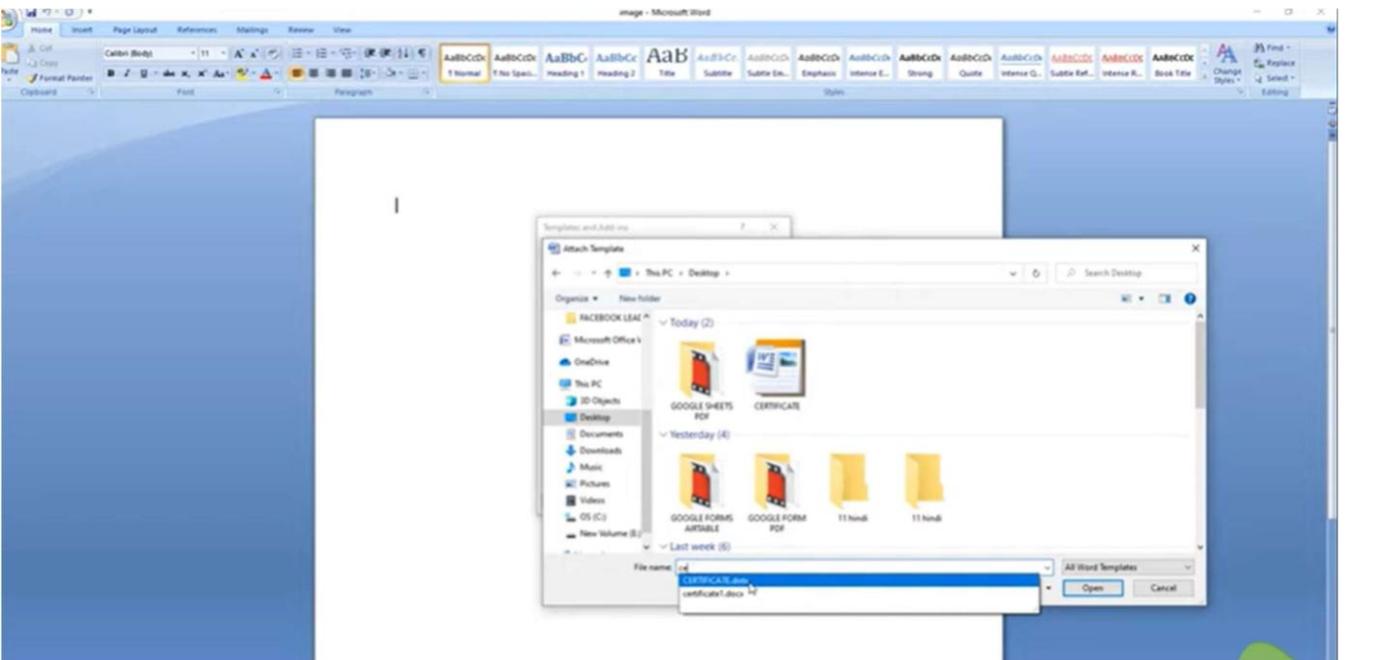
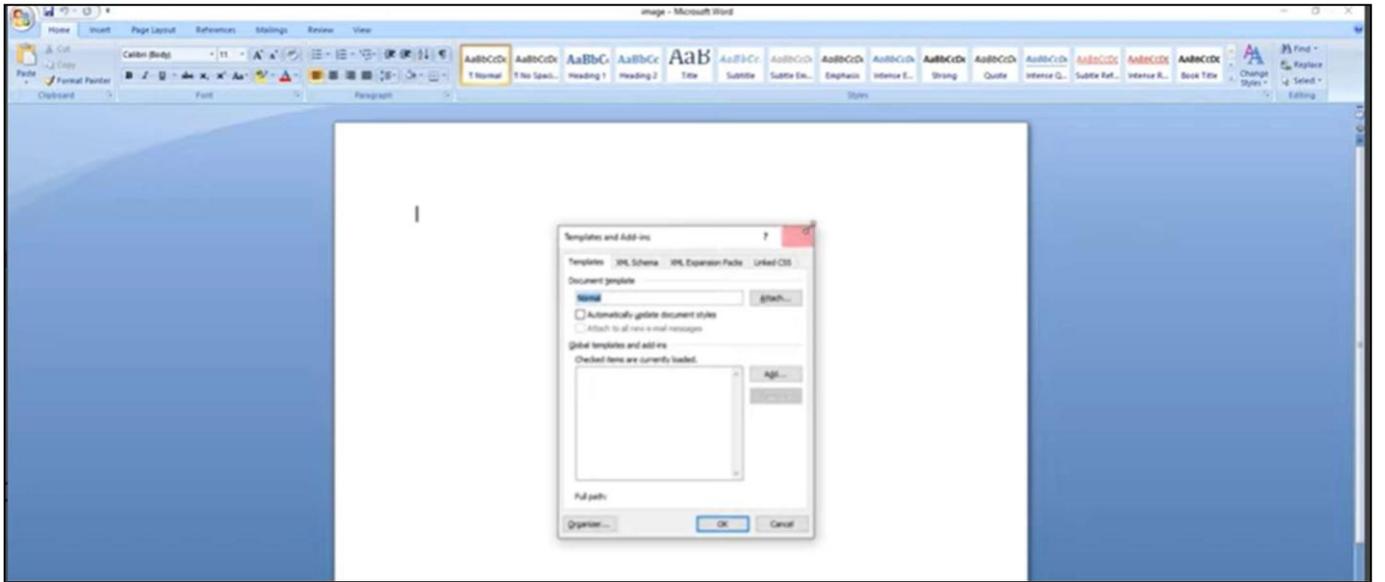
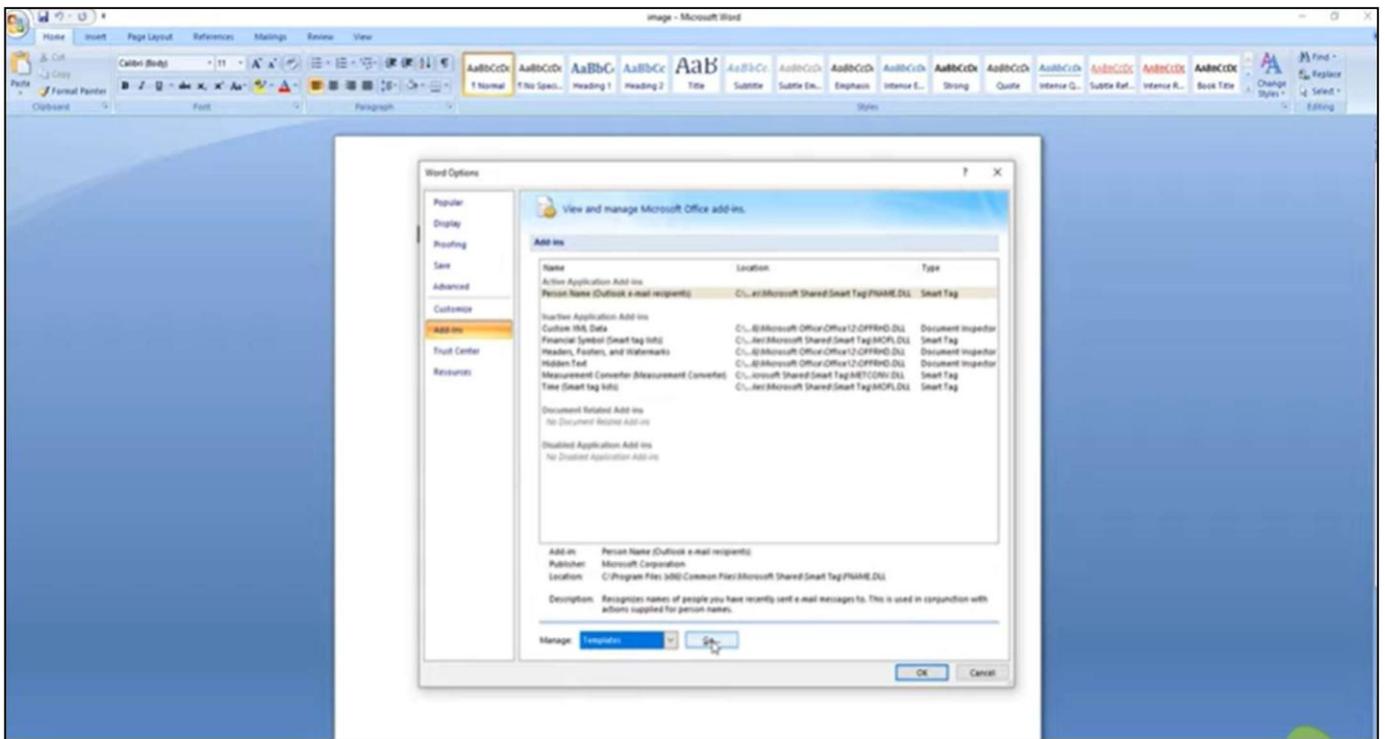
[xii] Locate the desired template file and click on the **open** button

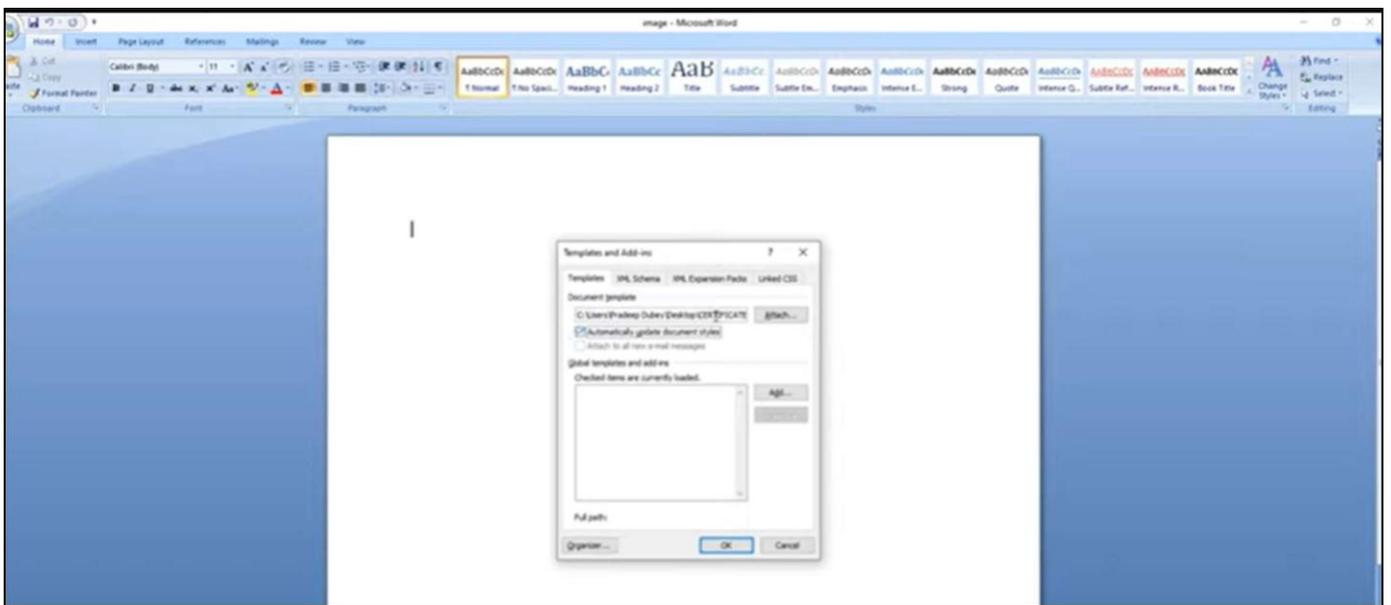
[xiii] The path to the selected template will be reflected in the textbox under the document template section.

[xiv] Make sure to select the automatically update document style checkbox. Click on **OK**

[xv] A new template will be attached to your document.







3.5- Assessment:

Q[A] Select the Correct option.

[1] By default, the option is selected when you click on the file > new option.

- a. Blank document b. Document 1 c. New document

Ans: a. Blank document

[2] A file saved with the extension .dotx / .dot is called a

- a. Style b. Template c. Theme

Ans: b. Template

[3] Which option do you select in the 'Save as type' box to save a document as template?

- a. Template b. Word template c. text document template

Ans: b. Word template

[4] Which option helps in creating a template based on the existing template?

- a. Template from existing b. New template from existing c. New from existing

Ans: c. New from existing



Q[B] Fill in the blanks:

[1] A..... give an initial foundation to build a document.

[2]..... is the default template for a Word document.

[3] Clicking on the option displays the recently used templates.

[4] A template can be created in word by saving a document with or extension

{ Hints : Normal dotm, Template, .dot, .dotx, Recent templates }

Ans : [1] Template [2] Normal dotm [3] Recent templates [4] .dot, .dotx

Q[C] Answer the following questions.

Q[1] What are templates?

Ans: A template is a form, mold or pattern used as a guide to making something.

Q[2] How can you create a document using a predefined template?

Ans: (i) Click on the **File tab**, then click on **New**.

(ii) Under Available templates, click **New from existing**.

(iii) Click a template or a document that is similar to the one that you want to create and then click **Create New**



Q[3] What are Add-Ins ?

Ans: An add-in is a software program that expands the capabilities of bigger programs.

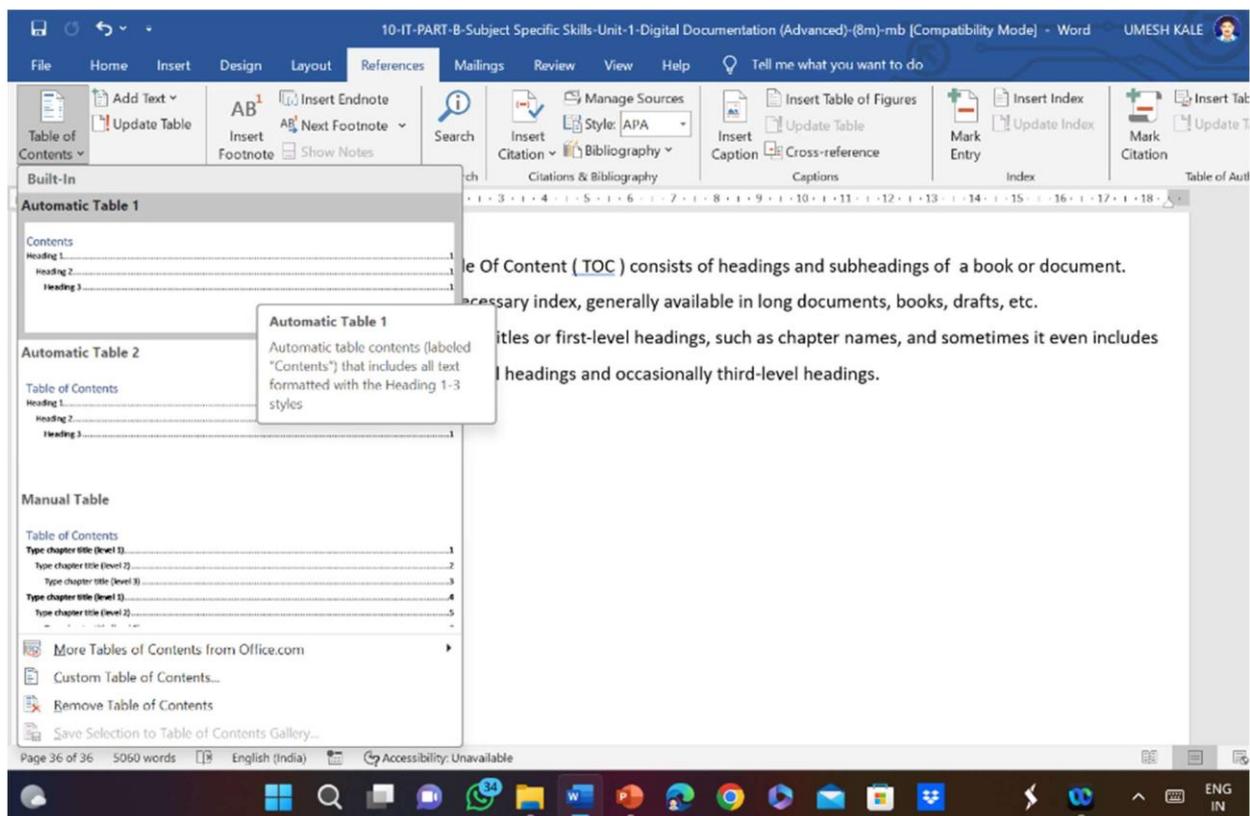
It is a term commonly used by Microsoft and other platforms which have additional functions that can be added to primary programs.



Chapter-04: Using Table of Content

4.1 Introduction :

- [i] You must have seen the Table of Contents page in your book that you refer to go to a particular chapter.
- [ii] The Table Of Content (TOC) consists of headings and subheadings of a book or document.
- [iii] It is a necessary index, generally available in long documents, books, drafts, etc.
- [iv] It includes titles or first-level headings, such as chapter names, and sometimes it even includes second-level headings and occasionally third-level headings.
- [v] A table of content act as a Map for the users.
- [vi] It allows them to find the information in the document using the chapter names & page numbers.
- [vii] A good table of contents has the following **characteristics**:
 1. It should be easy to read and simple to use.
 2. It should be organized and formatted properly.
 3. It must be accurate and easily accessible.
 4. It should be given after the title & copyright page.



Creating Table Of Contents:

- [1] To create a table of contents, you **must use appropriate styles for the Heading** in your document.
- [2] For example, **Heading 1 style** for the first level headings, **Heading 2 style** for the second level heading and so on.
- [3] You can also **define the hierarchy of headings** in a document if it contains multi-level headings
- [4] For example, you can categorise headings in different headings levels, such as 1, 1.1, 1.2, 2, 2.1, and so on..
- [5]When chapters or sections will be added or deleted, the numbering of headings levels will automatically change.
- [6] Word provides there method to create a table of contents in a document.
 - (i) Using Inbuilt types
 - (ii) Using the Manual Table option
 - (iii) Using the Insert Table of Content option

[1] Using Inbuilt type:

- (i) Word lets you build an automated table of contents using the Table of Content option.
- (ii)It generates all the entries automatically as hyperlinks in the TOC. You can visit the heading by pressing the Ctrl key and clicking on the hyperlink.

[2] Using Manual Table Option:

Another option in the Table of Contents submenu is Manual Table. This option allows us manually enter the headings and subheadings in the table of contents.

* Click on the **References** tab and select the **Table of Content option**.

* A submenu appears, click on the **Manual Table** option.

A table of contents is inserted where you can manually enter the topics, sub topics, page numbers, etc. This is usually not a recommend method to insert a table of content, as the chances of errors while typing are higher.

Using Insert Table of Contents Option:

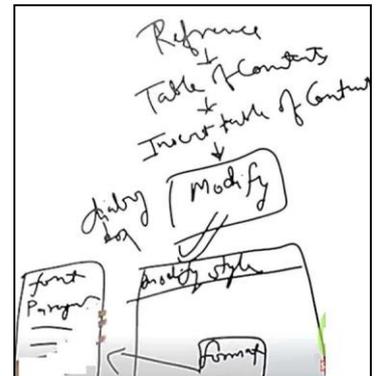
In case you want to make **modifications** in the default style of the table of contents, you can use the Insert Table Of Content option from the sub-menu of the Table of Content menu.

- * Click on **ReferenceS tab** and select the Table of Content option.
- * A submenu appears, Click on the **Insert Table of Content** option.
- * The **Table of Content dialog box** appears.

Customising The Table of Contents:

In word, you can easily customise the table of contents as per your requirement using the Table of Contents dialog box. To customise the TOC, follow these steps:

- * Select the existing table of contents by clicking on the icon on the top-left corner.
- * Now, click on the **References tab**. Click on the Table of Contents drop-down arrow. Select the **Insert Table of Contents** option from the sub-menu.



(It will replace the existing table of contents with new formatting.)

Maintaining A Table of Contents:

Whenever you make changes to the text of a heading in the body of document or the page on which the heading appears, those changes will appear in the table of contents automatically whenever it is updated.

You can perform some basic operation as listed below:

- * Updating a table of contents when changes are made to the document.
- * Deleting a table of contents.

4.3 Creating Table of Contents – (practical)

Using a Table of Contents

Creating Table of Contents:

- Word provides three methods to create a table of contents in a document:
 - Using **inbuilt types**
 - Using the **Manual Table** option
 - Using the **Insert Table of Contents** option
- Let us learn how to create a table of contents in MS Word.



To create table of contents, follow these steps:

- (i) Make sure that the headings are styled consistently. For example, use the Heading 1 style for the chapter names, Heading 2 style for the topics, Heading 3 style for sub-topics, and so on
- (ii) In the document, position the cursor where you want to insert the TOC. Usually, a table of contents is inserted after the title page in a document.
- (iii) Click on the **References** tab and select the **Table of Contents** option.
- (iv) A submenu appears. Word gallery has two inbuilt types of table of contents, **Automatic Table 1** and **Automatic Table 2**. Select any one of them.
- (v) A table of contents will appear in the document.

* Let us we have a word file and in that,

first page is Certificate, second page is keep blank for Table of Content & page number 3, 4, 5 contains Chapter 1, Chapter 2 & Chapter 3 respectively.

4.3 Creating Table of Contents - Practical

The screenshot shows a Microsoft Word document titled 'magnet - Microsoft Word'. The document content is as follows:

- Page 1: Certificate
- Page 2: Blank page for Table of Contents
- Page 3: Chapter 1
- Page 4: Chapter 2
- Page 5: Chapter 3

The table of contents is located on page 3, 4, and 5. The document content is as follows:

Chapter 1

ARTIFICIAL INTELLIGENCE

Introduction

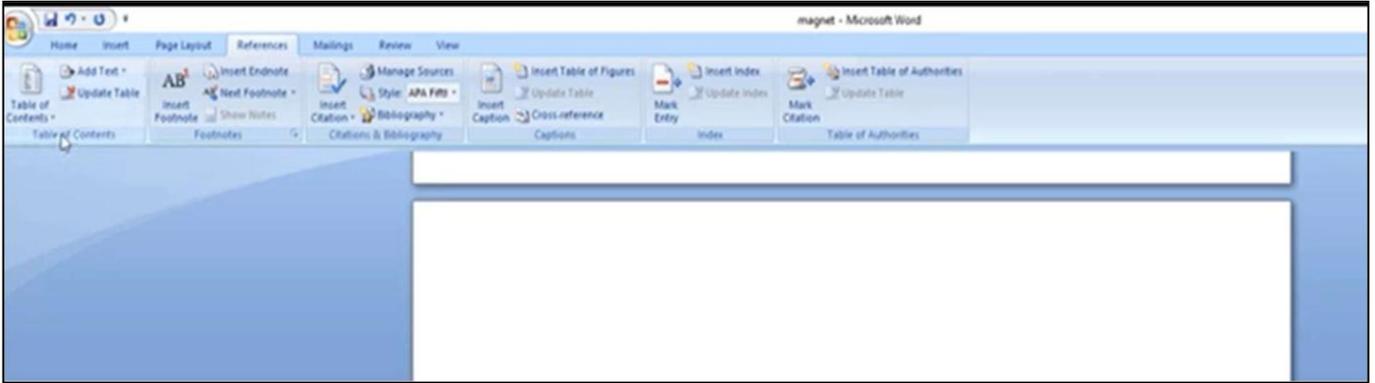
As AI educational solutions continue to mature, the hope is that AI can help fill needs gaps in learning and teaching and allow schools and teachers to do more than ever before.

AI can drive efficiency, personalization and streamline admin tasks to allow teachers the time and freedom to provide understanding and adaptability—uniquely human capabilities where machines would struggle.

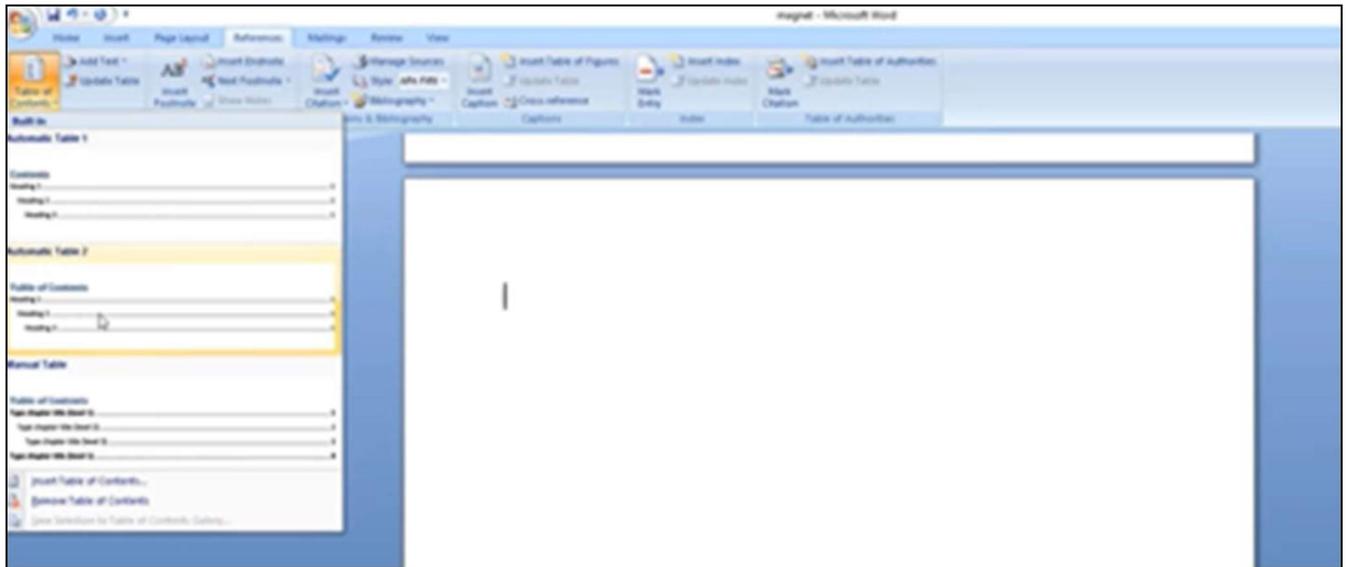
By leveraging the best attributes of machines and teachers, the vision for AI in education is one where they work together for the best outcome for students.

Since the students of today will need to work in a future where AI is the reality, it's important that our educational institutions expose students to and use the technology

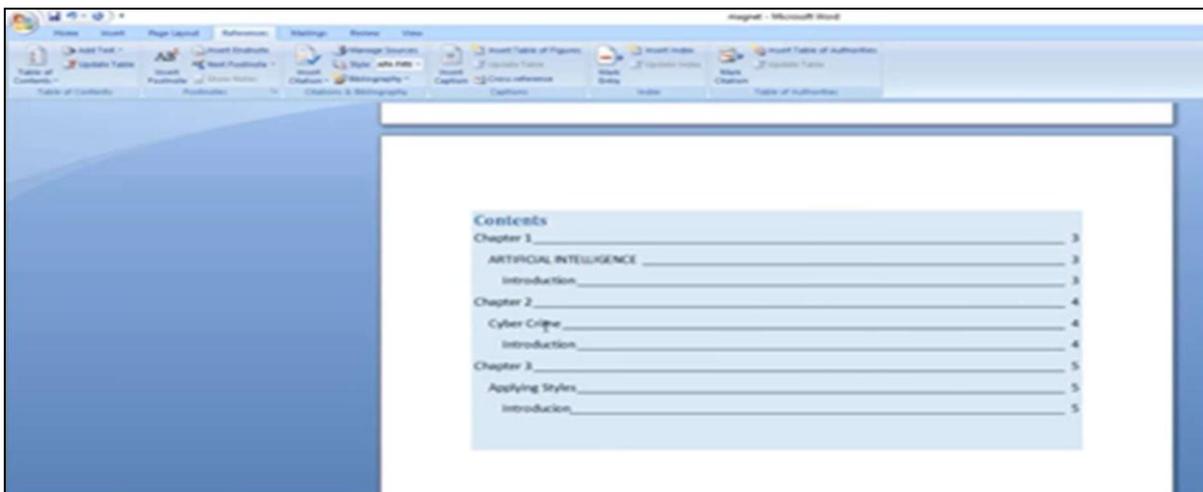
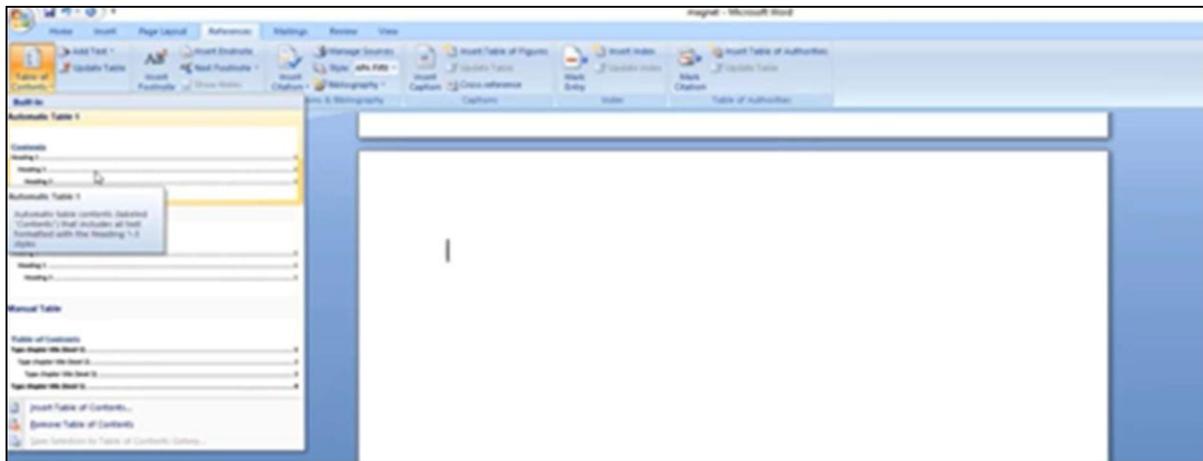
Select Reference tab



Click on **Table of Contents** from **Table of Contents** group



Select

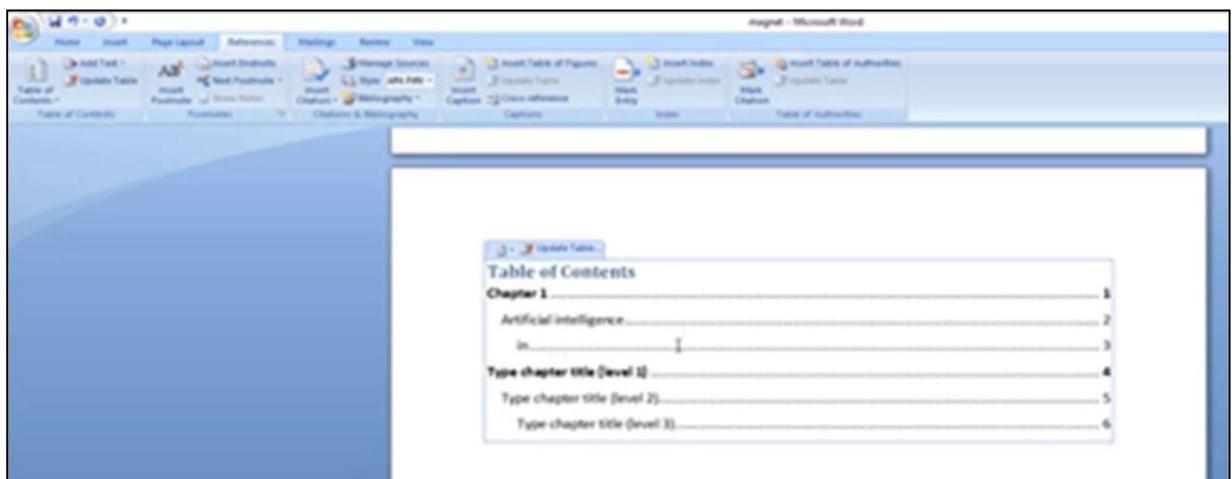
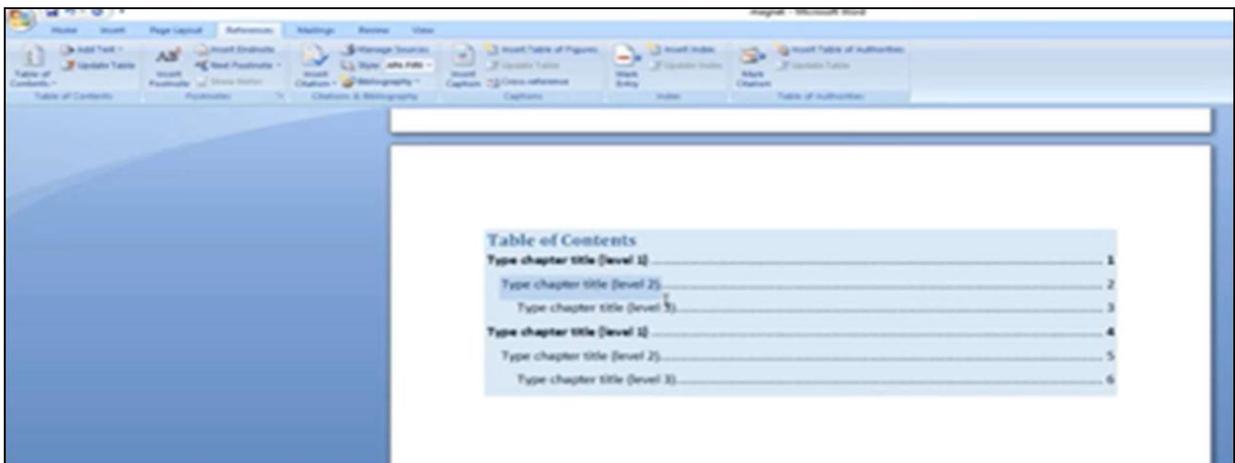
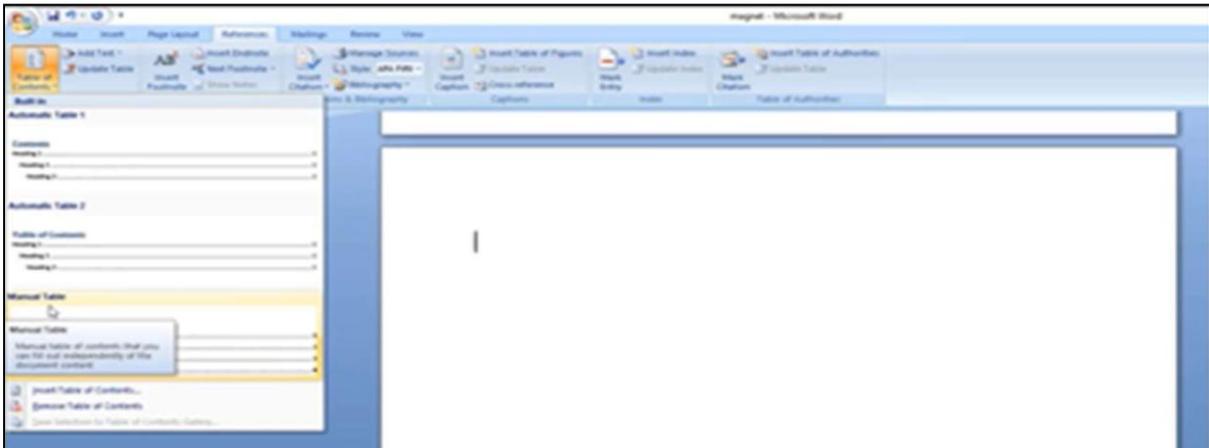


[2] Using Manual Table Option:

Another option in the **Table of Contents** submenu is **Manual Table**. This option is allows you manually enter the headings and subheadings in the table of contents.

- (i) Click on the **References tab** and select the **Table of Contents** option.
- (ii) A submenu appears. Click on the **Manual Table** option.

A table of contents is inserted where you can manually enter the topics, sub-topics, page numbers, etc. This is usually not a recommended method to insert a table of contents, as the chances of errors while typing are higher.



[3] Using Insert Table of Contents Option

In case you want to make modifications in the default style of the table of contents, you can use the **Insert Table of Contents** option from the sub-menu of the **Table of Contents** menu.

- Click on the **References** tab and select the **Table of Contents** option.
- A submenu appears. Click on the **Insert Table of Contents** option.
- The **Table of Contents** dialog box appears.

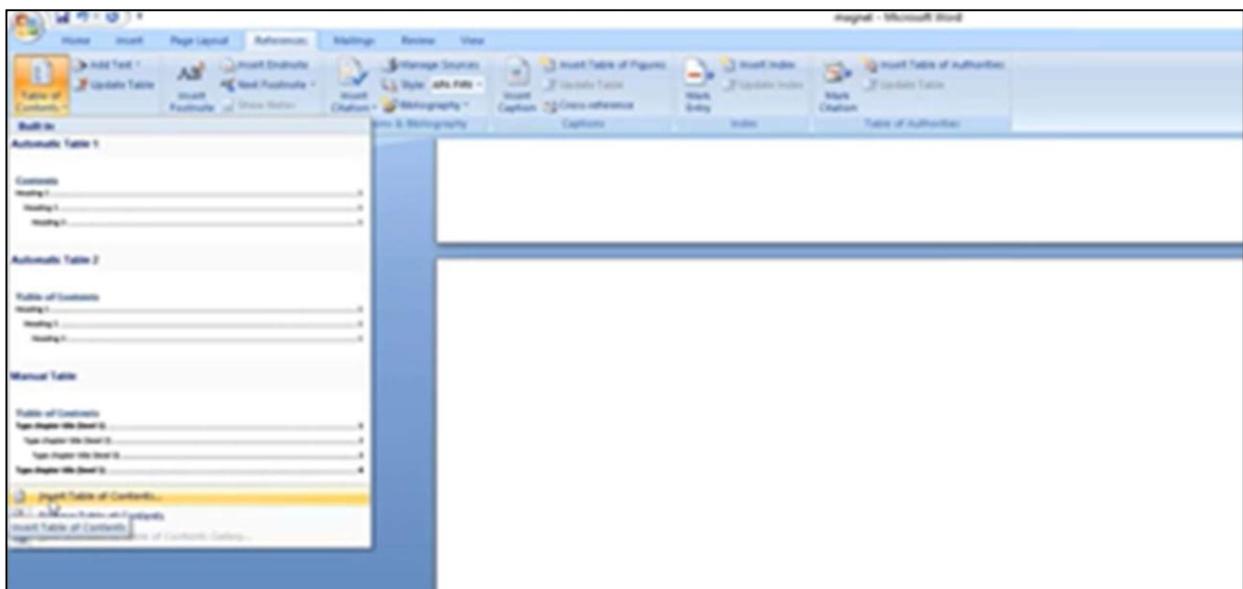
Selecting Levels of Headings:

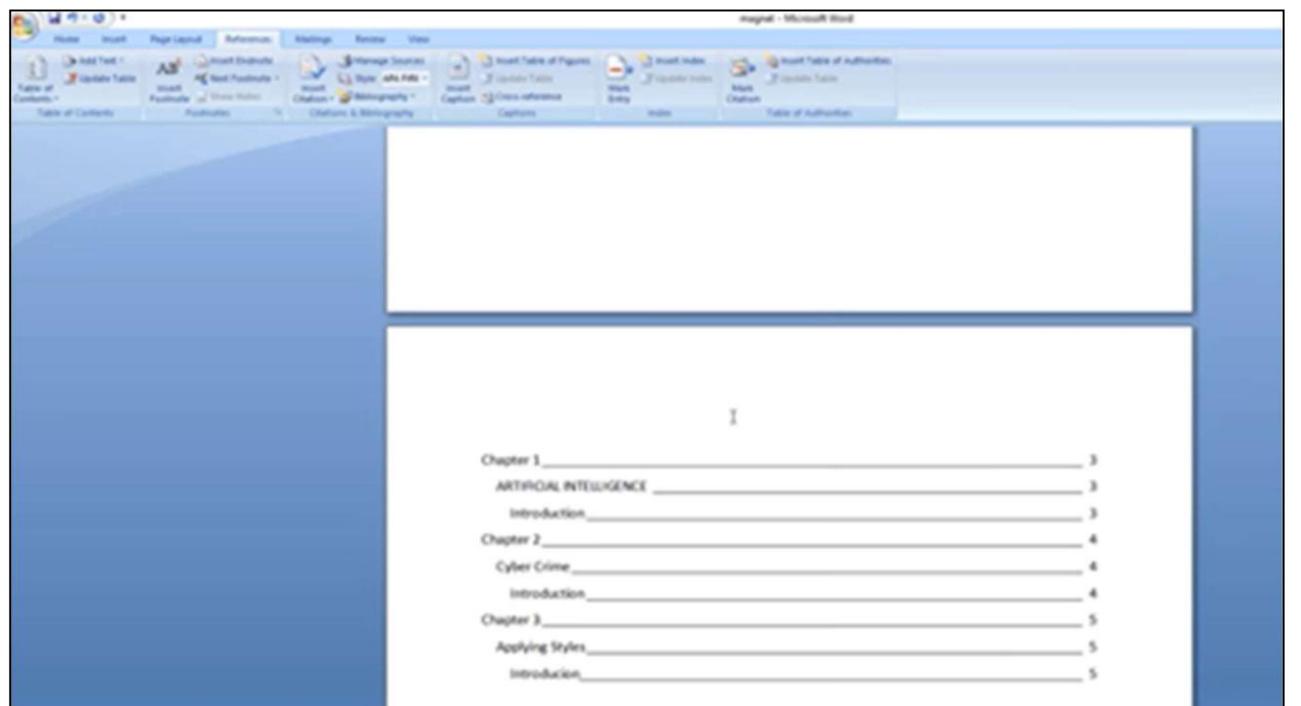
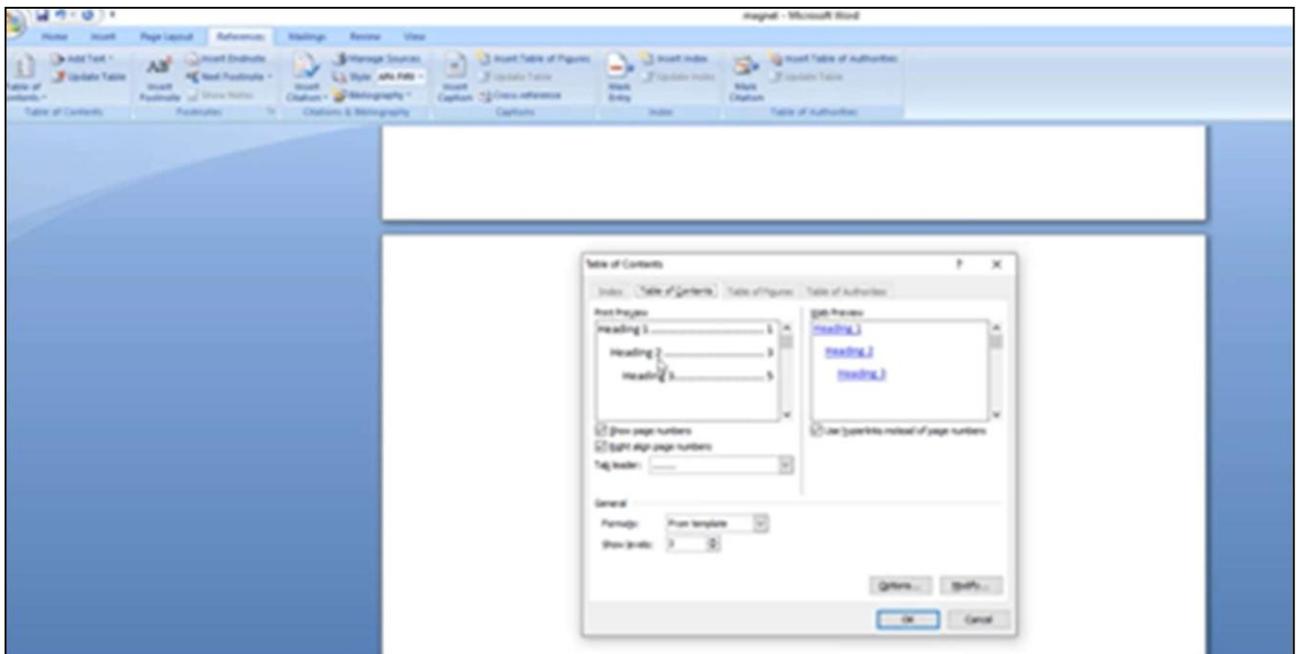
- Use the spin arrow of the **Show Levels option** to specify the hierarchy level of headings in your table of contents.
- By default, word uses three levels of headings as the hierarchy level. You can increase or decrease the value here. For example, select 2 by using the spin arrows.
- Only Heading 1 and heading 2 from your document will be inserted in the table of contents.

