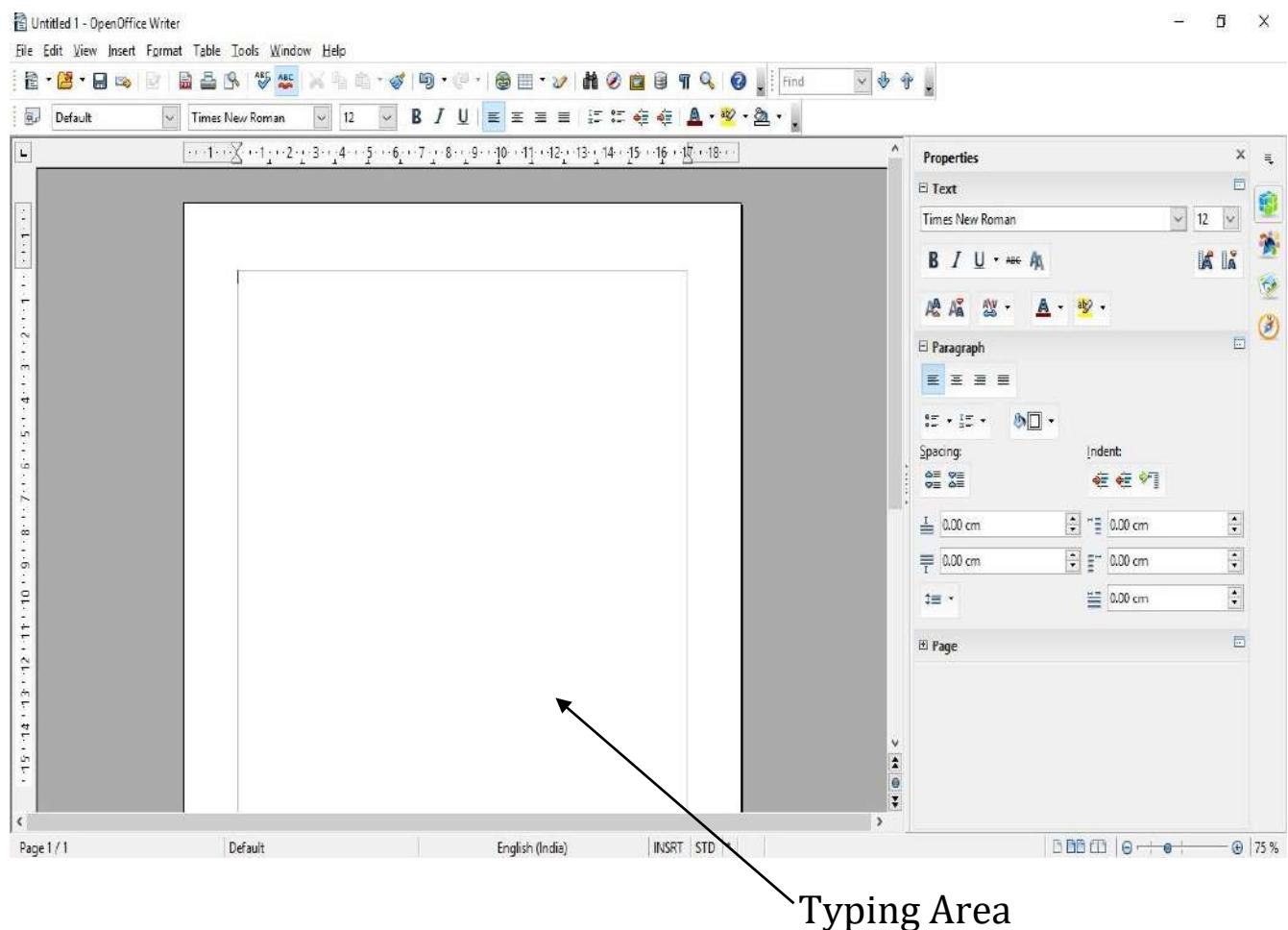


❖ Typing, editing, proofing & reviewing



Typing Area

- Writer opens with the blank document where initially a vertical point (cursor) is blink on the screen which addresses you to start typing.
- User can enter text where this cursor place on the screen. As per need user can change the location of cursor.
- Writer gives few menus which help to build meaningful document in easy manner. Such menu options are,

 1. **FILE:** provides functions for the file as a whole including open, save, print, export, Autopilot, templates etc.
 2. **EDIT:** Provides editing functions including cut, copy, paste, undo, redo, AutoText, find & replace etc.
 3. **VIEW:** Provides function for viewing your document including print layout, zoom, ruler, toolbar etc.
 4. **INSERT:** Inserts such items as page breaks, special character, hyperlinks, header, footer etc.

5. **FORMAT:** Formats characters, paragraphs, add bullets, change cases, section etc.
6. **TOOLS:** Provides spell-check, mail merge, macros, gallery etc.
7. **WINDOW:** switches among open documents so that you can see what is in document, copy data from one document to another and so on.
8. **HELP:** Get help!

→ Following key terms gives specific functionality

KEY	DESCRIPTION
Enter	Start a new paragraph
Shift + Enter	Starts a new line within same paragraph
Ctrl + Enter	Starts a new page
Tab	Moves cursor to the next location
Backspace	Deletes letter from left side
Delete	Deleted letter from right side
Ctrl + Alt + C	Creates copyrights
Shift + "	Print " instead of '
Shift + :	Print : instead of ;

- User can create whole new paragraph using bullets, numbering, line-spacing, font size, font type etc.
- Extension of this type of file is .odt

➤ **Editing:**

- User can edit document in various way.
- From the menu list edit gives you such tremendous facilities like,
- You can undo your recent work
- You can redo your deleted items
- You can cut, copy, paste
- You can find certain letters or words and replace it with other letter/words.
- Auto text is another major part of editing
- To edit your text or paragraph you need to select certain selected words or letters. You do this by following option,
- **Select a word:** Double click the word

- **Select a Line:** Triple click the line
- **Selects the entire document:** Choose edit -> select all

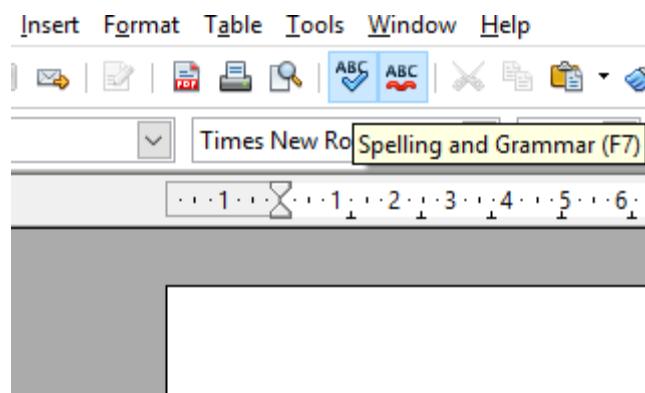
➤ **PROOFING:**

- When finalizing your text area document, proof it to catch text or formatting errors. Open office offers a numbers of proofing tools, including a spelling and grammar check, viewing styles, and using Print Preview.

 **CHECK SPELLING AND GRAMMAR (SPELLCHECK DIALOG BOX)**

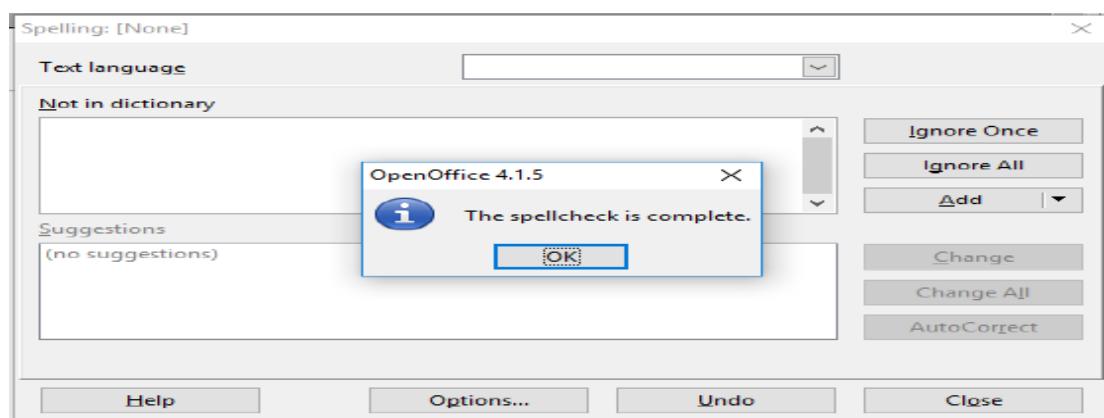
- This function checks your document grammatically.
- If you are not at the beginning of your document then open office asks you whether you want to start at the beginning of the document.
- Click yes to start at the beginning. Follow the steps to start work with it,

1. Click the Spelling & Grammar button (Review tab).



The Spelling and Grammar dialog box opens and takes you to the functional area.

2. Using the buttons of the Spelling and Grammar dialog box, review each suggestion



Add – Opens a submenu of dictionaries to which you can add the word

Ignore All – Ignore all instance of the word in document

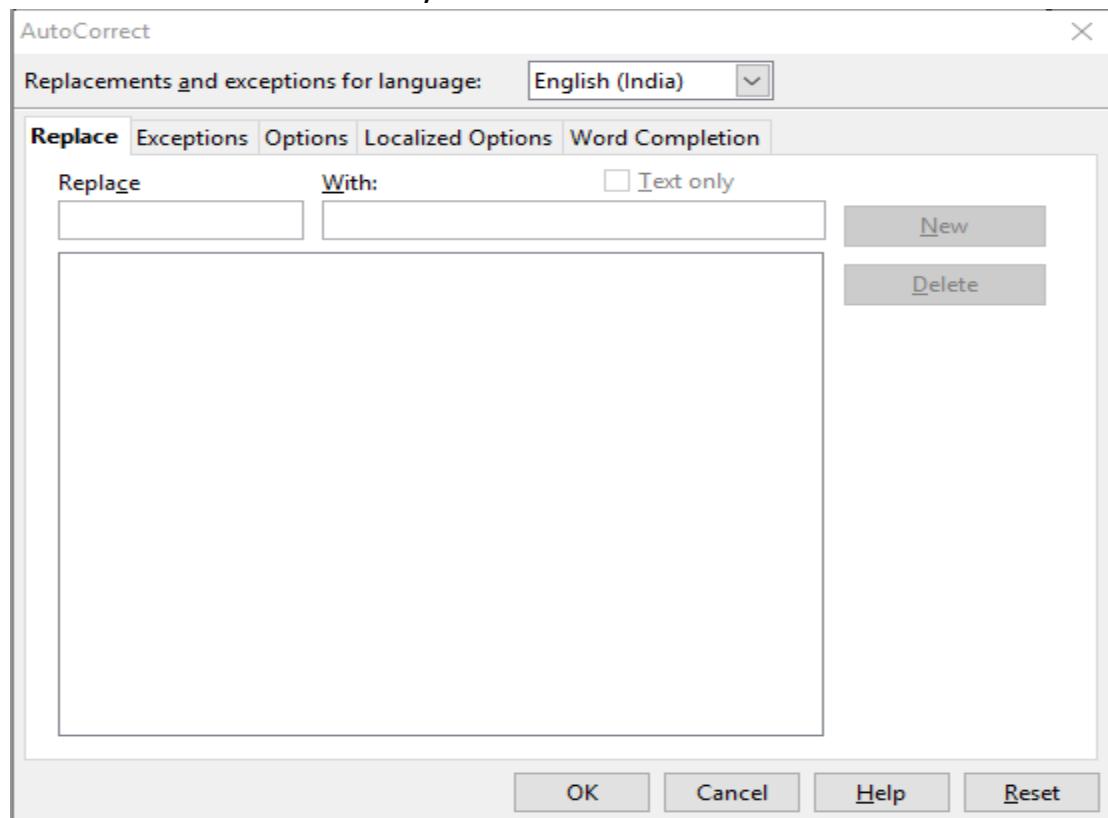
AutoCorrect – Creates an autocorrect entry for one of the suggested words.

- To correct spelling as you type, turn on spelling and grammar.
- When this feature is on open office places wavy red line, right click and choose one of the suggested words from pop-up list.

Autocorrect/ AutoFormat

- For some sophisticates editing try the AutoCorrect feature which lets you correct commonly misspelled words automatically.
- You can also use AutoCorrect to create typing shortcuts.
- To create AutoCorrect Entry, follow this steps:

1. Choose Format -> AutoCorrect-> AutoCorrect options. The AutoCorrect dialog box opens.
2. Click the Replace tab, as shown in figure. You can see two columns, Replace and with. This may include long list of existing entries. Before adding an entry, check that it doesn't already exist.



3. To add an entry, enter the spelling to replace in the Replace text box. If you clicked an existing entry, you see it in the replace and with text boxes.

You can simply select this entry and type your new one, this action doesn't delete the existing entry.

If you are using, AutoCorrect to create a shortcut, make sure that you won't use the shortcut in another context, and keep it as short as possible.

4. Enter the correct spelling in the with text box.

5. Click the new button.

To add another entry repeat step 3 through 5.

6. When you are done, click ok to close the dialog box. Here you saving your task done in above steps

As you type, Open office automatically corrects incorrectly spelled items when you press the spacebar after the word or add a period.

AutoText:

➤ There is another feature to create the shortcuts.

➤ One great advantage of AutoText is that you can use it to insert graphics, tables and another object.

➤ To create AutoText follow this steps,

1. Type the full version of the text and select it in your document

2. Select edit->AutoText.

The AutoText dialog box opens.

3. In the Name text box, enter a name for the shortcut.

This name can be anything that you can recognize if you read through the list of AutoText entries.

4. In the shortcut text box, enter your shortcut

Notice that open office has suggested a shortcut for you. You can use that one or make up another one.

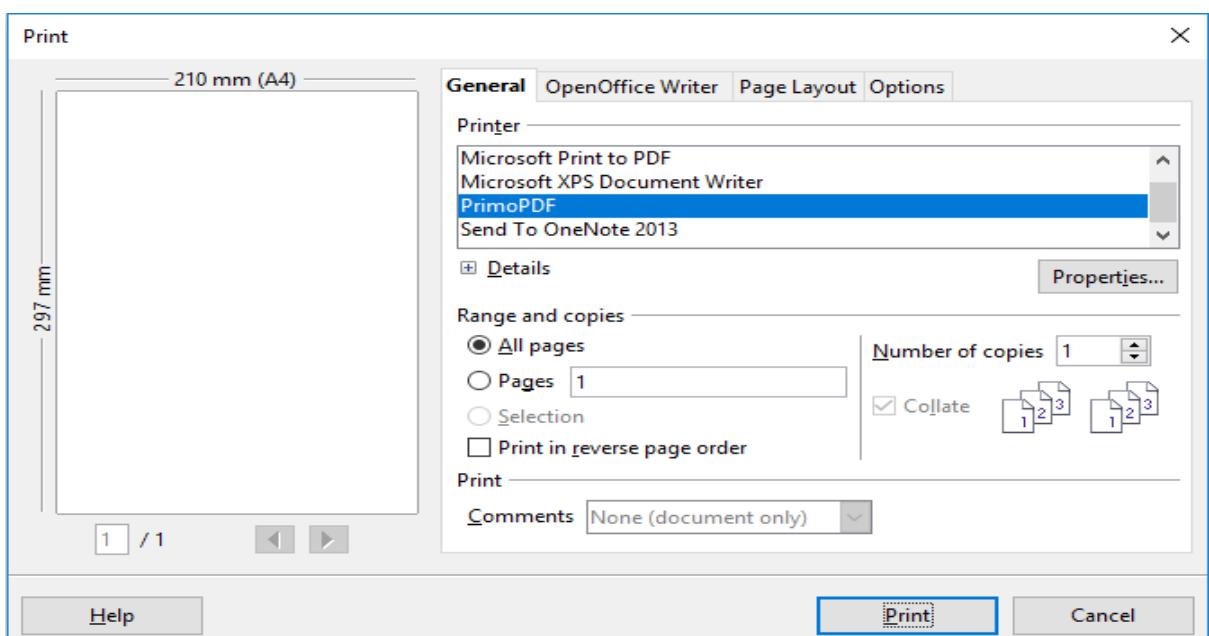
5. Choose AutoText->New or AutoText->New(text only) Use the text only option to ignore any selected graphics

6. Click the close button to return to your document.

To use AutoText, type the shortcut and then press F3 to change the shortcut to the longer version.

➤ Reviewing

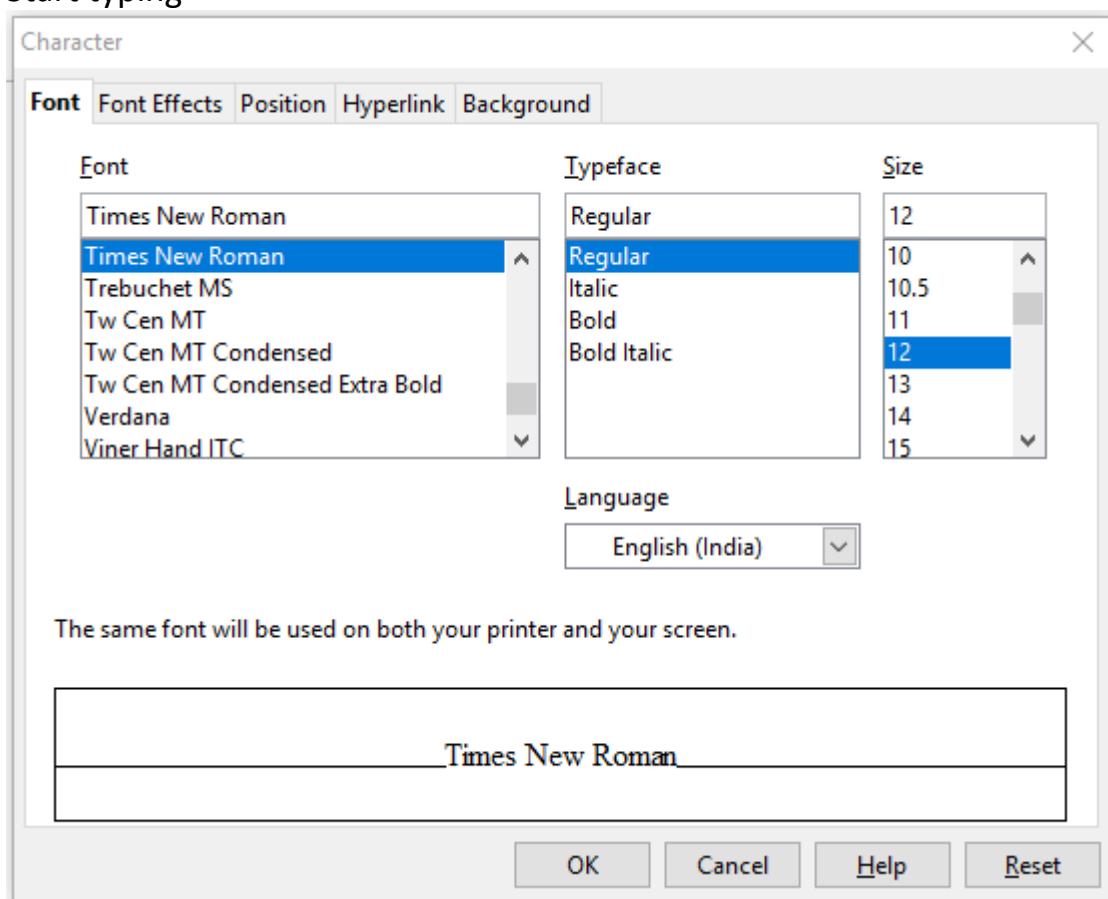
- In most cases the final product of your work is printed document. Some variation may exist based on your operating system but the process is same.
- Before you commit to paper, preview the document to see how it will look alike
- File -> Page preview. The object toolbar changes to provide you with the tools that are appropriate to the page preview mode.
- Printing is very simple. Use one of the following option to print your document
- Choose file -> Print, to open the print dialog box if you want to make any adjustments in your printer settings like you can change no of copies, print only certain portion etc.
- Click the print button on the function toolbar to immediately print your document using the settings
- Use shortcut ctrl+p to open print document dialog box.



❖ **Formatting text and paragraph**

- You can define shapes to your letters, change the size, make it bold or italic or underline and all over it you can set classified look to it.

1. select Format->Character
2. Click the font tab
3. From the font list, choose your kind of font
4. From the typeface list, choose regular, Italic, Bold or Bold Italic
5. From the size list, choose a font size according to your requirement
6. Click OK
7. Start typing



Other options are,

Font effects: you can add several kinds of underlying, use strikethrough text, change text color, make small capitals, add shadow, add outlining, add blinking etc.

Position: you can create subscript or superscript text, rotate text, scale the width of text and expand or condense text.

Hyperlink: you can attach a hyperlink to text

Background: you can add a colored background to selected text.

Aligning Paragraph

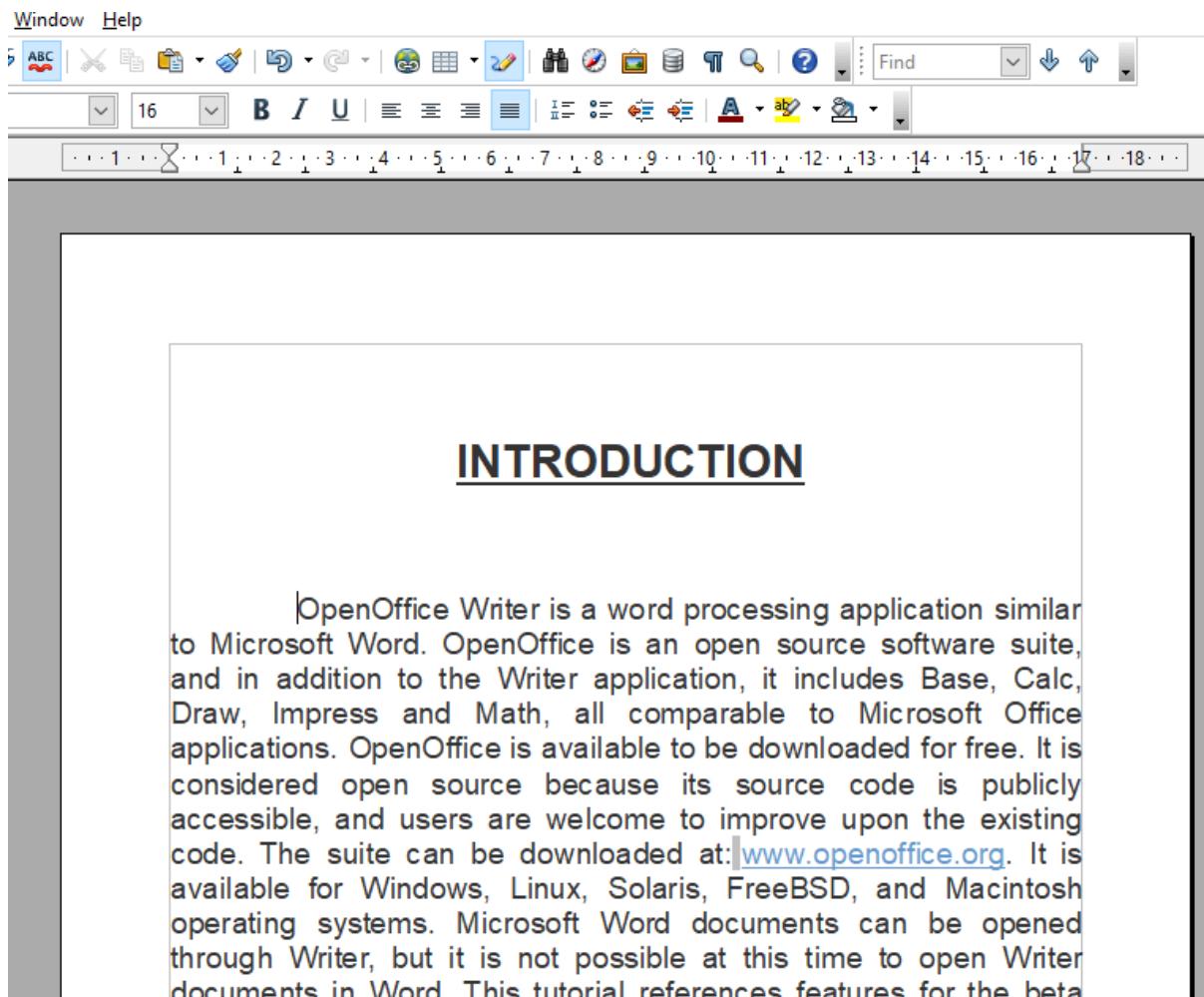
- You can set your paragraph to be lined up in the right, left or centered position on the page.
- You can set alignment after or before you type.
- If you need to change alignment after typing then just select the word or paragraph and use the following buttons on the object toolbar.

Left: aligns the text along the left margin of the page.

Centered: aligns text in center position. Mostly this alignment is used for the title of the paragraph

Right: aligns the text along the right margin of the page.

Justified: Makes each line of text reach the left and right margin of the page

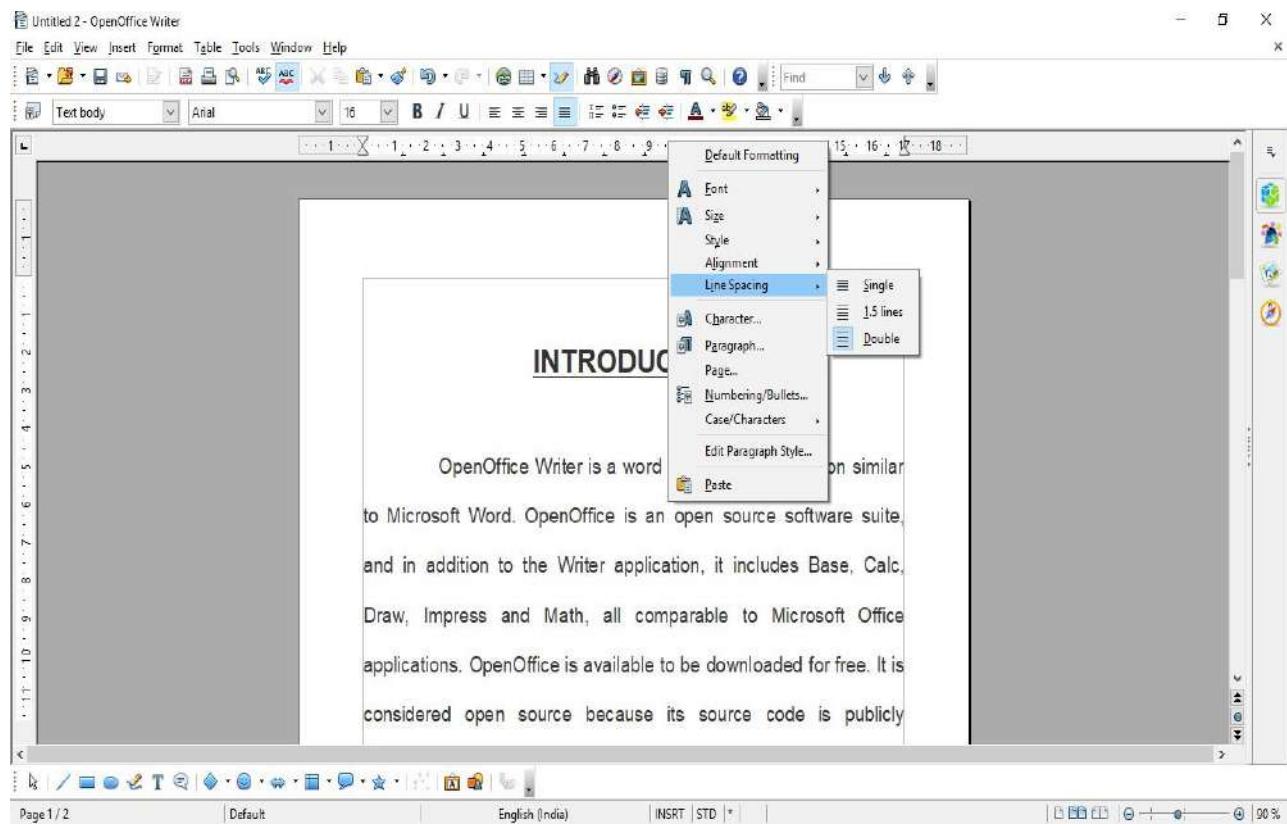


The screenshot shows the OpenOffice Writer application interface. At the top is a toolbar with various icons for file operations, text styling, and document manipulation. Below the toolbar is a menu bar with 'Window' and 'Help'. The main workspace is a large white area with a thin black border. In the center of this workspace, the word 'INTRODUCTION' is written in a bold, dark blue font and is underlined. The text is enclosed in a thin black rectangular border. The entire application window has a light gray background.

OpenOffice Writer is a word processing application similar to Microsoft Word. OpenOffice is an open source software suite, and in addition to the Writer application, it includes Base, Calc, Draw, Impress and Math, all comparable to Microsoft Office applications. OpenOffice is available to be downloaded for free. It is considered open source because its source code is publicly accessible, and users are welcome to improve upon the existing code. The suite can be downloaded at: www.openoffice.org. It is available for Windows, Linux, Solaris, FreeBSD, and Macintosh operating systems. Microsoft Word documents can be opened through Writer, but it is not possible at this time to open Writer documents in Word. This tutorial references features for the beta

Spacing:

- Line spacing is the space between each line in a paragraph.
- Open office allows you to customize the line spacing to be single spaced (one line high), double spaced (two lines high), or any other amount you want.
- The default spacing is **1.08** lines, which is slightly larger than single spaced.
- To apply spacing, right click the paragraph and select line spacing option from list
- Now select any of the option, single 1.5 line or double.
- According to your selected option lines will be set in amount of space.



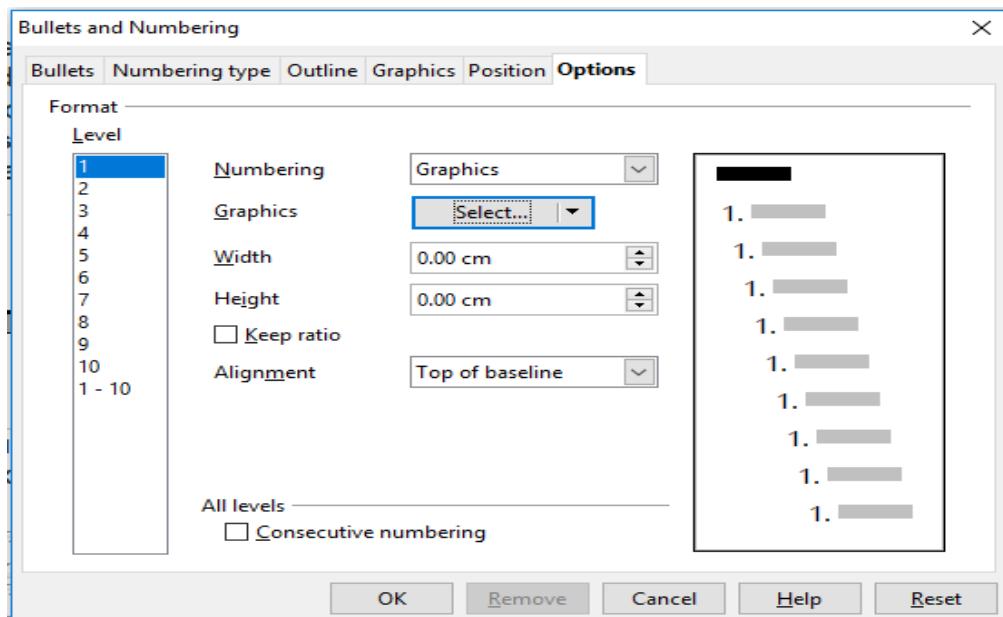
Bulleting List

- Use bulleted lists when the items need to get set in list.
- It's easy to turn an ordinary paragraph into a bulleted paragraph
- Open office does all the heavy lifting for you. You may spend more time choosing a bullet style than applying it.
- By default it prints single dot
- You can set your bullets before you start typing or change regular text to bulleted text

- Open office adds a bullet for each paragraph, which means that each time you press enter, you get another bullet.
 - To create bulleted text, click the bullets on/off button on the object toolbar.
 - To change the way that your bullets look, choose format -> Number/Bullets. Choose the type of bullets that you want and click ok.
1. Choose format -> number/Bullets
 2. Select any of the bullet design of your choice.
 3. Click ok to apply bullets on your list.

Customizing bullets

- If you don't have to settle for the bullets shown on the menu open office have more choices for you.
 - You can even use your own graphics for bullets.
 - To explore the Bullet options available to you, follow this step
1. Choose format -> number/Bullets
 2. Select Options tab.
 3. From the Numbering drop-down list choose graphics.
 4. From the Graphics drop down list, choose from file.
 5. Choose your graphic file and click the open button.
 6. Change the size of image using width and height text boxes.
 7. Click ok



 **Numbered paragraphs**

- In most cases, numbered paragraphs work just like bulleted paragraphs.
- You can follow the step-by-step instructions in the previous section for making bulleted paragraphs to make numbered paragraphs.
- Just click the Numbering type tab, and then choose a number style
- The main distinction between the numbered paragraphs and the bulleted paragraphs is in the options.
- For numbered paragraphs, you can choose from Arabic numbers, Roman numerals, numbers set off by parentheses, and alphabetic sequences. You can even use words such as One, Two, Three, or First, Second, Third.

 **Headers and Footers**

- You can create headers and footers for your pages.
 - The most common use for headers and footers is to insert page numbers.
 - A header always stays at the top of the page and footers rely at the end of the page.
 - It sets the generalized format of the document.
 - To create a header or footer follow these steps,
1. Choose Format-> Page to open the page style dialog box.
 2. Click header tab or footer tab
 3. Select header On check box or the footer On check box.
 4. Specify the rest of the setting for the header or footer as follow:

Same content left/right: Inserts the same header or footer content on both even and odd pages

Left margin: Sets the left margin between the page **Right**

margin: Sets the right margin between the page

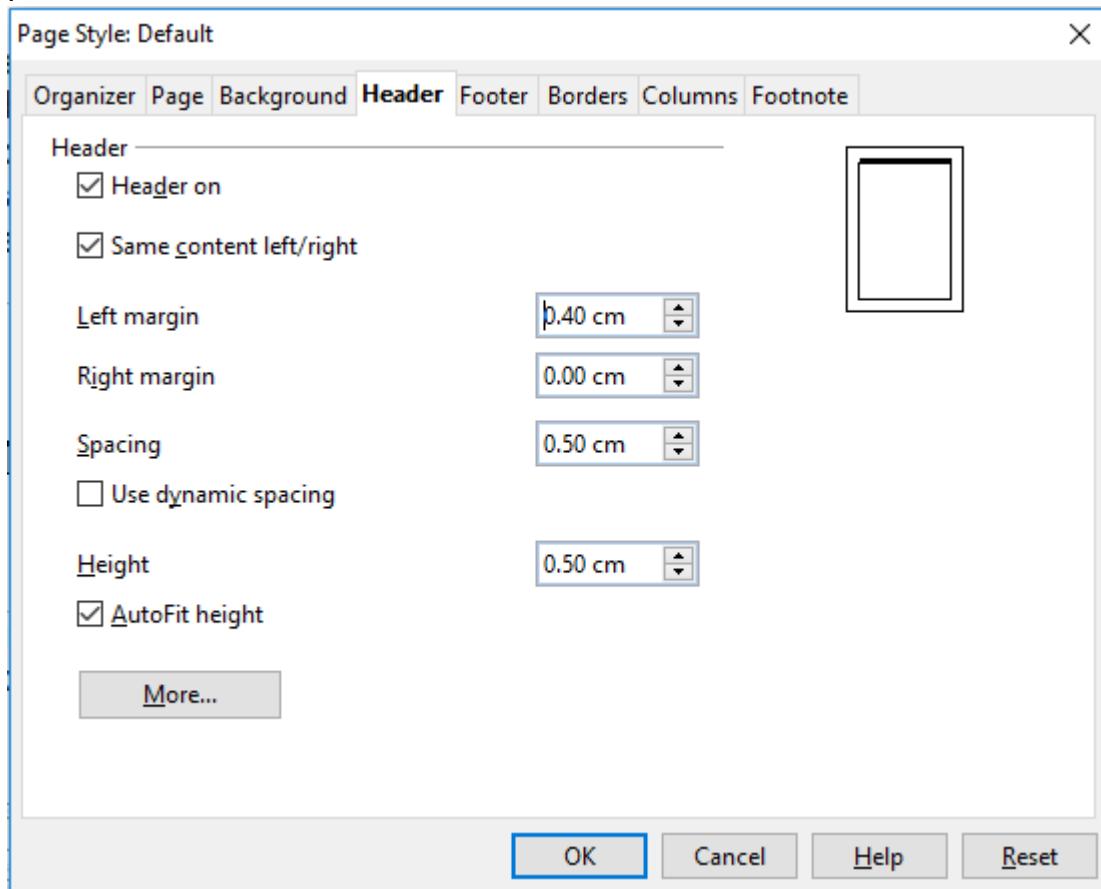
Spacing: sets the space between the top or bottom of the page text and the header or footer

Use dynamic Spacing: Allows the header or footer to expand toward the text, overriding the spacing setting.

Height: Sets the height of the header or footer

AutoFit Height: adjust the height of header or footer according to the amount of text.

5. Click ok to return to your document
6. Click inside the header or footer, and enter the text that you want to place.

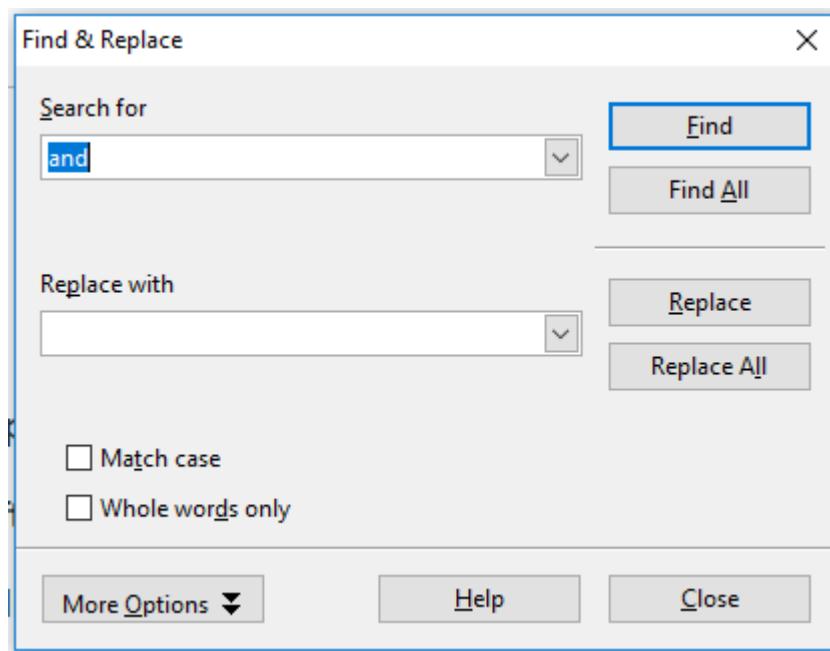


Numbering Pages

- The most common use for a header or footer is to insert page numbers.
- Open office uses to create page numbers. Follow these steps,
 1. To place page numbers at the top of the page, create header. For page numbers at the bottom of the page, create footer.
 2. Click inside the header or footer
 3. Choose insert -> fields -> page number
 4. To move the page number (left, right, center) select a page number.
 5. Choose the desired alignment on the object toolbar.

Finding & Replacing text

- Sometimes you need to change a certain word in many places.
- For eg, when you reuse a document that you created for one client now you need to reuse that document to another client. There must be some changes like name, address etc.
- You can simply do this with this feature of open office
- Enter the text that you want to find in search list box. To find the next instance of the text, click the find button.
- To select all the instances of the text, click find all button.
- To replace text, enter the new text that you want in the replace with list box.
- You can click replace all button to replace all instances of the text.
- Use the option panel of the dialog box to specify whole words to match the case (like find only KING not king).
- To use this feature select edit -> find & replace.

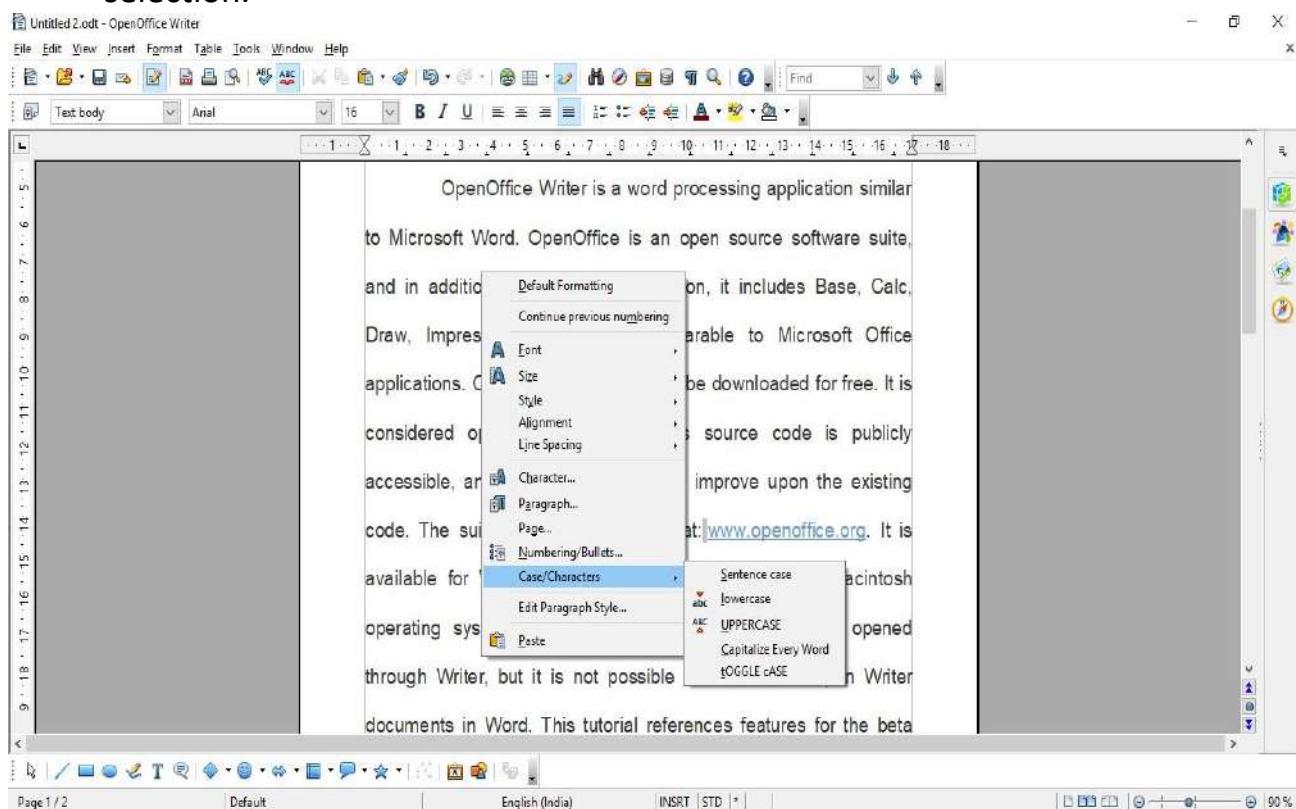


CHANGE CASE

- Any letter can be uppercase or lowercase, but when you get to words and sentences, you find some variations on the theme.
- It's not unusual to have a heading or a company name where all the letters are capitalized.
- Sentences start with an initial cap on the first word only, and titles

usually have the major words capped. In an effort to automate anything that can possibly be automated,

- Open office provides the Change Case menu.
- The Change Case command defies the usual rules about selecting before you apply character formatting.
- If you don't select anything, open office assumes you want to apply the Change Case command to an entire word, so the program selects the word at the insertion point.
- If you've selected text, the command works, as you'd expect, only on the selection.



- **Sentence case** – in sentence case, the first word of each sentence has a capital letter and all other words are lowercase. For example, **the man went home. the house was empty. empty** becomes **The man went home. The house was empty. Empty**
- **Lowercase** – if you choose this option, all letters become lowercase.
- **UPPERCASE** – if you choose this option, all letters become uppercase.
- **Capitalise Each Word** – this option Capitalises Each Word in the Selected Text. As Demonstrated Here.

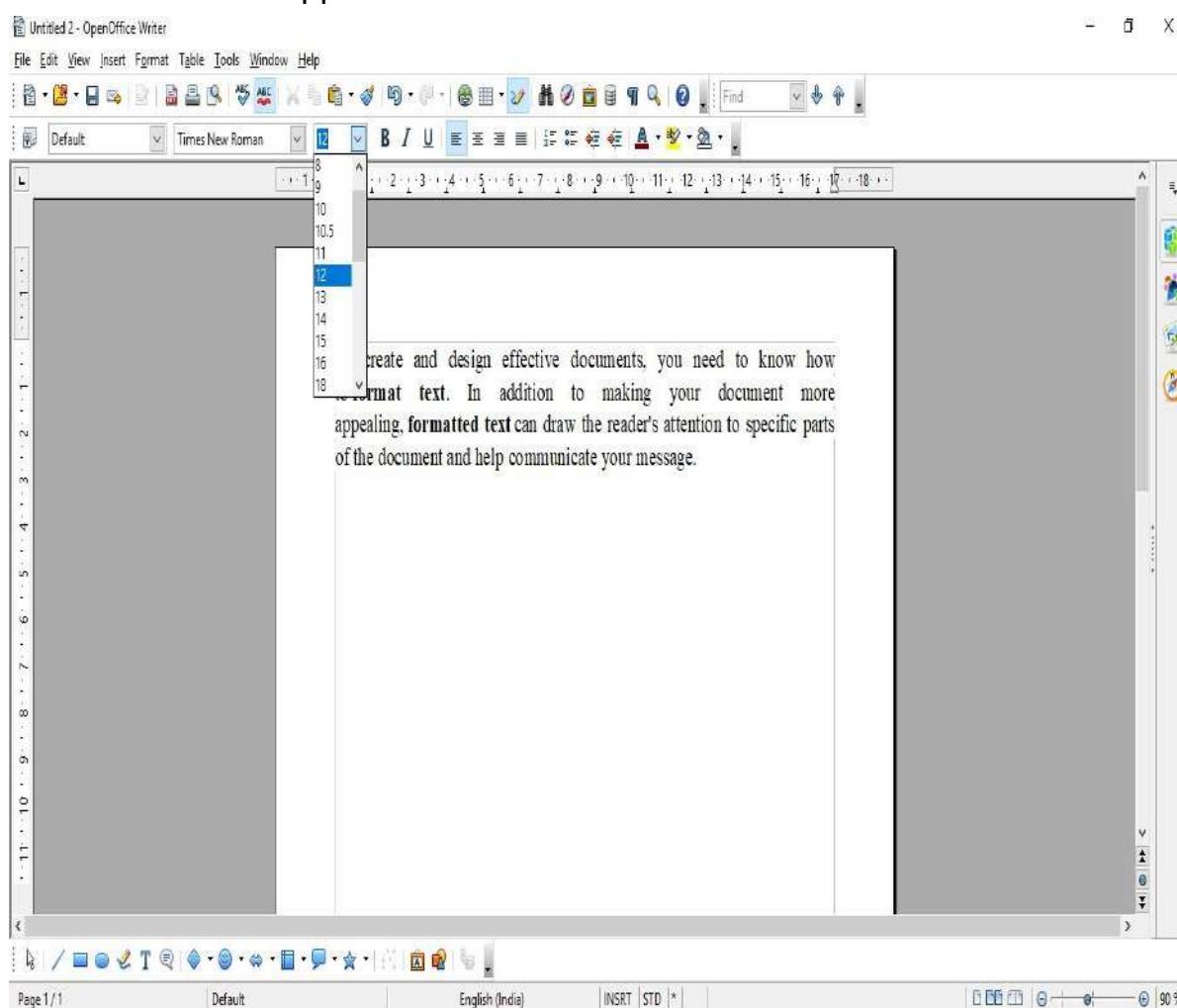
- **Toggle Case** – choosing this option reverses the case of each letter so that **i l o V e T O d A N c E T h E s L O W f o X T r o T** becomes **I L O v E t o D a n C e t H e S l o w F o x t R o t.**

❖ **AUTOMATICS FORMATTING AND STYLES**

To create and design effective documents, you need to know how to **format text**. In addition to making your document more appealing, **formatted text** can draw the reader's attention to specific parts of the document and help communicate your message.

- **To format font size:**

- Select the text you want to modify.
- Left-click the **drop-down arrow** next to the **font size box** on the Home tab. The font size drop-down menu appears.
- Move your cursor over the various font sizes. A **live preview** of the font size will appear in the document.

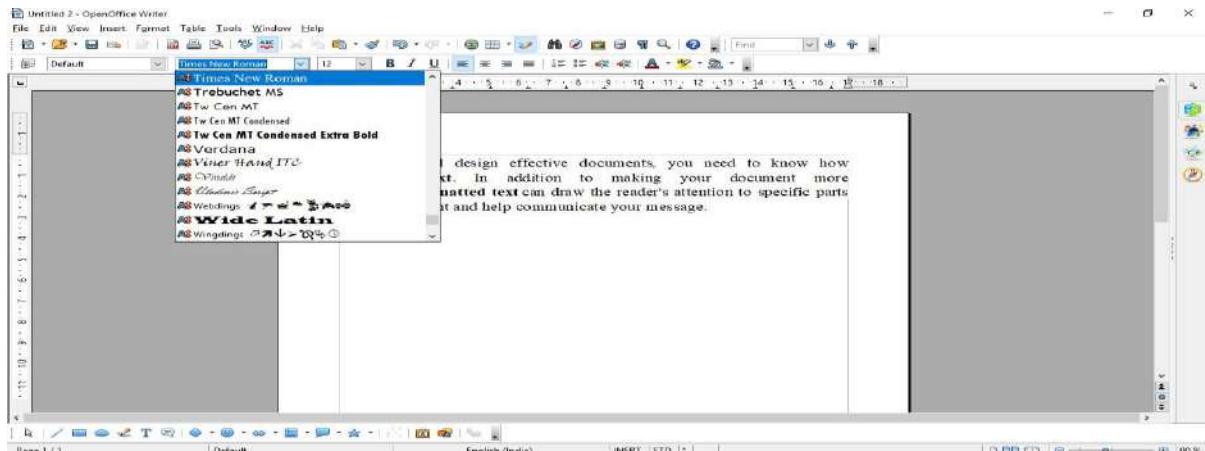


- Left-click the font size you want to use. The font size will change in the document.

■ To format font style:

- Select the text you want to modify.

Left-click the **drop-down arrow** next to the **font style box** on the Home tab. The font style drop-down menu appears. Move your cursor over the



various font styles. A **live preview** of the font will appear in the document.

- Left-click the font style you want to use. The font style will change in the document.

■ To format font color:

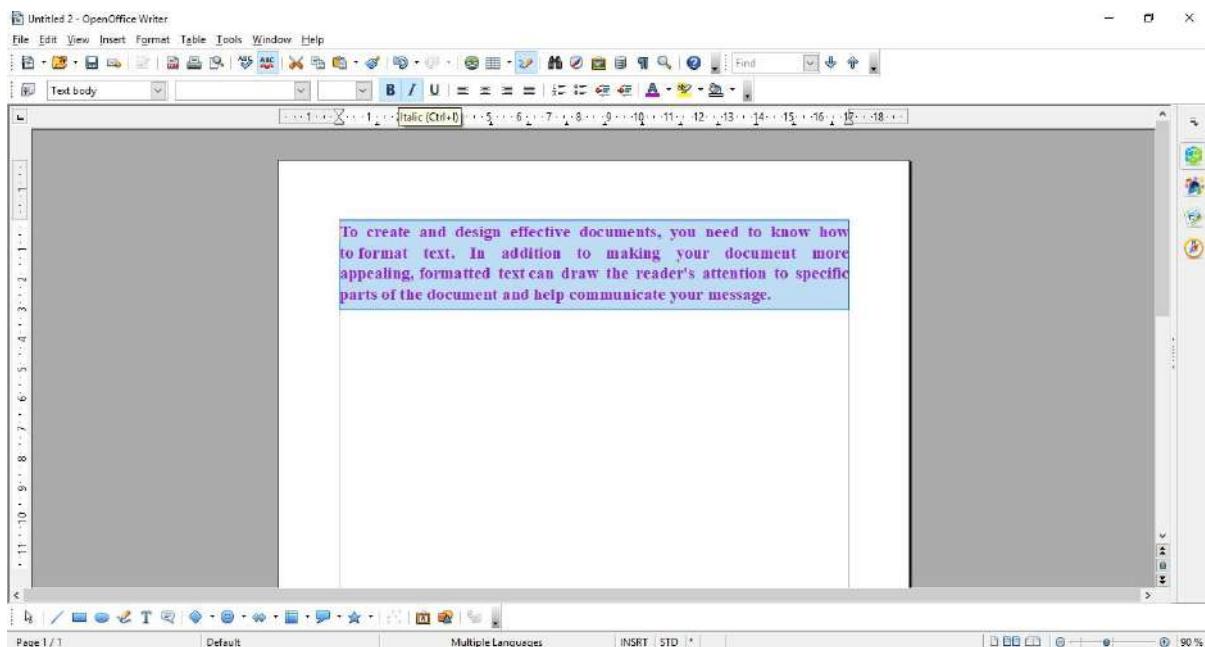
- Select the text you want to modify.
- Left-click the drop-down arrow next to the **font color box** on the Home tab. The font color menu appears.
- Move your cursor over the various font colors. A live preview of the color will appear in the document.
- Left-click the font color you want to use. The font color will change in the document.

Your color choices aren't limited to the drop-down menu that appears. Select **More Colors** at the bottom of the list to access the Colors dialog box. Choose the color you want, then click OK.

■ To use the bold, italic, and underline commands:

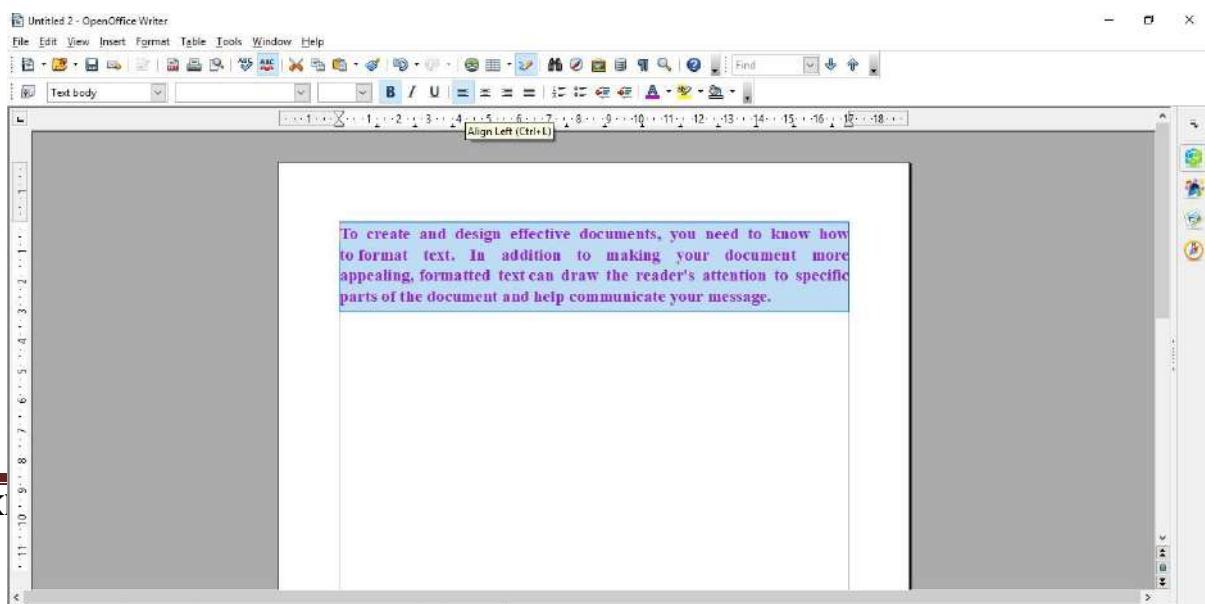
- Select the text you want to modify.

- Click the bold, italic, or underline command in the **Font group** on the Home tab.



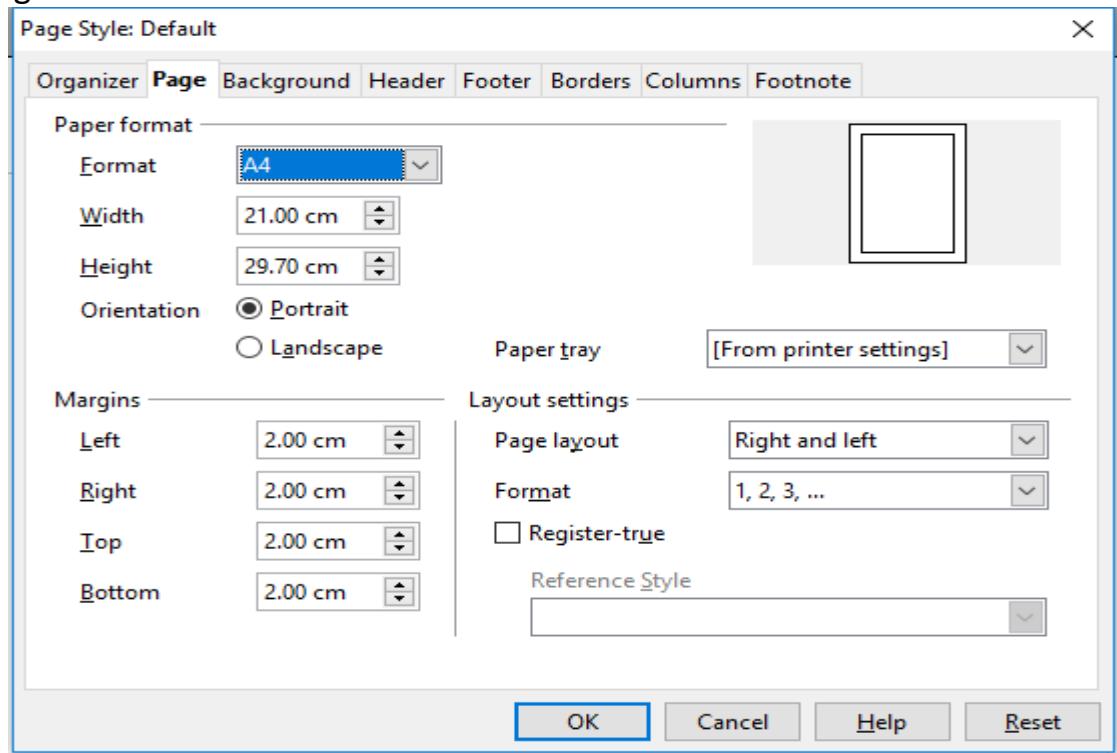
- To change text alignment:

- Select the text you want to modify.
- Select one of the four **alignment options** from the Paragraph group on the Home tab.
 - Align Text Left:** Aligns all of the selected text to the left margin
 - Center:** Aligns text an equal distance from the left and right margins
 - Align Text Right:** Aligns all of the selected text to the right margin
 - Justify:** Aligns text equally to the right and left margins; used in many books, newsletters, and newspapers



Setting paper size, margin and orientation

- The paper size specifies the paper's size and type.
- The margins decide how much white space you have around the edges of your text.
- The orientation determines whether the narrow or the wide edge of your paper is on top.
- To change paper size, margins and orientation select Format
- Page.



■ Paper size and orientation

- Use the paper format panel of the page style dialog box to specify the page size and orientation
- From the format drop down list, select the paper type, which generally means the paper size.
- the default paper size is letter
- When you select a paper type, the dimensions automatically adjust. You can create custom paper sizes. in fact you change the dimension by yourself, the paper type automatically changes to user.
- You have to put proper paper type into the printer to get proper print.
- Choose portrait or landscape to set the orientation. the image of the paper changes accordingly so that you can be sure the right choice.

- **Margins**

- In the margins panel of the page style dialog box, you set the left, right, top and bottom margin.
- You can type a number or click the arrow keys in the list boxes to increase or decrease the current setting.
- Specify whether to apply the formatting to odd pages, to even pages or to both.

- **Layout setting**

- In the layout settings panel of the page style dialog box, you specify settings that determine how the page is laid out.
- This setting applies to all the other formatting settings and allow you to apply different settings to odd and even pages. You have following option,

Right and left: applies the same formatting to both even and odd pages.

Mirrored: Mirrors the formatting. For e.g., if you have a larger left margin on the first page to leave room for binding, the second page will have a larger right margin.

Margin: The margin setting changes from left and right to outer and inner.

Only right: applies formatting only to the odd pages

Only left: applies formatting only to the even pages

USING STYLES

Styles are collections of font or paragraph settings that define how your text looks.

- You can ignore styles for short documents but for long documents use styles which give uniformly settled look to your document.
- Especially with repeated features like heading and all.
- It also helps you make global changes if you need to do so.
- With the style you can add many features into your document.
- For e.g. how much space comes after every paragraph?

- **Open office offers following kind of styles:**

Paragraph: formats entire paragraph. This is the most common type.

Character: formats one or more characters

Frame: formats text frames and frames for graphics.

Page: Formats the structure of a document. Like page no, margins etc.

Numbering: Formats bullets and numbers.

- Open office comes with many styles already set up for you. So you can start creating a basic document without any preliminary setup.
- The most efficient method of selecting a style depends on how much of your document has been created, as follows:
- The stylist panel accesses all styles or selected set of style.
- The apply style drop-down list on the object toolbar access styles that are already used in document.

Drop-down list

- The apply style drop-down list is found on the object toolbar.
- This list only includes styles that you have already used in your document.
- To apply a style from the apply style drop –down list, select the text and select any style that you want from the list.

Stylist panel

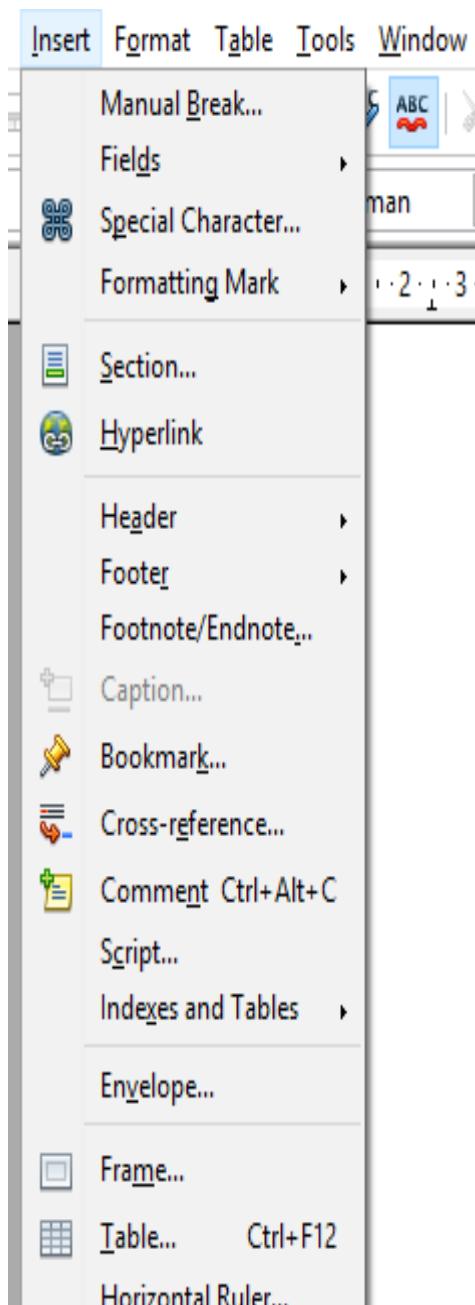
- The stylist panel is devoted to styles. You can open this panel by following steps:
- Select stylist on/off on the function toolbar.
- Press F11.
- Select format -> stylist.
- Protect Document
- For the ultimate protection, you can secure your document with the defined password.
- You can only password protect documents that you save in OpenOffice.org's native .sxw format

Follow such steps,

1. Select File -> save as
2. Select save with password check box.
3. Click the save button
4. Enter the password twice, once in password text box and second in confirm password text box.
5. Click ok.

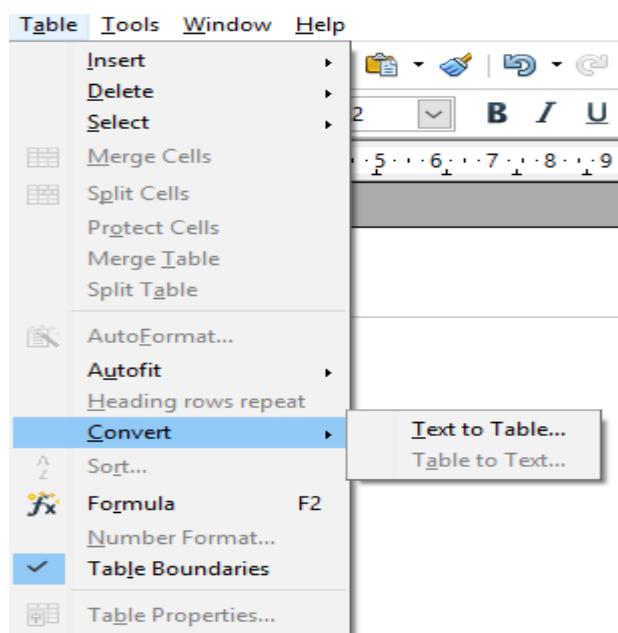
❖ **WORING WITH TABLES**

- A **table** is a grid of cells arranged in **rows** and **columns**. Tables can be customized and are useful for various tasks such as presenting text information and numerical data.
- There are multiple ways to insert a table.

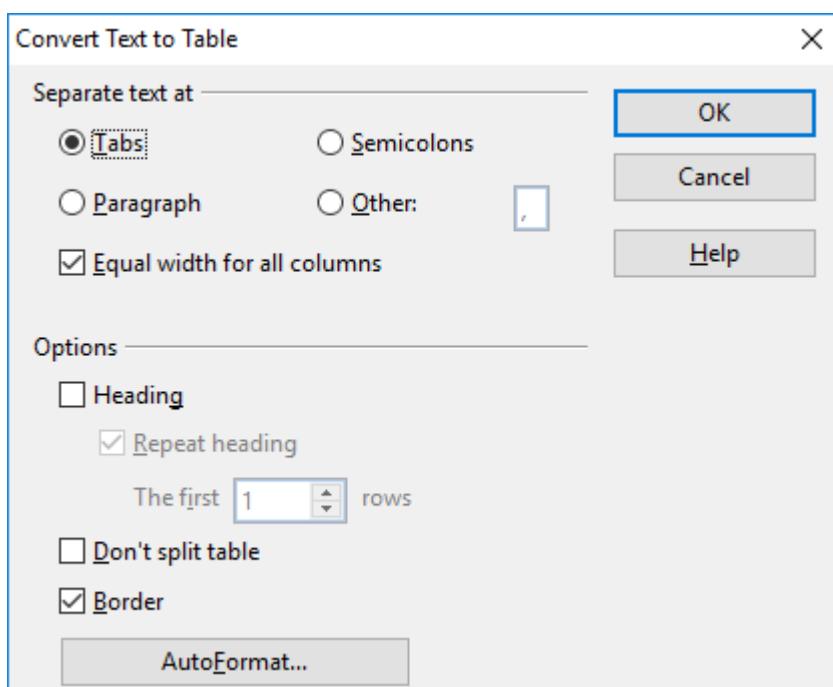


▪ **To convert existing text to a table:**

- Select the text you want to convert.
- Select the **TABLE** tab.
- Click the **CONVERT** command.



- Choose one of the options in the **Separate text at:** section. This is how text area knows what text to put in each column.



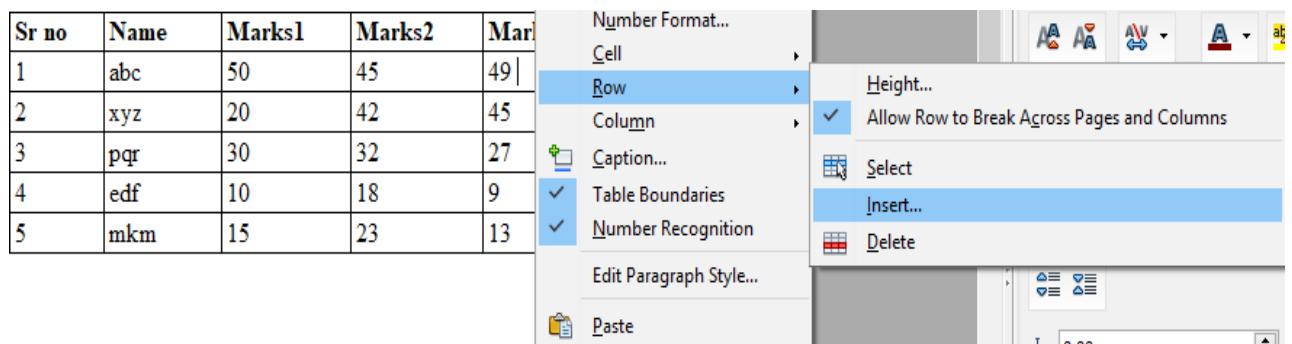
- Click OK and the text appears in a table.
- To add a row above an existing row:**

- Place the insertion point in a row below the location where you want to add a row.

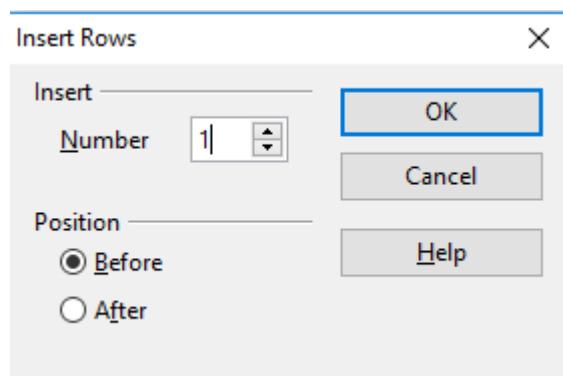
Sr no	Name	Marks1	Marks2	Marks3
1	abc	50	45	49
2	xyz	20	42	45
3	pqr	30	32	27
4	edf	10	18	9
5	mkm	15	23	13

Khyati Sola

- Right-click the mouse. A menu appears.
- Select **ROW** → **INSERT**.



- Dialogue box will appear. Enter the no of rows you want to insert and select the position before or after.



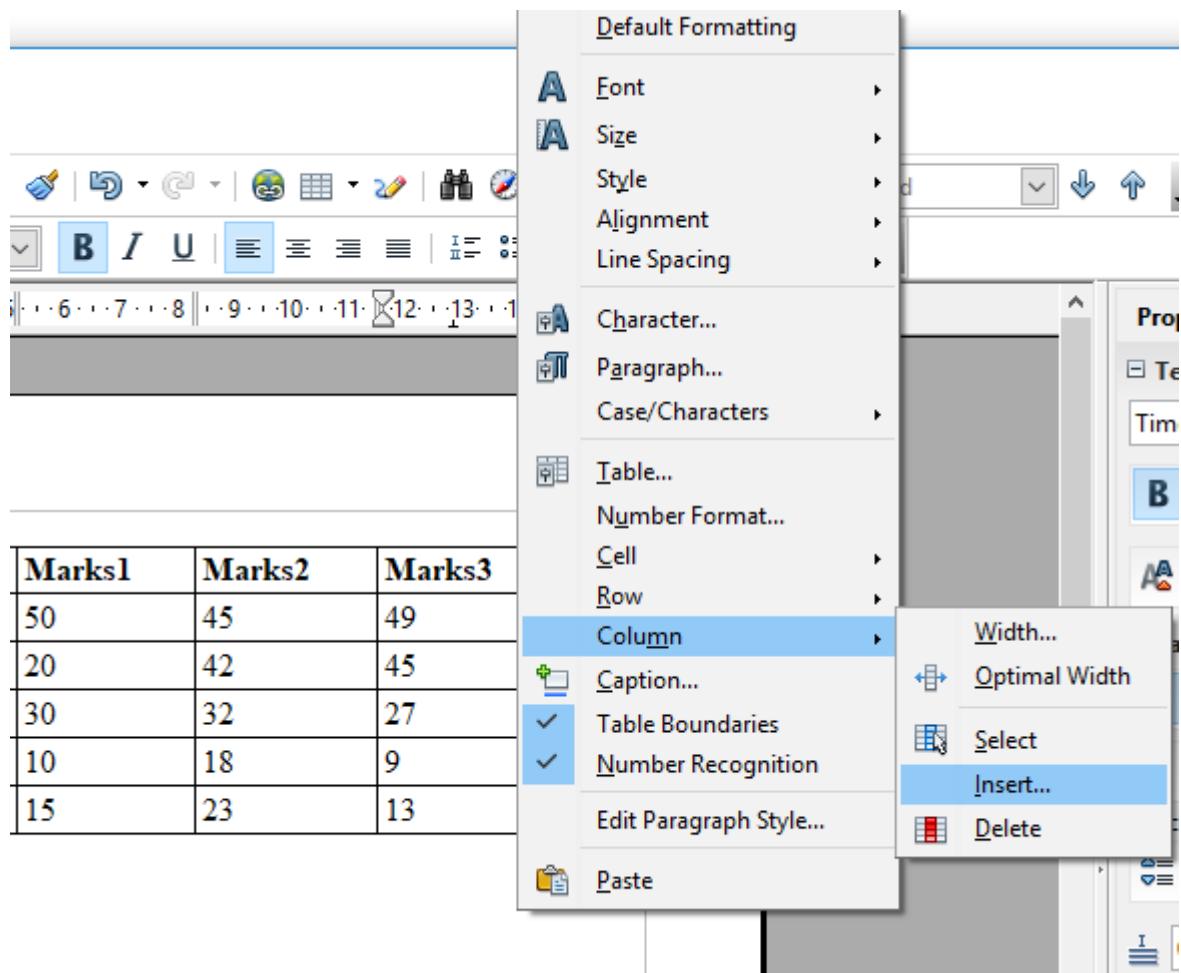
A new row appears **before** the insertion point.

Sr no	Name	Marks1	Marks2	Marks3
1	abc	50	45	49
2	xyz	20	42	45
3	pqr	30	32	27
4	edf	10	18	9
5	mkm	15	23	13

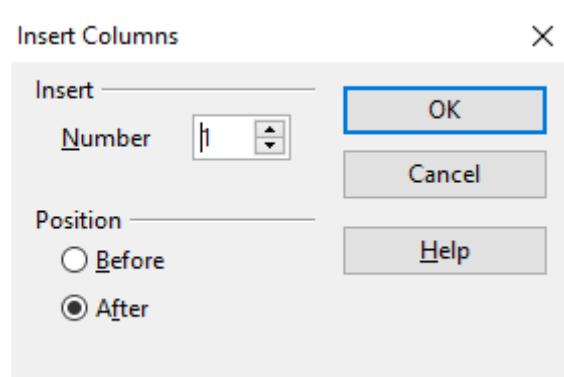
You can also add rows after the insertion point. Follow the same steps, but select after option from the menu.

- To add a column:
- Place the **insertion point** in a **column adjacent** to the location where you want the new column to appear.

- Right-click the mouse. Select **Column ->Insert** option



- Select **Insert** → **no of columns** and select position **before or after**.
A new column appears.

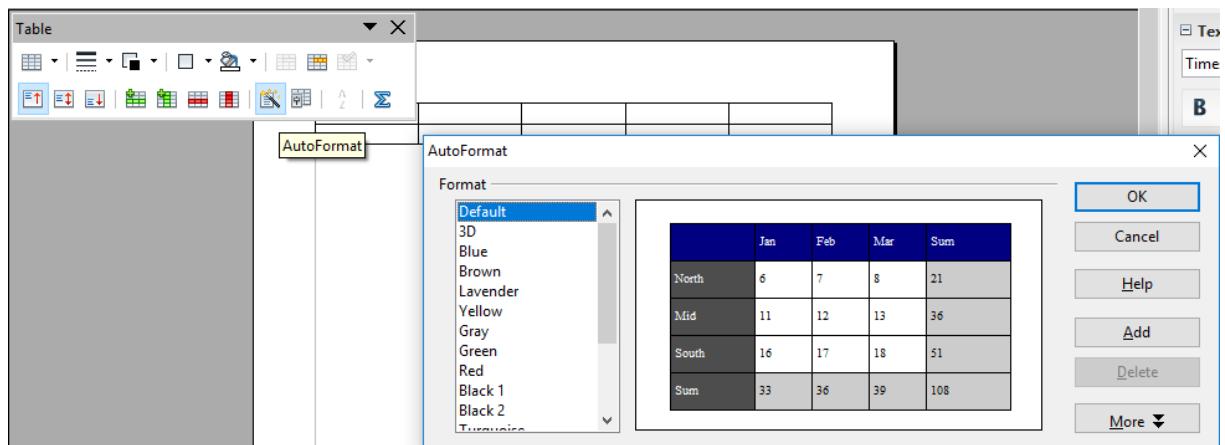


■ To delete a row or column:

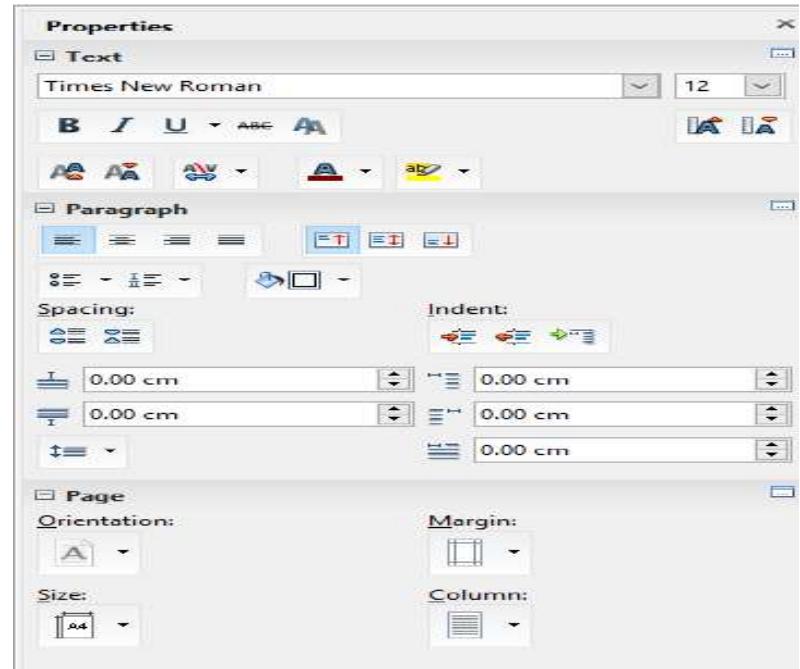
- Select the row or column.
- Right-click your mouse, and a menu appears.
- Select **Column-> delete** or **Row-> delete**.

▪ **To apply a table style:**

- Select the **AUTO FORMAT** option from the table option shown on the left side of the page.
- It will display the following menu screen
- You can select no of styles for a table layout from here

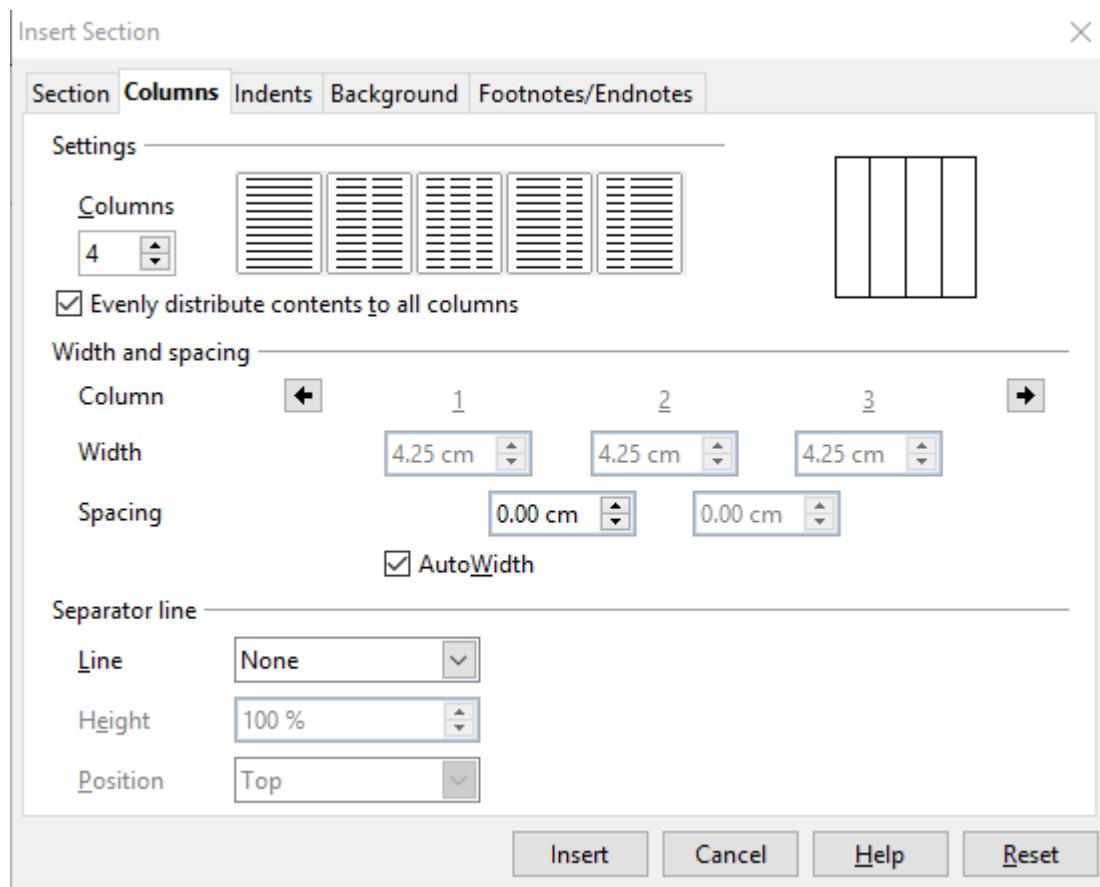


- Click through the various styles from the different section.
- You can manually change the table border or shading, change line weight, or erase part of the table.
- There is properties menu which allows you to do many things with the table and its text. You can make a variety of modifications to the table, including:
 - Size of the font
 - Type of the font
 - Alignments of text
 - Spacing
 - Margin etc.