Selecting Style of Tab Leader

Tab leaders are the lines that join the topics and sub-topics to the page numbers.

- By default, the style of the tab leader is a dotted line
- Change the style by clicking on the drop-down arrow of the **Tab leader** option in the **Table of Contents** dialog box.
- Select dashes, solid line, or none option for the tab leader.





Customising the Table of Contents:

In Word, you can easily customise the table of contents as per your requirement using the Table of Contents dialog box. To customise the TOC, follow these steps:

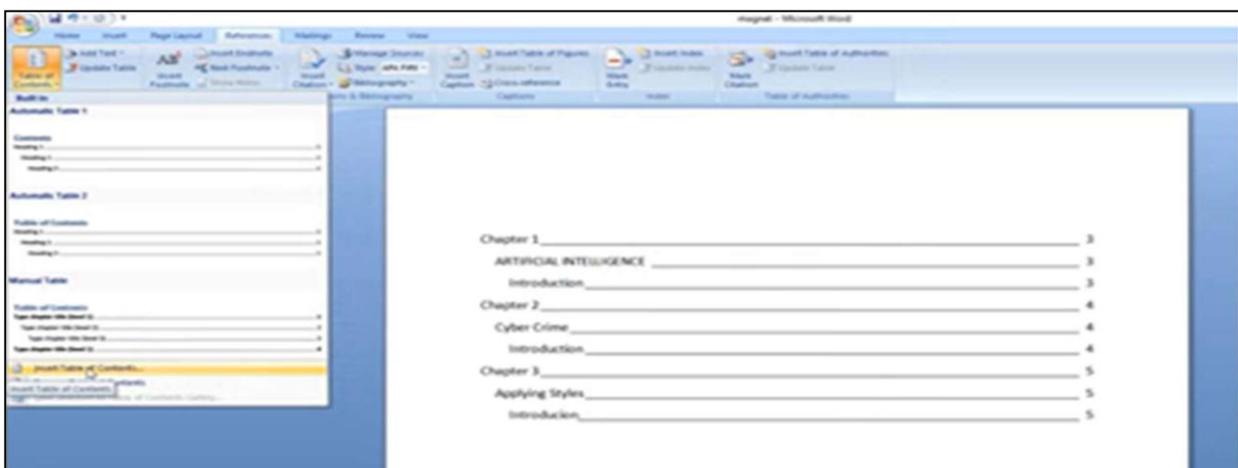
- (i) Select the existing table of contents by clicking on the icon on the top-left corner.
- (ii) Now, click on the **References** tab.

Click on **Table of Content** drop-down arrow.

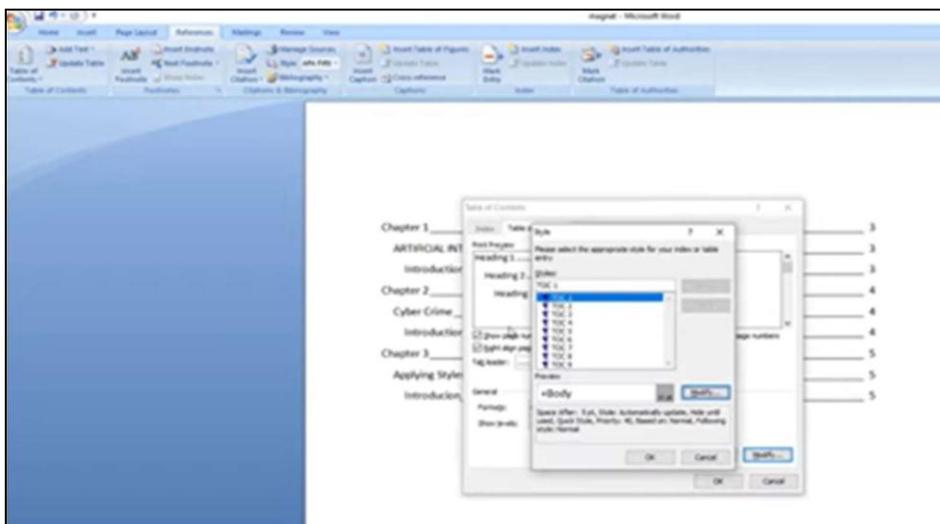
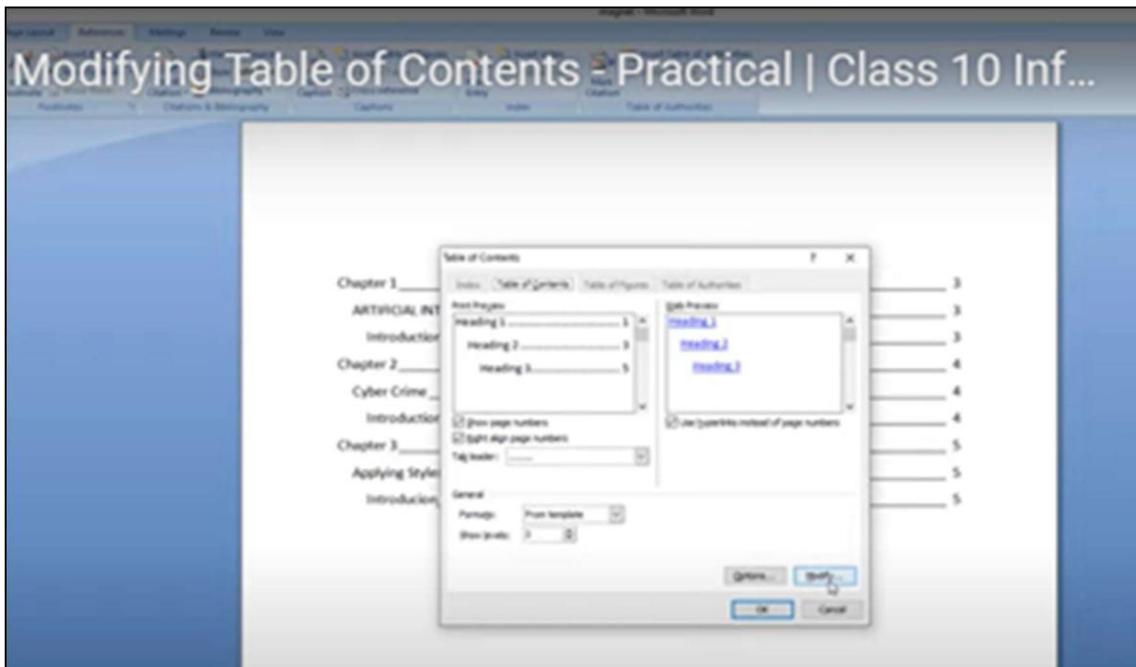
Select the **Insert Table of Content** option from the sub-menu.

(it will replace the existing table of contents with new formatting)

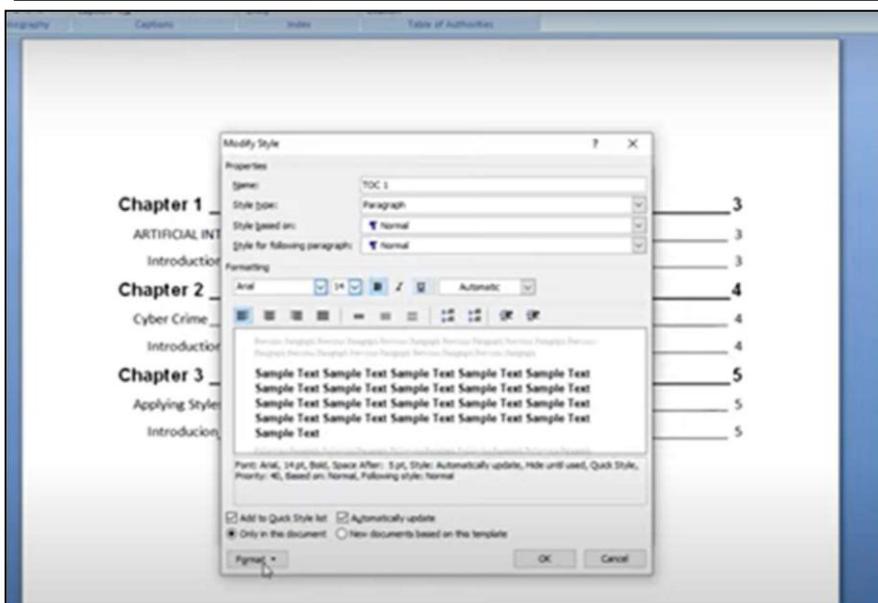
- (iii) The **Table of Contents** dialog box appears.
- (iv) Click on the **Modify** button. The **Style** dialog box open.
- (v) Select an appropriate style for the entries in the TOC.
- (vi) You can click on the **Modify** button in this dialog box to open the **Modify Style** dialog box.
- (vii) Using the **Modify Style** dialog box, you can make changes in the style of the headings, font, font size, colour, Font effects such as bold, italic or underline.
- (viii) You can apply other formatting effects on the headings by using the **Format** button in the **Modify Style** dialog box.
- (ix) Click on the **Format** button and select any option from the displayed list for ex. Paragraph.
- (x) The **Paragraph** dialog box opens.
- (xi) Make the required changes and click on **OK**.
- (xii) Similarly, you can make changes in front of style by clicking on the **Font** option in the **Format** button drop-down list.
- (xiii) Click on **OK** to close **Modify Style** dialog box. Again, click on **OK** to close the **Style** dialog box.
- (xiv) At last, click on **OK** to close the **Table of Contents** dialog box.
- (xv) You will be prompted to replace the existing table of contents. Click on the **Yes** button.
- (xvi) The table of contents will be modified with the recent changes.



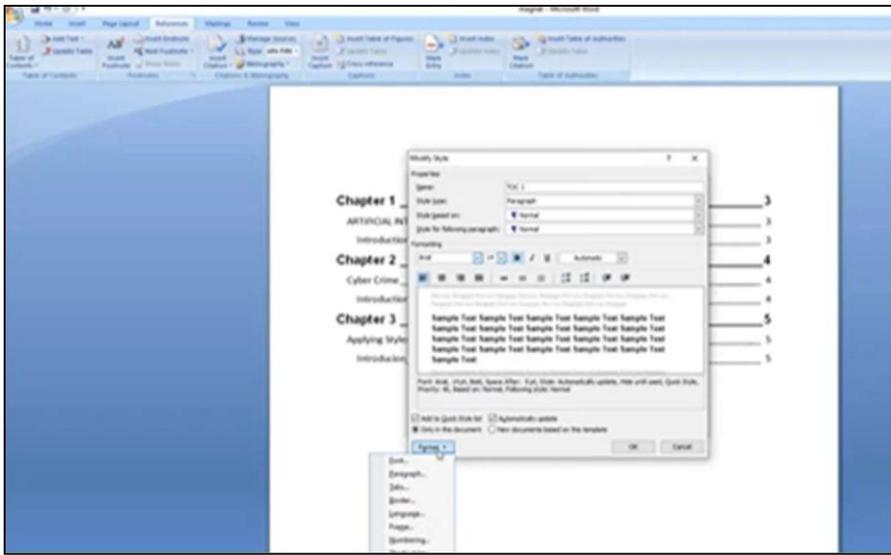
Modifying Table of Contents - Practical | Class 10 Inf...



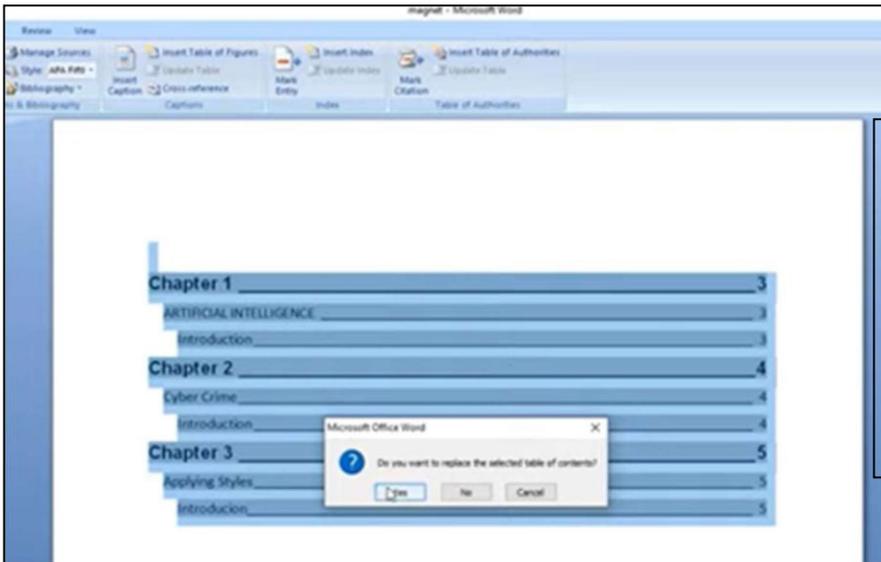
Here also select Modify option then displays dialog box Modify Style



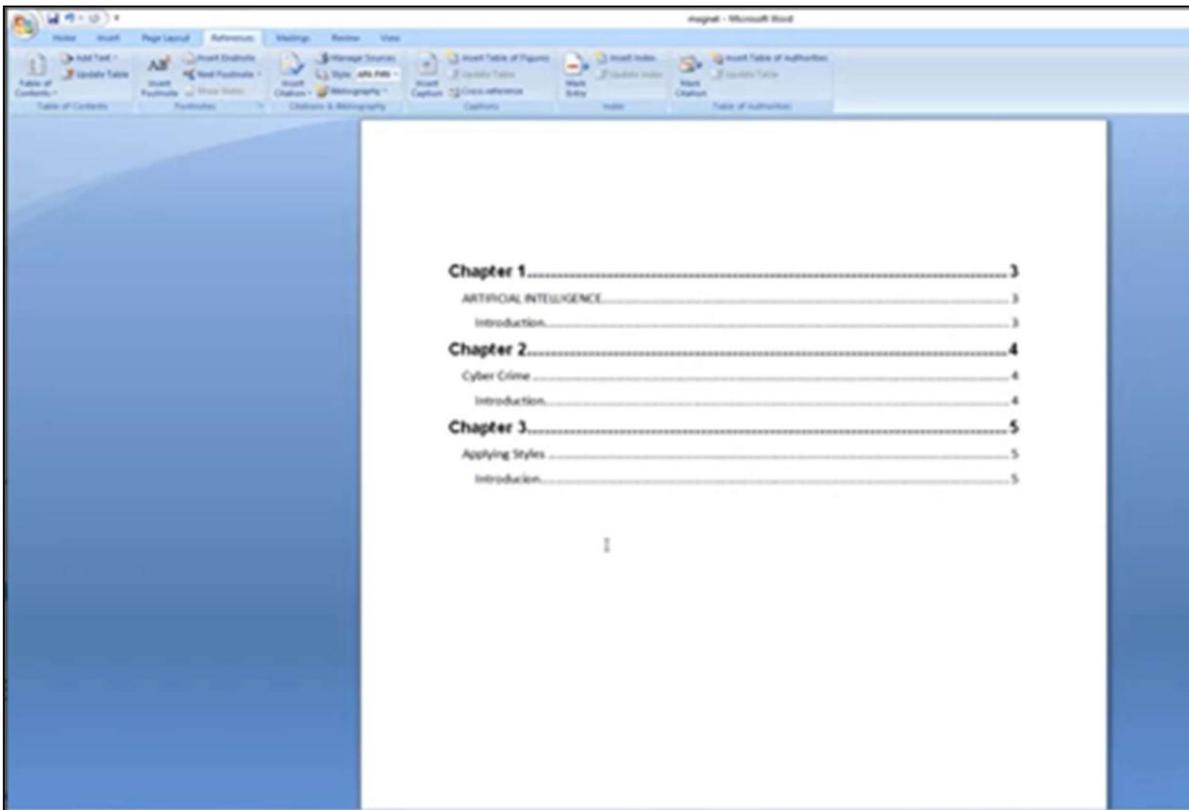
Select Format option which is at the bottom left corner then displays more options...



Do required formatting and finally select the OK button



It is asking us what ever formatting we have done, do you want to replace it. Select YES button. Then displays Table of Content as per our formatting done



Whenever you make changes to the text of a heading in the body of the document or the page on which the heading appears, those changes will appear in the table of contents automatically whenever it is updated.

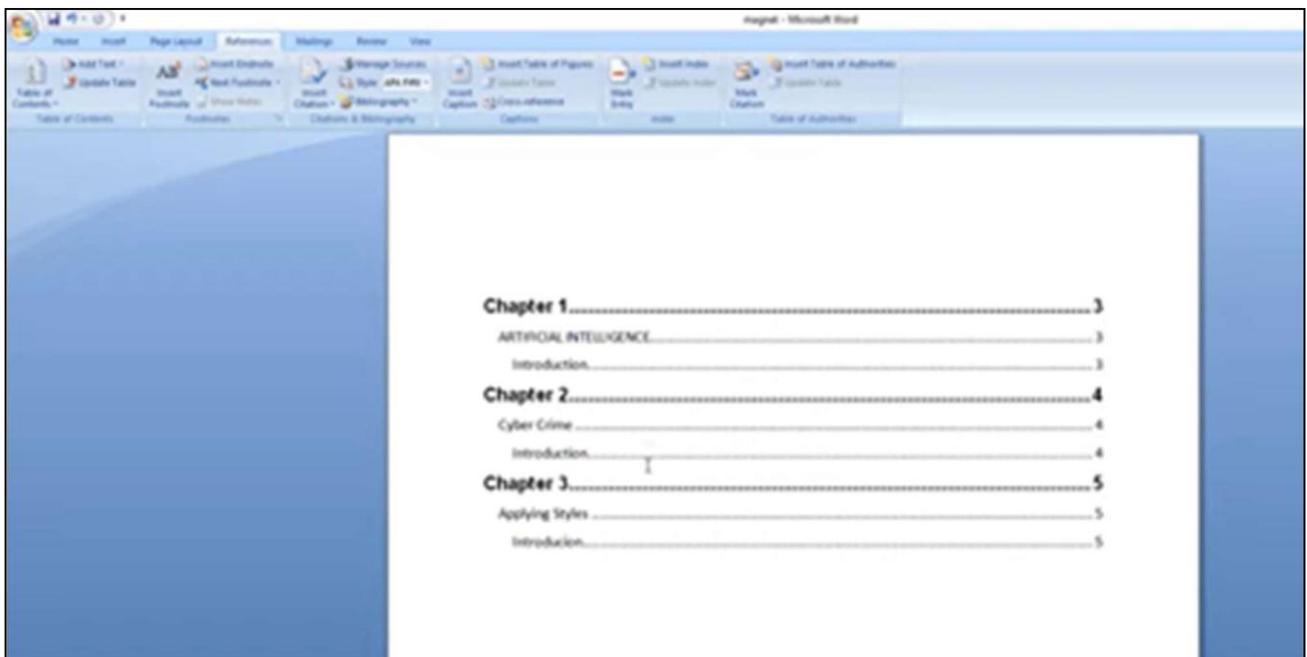
You can perform some basic operations as listed below:

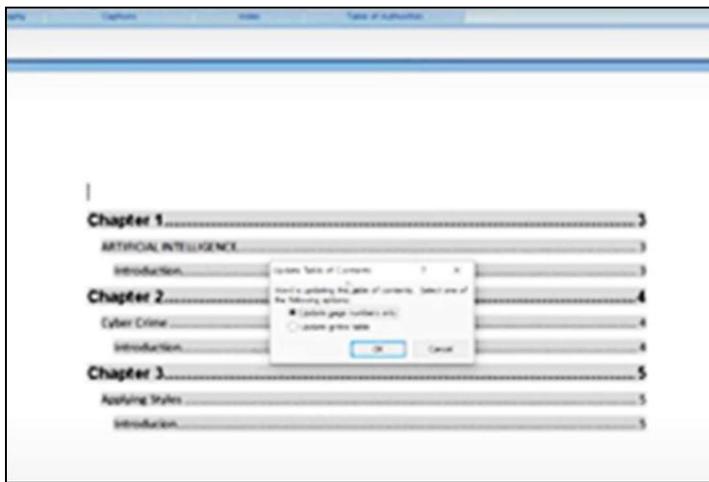
- Updating a table of contents when changes are made to the document.
- Deleting a table of contents.
- Updating a Table of Contents
- Word does not update the TOC automatically. You need to update the TOC every time when you make a change in your document.
- To update TOC, follow these steps:
- Click anywhere in the TOC.
- Click on the References tab and select the Update Table option from the Table of Contents group. Or

The Update Table tab appears on the top-left corner of the TOC. Click on it. Or

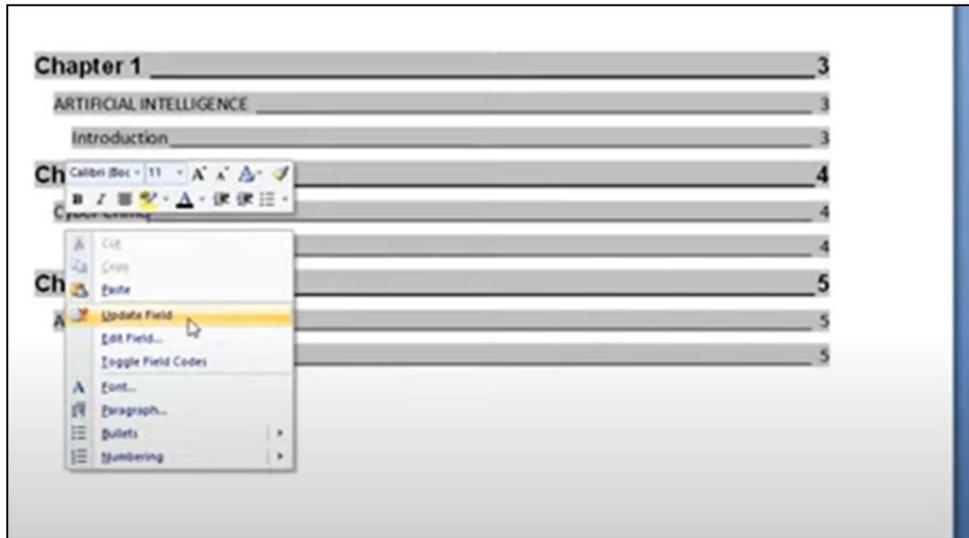
Right-click on the table of contents and select the Update field option from the context menu.

- You will get a dialog box as shown in Figure 4.10.
- Select the Update entire table option and click on OK.
- Word will update the TOC to reflect the changes in the document.

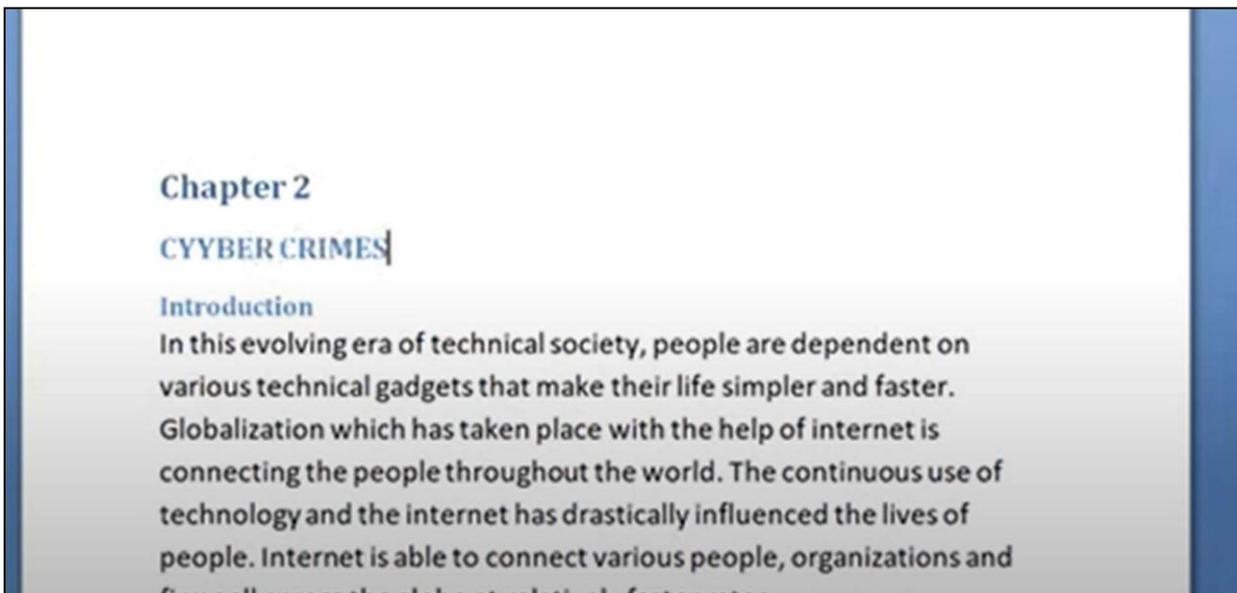


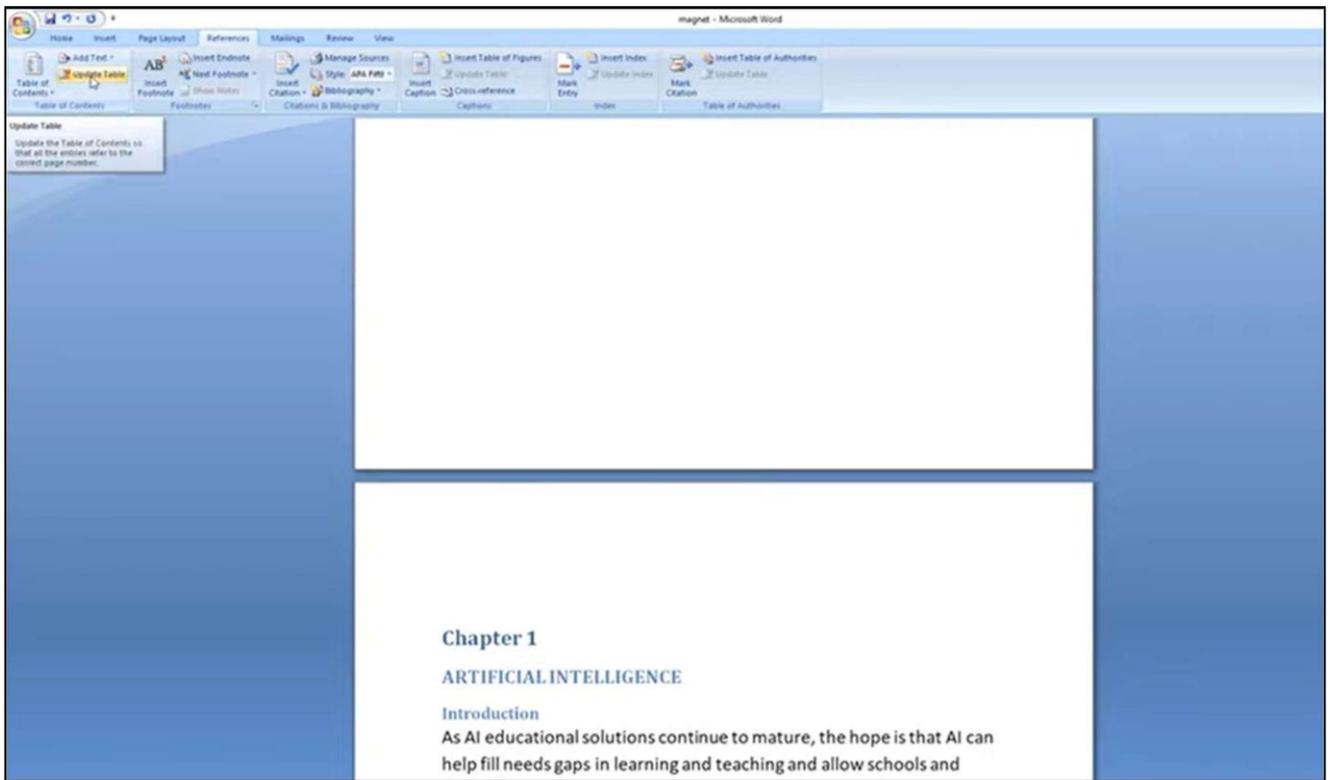


OR

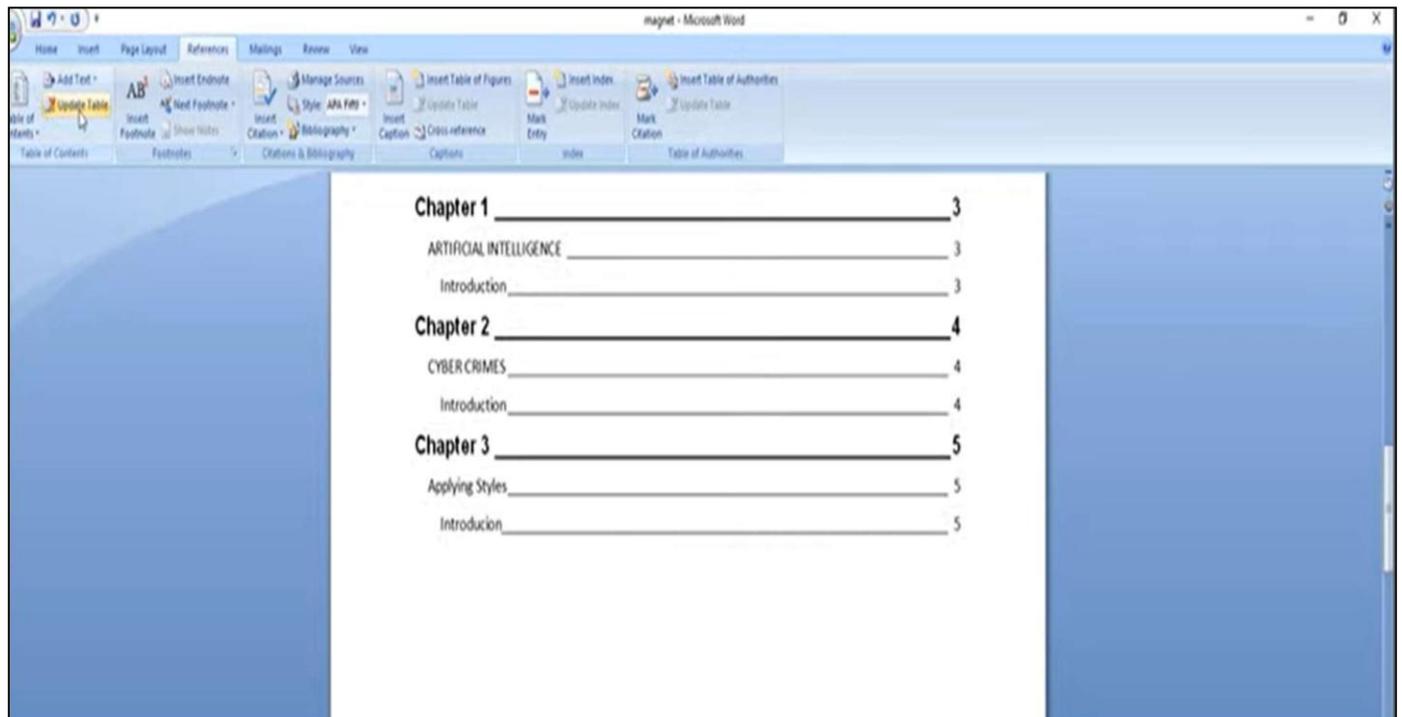


We have change the cyber crime in capital letter here.



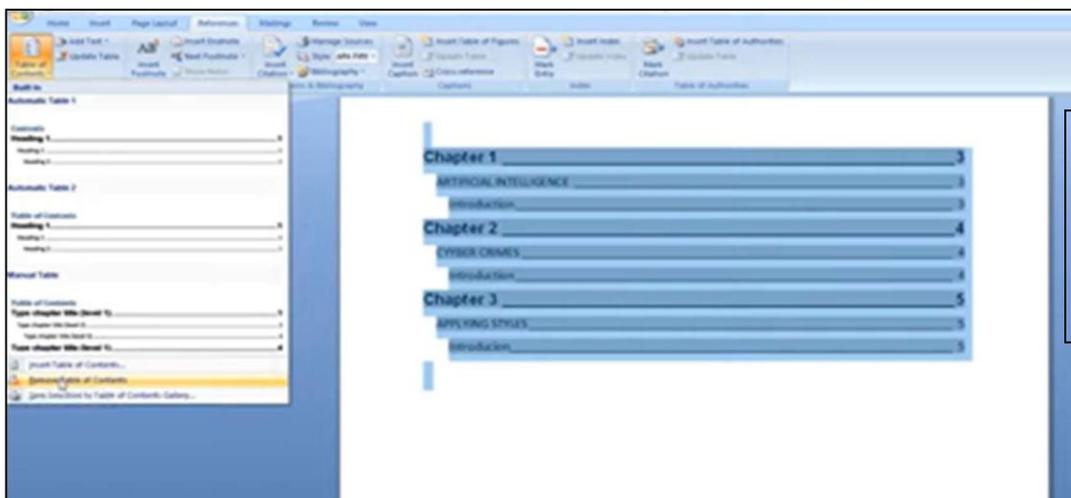
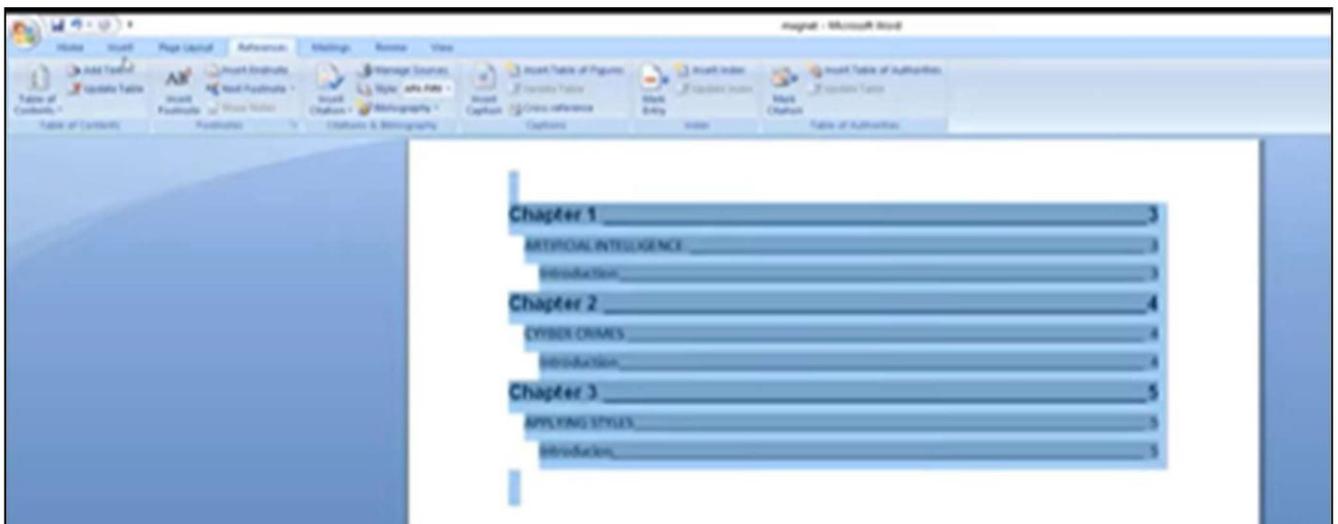
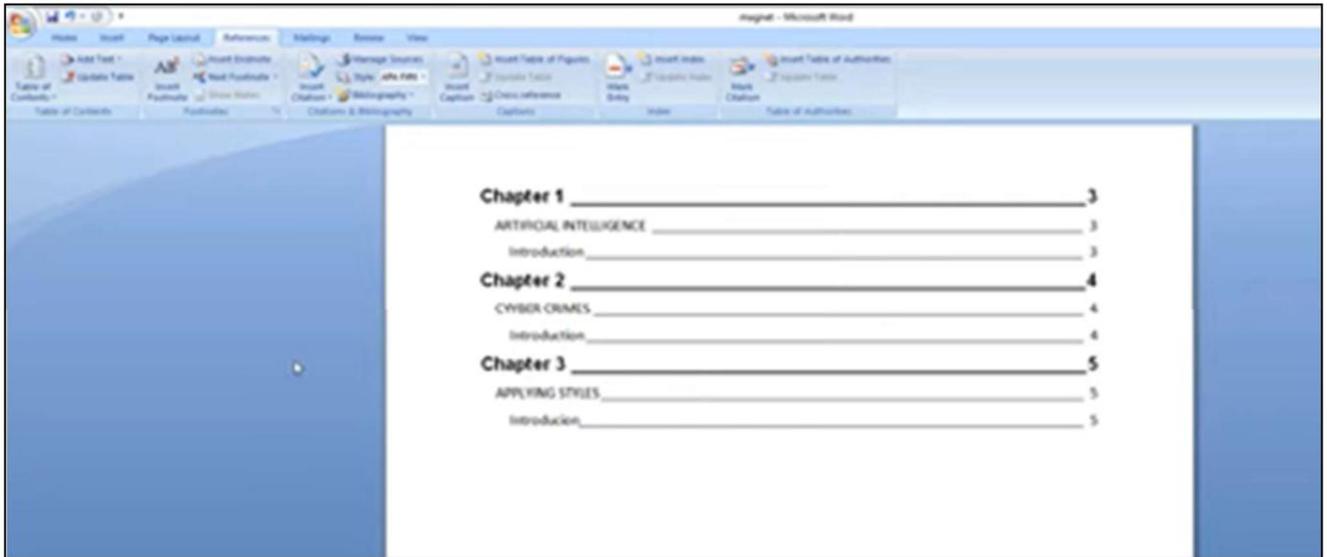


Then Table of Content it automatically changes to capital



Deleting a Table of Contents

- To delete the TOC from a document, follow these steps:
- Select the References tab > Table of Contents option.
- In the drop-down list, click on the Remove Table of Contents option.
- The table of contents will be deleted from the document.



Then it deletes
Table of
content

Assessment:

Q[A] Select the correct option.

Q[1] What does TOC stand for?

- a. Term of Contents
- b. Table of Contents
- c. Table of Components.

Ans: b. Table of Contents

Q[2] Which tab has the 'Table of Contents' option?

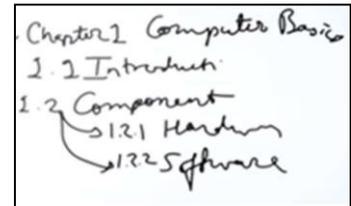
- a. References
- b. Insert
- c. View

Ans: a. References

Q[3] You can specify the hierarchy level of headings in your table of contents by using thesubject.

- a. Set heading
- b. Set level
- c. Show levels

Ans: c. Show levels



Q[4] By default, word uses.....levels of headings as the hierarchy level.

- a. Two
- b. Three
- c. Four

Ans: b. Three

Q[B] Fill in the blanks.

(Hints: Hyperlinks, Headings, Tab leaders, Title page, Sub-headings)

Q[1] The Table of Content (TOC) consist of and of a book.

Q[2] Word generates all the entries automatically as of a book.

Q[3] Usually, a Table of Content is inserted after the in a document.

Q[4] are the lines that join the topics and sub-topic to the page number.

Ans : [1] Headings and Sub-headings [2] Hyperlinks [3] Title page [4] Tab leaders

Q[C] Answer the following questions.

Q[1] What is TOC ?

Ans : A Table of Content, usually headed simply Contents & abbreviated informally as TOC, is a list, usually found on a page before the start of written work, of its chapter or section titles or brief descriptions with their commencing page numbers.

Q[2] List any two Characteristics of a good TOC.

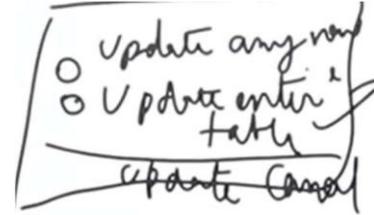
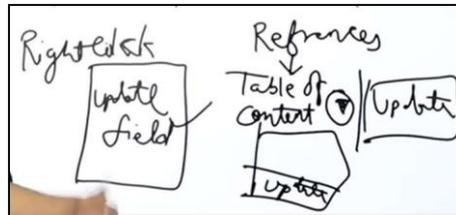
Ans: A good table of contents has the following characteristics:

1. It should be easy to read and simple to use.
2. It should be organized and formatted properly.
3. It must be accurate and easily accessible.
4. It should be given after the title and copyright page.