Working with Sections

- If there is need to have one part of your document having one column and other part is having two columns you can use section.
- Section divides your text.
- You can use sections to vary the no of columns.
- To insert a section, follow these steps,
 1. Click where you want to insert a section. You can also select existing text to convert it to a section.
 2. Select Insert -> section
 3. In the new section text box, enter name for the section
 4. Click the columns tab and set the columns as described in previous section
 5. Click the insert button.

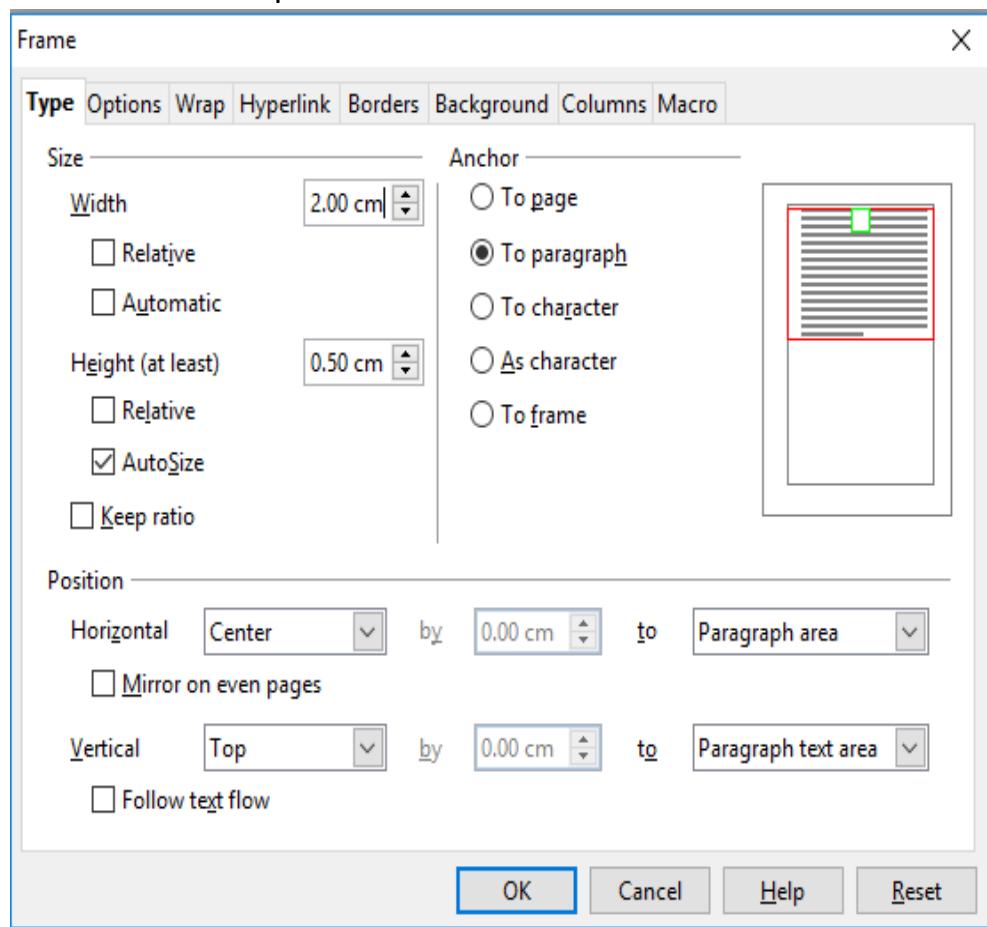


Graphics & Frame

- Frame for a page in writer is something like you creating a birthday card.
- When you add a border to text, the text stays in in the page's alignment and column settings.
- But if you need to move a box of particular text anywhere in the page

then you can use “Frame” concept of writer.

- To insert an empty frame follow this steps,
 1. Choose insert -> frame from the menu list
 2. One window appears called “Frame”, you can design your frame here with the various option



3. After clicking on OK the frame will be display on page in that you can enter your text, image or any clip art.



- You can change the dimension any place of frame with drag and drop.
- If you move the frame then the text will also move along with the frame.

You can manipulate frame in following manner,

Move it: click the frame to select it. Move the cursor so that you see a four-headed arrow and drag in any direction

Resize it: Click the frame and drag any of the handles **Delete it:**

Click the frame and press delete

Edit the text: Click inside the frame and edit the text as per the requirements.

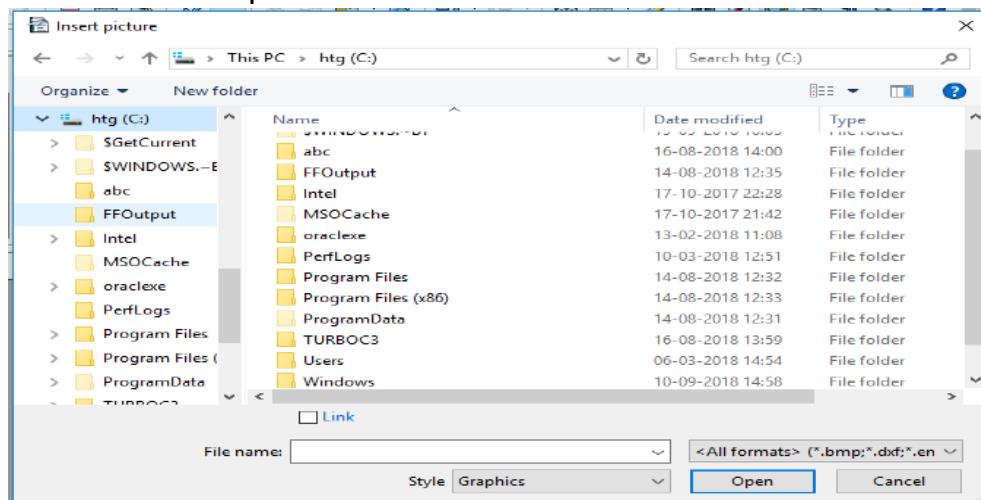
Graphics:

- You can make your document more interesting and eye pleasing by adding clipart, shapes and images which comes under the graphic section.
- Open office offers lots of features for adding graphics.
 - Clipping art
 - Gallery
 - Shapes

▪ Clipping Art

The easiest way to insert art is to find some and insert it. To insert an image follow this step,

1. Click your document where you want to the graphic to appear
2. Choose Insert->Picture->From File.
3. In the Insert Picture dialog box, locate and click the graphic file that you want.
4. Click the open button



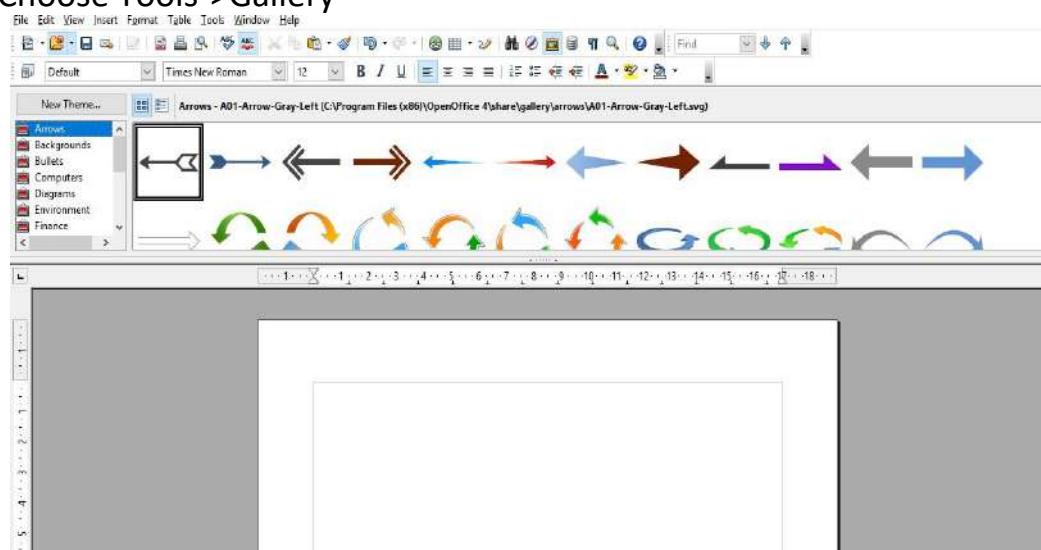
To edit your image as per the requirement, right click on the image and select format picture, u will get “Format Text Effects” on right side of the screen.



➤ Gallery

- The gallery is a place to hold graphics.
- Open office comes with a selection of 3-D shapes, bullets and other graphics.
- This is not a clipart
- To use the Gallery, follow these steps

1. Choose Tools->Gallery



2. Select any of the themes in the gallery

Right click on that particular graphic, select insert and then choose required option.

3. You can create your own customized theme with gallery option.

Follow define step to create your own theme

4. Choose toolbar->gallery

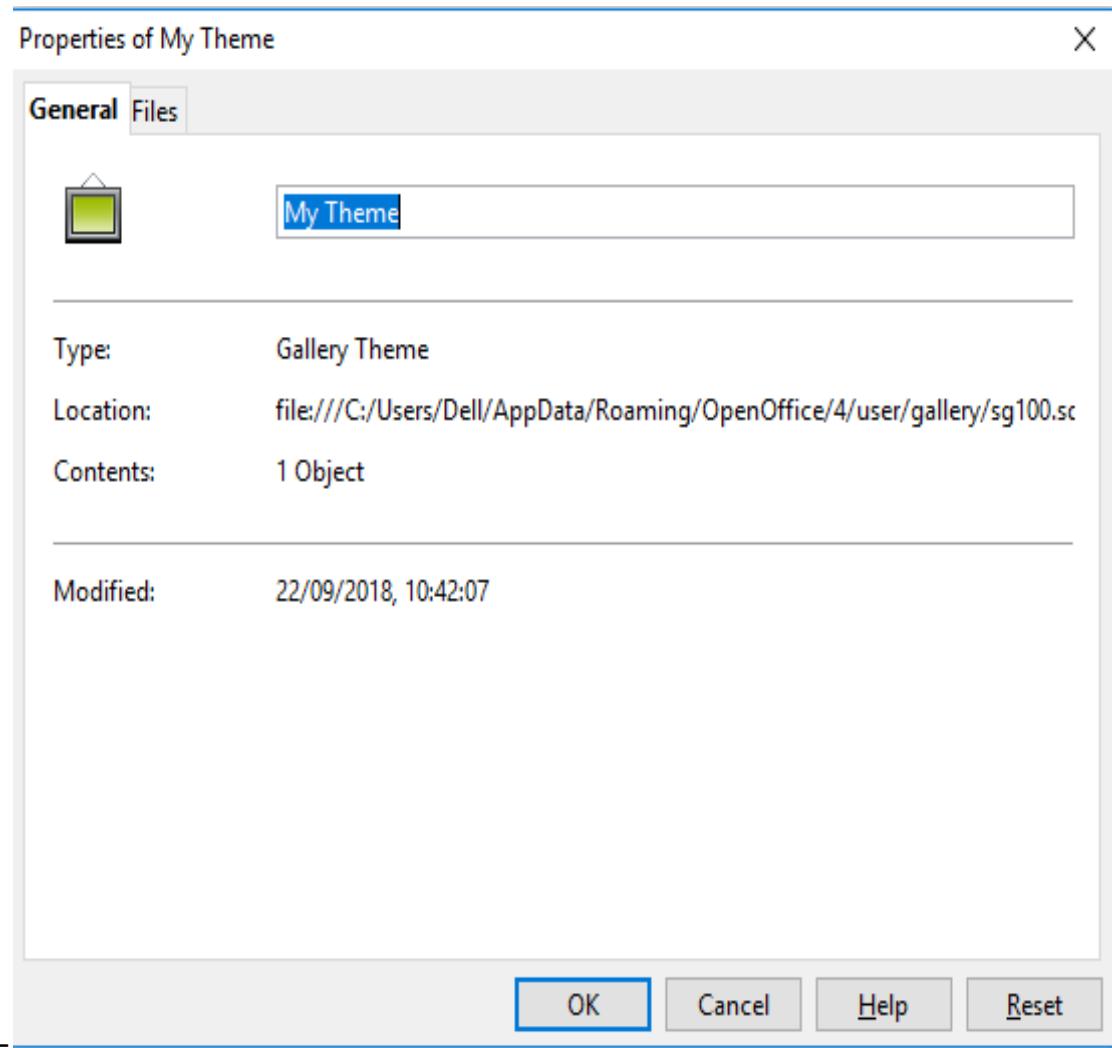
5. Click general tab and enter name of your theme

6. Click FILES tab

7. Click the add button, locate the file and press OK button

8. Now u can see your customized theme in new theme gallery section.

9. Right click on that particular theme, select insert and then choose Background.



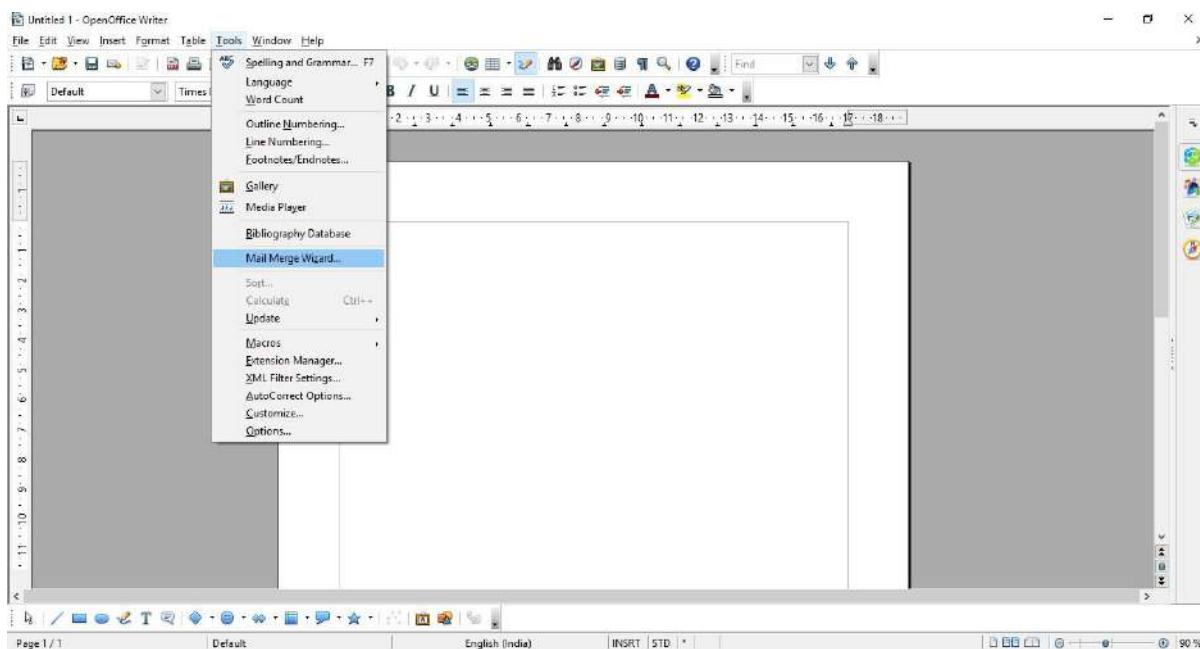
➤ Shapes

- Open office has an excellent supply of tools for creating your own shapes.
- You can insert shape into your document with the help of it.
- You can draw any shape like arrows, rectangle, circle etc.

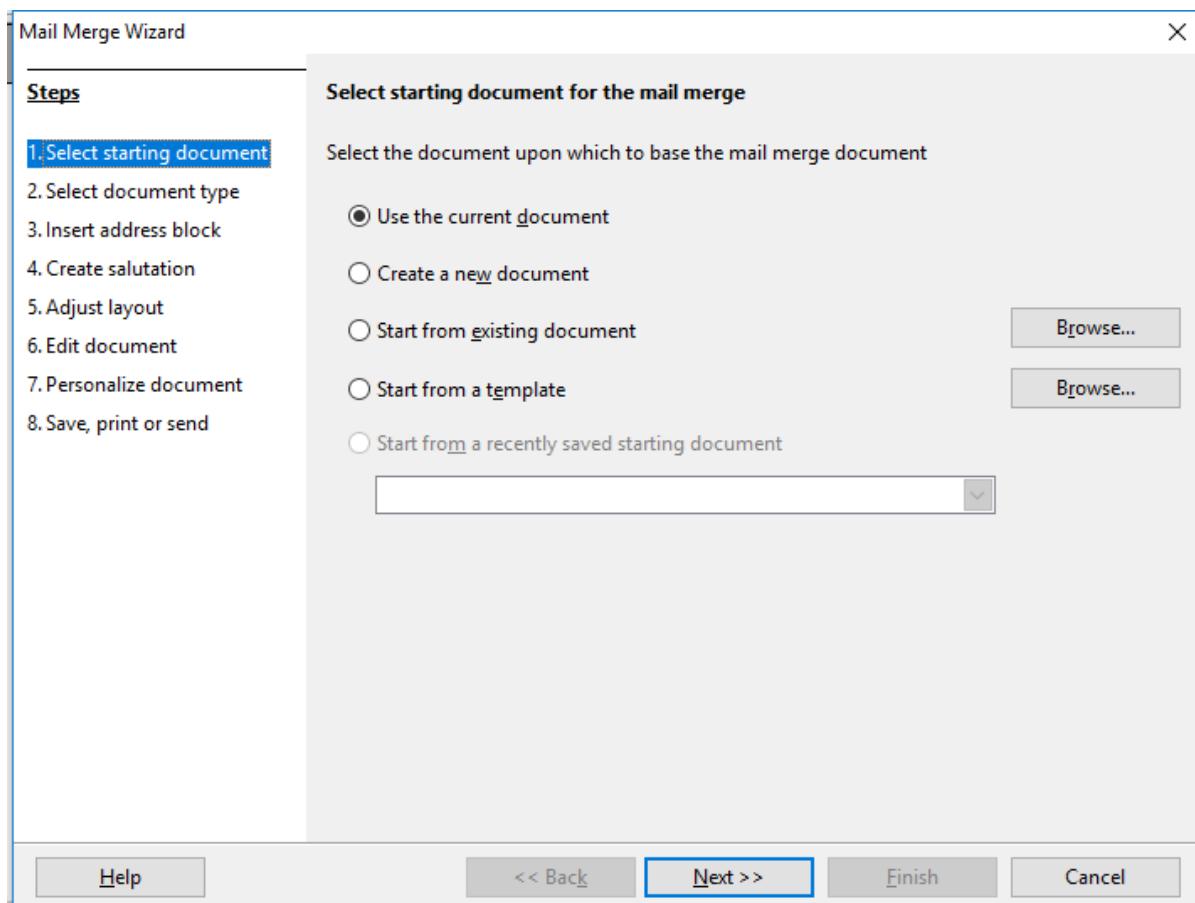
❖ Mail Merge

- Mail Merge is a useful tool that will allow you to easily produce multiple letters, labels, envelopes, and more using information stored in a list, database, or spreadsheet.
- Mail Merge is used to print personalized form letters, envelopes, mailing labels, etc. Form letters are those letters that have the same content. These letters are sent to several persons.
- Mail Merge is a word feature that is efficient and quick.
- The names, designation, address, etc. that differ from one letter to another are stored in one file and the main document that forms the body of the letter is stored in a different file.
- The mail merge feature combines these two files at the time of printing. It merges two files and produces a document that is usually mailed; hence it is called Mail Merge.
- The first file contains the complete text of the letter except the name and address of the person. This file is called the main document or the master document.
- Another file that is called the data file or the data source is used to store the names and addresses of person to whom the letters are to be sent.
- Mail Merge uses the main document and then picks up the first address from the data file to print the first letter. Then it picks the next address from the data file to print the second letter and so on.
- To use mail merge follow this steps,

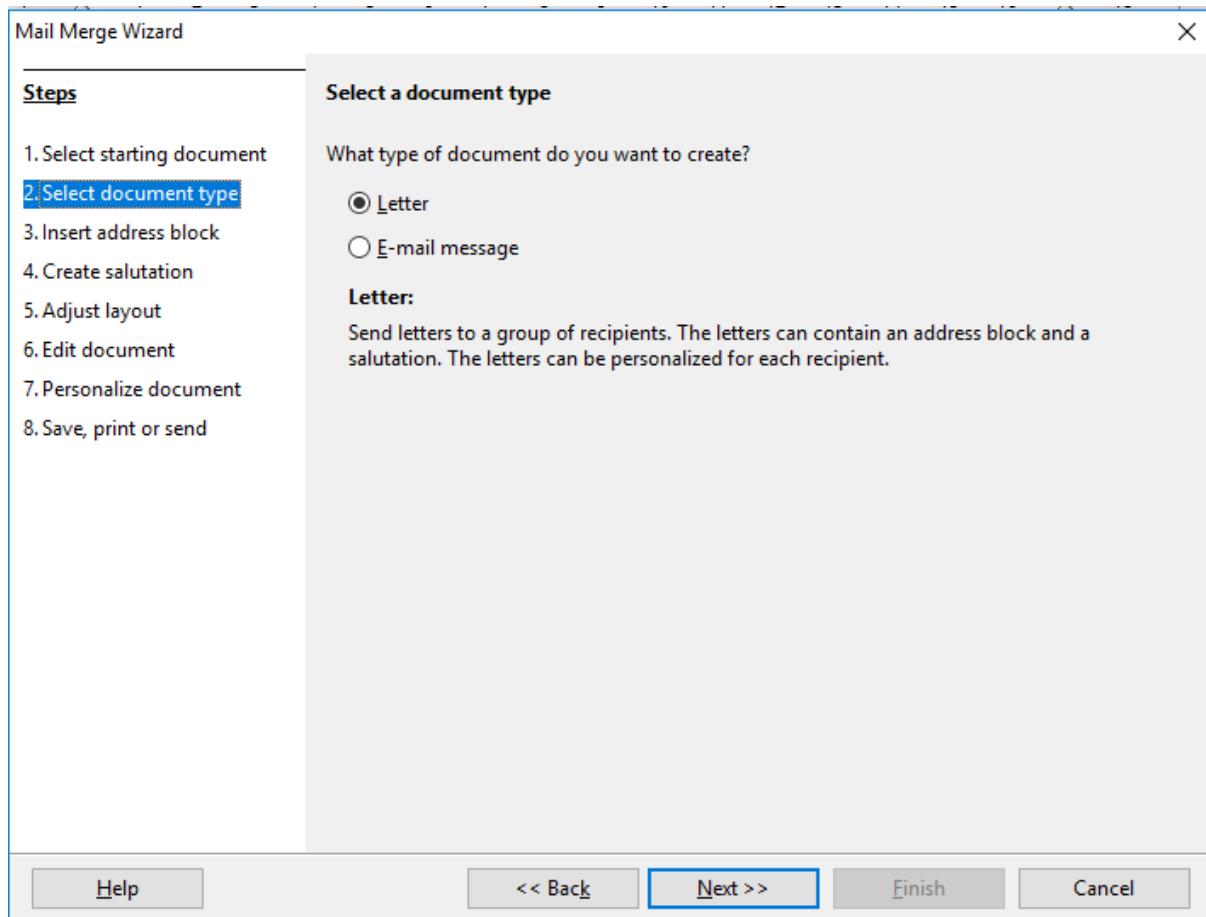
Step 1: Go to the Tools -> Mail Merge Wizard



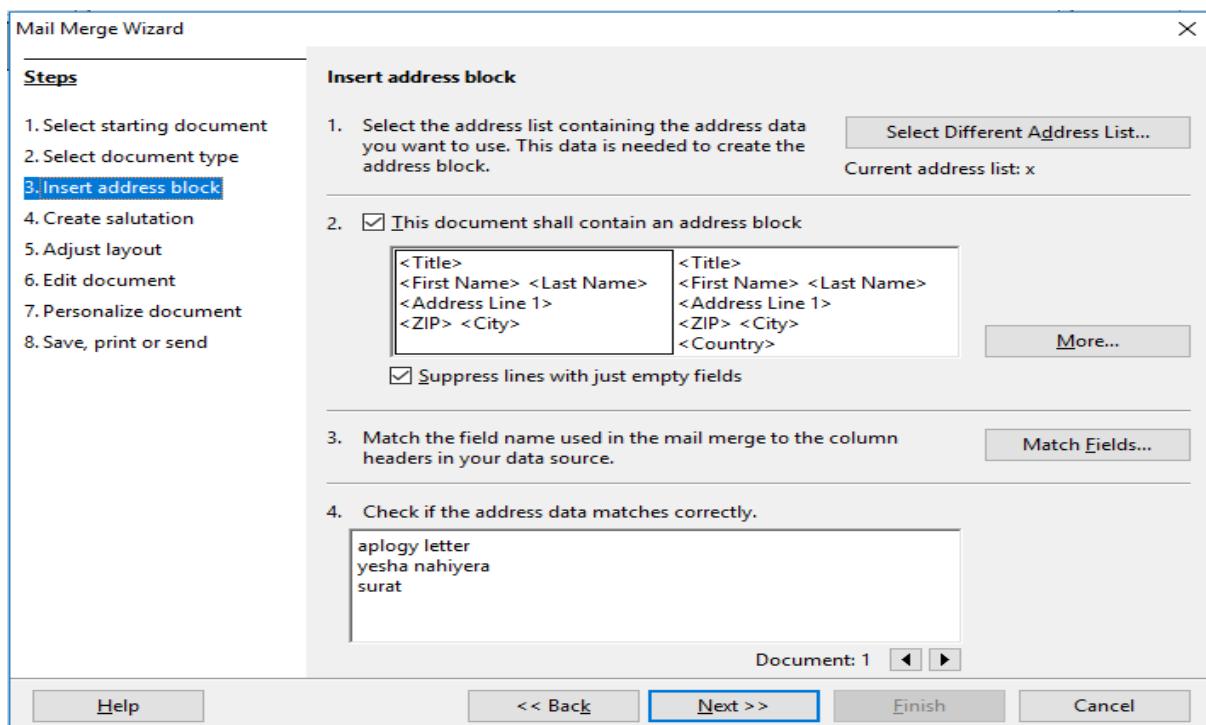
Step 2: SELECT THE STARTING DOCUMENT OR MASTER DOCUMENT FOR MAIL MERGE .



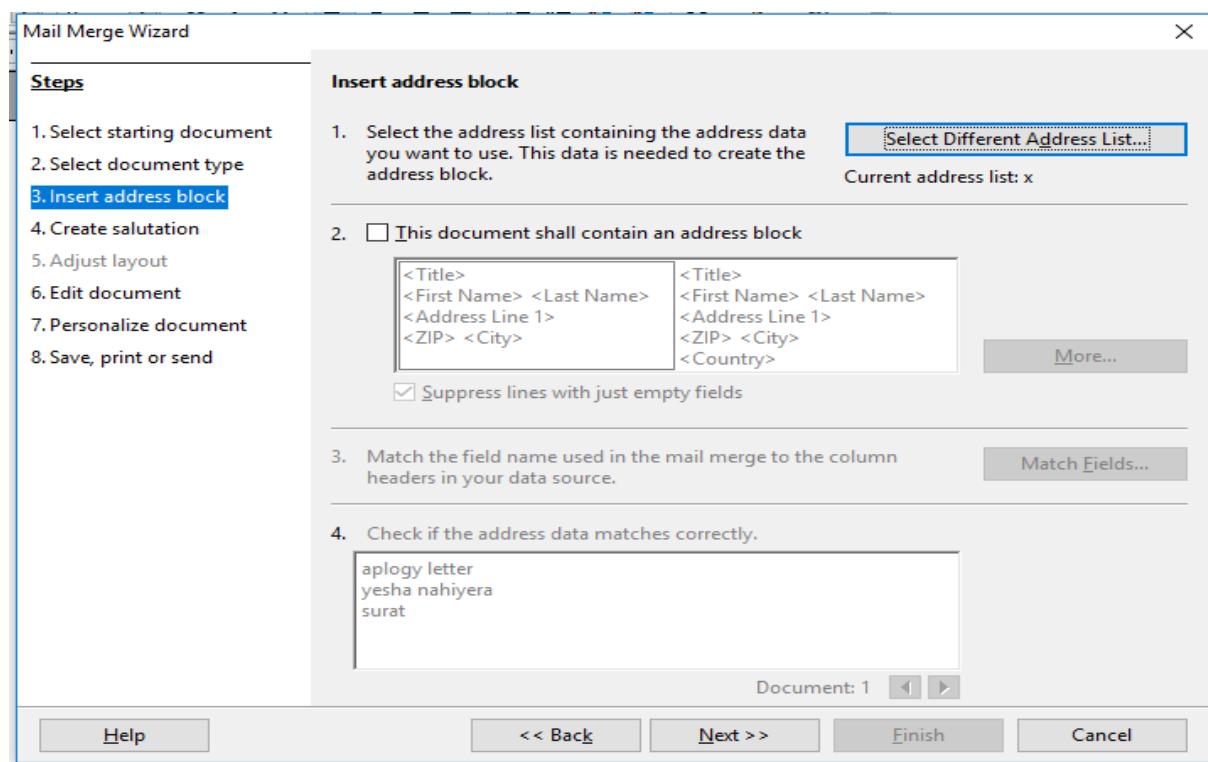
Step 3: SELECT THE TYPE OF DOCUMENT YOU WANT TO CREATE



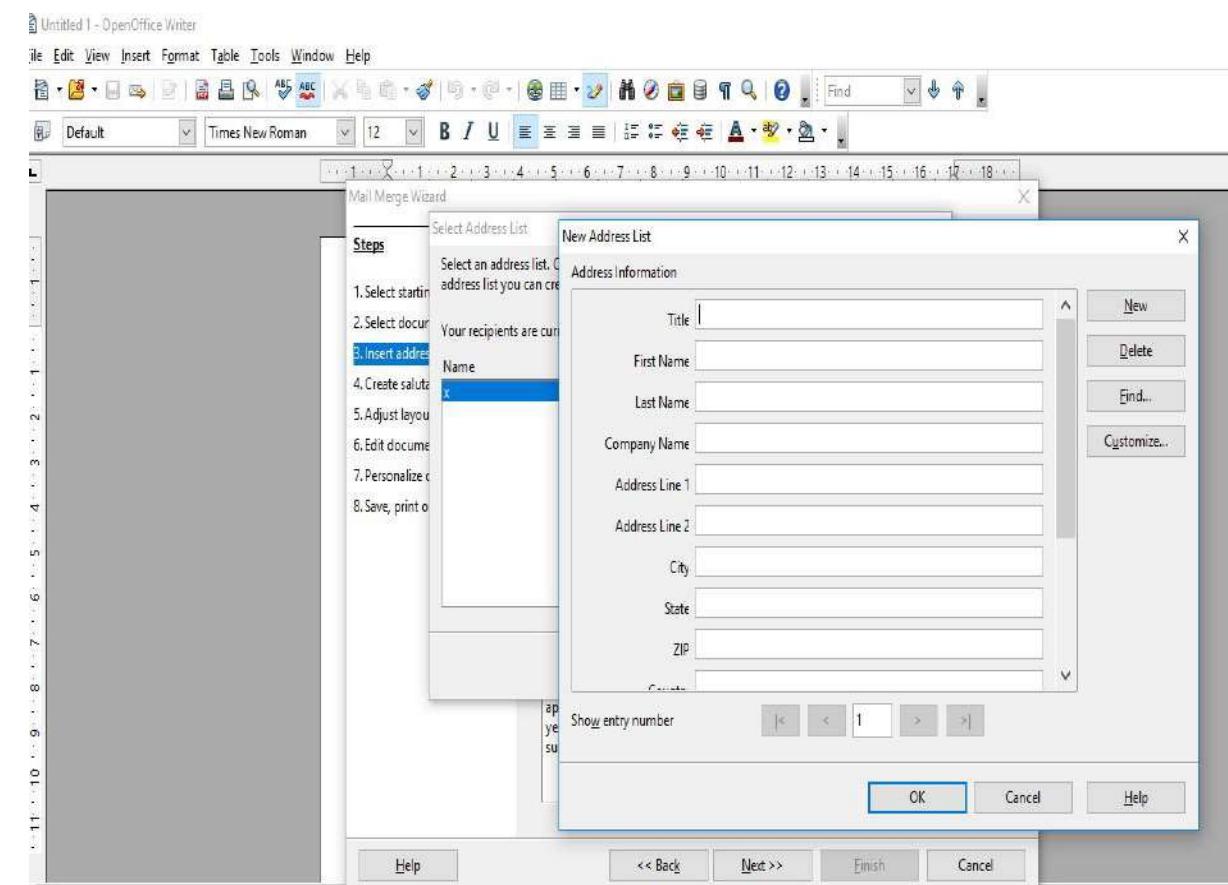
Step 4: INSERT ADDRESS BLOCK.



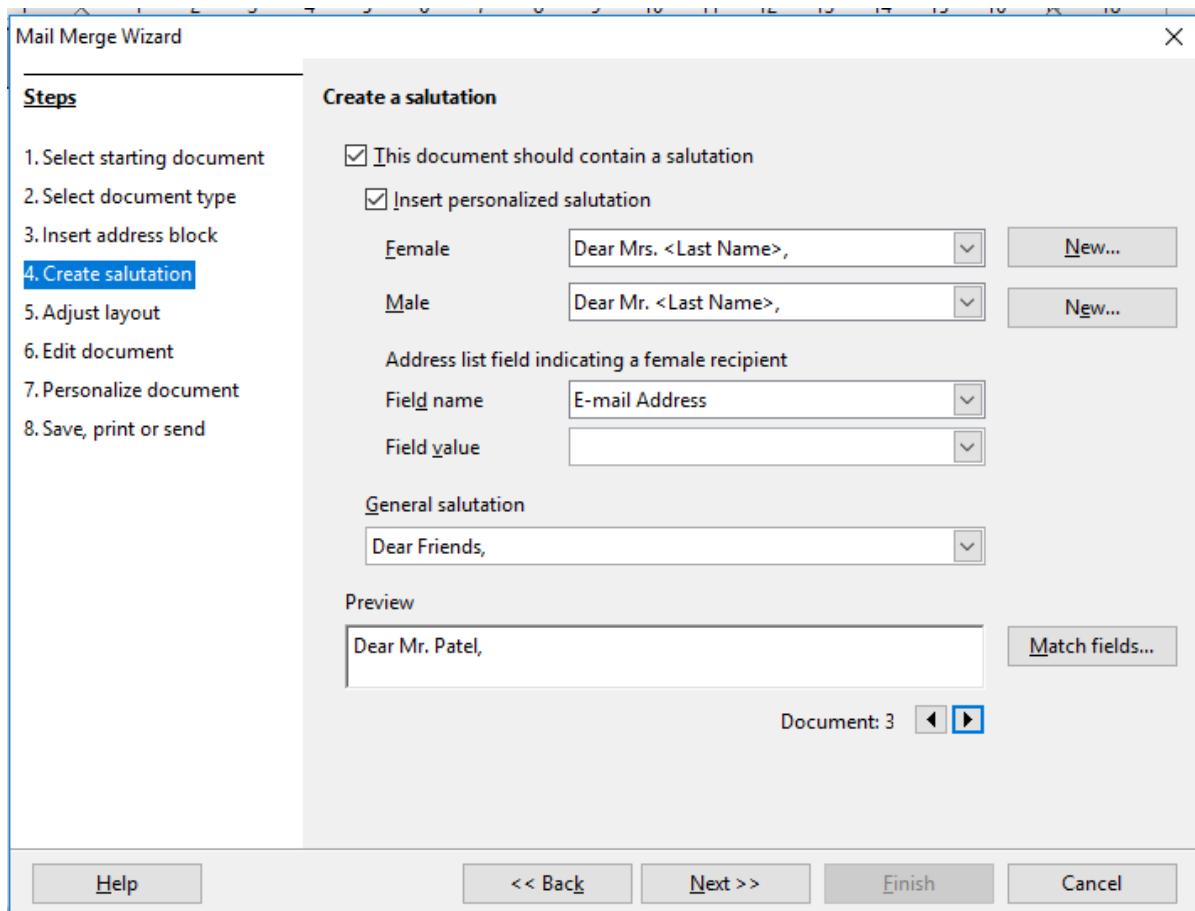
Step 5: IF DATA SOURCE DOES NOT EXIT .SELECT ADDRESS LIST.



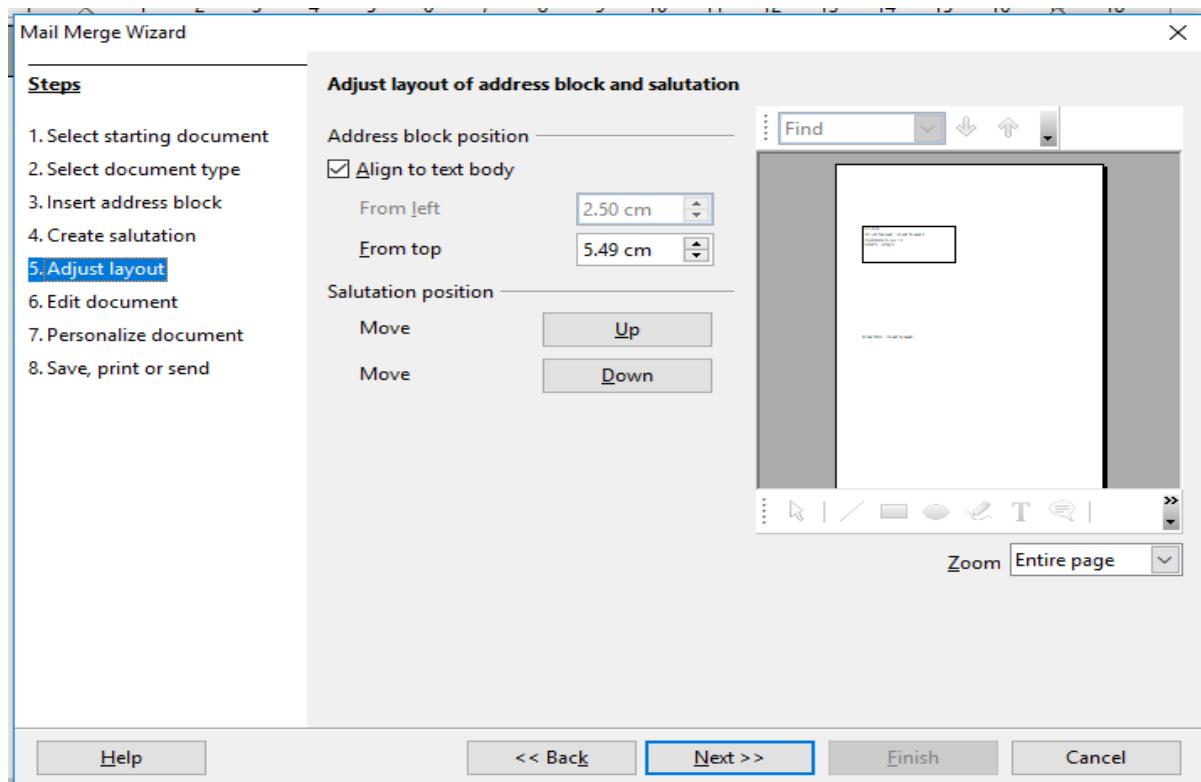
Step 6: CLICK CREATE TO CREATE A DATA SOURCE. THE NEW ADDRESS LIST DIALOGUE BOX APPEARS.



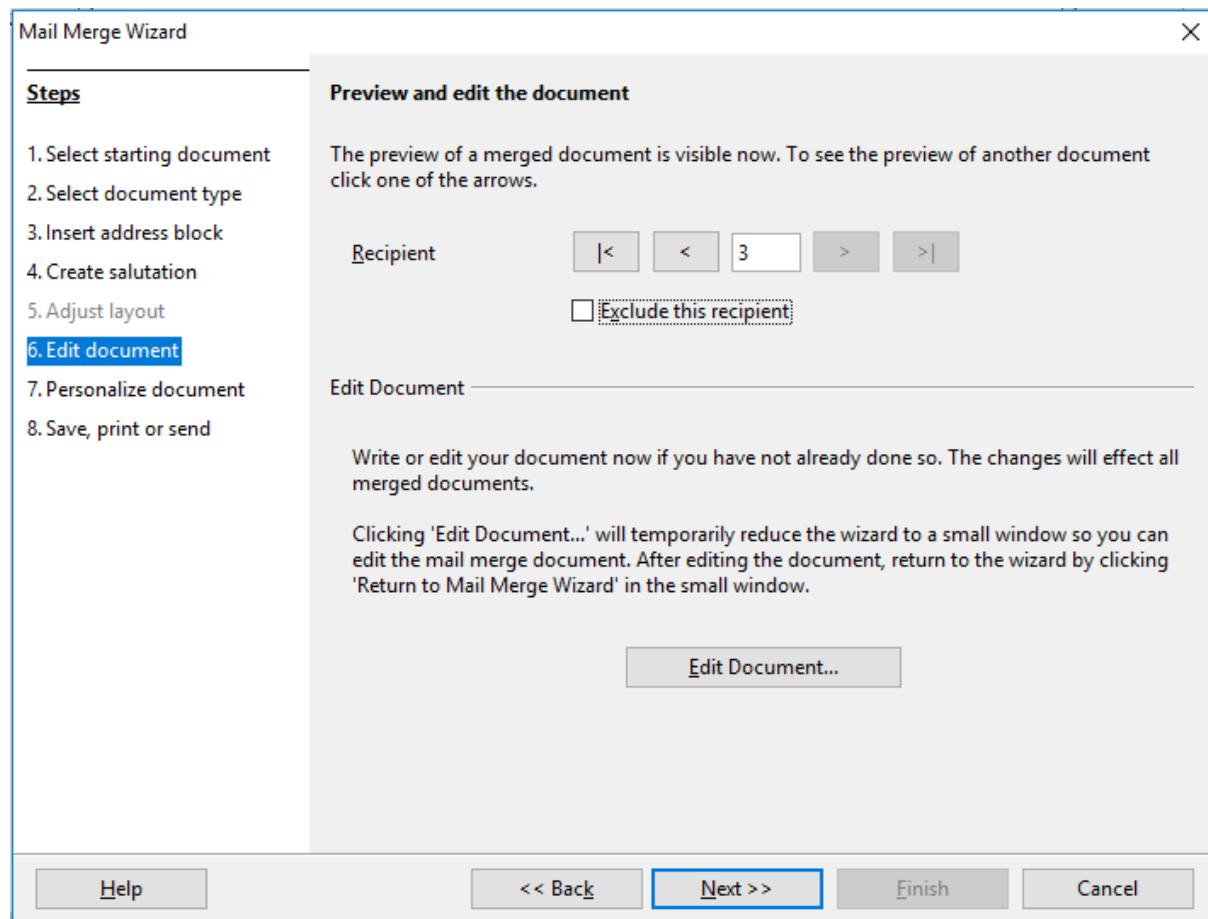
Step 7: CREATE SALUTATION FOR THE LETTER AS PER YOUR CHOICE AND CLICK NEXT.



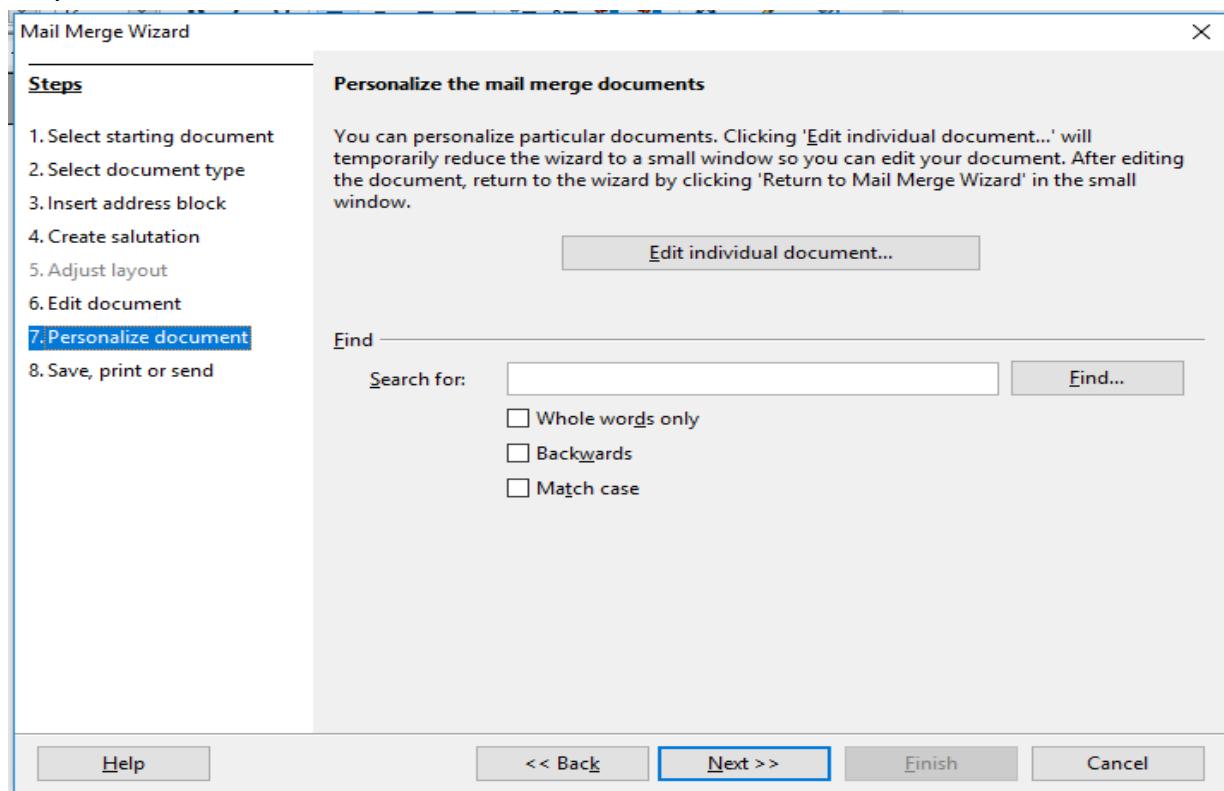
Step 8: ADJUST THE LAYOUT OF ADDRESS BLOCK AND SALUTATION BY CHANGING THE POSITION.



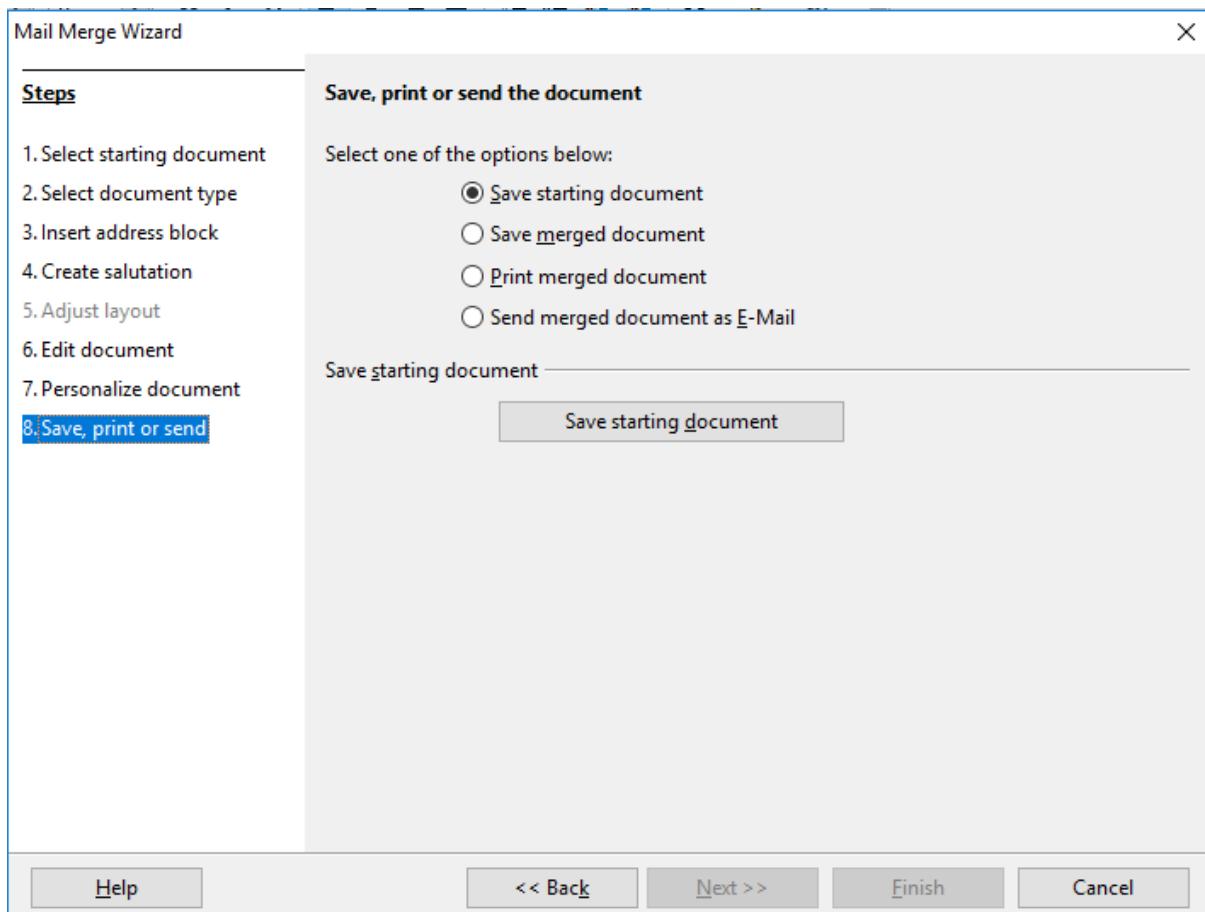
Step 9: PREVIEW AND EDIT THE DOCUMENT.



Step 10: PERSONALISE THE DOCUMENT.



STEP 11: SAVE, PRINT OR SEND THE DOCUMENT INDIVIDUALLY OR AS MERGE FILE .



❖ Page breaks and section breaks

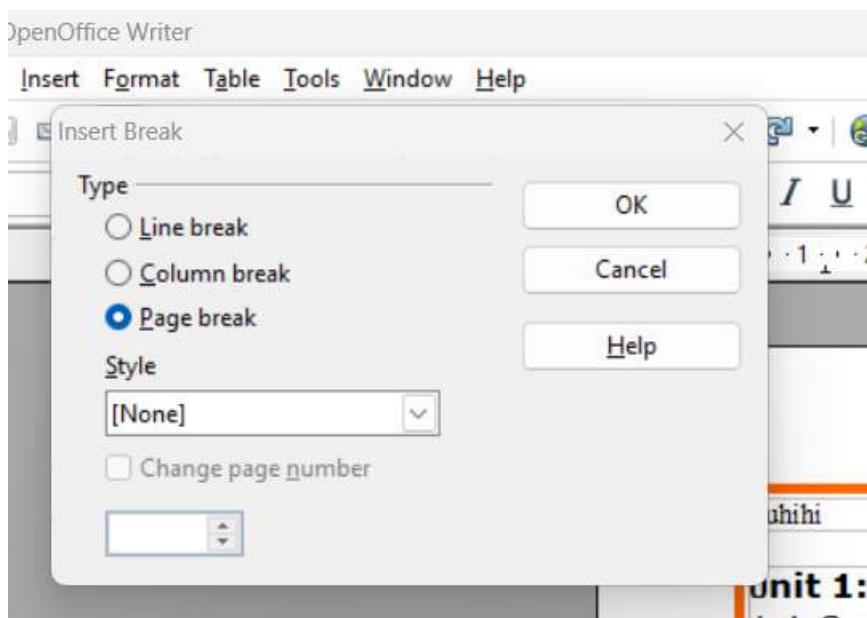
Page breaks and section breaks are two useful features for controlling page layout in writer. You should consider using them to format your thesis/dissertation.

Page Breaks

Page breaks are used to end a page without filling it with text. To make sure the title page of your thesis/dissertation is separate from the signature page, for example, insert a page break after the graduation date on the title page.

Page breaks are also used to start a chapter on a new page, a common standard in publishing. To ensure that the new chapter does appear on a separate page, insert a page break immediately following the text at the end of the chapter.

To add a page break, click **Insert->manual break-> Page Break**, then **OK**.



Section Breaks

By default, Writer documents are created with a single section and therefore any formatting will be applied to the entire document. But by inserting section breaks, you are able to split a document into two or more sections, which allows you to apply different formatting or page layout to individual sections. This is particularly useful where you want different headers and footers for each section, or you want to change the page orientation for specific pages within a document, for example.

UNDERSTANDING SECTION BREAKS

Section breaks enable you to split a document into several sections, enabling you to apply different formatting and layouts to each **section**. For instance, having two sections in a document

enables one section to have portrait orientation and the other to have landscape orientation. There are several types of sections breaks that you can insert depending on the requirements of the document.

What is a Section?

First of all, it is important to understand that page formatting and layout options are applied to the entire document in Writer, irrespective of whether it consists of one page or one hundred pages. Examples of document-wide formatting and layout options include headers and footers, margins, page orientation and vertical text alignment. However, consider a situation where you want to change the orientation of a single page to landscape, enabling you to neatly insert a table with thirty columns. Or perhaps you are writing a book? In that case, you will want different headers and/or footers for each chapter. The way to achieve this is to section off each part of the document that requires alternative formatting or layout. By inserting section breaks, you create sections and effectively isolate each part of the document and protect it from formatting applied to other sections.

Types of Section Breaks

NEXT PAGE

As the name implies, a **Next Page** section break will start the section on the next page. You would use this break when the changes you want to apply affect entire pages. For example if you want to: create different headers and footers for different chapters, or if you want to change the page size, orientation or the margins for one or a number of pages, then **Next Page** section breaks are ideal.

CONTINUOUS

A **Continuous** section break enables you to isolate text within a page and can be used, for instance, to create newspaper-style columns. By default, text on a page is in one column, which spans from the left to the right margin. By inserting two continuous section breaks (one at the beginning of the text you want to isolate and the other at the end) you can apply a multi-column format to the section.

EVEN AND ODD PAGE

The **Even** and **Odd Page** section breaks are typically used in longer documents and books, such as where headers and footers must mirror each other. For example, you might create a footer for even-numbered pages, where the page number appears on the left side of the page, and an odd page footer for odd-numbered pages, where the page number appears on the right side of the page. Using **Even Page** and **Odd Page section** breaks, you can ensure that the footers appear where they're supposed to.

Use an **Even Page** break when you want the next page to start on an even-numbered page, and use **Odd Page** breaks when you want the next page to start on an odd-numbered page.

NEW COLUMN

When multiple columns have been used in a document, the **New Column** section break enables you to push text to the next column. For instance, to force a heading that is currently lingering at the bottom of column one to the top of column two, you could insert a **New Column** break at the front of the heading.

❖ Insert Watermark in OpenOffice.org Writer

Watermarks are faded background text or images that display behind the text in a document. Unlike MS Word OpenOffice's word processor doesn't have a specific watermark option. However, with the software's page formatting options, and an image editing package such as Paint.NET, you can still add a custom text watermark to OpenOffice documents.

To insert a background "watermark" in your OpenOffice.org Writer documents:

1. Select **Format -> Page** from the menu.
2. Choose the tab labeled **Background**
3. In the first select box, choose **As Graphic**
4. Use the **Browse** button to browse your hard drive for the graphic you want to use.
5. Use the **Type** options to determine the placement of the image, and whether it repeats (tiles) across the page.



❖ Hyperlink,

In computing, a hyperlink, or simply a link, is a digital reference to data that the user can follow or be guided to by clicking or tapping. A hyperlink points to a whole document or to a specific element within a document. Hypertext is text with hyperlinks.

Using the Hyperlink dialog

To display the dialog, click the **Hyperlink** icon  on the Standard toolbar or choose **Insert > Hyperlink** from the menu bar. To turn existing text into a link, highlight it before opening the dialog. On the left side, select one of the four categories of hyperlink:

- **Internet:** the hyperlink points to a web address, normally starting with http://
- **Mail & News:** the hyperlink opens an email message that is pre-addressed to a particular recipient
- **Document:** the hyperlink points to another document or to another place in the current document
- **New document:** the hyperlink creates a new document

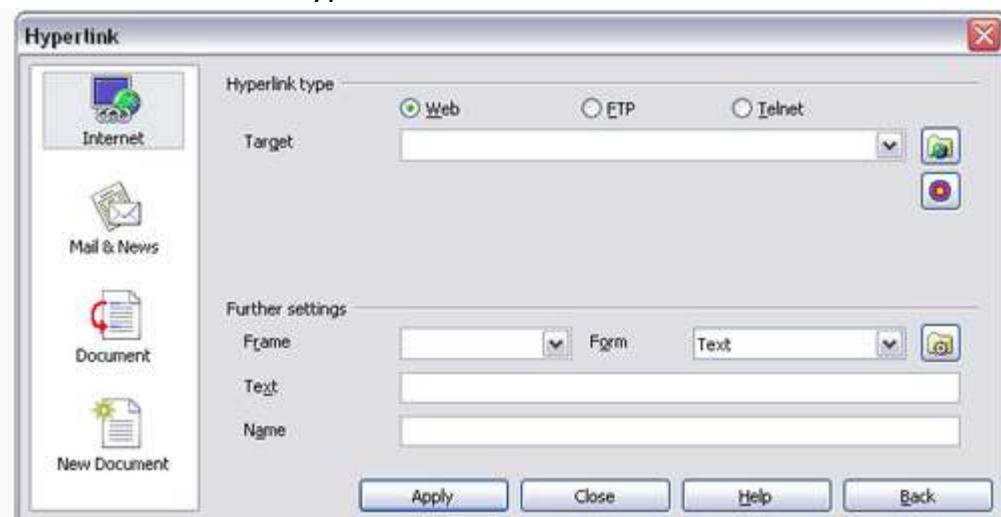


Figure 2. Hyperlink dialog showing details for Internet links.

The top right part of the dialog changes according to the choice made for the hyperlink category in the left panel. A full description of all the choices and their interactions is beyond the scope of this chapter. Here is a summary of the most common choices.

For an *Internet* hyperlink, choose the type of hyperlink (Web, FTP, or Telnet), and enter the required web address (URL).

For a *Mail and News* hyperlink, specify whether it is a mail or news link, the receiver's address, and for email, also the subject.

For a *Document* hyperlink, specify the document path (the **Open File** button opens a file browser) or leave this blank if you want to link to a target in the same document.

Optionally specify the target in the document (for example a specific slide). Click on the **Target in Document** icon to open the Navigator where you can select the target; or if you know the name of the target, you can type it into the box.

For a *New Document* hyperlink, specify whether to edit the newly created document immediately (**Edit now**) or just create it (**Edit later**), enter the file name, and select the type of document to create (text, spreadsheet, and so on). Click the **Select Path** button to open a file browser and choose where to store the file.

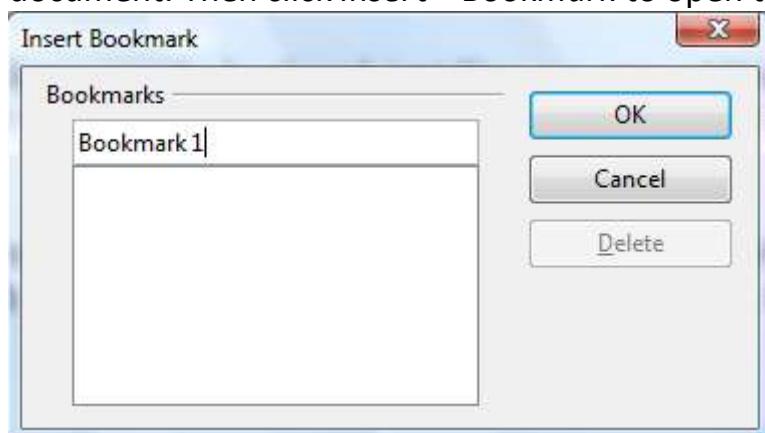
The *Further settings* section in the bottom right part of the dialog is common to all the hyperlink categories, although some choices are more relevant to some types of links.

- Set the value of **Frame** to determine how the hyperlink will open. This applies to documents that open in a Web browser.
- **Form** specifies if the link is to be presented as text or as a button. A hyperlink button is a type of form control. See Chapter 15 of the **Writer Guide** for more information.
- **Text** specifies the text that will be visible to the user. If you do not enter anything here, OOo uses the full URL or path as the link text. Note that if the link is relative and you move the file, this text will not change, though the target will.
- **Name** is applicable to HTML documents. It specifies text that will be added as a NAME attribute in the HTML code behind the hyperlink.
- **Events** button : click this button to open the Assign Macro dialog and choose a macro to run when the link is clicked.

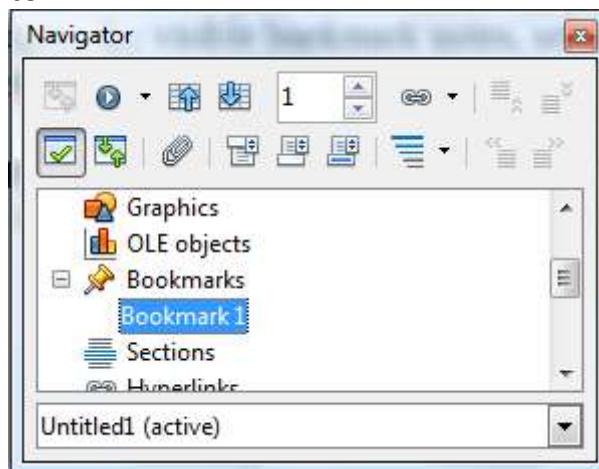
❖ How to use visible bookmarks in OpenOffice documents

Bookmarks are something you can add to OpenOffice documents. You can add bookmarks as a shortcut that when selected jump to a specific point in the document.

First, add some bookmarks to the document. Select a point to insert the bookmark in the document. Then click *Insert > Bookmark* to open the window in shot below.



There enter a title for the bookmark. Press *OK* to add it to the document, but the bookmark isn't visible. You can jump to the bookmarked point in the document by pressing F5 to open the Navigator. Then click *Bookmarks* and select a bookmark to jump to.



❖ Using footnotes and endnotes

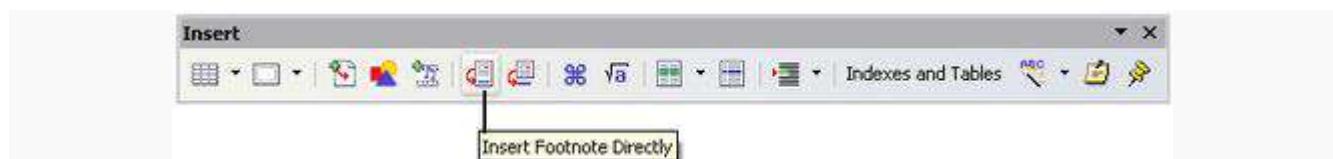
Use footnotes and endnotes to explain, comment on, or provide references to something in a document. Usually, footnotes appear at the bottom of the page, while endnotes come at the end of the document or section

Footnotes appear at the bottom of the page on which they are referenced. Endnotes are collected at the end of a document.

To work effectively with footnotes and endnotes, you need to:

Inserting footnotes/endnotes

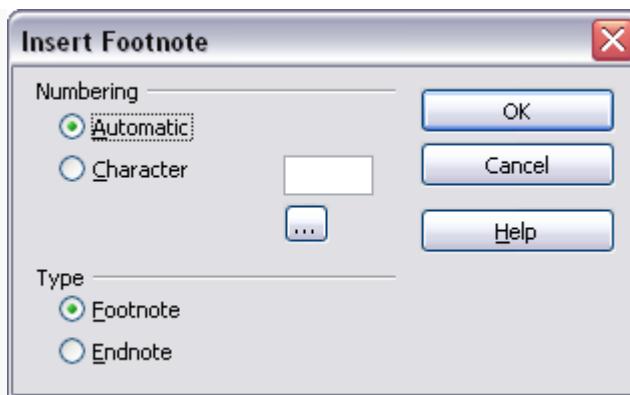
To insert a footnote or an endnote, put the cursor where you want the footnote/endnote marker to appear. Then select **Insert > Footnote** from the menu bar or click the **Insert Footnote Directly** or **Insert Endnote Directly** icon on the Insert toolbar).



Using the Insert Footnote Directly icon on the toolbar.

A footnote (or endnote) marker is inserted in the text, and the cursor is relocated to the footnote area at the bottom of the page (or to the endnote area at the end of the document). Type the footnote or endnote content in this area.

If you use **Insert > Footnote**, the Insert Footnote dialog box is displayed. Here you can choose whether to use the automatic numbering sequence specified in the footnote settings and whether to insert the item as a footnote or an endnote.



Insert Footnote dialog.

If you use the **Insert Footnote Directly** or **Insert Endnote Directly** icon, the footnote or endnote automatically takes on the attributes previously defined in the [Footnote Settings dialog box](#).

You can edit an existing footnote/endnote the same way you edit any other text.

To delete a footnote/endnote, delete the footnote marker. The contents of the footnote/endnote are deleted automatically, and the numbering of other footnotes or endnotes is adjusted automatically.

Defining the format of footnotes/endnotes

To format the footnotes themselves, click **Tools > Footnotes**. On the Footnote Settings dialog box, choose settings as required. The *Endnotes* page has similar choices.



Defining footnote formatting.

Formatting footnotes and endnotes is a bit complicated, because there are so many parts. Each part has a style that you can change, for example by using Format / Styles and Formatting. Endnotes work the same as footnotes, with "Footnote" changed to "Endnote" everywhere. Taking footnotes first, the main parts are these:

- The "Footnote Anchor" is the number or symbol that occurs in the main text, typically superscripted, and often an automatically-generated number. The format of this character or number (font, size, superscripting, etc) is controlled by a Character Style (the second icon under Format / Styles and Formatting), named "Footnote Anchor".
- The "Footnote Characters" is the number or symbol at the start of the "Footnote". This is the same number or symbol as the "Footnote Anchor", but can be formatted differently; for example, it might or might not be superscripted. This is controlled by a Character Style (the second icon under Format / Styles and Formatting), named "Footnote Characters".
- The "Footnote" is the paragraph(s) of text that appears at the bottom of the page. This is controlled by a Paragraph Style (the first icon under Format / Styles and Formatting), named "Footnote".
- The "Footnote Area" is the space reserved at the bottom of a page to put footnotes in. It might have a horizontal line or extra space above it, or other effects. This is controlled by a Page Style (the fourth icon under Format /

Styles and Formatting), named "Footnote" (don't confuse this with the Paragraph style of the same name!).

You can control the font and other properties of all your footnotes, by modifying the corresponding style.

❖ Tables of Contents

Writer's table of contents feature lets you build an automated table of contents from the headings in your document. Whenever changes are made to the text of a heading in the body of the document or the page on which the heading appears, those changes automatically appear in the table of contents which it is next updated.

Before you start, make sure that the headings are styled consistently. For example, you can use the *Heading 1* style for chapter titles and the *Heading 2* and *Heading 3* styles for chapter subheadings. This section shows you how to:

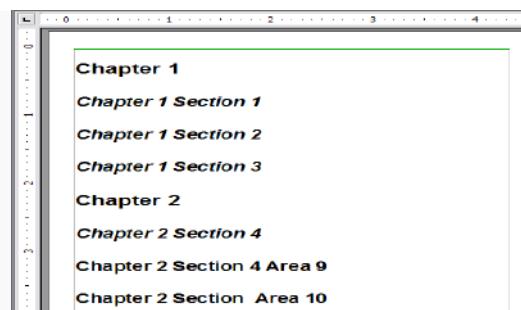
- Create a table of contents quickly, using the defaults.
- Customize a table of contents.

You can use any style you want for the different levels to appear in the table of contents; however, for simplicity, most of this chapter uses the default *Heading [x]* styles.

Creating a table of contents quickly

Most of the time you will probably find the default table of contents to be what you need. Inserting a default TOC is simple:

1. When you create your document, use the following paragraph styles for different heading levels (such as chapter and section headings): *Heading 1*, *Heading 2*, and *Heading 3*. These are what will appear in your TOC. Writer can evaluate up to ten levels of headings.



Headings example.

2. Click in the document where you want the TOC to appear.
3. Choose **Insert > Indexes and Tables > Indexes and Tables**.
4. Click **OK**. The result will be a typical table of contents.

Table of Contents	
Chapter 1.....	2
Chapter 1 Section 1.....	2
Chapter 1 Section 2.....	2
Chapter 1 Section 3.....	2
Chapter 2.....	2
Chapter 2 Section 4.....	2
Chapter 2 Section 4 Area 9.....	2
Chapter 2 Section Area 10.....	2
Chapter 2 Section 5.....	2
Chapter 3.....	2
Chapter 3 Section 6.....	2
Chapter 3 Section 7.....	2
Chapter 3 Section 8.....	2

Table of contents example.

❖ bibliography

A bibliography is a list of works on a subject or by an author that were used or consulted to write a research paper, book or article. It can also be referred to as a list of works cited. It is usually found at the end of a book, article or research paper.

Creating a bibliography

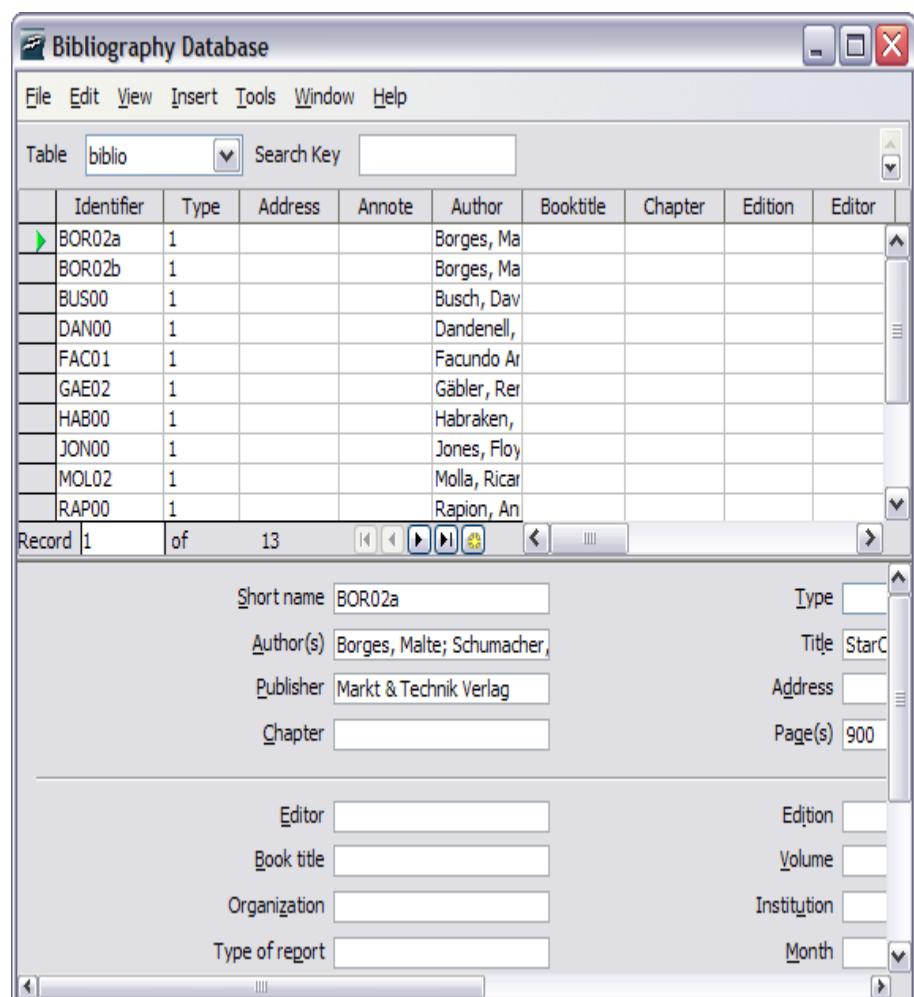
A bibliography is useful for displaying references used throughout a document. These references are either stored in a bibliographic database or within the document itself.

Creating a bibliographic database

Although you can create references within the document itself, creating a bibliographic database allows reuse in other documents and saves a lot of time.

Follow these steps to create a bibliographic database:

1. Select **Tools > Bibliography Database**. A window similar to that below is shown.



Bibliography Database main window.

2. You can use the top portion of this window to:

- Filter for specific records within the database (see [Filtering records](#)).
- Change some details of columns in the database (see [Changing column details](#)).
- Select an alternative data source (another database or table) or change details of the fields in the database.

The middle portion of the window shows each of the records in a table layout similar to that of a spreadsheet. Additional fields can be viewed by scrolling the table to the right.

The bottom portion of the window shows the contents of the selected record.

To create the bibliography:

1. Place the cursor at the point where you wish to insert the bibliography.

2. Select **Insert > Indexes and tables > Indexes and tables** and change the **Type** to **Bibliography**, to see a dialog box similar to that shown below.



Inserting a bibliography.

The Insert Index/Table dialog box has five pages.

Using the Index/Table page

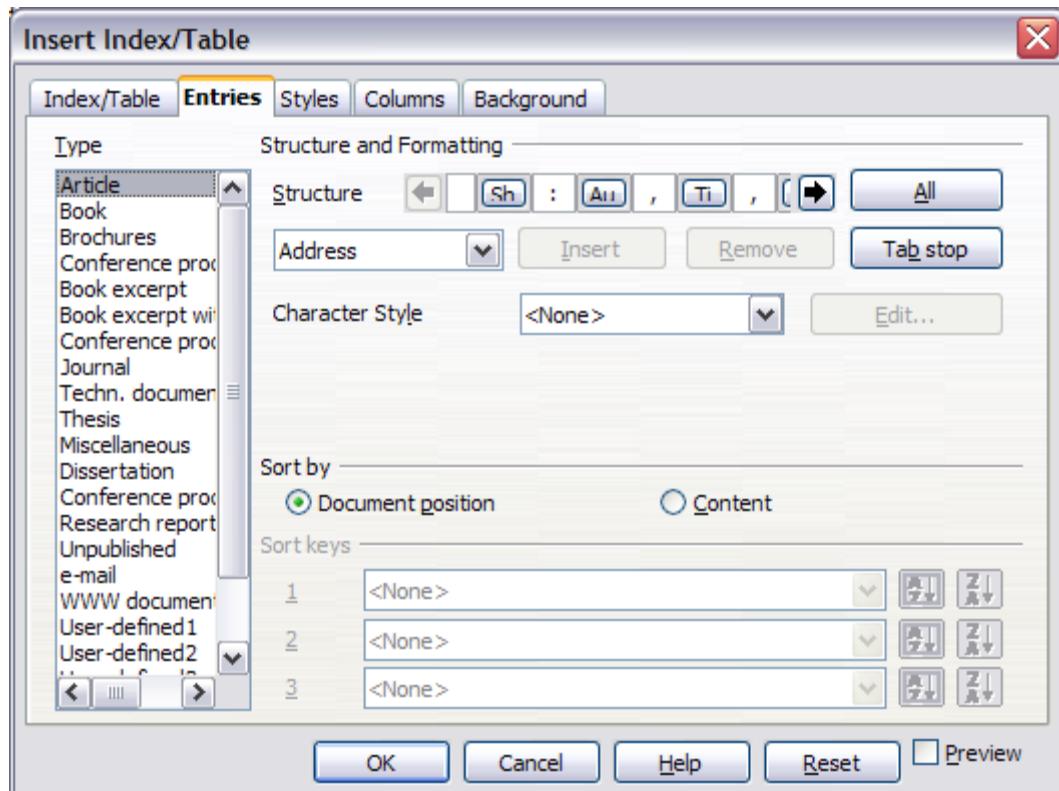
The basic settings are selected on this page.

1. To give the bibliography a title, enter it in the **Title** field. (A title is not required.)
2. You can protect the bibliography from being changed accidentally, by checking the **Protected against manual changes** checkbox. If this box is checked, the bibliography can only be changed using the context menu or the Insert Table/Index dialog. If the box is not checked, the bibliography can be changed directly on the document page, just like other text.
3. To have the bibliographic entries numbered within the body of the document (for example, [1], [2], ...), select **Number entries**. If, however, you wish to have the field *Identifier* (from the database) appear in the document, clear this checkbox.
4. Select the type of brackets that you want for the referenced entries shown within the body of the document.

5. Define the sorting you require. Currently only alphanumeric sorting is supported. Sorting by the sequence that entries appear in the text is done on the *Entries* tab.

Using the Entries page

The structure of this page is similar to that of the previous sections.



Entries page for bibliographies.

You can define how the entry will appear based on the *Type* of the entry, or simply apply the same format to all entries by selecting the **All** button.

The *Structure* of the entry is based on the fields available in the bibliographic database. The ones shown by default are:

- **Au** – Author
- **Ti** – Title
- **Ye** - Year

To determine how entries are sorted, modify the *Sort by* options. To sort by the sequence that entries appear in the text, choose *Document position*. To sort alphabetically, choose *Content*. Use **Sort keys** to group similar references.

Using the Styles, Columns and Background pages

Generating the bibliography

To generate the bibliography so that it appears in your document, click **OK**. The Insert Index/Table dialog box closes and the bibliography appears in your document.(Example)

Bibliography

- [1] Warner, Nancy D., StarOffice 5.2 Writer Handbook, 2001. blah blah.
- [2] Dandenell, Malin; Ek, Jesper, StarOffice 5.2 för Alla, 2000.
- [3] Borges, Malte; Schumacher, Jörg, StarOffice 6.0 Kompendium, 2002.

Result of settings for Bibliography 1 paragraph style.

❖ Citation

What is a citation? Citations are a way of giving credit when certain material in your work came from another source. It also gives your readers the information necessary to find that source again-- it provides an important roadmap to your research process

Adding a reference (citation) into a document

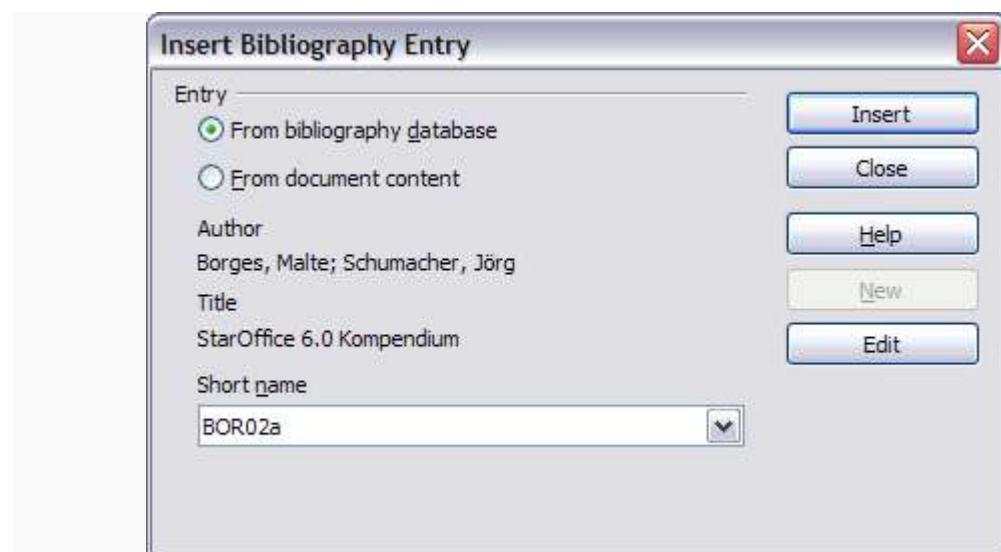
Writer supports two ways of showing references (citations) in the text of a document:

- Using authors' names and dates of the referenced documents, for example [Smith, 2004], as recorded in the Identifier (Short name) of each bibliographic entry.
- By numbering the referenced documents in the sequence they occur in the text, for example [1].