Q[3] How can you update an existing TOC ?

Ans: We can update an existing TOC as follows:

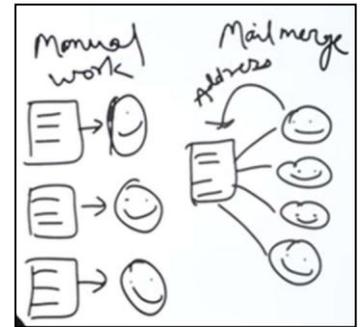
- (i) Locate and click the **table of content in the document.**
- (ii) Right-click the table of contents and select **Update field** in the pop-up menu.
- (iii) In the Update Table of Contents window, select the **Update entire table** option.
and click the **OK** button.



Chapter-5: Using a Mail Merge

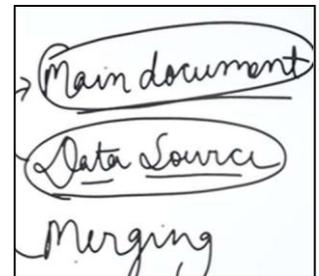
Introduction:

- In business, as well as personal matters, it is often required to send letters with similar information to different people.
- The letters require the name and address of each recipient to be printed on top.
- Changing the address each time would be a very long process and a wastage of time and effort.
- MS word provides a useful feature of Mail Merge to create and print multiple copies of a document, address labels, envelopes, etc in one go.



Printing letters using Mail Merge:

- Consider an example where your class teacher wants to invite the parents of her students for the parent- teacher meeting.
- So, she needs to create and send an invitation in bulk to the parents of all students.
- Let us see how this task becomes easy for her by using the Mail Merge feature.
- Mail Merge involves three basic steps- creating a main document, specifying a data source, and merging the data source with the main document.



Main Document-

- The main document is the letter that you wish to send to multiple recipients.



Sample Invitation Letter to Parents to Visit School

From,
The principal
Five star High school
Delhi,592824

Sender's Address

Receipt Address

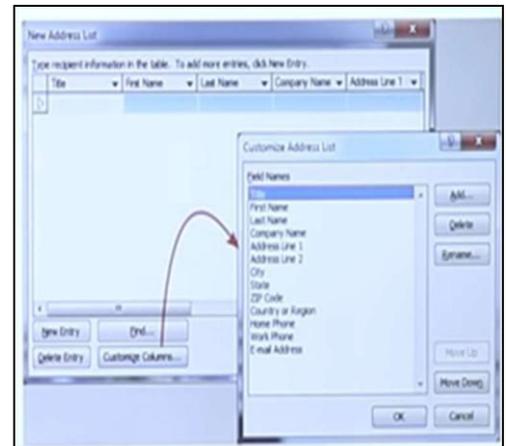
Date: 24 August, 2015
Subject: invitation to upcoming parent teacher meeting

Dear Parents,
On behalf of five stars High school, I am informing you about the next parent to September. Please consider this letter as formal invitation to the parent teacher enough time to organize your schedule for this meeting and we are looking for

Yours sincerely,
Tierra Thompson
Registrar, Five Star High School

Data Source-

- Data source consists of a mailing list.
- The data is organised in a tabular form along with the field names. For example, First Name, Last Name, Address, City, State, Contact No, etc.
- The data source is associated with the main document, so that its field names can be used in the main document, and it becomes easy to merge addresses with the main document.

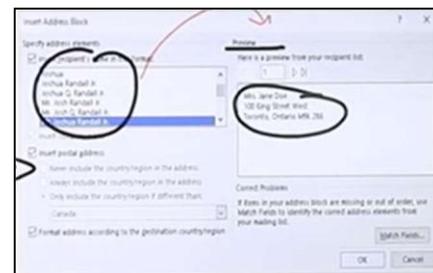


data source for example:

First Name	Last Name	Address	City	State	Contact No
Seema	Kakkar	#23, MSX Society	Delhi	Delhi	9988776655
Ankur	Agarwal	#11, Golf Forest	Noida	UP	7788996655
Jagdeep	Singh	Sector 1, Sports City	Noida	UP	6677554499
Vinay	Sharma	Gali no. 1, Sarita Vihar	Delhi	Delhi	9898786756
Amit	Verma	New Friends Colony	Delhi	Delhi	7898767890

- A merged document is created by merging the main document with the data source fields.

A hand-drawn diagram illustrating the merge process. On the left, a document is shown with a section labeled '< address block >'. An arrow points from this section to a box on the right labeled 'Merge'. Another arrow points from the text 'Address blocks' to the 'address block' section.

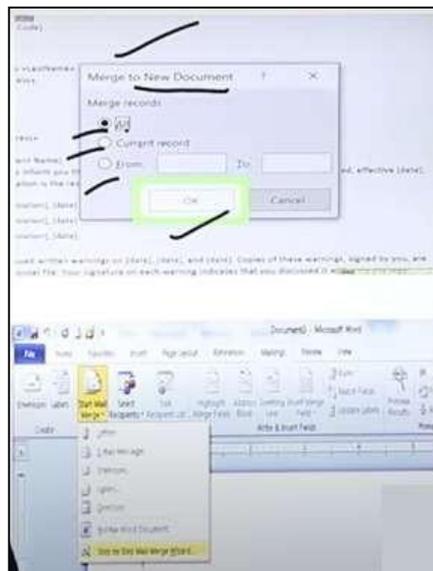


Printing The Merged Data:

You can now take the printouts of your letter with the merged address block from the data source.

Printing Labels:

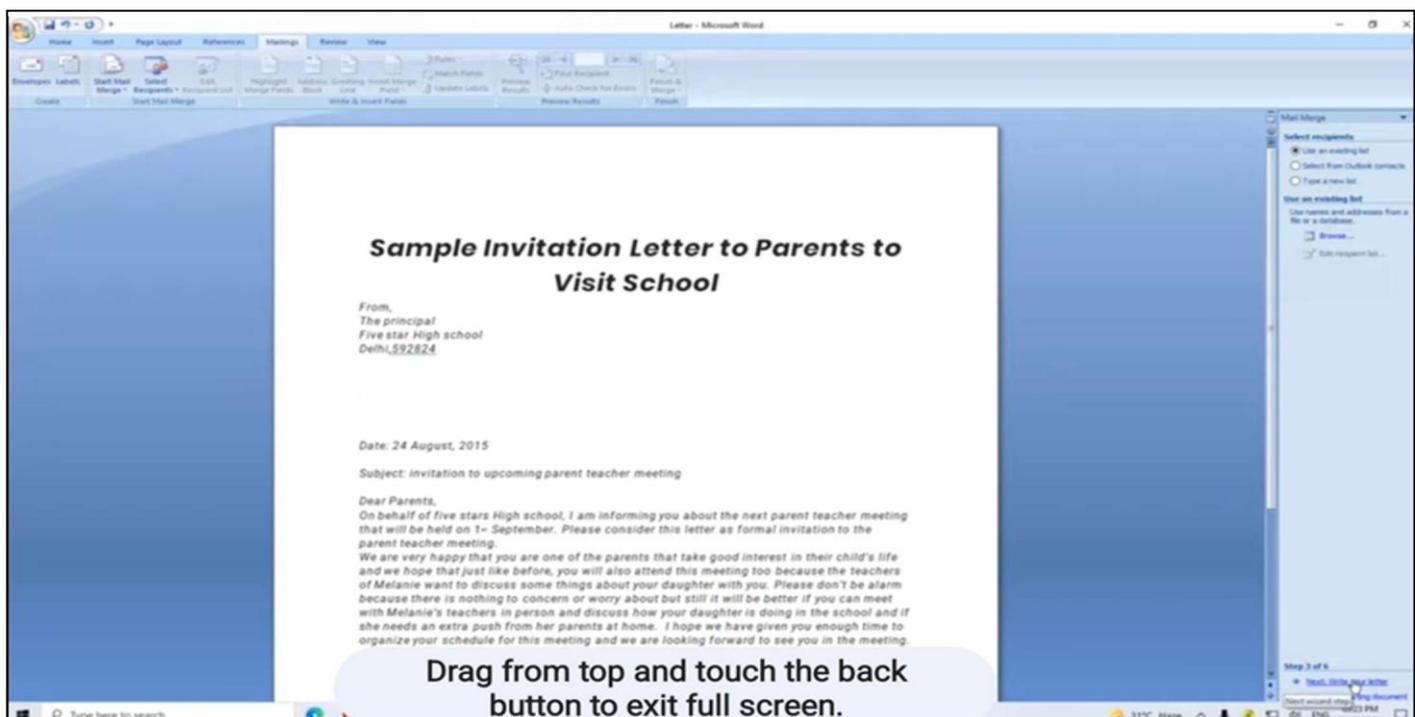
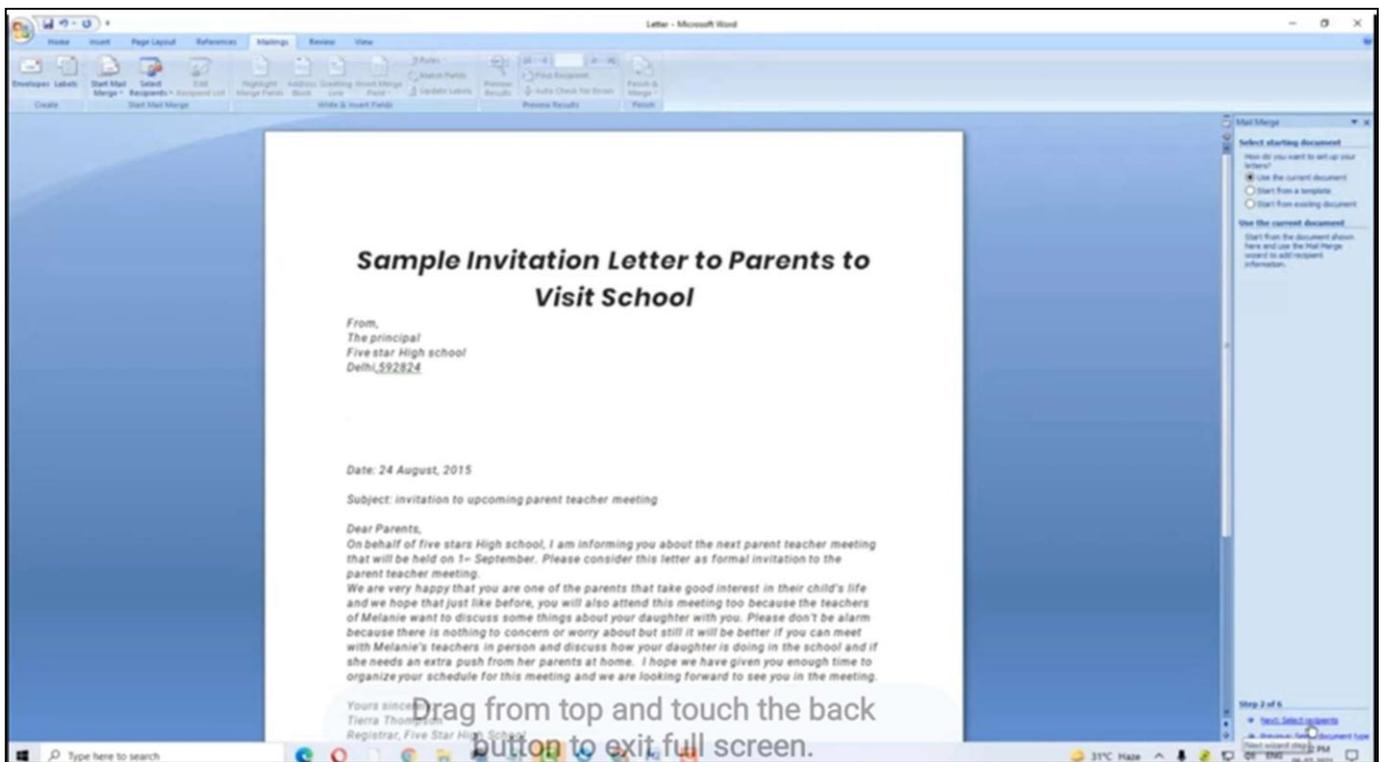
- After printing your letters, you may wish to post them.
- For this, you either need to write the addresses on the envelope or print the labels for individual address.
- This is a time- taking task.
- The mail merge feature can help you here also in printing multiple address labels on a single sheet.



Using Mail Merge:

- Consider an example where your class teacher wants to invite the parents of her students for the parent- teacher meeting.
- So, she needs to create and send an invitation in bulk to the parents of all students.
- Let us see how this task becomes easy for her by using the Mail Merge feature.
- Mail Merge involves three basic steps- creating a main document, specifying a data source, and merging the data source with the main document.

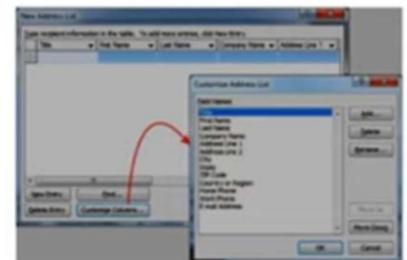
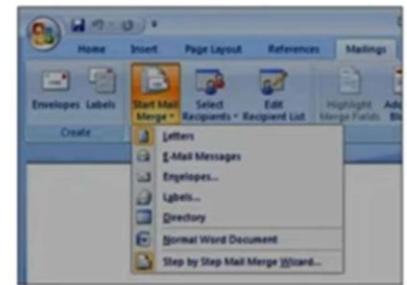




Creating a main document:

To create a main document, follow these steps:

- Create a new document and type a letter or open an existing letter that you want to send to different people at their respective addresses.
- Click on the Mailings tab. In the Start Mail Merge group, click on the Start Mail Merge drop-down arrow and select the Step by Step Mail Merge Wizard option.
- The Mail Merge task pane appears on the right side of the application window.
- Now, select the Letters radio button from the 'Select document type' section.
- Click on Next: Starting document (wizard step) under the 'Step 1 to 6' section at the bottom of the task pane.
- A new task pane appears on the screen.
- Click on the Use the current document radio button under the 'Select starting document' section.
- Click on Next: Select recipients under the 'Step 2 of 6' section. Another task pane appears showing options for the defining recipients list.

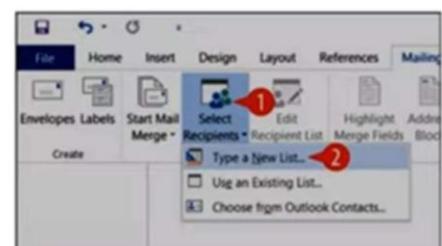


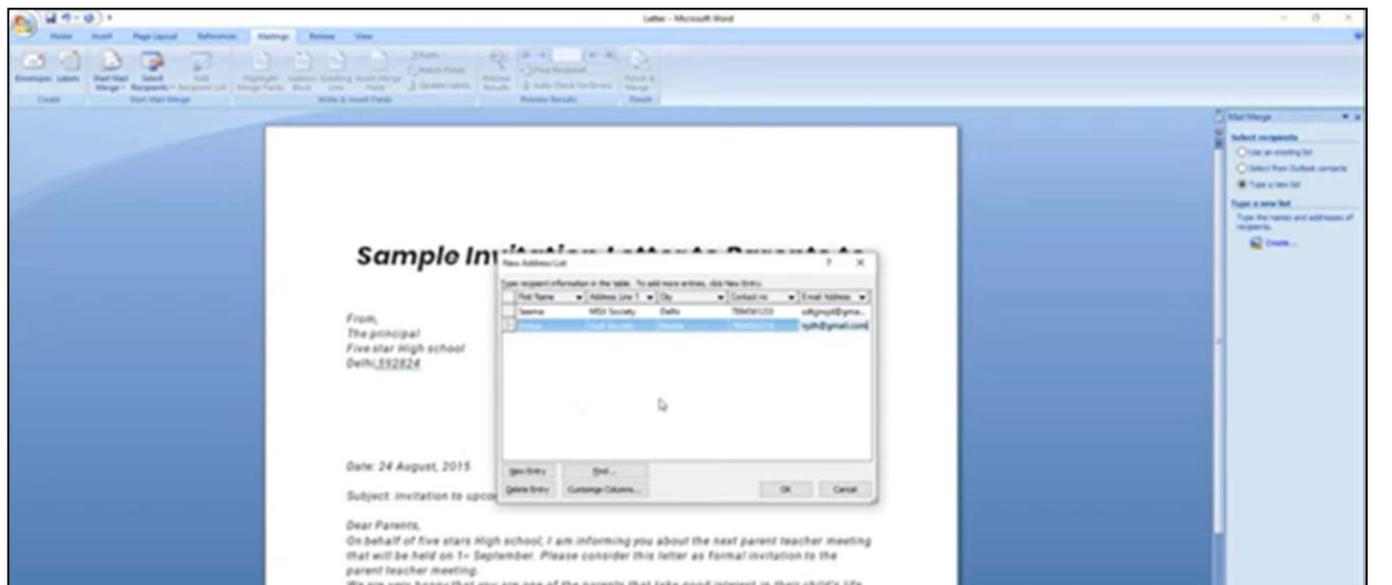
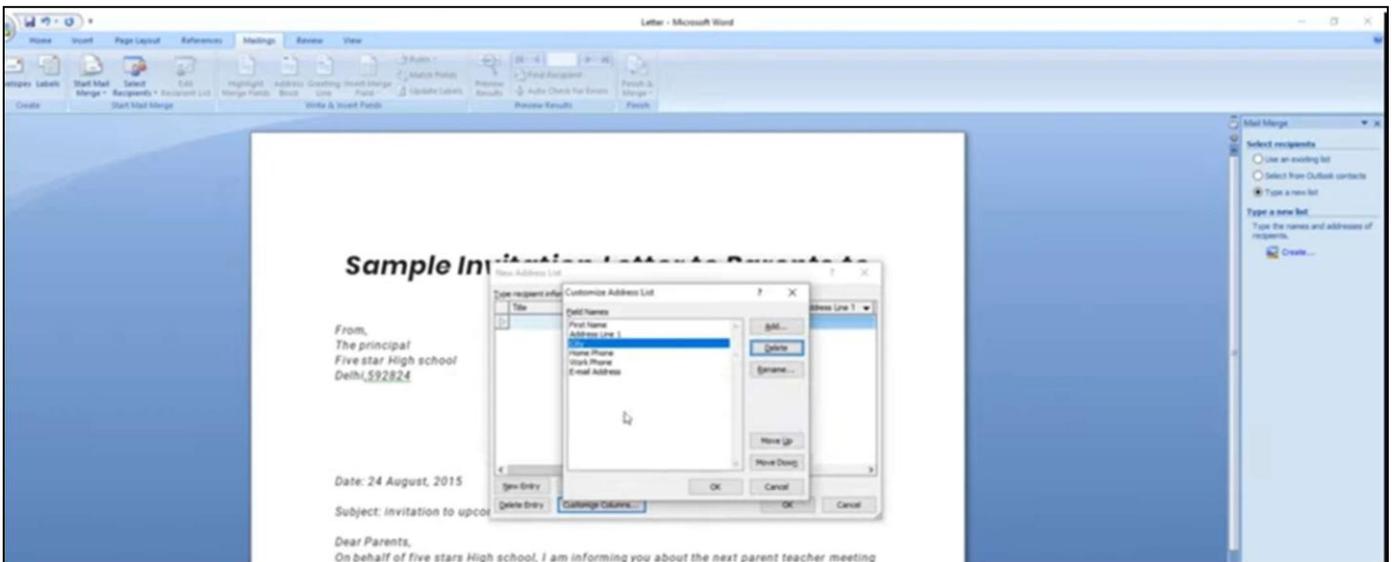
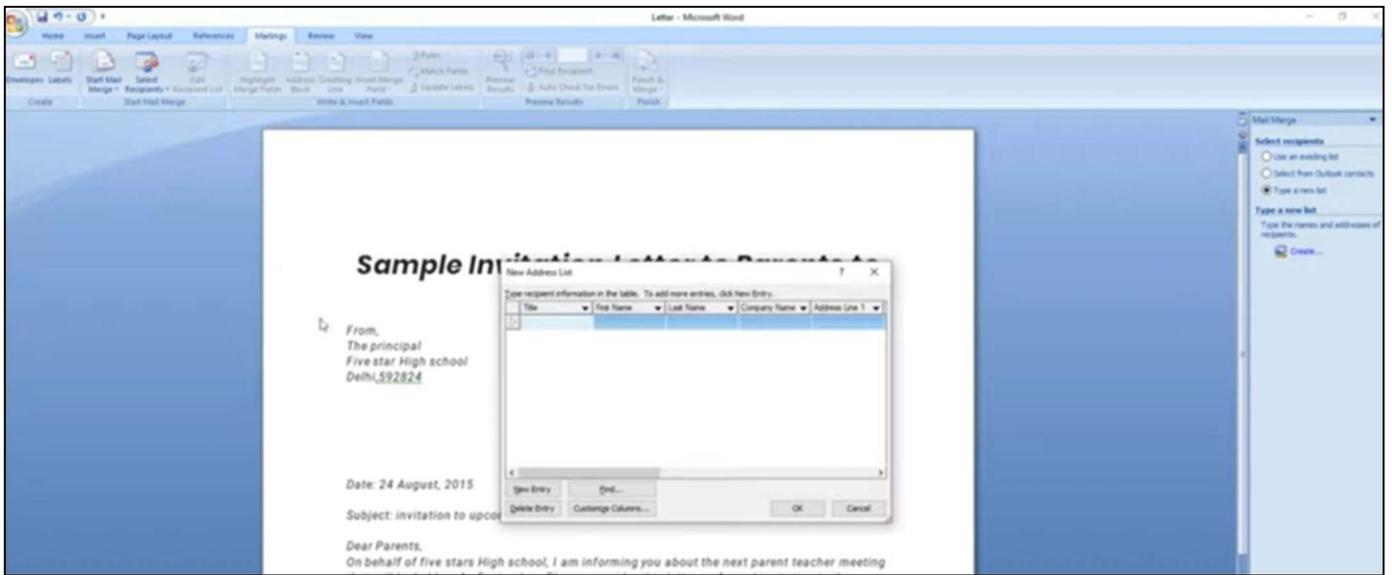
Creating a Data Source:

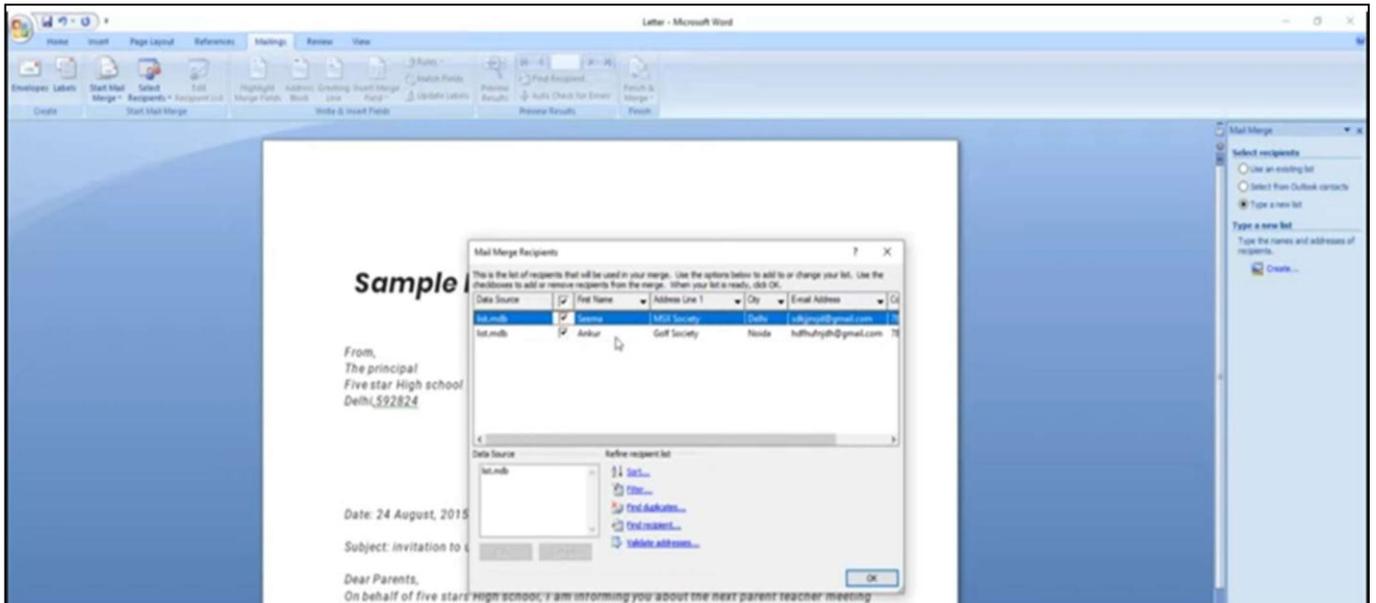
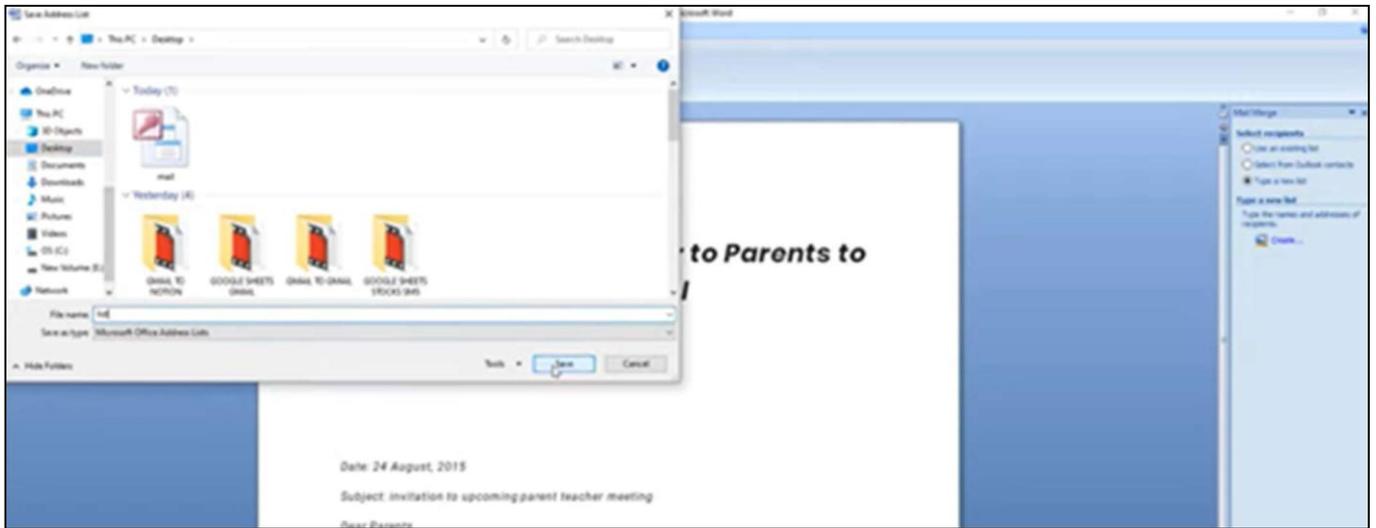
To create a new data source or address list, follow these steps:

- Select the Type a new list radio button under the 'Select recipients' section in the Mail Merge task pane and click on the Create option.
- The New Address List dialog box appears on the screen. Click on the Customize Columns button to add or remove fields.
- Enter data in the respective fields and click on the New Entry button located at the bottom left of the dialog box.

Information Technology (Code 402)



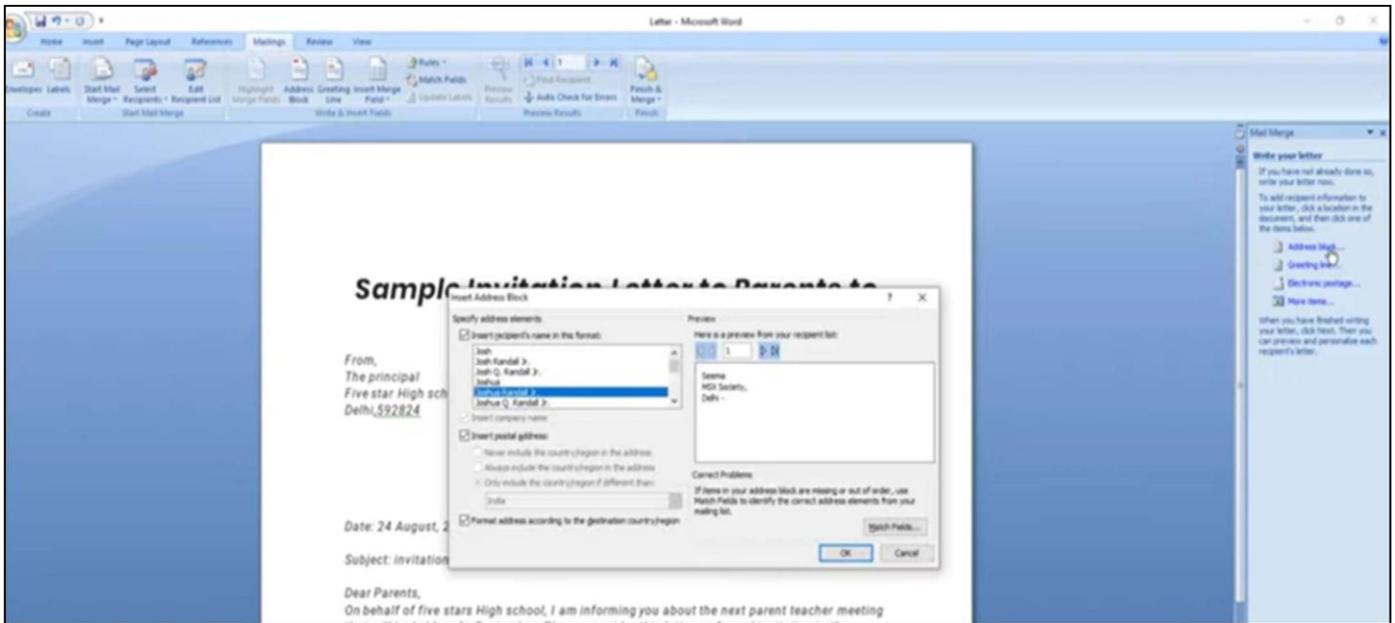




- Enter the records of the people to whom you want to send the letter.
- Click on OK.
- You will get the Save Address List dialog box.
- Specify a name in the File Name: text box and click on the Save button.
- The Mail Merge Recipients dialog box, which displays the details of all the records added by you, will appear.

- To change any detail, you can select the name of the address list that you have created in the Data Source box.
- Now, click on the Edit located below the Data Source box.
- The Edit Data Source dialog box appears where you can make the required changes.
- When you are through,click on OK. you are asked to update the address list. Click on Yes to confirm.

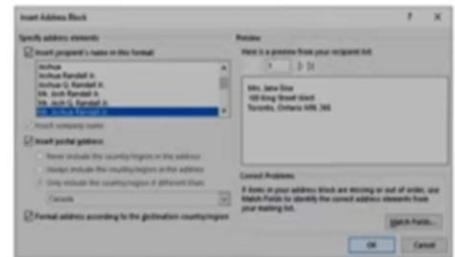
- Note that by default, tick marks are placed in the check boxes next to the Data Source field. It indicates that these records are selected.
- If you do not want to send the letter at a particular address, just click on that specific check box to deselect it. Click on OK.
- Now, click on Next: Write your letter (wizard step) under the 'Step 3 of 6' section in the Mail Merge task pane.
- You can type your letter now, if not written yet.



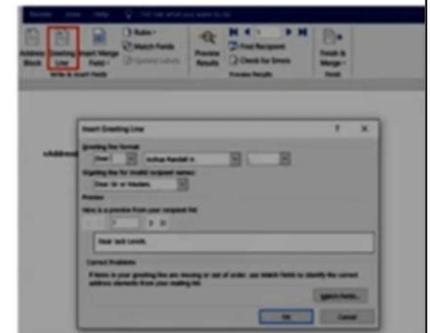
Merging Address Block:

To merge an address block in your document , follow the given steps:

- Place the cursor at the position where you want to insert the address block.
- Click on the Address block option in the 'Write your Letter' section. The Insert Address Block dialog box appears.
- Select any desired format in which you want to insert the address block. You can preview the format in the Preview section of the dialog box. Click on OK.



- You can observe that <<Address Block>> is displayed in your document.
- Now, to insert the salutation in your document, you can click on the Greeting line option below the Address Block option in the 'Write your letter' section.
- The Insert Greeting Line dialog box appears. Select any desired format and click on OK.
- Similarly, you can use the other options, such as Electronic postage and More items, etc., in the 'Write your Letter' section.



Viewing The Merged Data:

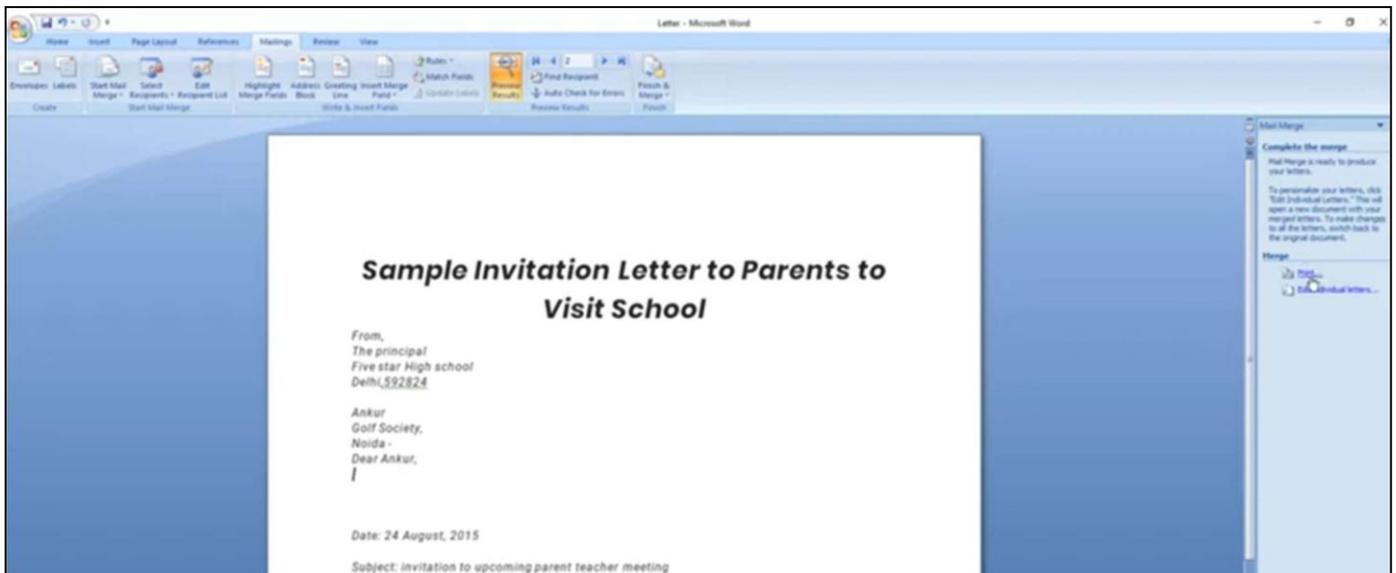
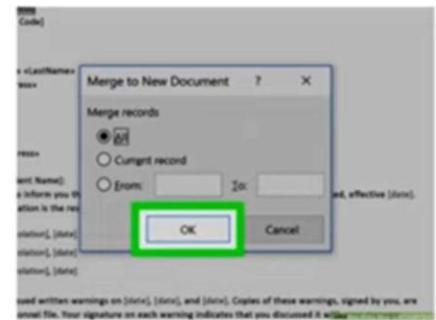
You can now preview your letters with the merged address block by following the given steps:

- Click on Preview your letters (wizard step) under the 'step 4 of 6' section.
- The first letter with the merged address block will be displayed. Click on the Next Record button in the Preview your letters section to view the next letter.

Printing The Merged Data:

You can now take the printouts of your letter with the merged address block from the data source. In order to print the letters, follow the given steps:

- Click on Next: Complete the merge (wizard step) under the 'Step 5 of 6' section in the task pane and then click on the Print option under the Merge section.
- The Merge to Printer dialog box will appear. Select All radio button and click on OK.
- The Print dialog box will appear, define the print settings and click on OK. The selected letters will be printed.



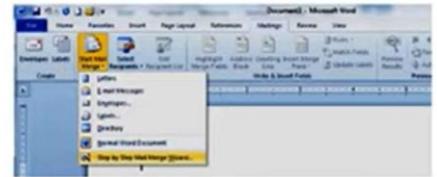
Printing Labels:

- After printing your letters, you may wish to post them.
- For this, you either need to write the addresses on the envelope or print the labels for individual address.
- This is a time- taking task.
- The mail merge feature can help you here also in printing multiple address labels on a single sheet.

Creating Main Document For Labels:

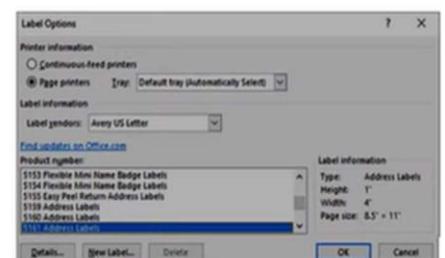
To create a Main document for address labels, follow the given steps:

- Open a new document in the MS word application.
- Click on the Mailings tab. In the Start Mail Merge group, click on the Start Mail Merge drop-down arrow and select Step by Step Mail Merge Wizard option.
- The Mail Merge task pane appears on the right side of the application window.
- Select Labels radio button from the 'Select document type' section.



- Click on Next: Starting document (wizard step) at the bottom of the task pane.
- A new task appears on the screen.
- The change document layout radio button is selected by default under the 'Select Starting document' section.
- Click on the Label options option from the 'Change document layout' section in the task pane.
- The Label Options dialog box opens.

- Click on OK.
- Now, move to the next step by clicking on Next: Select recipients.
- Another task pane appears, showing options for selecting the recipients list.

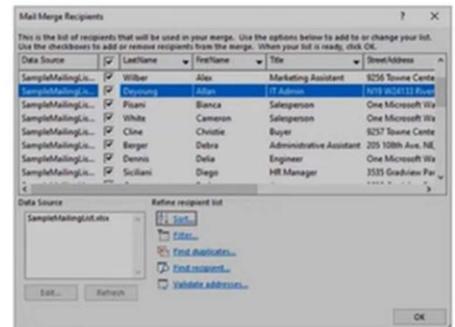


Selecting The Data Source:

Here, you can select the same address list created while printing the letters. To do this, follow the given steps:

- Select the Use an existing list radio button from the 'Select Recipients' section.
- To select an existing list, click on the Browse button under the section 'Use an existing list'.
- Locate the same address list that you created while printing the letters. Click on Open.

- The address list in the Mail Merge Recipients dialog box opens.
- The tick marks are placed in front of the Data Source field by default, which means that these record are selected.
- If you do not wish to include any particular address, then you can deselect it by clicking on the respective check box. Click on OK.



- You can observe that <<Next Record>> gets displayed in all the labels blocks in the main document, except the first one.
- Now, you can merge the fields with the main document to be displayed in the address labels.

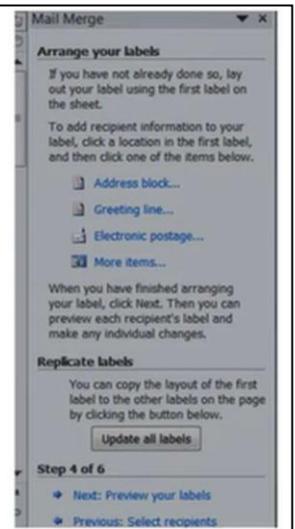
Inserting Address Block:

To insert the address block, follow the given steps:

- Place the cursor at the position where you want to insert the address block.
- Click on the Address Block option in the 'Arrange your labels' section.
- The Insert Address Block dialog box appears.
- Select any desired format in which you want to insert the address block.
- You can preview the format in the Preview section of the dialog box.



- Click on OK.
- You can observe that <<Address Block>> is displayed in the first blank block and in all other blocks following the <<Next Record>> entry in your document.
- Similarly, you can use the other options, such as Greeting line, Electronic postage, and More items, etc., in the 'Arrange your labels' section.



- Observe that selected address block appears in your document horizontally.
- You can use Space bar key and Enter key to separate <<Next Record>> and <<Address Block>>.
- After inserting the required items in the first block, click on the Update all labels button under the 'Replicate labels' section in the Mail Merge pane.
- You can observe that all the labels are immediately updated with <<Address Block>>.

Viewing The Merged Data:

You can preview the labels on the screen by following the given steps:

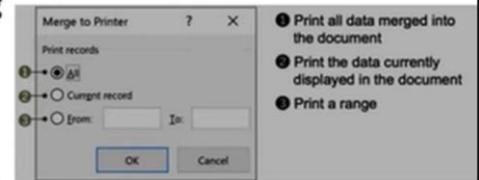
- Select Next: Preview your labels (wizard step) at bottom of task pane.
- The Preview your labels pane appears in the Mail Merge pane and immediately, all the addresses are displayed in the labels.
- Click on the Forward button or the Backward button in the 'Preview your label' section to navigate through the labels.

- In case you wish to make any changes in the address label, you can do so by clicking on the Edit recipients list option under the 'Make changes' section.

Printing The Merged Labels:

You can take the print out of the address labels by following the given steps:

- Click on the Next: Complete the merge (wizard step) .
- From the right pane click on the Print option under the 'Merge' section.
- The Merge to Printer dialog box appears.
- Select the All radio button and click on OK.



steps of Mail-Merge

classmate

Date _____

Page _____

① select **Mailing** tab from **Start Mail Merge group**

② **start mail merge**

select

③ **step by step Mail Merge Wizard**

④ select radio button **① Letters** from select document type.

⑤ step 1 of 6

Next: starting document

⑥ select Radio button **① Use the current document**

⑦ step 2 of 6

Next: Select Recipients

⑧ select Radio button

- Use an existing list
- select from Outlook contacts
- Type a new list

⑨ select **Create...** option

then displays,

New Address list dialog box.

Here enter addresses,

select **OK**

Save Address list dialog box displays

Give some name, say **Address** click on **Save**

then displays, **Mail Merge Recipients** dialog box
select **OK**

Date _____
Page _____

(10) step 3 of 6

Next: Write your letter

(11) select **Address block**,

displays **Insert Address Block** dialog box

select **OK**

then **<< AddressBlock >>** displays where you keep
cursors in main document

(12) step 4 of 6

Next: Preview your letters

<< Recipients >>

(13) step 5 of 6

Next: Complete the Merge

(14) step 6 of 6

Previous: Preview your letters

select **Print...**

displays **Merge to Printer** dialog box.

select All
 Current Record
 From to

at **OK**

Steps of Labels

classmate

Date _____

Page _____

① Open New document

② select Mailing Tab

③ select start Mail Merge

④ select step by step Mail Merge Wizard...

⑤ Select Radio button ① Label

⑥ step 1 of 6

Next: starting document

⑦ step 2 of 6

Next: select recipients

OK select
Label options...

then displays Label option diag box

select OK

⑧ ① Use an existing list from Select Recipients

Browse...

⑨ Then displays Select Data Source diag box.

select your file Address

select Open button

then disp.

Mail Merge Recipients dialog box

select OK

⑩ step 3 of 6

Next: Arrange your Labels

Address block

then displays

Insert Address block dialog box

Update all labels

⑪ step 4 of 6

Next: Preview your labels

⑫ step 5 of 6

Next: Complete the Merge

Print

Assessment:

Select the Correct option:

Q(1) The is the letter that you wish to send to multiple recipients.

- a. Main document
- b. Address label
- c. Address list

Ans: a. Main document

Q(2) A merged document is created by merging the main document with the.....fields.

- a. Address book
- b. Data source
- c. Merged document

Ans: b. Data source

Q(3) You can print multiple address on a single sheet by using the mail merge feature

- a. Books
- b. Labels
- c. List

Ans: b. Labels

True or False:

- (1) The process of mail merge involves only two steps. - False (it involves 3 steps)
- (2) You cannot edit any address label in a merged document - True
- (3) The data source is associated with the main document. - True
- (4) You can find the Start Mail Merge option in the Mailing tab - True

Answer th following questions.

Q[1] What do you understand by the term Mail Merge ?

Ans: (i) Mail merge is a technique to merge text (main document, containing letter) with addresses (data source) to create personalized letters.

(ii) Mail merge is a feature within most data processing applications that enables users to send a similar letter or document to multiple recipients.

(iii) It saves our time and effort of retyping the same letter over and over. Q[2] Name the documents that are combined while using the Mail Merge feature.

Ans: A mail merge is used to create Letters, Labels, Envelopes, E-mail message & Fax distributions.

There are 3 documents that are involved in the mail merge process:

- i. Main document
- ii. Data source
- iii. Merged



document Q[3] Define the term data source.

Ans: (i) A data source is the location where data that is being used originates from.

(ii) It can be as simple as a file with rows and columns. Data source may be database.

(iii) It is table or spreadsheet or a database storing details (fields) of the recipients. Q[4] What is the main document ?

Ans: **Main document:** In a mail-merge operation in Word, this the document contains the main body of your letter, field names, and merge instructions. The basic information in the main document remains the same.

Q[5] What are the main steps involved in Mail Merge?

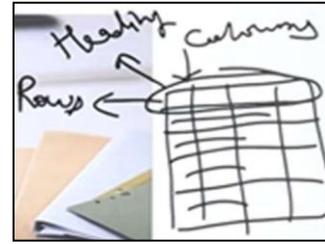
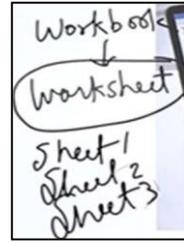
Ans: The mail merge process generally requires the following steps:

- (i) Create a Main Document and the Template.
- (ii) Create a Data Source.
- (iii) Defining the Merge Fields in the main document.
- (iv) Merging the Data Source with the main document.
- (v) Save / Print

10-PART-B-Subject Specific Skills

Part-B: Unit-2-Electronic Spreadsheet (Advanced)-(10m)-mb

- Chapter[6] Analysing data in a Spreadsheet
- Chapter[7] Linking data and spreadsheets
- Chapter[8] Sharing and reviewing spreadsheet
- Chapter[9] Using Macros in a spreadsheet



In 2010	
Columns	10,48,576
Rows	16,384

Part-B: Unit-2-Electronic Spreadsheet (Advanced)

Chapter[6] Analysing data in a Spreadsheet

Introduction:

- Microsoft (Excel 2010) is a component of Microsoft Office 2010 suite. It is one of the most professional and spreadsheet software used by a large number of people across the world.
- It allows you to store, organise, calculate and manipulate data.
- It provides different data analysis tools that help you analyse a large amount of data, easily and quickly.

6.1 Introduction (Theory)

Consolidating Data:

(1) Consolidating data means combining data from different sources into one place.

For ex, you have a Sales data from four different zonal heads in four different worksheets.

(2) In such a case, to analyse data, you need to collate everything into one worksheet. It will become a tedious and tiresome, time-consuming task, if you combine it manually, using the traditional way copying and pasting.

(3) Excel provides the Consolidate feature that lets you collage the data with minimal efforts.

(4) It selects the contents of the cells from several worksheets and maintain the collected data in a Master Worksheet.

(5) Example : Let us consider a scenario where a sales manager of an automobile showroom wants to calculate the total car sales in the first quarter of years 2020 and 2021.

The sales of the first quarter of both the years have been stored in separate worksheets with names 2020 and 2021.

First Quarter Sales of Year 2020				First Quarter Sales of Year 2021			
Cars	Jan	Feb	March	Cars	Jan	Feb	March
Ferrari	350	550	450	Ferrari	456	400	657
Audi	200	349	345	Audi	678	553	548
BMW	700	243	654	BMW	890	348	843

Consolidating Data			
Cars	Jan	Feb	March
Ferrari	806	950	1,107
Audi	878	902	893
BMW	1,590	591	1,497

To sum up the data of both the worksheets, consolidate them using the following steps:

- Open a workbook in Excel and enter the data of the First Quarter Sales of year 2020 in Sheet 1 and 2021 in Sheet 2.
- Click on the Sheet 3 tab and rename it as 'Consolidated Data 2020 and 2021'.
- Enter the headings and names of cars in Sheet 3.
- Click on the Data tab and select Consolidate.
- The Consolidate dialog box appears.
- In the Function drop-down list, select a function. For example, to get the sum of data of both the worksheets, select the Sum function.
- Click inside Reference text box. Then, go to Sheet 1, and drag the mouse to select the first source data range on the sheet.
- Click on the Add button. The selected range is added in the All References list box.
- Similarly, choose data range from Sheet 2 and add it in all references list box.
- Now click on OK. You will get the consolidated data on sheet 3.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	FIRST QUARTER SALES OF YEAR 2020												
2	CARS	JAN	FEB	MARCH									
3	Porsche	350	550	450									
4	Audi	200	349	345									
5	BMW	700	243	654									
6	Cadillac	850	453	768									
7	Chevrolet	1500	234	987									
8	Datsun	400	865	467									
9	Ferrari	900	234	356									
10	Ford	430	240	678									
11													
12													
13													

Excel window: CONSOLIDATED - Excel, UMESH KALE

Home tab ribbon: Clipboard, Font, Alignment, Number, Conditional Formatting, Styles, Cells, Editing, Add-ins.

	A	B	C	D	E	F	G	H	I	J	K
1	FIRST QUARTER SALES OF YEAR 2021										
2	CARS	JAN	FEB	MARCH							
3	Porsche	456	400	657							
4	Audi	678	553	548							
5	BMW	890	348	843							
6	Cadillac	543	278	549							
7	Chevrolet	457	670	532							
8	Datsun	789	450	794							
9	Ferrari	856	900	973							
10	Ford	400	240	569							
11											

Sheet1 | Sheet2 | Sheet3

Excel window: CONSOLIDATED - Excel, UMESH KALE

Home tab ribbon: Clipboard, Font, Alignment, Number, Conditional Formatting, Styles, Cells, Editing, Add-ins.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Consolidated data of year 2020 and 2021											
2	CARS	JAN	FEB	MARCH								
3	Porsche											
4	Audi											
5	BMW											
6	Cadillac											
7	Chevrolet											
8	Datsun											
9	Ferrari											
10	Ford											
11												
12												

Sheet1 | Sheet2 | Sheet3

Excel window: CONSOLIDATED - Excel, UMESH KALE

Data tab ribbon: Get & Transform Data, Queries & Connections, Sort & Filter, Advanced, Data Tools, Forecast, Outline.

Consolidate tooltip:

Consolidate
Summarize data from separate ranges, consolidating the results in a single output range.

For example, if you have a worksheet of expense figures for each of your regional offices, you might use a consolidation to roll up these figures into a corporate expense worksheet.

[Tell me more](#)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Consolidated data of year 2020 and 2021											
2	CARS	JAN	FEB	MARCH								
3	Porsche											
4	Audi											
5	BMW											
6	Cadillac											
7	Chevrolet											
8	Datsun											
9	Ferrari											
10	Ford											
11												
12												

Sheet1 | Sheet2 | Sheet3

Excel window showing the 'Data' tab and the 'Consolidate' dialog box. The spreadsheet contains the following data:

Consolidated data of year 2020 and 2021			
CARS	JAN	FEB	MARCH
Porsche			
Audi			
BMW			
Cadillac			
Chevrolet			
Datsun			
Ferrari			
Ford			

The 'Consolidate' dialog box is open, showing the 'Function' set to 'Sum' and 'All references' including 'Sheet1!\$B\$3:\$D\$5' and 'Sheet2!\$B\$3:\$D\$5'. The 'Use labels in' section has 'Top row' and 'Left column' checked, and 'Create links to source data' is unchecked.

A close-up view of the 'Consolidate' dialog box. The 'Function' dropdown menu is open, showing a list of options: Sum, Count, Average, Max, Min, Product, Count Numbers, StdDev, StdDevp, Var, and Varp. 'Sum' is selected. The 'All references' list is empty, and the 'Use labels in' section has 'Top row' and 'Left column' checked.

Excel window showing the 'Data' tab and the 'Consolidate' dialog box. The spreadsheet contains the following data:

FIRST QUARTER SALES OF YEAR 2020			
CARS	JAN	FEB	MARCH
Porsche	350	550	450
Audi	200	349	345
BMW	700	243	654
Cadillac	850	453	768
Chevrolet	1500	234	987
Datsun	400	865	467
Ferrari	900	234	356
Ford	430	240	678

The 'Consolidate' dialog box is open, showing the 'Function' set to 'Sum' and 'All references' including 'Sheet1!\$B\$3:\$D\$10'. The 'Use labels in' section has 'Top row' and 'Left column' checked, and 'Create links to source data' is unchecked.

Excel interface showing the 'Consolidate' dialog box. The spreadsheet contains data for the first quarter of 2021.

	A	B	C	D
1	FIRST QUARTER SALES OF YEAR 2021			
2	CARS	JAN	FEB	MARCH
3	Porsche	456	400	657
4	Audi	678	553	548
5	BMW	890	348	843
6	Cadillac	543	278	549
7	Chevrolet	457	670	532
8	Datsun	789	450	794
9	Ferrari	856	900	973
10	Ford	400	240	569

The 'Consolidate' dialog box is open, showing the following settings:

- Function: Sum
- Reference: Sheet2!\$B\$3:\$D\$10
- All references: Sheet1!\$B\$3:\$D\$10, Sheet2!\$B\$3:\$D\$10
- Use labels in: Top row, Left column, Create links to source data

Excel interface showing the 'Consolidate' dialog box. The spreadsheet is titled 'Consolidated data of year 2020 and 2021'.

	A	B	C	D
1	Consolidated data of year 2020 and 2021			
2	CARS	JAN	FEB	MARCH
3	Porsche			
4	Audi			
5	BMW			
6	Cadillac			
7	Chevrolet			
8	Datsun			
9	Ferrari			
10	Ford			

The 'Consolidate' dialog box is open, showing the following settings:

- Function: Sum
- Reference: (empty)
- All references: Sheet1!\$B\$3:\$D\$10, Sheet2!\$B\$3:\$D\$10
- Use labels in: Top row, Left column, Create links to source data

Excel interface showing the final consolidated data for the year 2020 and 2021.

	A	B	C	D
1	Consolidated data of year 2020 and 2021			
2	CARS	JAN	FEB	MARCH
3	Porsche	806	950	1107
4	Audi	878	902	893
5	BMW	1590	591	1497
6	Cadillac	1393	731	1317
7	Chevrolet	1957	904	1519
8	Datsun	1189	1315	1261
9	Ferrari	1756	1134	1329
10	Ford	830	480	1247

The status bar at the bottom shows: Average: 1149, Count: 24, Sum: 27576.

Creating Subtotals:

- The Subtotal feature of Excel is used for generating subtotals to summarise data.
- It helps you to manage, analyse, and extract specific information from the rows of related data.
- It is a good practice to use sorted data while applying the subtotal command on it.
- Let us consider a scenario where a 'Senior Sales Manager' of a renowned publication wants to calculate the subtotal of sales of each employee and total sales.
- To obtain a subtotal sales and total sales, follow the given steps:

1. Open the worksheet containing the sales data or enter the data.
2. Select the desired range of cells that you want to use to tax, calculate the subtotals.
3. Choose the Data tab and then select the Subtotal command.
4. The **Subtotals** Dialog box appears.
5. In the **At each change** in list box, select the column by which you want to group the subtotals. For example, if you want to get the subtotals of the sales by grouping sales executives, then select **Sales Executive**. A subtotal will be calculated for each value in this column.
6. In the **Add subtotal to** list box, select the columns containing the values that you want to create the subtotals. For example, select the **Sales** column to create the subtotals according to sales. If the contents of the selected columns change later, the subtotals are automatically recalculated.
7. In the **use function** list box, select the function that you want to use to calculate the subtotals. For example, to get the total sales of each employee, select the **Sum** function.
8. Click on OK. The subtotals of **Sales Executives** and **Grand Total** of sales will appear.

Excel interface showing a sales report with columns: SALES EXECUTIVE, MONTH, SALES. The data is as follows:

SALES EXECUTIVE	MONTH	SALES
ANIKET	OCT	89064
ANIKET	NOV	78899
DINESH	OCT	24576
DINESH	NOV	33455
KAVYA	OCT	23456
KAVYA	NOV	35689
RAJAN	OCT	56788
RAJAN	NOV	99335
RAMAN	OCT	23466
RAMAN	NOV	34567

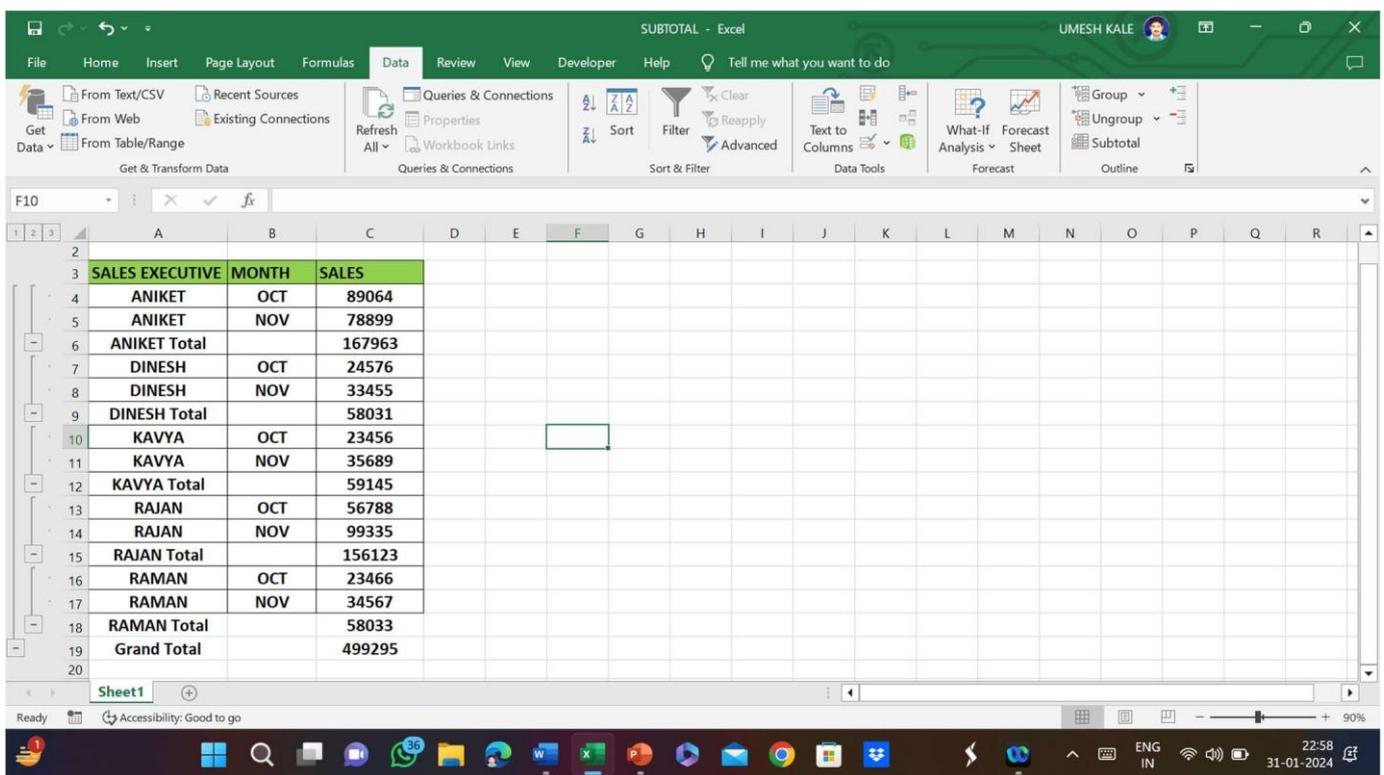
A tooltip for the Subtotal button is visible, stating: "Subtotal: Quickly calculate rows of related data by inserting subtotals and totals."

Excel interface showing the Subtotal dialog box. The dialog is configured as follows:

- At each change in: SALES EXECUTIVE
- Use function: Sum
- Add subtotal to:
 - SALES EXECUTIVE
 - MONTH
 - SALES
- Replace current subtotals
- Page break between groups
- Summary below data

Excel interface showing the Subtotal dialog box with the 'Use function' dropdown menu open. The available functions are:

- Sum
- Count
- Average
- Max
- Min
- Product



What-If Analysis Tools:

- (i) The What-If Analysis tools of excel allow you to use different sets of values in one or more formula to explore all the various results.
- (ii) By using these tools, we can do what-if analysis to analyse complex data or two different sets of data on the same subject.
- (iii) You can also specify a result that you want to formula to produce, and then determine of values will produce that result.

Scenario Manager:

- (i) Scenario Manager is an important tool of Excel, which you use to test the 'What-If, question.
- (ii) It enables you to manage and view data from different input values.
- (iii) For example, if you want to calculate the effect of different interest rates on an investment, you could add a scenario for each interest rate and quickly view the results.

	Current Values	Actual Budget	Plan 2	Plan 3
Changing Cells:				
\$B\$13	10,000	15,000	7,500	10,000
\$B\$14	10,000	15,000	7,500	10,000
Result Cells:				
\$B\$13	10,000	15,000	7,500	10,000
\$B\$14	10,000	15,000	7,500	10,000
\$B\$19	15,550	5,550	20,550	15,550

- (iv) A scenario is a set of values that you enter in a worksheet to perform calculations.
- (v) You can easily create, edit and format different groups of values (in form of scenarios) and name them as per your choice.
- (vi) You can create as many as scenarios as you want and then compare them without changing

the values, manually.

- Suppose, you want to take a loan of amount 50,00,000 from a bank and different banks offer you the interest .

HDFC BANK (SCENARIO 1)	
Loan amount	50,00,000
Interest rate	12%
NPER	360
Type	0
EMI	

SBI BANK (SCENARIO 2)	
Loan amount	50,00,000
Interest rate	9%
NPER	360
Type	0
EMI	

ICICI BANK (SCENARIO 3)	
Loan amount	50,00,000
Interest rate	11%
NPER	360
Type	0
EMI	

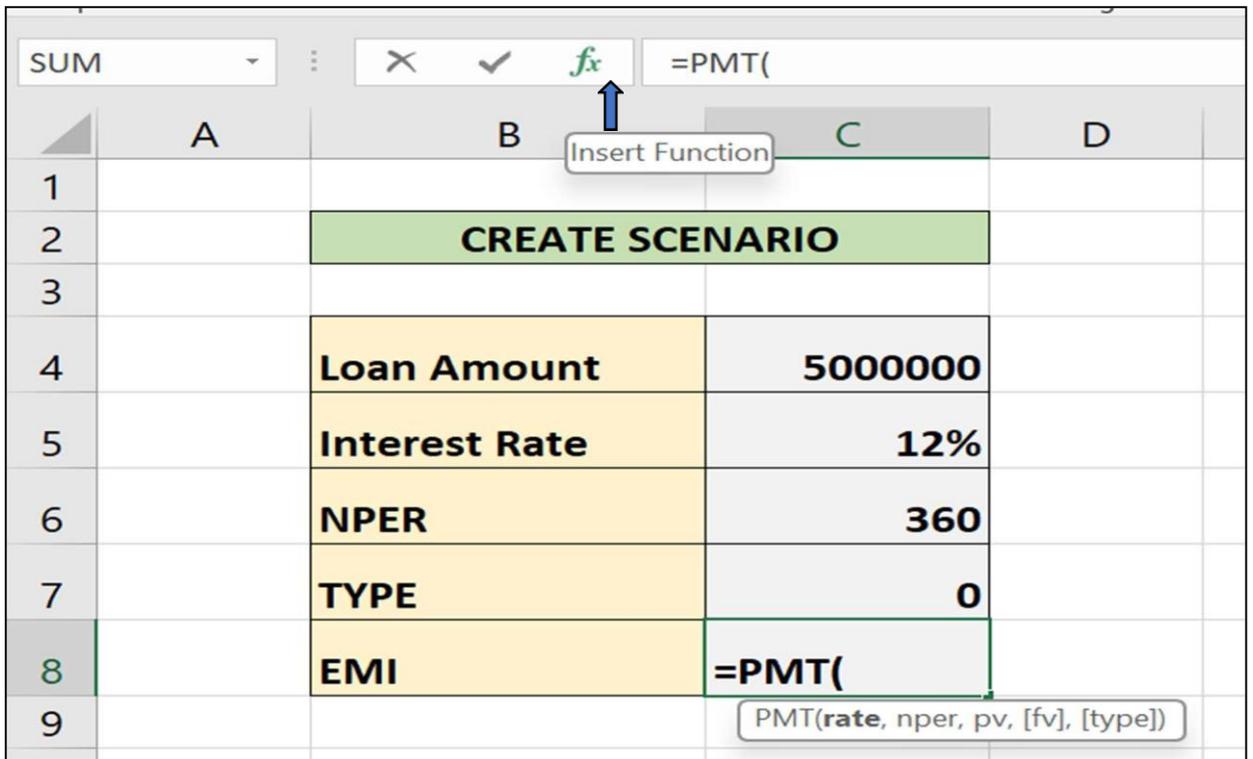
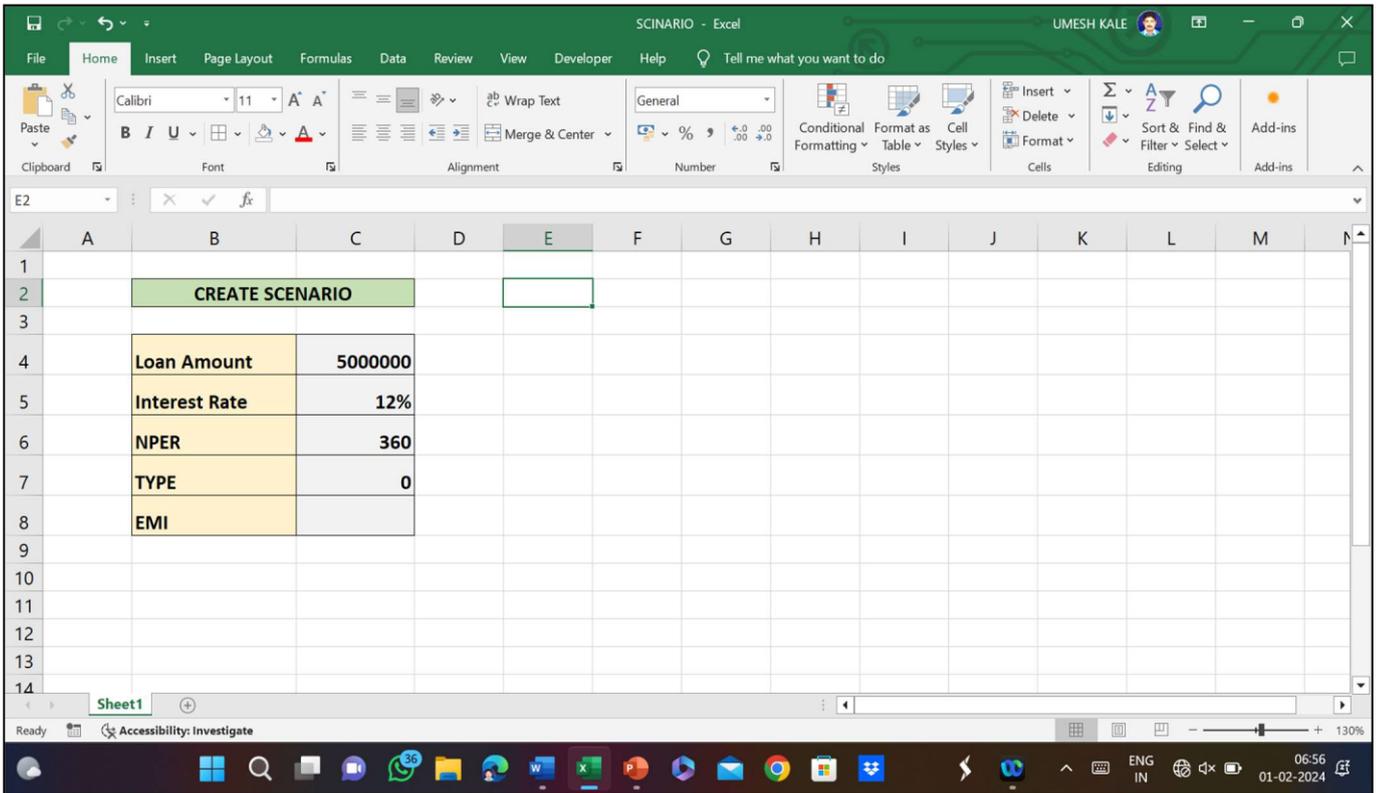
IDBI BANK (SCENARIO 4)	
Loan amount	50,00,000
Interest rate	8%
NPER	360
Type	0
EMI	

- In such a situation, you can create the above scenarios to calculate and analyse the EMI best suited TO YOU.
- To create scenarios in Excel, follow these steps:
 - Open the Excel worksheet and enter the data.

- Enter the following Formula in cell
B5: = PMT (Interest-Rate/12, NPER, Loan_Amont, 0, Type).
- Press Enter to get the calculated value. The EMI calculated - Rs. 51,430.63 is the outgoing amount per month. The value is negative as money is going out of your pocket. It can also be displayed as (51,430.63).
- Now, select the initial values in the worksheet .
- Click on **Data > What-if Analysis > Scenario Manager.**
- The Scenario Manager dialog box opens.
- Choose Add. The Add Scenario dialog box opens.

- Enter a name for the new scenario in the Scenario name textbox. For example, enter HDFC Bank. It is a good practice to use a name that clearly identifies the scenario. This name is displayed in the Scenario Manager to choose from all the available scenarios.
- Enter some information about the scenario in the Comment box or stay with the default text. This is optional.
- Click on OK. The Scenario Values dialog box appears.
- Click on OK to create a scenario with the displayed values.
- Create another Scenario by choosing Add from the Scenario Manager dialog box

- Create separate scenarios for SBI, ICICI, and IDBI banks with interest rates 9%, 11% and 8%, respectively. To change the interest rate, change the value of cell Changing cell in the Scenario Values dialog box as 0.09, 0.11 ,0.12 and 0.08, respectively.
- Now, you can compare the EMIs offered by all the banks by easily switching between the four scenarios.
- To switch into a scenario, select it and click on Show button in the Scenario Manager dialog box. The selected scenario will display the values in the worksheet.
- To edit a scenario name or value, click on Edit in the Scenario Manager dialog box.



C8 X ✓ fx =PMT()

	A	B	C
1			
2		CREATE SCENARIO	
3			
4		Loan Amount	5000000
5		Interest Rate	12%
6		NPER	360
7		TYPE	0
8		EMI	=PMT()
9			
10			
11			
12			

Function Arguments

PMT

Rate = number

Nper = number

Pv = number

Fv = number

Type = number

=

Calculates the payment for a loan based on constant payments and a constant interest rate.

Nper is the total number of payments for the loan.

Formula result =

[Help on this function](#)

SUM X ✓ fx =PMT(C5/12,C6,C4)

	A	B	C	D
1				
2		CREATE SCENARIO		
3				
4		Loan Amount	5000000	
5		Interest Rate	12%	
6		NPER	360	
7		TYPE	0	
8		EMI	=PMT(C5/12,C6,C4)	
9				
10				
11				
12				

Function Arguments

PMT

Rate C5/12 = 0.01

Nper C6 = 360

Pv C4 = 5000000

Fv = number

Type = number

= -51430.62985

Calculates the payment for a loan based on constant payments and a constant interest rate.

Pv is the present value: the total amount that a series of future payments is worth now.

Formula result = -51430.62985

[Help on this function](#)

C8 X ✓ fx =PMT(C5/12,C6,C4)

	A	B	C	D
1				
2		CREATE SCENARIO		
3				
4		Loan Amount	5000000	
5		Interest Rate	12%	
6		NPER	360	
7		TYPE	0	
8		EMI	₹ -51,430.63	
9				

SCENARIO - Excel

File Home Insert Page Layout Formulas **Data** Review View Developer Help Tell me what you want to do

Get Data: From Text/CSV, From Web, From Table/Range

Recent Sources, Existing Connections

Queries & Connections: Refresh All, Properties, Workbook Links

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, What-If Analysis, Forecast Sheet, Subtotal

Scenario Manager... Scenario Manager

Scenario Manager: Create different groups of values or scenarios, and switch between them.

Goal Seek... Data Table...

	A	B	C	D	E	F	G	H	I
1									
2		CREATE SCENARIO							
3									
4		Loan Amount	5000000						
5		Interest Rate	12%						
6		NPER	360						
7		TYPE	0						
8		EMI	₹ -51,430.63						
9									
10									
11									

SCENARIO - Excel

File Home Insert Page Layout Formulas **Data** Review View Developer Help Tell me what you want to do

Get Data: From Text/CSV, From Web, From Table/Range

Recent Sources, Existing Connections

Queries & Connections: Refresh All, Properties, Workbook Links

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, What-If Analysis, Forecast Sheet, Outline

Scenario Manager

Scenarios: No Scenarios defined. Choose Add to add scenarios.

Buttons: Add..., Delete, Edit..., Merge..., Summary...

Changing cells: []

Comment: []

Show Close

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2		CREATE SCENARIO										
3												
4		Loan Amount	5000000									
5		Interest Rate	12%									
6		NPER	360									
7		TYPE	0									
8		EMI	₹ -51,430.63									
9												
10												
11												
12												

SCENARIO - Excel

File Home Insert Page Layout Formulas **Data** Review View Developer Help Tell me what you want to do

Get Data: From Text/CSV, From Web, From Table/Range, Recent Sources, Existing Connections

Queries & Connections: Refresh All, Properties, Workbook Links

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, What-If Analysis, Forecast Sheet

Forecast

E4

1										
2		CREATE SCENARIO								
3										
4		Loan Amount	5000000							
5		Interest Rate	12%							
6		NPER	360							
7		TYPE	0							
8		EMI	₹ -51,430.63							
9										
10										
11										
12										

Add Scenario

Scenario name:

Changing cells: E4

Ctrl+click cells to select non-adjacent changing cells.

Comment: Created by UMESH KALE on 02-02-2024

Protection: Prevent changes, Hide

OK Cancel

SCENARIO - Excel

File Home Insert Page Layout Formulas **Data** Review View Developer Help Tell me what you want to do

Get Data: From Text/CSV, From Web, From Table/Range, Recent Sources, Existing Connections

Queries & Connections: Refresh All, Properties, Workbook Links

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, What-If Analysis, Forecast Sheet

Forecast

C4

1										
2		CREATE SCENARIO								
3										
4		Loan Amount	5000000							
5		Interest Rate	12%							
6		NPER	360							
7		TYPE	0							
8		EMI	₹ -51,430.63							
9										
10										
11										
12										

Edit Scenario

Scenario name: HDFC

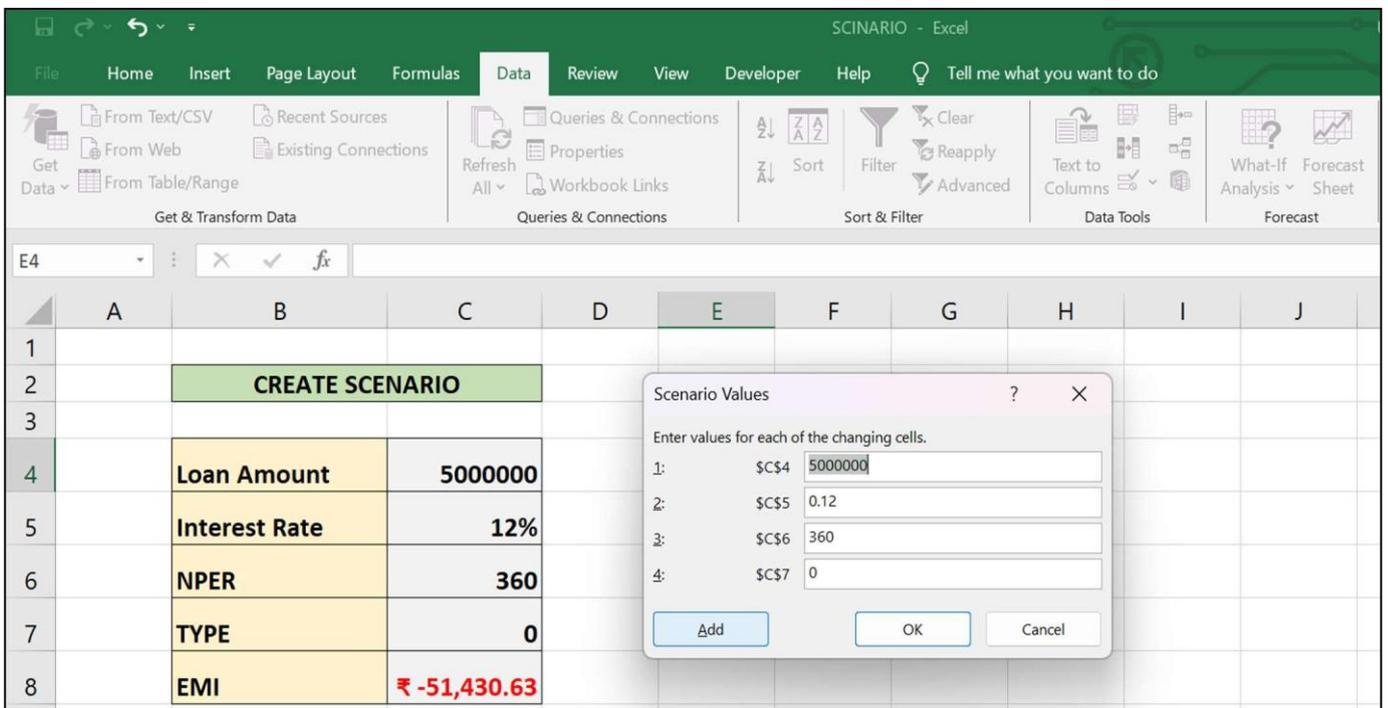
Changing cells: \$C\$4:\$C\$7

Ctrl+click cells to select non-adjacent changing cells.

Comment: Created by UMESH KALE on 02-02-2024

Protection: Prevent changes, Hide

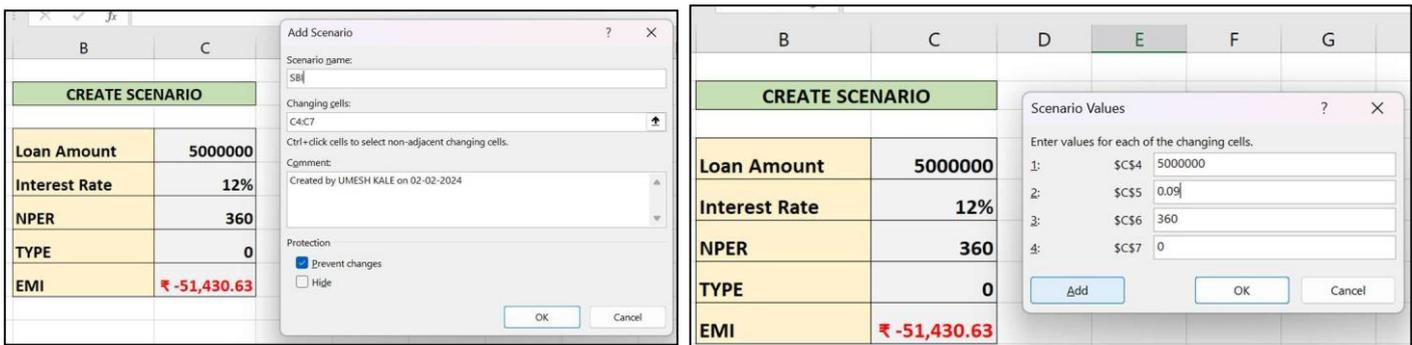
OK Cancel



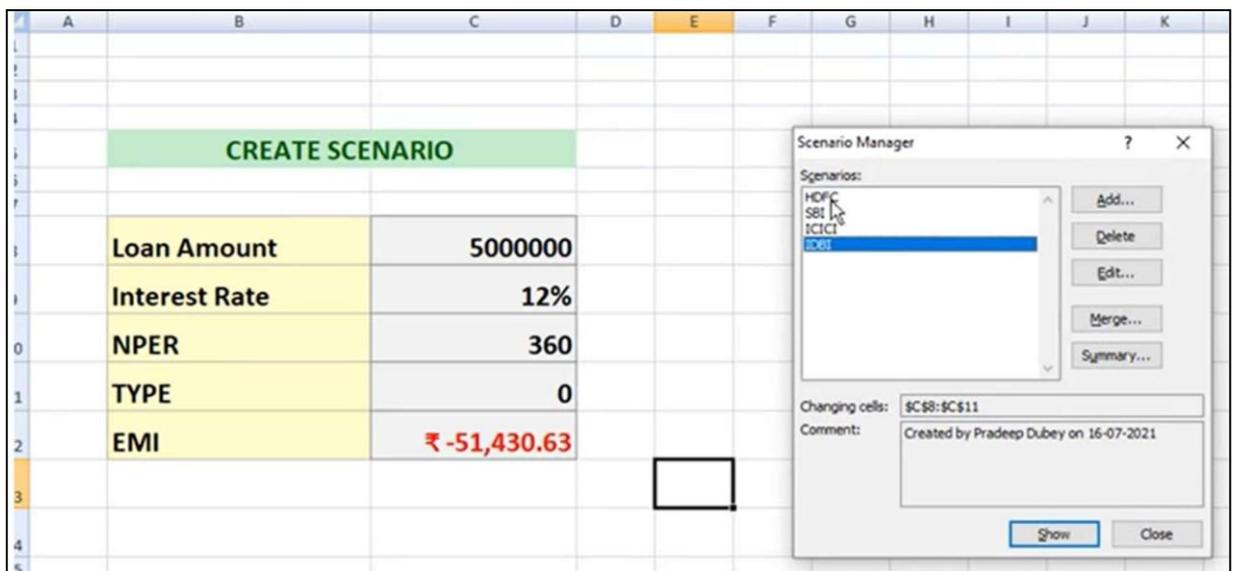
* Then select ADD button

* Then, This scenario is added

* Then similarly create next scenario for next bank



Then we will see all four bank scenarios as follows



To see the scenario of particular bank, for example SBI bank

Select SBI scenario and then select SHOW button, then EMI changes as per SBI scenario

The screenshot shows an Excel spreadsheet with a 'CREATE SCENARIO' table and the Scenario Manager dialog box. The table contains the following data:

CREATE SCENARIO	
Loan Amount	5000000
Interest Rate	9%
NPER	360
TYPE	0
EMI	₹ -40,231.13

The Scenario Manager dialog box is open, showing a list of scenarios: HDFC, SBI, ICICI, and IDBI. The 'SBI' scenario is selected. The 'Changing cells' field is set to '\$C\$8:\$C\$11'. The 'Comment' field is empty. The 'Show' button is highlighted.

The screenshot shows the same Excel spreadsheet as above, but with the 'ICICI' scenario selected in the Scenario Manager dialog box. The table data is updated as follows:

CREATE SCENARIO	
Loan Amount	5000000
Interest Rate	11%
NPER	360
TYPE	0
EMI	₹ -47,616.17

The Scenario Manager dialog box shows 'ICICI' selected. The 'Comment' field now contains the text: 'Created by Pradeep Dubey on 16-07-2021'. The 'Show' button is highlighted.

The screenshot shows the same Excel spreadsheet as above, but with the 'IDBI' scenario selected in the Scenario Manager dialog box. The table data is updated as follows:

CREATE SCENARIO	
Loan Amount	5000000
Interest Rate	8%
NPER	360
TYPE	0
EMI	₹ -36,688.23

The Scenario Manager dialog box shows 'IDBI' selected. The 'Comment' field contains the text: 'Created by Pradeep Dubey on 16-07-2021'. The 'Show' button is highlighted.

Note: we can

DELETE, EDIT, MERGE or SUMMARY the scenario

Goal Seek:

Information Technology (Code 402)

- Goal Seek is another useful data analysis tool of Excel. It is used to set a goal to find the optimum value for one to more target variables, given with the certain conditions. It allows you to try different values in the formula to arrive a solution for the input value.
- In other words, Goal Seek is another What If Analysis tool that helps you obtain the input value that results in the target value that you want.
- Suppose, you want to take a loan of amount 60,00,000 and repay it in 25 years.
- Also, you can pay an EMI of Rs. 50,000 only.
- So, you want to know the interest rate of the loan.
- In such a situation, one Goal Seek to get the value.