To specify which citation style is used in the document, use the Index/Table page on the Insert Index/Table dialog.

To add references from the bibliographic database into a document:

1. Place the cursor where you want the reference to appear.
2. From the main menu, choose **Insert > Indexes and tables > Bibliographic entry**.
3. In the Insert Bibliographic Entry dialog box, shown below, choose **From bibliography database** at the top of the dialog box. (You can also insert a reference from the document itself by selecting **From document content**, but that method is not covered in this chapter.)



Inserting bibliographic entries into a document.

4. Select the reference from the **Short name** dropdown list near the bottom of the dialog box. The Author and Title of the selected reference are shown in the middle of the dialog box, to help you verify that it is the reference you want.
5. To insert the reference into the document, click **Insert**.
6. You can keep the dialog box open and insert another reference into the document; you do not need to close and reopen it.
7. When you have finished inserting all the references, select **Close**.

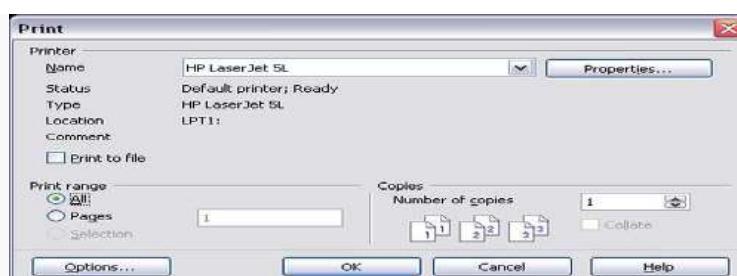
Printing from Writer

Quick printing

Click the **Print File Directly** icon  to send the entire document to the default printer defined for your computer.

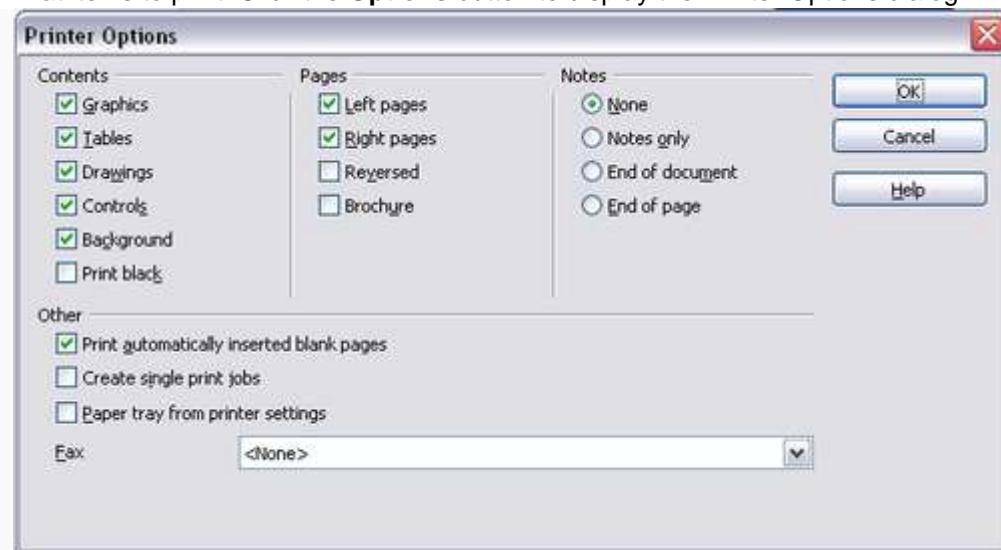
Controlling printing

For more control over printing, use **File > Print** to display the Print dialog.



On the Print dialog, you can choose:

- Which printer to use (if more than one are installed on your system) and the properties of the printer—for example, orientation (portrait or landscape), which paper tray to use, and what paper size to print on. The properties available depend on the selected printer; consult the printer's documentation for details.
- What pages to print, how many copies to print, and in what order to print them. Use dashes to specify page ranges and commas or semicolons to separate ranges; for example: 1, 5, 11–14, 34–40. *Selection* is the highlighted part of a page or pages.
- What items to print. Click the **Options** button to display the Printer Options dialog.



Printer Options dialog.

Previewing pages before printing

The normal page view in Writer shows you what each page will look like when printed, but it shows only one page at a time. If you are designing a document to be printed double-sided, you may want to see what facing pages look like. OOO provides two ways to do this:

- View Layout (editable view) —see [View layout](#).
- Page Preview (read-only view) —from which you can print multiple pages onto one sheet of paper.

To use Page Preview:

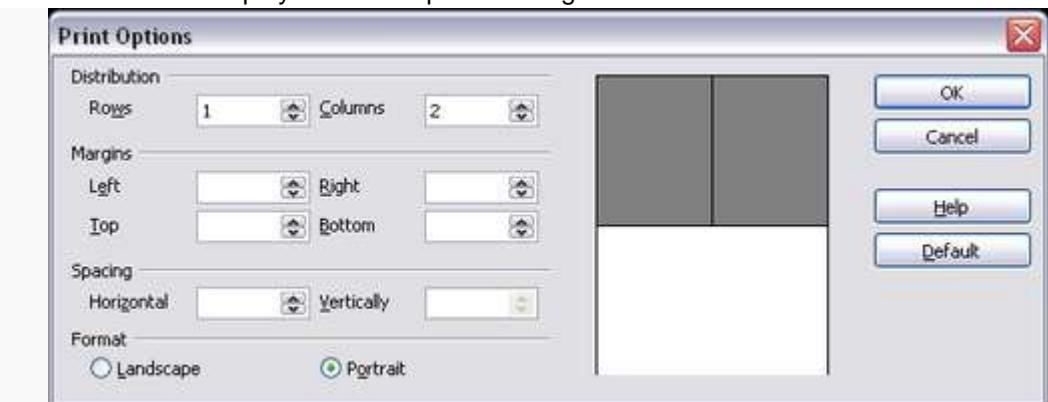
1. Click **File > Page Preview**, or click the **Page Preview** button . The Writer window changes to display the current page and the following page, and shows the **Page Preview** toolbar in place of the Formatting toolbar.



Page Preview toolbar.

2. Click the **Book Preview** icon to display left and right pages in their correct orientation.

3. To print the document from this page view, click the **Print page view** icon  to open the Print dialog. Choose your options and click **OK** to print as usual.
4. To choose margins and other options for the printout, click the **Print options page view** icon  to display the Print Options dialog.



Print Options dialog.

UNIT 2:

SPREADSHEET

PACKAGE

CONCEPT OF WORKSHEET

A worksheet or sheet is a single page in a file created with an electronic spreadsheet program such as Spreadsheet or Spreadsheet. A workbook is the name given to a spreadsheet file and contains one or more worksheets. The term spreadsheet is often used to refer to a workbook, when, as mentioned, it more correctly refers to the computer program itself. When you open an electronic spreadsheet program, it loads an empty workbook file consisting of one or more blank worksheets for you to use.

A worksheet is used to store, manipulate, and display data.

The basic storage unit for data in a worksheet is the rectangular-shaped cells arranged in a grid pattern in every worksheet known as cell.

A cell is an intersection of rows and columns in a worksheet.

Individual cells of data are identified and organized using the vertical column letters and horizontal row numbers of a worksheet which create a cell reference - such as A1, D15, or Z467.

Worksheet specifications for current versions of Spreadsheet include:

- 32,000 rows per worksheet;
- 255 columns per worksheet;
- by default, each new file contains three worksheet;
- the number of sheets per file is limited only by the amount of memory available on the computer.

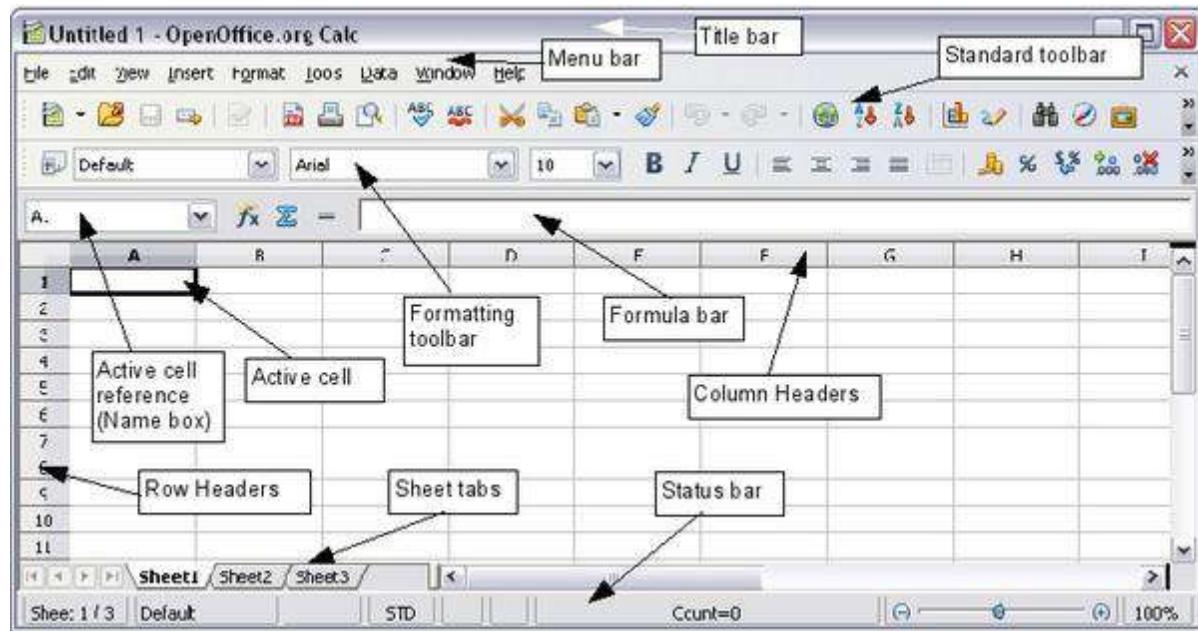
Each worksheet has a name. By default, the worksheets are named Sheet1, Sheet2, Sheet3 and so on, but these can easily be changed.

It is possible to delete or to hide individual worksheets in a workbook;

It is also possible to rename individual worksheets and to change worksheet tab colors to make it easier to identify individual sheets in a workbook using the context menu.

Changing from one worksheet to another in a workbook can be done by clicking on the sheet tab at the bottom of the screen;

The Spreadsheet Screen



ACTIVE CELL

- The active cell is recognized by its black outline. Data is always entered into the active cell. Different cells can be made active by clicking on them with the mouse or by using the arrow keys on the keyboard.

CELL

- Cells are the rectangular boxes located in central area of a worksheet.
- Data entered into a worksheet is stored in a cell. Each cell can hold only one piece of data at a time.
- A cell is the intersection point of a vertical column and a horizontal row.
- Each cell in the worksheet can be identified by a cell reference, which is a combination of letters and numbers such as A1, F456, or AA34.

COLUMN HEADERS

- Columns run vertically on a worksheet and each one is identified by a letter in the

column header.

ROW HEADERS

- Rows run horizontally on a worksheet and each one is identified by a number in the row header.

FORMULA BAR

- Located above the worksheet, this area displays the contents of the active cell. The formula bar can also be used for entering or editing data and formulas.

NAME BOX

- Located next to the formula bar, the Name Box displays the cell reference or the name of the active cell.

SHEET TABS

- By default there are three worksheets in a Calc file.
- The tab at the bottom of a worksheet tells you the name of the worksheet - such as Sheet1, Sheet2 etc.
- Renaming a worksheet or changing the tab color can make it easier to keep track of data in large spreadsheet files.
- Switching between worksheets can be done by clicking on the tab of the sheet you wish to access or by using this keyboard shortcut to change between worksheets.

STATUS BAR

- The status bar, which runs horizontally along the bottom of screen, can be customized to display a number of options, most of which give the user information about the current worksheet, data the worksheet contains, and even the user's keyboard - such as

whether the Caps Lock, Scroll Lock, and Num Lock keys are turned on or off.

- The status bar also contains the zoom slider, discussed below, which allows users to alter the magnification of a worksheet.

RANGE

A range is any rectangular area in the worksheet. A range may include just a single cell, a number of consecutive cells in a row or column, or cells from consecutive rows and columns. A range must form a rectangle in order to be valid.

TABLE

A table is a range of cells with related data.

❖ CELL REFERENCE:

	A	B	C	D	E
1	ID	Shape	Color		
2	1	Circle	White		
3	2	Oval	Yellow		
4	3	Triangle	Red		
5	4	Rectangle	Green	← Cell Reference: C5	
6	5	Pentagon	Blue		
7	6	Hexagon	Purple		
8	7	Heptagon	Orange		
9	8	Octagon	Black		
10	9				
11	10				

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A cell reference refers to a cell or a range of cells on a worksheet and can be used in a formula so that Calc or spreadsheet can find the values or data that you want that formula to calculate. Cell references behave differently when copied and filled to other cells.

For example:

- Cell reference C2 refers to value in C2.
- A1:F1 refers to the cell range A1 to F1.

There are two types of cell references:

1. **Relative:** Relative references **change** when a formula is copied to another cell. By default, all cell references are **relative references**. When copied across multiple cells, they change based on the relative position of rows and columns. For example, if you copy the formula **=A1+B1** from row 1 to row 2, the formula will become **=A2+B2**. Relative references are especially convenient whenever you need to repeat the same calculation across multiple rows or columns.
2. **Absolute:** Absolute references remain **constant** no matter where they are copied. There may be times when you do not want a cell reference to change when copying or filling cells. You can use an **absolute reference** to keep a row and/or column constant in the formula. An absolute reference is designated in the formula by the addition of a **dollar sign (\$)**. It can precede the column reference, the row reference, or both.

Eg. **\$A\$2** The row and column do not change when copied.

A\$2 The row does not change when copied

\$A2 The column does not change when copied

WORKING & EDITING IN WORKBOOKS

❖ Entering Information in a Worksheet

Spreadsheets are made up of rows and columns. Rows are defined by numbers and columns are defined by letters. When you open Spreadsheet, cell **A1** is automatically highlighted. Anything you type will show up in this cell. To enter text into a different cell, simply select the cell by double clicking on it and then begin typing.

Before entering text, it is helpful to be aware of the shape your cursor will take and what each it means:

1. **The thin black cross.** This is used for autofilling data and for copying formulas, both of which will be covered later in this course

	A	B	C	D
1	1			
2				
3	3			
4	4			
5				

2. This is used for moving cells or other items.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					

To edit data in the spreadsheet:

1. Double click the cell that you want to edit.
2. Move the cursor with the arrow keys to where you want to edit.
3. Type in your change.
4. Press Enter.

Note that in addition to showing up in the cell, the text you are typing also shows up in the **Formula Bar**:

The screenshot shows a spreadsheet interface with a grid of cells from A1 to U22. Cell A1 is highlighted with a green background and contains the text "Hello World!". A red arrow points from the text "Text in Cell A1" to the cell itself. Another red arrow points from the text "Text in Formula Bar" to the formula bar at the top, which also displays "Hello World!". The formula bar also includes standard editing icons like a clear button, a checkmark, and a formula icon.

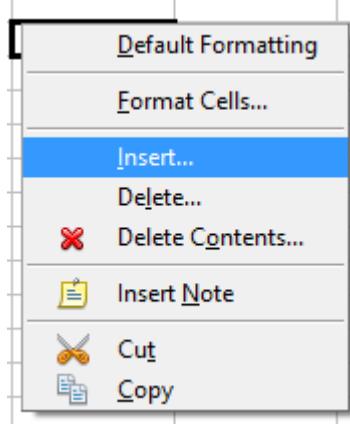
If you are entering a lot of text, it is sometimes easier to type directly into the formula bar. To do this, simply select the cell by clicking on it and then click in the Formula Bar and begin typing.

❖ Adding and Deleting Cells

You can add and delete cells when working with a worksheet:

To add a cell to a worksheet:

1. Select the cell where you want to insert a new cell.

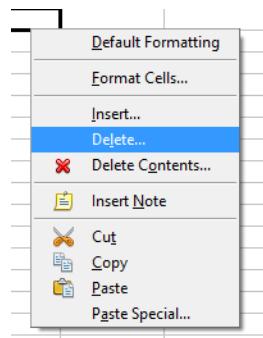


2. Right-click and select **Insert**.
3. In the **Insert** dialog box, select an option and click **OK**.

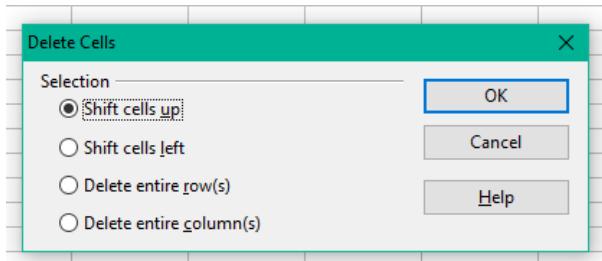


To delete a cell in a worksheet:

1. Select the cell you want to delete.
2. Right-click and select **Delete**.



3. In the **Delete** dialog box, select an option and click **OK**.



❖ Entering Numbers and Dates

To enter numbers in Spreadsheet:

1. Select the cell into which you wish to enter a number by clicking on it.
2. Begin typing a number.

Things to be aware of when entering numbers:

1. There is no need to enter commas. If you wish to display commas, you can format your numbers to display them. This will be covered in the next lesson.
2. By default, trailing zeroes are not shown. For example, if you enter "5.00" into a cell and press Enter, the value shown will change to just "5". We will cover displaying decimals in the later part.

To enter dates in Spreadsheet:

1. Select the cell into which you wish to enter a date by clicking on it.
2. Type the date in the following format: *mm/dd/yy* (e.g., 12/21/12) or *m/d/yy* (e.g., 1/1/00).

❖ Entering a Formula

Formulas are equations that perform calculations on values in your sheet. All formulas begin with an equal sign (=). You can create a simple formula by using constant and calculation operator. For example, the formula **=5+2*3**, multiplies two numbers and then adds a number to the result.

When you want to refer to variables instead of constants, you can use cell values, for example, **=A1+A2**. If you are working with long columns of data, or data that is located in different parts of a sheet or on another sheet, you can use a range —for example, **=SUM(A1:A100)/SUM(B1:B100)**, which represents the division of the sum of the first hundred numbers in column A by the sum of those numbers in column B. When your formula refers to other cells, any time that you change the data in any of the cells Spreadsheet recalculates the results automatically.

You can also create a formula by using a function, a predefined formula that simplifies entering calculations.



- ① **Equal signs** start all formulas.

- ② **Constants**, such as numbers or text values, can be entered directly into a formula.
- ③ **Operators** specify the kind of calculation that the formula performs. For example, the $^$ (caret) operator raises a number to a power, and the $*$ (asterisk) operator multiplies numbers.
- ④ **Functions** are premade formulas that can be used alone, or as part of a longer formula. Each function has a specific argument syntax.
- ⑤ **Cell values** let you reference in Spreadsheet cell, instead of the specific value inside the cell so that the contents of the cell can change without the function that refers to the cell having to change.

Enter a formula that refers to values in other cells:

1. In a sheet that contains columns of numbers, click the cell where you want the formula results to appear.
2. Type an equal sign =
3. Click the first cell that you want to include in your calculation.

	A	B	C	D
1	22	=A1		
2	25	4		
3	28	6		

4. Type an operator. An operator is the kind of calculation that the formula performs. For example, the $*$ (asterisk) operator multiplies numbers. In this example, use the $/$ (forward slash) operator to divide. At this point your formula should look like this:

	A	B	C	D
1	22	=A1/		
2	25	4		
3	28	6		

5. Click the next cell that you want to include in your calculation. Now your formula should look like this:

	A	B	C	D
1	22	=A1/B1		
2	25	4		
3	28	6		

6. Press RETURN.

The result of the calculation appears in the cell.

	A	B	C	D
1	22	2	11	
2	25	4		
3	28	6		

Filling cells automatically (Auto-generation):

Calc has a feature for automatically inputting values. If you want to enter numbers sequentially or in regular intervals, then we use auto generation.

1. Type the number that you want to begin with in the cell.
2. Return the active cell to the cell that contains your number.

	A	B	C	
1				
2				
3	1			
4				
5				
6				
7				
8				
9				
10				

3. Click and drag the cells either up, down or across the cells.

The left screenshot shows a spreadsheet with rows 1 through 19. Row 3 is selected, containing the value '1'. A red box highlights the range from A3 to A15, indicating the area being filled. The right screenshot shows the result after dragging: the range A3:A15 now contains sequential numbers from 1 to 13, with row 15 also containing the value '13'.

	A	B	C	D
1				
2				
3	1			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15	13			
16				
17				
18				
19				

	A	B	C
1			
2			
3	1		
4	2		
5	3		
6	4		
7	5		
8	6		
9	7		
10	8		
11	9		
12	10		
13	11		
14	12		
15	13		
16			
17			
18			
19			

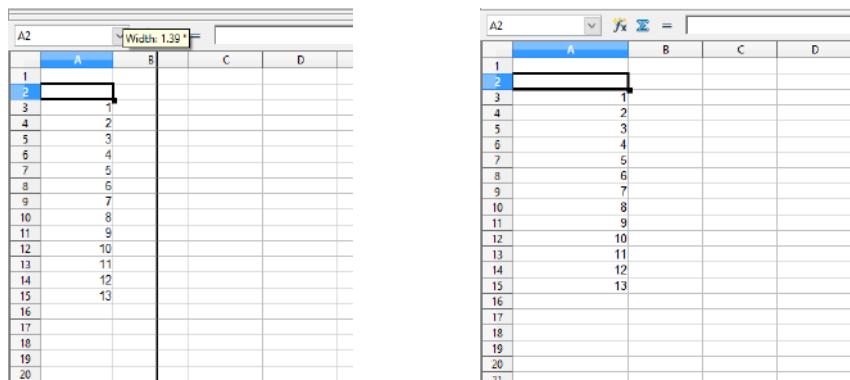
Your range is outlined in red, and the box shows the uppermost value in cell. When you stop dragging, your numbers appears.

Managing rows and columns:

When you create a new spreadsheet, Calc assigns each column a standard width and height. But the data does not always fit in that column. Calc provides with a feature that allows you to change the width and height of columns and rows easily.

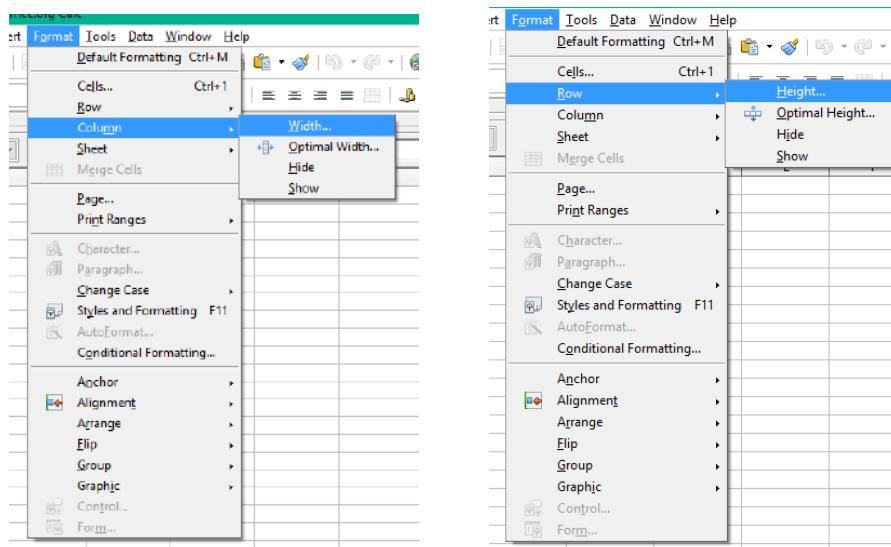
To change the width and height using mouse, follow the following steps:

1. Click the line that separates two column names and row names. Choose the line that is to the right of the column that you want to resize.
2. While holding the mouse button, drag the line to the desired column width or row height.



To change the width and height using main menu, follow the following steps:

1. Click a cell in the column or row that you want to resize.
2. Choose **Format** → **Column** → **Width** to open the Column Width dialog box or choose **Format** → **Row** → **Height** to open the Row height dialog box.
3. Enter the desired size of your column or row.
4. Click OK.



CREATING FORMATS

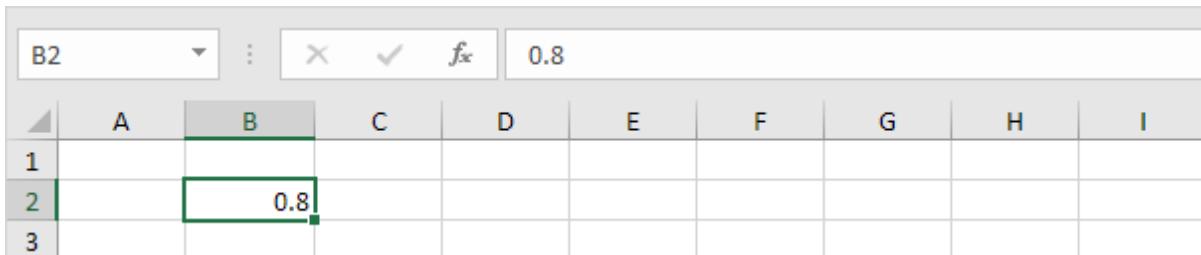
❖ Number Formatting:

When we format cells in Spreadsheet, we change the appearance of a number without changing the number itself. We can apply a number format (0.8, \$0.80, 80%, etc) or other formatting (alignment, font, border, etc).

Number can be formatted in the following ways:

- **Currency Icon:** This format allows you to add currency symbol with the numeric value and transforms the number to currency.
- **Percentage icon:** This format transforms the number into a percentage value by adding a percentage sign along with the number.
- **Increase/Decrease Decimal Places:** This increases or decreases the decimal places in a number.
- **Time:** This formats the numeric value into time format (hh:mm:ss)
- **Date:** This formats the numeric value into date format (dd\mm\yy)

1. Enter the value 0.8 into cell B2.

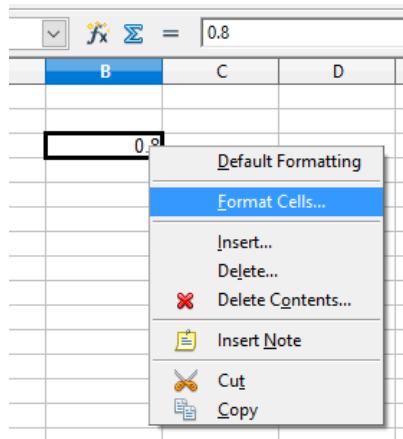


		B2	⋮	X	✓	f _x	0.8					
		A	B	C	D	E	F	G	H	I	J	K
1												
2			0.8									
3												

By default, Spreadsheet uses the General format (no specific number format) for numbers.

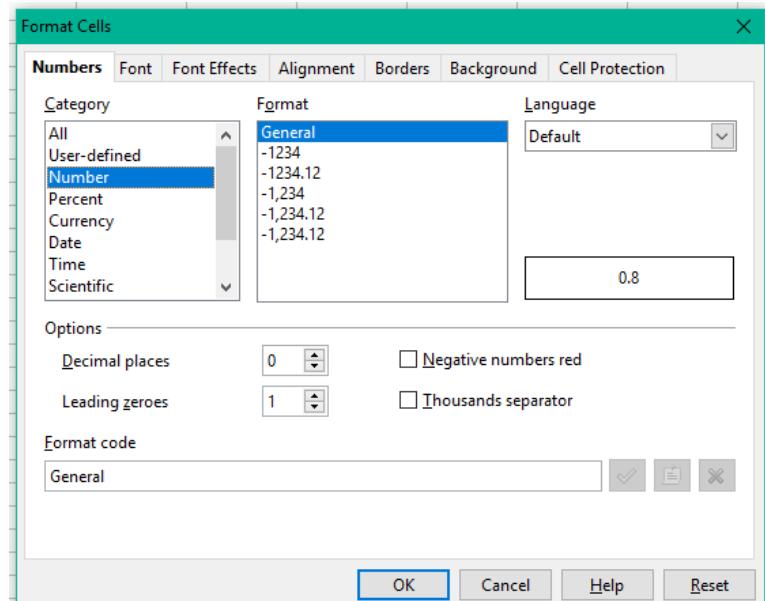
To apply a number format, use the 'Format Cells' dialog box.

2. Select cell B2.
3. Right click, and then click Format Cells.



The 'Format Cells' dialog box appears.

4. For example, select Currency.



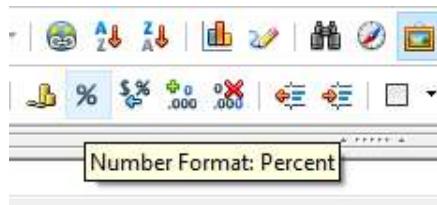
Note: Spreadsheet gives you a life preview of how the number will be formatted (under Sample).

5. Click OK.

	A	B	C	D	E	F	G	H	I
1									
2		\$0.80							
3									

Cell B2 still contains the number 0.8. We only changed the appearance of this number.
The most frequently used formatting commands are available on the standard toolbar.

6. In the Number group, click the percentage symbol to apply a Percentage format.



7. In the Alignment group, you can change the alignment.



8. Add outside borders.

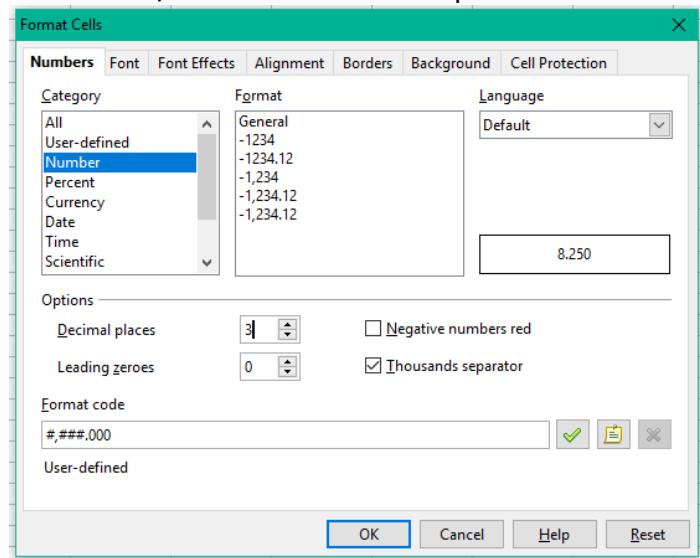


❖ **To change decimal places**

On the standard toolbar, click the Decrease/Increase Decimal button twice.



Or Increase/decrease the decimal places' values in the options from the format cell option.



❖ **Date Formatting:**

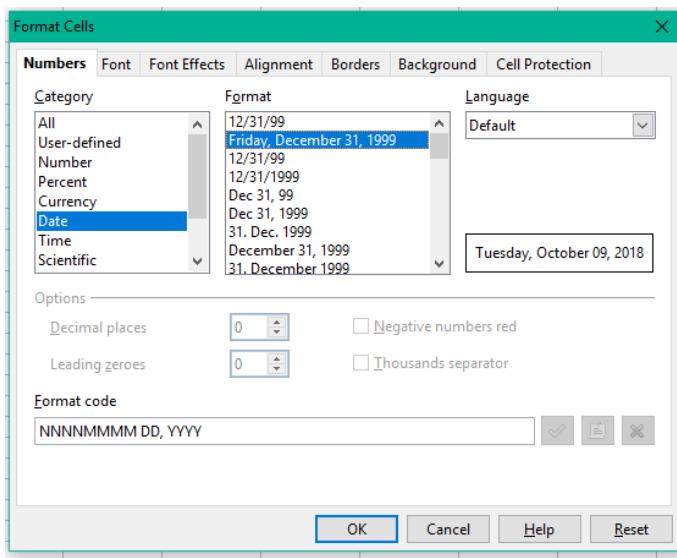
Dates and times in Spreadsheet can be displayed in a variety of ways. To apply a Date or Time format, execute the following steps.

1. Select cell A1.

A1	X	✓	f _x	6/23/2016				
1	A	B	C	D	E	F	G	
2	6/23/2016	6:00	6/23/2016 6:00					

2. Right click, and then click Format Cells.

3. In the Category list, select Date, and select a Date format.



1. Click OK.

Note: to apply a Time format, in the Category list, select Time.

2. Dates are stored as numbers in Spreadsheet and count the number of days since January 0, 1900. Times are handled internally as numbers between 0 and 1. To clearly see this, change the number format of cell A1, B1 and C1 to General.

A1	X	✓	f _x	42544				
1	A	B	C	D	E	F	G	
2	42544	0.25	42544.25					

Note: apparently, 42544 days after January 0, 1900 is the same as June 23, 2016. 6:00 is represented as 0.25 (quarter through the day).

3. You can enter times as 6:00, but Spreadsheet displays this time as 6:00:00 AM in the

B1	X	✓	f _x	6:00:00 AM				
1	A	B	C	D	E	F	G	
2	Thursday, June 23, 2016	6:00	6/23/2016 6:00					

formula bar. AM is used for times in the night and morning. PM is used for times in the afternoon and evening.

4. Change the number format of cell C1 to Date only.

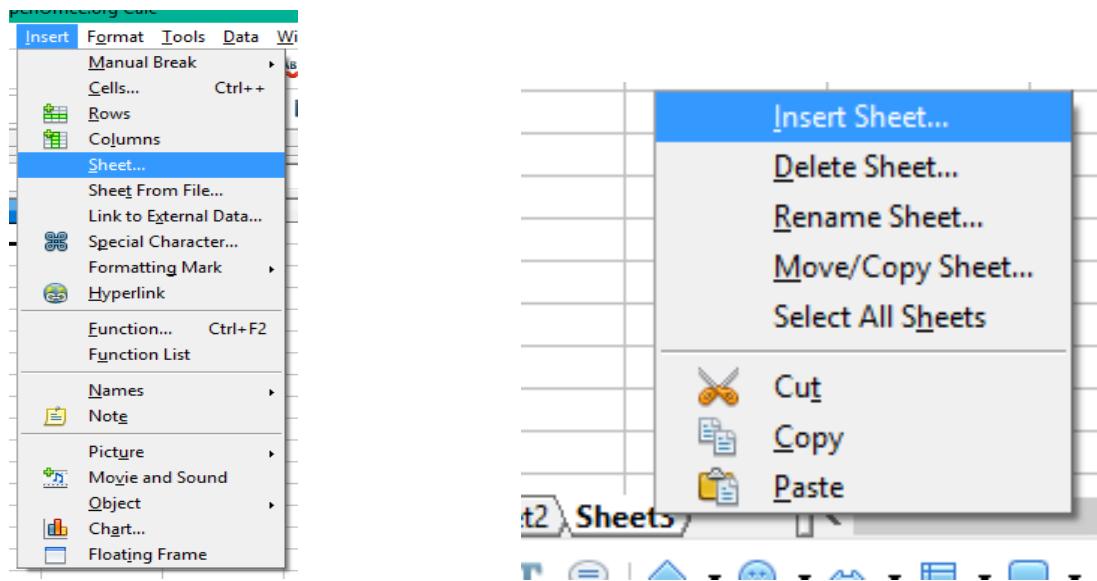
C1	A	B	C	D	E	F	G
1 Thursday, June 23, 2016		6:00	6/23/2016				
2							

ADDING SHEETS:

When you use up the three sheets that Calc supplies, new sheets can be added. To add a sheet, follow the following steps:

1. Click a sheet name that is located either before or after where you want to add new sheets.
2. Choose Insert Sheet to open the Insert Sheet dialog box.
3. Mark the box to position the new sheet(s) either before or after the active sheet.
4. Indicate how many sheets you want to add

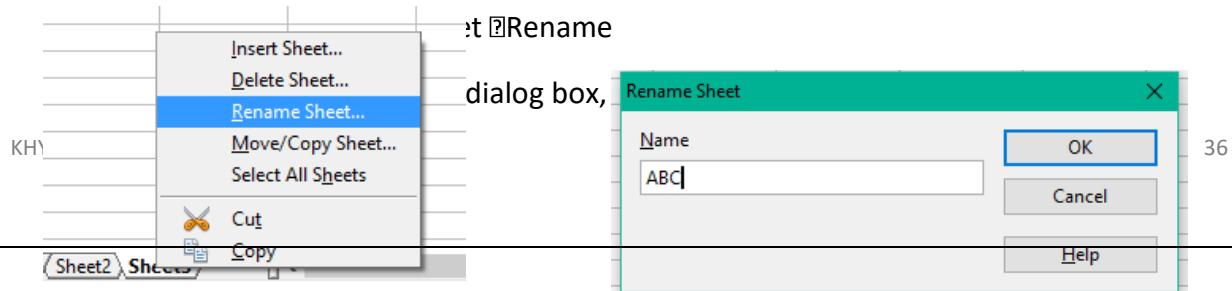
You can also right click the sheet name and choose Insert from the shortcut menu that appears.



RENAMING SHEETS:

To rename the sheets, follow these steps:

1. Select the sheet that you want to rename.



COPY/MOVE SHEETS:

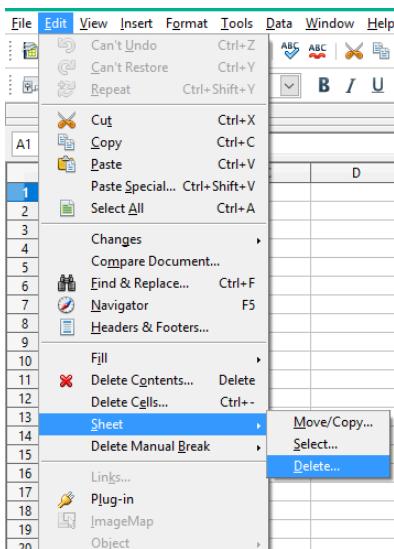
To move or copy the sheets, follow these steps:

1. Select the sheet name or names that you want to move or copy.
2. Choose **Edit** **Move/Copy Sheets**.
3. In the move/copy dialog box, select the copy check box to copy your sheet(s). Deselect this check box to move your sheet rather than copy it.
4. Click the name of the sheet that you want to insert – either the original sheet or its copy – and click **OK**.

DELETING SHEETS:

To delete the sheets, follow these steps:

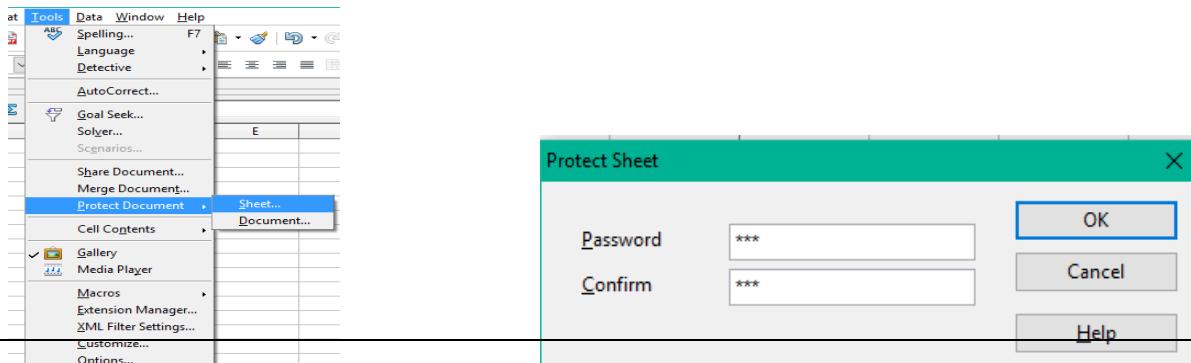
1. Select one or more sheets that you want to delete.
2. Choose **Edit** **Delete Sheet**.
3. If you are sure that you want to delete those sheets that are selected, click the **Yes** button.



PROTECT DOCUMENT/SHEET:

To protect a document/sheet, follow the following steps:

1. Go to **Tools** **Protect Document** **Sheet/Document**.
2. Create a **password** and confirm it in the **protect sheet dialog box**.



BUILT IN FUNCTIONS

Calc does much more task than just addition and subtraction. You can perform a whole range functions such as mathematical, statistical, counting, database functions and much more.

You can directly write the formula simply by typing =1+1 or =A1+B1 or complex formula such as =(2+(5*3)-4)/2 in the formula bar and press Enter. To edit the formula you can double click the cell and edit it.

MATHEMATICAL FUNCTIONS:

1. SUM

It Sums the contents of

cells. Syntax:

=SUM(number1; number2; ... number30)

number1 to number30 are up to 30 numbers or ranges/arrays of numbers whose sum is to be calculated.