Goal Seek:

Information Technology (Code 402)

- To perform Goal Seek, follow the given steps:
1. Enter the data.
 2. Enter the Formula =PMT (Interest_Rate/12, NPER, Loan_Amount, 0, Type) in cell and press Enter to get the calculated value.
 3. Choose Data > What-If Analysis > Goal Seek.
 4. The Goal Seek dialog box opens. It contains the following fields:
 - Set cell: Enter the reference of the cell that has the formula. Click on the cell B5.
 - To value: Enter the value you want to achieve as a new result. Enter '-50000' (the value should be negative because EMI is the money that is going out of your pocket)
 - By changing cell: Enter the reference for the cell that contains the value you want to adjust in order to reach the target. Click on B1.
 5. Click on OK The Goal Seek Status dialog box appears.
 6. Click on OK and observe the output.

	A	B	C	D
1				
2	CREATE GOAL SEEK			
3				
4	Loan Amount	6000000		
5	Interest Rate	8%		
6	NPER	300		
7	TYPE	0		
8	EMI	=PMT(
9		PMT(rate, nper, pv, [fv], [type])		

Then click on fx (insert function)

Function Arguments

PMT

Rate: B5/12 = 0.00666667

Nper: B6 = 300

Pv: B4 = 600000

Fv: = number

Type: = number

Calculates the payment for a loan based on constant payments and a constant interest rate.

Pv is the present value: the total amount that a series of future payments is worth now.

Formula result = ₹ -46,308.97

Help on this function

OK Cancel

Select OK button then displays

	A	B
1		
2	CREATE GOAL SEEK	
3		
4	Loan Amount	6000000
5	Interest Rate	8%
6	NPER	300
7	TYPE	0
8	EMI	₹ -46,308.97

Scenario Manager...

Goal Seek...

Data Table...

Goal Seek

Find the right input for the value you want.

Goal Seek

Set cell: B8

To value: -46308.97

By changing cell:

OK Cancel

(i) In Set Cell

Enter the address of cell, which we want to enter EMI how much we want to pay.

(ii) In To value

Enter the How much EMI we want pay for example, 50,000

(iii) In By changing cell

Enter the address of cell in which we want to see how interest rate if we choose the EMI is -50,000

	A	B	C	D	E
1					
2		CREATE GOAL SEEK			
3					
4	Loan Amount	6000000			
5	Interest Rate	8%			
6	NPER	300			
7	TYPE	0			
8	EMI	₹ -46,308.97			

Goal Seek

Set cell: \$B\$8

To value: -50000

By changing cell: \$B\$5

OK Cancel

Select the required data and press OK button

	A	B	C	D	E
1					
2		CREATE GOAL SEEK			
3					
4	Loan Amount	6000000			
5	Interest Rate	9%			
6	NPER	300			
7	TYPE	0			
8	EMI	₹ -50,000.00			

Goal Seek Status

Goal Seeking with Cell B8 found a solution.

Target value: -50000

Current value: ₹ -50,000.00

OK Cancel

Then if we change Interest manually in this table, then EMI is also automatically changes.

	A	B
1		
2		CREATE GOAL SEEK
3		
4	Loan Amount	6000000
5	Interest Rate	6%
6	NPER	300
7	TYPE	0
8	EMI	₹ -38,658.08

	A	B
1		
2		CREATE GOAL SEEK
3		
4	Loan Amount	6000000
5	Interest Rate	11%
6	NPER	300
7	TYPE	0
8	EMI	₹ -58,806.78

Data Table:

- In Excel, a Data Table is a way to see different results by altering an input cell in your formula.
- Instead of creating different scenarios, you can create a data table to quickly try out the different values for the formulas.
- You can create a one or two variable data table.
- Suppose you have Price, Quantity, and Discount percentage of an item, and also calculated the net price.
- Let's find out the values of Net Price for the various values of price and quantity.
- The price runs horizontally to the right while quantity runs vertically down.

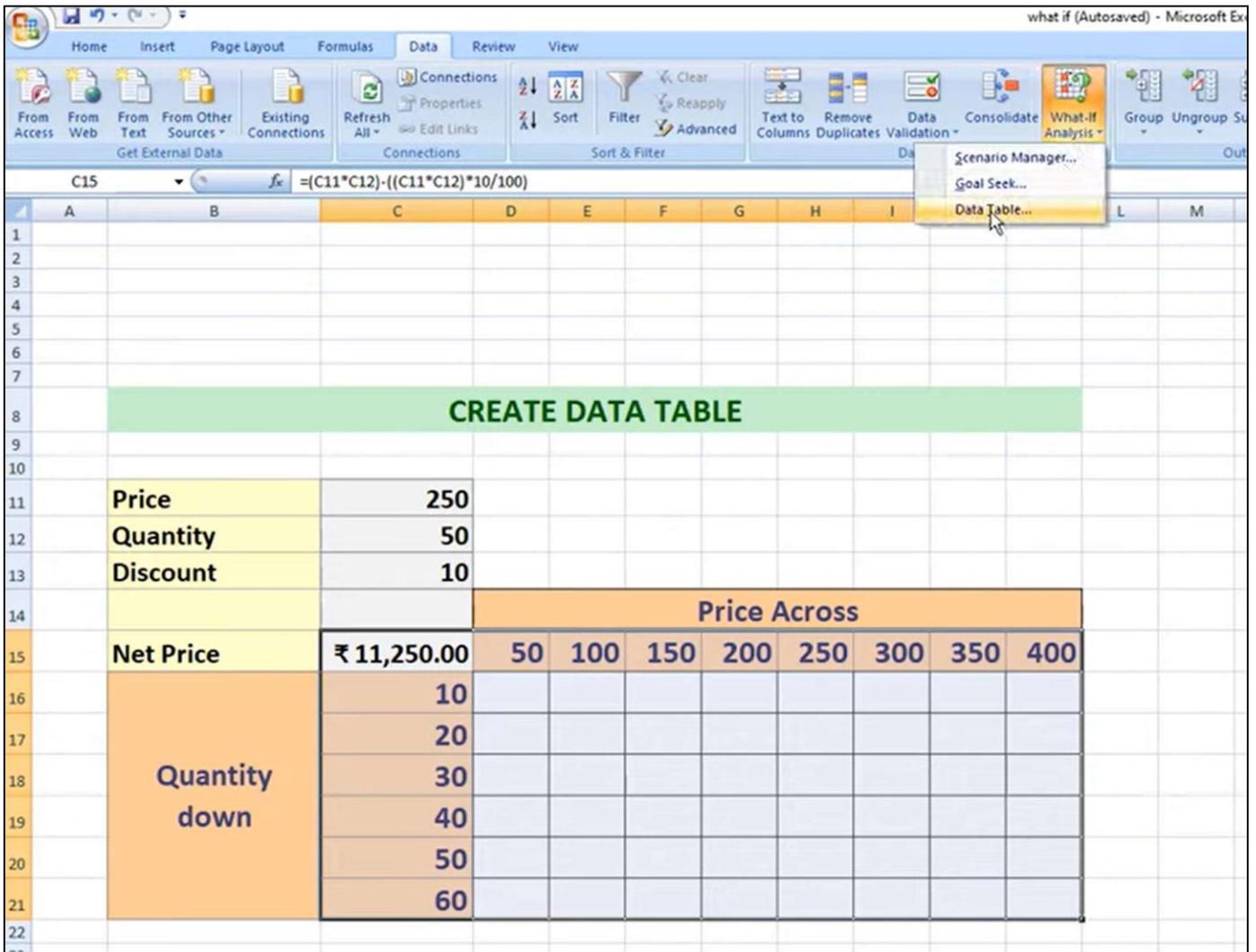
- Now, do the following to create the data table:
 1. Select the range of the cells for data table.
 2. Click on Data > What-If Analysis > Data Table.
 3. The Data Table dialog box opens.
 4. In the Row input cell, click on the Price cell.
 5. In the Column input cell, click on the Quantity cell.
 6. Click on OK. Observe the data table that appears.

CREATE DATA TABLE									
Price	250								
Quantity	50								
Discount	10								
Net Price		Price Across							
		50	100	150	200	250	300	350	400
Quantity down	10								
	20								
	30								
	40								
	50								
	60								

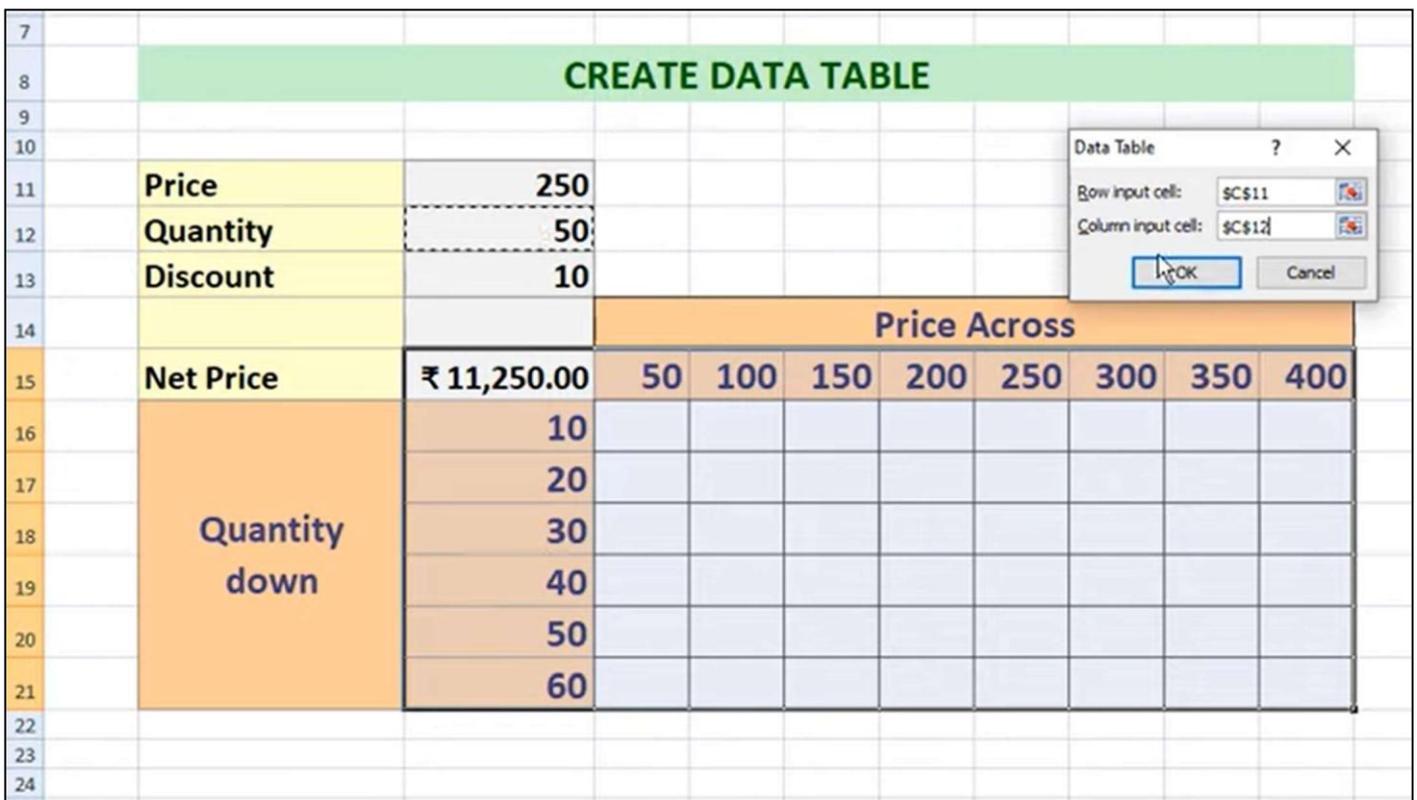
CREATE DATA TABLE									
Price	250								
Quantity	50								
Discount	10								
Net Price		Price Across							
		=(C11*C12)-((C11*C12)*10/100)		200	250	300	350	400	
Quantity down	10								
	20								
	30								
	40								
	50								
	60								

First Select the required data by mouse

Then select, Data Table option from What-If-Analysis from Data Tab



Enter the Row input cell and Column input cell range by mouse, then select OK button



Then displays the result in each selected cell

7											
8		CREATE DATA TABLE									
9											
10											
11		Price	250								
12		Quantity	50								
13		Discount	10								
14				Price Across							
15		Net Price	₹ 11,250.00	50	100	150	200	250	300	350	400
16		Quantity down	10	450	900	1350	1800	2250	2700	3150	3600
17	20		900	1800	2700	3600	4500	5400	6300	7200	
18	30		1350	2700	4050	5400	6750	8100	9450	10800	
19	40		1800	3600	5400	7200	9000	10800	12600	14400	
20	50		2250	4500	6750	9000	11250	13500	15750	18000	
21	60		2700	5400	8100	10800	13500	16200	18900	21600	
22											

Solver:

Information Technology (

- Solver is another What-if Analysis tool.
- It follows the Goal Seek method to solve the equations but more elaborately.
- The only difference between goal seek and solver is that the Solver deals with equations with multiple unknown variables.
- It is the elaborate form of goal seek.
- The Solver command is not available in Excel, by default.
- You need to load the Solver Add-in using the following steps:
 1. On the File tab, click on Options.
 2. Under Add-Ins, select Solver Add-in and click on Go button.

3. The Add-Ins dialog box opens. Check Solver Add-in and click OK.
4. Now, you can find the Solver in the analysis groups of the data tab.
 - Suppose, you are the owner of an automobile service centre, and planning on providing a new service to your clients.
 - For this, You need to buy a new equipment that costs Rs.50,000, which should be by instalments within twelve months.
 - Your goal is to calculate the minimal cost per vehicle service that will let you pay for the new equipment where the specified timeframe.
 - Enter the data on a worksheet.

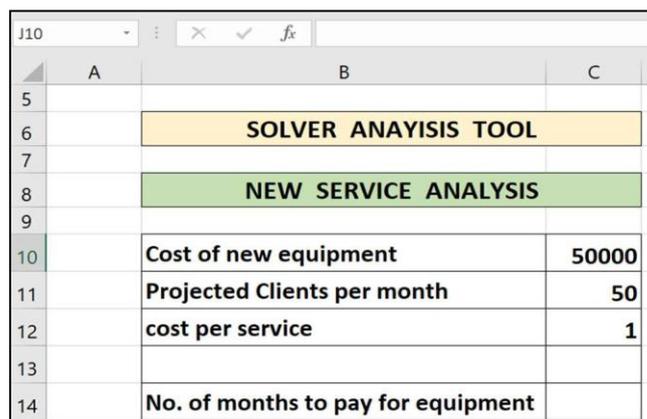
To find the solution to this problem through Solver, follow these steps:

1. Choose Solver from the Analysis group of the Data tab.
2. The Solver Parameters window will open.
3. The Set Objective is the cell containing a formula that represents the objective, or goal, of the problem. The objective can be to maximise, minimise, or achieve some target value. Here, the objective cell is D14, which calculates the payment term using the formula $=D10/(D11*D12)$ and the result of the formula should be equal to 12. Select the Value Of button and enter 12 in the box.
4. By Changing Variable Cells are the cells that contain variable data that can be changed to achieve the objective. Excel Solver allows specifying up to 200 variable cells. Here, the cells whose values can be changed are:

- Projected clients per month (D11) that should be less than or equal to 50
- Cost per service (D12) that you want Solver to calculate
- Therefore, in the By Changing Variable Cells area, select both the cells D11 and D12.
- Subject to the Constraints are restrictions or limits of the possible solutions to the problem. To add a constraint(s), do the following:
 1. Click on the Add button.
 2. In the Add Constraint window, enter a constraint. For example, add D10 in the Cell Reference box, choose equal sign(=), and enter value 50,000 as Constraint.
 3. Click on the Add button to add the constraint to the list.
 4. Continue entering another constraint. Now, add D11 in the Cell Reference box, Choose less than equal sign (<=) and enter 50 as the value of constraint.

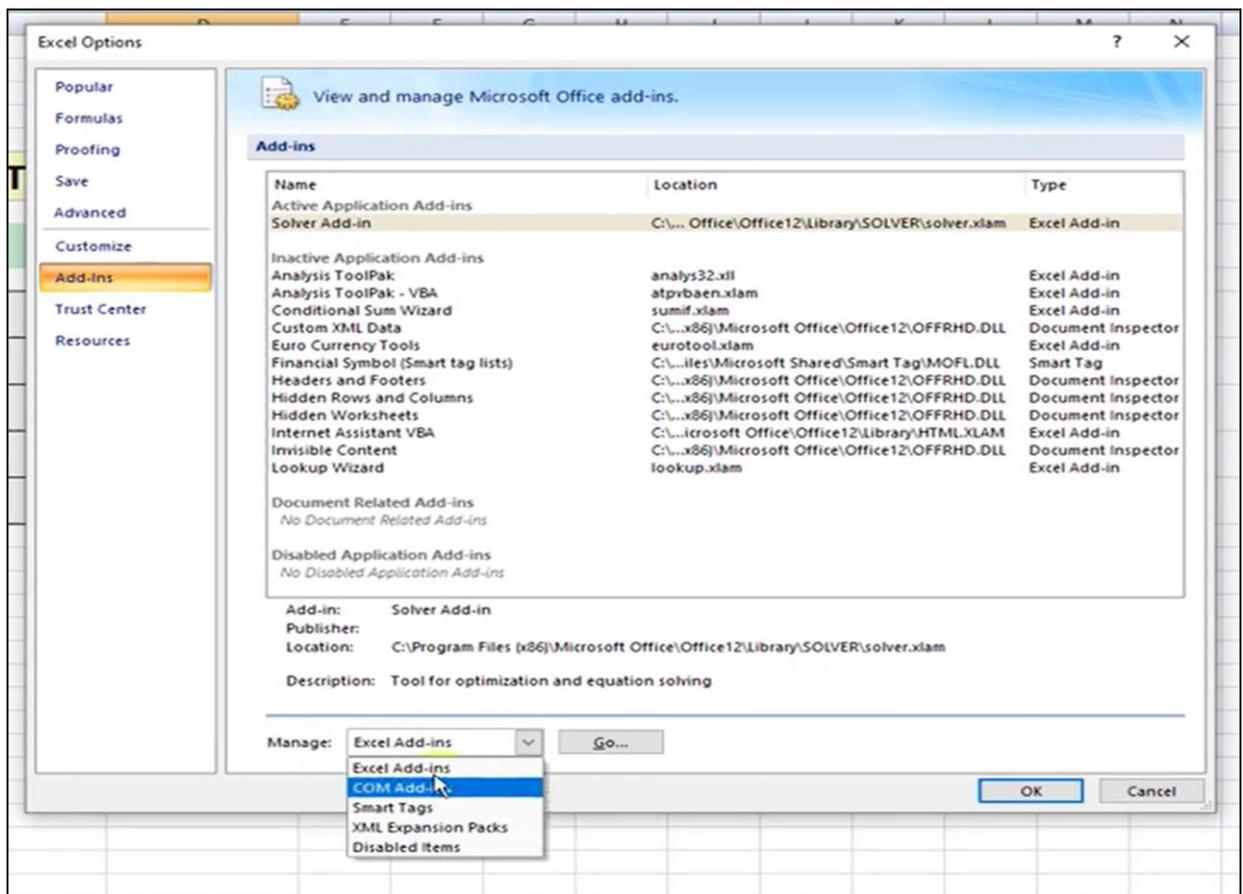
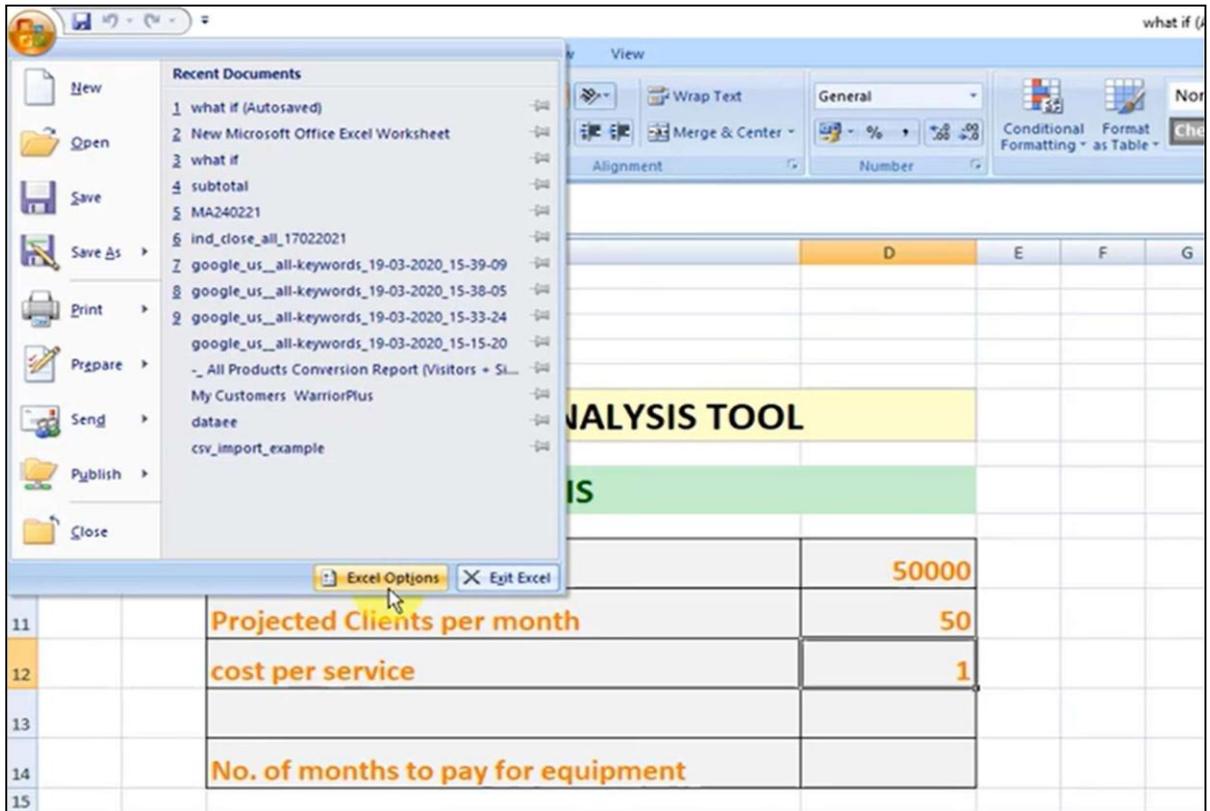
5. Click on OK to return to the main Solver Parameters window.
 - Click on the Solve button and let the Solver find the optimal solution for your problem.
 - When the solver has finished processing, it will display the Solver Results dialog window, where you select keep the solver solution and click on OK.
 - The solver Results window will close and the solution will appear on the worksheet

Practical:



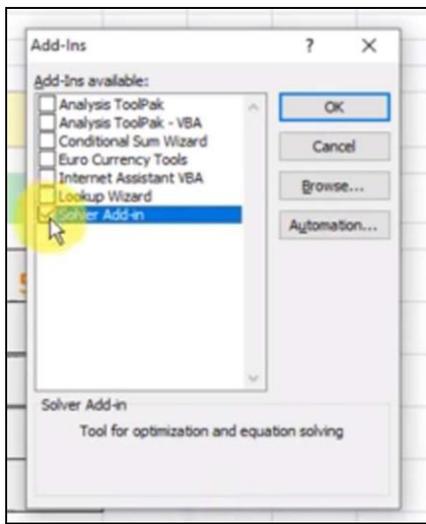
	A	B	C
5			
6		SOLVER ANALYSIS TOOL	
7			
8		NEW SERVICE ANALYSIS	
9			
10		Cost of new equipment	50000
11		Projected Clients per month	50
12		cost per service	1
13			
14		No. of months to pay for equipment	

By default Solver option is not available in excel, so do the following procedure



Click on GO button

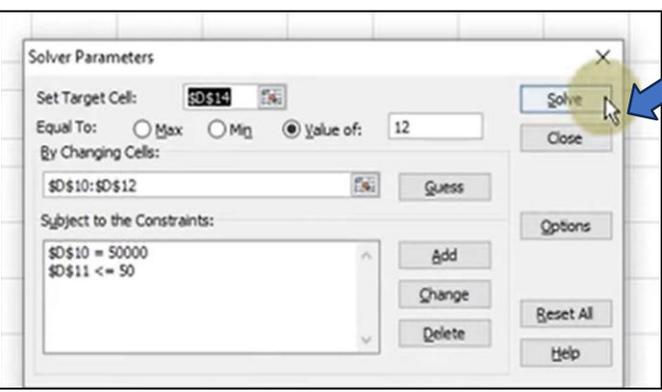
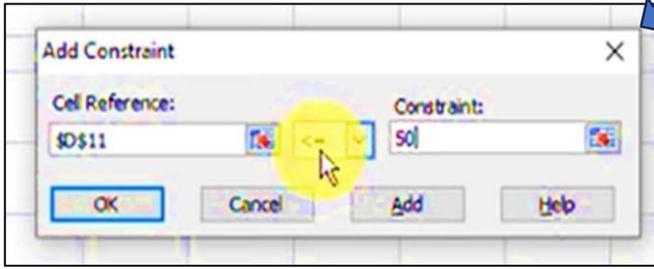
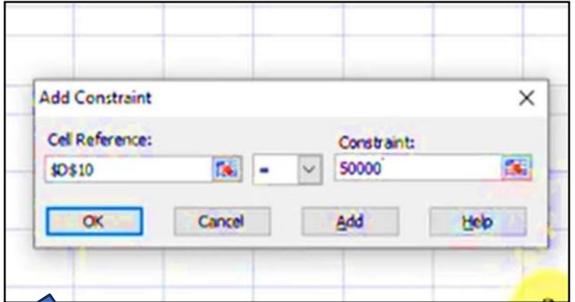
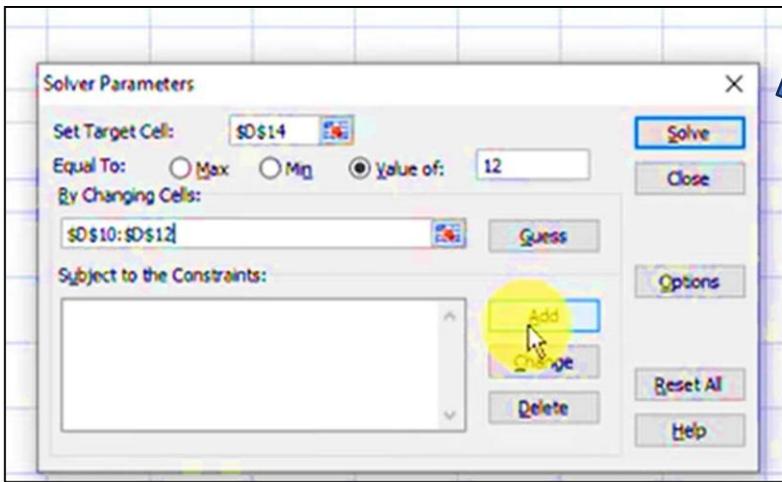
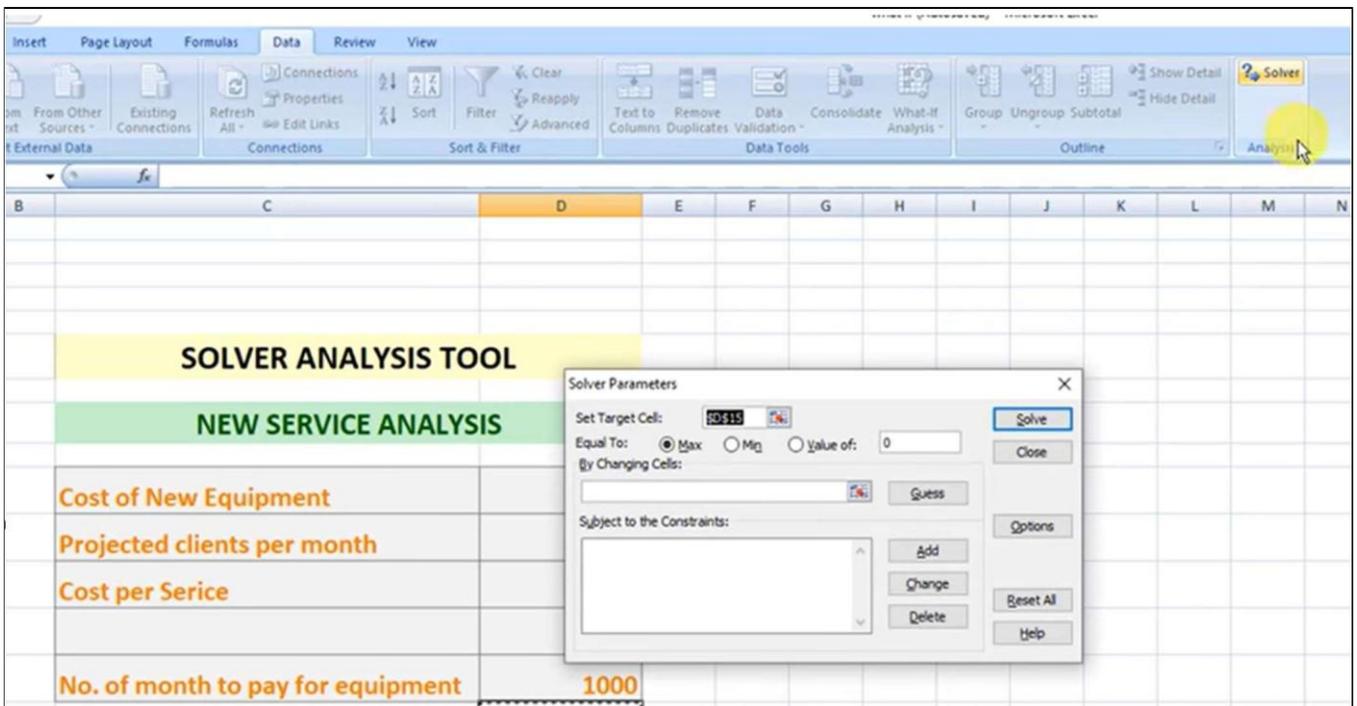
Then Solver is gets added in excel



Then insert formula as follows

	A	B	C	D
5				
6		SOLVER ANALYSIS TOOL		
7				
8		NEW SERVICE ANALYSIS		
9				
10		Cost of new equipment	50000	
11		Projected Clients per month	50	
12		cost per service	1	
13				
14		No. of months to pay for equipment	=C10/(C11*C12)	
15				

	A	B	C
5			
6		SOLVER ANALYSIS TOOL	
7			
8		NEW SERVICE ANALYSIS	
9			
10		Cost of new equipment	50000
11		Projected Clients per month	50
12		cost per service	1
13			
14		No. of months to pay for equipment	1000
15			



Click on Solve button, we get as follows,

SOLVER ANALYSIS TOOL	
NEW SERVICE ANALYSIS	
Cost of New Equipment	50000
Projected clients per month	50
Cost per Service	83.33333704
No. of month to pay for equipment	11.99999947

Finally click on OK button.

Assessment:

Abstract Chapter :

1. Consolidating Data
2. Creating Subtotal
3. What-If Analysis (In Data Tab)
 - i. Scenario Manager
 - ii. Goal Seek
 - iii. Data Table
 - iv. Solver (it is not in Data Tab, for this use Addin)

A. Select the correct option.

1. It collates the data from different ranges and places it in a worksheet.

a. Consolidate ✓

b. Combining

c. Subtotals

2. It generates a subtotal to summarise the data.

a. Define range

b. Total

c. Subtotals ✓

3. Which tab holds the 'What-If Analysis' option?

a. Analysis

b. Data tools ✓

c. Developer

Q[B] Fill in the blanks:

(1) A Scenario is a that you enter in a worksheet to perform calculations.

Ans: Set of Values

(2) It is good practice to use data while applying the subtotal command to it.

Ans: Sorted

(3) Thetools displays the result of applying formula to list of alternative values for variables.

Ans: Data Table

(4)..... can process only one input value at a time.

Ans: Goal Seek

(5)..... deals with equations with multiple unknown variables.

Ans: Solver

C. Answer the following questions:

1. What is data consolidation?

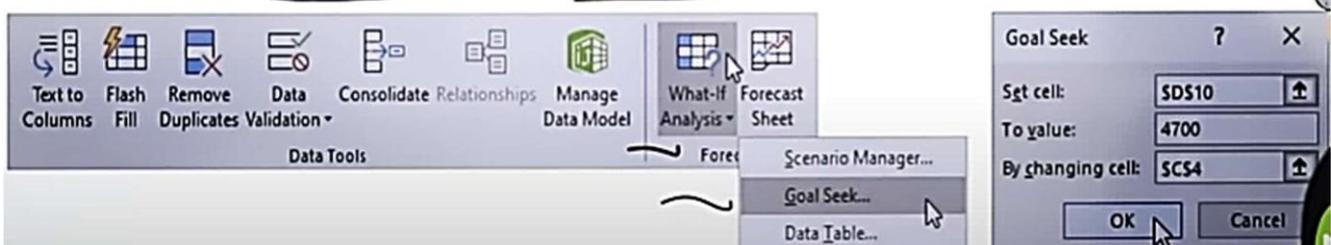
Ans: Data Consolidation allows you to gather together your data from separate worksheets into a master worksheet. In other words, the Data Consolidation function takes data from a series of worksheets or workbooks and summaries it into a single worksheet that you can update easily.

2. Explain the use of scenarios.

Ans: In simple terms, you can see the impact of changing input values without changing the actual data. Scenario Manager in Excel allows you to change or substitute input values for multiple cells (maximum up to 32). Therefore, you can view the results of different input values or different scenarios at the same time.

3. What is Goal seek ?

Ans: The Goal Seek feature in Excel 2010 is a what-if analysis tool that enables you to find the input values needed to achieve a goal or objective. Goal seek is an advanced spreadsheet feature that allows to provides the values for the target based input. Just decide the target value and you can select which cell should be changed in goal seek dialog box.



4. What is the basic difference between 'Scenario Manager' and 'Data Table' tools?

Ans:

Scenario Manager	Data Table
i) It has multiple variables. ✓	Works with only one or two variables.
ii) It can only accommodate up to 32 values.	It can accept many different values for those variables.

Chapter - 7

Linking Data and Spreadsheets

Introduction:

- Linking spreadsheet data enables you to keep the information updated without editing in multiple locations, every time data changes.
- The ability to create links eliminates the need of having identical data entered and updated in multiple sheets. This saves time, reduce errors, and improves data integrity.
- It is a quick way to get the data from one worksheet to another by using the 'copy and paste' method.

Hyperlinks

Settings up multiple sheets

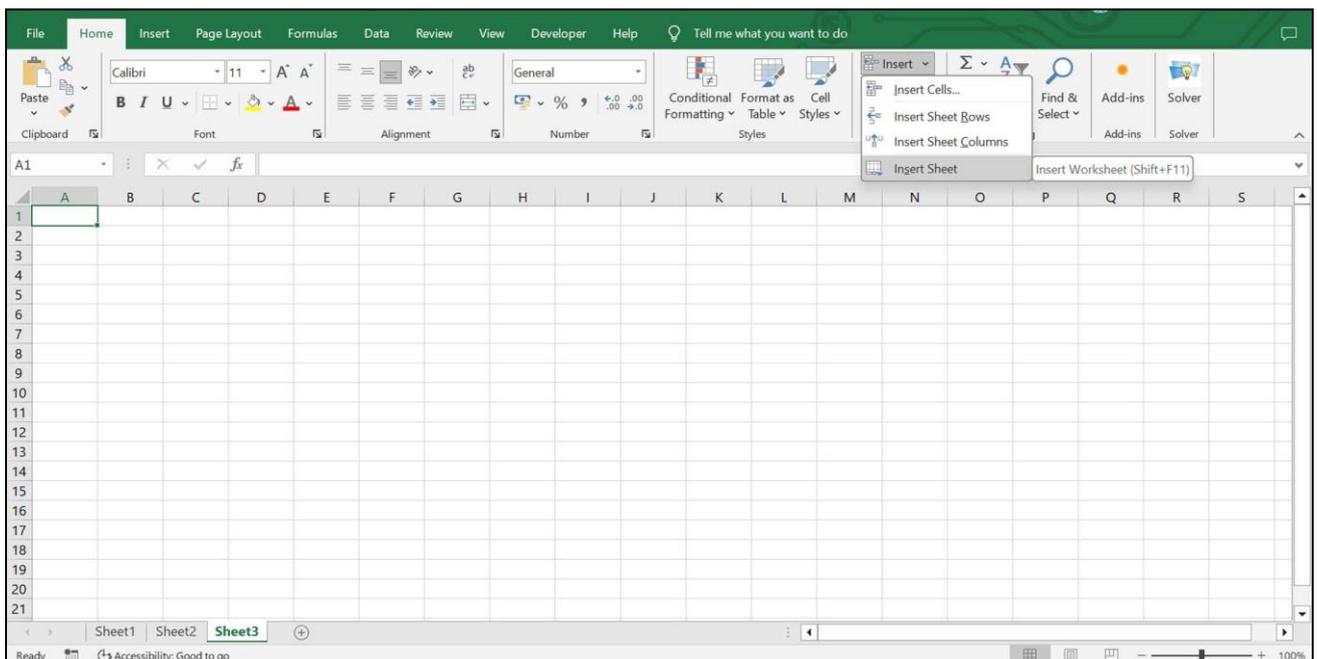
When you launch Excel on your computer, it opens a worksheet, button beside the sheet tabs,

Insert Worksheet

- Choose home > insert > insert sheet from the menu bar.
- Or press Shift + F11. This inserts a new sheet in the current workbook.

* or **right click** on the **Sheet tab**, select **Insert option**, select **worksheet option**, finally select **OK** button. Then new sheet will be insert.

* Or Click on + sign present just after the sheet tabs.



Rename Worksheet

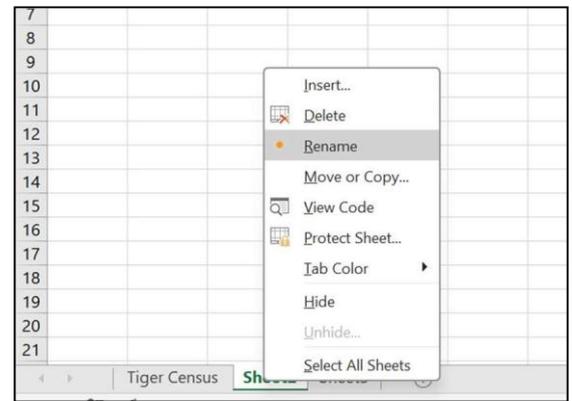
For this, set up two worksheets by following the given steps:

- Open a workbook. Double-click on the sheet1 tab to rename it as 'Tiger census'.
- Enter the data.
- Now, rename sheet 2 as 'Total Number of Tiger'.
- Enter the data.

or

Right click

on the sheet tab which we want to rename



Creating reference to other workbooks

- Sometime, you may be required to link the contents of the cell among the different sheets of the same workbook.
- However, you need to add one more step to indicate which workbook the worksheet is in.
- So, you need to link the data of workbook 1 and workbook 2 to workbook 3.



- The following syntax is used to enter the reference in a cell to link cells of different workbook: '[workbook name] worksheet name'! Celladdress.
- The syntax consists of three parts - workbook name, worksheet name and cell address.

Creating reference to other worksheets:

Following are the two ways to refer to the cells of the other sheets:

- Using a keyboard
- Using a mouse

Using a keyboard:

Using a keyboard

In this method you need to type the reference manually, to create a reference using the keyboard, follow the given steps:

- Open the worksheet in which you want to create reference. For example, open sheet2 (Total number of tigers) and click on cell B3.
- To get the total number of tigers in the uttarakhand state. Type formula =Sum('Tiger census' IB4:D4) in cell b3 and press the enter key .

Data in Sheet1 renamed as Tiger Census

Tiger Census_Statewise			
	Number of Tigers		
States	2010	2014	2018
Uttrakhand	227	30	442
Uttar Pradesh	118	117	173
Madhya Pradesh	257	308	526
Maharashtra	168	190	312
Rajasthan	36	45	69
Karnataka	300	406	524
Tamil Nadu	163	229	264

Data in Sheet2 renamed as Number of Tigers

Tiger Census_Statewise	
States	Number of Tigers
Uttrakhand	
Uttar Pradesh	
Madhya Pradesh	
Maharashtra	
Rajasthan	
Karnataka	
Tamil Nadu	

Tiger Census_Statewise		
States	Number of Tigers	
Uttrakhand	=SUM('TigerCensus'!B4:D4)	
Uttar Pradesh		
Madhya Pradesh		
Maharashtra		
Rajasthan		
Karnataka		
Tamil Nadu		

Tiger Census_Statewise	
States	Number of Tigers
Uttrakhand	699
Uttar Pradesh	
Madhya Pradesh	
Maharashtra	
Rajasthan	
Karnataka	
Tamil Nadu	

Using a mouse:

To create reference using mouse/ folle the given steps:

- Open the workbook that has both the worksheets. For example , sheet1 (tiger census) and sheet2 (total number of tigers).
- Open the sheet in which the link is to be create for example, select sheet2 (total number of tigers).
- Click on cell B3 to enter formula.
- Type =sum (in cell b3)
- With the opening parentheses, switch to sheet1 (tiger census) and select the cell range that you wish to sum up.
- For example select the cell range B4:D4 to get the tiger count of the uttarakhand state.

Creating reference to other workbooks

- Sometime, you may be required to link the contents of the cell among the different sheets of the same workbook.
- However, you need to add one more step to indicate which workbook the worksheet is in.
- So, you need to link the data of workbook 1 and workbook 2 to workbook 3.
- The following syntax is used to enter the reference in a cell to link cells of different workbook:
 - **'[workbook name] worksheet name'! Celladdress.**
- The syntax consists of three parts - workbook name, worksheet name and cell address.

Lets us link the cell B2 of workbook 1 and workbook 2 to the cell B2 workbook 3 . To get the total amount of FDs.

Following are the two ways to link the contents of cells in different workbooks:

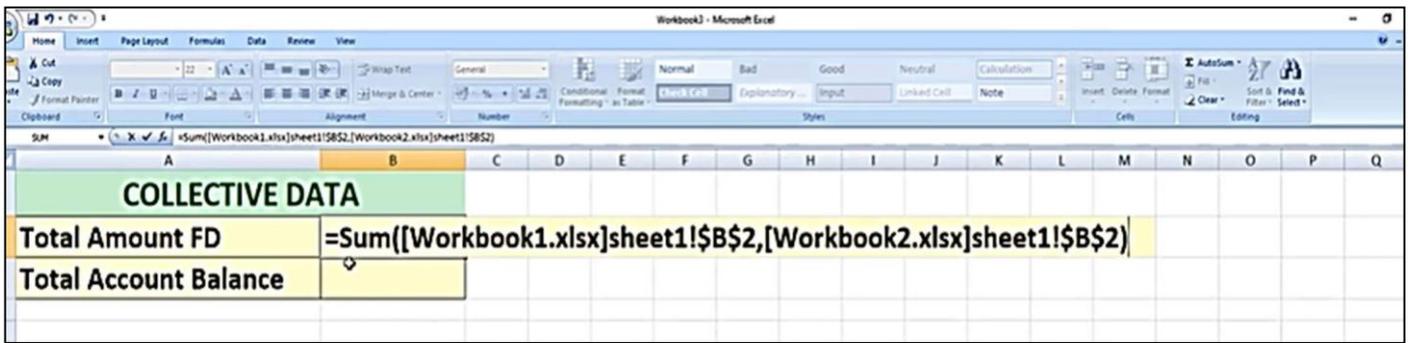
- Using a keyboard
- Using a mouse

Using a keyboard:

Info

To create reference between sheets of different work using a keyboard, follow the given steps:

- Open workbook 3. Click on the cell B2 and type the following reference.
- **=sum('[workbook 1]sheet1'!\$B\$2,'[workbook 2]Sheet1'!\$B\$2)**
- Press the enter key to get the result.



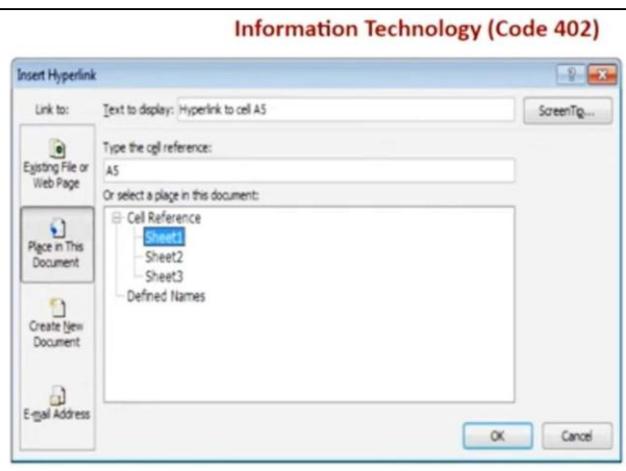
Using a mouse

To reference sheets of different workbook using a mouse, follow the given steps:

- Open all the workbooks - workbook 1, workbook 2 and workbook 3.
- Make sure you are on workbook 3, sheet1 in which the link is to be created.
- Click on cell B2 where the formula is to be entered and type =sum(‘.
- Switch to workbook 1, sheet1 and click on cell B2 to select it.
- Come back to workbook 3, sheet1 and type ‘,’.
- Then, go to workbook 2, sheet1 and click on cell B2 to select it.
- Come back to workbook 3, sheet1 and type ‘)’. Observe the formula.
- Press the enter key. Observe the calculated value.

Hyperlinks

- Excel enables you to create hyperlink for many different purposes, including:
- Hyperlink to the sheet - going to a certain location within the current workbook.
- Linking with the external data - opening another document or getting to a specific place in that document, or navigating to a web-page on the internet.



Inserting a hyperlink

To insert a hyperlink in a spreadsheet, follow the given steps:

- ❖ Click on the cell where you want to insert a hyperlink. Or select the cell that you want to put as a hyperlink.
 - ❖ Choose insert> hyperlink.
 - ❖ The insert hyperlink dialog box appear.
 - ❖ Select the place in this document category in the dialog box.
 - ❖ Choose the following options to create a hyperlink at a particular place in the current workbook :
- ❖ In the text to display textbox, type the text is to be displayed as the linked text. This is an optional field, by default, excel displays the cell address.
 - ❖ In the type the cell reference textbox enter the reference(s) of the cell(s) to be linked.
 - ❖ In the or select a place in the document section, choose from the list of sheets or defined names to select the area to be linked.
 - ❖ Click on OK to insert the link.

Type the data in Sheet1 as follows

	A	B	C	D	E	F	G	H	I	J
1	HYPERLINK IN EXCEL									
2										
3	Product Price	50								
4	Quantity	1000								
5	Total Amount	50000								

Select Sheet2, and keep the cell pointer in a cell, where you want give hyperlink, (in that cell you can write any thing, for example here we wrote Address.

Select **Insert** tab, then click on **Hyperlink** icon,

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2													
3													
4													
5			Amount										
6													
7													

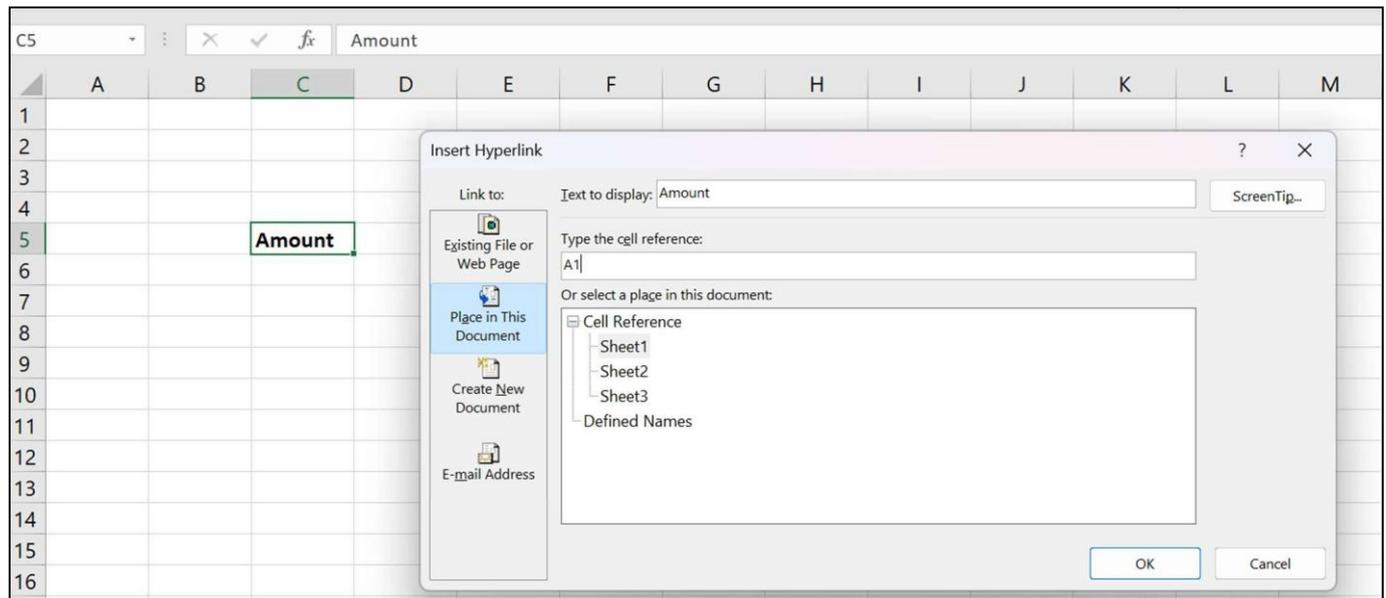
Then displays a **Insert Hyperlink dialog box**,

In **Text to display** a word **Amount** is automatically selected, In

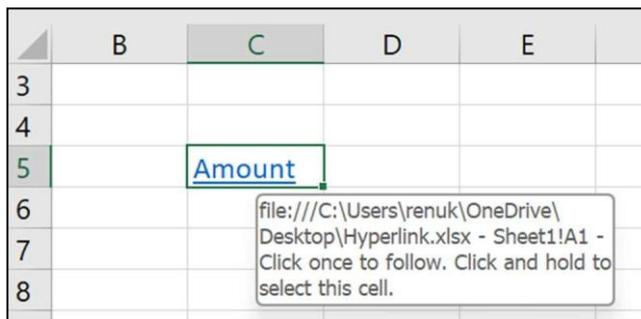
Type the cell reference **A1** is automatically selected.

In **Cell Reference** select **Sheet1** because we want create hyperlink to **Sheet1**

Select **OK** button.



Then, **Amount** word colour changes to **Blue** with underline.



Then, click on word **Amount**, then we automatically jumped to cell **A1** of **Sheet1**.

The screenshot shows the Excel spreadsheet with cell C5 containing the word 'Amount'. The word is blue and underlined. A tooltip is visible over the word, displaying the file path: 'file:///C:/Users/reduk/OneDrive/Desktop/Hyperlink.xlsx - Sheet1!A1 - Click once to follow. Click and hold to select this cell.'

Relative hyperlink

- A relative hyperlink contains a partial address, which is to the address of the destination file. For example, you have saved a workbook ABC.xlsx and an image file capture.jpg in drive. To create a relative hyperlink of the image file to the workbook, the relative path will be /capture.jpg.
- Relative linking is only possible when both the source and destination file are on the same drive or location. However, a relative link will break if any of the files (source or destination) is moved from its location.

Absolute hyperlink

An absolute hyperlink is a hyperlink that contains the full address of the destination file or webpage. The following are examples of absolute hyperlink:

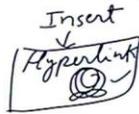
<https://kips.in/index.php/books>

C:/Users/KIPS/Documents

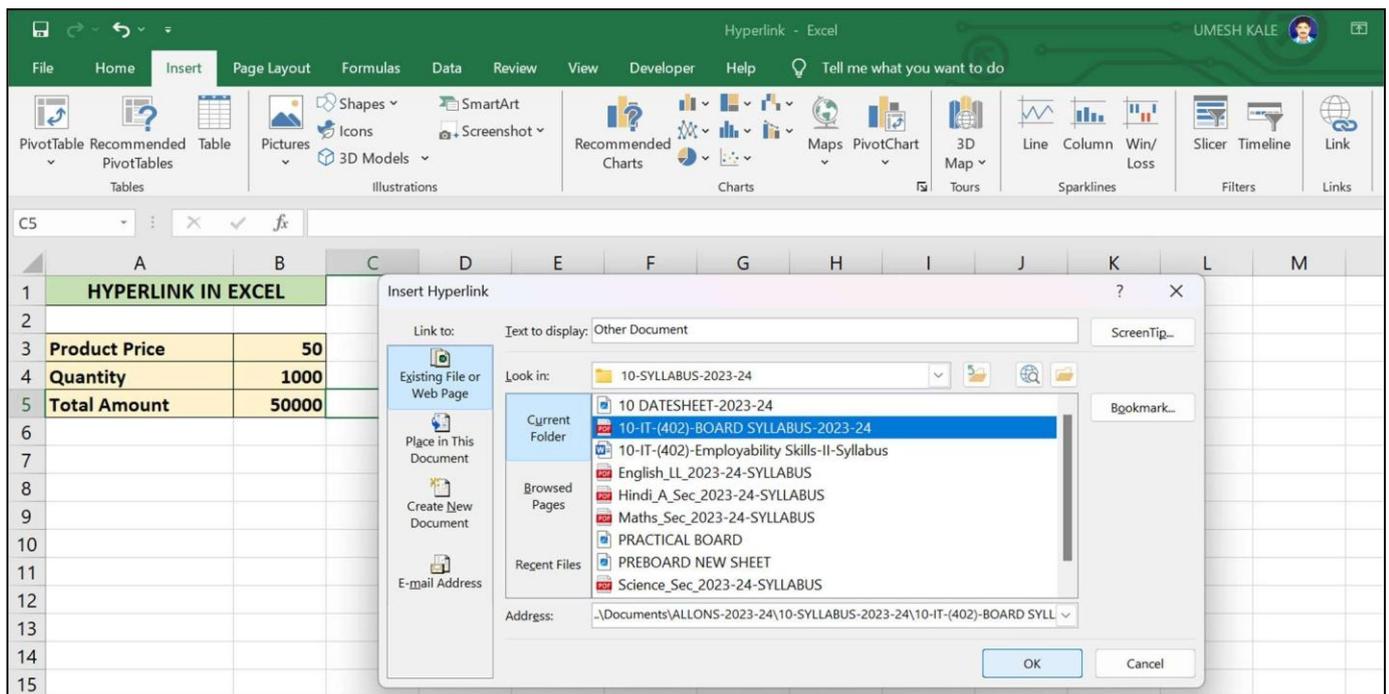
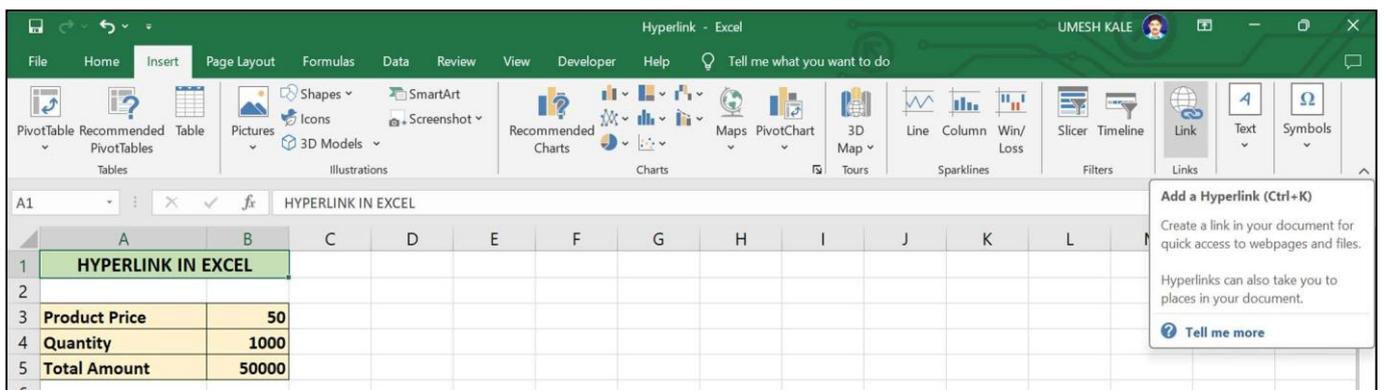
Linking to external data

To link a spreadsheet with an external file, web page, document or e-mail address, choose the following options in the insert hyperlink dialog box:

- ❖ Inserting Link of a cell from worksheet,
- ❖ Existing file or web page
- ❖ Create new document
- ❖ E-mail address

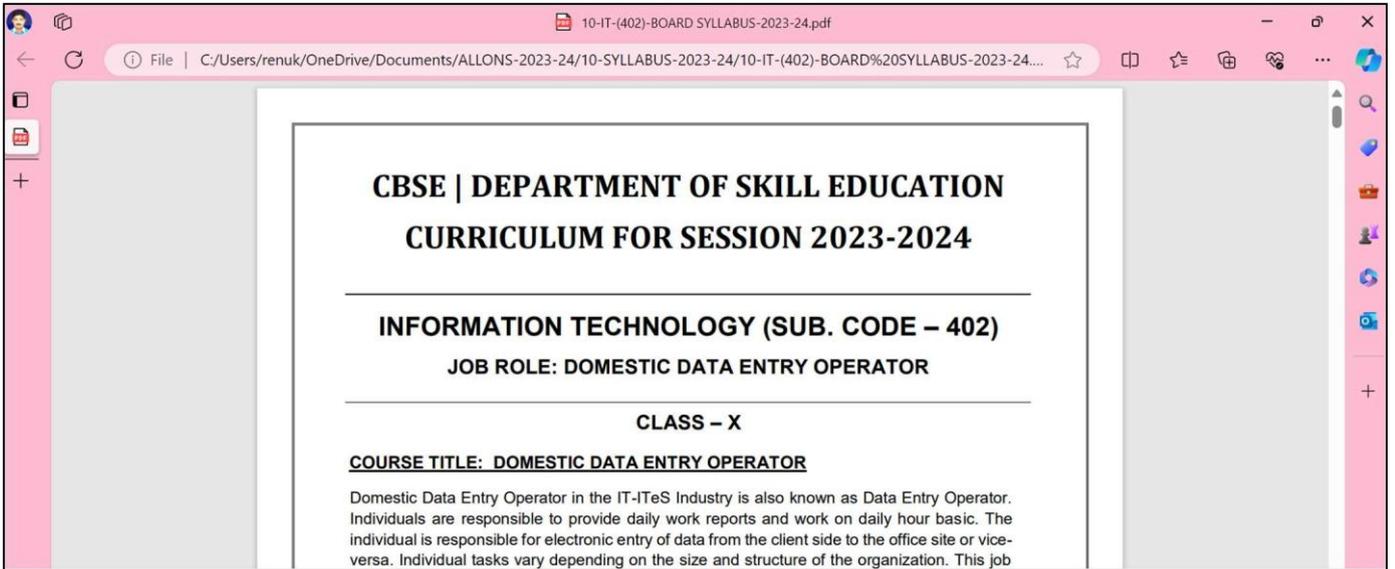


- ❖ **Existing file or web page:** It enables you to create a hyperlink to access a web address, normally starting with http://.
- ❖ Enter the required web address (URL) in the address section to link.
- ❖ Click on OK to insert the link.



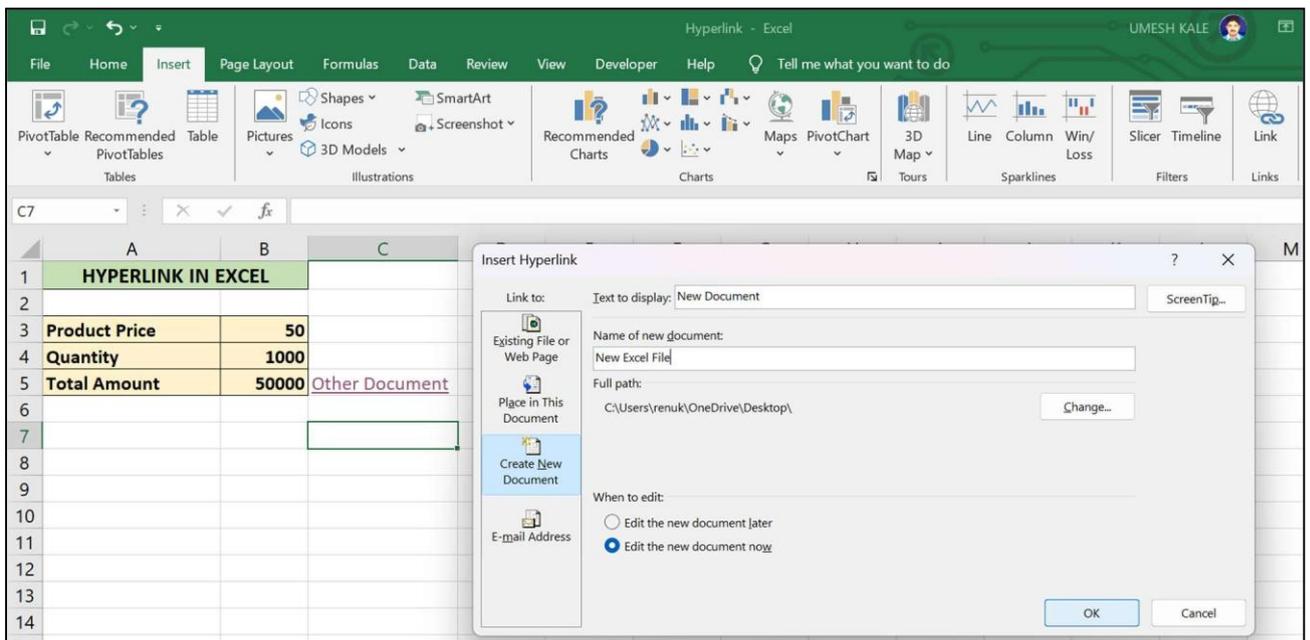
	A	B	C	D	E
1	HYPERLINK IN EXCEL				
2					
3	Product Price	50			
4	Quantity	1000			
5	Total Amount	50000	Other Document		
6					
7					
8					
9					

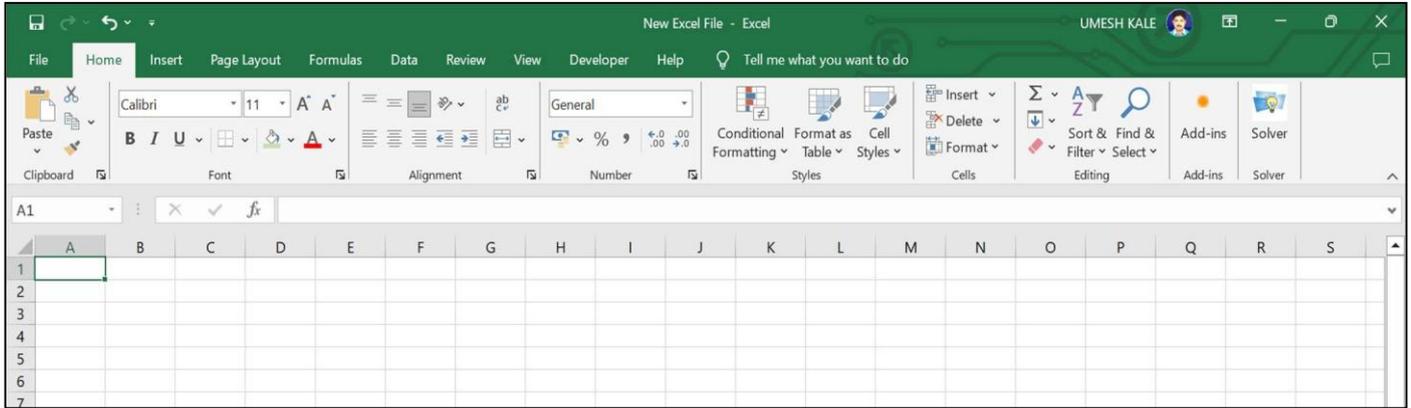
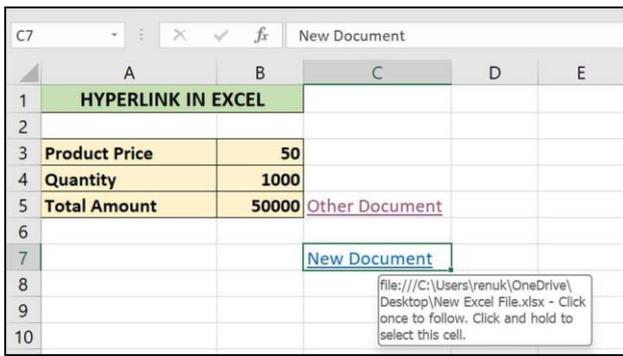
file:///C:/Users/re nuk/OneDrive/Documents/ALLONS-2023-24/10-SYLLABUS-2023-24/10-IT-(402)-BOARD SYLLABUS-2023-24.pdf - Click once to follow. Click and hold to select this cell.



Linking to external data

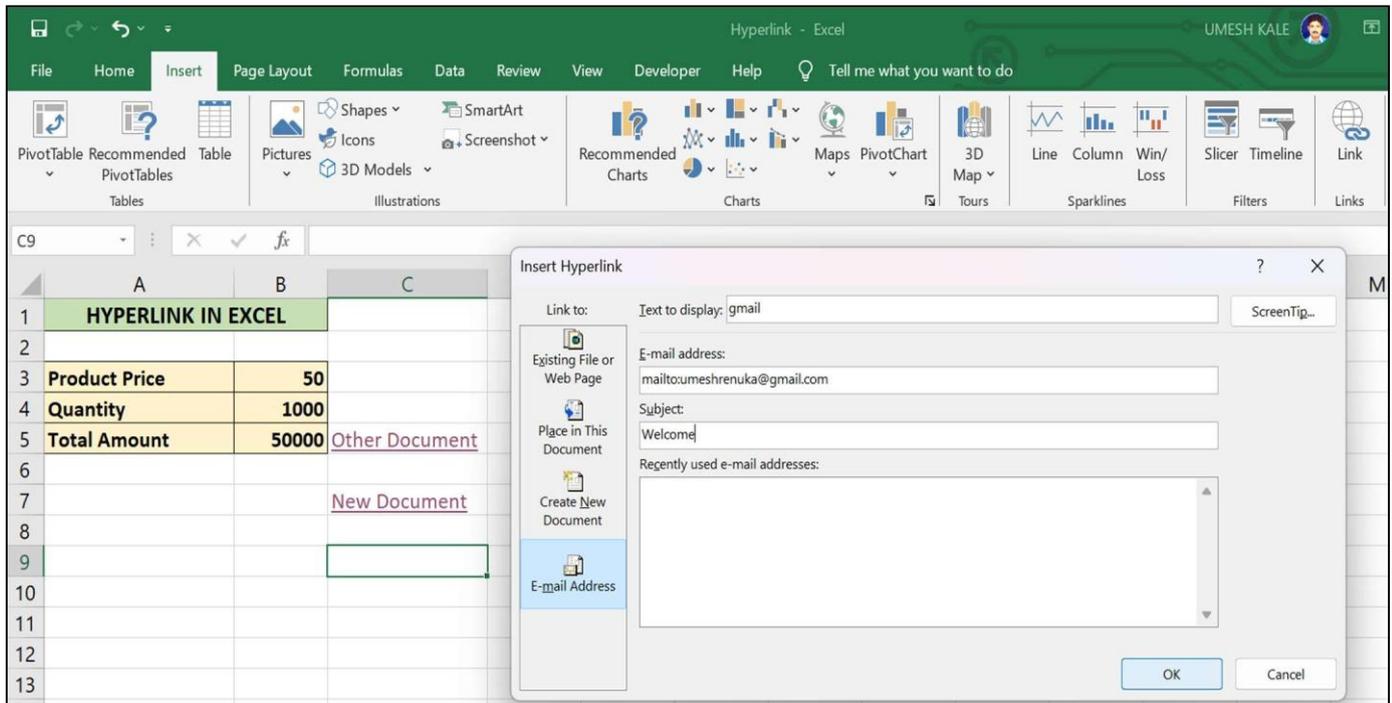
- [i] **Create new document:** It creates a hyperlink to create a new document.
- [ii] In the text to display textbox, specify the text to be displayed as a link.
- [iii] Specify the name for the new workbook, in the name document section.
- [iv] You can also choose whether the document is to be edited now or later by choosing the respective radio buttons.
- [v] Click on **OK** button to insert the link.



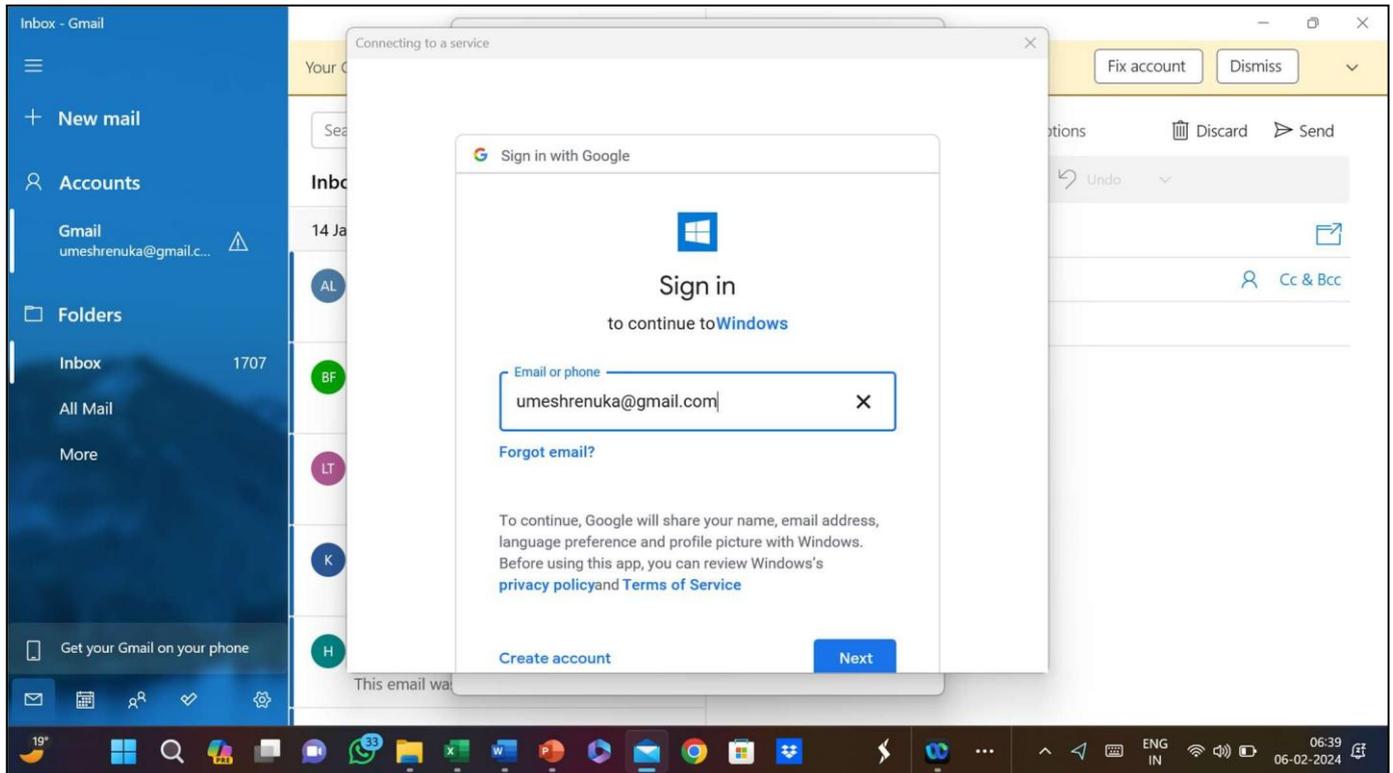


Linking to external data:

- ❖ **E-mail address:** it creates a link to send an email message, specify the following in the dialog box.
- ❖ In the text to display section, specify the text to be displayed as the link. By default, It takes the entered email address,
- ❖ In the e-mail address section of the mail in the subject textbox,
- ❖ Click on OK to insert the e-mail link.



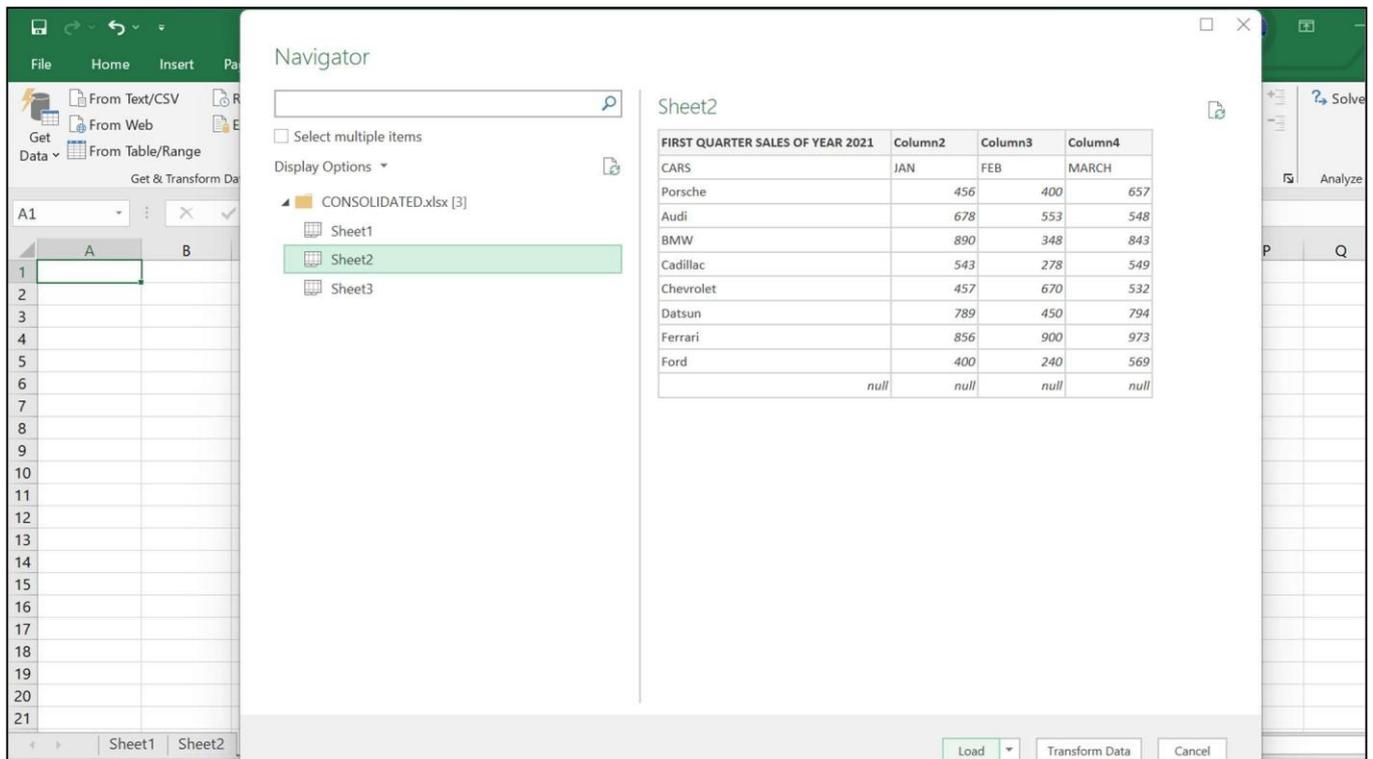
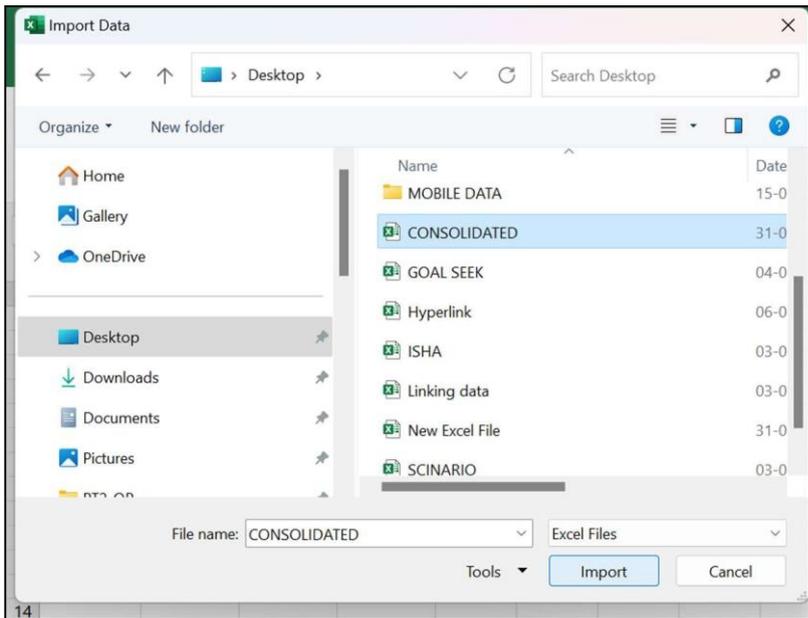
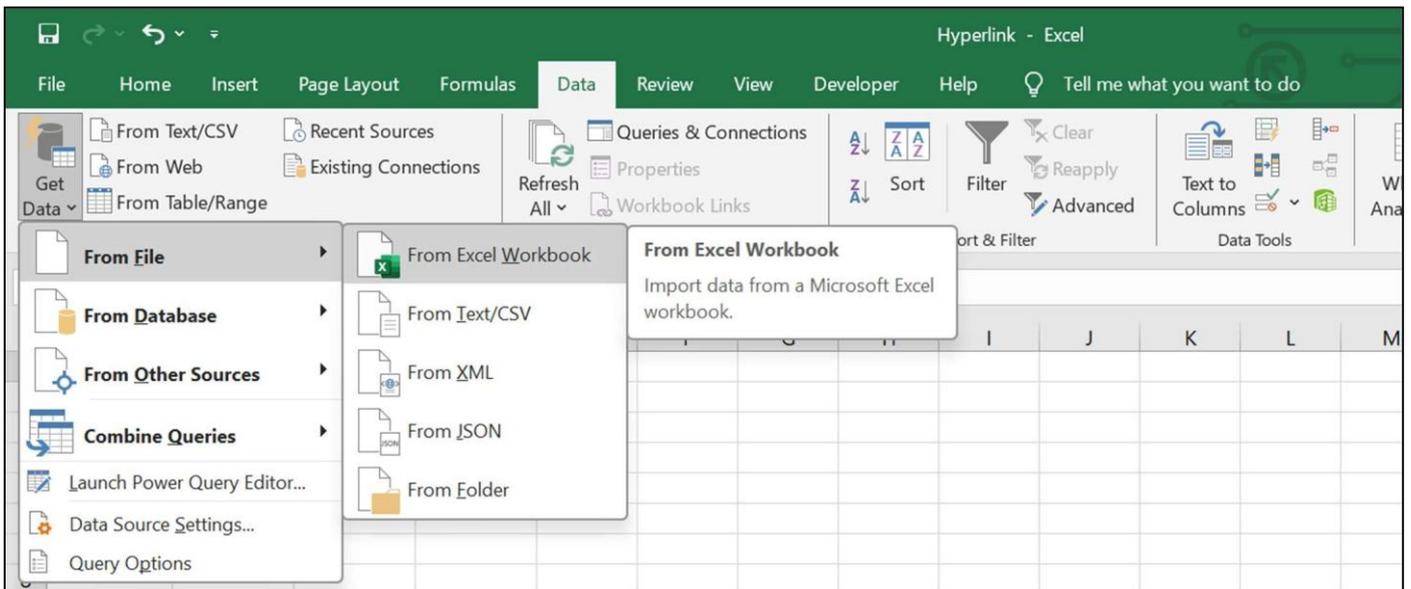
	A	B	C	D	E
1	HYPERLINK IN EXCEL				
2					
3	Product Price	50			
4	Quantity	1000			
5	Total Amount	50000	Other Document		
6					
7			New Document		
8					
9			gmail		
10					
11					
12					

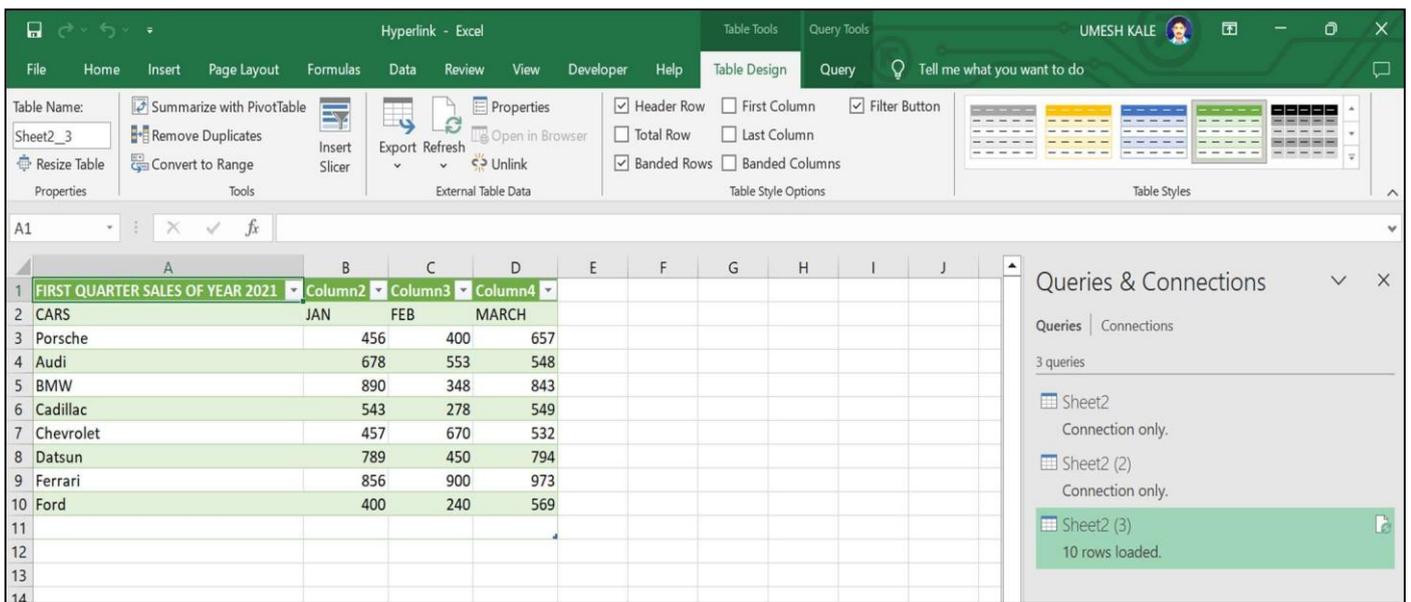


Importing data from external data sources:

In excel, you can insert data in a spreadsheet from different external sources, such as from Ms access, web, text other source (sql server and XML data import). When you import data, you make a permanent connection that can be refreshed, whenever required.

- ❖ Open the excel worksheet in which data is to be inserted from an external source.
- ❖ Open the data tab and choose the from access option from the get external data group.
- ❖ The select data source dialog box opens choose a database file and click on open.
- ❖ The select table dialog box open, Choose the desired table.
- ❖ The import data dialog box opens.
- ❖ Choose the table option to view data in a tabular format also, choose whether you want to put the data in the existing worksheet or in a new worksheet. Click on OK
- ❖ The access is displayed in the worksheet.
- ❖ The data can be searched and sorted using the filters displayed along with the fields.
- ❖ The data can be formatted using the various option available in the design tab.