SUM ignores any text or empty cell within a range or array.

Example:

=SUM(2; 3; 4)

returns 9, because $2+3+4 = 9$.

=SUM(B1:B3)

(where cells B1, B2, B3 contain 1.1, 2.2, 3.3) returns 6.6

2. ABS

It Returns the absolute value of a number.

Syntax:

=ABS(number)

number is the number whose absolute value is to be calculated. The absolute value of a number is its value without the +/- sign.

Example:

=ABS(-56)

returns 56.

=ABS(12.3)

returns 12.3.

=ABS(0)

returns 0.

3. ROUND

It Rounds a number to a certain precision.

Syntax:

=ROUND(number; places)

returns number rounded to places decimal places. If places is omitted or zero, the function rounds to the nearest integer. If places is negative, the function rounds to the nearest 10, 100, 1000, etc.

Example:

=ROUND(2.348; 2)

returns 2.35

=ROUND(2.348; 0)

returns 2

=ROUND(2.5)

returns 3

4. INT

It Rounds a number down to the nearest integer.

Syntax:

=INT(number)

returns number rounded down to the nearest integer.

Negative numbers round down to the integer below: -1.3 rounds to -2.

Example:

=INT(5.7)

returns 5

=INT(-1.3)

returns -2.

5. SIGN

It Returns the sign of a number:- 1 if the number is positive, -1 if negative and 0 if zero.

Syntax:

=SIGN(number)

number is the number whose sign is to be determined.

Example:

=SIGN(3.4)

returns 1.

=SIGN(-4.5)

returns -1.

=SIGN(0)

returns 0

6. SQRT

It returns the positive square root of a number.

Syntax:

=SQRT(number)

Returns the positive square root of number; number must be positive.

Example:

=SQRT(16)

returns 4.

7. RAND

It returns a random number between 0 and

1 Syntax:

RAND()

8. FACT

It returns the factorial of a number.

Syntax:

=FACT(number)

Example:

=FACT(3) returns 6

9. POWER

It returns a number raised to a

power Syntax:

=POWER(number; power)

returns number^{power}, that is number raised to the power of power.

Example:

=POWER(4; 3)

returns 64, which is 4 to the power of 3.

10. EXP

It returns the mathematical constant e raised to the power of a number.

Syntax:

=EXP(number)

returns e^{number} .

Example:

=EXP(1)

returns 2.71828182845904

11. LOG

It returns the logarithm of a number to the specified base.

Syntax:

=LOG(number; base)

returns the logarithm to base base of number.

Example:

=LOG(10; 3)

returns the logarithm to base 3 of 10 (approximately 2.0959)

12. LOG10

It returns the base 10 logarithm of a number.

Syntax:

=LOG10(number)

returns the logarithm to base 10 of number.

Example:

=LOG10(5)

returns the base-10 logarithm of 5 (approximately 0.69897)

13. LN

It returns the natural logarithm of a number
Syntax:

=LN(number)

returns the natural logarithm (the logarithm to base e) of number

Example:

=LN(3)

returns the natural logarithm of 3 (approximately 1.0986)

14. PRODUCT

It multiplies all the numbers given as arguments and returns the product.

Syntax:

=PRODUCT(number1; number2; ... number30)

Example:

=PRODUCT(2; 3; 4)

returns 24 ($2 * 3 * 4$).

=PRODUCT(A1:A2)

where A1 and A2 contain 3 and 5, returns 15 ($3 * 5$).

STATISTICAL FUNCTIONS:

1. MIN

It returns the minimum of a list of arguments, ignoring text entries.

Syntax:

=MIN(number1; number2; ... number30)

Example:

=MIN(2; 6; 4)

returns 2, the smallest value in the list.

=MIN(B1:B3)

where cell range is B1, B2, B3

2. MAX

It returns the maximum of a list of arguments, ignoring text entries.

Syntax:

=MAX(number1; number2; ... number30)

Example:

=MAX(2; 6; 4)

returns 6, the largest value in the list.

=MAX(B1:B3)

3. AVERAGE

It returns the average of the arguments, ignoring text.

Syntax:

=AVERAGE(number1; number2; ... number30)

Example:

=AVERAGE(2; 6; 4)

returns 4, the average of the three numbers in the list.

=AVERAGE(B1:B3)

4. MEDIAN

It returns the median of a set of

numbers

Syntax:

=MEDIAN(number1; number2; ... number30)

number1 to number30 are up to 30 numbers or ranges containing numbers.

MEDIAN returns the median (middle value) of the numbers. If the count of numbers is odd, this is the exact middle value. If the count of numbers is even, the average of the two middle values is returned.

Example:

=MEDIAN(1; 5; 9; 20; 21)

returns 9, the number exactly in the middle.

=MEDIAN(1; 5; 9; 20)

returns 7, which is the average of 5 and 9, the two numbers in the middle.

5. MODE

It returns the most common value in a set of numbers.

Syntax:

=MODE(number1; number2; ... number30)

Example:

=MODE(A1:A4)

where cells A1:A4 contain 1, 3, 2, 3 returns 3, the number occurring most often.

6. AVEDEV

It returns the average of the absolute deviations of values from their mean.

Syntax:

=AVEDEV(number1; number2; ... number30)

Example:

=AVEDEV(1; 4; 7)

returns 2. The mean is 4, and the absolute deviations from the mean are 3, 0, 3 respectively.

7. COMBIN

It returns the number of combinations of a subset of items.

Syntax:

=COMBIN(n; k)

n is the number of items in the set.

k is the number of items to choose from the set.

COMBIN returns the number of ways to choose these items. For example if there are 3 items A, B and C in a set, you can choose 2 items in 3 different ways, namely AB, AC and BC.

Example:

COMBIN(3,2)

returns 3.

8. PERMUT

It returns the number of ordered permutations for a given number of objects.

Syntax:

=PERMUT(n; k)

where n and k are integers.

PERMUT returns the number of ordered ways that k objects can be chosen from a set of n objects, where an object can only be chosen once. For example with a set of 3 objects A, B, C, we can choose 2 as follows: AB, AC, BA, BC, CA, CB.

Example:

=PERMUT(3; 2)

returns 6, as in the example above.

COUNTING FUNCTIONS:

1. COUNT

It counts the numbers in the list of arguments, ignoring text entries.

Syntax:

=COUNT(value1; value2; ... value30)

EXAMPLE:

=COUNT(B1:B3)

2. COUNTA

It counts the non-empty values in the list of arguments. Syntax:

=COUNTA(value1; value2; ... value30)

EXAMPLE:

=COUNTA(B1:B3)

TEXT/STRING FUNCTIONS:

1. LOWER

Converts a text string to lowercase.

Syntax:

=LOWER(text)

returns text with all characters converted to lower case.

Example:

=LOWER("Good MORNING")

returns good morning

2. UPPER

Converts a text string to uppercase.

Syntax:

=UPPER(text)

returns text with all characters converted to upper case.

Example:

=UPPER("Good Morning") returns

GOOD MORNING

3. TEXT

Converts a number into text according to a given format. Syntax:

=TEXT(number; format)

returns number converted to text, according to the format code specified by format.

Example:

=TEXT(12.34567;"###.##")

returns the text 12.35

4. TRIM

It removes excess spaces from a text string.

Syntax:

=TRIM(text)

returns text with any leading or trailing spaces removed, and with any multiple spaces replaced with a single space.

Example:

=TRIM(" Good Morning ")

returns Good Morning.

DATE AND TIME FUNCTIONS:

1. TODAY

It returns the current date.

=TODAY()

returns the current date (as a date-time serial number). TODAY is updated at every recalculation, for instance if a cell is modified.

2. NOW

It returns the current date and time Syntax:

=NOW()

returns the current date and time (as a date-time serial number).

3. YEAR

It returns the year of a given date.

Syntax:

=YEAR(date)

returns the year of date as a number.

Example:

=YEAR("2008-06-04")

returns 2008.

4. MONTH

It returns the month of a given date.

Syntax:

=MONTH(date)

returns the month of date as a number, where January is 1 and December is 12.

Example:

=MONTH("2008-06-04") returns 6.

5. DAY

It returns the day of a given date.

Syntax:

=DAY(date)

returns the day of date as a number (1-31).

Example:

=DAY("2008-06-04") returns 4.

=DAY(A1)

where cell A1 contains the date 23Nov83 as a date-time serial number, returns 23.

6. TIME

It returns the time, given hours, minutes and seconds.

Syntax:

=TIME(hours; minutes; seconds)

Example:

=TIME(9; 31; 20)

returns the time 9:31:20 am

7. HOUR

Returns the hour of a given

time. Syntax:

=HOUR(time)

returns the hour of time as a number, 0 - 23.

Example:

=HOUR("2008-01-06 21:30:15")

returns 21.

8. MINUTE

Returns the minutes of a given

time. Syntax:

=MINUTE(time)

returns the minutes of time as a number, 0 - 59.

Example:

=MINUTE("2008-01-06 21:30:15") returns 30.

9. SECOND

It returns the seconds of a given time.

Syntax:

=SECOND(time)

returns the seconds of time as a number, 0 - 59.

Example:

=SECOND("2008-01-06 21:30:15") returns 15.

LOGICAL FUNCTIONS:

This includes logical conjectures such as if..then statements.

1. AND()

This function returns the TRUE if all the arguments are TRUE and FALSE if any or more arguments are false.

Syntax:

=AND(condition; TRUE)

Example:

=AND(2<4;FALSE)

2. OR()

This function returns TRUE if any argument is TRUE and FALSE if all arguments are FALSE.

Syntax:

=OR(condition1;condition2;TRUE)

Example:

=OR(1>2;TRUE)

3. IF()

This function checks the logical condition of a statement and returns one value if a condition you specify evaluates to TRUE and other value if evaluates to FALSE.

Syntax:

=IF(condition;true-value;false-value)

Example:

=IF(A1>5;100;"too small")

FINANCIAL FUNCTIONS:

This function includes calculating and tracking loan functions, principal, interest rate, depreciation and future values.

1. PMT()

This function finds a periodic payment for a fixed loan.

Syntax:

=PMT(interest_rate;no_of_periods;present_value;future_value;type)

2. RATE()

This function is used to calculate the interest rate charged to pay off a loan.

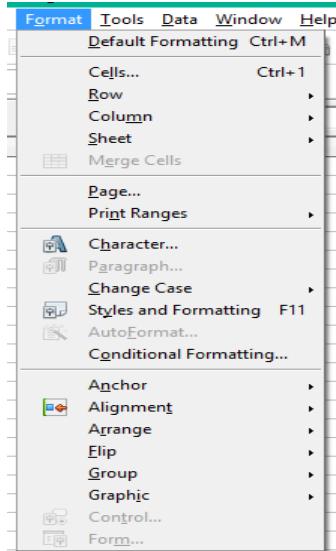
Syntax:

=RATE(no_of_periods;fixed_periodic_payments;present_value)

FORMATTING A WORKSHEET:

There are many types of formatting that can be applied to spreadsheet worksheets. The most commonly used formatting commands show up on the **Format Menu**.

Formatting changes can be applied to a whole worksheet, a range of cells within a worksheet, individual cells, and sometimes even text within a cell.



❖ The Font Group

Bold, Italicize and Underline Text

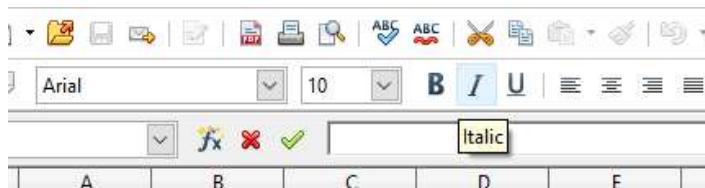
To bold text in Spreadsheet:

1. Select the cell or cells in which you wish to bold the text.
2. From the formatting bar, click the **Bold** command.



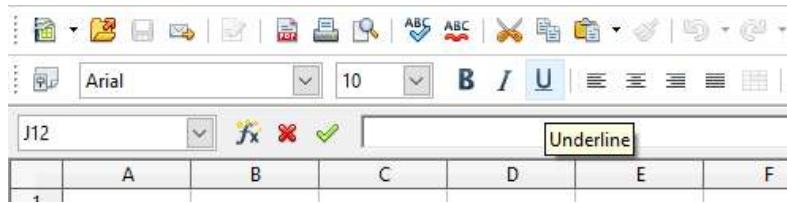
To italicize text in Spreadsheet:

1. Select the cell or cells in which you wish to italicize the text.
2. From the formatting bar, click the **Italic** command.



To underline text in Spreadsheet:

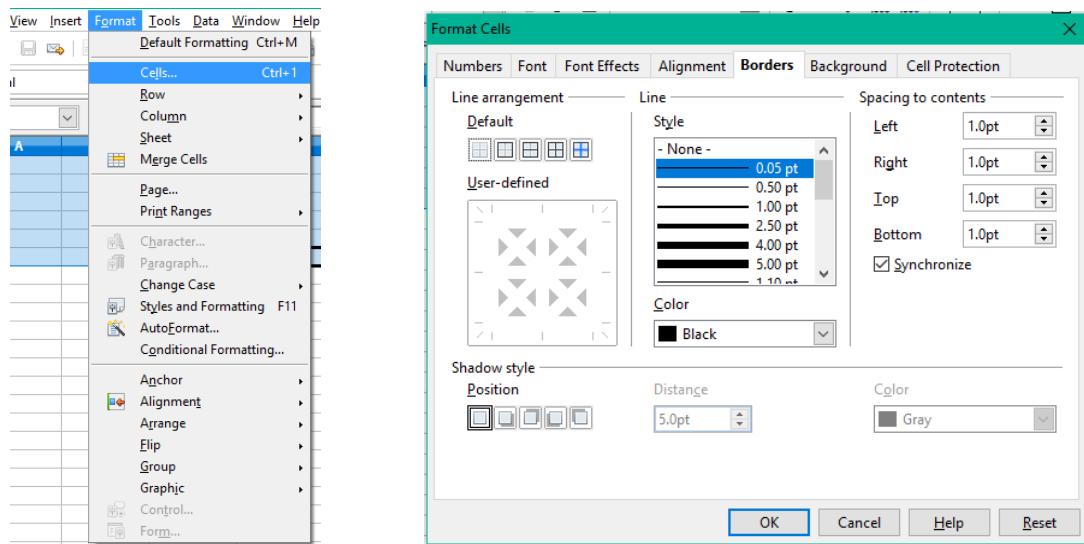
1. Select the cell or cells in which you wish to underline the text.
2. From the formatting bar, click the **Underline** command.



Add Borders to Cells

To add borders to cells in Spreadsheet:

1. Select the cell or cells to which you wish to add borders.
2. From the format menu, select Cells.

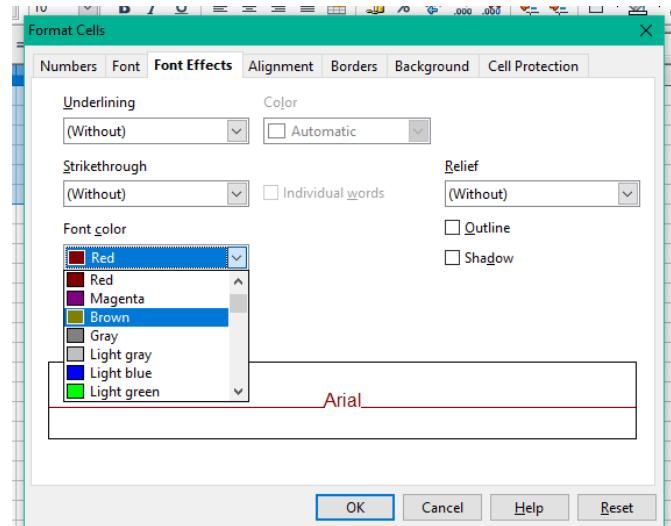


3. From the Borders Tab, select the type of border you wish to add from the line arrangement and select the type of border you wish to add.

Change Text and Cell Colors

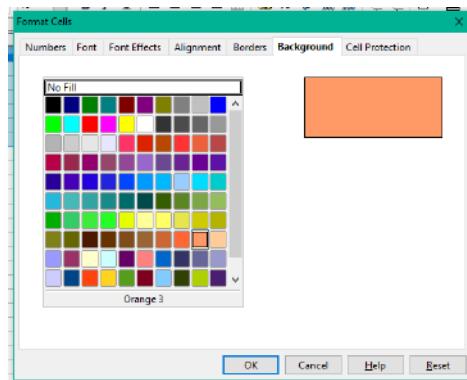
To change the color of text in cells in Spreadsheet:

1. Select the cell or cells to which you wish to add borders.
2. From the format menu, select Cells.
3. From the Font Effects tab, select the color that you wish to apply.



To change the fill (i.e., background) color of cells in Spreadsheet:

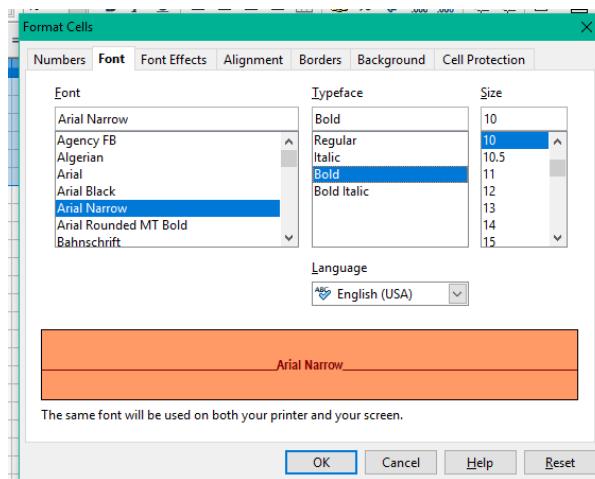
1. Select the cell or cells in which you wish to change the fill color.
2. From the format menu, select Cells.
3. From the Background tab, select the color that you wish to apply.



Set Font and Font Size

To change the font of text or numbers in cells in Spreadsheet:

1. Select the cell or cells in which you wish to change the font.
2. From the format menu, select Cells.
3. From the Font tab, font style, type and font size that you wish to apply.

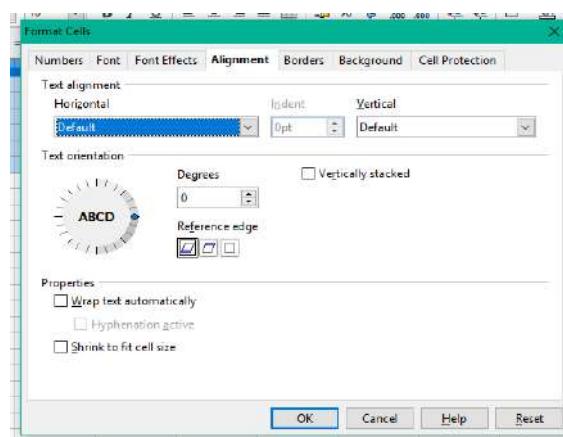


Align Text:

Text within cells in Spreadsheet can be aligned both vertically (top, center and bottom) and horizontally (left, center and right) or at any angle diagonally.

To align text vertically within a cell or cells in Spreadsheet:

1. Select the cell or cells in which you wish to align the text.
2. From the Format Menu, select Cells.
3. From the Alignment Tab, you can align the text horizontally, vertically or any diagonal angle that you wish.



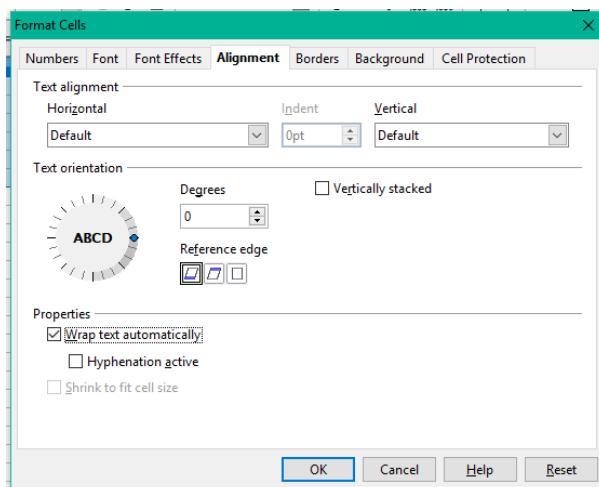
Wrap Text

By default, text in Spreadsheet remains on one line. Wrapping text is a way of getting text to show up on multiple lines within a cell. See the following example:

	This text does not wrap.
	This text does wrap.

To wrap text within a cell or cells in Spreadsheet:

1. Select the cell or cells in which you wish to wrap the text.
2. From the Format Menu, select Cells.
3. From the Alignment Tab, tick the Wrap text automatically check box to enable wrap text facility.



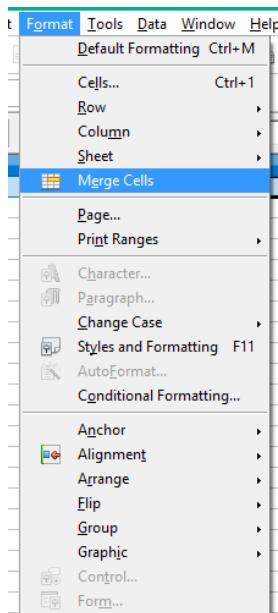
Merge & Center Text

Often a label applies to multiple columns. In these cases, it is useful to merge cells to show this. In the following example, the years "2012" and "2013" each apply to four columns

:

To merge cells in Spreadsheet:

1. Select the cells you wish to merge.
2. From the Format Menu, Select Merge Cells, to merge the selected cells.



CREATING CHARTS (GRAPHICS)

A **chart** is a tool you can use in Spreadsheet to communicate your **data graphically**. Charts allow your audience to more easily see the meaning behind the numbers in the spreadsheet, and to make showing comparisons and trends much easier. In this lesson, you will learn how to **insert** and **modify** Spreadsheet charts and see how they can be an effective tool for communicating information.

Charts can be a useful way to communicate data. When you insert a chart in Spread

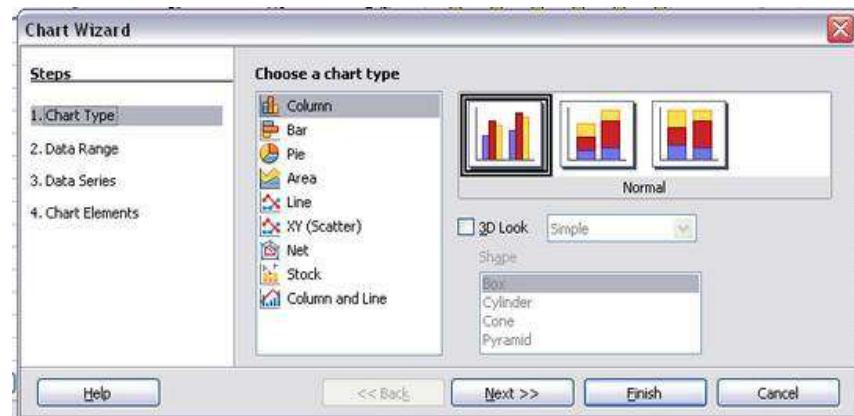
To create a chart:

- ② Select the worksheet you want to work with.
- ② Select the cells you want to chart, including the column titles and row labels.
- ② Select Insert > Chart from the menu bar.
- ② Or, click the Chart icon on the main toolbar.
- ② Select one of the Chart options. In this example, we'll use the Columns command.
- ② Select a type of chart from the list that appears.



Step 1: Choosing a chart type

The Chart Wizard includes a sample chart with your data. This sample chart updates to reflect the changes you make in the Chart Wizard. The Chart Wizard has three main parts: a list of the steps involved in setting up the chart, the list of chart types, and the options for each chart type. At any time you can go back to a previous step and change selections.



Step 2: Changing data label and axes labels

In Step 2, Data Range, you can manually correct any mistakes you have made in selecting the data. On this page you can also change the way you are plotting the data by using the rows—rather than the columns—as data series. This is useful if you use a style of chart such as Donut or Pie to display your data. Lastly, you can choose whether to use the first row or first column, or

both, as labels on the axes of the chart. You can confirm what you have done so far by clicking the **Finish** button, or click **Next** to change some more details of the chart.



Step 3: Selecting data series

On the Data Series page, you can fine tune the data that you want to include in the chart. Perhaps you have decided that you do not want to include the data for canoes. If so, highlight **Canoes** in the **Data series** box and click on **Remove**. Each named data series has its ranges and its individual Y-values listed. This is useful if you have very specific requirements for data in your chart, as you can include or leave out these ranges.



Step 4: Adding or changing titles, legend, and grids

On the Chart Elements page, you can give your chart a title and, if desired, a subtitle. It may be of benefit to have labels for the x axis or the y axis. This is where you give people an idea as to the proportion of your data. For example, if we put Thousands in the y axis label of our graph, it changes the scope of the chart entirely. For ease of estimating data you can also display the x or y axis grids by selecting the *Display grids* options. To finish the chart, click **Finish**.



Identifying the parts of a chart

Have you ever read something you didn't fully understand but when you saw a chart or graph, the concept became clear and understandable? Charts are a visual representation of data in a worksheet. Charts make it easy to see comparisons, patterns, and trends in the data.



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

Title: The title of the chart.

Legend: The chart key, which identifies what each color on the chart represents.

Axis: The vertical and horizontal parts of a chart. The vertical axis is often referred to as the Y axis, and the horizontal axis is referred to as the X axis.

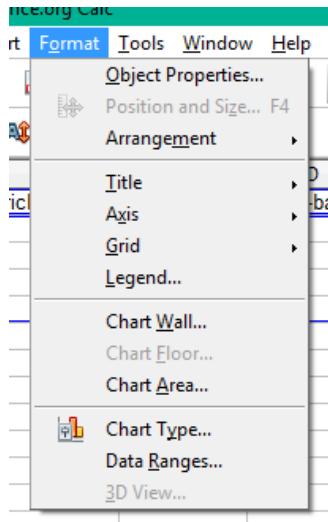
Data series: The actual charted values, which are usually rows or columns of the source data.

Value axis: The axis that represents the values or units of the source data.

Category axis: The axis identifying each data series.

Chart tools

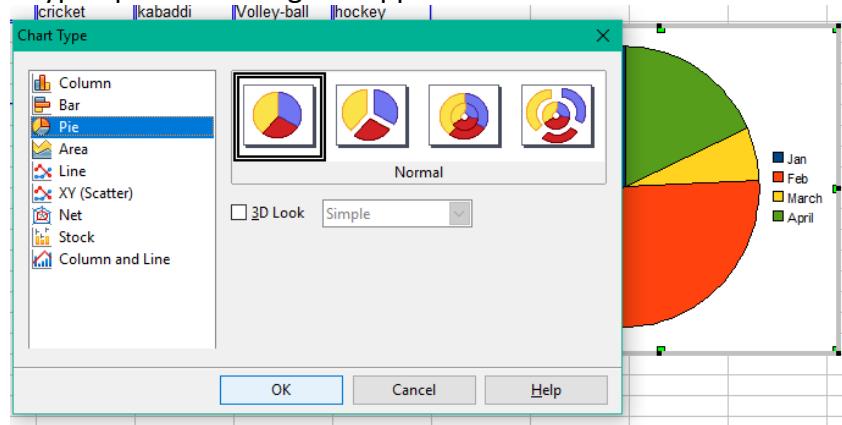
Once you insert a chart, a new set of Chart Tools are available in the Format Menu. These are only visible when the chart is selected.



To change the chart type:

The first tier of choice is for two-dimensional (2D) charts. Only those types which are suitable for 3D (Column, Bar, Pie, and Area) give you an option to select a 3D look.

- ② Select Format
- ② Click Chart Type option. A dialog box appears.

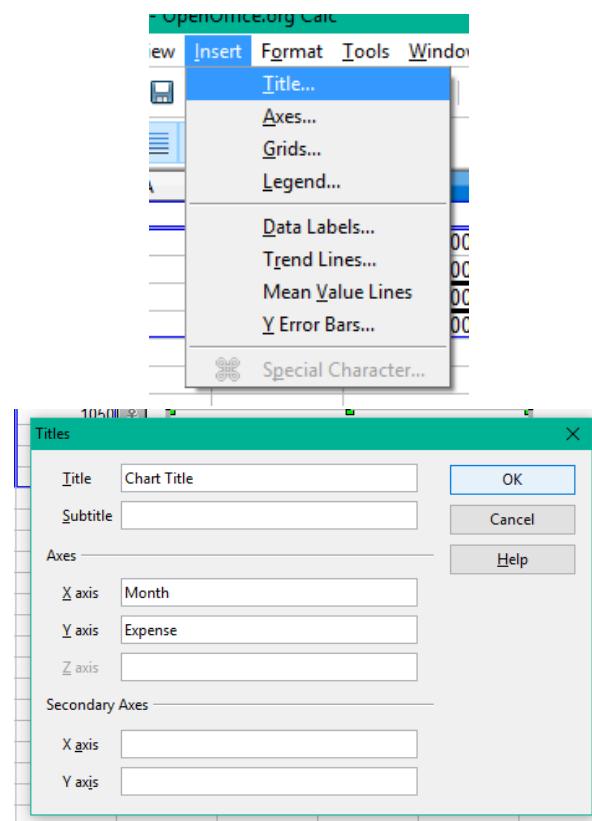


- ② Select another chart type.
- ② Click OK.

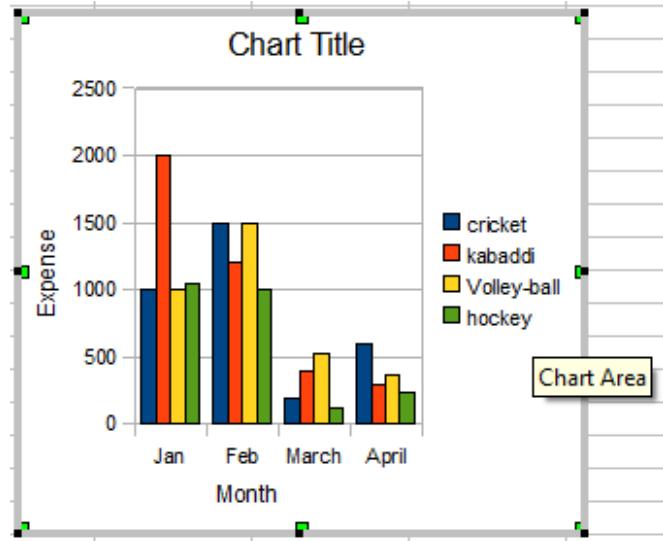
To insert title and axis of chart:

- ② Select Insert Menu.

- ② Select Title.



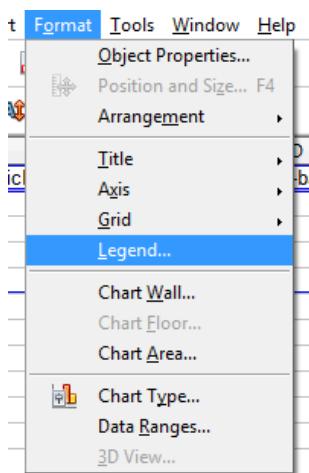
- ② Insert the values and click on OK.



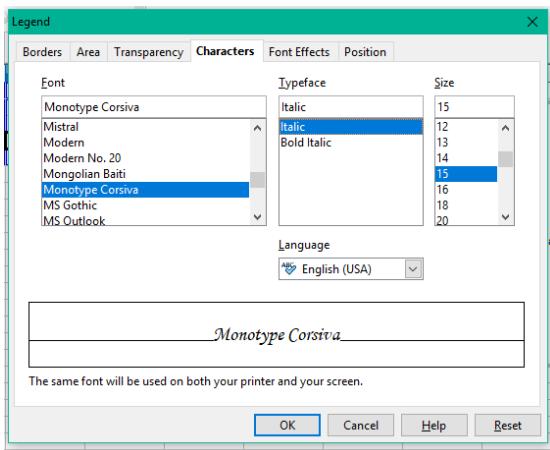
To format chart legend :

- ② Select Format Menu.

② Select Legend.



② Format the legends as per your choice.

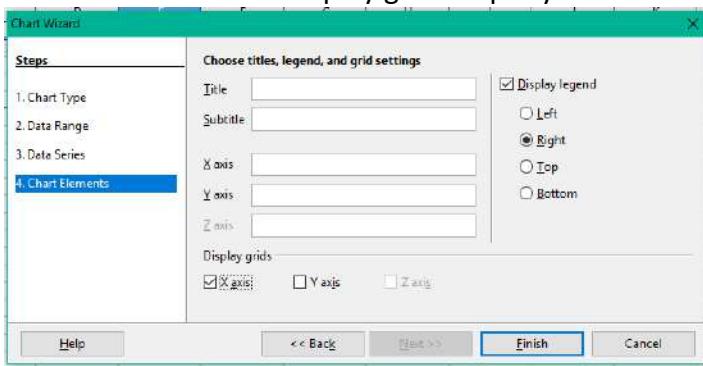


② **To change gridlines of the chart:**

② Select Insert chart.

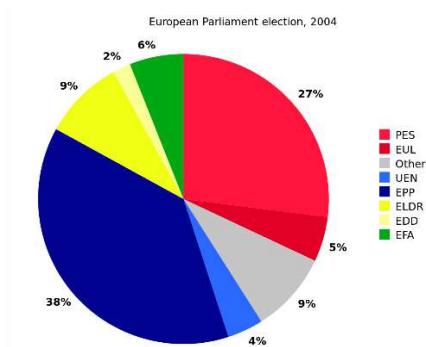
② In the Chart Wizard, go to chart elements.

② Check the box on the display grids as per your choice.

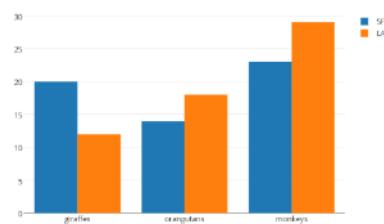


Types of chart:

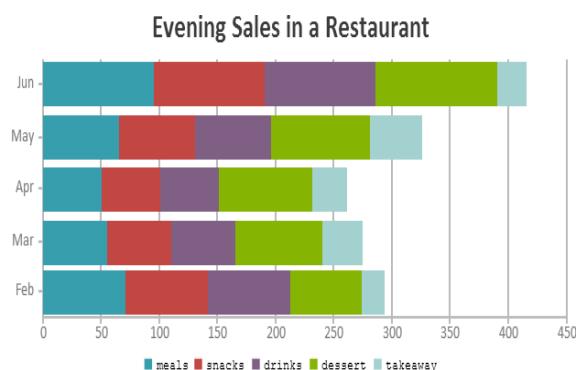
- Pie Chart
- Column Chart
- Line Chart
- Bar Chart
- Doughnut Chart
- Area Chart
- Scatter Chart



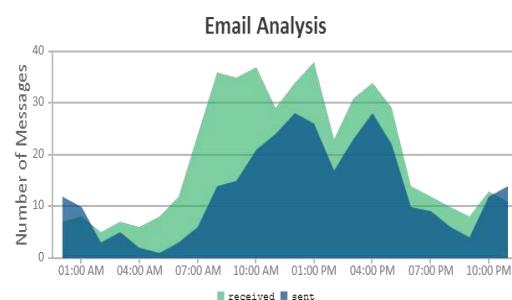
PIE CHART



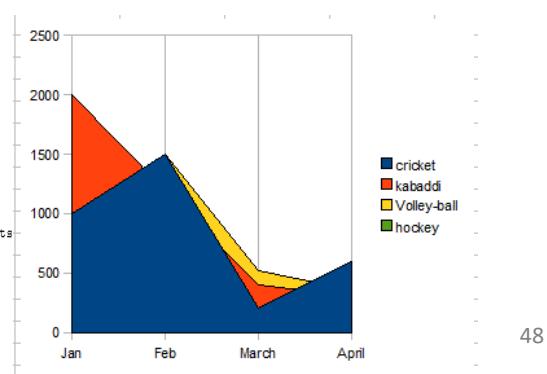
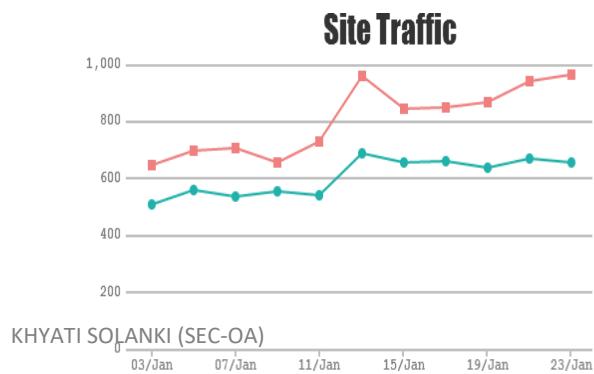
BAR CHART



COLUMN CHART



AREA CHART



ORGANIZING DATA IN A LIST

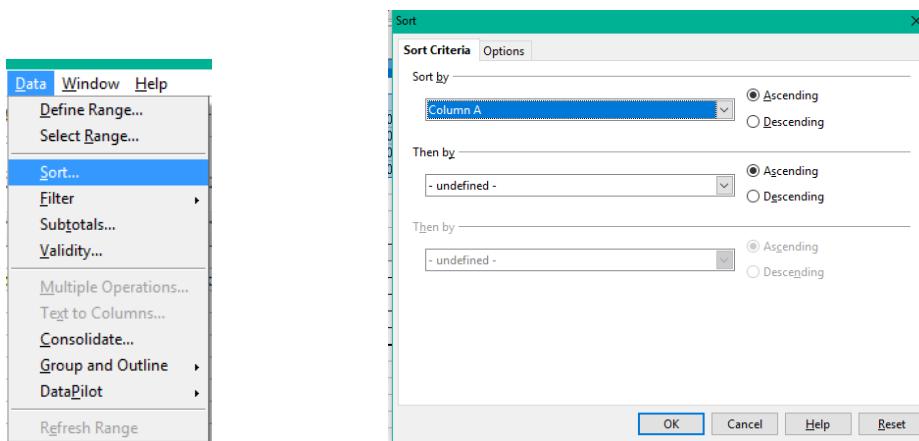
➤ **SORTING OF DATA:**

If your Spreadsheet worksheet has become quite large, using the Sort dialog box to sort on multiple columns can make it easier to find the data you need. The Sort dialog box lets you tell Spreadsheet what column to sort on next if two cells in the main sort column contain the same value or data.

Sorting lists is a common spreadsheet task that allows you to easily reorder your data. The most common type of sorting is alphabetical ordering, which you can do in ascending or descending order.

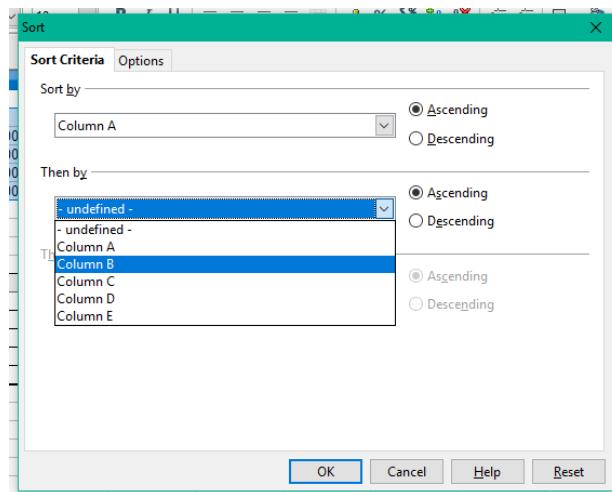
To sort in alphabetical order:

- Select a cell in the column you want to sort.
- From the Data Menu, select Sort.
- A dialog box for Sort will appear.
- In the Sort by option select the column name by which you want to sort.
- You have two options by which you can sort:
 - Ascending
 - Descending
- Click on OK.



To sort in multiple levels:

- Select a cell in the column you want to sort.
- From the Data Menu, select Sort.
- A dialog box for Sort will appear.
- In the Sort by option select the column name by which you want to sort first.
- You have two options by which you can sort that particular column:
 - Ascending
 - Descending
- Add the next level of sorting by selecting a column name from the **Then By..** option.



- Choose how to order the results. (Ascending or Descending)
- Click OK.

The spreadsheet has been sorted. All of the categories are organized in alphabetical order, and within each category the next data is arranged according to the next level sorting option.

➤ FILTERING OF DATA

Filtering, or temporarily hiding, data in a spreadsheet is simple. This allows you to focus on specific spreadsheet entries.

The basic Spreadsheet filter allows you to view specific rows in an Spreadsheet spreadsheet, while hiding the other rows. This is commonly known as AutoFilter in Spreadsheet. When the Spreadsheet AutoFilter is added to the header row of a spreadsheet, a drop-down menu appears in each cell of the header row. This provides you with many filter options that can be used to specify which rows of the spreadsheet are to be displayed.