Assessment:

A. Select the correct option.

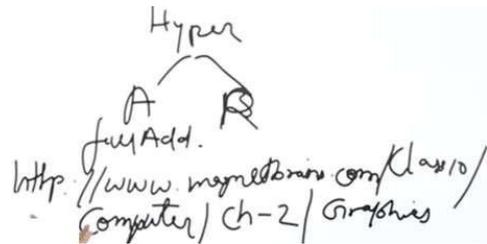
1. In the formula =sum ('records of students'! B4:D4), 'record of students' is a :

- a) Sheet name
- b) Range
- c) Database

Ans: a) Sheet name

2. Which of the following is relative hyperlink ?

- a) <https://www.google.com>
- b) /picture.jpg ✓
- c) ///picture.jpg



3. The 'hyperlink' option is available in thetab

- a) Insert ✓
- b) view
- c) data

4. It opens the select data source dialog box.

- a) Insert ✗
- b) Data > from access ✓
- c) Data > consolidate ✗

5. What is the keyboard shortcut to insert hyperlink in your worksheet ?

- a) Ctrl+h — find/Refere
- b) Ctrl+l — Italic
- c) Ctrl+k — Insert hyperlink

Linking Data & Spreadsheet

1. Insert worksheet
2. Rename
3. Linking/Cell Referencing
4. Hyperlinks ✓
5. Import data source

B. Fill in the blanks.

1. Linking spreadsheet data enables you to keep information **updated** without editing multiple locations every time the data changes.
2. To insert a new worksheet, click on the **Home** tab and select the **Insert Sheet** option.
3. You need to type **Reference** manually, if you entering it using the keyboard.
4. A **Hyperlink** is a coloured and underline text or graphic.
5. A **Relative Hyperlink** is a partial address.

C. Answer the following questions.

1. Why do you link the spreadsheets data ?

Ans: Creating links, or external cell references, can eliminate having the same data maintained in multiple sheets. This saves time, reduces errors, and improves data integrity. A Sales Manager can have a detailed sheet for each employee, and a summary sheet to compare performance.

2. How do you insert a new sheet in a workbook ?

Ans: To insert a new worksheet in front of an existing worksheet, select that worksheet and then, on the Home tab, in the Cells group, click Insert, and then click Insert Sheet.

Tip: You can also right-click the tab of an existing worksheet, and then click Insert.

3. Differentiate between the absolute and relative hyperlinks.

Ans:	Absolute URL	Relative URLs
	i) Contains <u>more information</u>	Contains <u>less information</u>
	ii) <u>More convenient to use</u>	Less convenient
	iii) It contains <u>the full address of the destination file or webpage</u>	It contains partial address
	iv) Eg- https://kips.in/index.php/books	Eg- /capture.jpg

4. How can you import the data from external data source in excel? Explain.

Ans:

- Step 1 – Click the DATA tab on the Ribbon.
- Step 2 – Click Existing Connections in the Get External Data group. The Existing Connections dialog box appears.
- Step 3 – Select the connection from where you want to import data and click Open.

Chapter-08

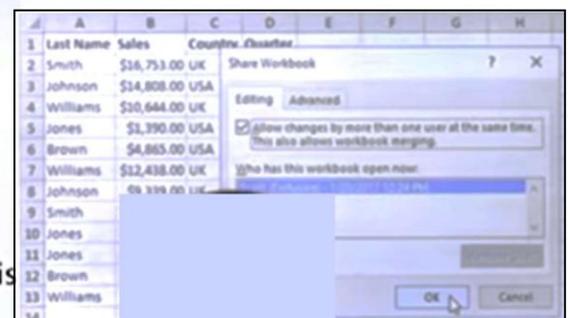
Sharing & Reviewing a Spreadsheet

Introduction:

- When you collaborate with the other, you may be required to work on the same spreadsheet.
- However , if you work on separate copies of the spreadsheet, you will create multiple version of the same spreadsheet.
- Hence, it will be difficult to keep a track of the changes made by the collaborators and further compile that data.
- Excel offers the sharing feature using which you can give access to the others users to work on the same spreadsheet at the same time.
- It saves the trouble of keeping track of multiple version of the same spreadsheet.
- This simultaneous editing and real-time commenting with the others gives you a feeling as if you are sitting across the table with each if you are miles apart.
- The workbook can be saved in a network location where others can easily access.
- It you can keep a track of the changes that the other people make, and accept or reject those changes.
- This chapter covers how to share spreadsheet, edit and review shared spreadsheet, merge and compare them,

Opening and saving a shared spreadsheet:

1. After sharing the worksheet, you and the other users can open it and make changes in it at the same time.
2. When you open a shared spreadsheet, a message appears, stating that the spreadsheet is in the shared mode and some features are not available in this mode.
3. After making changes in the share workbook, you need to save the file if you want to update the changes. To save a file, click on file > save.



Review
↓
Share workbook
↓
myExcelshet (Shared)

Setting up a spreadsheet for sharing:

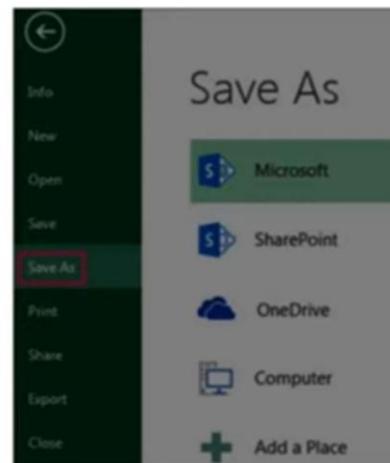
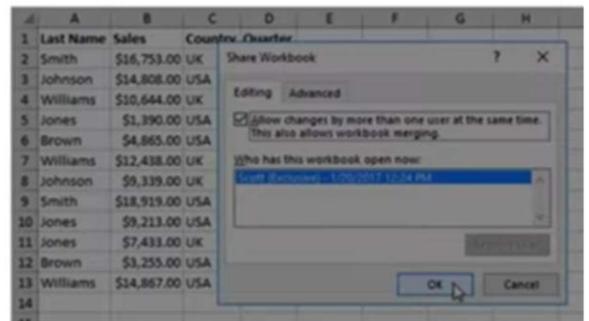
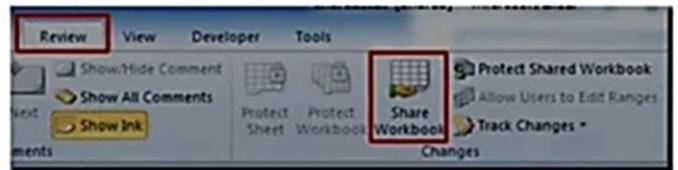
- When you share a worksheet, multiple users can work on it simultaneously.
- They can data, insert rows and columns, add and changes formulas, and also format the same spreadsheet.

Review
↓
Share workbook
↓
myExcelSheet (Shared)

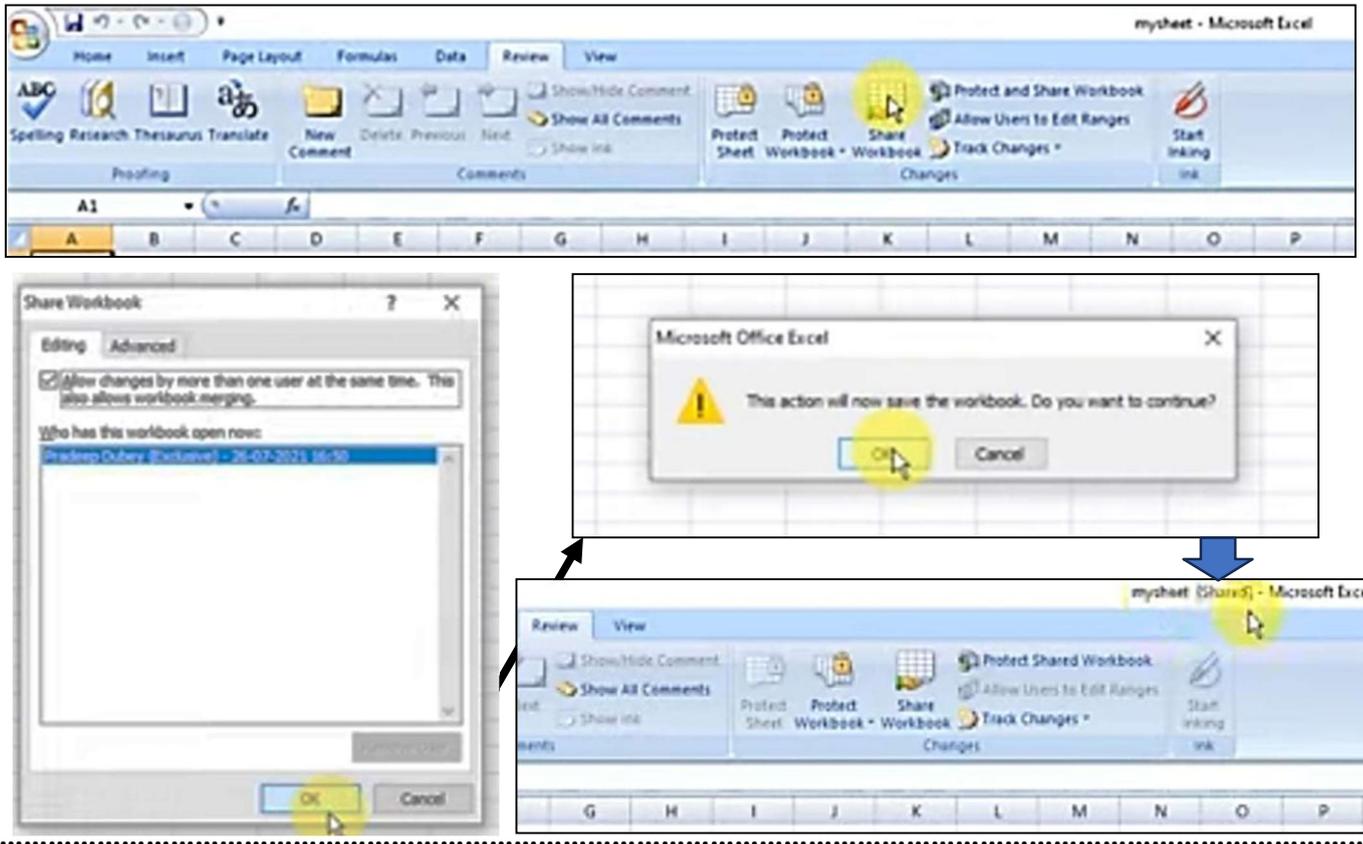
Setting up a spreadsheet for sharing:

To share a spreadsheet, follow the given steps:

- ❖ Start the Microsoft Excel 2010 application.
- ❖ Open the file you would like to share, create a new file.
- ❖ Save it in a network location, so that the others users can access easily.
- ❖ With the worksheet open, switch to the review tab.
- ❖ Click on the share workbook option in the changes group.
- ❖ The share workbook dialog box opens.
- ❖ Select the allow changes by more than one user at the same time. This also allows workbook merging checkbox to enable sharing.
- ❖ Click on ok. if you have already saved the spreadsheet, a message appears stating that the action will now save the workbook. Click on ok to continue.
- ❖ If the workbook has not been saved previously, the save as dialog box appears.
- ❖ After saving, the word [shared] is shown on the title bar along with the document's title.
- ❖ Now, all the users can work together on the same workbook.

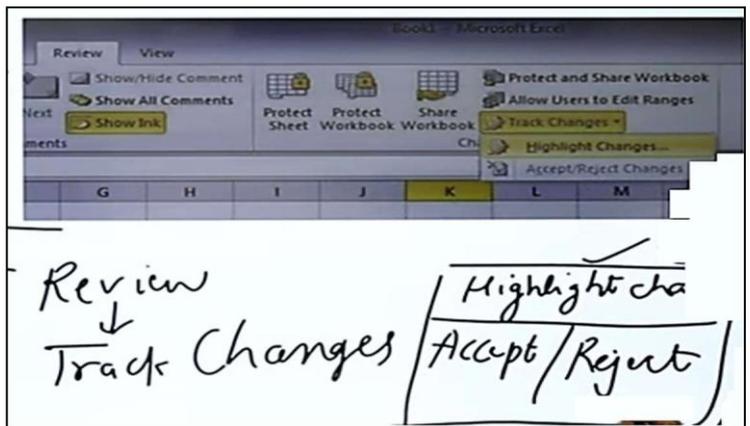


Practical of Setting up a spreadsheet for sharing:



Recording changes: ✓

- ❖ Somethings you may be required to record the changes done by you or other users in a spreadsheet to review later.
- ❖ The track changes feature in Excel is used for this purpose. It enables you to keep a track if the changes done by you or the other users in a spreadsheet.



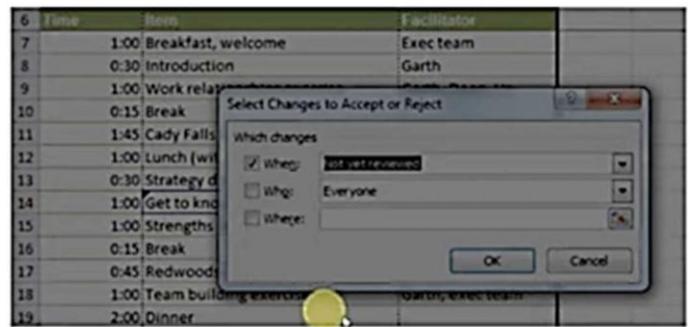
Recording changes:

- ❖ To record changes, follow the given steps:
- ❖ Open the spreadsheet in which you want to record the changes.
- ❖ Click on the review tab.
- ❖ Choose track changes > highlight changes to turn on the track changes.
- ❖ the highlight dialog box appears.

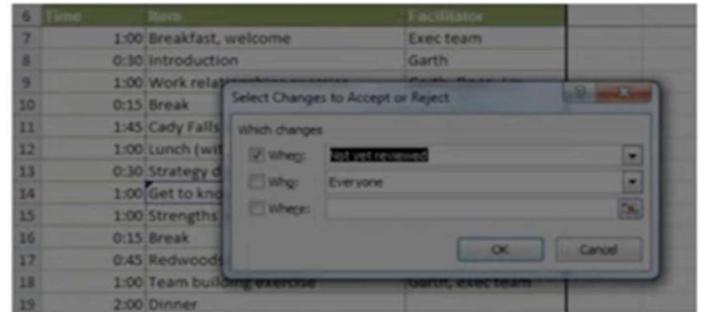
Information Technology (Code 402)



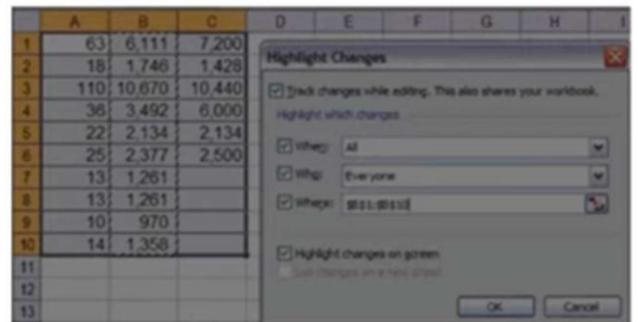
- ❖ Check the Track changes while editing checkbox. Enabling track changes also results in sharing the workbook.
- ❖ In the Highlight which changes section, choose: when to highlight the changes. By default, all the changes are highlighted.



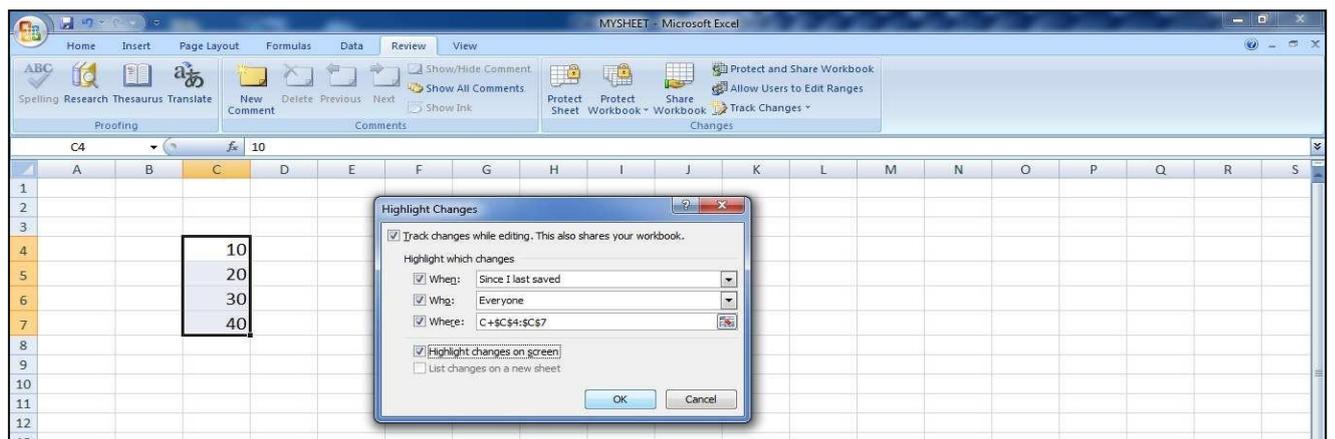
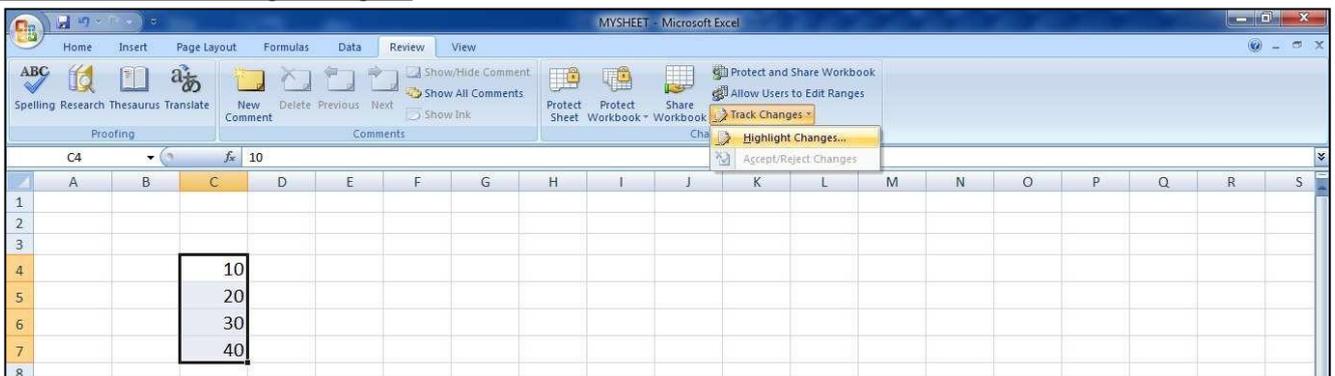
- ❖ When can highlight changes. By default, everyone can highlight the changes.
- ❖ Where to highlight the changes. By default, the changes made in the entire spreadsheet are highlighted.
- ❖ Click on ok. The file gets saved and shows a message window to continue the process.

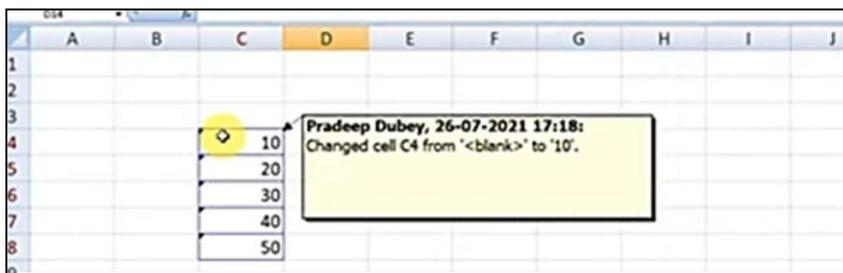


- ❖ Now make changes in the spreadsheet. The changes will be highlighted by a border around the cells with a dot on the upper-left corner of the cell.
- ❖ When you point at the dot, you can see more detailed information, such as the name of the author, date and time and type of change made in the help tip box.



Practical of Recording changes:





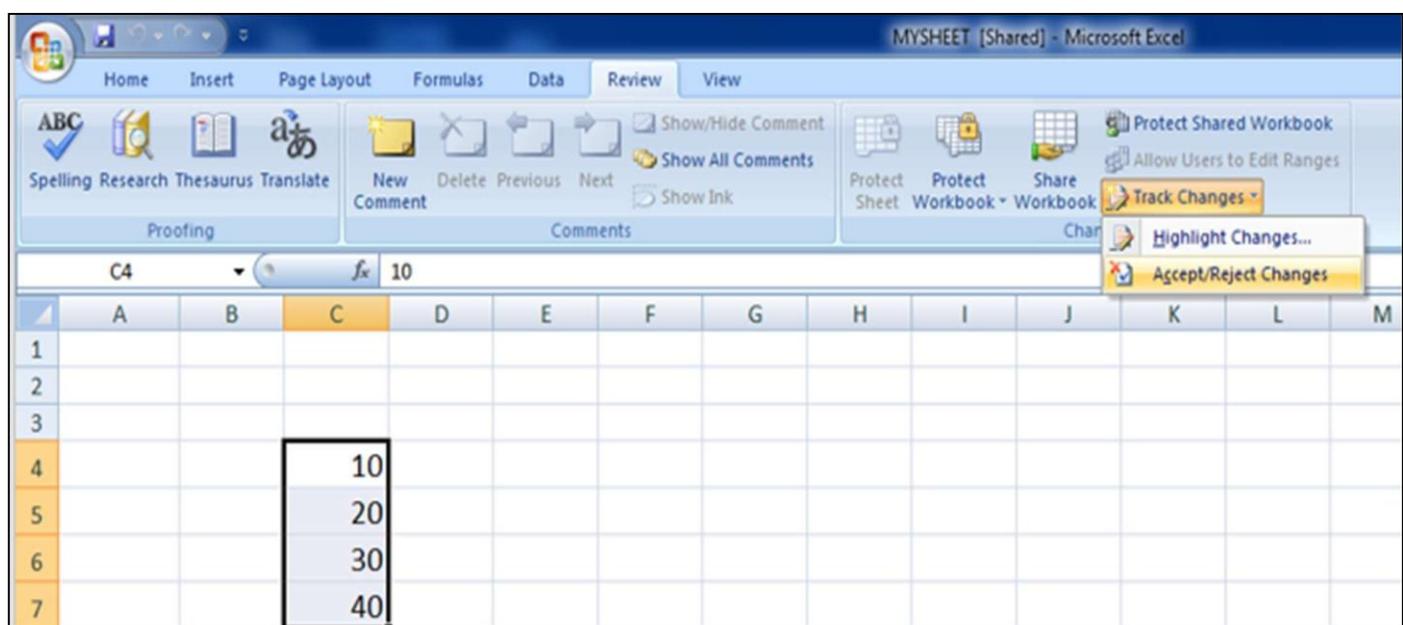
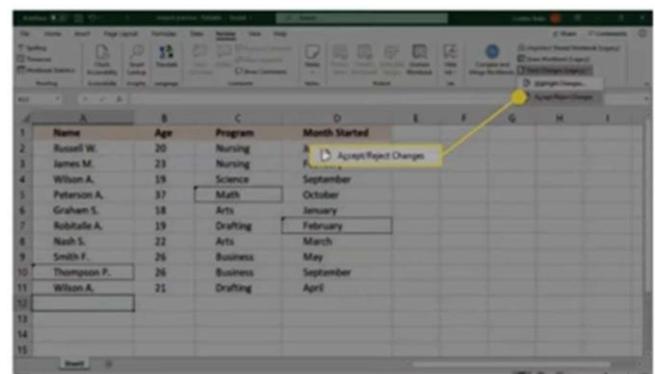
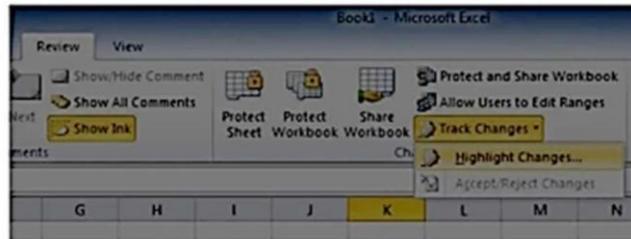
Reviewing changes:

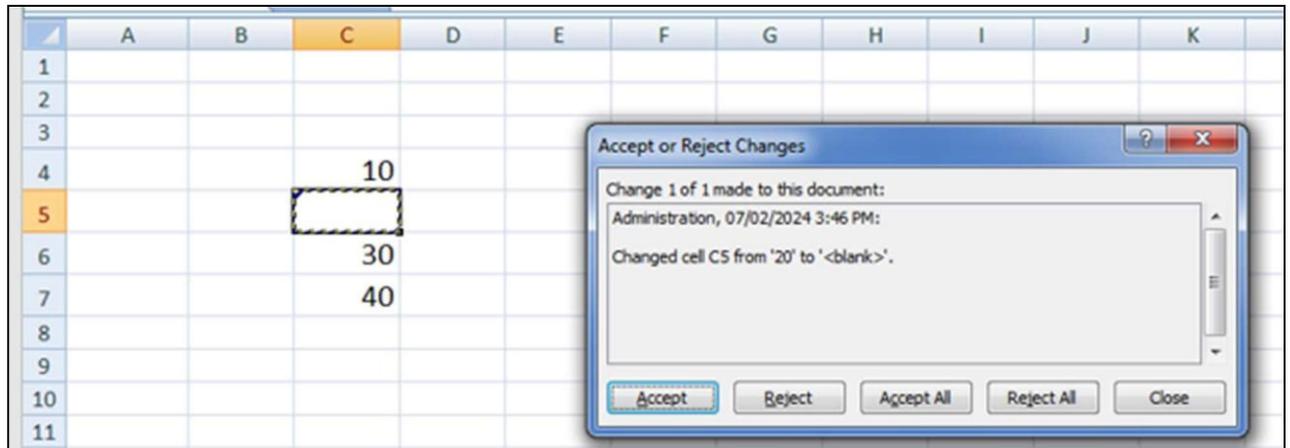
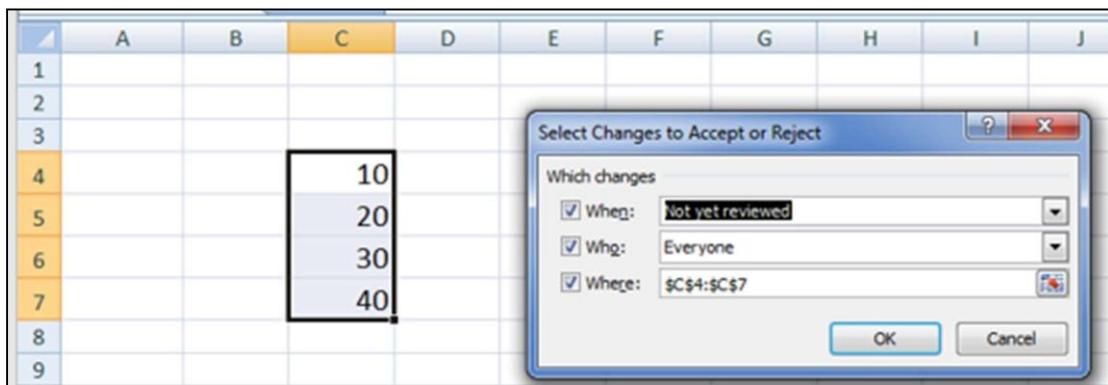
Information Technology (Code 402)

When you receive a document back with changes you can step through each change and decide whether to accept it or not.

To review changes, follow the given steps:

- ❖ Open the document that had changes.
- ❖ Click on review > track changes > accept/reject changes.
- ❖ The select changes to accept or reject dialog box opens.
- ❖ Click on ok to start the review process.
- ❖ The accept or reject changes dialog box opens with a list of all the changes.
- ❖ Click on each change one by one and choose the accept or reject button to accept or reject a change.
- ❖ Or click on the accept all or reject all button to accept or reject all the change at once.

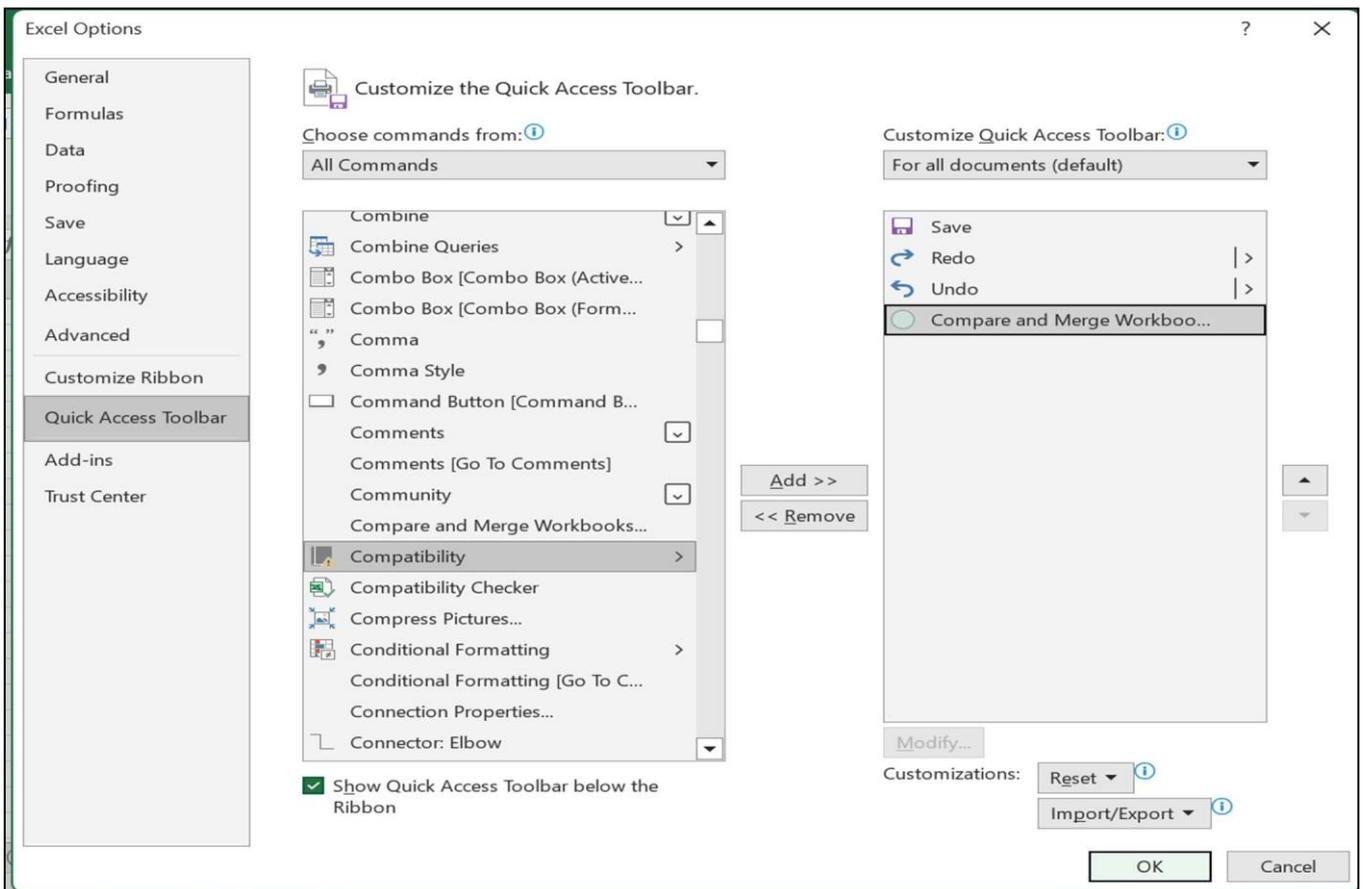
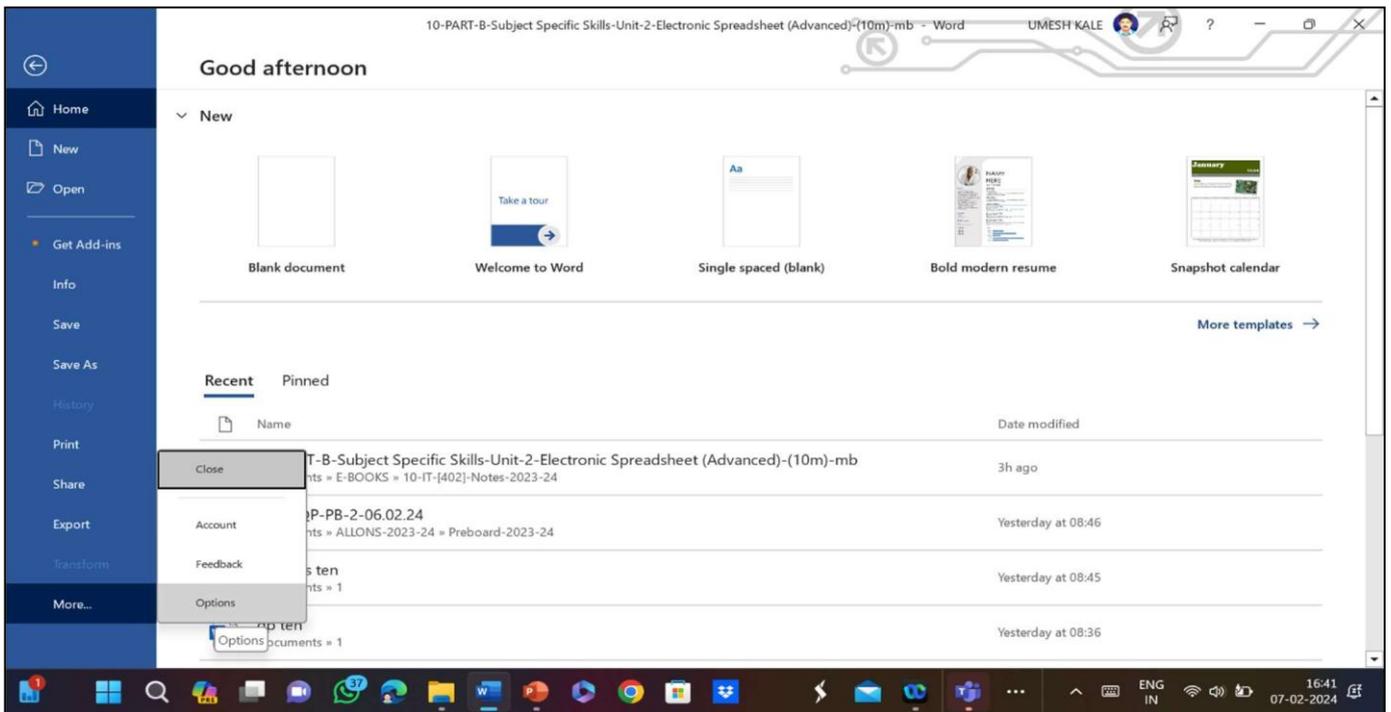




Comparing and Merging Workbook:

Adding the compare and merge workbooks option:

- The compare and merge workbook option is not available in excel, by default. It can added to the quick access toolbar using the following steps:
- ❖ Click on the file tab and choose option.
- ❖ The excel option dialog box will appear. Select quick access toolbar.
- ❖ Under choose commands from, click on the drop-down menu and select the commands option.
- ❖ Find and select the compare and merge workbooks option. ●
- ❖ Click on add to add it to the quick access toolbar.
- ❖ Click on ok. The selected command will be added to the quick access toolbar.

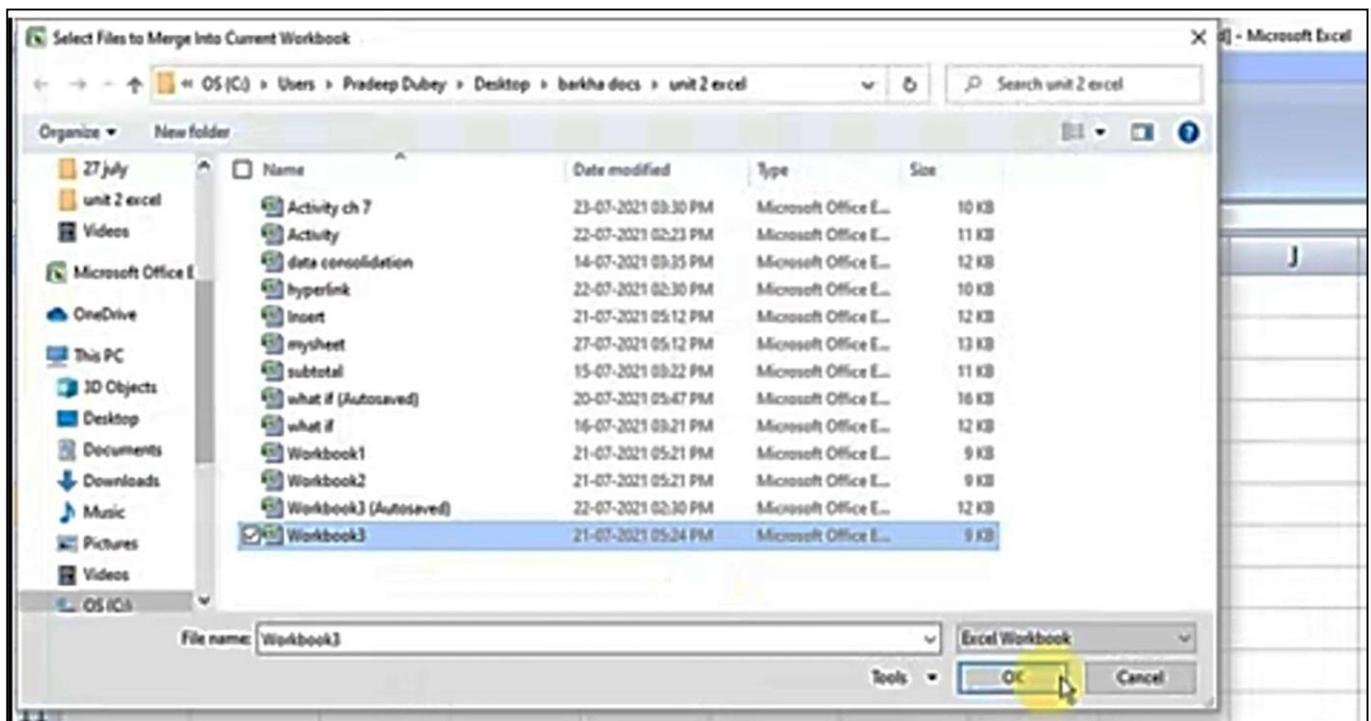
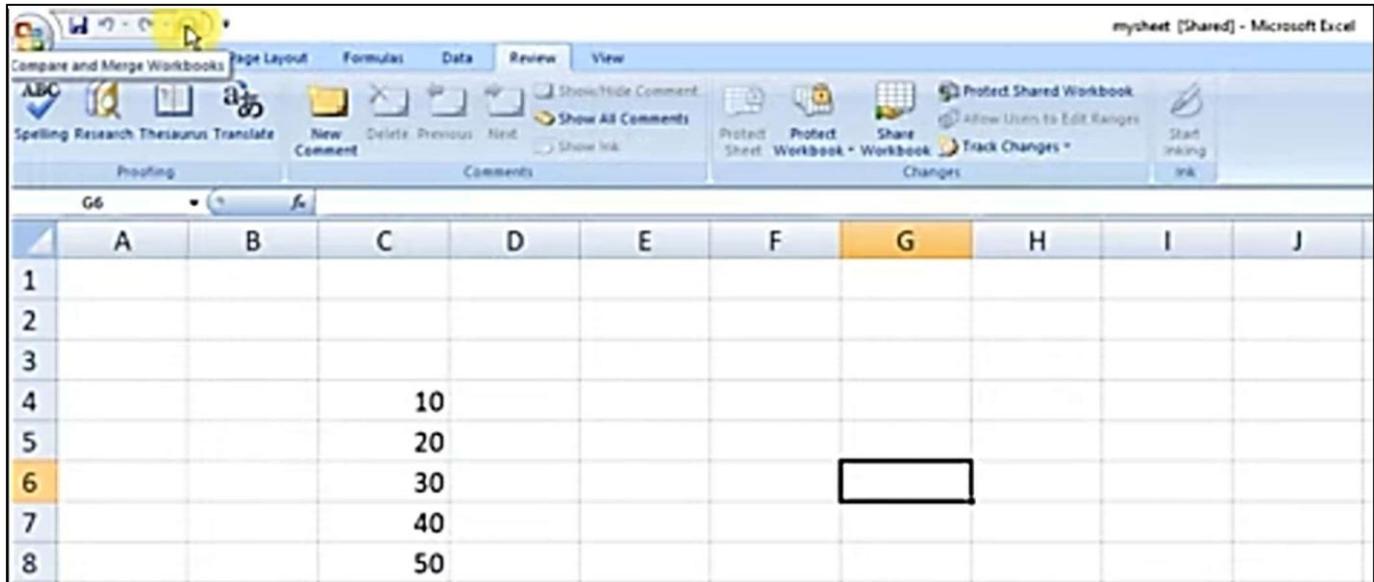


Comparing and merging workbook:

To compare and merge spreadsheet, follow these steps:

- ❖ Open a copy of the shared workbook.
- ❖ Click on the compare and merge workbook option on the quick access toolbar.
- ❖ The select file to merge into current workbook dialog box opens.

- ❖ Select another copy of the same shared workbook you want to merge.
- ❖ To select multiple copies, hold the ctrl or shift key on your keyboard while selecting the file names.
- ❖ Click on ok. the changes from each copy of the shared workbook will be merged into a single copy.



Adding and viewing comments:

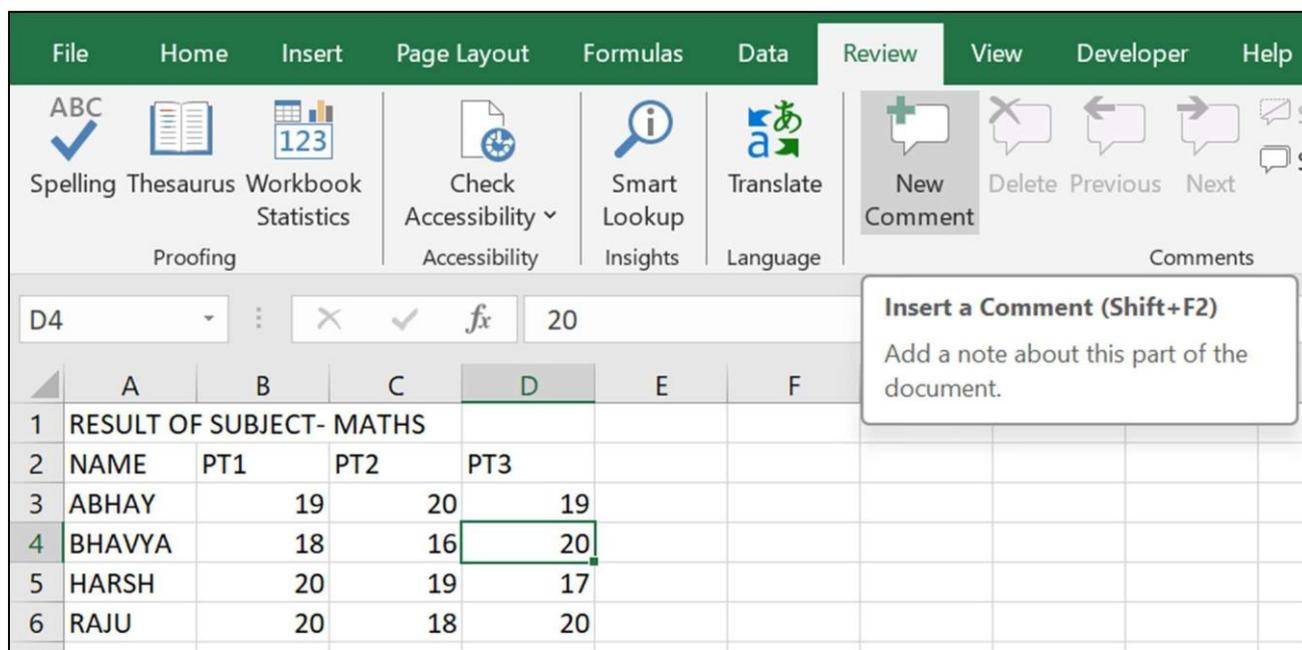
In a spreadsheet, comments help in providing some extra information on the data stored in a cell.

They play an important role to add some facts, tips, or feedback for user.

Adding a comment:

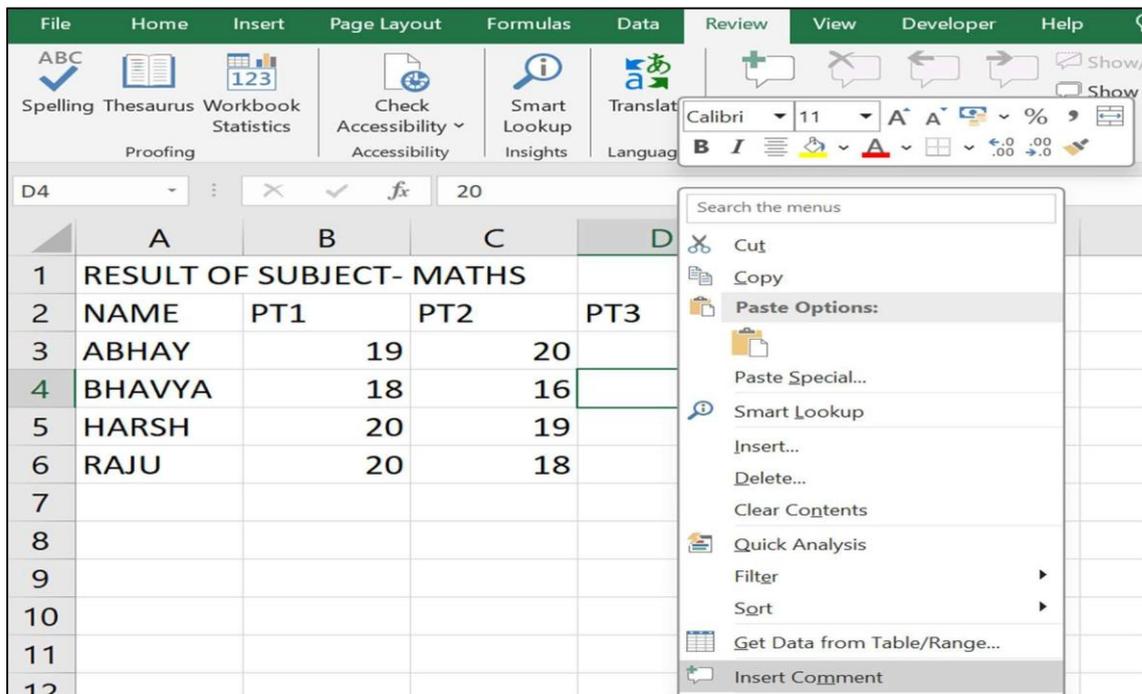
To add a comment, follow the given steps:

- ❖ Select the cell on which you wish to apply comment.
- ❖ Open the review tab and choose new comment
Or right-click on the cell and choose insert comment.
- ❖ The comment box pops-up enter the comment and click anywhere outside the comment box.
- ❖ The cell having comment will show a red dot on its top-right corner.



The screenshot displays the Microsoft Excel interface with the Review tab selected. The 'New Comment' button is highlighted, and a tooltip is shown over it. The spreadsheet below contains the following data:

	A	B	C	D	E	F
1	RESULT OF SUBJECT- MATHS					
2	NAME	PT1	PT2	PT3		
3	ABHAY	19	20	19		
4	BHAVYA	18	16	20		
5	HARSH	20	19	17		
6	RAJU	20	18	20		



	A	B	C	D	E	F	G
1	RESULT OF SUBJECT- MATHS						
2	NAME	PT1	PT2	PT3			
3	ABHAY	19	20	19			
4	BHAVYA	18	16	20			
5	HARSH	20	19	17			
6	RAJU	20	18	20			
7							

UMESH KALE:
Bhavya got least marks in PT2 exam of Maths among all students

Viewing comments:

- ❖ A comment automatically appears in the help tip box when the mouse cursor is placed on the cell.
- ❖ Choose review > show all comments to view all the comments markets marked on the worksheet.
- ❖ You can also click on review > previous or review > next commands to browse through the comments.

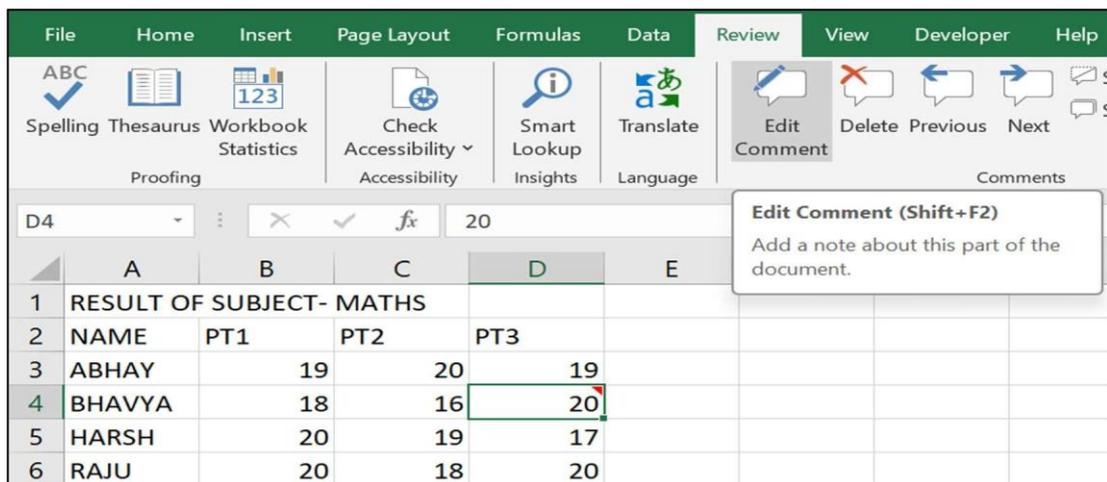
Editing and formatting comments:

Once a comment is added to a cell, it can be edited and formatted at any time.

Editing Comments:

To edit a comments, follow the given steps:

- ❖ Click on the cell that has the comment to be edited.
- ❖ Choose review > edit comment.
- ❖ The comment opens for editing.
- ❖ Make changes and click anywhere outside the comment box. The changes will reflect in the comment.



	A	B	C	D	E	F	G
1	RESULT OF SUBJECT- MATHS						
2	NAME	PT1	PT2	PT3			
3	ABHAY	19	20	19			
4	BHAVYA	18	16	20			
5	HARSH	20	19	17			
6	RAJU	20	18	20			
7							

UMESH KALE:
Bhavya got least marks
in PT2 exam of Maths
among all students
Study hard

Editing and Formatting comments:

Formatting Comments:

To format a comment, follow the given steps:

- Click on the cell that has the comment to be formatted.
- Choose Review > Edit Comment.
- The comment opens for editing. Here, you can change the format of the comment.
- Select the text to be formatted. Go to home tab and choose the required formatting options from the Font and Alignments groups.

File Home Insert Page Layout Formulas Data Review View Developer Help Tell me what you want to do

Clipboard Font Alignment Number Styles

Comment 2

	A	B	C	D	E	F	G	H	I	J	
1	RESULT OF SUBJECT- MATHS										
2	NAME	PT1	PT2	PT3							
3	ABHAY	19	20	19							
4	BHAVYA	18	16	20							
5	HARSH	20	19	17							
6	RAJU	20	18	20							
7											
8											
9											
10											
11											
12											
13											
14											

Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...

Visibility
Hide & Unhide

Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color

Protection
Protect Sheet...
Lock Cell
Format Comment...

File Home Insert Page Layout Formulas Data Review View Developer Help Tell me what you want to do

Clipboard Font Alignment Number Styles

Comment 2

	A	B	C	D	E	F	G
1	RESULT OF SUBJECT- MATHS						
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5	HARSH	20	19	17			
6	RAJU	20	18	20			
7							
8							
9							
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11							
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13							
14							
15							
16							

Format Comment

Font

Font: Tahoma
Font style: Bold
Size: 12

Underline: Single
Color: Red

Effects
 Strikethrough
 Superscript
 Subscript

Preview
Tahoma

This is a TrueType font. The same font will be used on both your printer and your screen.

OK Cancel

Assessment Time:

A. Select the correct option.

1. Which of the following tab contains the Share Workbook option?

a) Review

b) Data

c) View

2. Which of the following is the correct choice to turn on the 'Track Changes' feature in Excel?

- a) Review > Track changes > Show changes
- b) ~~Insert~~ > Track changes > Highlight changes
- c) ~~Data~~ > Track changes > View changes

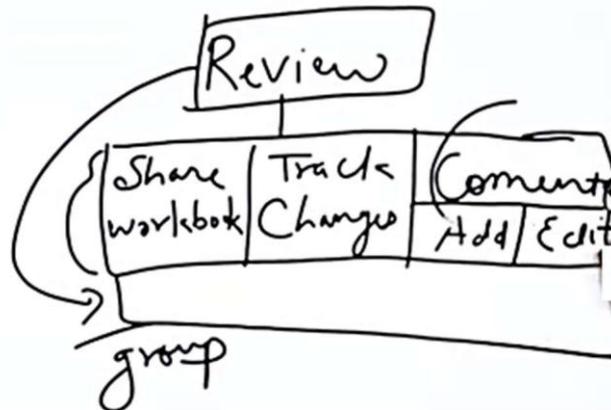
3. Which dialog box allows you to accept or refuse changes in a spreadsheet?

- a) Accept / Reject Changes
- b) Take or Refuse Changes
- c) Manage Changes



4. Which of the following group in the Review tab has the 'Track Changes' option?

- a) Proofing ~~X~~
- b) Comments ~~X~~
- c) Changes ✓



5. Which dialog box helps you to fix the conflict changes in a spreadsheet?

- a) Manage Conflicts ~~X~~
- b) Resolve Conflicts ✓
- c) Correct Conflicts ~~X~~

B. Write T for True and F for False.

1. Some commands are not available when document sharing is activated. T
2. All the users will be able to save the shared document while you are resolving the conflicts. F
3. Changes in a spreadsheet are marked by a border around the cells. T
4. You can add comments to add some information or provide a feedback. T

C. Answer the following questions.

1. How can a group of people work on the same Excel spreadsheet simultaneously?

Ans.

- Click the Review tab.
- Click Share Workbook in the Changes group.
- On the Editing tab, click to select the Allow changes by more than one user at the same time.
- In the Save As dialog box, save the shared workbook on a network location where other users can gain access to it.

2. Why are track changes needed?

Ans. The Track Changes function in excel allows you to keep a record of changes made to a spreadsheets. You can then choose to accept or reject the changes. It is a useful tool for managing changes made by several reviewers to the same spreadsheet.

3. What are comments ?

Ans: In a spreadsheet, comments help in providing some extra information on the data stored in a cell.

They play an important role to add some facts, tips, or feedback for user.

4. Why do you compare and merge spreadsheets?

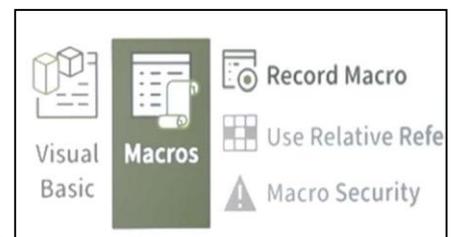
Ans. When multiple users collaborate on the same shared workbook, you can use the Compare and Merge Workbooks command to view all of their changes at once and address them by accepting or rejecting them.

Chapter-9

Using Macros in a Spreadsheet

Introduction:

- Let us consider an example, where a bookseller Rajneesh creates a report every month to view his sales and calculate profit.
- He also formats the names of the customers with overdue accounts in and applies bold formatting while creating the report.
- It means that every time he creates the monthly report he perform all these formatting operations, again and again.
- To avoid such a situation and speed up his task, he can create a macro to record the formatting and run it to apply these formatting changes quickly to the cells, whenever required.
- Macros enable you to automate almost any task that you want to perform in a spreadsheet. Let us learn how to record a simple macro and how to write a code for creating macros in Excel.



Creating a Simple Macro:

Follow these steps to record a simple macro:

- Click on the View > Macros > Record Macro.
- The Record Macro dialog box opens.
- Type a name for the macro in Macro name field. By default, Excel gives the name Macro1.
- Assign a shortcut key Ctrl + Shift + K in the Shortcut key field. This key combination will be used to execute the macro later.

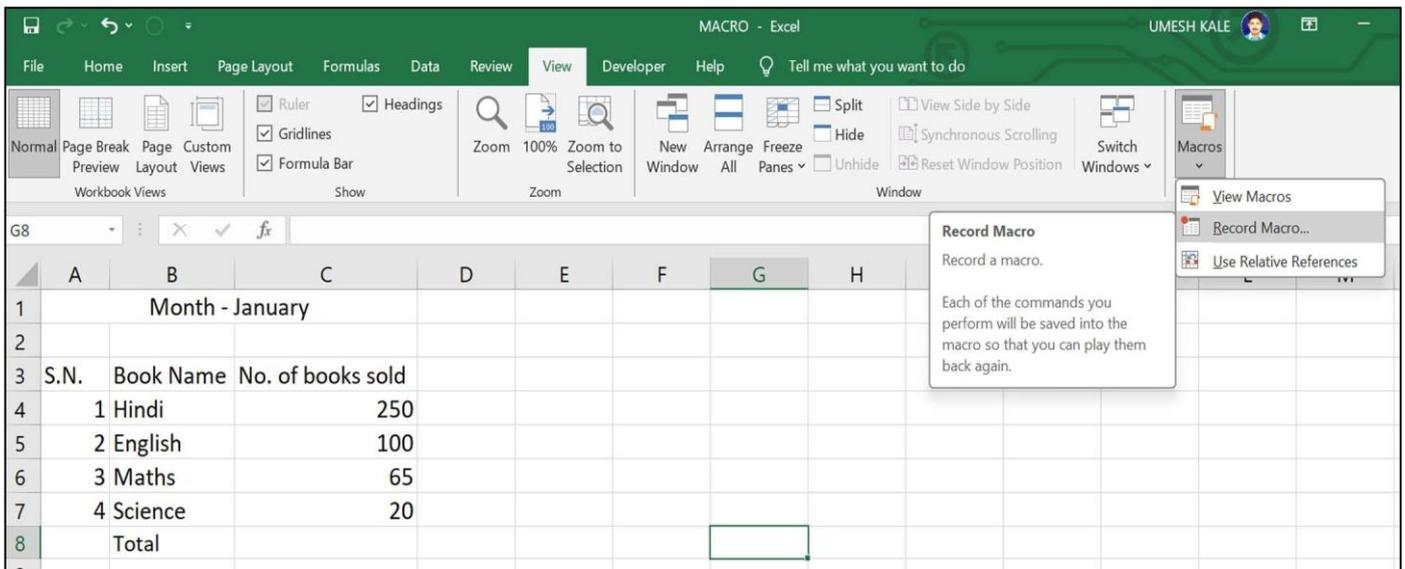
Information Technology (Code 402)



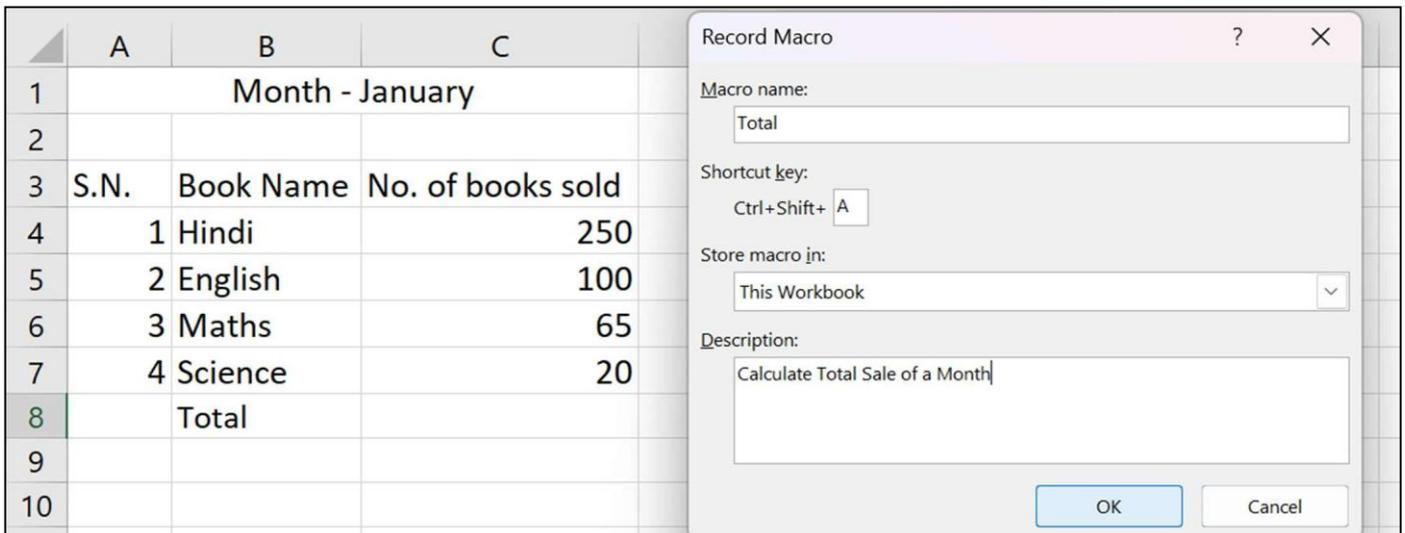
- You can also provide some description related to the macro in the Description box. This is optional.
- Click on OK to start recording the Macro.
- Perform the operations that you want to record in the macro.
- Click on View > Macros > Stop Recording to finish the recording of the macro.
- Press the keyboard shortcut (here. Ctrl +Shift + K) to execute the Macro. Or
- Click on the View > Macros > View Macros. Select the name of the macro that is to be executed and click on
- Observe that the operations recorded in the macro get automatically performed.



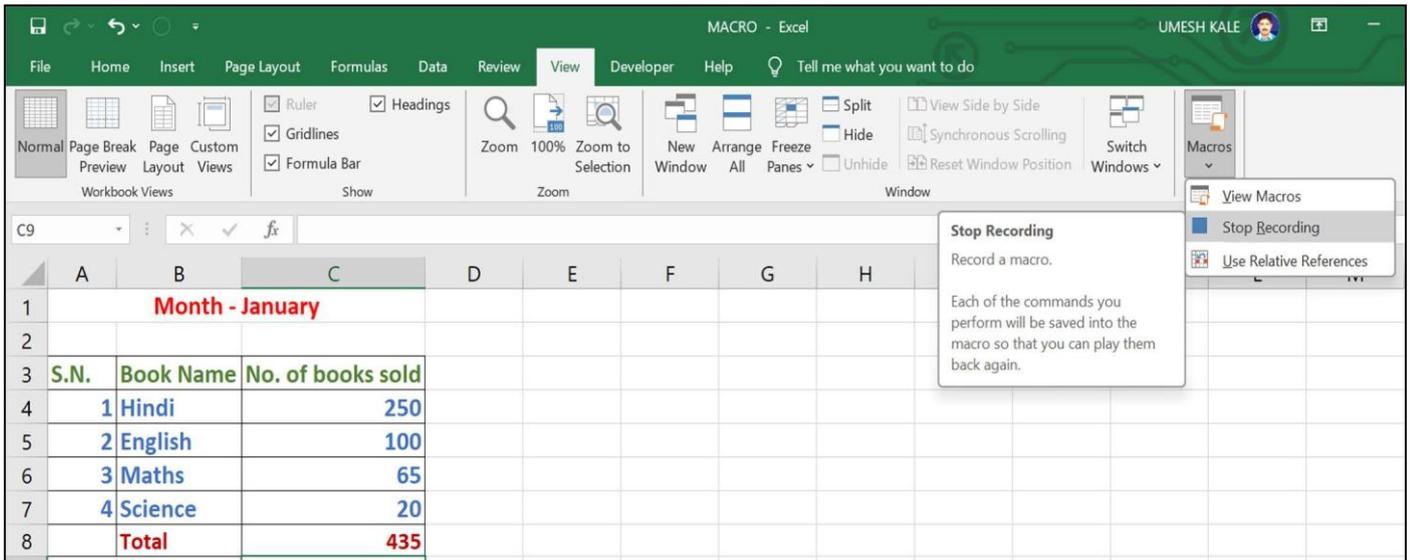
Select View tab, Select Macros icon, Select Record Macros



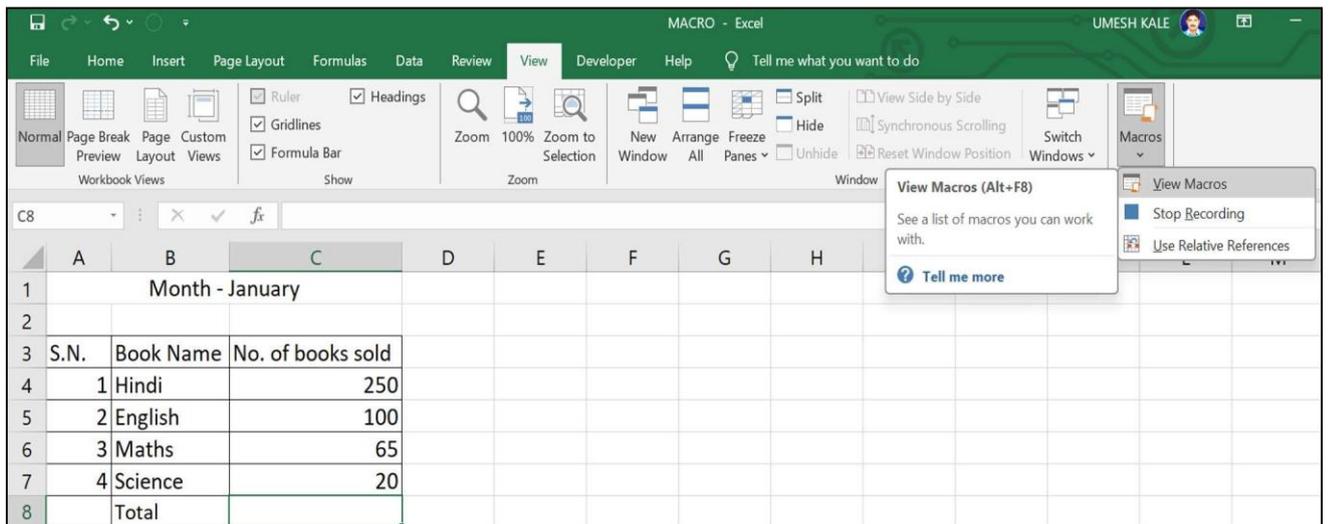
Enter Macro name, shortcut key, store macro in, description as per our need



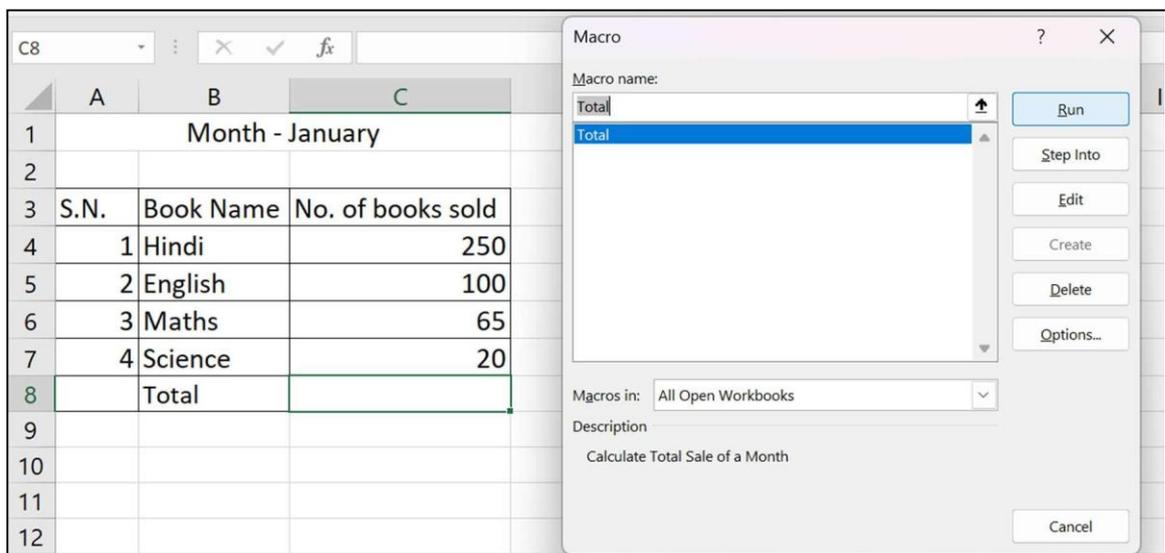
Do the formatting as we want, enter sum formula for Total,
Then, Select View Tab, Select Macro Icon, Select Stop Recording option



- * To check our macro is working or not, select sheet2 (same data as in sheet1)
- * Then Select View Tab, Select Macro Icon, Select View Macro option



Click on View Macros option, then select Run button



Then output is follows, it means our macro is running....

S.N.	Book Name	No. of books sold
1	Hindi	250
2	English	100
3	Maths	65
4	Science	20
Total		435

Macro Coding:

- When You record a macro, Excel notes down the steps you are taking in a language that it understands which is Visual Basic for Applications (VBA).
- When you stop the recording, save the macro, and run it, Excel simply executes the VBA code it generated and follows exactly the same steps you performed.
- Inshort, a code of macro is written in Visual Basic Editor, (VBE), which is a part of Microsoft Visual Basic for Applications (VBA).

Macro Coding:

- To work in VBA, you need to use some commands available in the Developer tab.
- So, let us first add the Developer tab by following the given steps:
 - Click on File > Options.
 - The Excel Options dialog box opens.
 - Click on Customize Ribbon, place a checkmark next to Developer.
 - Click on OK. Excel starts displaying the Developer tab.
- After adding the Developer tab, you can access the Visual Basic Editor (VBE) to type the code for a macro or write macro as a function by following the given steps:
 - Open your workbook in Excel.
 - Press Alt + F11 to open Visual Basic Editor (VBE).
 - Right-click on your workbook name in the "Project-VBA Project" pane and select Insert > Module from the context menu.
 - A new module opens where you can add your code.

Syntax:

To define a simple function without parameters:

```
Function Function_Name ( )  
Body of Function  
Function_Name=Result  
End Function
```

Code:

```
Function Total ( )  
Total=10+20  
End Function
```

To type and execute the above code, follow these steps:

- Switch to the Visual Basic Editor by pressing the Alt + F11 key combination.
- Create a new module (right-click on the Project - VBA Project pane and select Insert > Module).
- Type the given code, and save it.
- Again, press the Alt + F11 to switch back to the Excel window and enter the created macro function in a cell as =Total(). This is referred to as function calling.
- You will get the output as 30 in the same cell.

Passing Arguments To a Macro:

Code:

Defining a macro function to pass an argument:

```
Sub Button1_Click( )  
MsgBox Triple(x)  
End Sub
```

```
.....  
Function Triple(x)
```

```
x = 10
```

```
MsgBox x
```

```
End Function
```

Passing Arguments To a Macro:

To type and execute the given code, follow these steps:

- Place a command button on the worksheet. For this, click on the Developer tab and select Insert > Button (From Control), and drag the button on the spreadsheet.
- The Assign Macro dialog box opens. Enter the name for the macro, and click on New.
- Type the code as given in the example, and save it by clicking on the Save button available on the Standard toolbar.
- Press Alt + F11 to switch back to Excel, and click on the command button. It will invoke the created function and you will get 10 as the output in the message box.

Accessing Cells Directly Using VBA:

Code:

Reading the data from the first row and seventh column of the worksheet using the cell object

```
Sub sbGetCellData1( )  
MsgBox Cells(1, 7)  
End Sub
```

The above code will read the value from the first row and seventh column, i.e., from the cell A7, and display the value in the message box.

By now, you must have understood, how to read the data from a worksheet to VBA using the cell object. Let us learn how to use the range object to read the data.

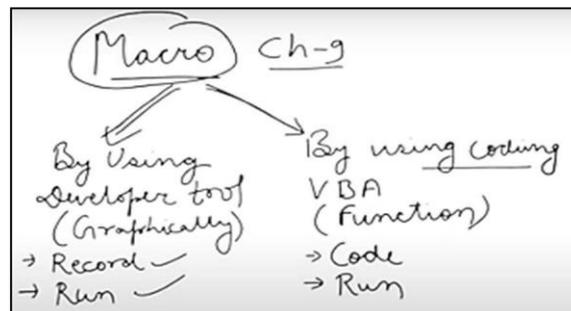
Code:

Reading the data from the first cell of the worksheet using the range object

```
Sub sbGetCellData2( )  
MsgBox Range("A1")  
End Sub
```

The given code will read the value of cell A1 from the worksheet and display it in the message box.

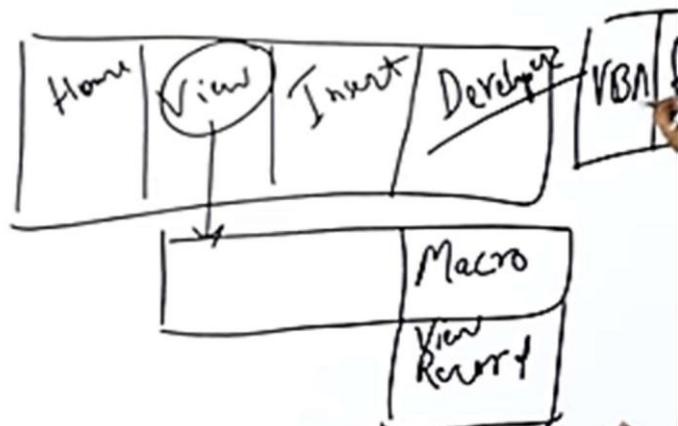
Assessment Time:



A. Select the correct option.

1. Which tab in Excel has the option to record a macro?

- a. Data
- b. Insert
- c. View ✓



2. In Excel, to run a macro choose

a. Data > Macros

b. Data > Run Macro

c. View > Macros > View Macros

3. Which of the following keyword is used to define a macro as a function?

a. Function

b. Macro

c. Define

Function total()
total = 10 + 20
End function

4. Which key combination do you press to open the VBA?

a. Alt + F11

b. Shift + F3

c. Ctrl + F11

Q(B) Fill in the blanks:

{ hint : Name, Parameters, Macros, Keystrokes, Function }

- [1] automates the recorded actions and saves your time and efforts.
- [2] You are actually recording your mouse clicks and while entering a macro.
- [3] A..... is a line of code that executes when you call it.
- [4] Each function has a and may have

Ans : [1] Macro [2] Keystrokes [3] function [4] Name, Parameters

Q(C) Answer the following questions

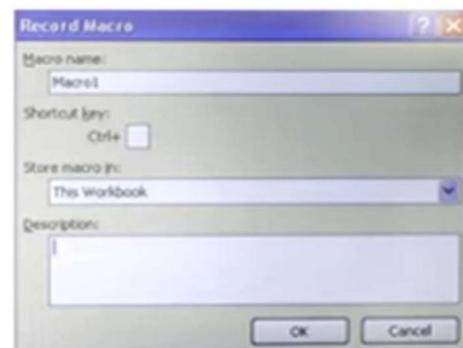
Q[1] What is a macro ?

Ans: A macro (which stands for “macro instruction”) is a programmable pattern which translates a certain sequence of input into a preset sequence of output. Macros can make tasks less repetitive by representing a complicated sequence of keystroke, mouse movements, commands, or other types of input.

2. How can you record a macro?

Ans: Click on the View > Macros > Record Macro.

- The Record Macro dialog box opens.
- Type a name for the macro in Macro name field. By default, Excel gives the name Macro1.
- Assign a shortcut key Ctrl + Shift + K in the Shortcut key field. This key combination will be used to execute the macro later.
- You can also provide some description related to the macro in the Description box. This is optional.
- Click on OK to start recording the Macro.
- Perform the operations that you want to record in the macro.
- Click on View > Macros > Stop Recording to finish the recording of the macro.



3. Write the syntax to define a macro as a function.

Ans:

To define a simple function without parameters:

```
Function Function_Name ( ) Blank  
Body of Function  
Function_Name=Result  
End Function
```

To define a macro with parameters:

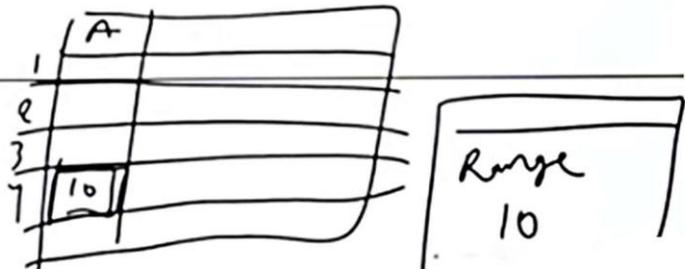
```
Function Function_Name (Optional Parameter1, Optional Parameter 2,..... )  
Program Code  
Function_Name=Result  
End Function
```

4. Write a VBA code to access the (A4) cell of a worksheet directly using the cell object

Ans:

Reading the data from the first cell of the worksheet using the range object

```
Sub sbGetCellData2 ( )  
MsgBox Range("A4") ✓  
End Sub
```



UNIT-3 RELATIONAL DATABASE MANAGEMENT SYSTEMS

SESSION 1: APPRECIATE THE CONCEPT OF DATABASE MANAGEMENT SYSTEM

A database is an organized collection of data. It is considered as a container of information.

Database Management System:

A database management system is a software package with computer programs that controls the creation, maintenance, and use of a database. For example Oracle, IBM DB2control, Microsoft SQL Server, Microsoft Access, MySQL, and SQLite.

Data can be organized into two types:

1. **Flat File:** Data is stored in a single table. Usually suitable for less amount of data.
2. **Relational:** Data is stored in multiple tables and the tables are linked using a common field. Relational is suitable for medium to large amount of data.

Database Servers :

Database servers are dedicated computers that hold the actual databases and run only the DBMS and related software.

Advantages of Database:

- 1) Reduces Data Redundancy :
- 2) Sharing of Data :
- 3) Data Integrity :
- 4) Data Security :
5. Privacy:
6. Backup and Recovery:

Important Terms :

1) Primary Key: A primary key is a unique value that identifies a row in a table. It helps the database to search for a record.

2) Composite Primary Key: When primary key constraint is applied on one or more columns then it is known as Composite Primary Key.

3) Foreign key: The foreign key identifies a column or set of columns in one (referencing) table that refers to a column or set of columns in another (referenced) table.

SESSION-2 : CREATING DATABASE AND TABLES

DATABASE OBJECTS:

1) Table: A table is a set of data elements (values) that is organized using a model of vertical columns and horizontal rows.

2) Columns or Fields or Attributes: A column is a set of data values of a particular simple type, one for each row of the table.

3) Rows or Records or Tuples: A row also called a Record or Tuple represents a single data item in a table. Every row in the table has the same structure.

Queries: Queries are commands that are used to define the data structure and also to manipulate the data in the database.

There are two types of languages:-

1. DDL (Data Definition Language)
2. DML (Data Manipulation Language)

Common DDL Statements are:-

1. **Create:** - Used to create database or tables.
2. **Alter:** - Used to modify structure of table.
3. **Drop:** - Used to delete database objects.

Common DML Statements are:-

1. **SELECT:** - Used to retrieve information from the database.
2. **INSERT:** - Used to insert new record into the database.
3. **DELETE:** - Used for deletion of information in the database.
4. **UPDATE:** - Used for modification of information in the database.

Select Statement:

A SELECT statement retrieves zero or more rows from one or more tables. SELECT is the most commonly used Data Manipulation Language (DML) command. To retrieve all the columns in a table the syntax is: `SELECT * FROM <Table Name>;`

For example, if you want to display all the data from table emp –

*Select * from emp;*

The SELECT statement has many optional clauses:

1. **WHERE** specifies which rows to retrieve.
2. **ORDER BY** specifies an order in which to return the rows. **for**

example : `Select * from emp where name = "Ravi";`

SELECT DISTINCT

The SELECT DISTINCT statement is used to return only distinct (**different**) values.

For example-

`SELECT DISTINCT Country FROM Customers;`

Update Statement:

Update statement is used for modifying records in a database. The general syntax of the update statement is as follows:

UPDATE <table name> SET <Column name > = value [WHERE <Condition>]; for

example :

1) To increase(update) the salary of employee "Ravi" by Rs 2000 (in table Employee)then the SQL command will be:

Update Employee set Salary = Salary + 2000 Where FirstName = "Ravi";

INSERT COMMAND IN SQL

```
INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);
```

CREATE COMMAND

```
CREATE TABLE table_name (
    column1 datatype,
    column2 datatype,
    column3 datatype,
    ....
);
```

PRIMARY KEY Constraint

The **PRIMARY KEY** constraint uniquely identifies each record in a table.

```
CREATE TABLE Persons (
    ID int NOT NULL,
    LastName varchar(255) NOT NULL,
    FirstName varchar(255),
    Age int,
    PRIMARY KEY (ID)
);
```

FOREIGN KEY Constraint

The **FOREIGN KEY** constraint is used to prevent actions that would destroy links between tables.

```
CREATE TABLE Orders (  
    OrderID int NOT NULL,  
    OrderNumber int NOT NULL,  
    PersonID int,  
    PRIMARY KEY (OrderID),  
    FOREIGN KEY (PersonID) REFERENCES Persons(PersonID)  
);
```

NOT NULL Constraint

By default, a column can hold NULL values.

The **NOT NULL** constraint enforces a column to NOT accept NULL values.

```
CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255) NOT NULL,  
    Age int  
);
```

ALTER TABLE Statement

The **ALTER TABLE** statement is used to add, delete, or modify columns in an existing table.

```
ALTER TABLE table_name ADD column_name datatype;
```

```
ALTER TABLE Customers ADD Email varchar(255);
```

UNIQUE Constraint

The **UNIQUE** constraint ensures that all values in a column are different.

```
CREATE TABLE Persons (  
    ID int NOT NULL UNIQUE,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int  
);
```

SQL Working With Dates

- **DATE** - Format YYYY-MM-DD
- **DATETIME** - Format: YYYY-MM-DD HH:MI:SS
- **TIMESTAMP** - Format: YYYY-MM-DD HH:MI:SS
- **YEAR** - Format YYYY or YY
- **DATE** - Format YYYY-MM-DD
- **DATETIME** - Format: YYYY-MM-DD HH:MI:SS
- **SMALLDATETIME** - Format: YYYY-MM-DD HH:MI:SS
- **TIMESTAMP** - Format: a unique number

SESSION 5: CREATE FORMS AND REPORTS USING WIZARD

FORM: A form provides the user a systematic way of storing information into the database. It is an interface in a user specified layout that lets users to view, enter, and change data directly in database objects such as tables.

Creating Form Using Wizard : Steps To Create Form Using Wizard are :

- 1) Click Use Wizard to Create Form... option under Tasks group. The Form Wizard dialog box appears.
- 2) Select selective fields to be sent onto the form by selecting the field name and clicking >button and click Next.
- 3) Select the option Add Subform if you need to insert the contents in the table in a separate form and click Next.

- 4) Arrange selected fields in a form and click Next.**
- 5) Select the data entry mode and click Next.**
- 6) Specify the styles to be used in the form and click Next.**
- 7) Specify the name of the form. Click Finish.**

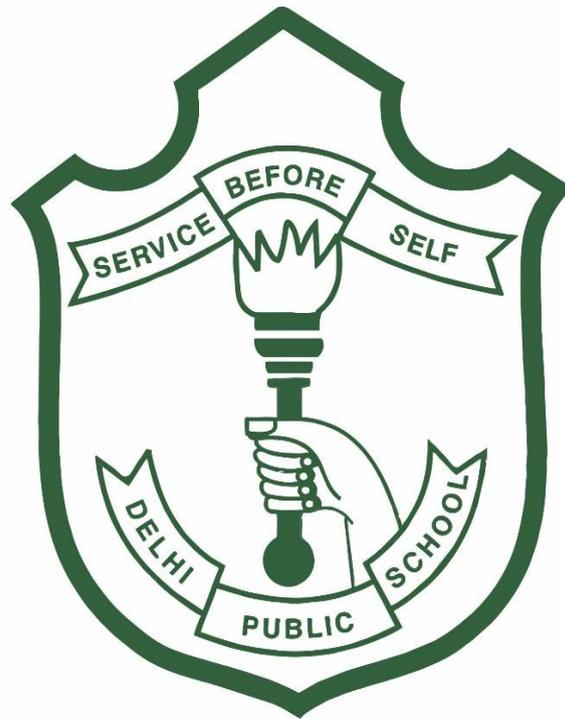
REPORT : A report helps to display the data in a summarized manner. It is used to generate the overall work outcome in a clear format.

Creating Reports using wizard : Steps To Create Report Using Wizard are :

- 1) Click on Use Wizard to Create Report... option available under Tasks.**
- 2) Select all the table fields by selecting the >> button.**
- 3) Redefine the label of the fields in the reports or else you can set the default name and click Next.**
- 4) Define grouping for the fields of the table if required and click Next**
- 5) Sort the field in the report by selecting the appropriate field name and sorting method(if required) and click Next.**
- 6) Select the layout of the report and click Next.**
- 7) Define a name for the report and click Finish.**

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INFORMATION TECHNOLOGY (402)

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