To filter data:

- Select a cell in the column you want to sort.
- From the Data Menu, select Filter.
- From the sub-menu, select AutoFilter.
- Drop-down arrows will appear beside each column heading.

	A	B	C	D	E
1					
2	month	cricket	kabaddi	Volley-ball	hockey
3	Jan	1000	2000	1000	1050
4	Feb	120	1500	1200	1500
5	March	240	200	400	520
6	April	600	300	360	240
7					

- Click the drop-down arrow next to the heading you would like to filter. For example, if you would like to only view data of March, click the drop-down arrow next to month.

	A	B	C	D	E
1					
2	month	cricket	kabaddi	Volley-ball	hockey
3	All	1000	2000	1000	1050
4	Top 10	1500	1200	1500	1000
5	Standard Filter...	200	400	520	120
6	April	600	300	360	240
7	Feb				
8	Jan				
9	March				

- Select only March from the drop down list.
- All other data will be filtered, or hidden, and only the March data is visible.

	A	B	C	D	E	F
1						
2	month	cricket	kabaddi	Volley-ball	hockey	
5	March	200	400	520	120	
7						

Advanced Filter:

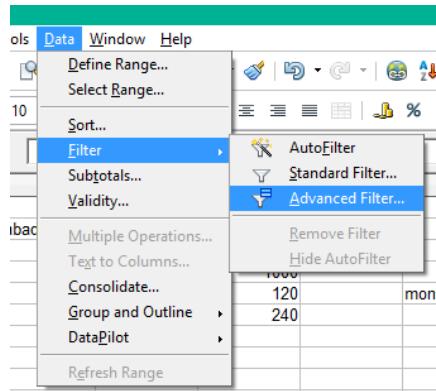
When you use the Advanced Filter, you need to enter the criteria on the worksheet. Create a Criteria range above your data set. Use the same column headers. Be sure there's at least one blank row between your Criteria range and data set.

To display the month in which expense in kabaddi greater than 1000, execute the following steps.

1. Enter the criteria shown below on the worksheet.

	A	B	C	D	E	F	G	H
1								
2	month	cricket	kabaddi	Volley-ball	hockey			
3	Jan	1000	2000	1000	1050			
4	Feb	1500	1200	1500	1000			
5	March	200	400	520	120	month	kabaddi	
6	April	600	300	360	240			>1000
7								
8								

2. Click any single cell inside the data set.
3. From the Data Menu, select Filter.
4. From the sub-menu, select Advanced Filter.



5. Click in the Criteria range box and select the range A1:D2 (blue).

	A	B	C	D	E	F	G	H
1								
2	month	cricket	kabaddi	Volley-ball	hockey			
3	Jan	1000	2000	1000	1050			
4	Feb	1500	1200	1500	1000			
5	March	200	400	520	120	month	kabaddi	
6	April	600	300	360	240			>1000
7								
8								

An 'Advanced Filter' dialog box is overlaid on the worksheet. It has a green header bar with the title 'Advanced Filter'. Inside, there is a dropdown labeled 'Read filter criteria from' with the value '- undefined -'. To its right is a text input field containing the range 'Sheet2!\$G\$5:\$H\$6', which is highlighted with a blue selection box. To the right of the input field is a green 'OK' button, which is also highlighted with a blue box. Below the input field are 'Cancel', 'Help', and 'More' buttons.

6. Click OK.

Notice the options to copy your filtered data set to another location and display unique records only (if your data set contains duplicates).

Result.

	A	B
1		
2	month	kabaddi
3	Jan	2000
4	Feb	1200
7		
8		

GOAL SEEK

Usually, you run a formula to calculate a result based upon existing values. By contrast, using **Tools > Goal Seek**, you can discover what values will produce the result that you want.

Goal Seek example

To calculate annual interest (*I*), create a table with the values for the capital (*C*), number of years (*n*), and interest rate (*i*). The formula is $I = C * n * i$.

Let us assume that the interest rate *i* of 7.5% and the number of years *n* (1) will remain constant. However, you want to know how much the investment capital *C* would have to be modified in order to attain a particular return *I*. For this example, calculate how much capital *C* would be required if you want an annual return of \$15,000.

Enter each of the values mentioned above into adjacent cells (for Capital *C*, an arbitrary value like \$100,000 or it can be left blank; for number of years *n*, 1; for interest rate *i*, 7.5%). Enter the formula to calculate the interest *I* in another cell. Instead of *C*, *n*, and *i* use the reference to the cell with the corresponding value. In our example, this would be =B1*B2*B3.

1. Place the cursor in the formula cell (B4), and choose **Tools > Goal Seek**.
2. On the Goal Seek dialog, the correct cell is already entered in the *Formula cell* field.
3. Place the cursor in the *Variable cell* field. In the sheet, click in the cell that contains the value to be changed, in this example it is B1.
4. Enter the desired result of the formula in the *Target value* field. In this example, the value is 15000. The figure below shows the cells and fields.

The screenshot shows a Microsoft Excel spreadsheet and its 'Tools' menu. The spreadsheet has four rows of data:

	A	B	C	D	E	I
1		100000				
2		1				
3		7.50%				
4		7500				

The 'Tools' menu is open, and 'Goal Seek...' is selected. A 'Goal Seek' dialog box is displayed in the foreground, showing the following settings:

- Default settings**
- Formula cell:** \$B\$4
- Target value:** 15000
- Variable cell:** \$B\$1

1. Click **OK**. A dialog appears informing you that the Goal Seek was successful. Click **Yes** to enter the result in the cell with the variable value. The result is shown below.

	A	B	C
1		200000	
2		1	
3		7.50%	
4		15000	
5			

EXCEL SHORTCUTS:

OpenOffice Calc, a spreadsheet program, offers various keyboard shortcuts to help you work more efficiently. Here are some commonly used shortcuts in OpenOffice Calc:

1. Navigation and Selection:

- **Arrow Keys:** Move the active cell in the direction of the arrow key.
- **Tab:** Move to the next cell to the right.
- **Shift + Tab:** Move to the next cell to the left.
- **Enter:** Move to the cell below.
- **Shift + Enter:** Move to the cell above.
- **Ctrl + Arrow Key:** Jump to the edge of data region in the current direction.
- **Ctrl + Space:** Select the entire column.
- **Shift + Space:** Select the entire row.
- **Ctrl + A:** Select all cells in the current sheet.

2. Editing:

- **F2:** Edit the active cell.
- **Delete or Backspace:** Delete the contents of the selected cell(s).
- **Ctrl + X:** Cut selected cell(s).
- **Ctrl + C:** Copy selected cell(s).
- **Ctrl + V:** Paste cut or copied cell(s).
- **Ctrl + Z:** Undo the last action.
- **Ctrl + Y:** Redo the last action.

3. Formatting:

- **Ctrl + B:** Bold text.
- **Ctrl + I:** Italicize text.
- **Ctrl + U:** Underline text.
- **Ctrl + 1:** Format cells dialog.
- **Ctrl + Shift + L:** Add or remove bullet points in a cell.

4. Insert and Delete:

- **Ctrl + + (Plus Key):** Insert cells, rows, or columns.
- **Ctrl + - (Minus Key):** Delete cells, rows, or columns.
- **Ctrl + Shift + + (Plus Key):** Insert a new sheet.
- **Ctrl + Shift + - (Minus Key):** Delete the current sheet.

5. Function Wizard:

- **Ctrl + F2:** Open the Function Wizard.

6. Other Useful Shortcuts:

- **Ctrl + S:** Save the current spreadsheet.
- **Ctrl + O:** Open a new spreadsheet.
- **Ctrl + P:** Print the current spreadsheet.
- **Ctrl + F:** Find and replace.
- **Ctrl + H:** Find and replace dialog.
- **Ctrl + W:** Close the current spreadsheet.
- **Ctrl + N:** Open a new spreadsheet.

These shortcuts can help you navigate, edit, and format your spreadsheets more efficiently in OpenOffice Calc. Keep in mind that some shortcuts may vary depending on your operating system and configuration.

Using conditional formatting

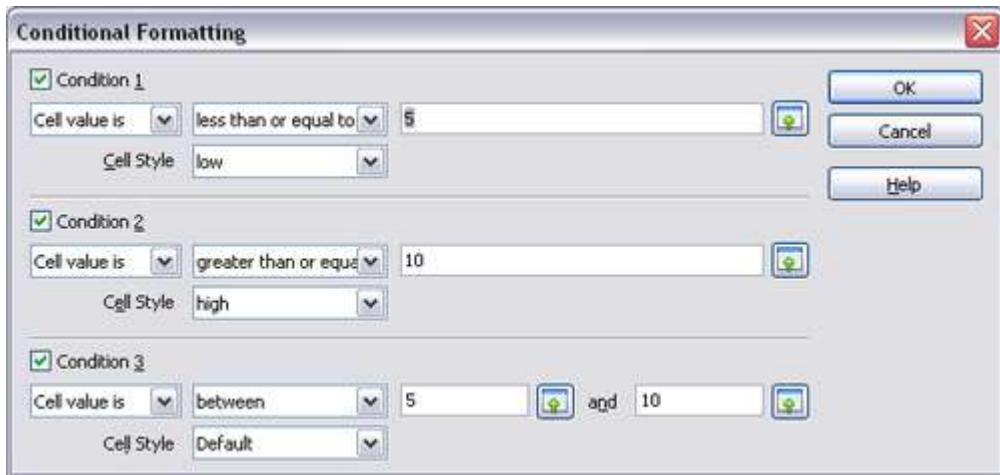
You can set up cell formats to change depending on conditions that you specify. For example, in a table of numbers, you can show all the values above the average in green and all those below the average in red.

To apply conditional formatting, AutoCalculate must be enabled. Choose **Tools > Cell Contents > AutoCalculate**.

Conditional formatting depends upon the use of styles. An easy way to set up the required styles is to format a cell the way you want it and click the New Style from Selection icon in the Styles and Formatting window.

After the styles are set up, here is how to use them.

1. In your spreadsheet, select the cells to which you want to apply conditional formatting.
2. Choose **Format > Conditional Formatting** from the menu bar.
3. On the Conditional Formatting dialog, enter the conditions. Click **OK** to save. The selected cells are now formatted in the relevant style.



Cell value is / Formula is

Specifies whether conditional formatting is dependent on a *cell value* or on a *formula*. If you select *cell value is*, the **Cell Value Condition** box is displayed, as shown in the example. Here you can choose from conditions including *less than*, *greater than*, *between*, and others.

Parameter field

Enter a reference, value, or formula in the parameter field, or in both parameter fields if you have selected a condition that requires two parameters. You can also enter formulas containing relative references.

'Cell style'

Choose the cell style to be applied if the specified condition matches. The style must have been defined previously.

See the Help for more information and examples of use.

To apply the same conditional formatting later to other cells:

1. Select one of the cells that has been assigned conditional formatting.
2. Copy the cell to the clipboard.
3. Select the cells that are to receive this same formatting.
4. Choose **Edit > Paste Special**.
5. On the Paste Special dialog, in the Selection area, select *only* the **Formats** option. Make sure all other options are not selected. Click **OK**.



Applying conditional format

Important aspect of the data tools lies in the visualization of those data for easy understanding of the user. Conditional formatting gives different font size, font colour and background colour for different data, based on the user requirements.

You can set up cell formats to change font size, font colour, background colour depending on conditions that you specify. For example, in a table of numbers, you can show all the values above the average in green and all those below the average in red.

For example, the marks of the students are entered in the spreadsheet. The marks should be shown in different colours for the different marks ranges.

Illustration 11.1: Apply the conditional formatting for **Table 11.1** as for the condition given below.

1. Marks less than or equal to 50 in Lightgreen
2. Marks greater than 50 in blue

Table 11.1 Data with conditional Formatting

Table 11.1 Data with conditional Formatting

Name	Marks
Kumar	32
Arun	67
Gayathri	50
Chandru	98

Procedure to apply conditional formatting:

1. Select the cells which contain marks
2. Choose **Format → Conditional Formatting** from the menu bar

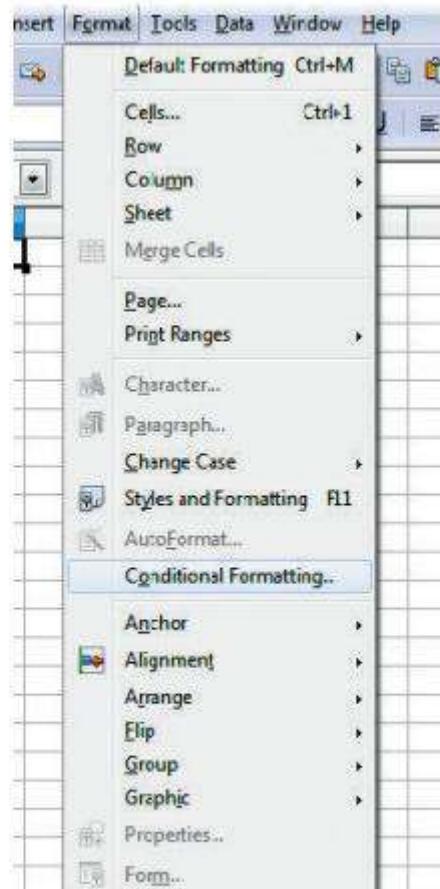


Figure 11.1 Format → Conditional Formatting

3. Conditional formatting dialog box appears as shown in **Figure 11.2**

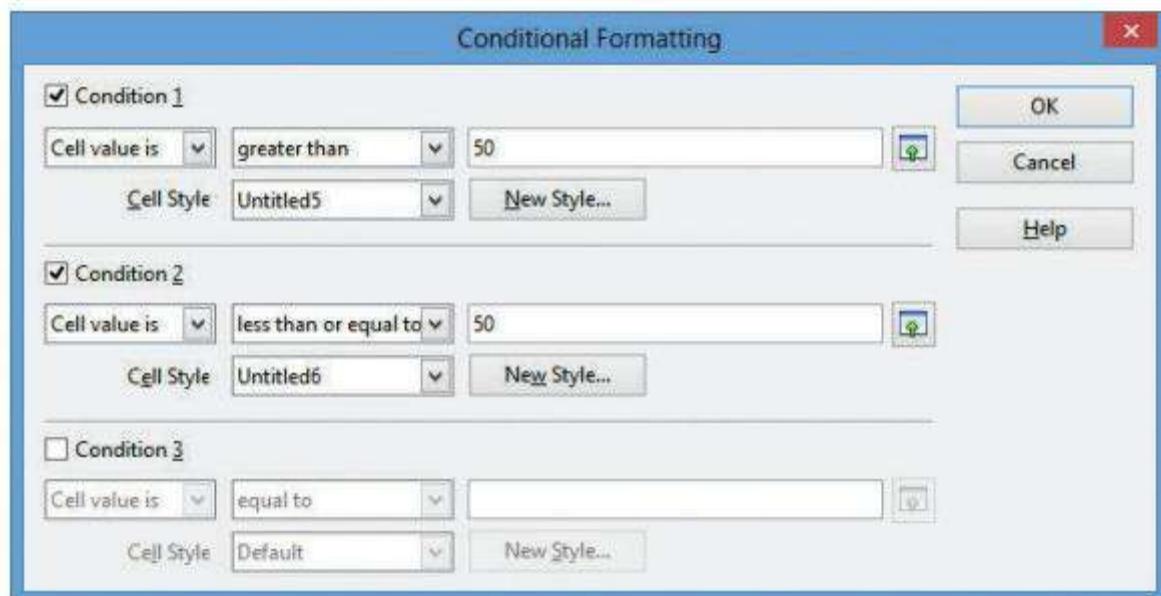


Figure 11.2 Conditional Formatting Dialog Box

4. Select Condition 1, choose **cell value** is “greater than” and type **50** in the value box.
 5. Then click **New Style** button. The New Style button has various options such as Font Style, Font Size, Font colour, Font alignment, Border Colour, and Background colour.
- Now, the cell style dialog box appears as shown in Figure 11.3a will appear. Click Background Tab and choose light green.

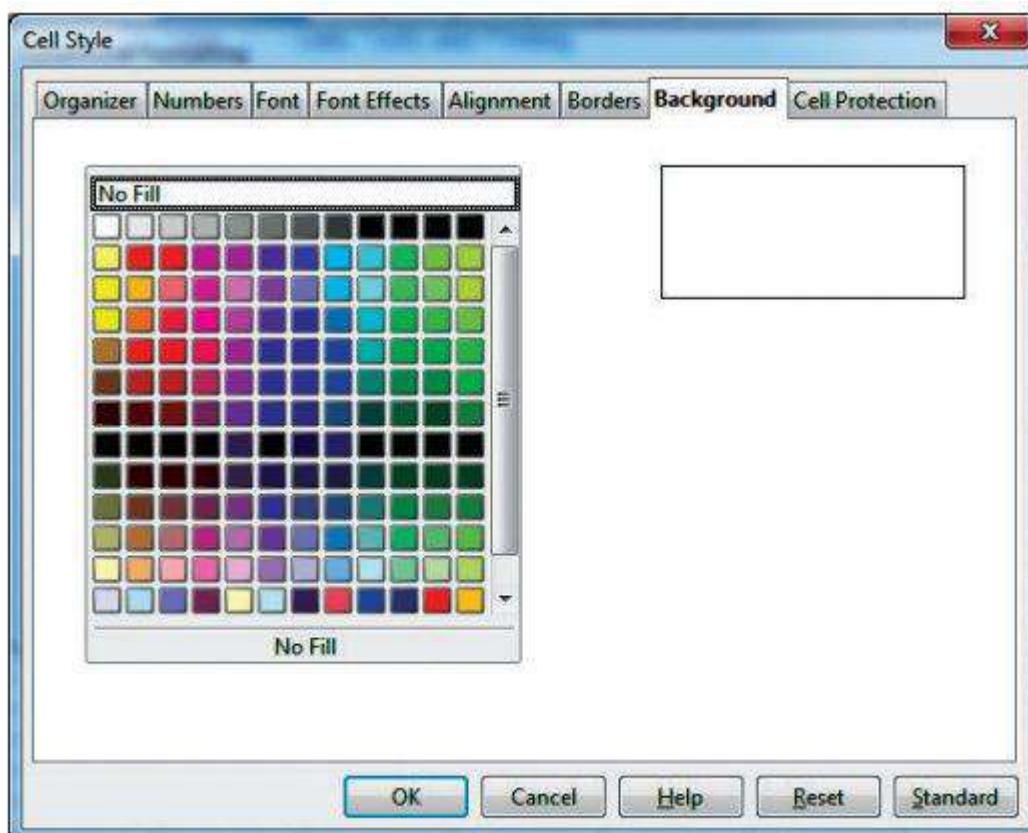


Figure 11.3a Conditional Formatting → New Style → Background

6. Similarly, Select Condition 2, choose cell value is “less than” and type 50 in the value box. In the background tab, choose blue colour.

Finally OpenOffice calc shows the result as given below:

	A	B	C	D
1	Name	Marks		
2	Kumar	32		
3	Arun	67		
4	Gayathri	50		
5	Chandru	98		
6				

Figure 11.3b Background Colour

DATA VALIDATION

Validating cell contents

When creating spreadsheets for other people to use, you may want to make sure they enter data that is valid or appropriate for the cell. You can also use validity in your own work as a guide to entering data that is either complex or rarely used.

Fill series and selection lists can handle some types of data, but they are limited to predefined information. For a more general case, you can select a cell and use **Data > Validity** to define the type of contents that can be entered in that cell. For example, a cell might require a date or a whole number, with no alphabetic characters or decimal points; or a cell may not be blank.

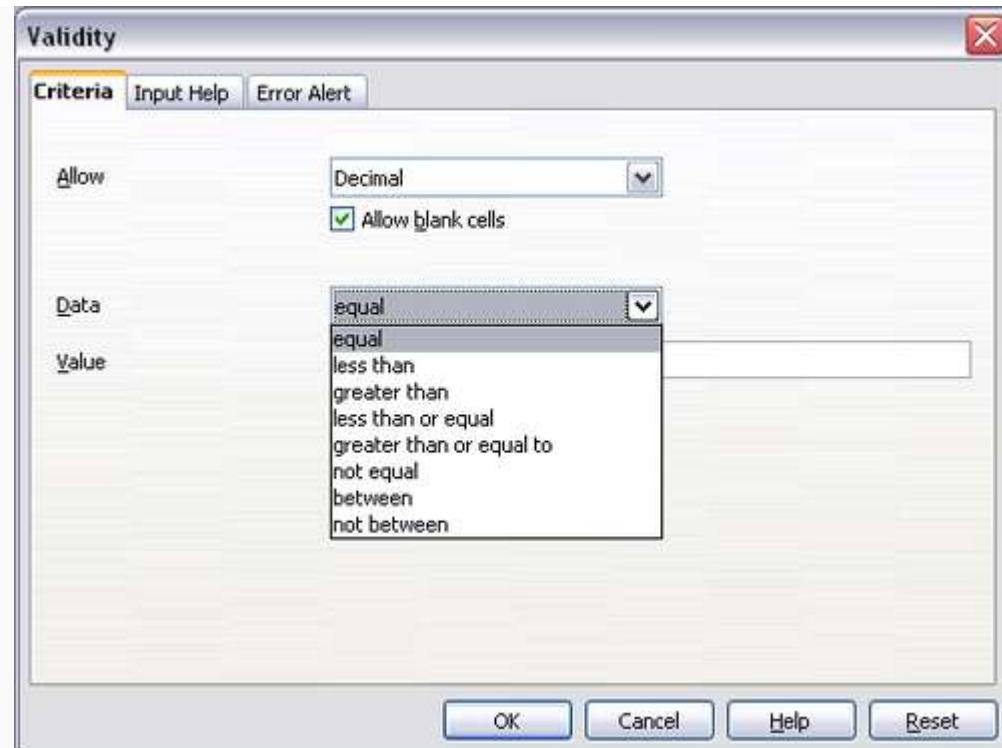
Depending on how validation is set up, the tool can also define the range of contents that can be entered and provide help messages that explain the content rules you have set up for the cell and what users should do when they enter invalid content. You can also set the cell to refuse invalid content, accept it with a warning, or—if you are especially well-organized—start a macro when an error is entered.

Validation is most useful for cells containing functions. If cells are set to accept invalid content with a warning, rather than refusing it, you can use **Tools > Detective > Mark Invalid Data** to find the cells with invalid data. The Detective marks with a circle any cells containing invalid data.

Note that a validity rule is considered part of a cell's format. If you select **Format** or **Delete All** from the Delete Contents window, then it is removed. (Repeating the Detective's Mark Invalid Data command then

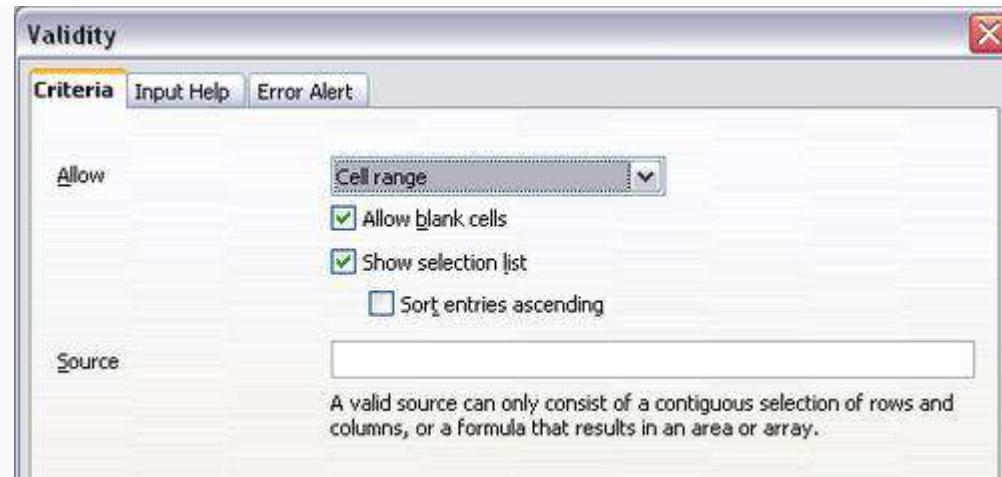
removes the invalid data circle, because the data is no longer invalid.) If you want to copy a validity rule with the rest of the cell, use **Edit > Paste Special > Paste Formats or Paste All**.

The figure below shows the choices for a typical validity test. Note the **Allow blank cells** option under the *Allow* list.



Typical validity test choices.

The validity test options vary with the type of data selected from the *Allow* list. For example, the figure below shows the choices when a cell must contain a cell range.



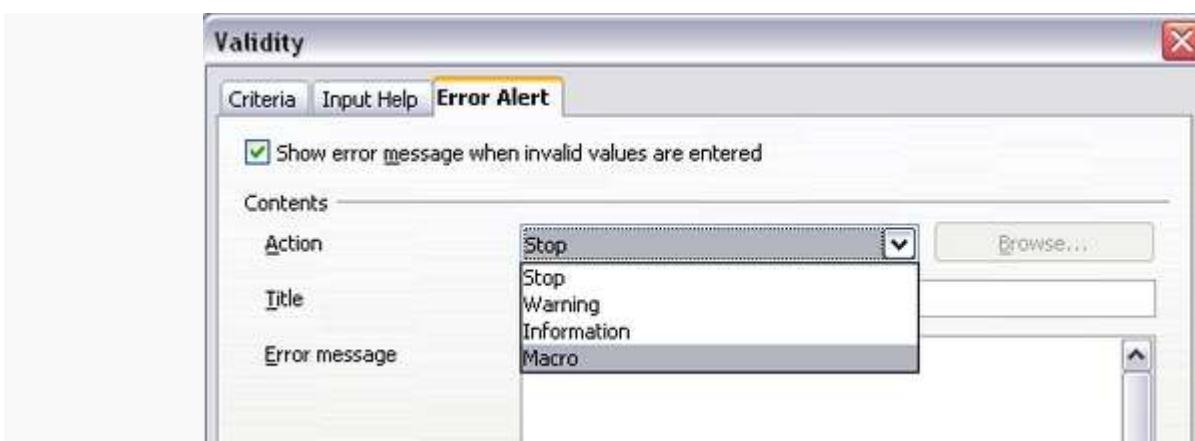
Validity choices for a cell range.

To provide input help for a cell, use the Input Help page of the Validity dialog.



Defining input help for a cell

To show an error message when an invalid value is entered, use the Error Alert page. Be sure to write something helpful, explaining what a valid entry should contain—not just “Invalid data—try again” or something similar.



Defining an error message for a cell with invalid data

Applying Validation

Validation will limit the data to be entered in the selected row/column/cell. For example, in the student database, the maximum roll no is 50. Hence, if the user enters a roll no above 50, it should give an error message.

Step 1: Enter Roll No in a cell A1 and select the entire column (column A)

Step 2: Go to **Data → Validity**, then a dialogue box will appear. In that, Go to Criteria Tab, Select whole numbers in the Allow field. It means only integer values are allowed.

Fractional values are not allowed. In the Data Field, select less than and in the maximum field type 50. Refer **Figure 11.16**.

Roll No	Name
1	P.Vishwanathan
2	V.Gowriyammal
6	V.Perumal
3	P.Ganam
4	P.Punitha
5	P.Kumutha
6	P.Komathi
7	P.Sumathi
9	A.Arthi
10	A.Sangeetha
11	K.Aravindh
12	K.P.Arumugam
13	S.Kumar
14	K.Kumaravel

Validity

Criteria Input Help Error Alert

Allow Whole Numbers Allow empty cells

Data less than

Maximum 50

OK Cancel Help Reset

Figure 11.16 Screen shot of validity dialogue box (Criteria Tab)

Then go to Error Alert Tab, in that select Show error message when invalid values are entered check box. Then select Warning in the Action checklist, Enter title of the error message (such as invalid) in the Title text box. Then Type the error message in the Error message multi line text box. Refer **Figure 11.17**.

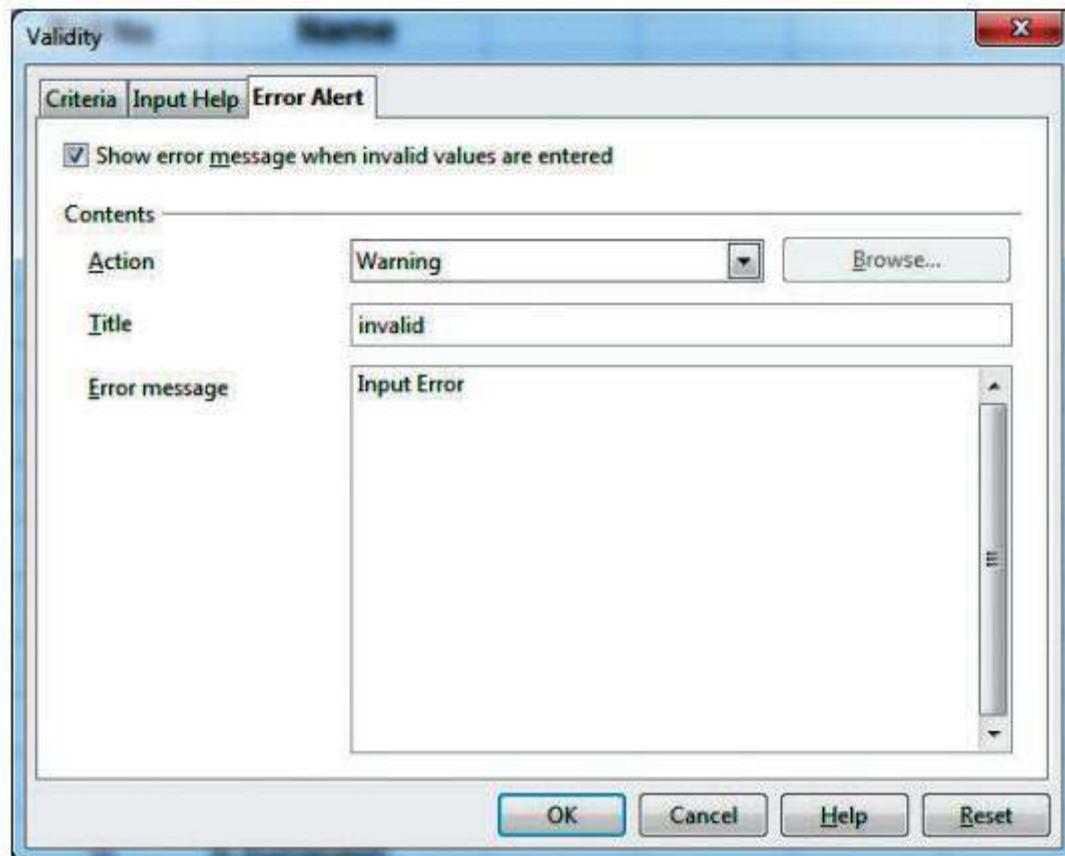


Figure 11.17 Screen shot of validity dialogue box (Error Alert Tab)

Now, in the Roll No column, if the user types values above 50, the error message will appear as shown in **Figure 11.18**.

Roll No	Name
1	P.Vishwanathan
2	V.Gowriyammal
6	V.Perumal
3	P.Ganam
4	P.Punitha
55	P.Kumutha
6	P.Komathi
7	P.Sumathi
9	A.Arthi
10	A.Sangeetha
11	K.Aravinth
12	K.P.Arumugam
13	S.Kumar
14	K.Kumaravel

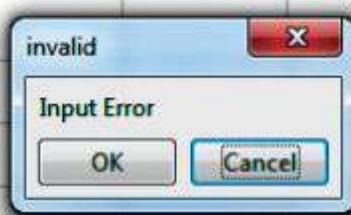


Figure 11.18 Screen shot of validity error

scenarios

Scenarios are a tool to test “what-if” questions. Each scenario is named, and can be edited and formatted separately. When you print the spreadsheet, only the contents of the currently active scenario is printed.

A scenario is essentially a saved set of cell values for your calculations. You can easily switch between these sets using the Navigator or a drop-down list which can be shown beside the changing cells. For example, if you wanted 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. Formulas that rely on the values changed by your scenario are updated when the scenario is opened. If all your sources of income used scenarios, you could efficiently build a complex model of your possible income.

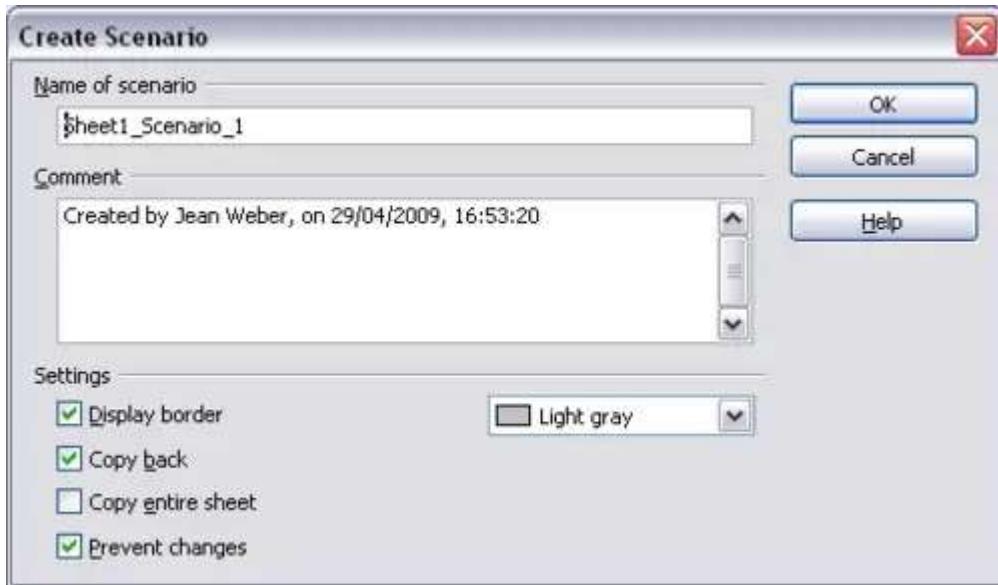
Creating scenarios

To create a scenario, select all the cells that provide the data for the scenario.

Select the cells that contain the values that will change between scenarios. To select multiple cells, hold down the *Ctrl* key as you click each cell.

Choose **Tools > Scenarios**.

On the Create Scenario dialog, enter a name for the new scenario. It's best to use a name that clearly identifies the scenario, not the default name as shown in the illustration. This name is displayed in the Navigator and on the title bar of the scenario on the sheet itself.



Optionally add some information to the **Comment** box. The example shows the default comment. This information is displayed in the Navigator when you click the Scenarios icon and select the desired scenario.

Optionally select or deselect the options in the *Settings* section. See below for more information about these options.

Click **OK** to close the dialog. The new scenario is automatically activated.

EXCEL FUNCTIONS

NOTE: USE **semicolon (;)** instead of **Comma (,)** in syntax of every excel function given in this PDF file and all the functions works perfectly fine with Open Office Calc

TYPES OF FUNCTION:

1) MATHEMATICAL AND TRIGONOMATRIC FUNCTIONS:-

These includes wide variety of functions for calculations of all type

1. SUM() : This function adds the value

Syntax:SUM(*number1*, [number2], ...)

Example: =SUM(A2:A6) - adds up values in cells A2 through A6.

=SUM(A2:A6)/5 - adds up values in cells A2 through A6, and then divides the sum by 5.

	A	B	C	D	E
1	Data			Sum formulas	
2	1			15	=SUM(A2:A6)
3	2			3	=SUM(A2:A6)/5
4	3				
5	4				
6	5				

2. ROUND() : The Excel ROUND function returns a number rounded to a given number of digits. The ROUND function can round to the right or left of the decimal point.

Syntax: =ROUND (*number*, *num_digits*)

EXCEL FUNCTIONS

D4

fx

=ROUND(B4,C4)

	A	B	C	D	E	F
1	ROUND (number, num_digits)					
2						
3	Number	Digits	Result	Notes		
4	5.7845	1	5.8	Round to 1 decimal place		
5	5.7845	2	5.78	Round to 2 decimal places		
6	5.7845	3	5.785	Round to 3 decimal places		
7	23542.5	0	23543	Round to the nearest whole number		
8	23542.5	-1	23540	Round to the nearest 10		
9	23542.5	-2	23500	Round to the nearest 100		
10	23542.5	-3	24000	Round to the nearest 1000		

If **num_digits > 0**, **number** is rounded to the specified number of decimal places to the right of the decimal point.

If **num_digits < 0**, **number** is rounded to the left of the decimal point (i.e. to the nearest 10, 100, 1000, etc.).

If **num_digits = 0**, **number** is rounded to the nearest integer.

- 3. ROUNDUP()** : The Excel ROUNDUP function returns a number rounded up to a given number of decimal places. Unlike standard rounding, where numbers less than 5 are rounded down, ROUNDUP always rounds numbers 1-9 up.

Syntax: =ROUNDUP (number, num_digits)

EXCEL FUNCTIONS

D4 =ROUNDUP(B4,C4)

	A	B	C	D	E
1	ROUNDUP (number, num_digits)				
2					
3	Number	Digits	Result	Notes	
4	5.1242	0	6	Round up to the nearest whole number	
5	5.1242	1	5.2	Round up to 1 decimal place	
6	5.1242	2	5.13	Round up to 2 decimal places	
7	5.1242	3	5.125	Round up to 3 decimal places	
8	27842.5	-1	27850	Round up to the nearest 10	
9	27842.5	-2	27900	Round up to the nearest 100	
10	27842.5	-3	28000	Round up to the nearest 1000	

4. **ROUNDDOWN()** : The Excel ROUNDDOWN function returns a number rounded down to a given number of decimal places. Unlike standard rounding, where only numbers less than 5 are rounded down, ROUNDDOWN rounds all numbers 1-9 down.

Syntax: =ROUNDDOWN (number, num_digits)

D4 =ROUNDDOWN(B4,C4)

	A	B	C	D	E
1	ROUNDDOWN (number, num_digits)				
2					
3	Number	Digits	Result	Notes	
4	5.7899	0	5	Round down to the nearest whole number	
5	5.7899	1	5.7	Round down to 1 decimal place	
6	5.7899	2	5.78	Round down to 2 decimal places	
7	5.7899	3	5.789	Round down to 3 decimal places	
8	27842.5	-1	27840	Round down to the nearest 10	
9	27842.5	-2	27800	Round down to the nearest 100	
10	27842.5	-3	27000	Round down to the nearest 1000	

5. **INT()** : The Excel INT function returns the integer part of a decimal number by rounding down to the integer.

Syntax: =INT (number)

EXCEL FUNCTIONS

	A	B	C	D
1				
2			INT (number)	
3				
4				
5		Value	Result	
6		4.9	4	
7		-10.8	-11	
8		5.1	5	
9		0.05	0	
		-1.1	-2	

6. **FACT()** : The Excel FACT function returns the factorial of a given number. For example, =FACT(3) returns 6, equivalent to $3 \times 2 \times 1$.

Syntax: =FACT (number)

	A	B	C
1			
2			FACT (number)
3			
4			
5		Number	Result
6		8	40320
7		7	5040
8		6	720
9		5	120
10		4	24
11		3	6
12		2	2
		1	1

7. **POWER()** : The Excel POWER function returns a number to a given power. The POWER function works like an exponent in a standard math equation.

Syntax: =POWER (number, power)

number - Number to raise to a power.

power - Exponent to raise power to.

EXCEL FUNCTIONS

	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					
8					
9					

POWER function

Number	Power	Result	Notes
2	5	32	
2	8	256	
2	16	65536	
27	0.333333	3	cubed root, C8 = 1/3
729	0.333333	9	cubed root, C8 = 1/3

8. **ABS()** : The Excel ABS function returns the absolute value of a number. Negative numbers are converted to positive numbers, and positive numbers are unaffected

Syntax: =ABS (number)

	A	B	C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

ABS (number)

Get absolute value

Input	Output
-\$134.50	\$134.50
500	500
5.125	5.125
-\$0.13	\$0.13
-\$43.00	\$43.00

9. **SIGN()** : The Excel SIGN function returns the sign of a number as +1, -1 or 0. If number is positive, SIGN returns 1. If number is negative, sign returns -1. If number is zero, SIGN returns 0.

Syntax: =SIGN (number)

EXCEL FUNCTIONS

The screenshot shows a Microsoft Excel interface with the formula `=SIGN(B6)` entered in cell C6. The table below illustrates the `SIGN` function:

Number	Result
0.01	1
0	0
5	1
0.333333333	1
-3	-1
1000	1

10.CEILING() :The Excel CEILING function returns a given number rounded up to a specified multiple. For example, =CEILING(A1,5) could be used to round a price in A1 to the nearest 5 dollars. CEILING always rounds up.

Syntax: `=CEILING (number, multiple)`

number - The number that should be rounded.

multiple - The multiple to use when rounding.

The screenshot shows a Microsoft Excel interface with the formula `=CEILING(B4,C4)` entered in cell D4. The table below illustrates the `CEILING` function:

Number	Significance	Result	Notes
10	3	12	Round up to nearest 3
36	7	42	Round up to nearest 7
610	100	700	Round up to nearest 100
5.37	0.05	5.40	Round up to nearest 0.05
5.37	1	6.00	Round up to nearest 1
-5.5	1	-5	Round up toward zero
-5.5	-1	-6	Round up away from zero

EXCEL FUNCTIONS

11. **FLOOR()** : The Excel FLOOR function rounds a given number down to the nearest specified multiple. FLOOR always rounds down

Syntax: =FLOOR (number, multiple)



FLOOR (number, significance)

Number	Significance	Result	Notes
10	3	9	Round down to nearest 3
36	7	35	Round down to nearest 7
660	100	600	Round down to nearest 100
\$5.37	0.05	\$5.35	Round down to nearest 0.05
\$5.37	1	\$5.00	Round down to nearest 1
-5.6	1	-6	Round away from zero
-5.6	-1	-5	Round toward zero

12. **SUBTOTAL()** : The Excel SUBTOTAL function returns an aggregate result for supplied values. SUBTOTAL can return a SUM, AVERAGE, COUNT, MAX, and others. Get a subtotal in a list or database

Syntax: =SUBTOTAL (function_num, ref1, [ref2], ...)

function_num - A number that specifies which function to use in calculating subtotals within a list. See table below for full list.

ref1 - A named range or reference to subtotal.

ref2 - [optional] A named range or reference to subtotal.

STEPS:

1. Select The Data Range In Which YouWant To Perform SUBTOTAL Function Formula

EXCEL FUNCTIONS

year	region	sales
2017	NORTH	5000
2017	SOUTH	4000
2017	EAST	5000
2018	EAST	6000
2018	NORTH	6500
2018	SOUTH	5000

2. Go To DATA Menu

3. Select Subtotal Icon

The screenshot shows the Microsoft Excel ribbon with the 'Data' tab selected. In the 'Data Tools' group, the 'Subtotal' icon is highlighted with a yellow box.

4. Now we Want Year Wise Total Of Sales So From The Open Dialogbox We Select:

The screenshot shows the 'Subtotal' dialog box open over a spreadsheet. The 'At each change in:' dropdown is set to 'year'. The 'Use function:' dropdown is set to 'Sum'. The 'Add subtotal to:' dropdown has 'year', 'region', and 'sales' selected. The 'Replace current subtotals' checkbox is checked.

5. Now Press OK And Finally We Got The Year Wise Sum Of Sales

EXCEL FUNCTIONS

	A	B	C	D	E
64	year	region	sales		
65	2017	NORTH	5000		
66	2017	SOUTH	4000		
67	2017	EAST	5000		
68	2017 Total		14000		
69	2018	EAST	6000		
70	2018	NORTH	6500		
71	2018	SOUTH	5000		
72	2018 Total		17500		
73	Grand Total		31500		
74					
75					
76					

13. PERMUT() : The Excel PERMUT function returns the number of permutations (combinations where order is significant) of a given number of items. To use PERMUT, specify the total number of items and "number chosen", which represents the number of items in each combination.

Syntax: =PERMUT (number, number_chosen)

A permutation is a group of items in which order/sequence matters.

If order is not significant, use the COMBIN function.

Arguments that contain decimal values are truncated to integers.

	A	B	C	D	E
1	PERMUT (number,number_chosen)				
2	Get number of possible permutations (sequence matters)				
3	Number	Chosen	Result	Notes	
4	5	1	5	5 possible permutations in groups of 1	
5	5	2	20	20 possible permutations in groups of 2	
6	5	3	60	60 possible permutations in groups of 3	
7	5	4	120	120 possible permutations in groups of 4	
8	5	5	120	120 possible permutations in groups of 5	

EXCEL FUNCTIONS

14. COMBIN() : The Excel Combin function returns the number of combinations (in any order) of a given number of items. To use COMBIN, specify the total number of items and "number chosen" which represents the number of items in each combination.

Syntax: =COMBIN (number, number_chosen)

D7	A	B	C	D	E
1					
2				COMBIN (number,number_chosen)	
3				Get number of possible combinations (in any order)	
4					
5					
6					
7					
8					
9					
10					

Number	Chosen	Result	Notes
5	1	5	5 possible combinations in groups of 1
5	2	10	10 possible combinations in groups of 2
5	3	10	10 possible combinations in groups of 3
5	4	5	5 possible combinations in groups of 4
5	5	1	1 possible combinations in groups of 5

15. MOD() : The Excel MOD function returns the remainder of two numbers after division. For example, MOD(10,3) = 1. The result of MOD carries the same sign as the divisor.

Syntax: =MOD (number, divisor)

D6	A	B	C	D	E
1					
2				Get the remainder from division	
3				Get the remainder after one number is divided by another	
4					
5					
6					
7					
8					
9					

Number	Divisor	MOD function	Notes
12	4	0	
-3	2	1	Sign is the same as divisor
3	-2	-1	Sign is the same as divisor
54	7	5	

2) STATISTICAL FUNCTIONS

These functions are used for calculating average, probabilities, ranking, trends and others.

1. **MIN()** : The Excel MIN function returns the smallest numeric value in a range of values. The MIN function ignores empty cells, the logical values TRUE and FALSE, and text values.

Syntax: =MIN (number1, [number2], ...)

number1 - Number, reference to numeric value, or range that contains numeric values.

number2 - [optional] Number, reference to numeric value, or range that contains numeric values.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top displays '=MIN(D4:D11)'. The cell G6 contains the formula 'MIN(number1,[number2],...)'. Below the formula bar is a row of column headers A through F. The data starts at row 3, with columns A, B, and C labeled 'First', 'Last', and 'Score' respectively. Rows 4 through 11 contain data points: Sue Brown (Score 66), Sarah Duncan (Score 84), Justin Gatt (Score 69), Manfred Hollis (Score 77), Troy Johnson (Score 69), Aubrey Sinclair (Score 88), Gen Tanaka (Score 86), and Renee Zwick (Score 74). To the right of the main data area, there is a small table with two rows: 'Max' in row 5 with value 88, and 'Min' in row 6 with value 66. Row 6 is highlighted with a yellow background.

A	B	C	D	E	F	G
1	MIN(number1,[number2],...)					
2						
3	First	Last	Score			
4	Sue	Brown	66			
5	Sarah	Duncan	84			
6	Justin	Gatt	69			
7	Manfred	Hollis	77			
8	Troy	Johnson	69			
9	Aubrey	Sinclair	88			
10	Gen	Tanaka	86			
11	Renee	Zwick	74			

2. **MAX()**: The Excel MAX function returns the largest numeric value in a range of values. The MAX function ignores empty cells, the logical values TRUE and FALSE, and text values.

Syntax: =MAX (number1, [number2], ...)

EXCEL FUNCTIONS

	A	B	C	D	E	F	G
1							
2							
3	First	Last	Score				
4	Sue	Brown	66				
5	Sarah	Duncan	84	Max	88		
6	Justin	Gatt	69	Min	66		
7	Manfred	Hollis	77				
8	Troy	Johnson	69				
9	Aubrey	Sinclair	88				
10	Gen	Tanaka	86				
11	Renee	Zwick	74				

3. **AVERAGE()** : The Excel AVERAGE function returns the average of values supplied as multiple arguments. AVERAGE can handle up to 255 individual arguments, which can include numbers, cell references, ranges, arrays, and constants.

Syntax: =AVERAGE (number1, [number2], ...)

	A	B	C	D	E
1					
2					
3					
4	AVERAGE function				
5	Calculate the average of supplied numbers				
6	Test 1	Test 2	Test 3	Average	
7	8	7	9	8	
8	9	9		9	
9	7	6	8	7	
10	8	8	8	8	
11	10	10	10	10	

4. **AVERAGEA()**:The Excel AVERAGEA function returns the average of a group of supplied values. Unlike AVERAGE, AVERAGEA will also evaluate the logical values TRUE and FALSE, and numbers represented as text, whereas AVERAGE just skips these values during calculation

Syntax: =AVERAGEA (value1, [value2], ...)

EXCEL FUNCTIONS

	G5	f _x	=AVERAGEA(B5:E5)				
1	AVERAGEA function						
2	Average numbers (as text) and boolean values						
4	val1	val2	val3	val4	AVERAGE	AVERAGEA	
5	2	4	6	8	5	5	
6	2	TRUE	6	8	7	3.75	
7	7	6	FALSE		#DIV/0!	0	
8	1	3	TRUE	TRUE	2	1.5	

5. **AVEDEV()** : The Excel AVEDEV function returns the average of the absolute value of deviations from the mean for a given set of data. Average deviation is a measure of variability.

Syntax: =AVEDEV (number1, [number2], ...)

$$\text{Formula} = \frac{1}{n} \sum |x - \bar{x}|$$

	G5	:	X	✓	f _x	=AVEDEV(B5:B10)		
1	A	B	C	D	E	F	G	
2	AVEDEV (number1, [number2], ...)							
3								
4	Height	Deviation	ABS		Average	48		
5	50	2	2		AVEDEV	2		
6	47	-1	1					
7	52	4	4					
8	46	-2	2					
9	45	-3	3					
10	48	0	0					

6. **MEDIAN()**:The MEDIAN function returns the median (middle number) in a group of supplied numbers. For example, =MEDIAN(1,2,3,4,5) returns 3

Syntax: =MEDIAN (number1, [number2], ...)

EXCEL FUNCTIONS

A screenshot of Microsoft Excel demonstrating the MEDIAN function. The formula bar shows =MEDIAN(B5:F5). The spreadsheet has columns A through G and rows 1 through 6. Column G is labeled "Result". The data in rows 5 and 6 is as follows:

	1	2	3	4	5	Result
5	1	2	3	4	5	3
6	1	2	3		4	2.5

7. **MODE()** : The Excel MODE function returns the most frequently occurring number in a numeric data set. For example, =MODE(1,2,4,4,5,5,5,6) returns 5.

Syntax: =MODE (number1, [number2], ...)

A screenshot of Microsoft Excel demonstrating the MODE function. The formula bar shows =MODE(B4:K4). The spreadsheet has columns A through M and rows 1 through 7. The data in rows 4 through 7 is as follows:

	1	2	2	1	1	2	2	2	1	1
4	1	2	2	1	1	2	2	2	1	1
5	5	10	15	15	10	5	12	15	15	10
6	69	70	70	71	71	70	69	73	71	72
7	95	115	125	115	95	115	125	150	150	115

To the right of the table, there is a vertical column of numbers: 1, 15, 70, and 115, which are the mode values for each row respectively.

8. **CORREL()**: Returns the correlation coefficient of the Array1 and Array2 cell ranges. Use the correlation coefficient to determine the relationship between two properties. For example, you can examine the relationship between a location's average temperature and the use of air conditioners.

Syntax: =CORREL(array1, array2)

EXCEL FUNCTIONS

The screenshot shows a Microsoft Excel spreadsheet titled "bba unit1 practical - Microsoft Excel". The formula bar at the top displays "=CORREL(A30:A35,B30:B35)". The main area shows a table with columns labeled "PRODUCT", "DEMAND", and "CORREL". The "CORREL" column contains the value "-0.87991156" in row 30 and "-88%" in row 31. The table has rows numbered 27 through 36.

	A	B	C	D	E	F	G	H	I
27									
28	PRODUCT	DEMAND	CORREL						
29									
30	100	1000	-0.87991156						
31	110	950	-88%						
32	105	970							
33	95	1050							
34	90	1250							
35	115	925							
36									

9. RANK(): The Excel RANK function returns the rank of a numeric value when compared to a list of other numeric values. RANK can rank values from largest to smallest (i.e. top sales) as well as smallest to largest (i.e. fastest time) values, using an optional **order** argument.

Syntax: =RANK (number, array, [order])

number - The number to rank.

array - An array that contains the numbers to rank against.

order - [optional] Whether to rank in ascending or descending order.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top displays "=RANK(D5,\$D\$5:\$D\$12)". The main area shows a table with columns labeled "City", "State", "Population", and "Rank". The "Rank" column contains the value "4" in row 5. The table has rows numbered 1 through 12.

	A	B	C	D	E	F
1						
2	RANK(number, array, [order])					
3						
4	City	State	Population	Rank		
5	Houston	TX	2,100,263	4		
6	Phoenix	AZ	1,445,632	6		
7	New York	NY	8,175,133	1		
8	Philadelphia	PE	1,526,006	5		
9	Los Angeles	CA	3,792,621	2		
10	San Antonio	TX	1,327,407	7		
11	San Diego	CA	1,307,402	8		
12	Chicago	IL	2,695,598	3		

EXCEL FUNCTIONS

3. TEXT FUNCTIONS

Use these text based functions to search and replace data and other text related tasks.

1. **UPPER():**The Excel UPPER function returns a upper-case version of a given text string. Numbers and punctuation are not affected.

Syntax: =UPPER (text)

A screenshot of Microsoft Excel demonstrating the UPPER function. The formula bar shows =UPPER(B4). The cell C4 contains the text "UPPER (text)". Below it is a table with three rows:

	Input	Result	Notes
4	zachary taylor	ZACHARY TAYLOR	Spaces are unaffected
5	zip code: 84111	ZIP CODE: 84111	Numbers are unaffected
6	#hello_world!	#HELLO_WORLD!	Punctuation is unaffected

2. **LOWER():**The Excel LOWER function returns a lower-case version of a given text string. Numbers and punctuation are not affected.

Syntax: =LOWER (text)

A screenshot of Microsoft Excel demonstrating the LOWER function. The formula bar shows =LOWER(B4). The cell C4 contains the text "LOWER (text)". Below it is a table with three rows:

	Input	Result	Notes
4	ZACHARY TAYLOR	zachary taylor	Spaces are unaffected
5	ZIP CODE: 84111	zip code: 84111	Numbers are unaffected
6	#HELLO_World!	#hello_world!	Punctuation is unaffected

3. **PROPER():**The Excel PROPER function capitalizes words given text string. Numbers and punctuation are not affected.

Syntax: =PROPER (text)

EXCEL FUNCTIONS

	A	B	C	D
1		PROPER (text)		
2				
3		Input	Result	Notes
4	zachary taylor	Zachary Taylor	Spaces are unaffected	
5	To be or not to be	To Be Or Not To Be	All words are capitalized	
6	san diego, CA	San Diego, Ca	Existing capitalization may be affected	

4. **LEFT()**:The Excel LEFT function extracts a given number of characters from the left side of a supplied text string. For example, LEFT("apple",3) returns "app"

Syntax: =LEFT (text, [num_chars])

	A	B	C	D
1				
2		LEFT (text)		
3				
4		Text	Result	Comment
5	New York City	New	Left 3 characters of "New York"	
6	New York City	New York	Left 8 characters of "New York"	
7	84111-0001	84111	Standard 5 digits of a zip code	
8	303-512-4271	303	Area code of a phone number	

5. **RIGHT()**:The Excel RIGHT function extracts a given number of characters from the right side of a supplied text string. For example, RIGHT("apple",3) returns "ple".

Syntax: =RIGHT (text, [num_chars])

EXCEL FUNCTIONS

	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					
8					
RIGHT (text)					
Text		Examples			
New York City		Right 4 characters of "New York City" City			
Moab, UT		State abbreviation from city, state UT			
FUNCTION		Number of characters not specified N			
303-512-4271		Phone number without area code 512-4271			
google.com		Extracting a 3 letter domain extension com			

6. **MID()**:The Excel MID function extracts a given number of characters from the middle of a supplied text string. For example, =MID("apple",2,3) returns "ppl".

Syntax: =MID (text, start_num, num_chars)

text - The text to extract from.

start_num - The location of the first character to extract.

num_chars - The number of characters to extract.

	A	B	C	D	E	F
1						
2						
3						
4						
MID (text, start_num, num_chars)						
Text		Start	Chars	Result	Notes	
The cat in the hat		5	3	cat	Retrieving characters 5-7	
The cat in the hat		16	3	hat	Retrieving characters 16-18	
string_unwanted		1		string	Using FIND with MID to remove " _xxxx"	
string_garbage		1		string	Same formula as above	

7. **LEN()**:The Excel LEN function returns the length of a given text string as the number of characters. LEN will also count characters in numbers, but number formatting is not included.

Syntax: =LEN (text)

EXCEL FUNCTIONS

	A	B	C	D	E
1		LEN(text)			
2					
3	Text		Examples		
4	Utah		Length of "Utah"	4	
5	Salt Lake City		Length of "Salt Lake City"	14	
6	UT		Length of "UT"	2	
7	01-Jan-13		Length of a date (5-digit number)	5	
8	001		Length of "001" (text)	3	
9		10.1	Length of a number (10.00)	4	
10		1,000	Length of a number (1000)	4	

8. **FIND()**:The Excel FIND function returns the position (as a number) of one text string inside another. When the text is not found, FIND returns a #VALUE error

Syntax: =FIND (find_text, within_text, [start_num])

find_text - The text to find.

within_text - The text to search within.

start_num - [optional] The starting position in the text to search. Optional, defaults to 1.

- FIND is case-sensitive and does not support wildcards.
- Use the [SEARCH function](#) to search without case-sensitivity and/or to use wildcards.

	A	B	C	D	E	F
1						
2						
3						
4	FIND (find_text, within_text, [start_num])					
5						
6	Find	Within	Start	Result	Notes	
7	A	Apple		1	Start number is optional and defaults to 1	
8	p	Apple	1	2	Result based on first occurrence	
9	le	Apple	1	4	Finding more than one character	
10	the	The cat in the hat	1	12	Find IS case sensitive	

9. **SEARCH()**:The Excel SEARCH function returns the location of one text string inside another. SEARCH returns the position of the first character of find_text inside within_text. Unlike FIND, SEARCH allows wildcards, and is not case-sensitive.

Syntax: =SEARCH (find_text, within_text, [start_num])

EXCEL FUNCTIONS

	A	B	C	D	E	F
1					=SEARCH(B4,C4)	
2						
3						
4	Find	Text	Start	Result	Notes	
5	A	Apple		1	Start number is optional; defaults to 1	
6	p	Apple	1	2	Result based on first occurrence	
7	the	The cat in the hat	1	1	Search is NOT case sensitive	
	00??	01-A-0010	1	6	Search supports wildcards ? and *	

10.REPLACE():The Excel REPLACE function replaces characters specified by location in a given text string with another text string. For example =REPLACE("XYZ123",4,3,"456") returns "XYZ456".

Syntax: =REPLACE (old_text, start_num, num_chars, new_text)

old_text - The text to replace.

start_num - The starting location in the text to search.

num_chars - The number of characters to replace.

new_text - The text to replace old_text with.

	A	B	C	D	E
1					
2					
3					
4	Input	Output			
5	XRT-2017-001	XRT-2018-001			
6	XRT-2017-002	XRT-2018-002			
7	XRT-2017-003	XRT-2018-003			
8	XRT-2017-004	XRT-2018-004			
9	XRT-2017-005	XRT-2018-005			
10	XRT-2017-006	XRT-2018-006			

11.SUBSTITUTE():The Excel SUBSTITUTE function replaces text in a given string by matching.

For example =SUBSTITUTE("952-455-7865","-","",") returns "9524557865"; the dash is stripped. SUBSTITUTE is case-sensitive and does not support wildcards.

EXCEL FUNCTIONS

Syntax: =SUBSTITUTE (text, old_text, new_text, [instance])

text - The text to change.

old_text - The text to replace.

new_text - The text to replace with.

instance - [optional] The instance of old_text to replace with new_text. Optional; if not supplied, all instances of old_text are replaced with new_text.

	A	B	C	D	E	F	G
1	SUBSTITUTE (text, old_text,new_text, [instance_num])						
2							
3	Text	Old	New	Instance	Result	Notes	
4	tuttle	t	b		bubble	All instances replaced	
5	tuttle	t	b	1	buttle	First instance only replaced	
6	The cat in the hat	the	a		The cat in a hat	Substitute IS case sensitive	

12. TRIM(): The Excel TRIM function strips extra spaces from text, leaving only a single space between words and no space characters at the start or end of the text.

Syntax: =TRIM (text)

	A	B	C	D
1	TRIM (text)			
2				
3	Input	Result	Notes	
4	many spaces	many spaces	Extra spaces are replaced with one space	
5	even more space	even more space	Leading and trailing spaces also removed	
6	extra spaces & line breaks	extra spaces & line breaks	TRIM with CLEAN to remove line breaks and spaces at the same time	

13. CONCAT(): The Excel CONCAT function concatenates (joins) values supplied as references or constants. Unlike the CONCATENATE function (which CONCAT replaces), CONCAT allows you to supply a range of cells to join, in addition to individual cell references.

Syntax: =CONCAT (text1, [text2], ...)

EXCEL FUNCTIONS

G5	:	X	✓	f _x	=CONCAT(B5:F5)	
A	B	C	D	E	F	G
1						
2		CONCAT(text1,[text2],...)				
3						
4	1	2	3	4	5	Result
5	A	B	C	D	E	ABCDE
6	dates	oranges	pears	pears	limes	datesorangespearspearslimes
7	exceljet	.net				exceljet.net
8	1	2	3	4	5	12345
9	100	oranges				100oranges

4. COUNT FUNCTIONS

1 COUNT():The Excel COUNT function returns the count of values that are numbers, generally cells that contain numbers. Values can be supplied as constants, cell references, or ranges.

Syntax:=COUNT (value1, [value2], ...)

value1 - An item, cell reference, or range.

value2 - [optional] An item, cell reference, or range.

E6	:	X	✓	f _x	=COUNT(B5:B11)	
A	B	C	D	E	F	G
1						
2		COUNT (value1, value2 ,...)				
3						
4	Value					
5	puppy					
6	apple			Numbers	4	
7	100					
8	20%					
9	-3					
10	0.5					
11	red					

EXCEL FUNCTIONS

- 2 **COUNTA():**The Excel COUNTA function returns the count of cells that contain numbers, text, logical values, error values, and empty text (""). COUNTA does not count empty cells.

Syntax: =COUNTA (value1, [value2], ...)

	A	B	C	D	E	F	G
1							
2	COUNTA (value1, value2 ,...)						
3							
4	Value						
5	puppy						
6	apple						
7							
8	20%						
9	-3						
10	0.5						
11							

- 3 **COUNTBLANK():**The Excel COUNTBLANK function returns a count of empty cells in a range. Cells that contain text, numbers, errors, etc. are not counted. Formulas that return empty text are counted.

Syntax:=COUNTBLANK (range)

	A	B	C	D	E	F	G	H
1								
2	COUNTBLANK function							
3	1	2	3	4	5	6	Blank	
4	0.592437	0.698525		0.618278		0.7187	2	
5	0.042949	0.231815	0.185179	0.224723	0.437195	0.317542	0	
6	0.829421	0.592394	0.807353	0.058918	0.456367	0.950373	0	
7	0.179294	0.324136		0.311283		0.431638	2	
8	0.950429	0.86344	0.03272	0.852769	0.392676	0.387932	0	
9	0.013879				0.94476	0.918461	3	
10	0.668453	0.607958	0.556335	0.139015	0.231815	0.415497	0	
11								

EXCEL FUNCTIONS

- 4 COUNTIF():** COUNTIF is a function to count cells that meet a single criteria. COUNTIF can be used to count cells with dates, numbers, and text that match specific criteria. The COUNTIF function supports logical operators ($>$, $<$, $<>$, $=$) and wildcards (*, ?) for partial matching.

Syntax:=COUNTIF (range, criteria)

range - The range of cells to count.

criteria - The criteria that controls which cells should be counted.

COUNTIF (range, criteria)						
1	A	B	C	D	E	F
2						
3	Sales rep	State	Sales			
4	Jim	MN	\$ 100			
5	Sarah	CA	\$ 125			
6	Jane	GA	\$ 200			
7	Steve	CA	\$ 50			
8	Jim	WY	\$ 75			
9	Joan	WA	\$ 150			

Examples

Count of sales over \$100	3
Count of sales by Jim	2
Count of sales in California	2

5. DATE-TIME FUNCTIONS

- 1 TODAY():** The Excel TODAY function returns the current date, updated continuously when a worksheet is changed or opened. The TODAY function takes no arguments.

Syntax: TODAY()[MM:DD:YYYY FORMAT]

TODAY ← A1 CELL	TODAY(A1)	12/16/2018
-----------------	-----------	------------

- 2 NOW():** The Excel NOW function returns the current date and time, updated continuously when a worksheet is changed or opened. The NOW function takes no arguments. You can format the value returned by NOW as a date, or as a date with time by applying a number format.

Syntax: NOW() [24 HOUR FORMAT]

NOW ← A1 CELL	NOW(A1)	12/16/2018 20:54
---------------	---------	------------------

EXCEL FUNCTIONS

- 3 DAY():** The Excel DAY function returns the day of the month as a number between 1 to 31 from a given date. You can use the DAY function to extract a day number from a date into a cell.

Syntax:=DAY (date)

The screenshot shows a Microsoft Excel interface. The formula bar at the top has the formula =DAY(B5). The main area displays a table titled "DAY (date)" with columns for "Date" and "Result". The table contains the following data:

Date	Result
1-Jan-2013	1
1-Jun-1970	1
4-Jul-2013	4
30-Sep-2015	30
24-Sep-2018	24
7-Apr-2025	7

- 4 MONTH():** The Excel MONTH function extracts the month from a given date as number between 1 to 12. You can use the MONTH function to extract a month number from a date into a cell.

Syntax: =MONTH (date)

The screenshot shows a Microsoft Excel interface. The formula bar at the top has the formula =MONTH(B6). The main area displays a table titled "MONTH (date)" with columns for "Date" and "Result". The table contains the following data:

Date	Result
10-Oct-2015	10
17-May-2018	5
30-Nov-2018	11
15-Feb-2019	2
30-Mar-2019	3
20-Sep-2019	9
30-Mar-2020	3
3-Dec-2021	12

EXCEL FUNCTIONS

- 5 YEAR():** The Excel YEAR function returns the year component of a date as a 4-digit number. You can use the YEAR function to extract a year number from a date into a cell

Syntax:=YEAR (date)

The screenshot shows a Microsoft Excel spreadsheet with the following details:

- Cell C6:** Contains the formula `=YEAR(B6)`.
- Cell B6:** Contains the date `10-Oct-1964`.
- Cell C6 Result:** Displays the year `1964`.
- Row 2:** Contains the title **YEAR (date)** and a subtitle **Extract year number from date**.
- Table Data:** A table titled "Result" with columns "Date" and "Result". The data rows are:
 - Date: 10-Oct-1964, Result: 1964
 - Date: 17-May-1970, Result: 1970
 - Date: 30-Nov-1981, Result: 1981
 - Date: 15-Feb-1987, Result: 1987
 - Date: 30-Mar-1998, Result: 1998
 - Date: 20-Sep-2000, Result: 2000
 - Date: 30-Mar-2012, Result: 2012
 - Date: 24-Jun-2019, Result: 2019

- 6 DATE():** The Excel DATE function creates a valid date from individual year, month, and day components. The DATE function is useful for assembling dates that need to change dynamically based on other values in a worksheet.

Syntax: =DATE (year, month, day)

EXCEL FUNCTIONS

E5	:	X	✓	f _x	=DATE(B5,C5,D5)
A	B	C	D	E	
1					
2					
3					
4	Year	Month	Day	Result	
5	2019	1	1	1-Jan-19	
6	2019	1	5	5-Jan-19	
7	2019	2	15	15-Feb-19	
8	2019	1	60	1-Mar-19	
9	2019	36	1	1-Dec-21	
10	2019	1	-1	30-Dec-18	

- 7 **DAYS360()**: The Excel DAYS360 function returns the number of days between two dates based on a 360-day year. Calculations based on a 360-day year comes from certain accounting calculations where all 12 months are considered to have 30 days

Syntax: =DAYS360 (start_date, end_date, [method])

method - [optional] The type of day count basis to use. FALSE (default) is US method, TRUE is European method.

D4	:	X	f _x	=DAYS360(B4,C4)	
A	B	C	D	E	
1					
2					
3	Start date	End date	Result	Notes	
4	1/1/2013	12/31/2013	360	12 * 30 days per month	
5	2/1/2013	3/1/2013	30	February calculates to 30 days	
6	6/1/2013	11/1/2013	150	5 months * 30 days	
7	9/10/2013	12/10/2013	90	3 months * 30 days	
8	1/31/2013	2/1/2013	1	start date set to Jan 30	

- 8 **HOUR()**: The Excel HOUR function returns the hour component of a time as a number between 0-23. For example, with a time of 9:30 AM, HOUR will return 9. You can use the HOUR function to extract the hour into a cell,

Syntax: =HOUR (serial_number)

EXCEL FUNCTIONS

C5 : fx =HOUR(B5)

A	B	C	D
1			
2	HOUR (date)		
3			
4	Time	Result	
5	12:00 AM	0	<-- Midnight is zero
6	3:00 AM	3	
7	6:00 AM	6	
8	9:30 AM	9	<-- Minutes are ignored
9	12:00 PM	12	
10	3:00 PM	15	
11	6:00 PM	18	
12	9:00 PM	21	
13	7/1/19 6:00 PM	18	<-- Dates are ignored
14	30:00	6	<-- Hours "reset" on 24 hour clock

- 9 **MINUTE()**: The Excel MINUTE function extracts the minute component of a time as a number between 0-59. For example, with a time of 9:45 AM, minute will return 45. You can use the MINUTE function to extract the minute into a cell.

Syntax:=MINUTE (serial_number)

C6 : fx =MINUTE(B6)

A	B	C	D	E
1				
2	MINUTE (serial_number)			
3	Extract minute from date or time			
4				
5	Time	Result		
6	9:15 AM	15	<-- hour is ignored	
7	9:30 AM	30		
8	9:45 AM	45		
9	10:00 AM	0	<-- zero on the hour	
10	10:15 AM	15		
11	7/1/15 6:23 PM	23	<-- date is ignored	
12	90:00	30	<-- resets after 60 minutes	

EXCEL FUNCTIONS

10 SECOND(): The Excel SECOND function returns the second component of a time as a number between 0-59. For example, with a time of 9:10:15 AM, second will return 15. You can use the SECOND function to extract the second into a cell.

Syntax:=SECOND (serial_number)

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				

SECOND (serial_number)

Time	Result	Notes
12:10:30 PM	30	Basic usage; only seconds are returned
12:10 PM	0	Time contains no seconds
7/1/15 6:23:15 PM	15	Date component is ignored
1-Aug-2015	0	Date contains no time component
7:45:25 PM	25	Valid time entered as text

11 TIME(): The Excel TIME function is a built-in function that allows you to create a time with individual hour, minute, and second components. The TIME function is useful when you want to assemble a proper time inside another formula.

Syntax: =TIME (hour, minute, second)

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

TIME (hour, minute, second)

Hour	Minute	Second	Result	Notes
8	0	0	8:00:00 AM	
12	30	0	12:30:00 PM	
24	0	-1	11:59:59 PM	Negative values OK
6	75	0	7:15:00 AM	Values will rollover as needed

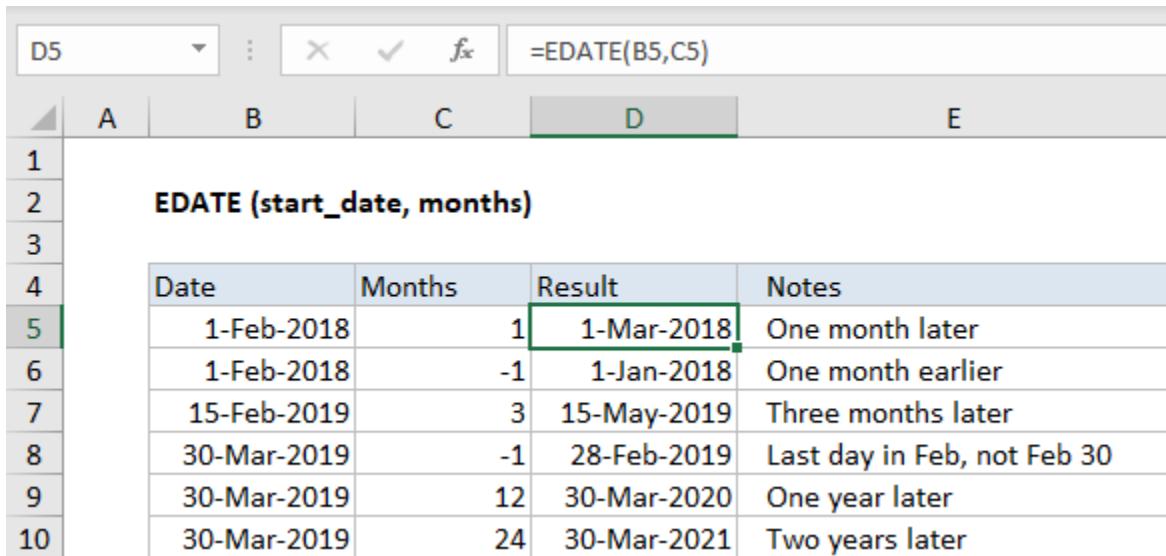
Returns values from 0 (zero) to 0.99999999 = times from 0:00:00 to 23:59:59.

12 EDATE(): The Excel EDATE function returns a date on the same day of the month, n months in the past or future. You can use EDATE to calculate expiration dates, maturity

EXCEL FUNCTIONS

dates, and other due dates. Use a positive value for months to get a date in the future, and a negative value for dates in the past.

Syntax: =EDATE (start_date, months)

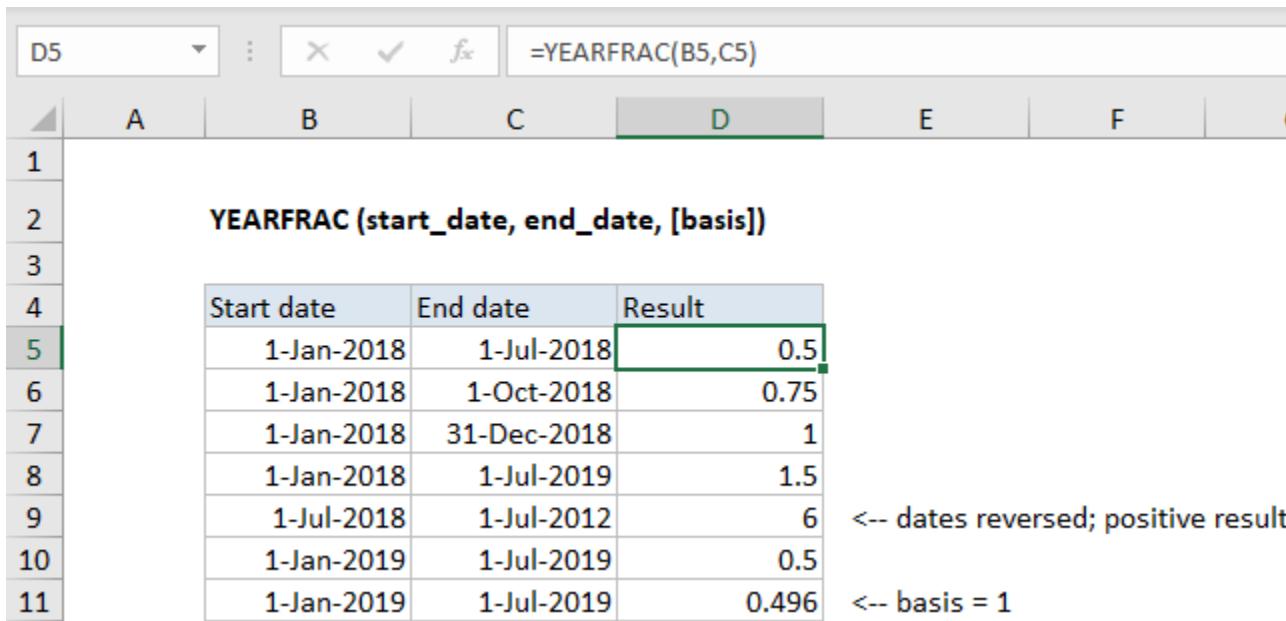


The screenshot shows an Excel spreadsheet with the formula =EDATE(B5,C5) entered into cell D5. The table below illustrates various examples of the EDATE function:

Date	Months	Result	Notes
1-Feb-2018	1	1-Mar-2018	One month later
1-Feb-2018	-1	1-Jan-2018	One month earlier
15-Feb-2019	3	15-May-2019	Three months later
30-Mar-2019	-1	28-Feb-2019	Last day in Feb, not Feb 30
30-Mar-2019	12	30-Mar-2020	One year later
30-Mar-2019	24	30-Mar-2021	Two years later

13 YEARFRAC(): The Excel YEARFRAC function returns a decimal value that represents fractional years between two dates. You can use YEARFRAC to do things like calculate age with a birthdate.

Syntax: =YEARFRAC (start_date, end_date)



The screenshot shows an Excel spreadsheet with the formula =YEARFRAC(B5,C5) entered into cell D5. The table below illustrates various examples of the YEARFRAC function:

Start date	End date	Result	
1-Jan-2018	1-Jul-2018	0.5	
1-Jan-2018	1-Oct-2018	0.75	
1-Jan-2018	31-Dec-2018	1	
1-Jan-2018	1-Jul-2019	1.5	
1-Jul-2018	1-Jul-2012	6	<-- dates reversed; positive result
1-Jan-2019	1-Jul-2019	0.5	
1-Jan-2019	1-Jul-2019	0.496	<-- basis = 1

6) FINANCIAL FUNCTIONS

1 . PMT(): The Excel PMT function is a financial function that returns the periodic payment for a loan. You can use the NPER function to figure out payments for a loan, given the loan amount, number of periods, and interest rate.

Syntax: =PMT (rate, nper, pv, [fv], [type])

rate - The interest rate for the loan.

nper - The total number of payments for the loan.

pv - The present value, or total value of all loan payments now.

fv - [optional] The future value, or a cash balance you want after the last payment is made. Defaults to 0 (zero).

type - [optional] When payments are due. 0 = end of period. 1 = beginning of period. Default is 0.

	A	B	C	D
1				
2		PMT (rate, nper, pv, [fv], [type])		
3		Using PMT to determine loan payment amount		
4				
5	Loan amount	\$5,000		
6	Interest rate	4.50%		
7	Periods (term in months)	60		
8	Compounding periods per year	12		
9				
10	Monthly payment	\$93.22		

2.IPMT(): The Excel IPMT function can be used to calculate the interest portion of a given loan payment in a given payment period. For example, you can use IPMT to get the interest amount of a payment for the first period, the last period, or any period in between

Syntax: =IPMT (rate, per, nper, pv, [fv], [type])

per - The payment period of interest.

EXCEL FUNCTIONS

	A	B	C	D
1				
2		IPMT (rate, per, nper, pv, [fv], [type])		
3		IPMT to get interest amount of payment in a given period		
4				
5	Loan amount	\$5,000		
6	Interest rate	4.50%		
7	Monthly payment	\$93.22		
8	Periods (term in months)	60		
9	Compounding periods per year	12		
10				
11	Interest amount in period 1	\$18.75		

3.PPMT(): The Excel PPMT function can be used to calculate the principal portion of a given loan payment. For example, you can use PPMT to get the principal amount of a payment for the first period, the last period, or any period in between.

Syntax: =PPMT (rate, per, nper, pv, [fv], [type])

	A	B	C	D
1				
2		PPMT (rate, per, nper, pv, [fv], [type])		
3		Get the principal amount of payment for a given period		
4				
5	Loan amount	\$5,000		
6	Interest rate	4.50%		
7	Monthly payment	\$93.22		
8	Periods (term in months)	60		
9	Compounding periods per year	12		
10				
11	Principal amount in period 1	\$74.47		

4.RATE(): The Excel RATE function is a financial function that returns the interest rate per period of an annuity. You can use RATE to calculate the periodic interest rate, then multiply as required to derive the annual interest rate. The RATE function calculates by iteration.

Syntax: =RATE (nper, pmt, pv, [fv], [type], [guess])

EXCEL FUNCTIONS

nper - The total number of payment periods.

pmt - The payment made each period.

pv - The present value, or total value of all loan payments now.

fv - [optional] The future value, or desired cash balance after last payment. Default is 0.

type - [optional] When payments are due. 0 = end of period. 1 = beginning of period. Default is 0.

guess - [optional] Your guess on the rate. Default is 10%.

C10		f _x	=RATE(C7,C6,-C5)*12
A	B	C	D
1			
2	RATE (nper, pmt, pv, [fv], [type], [guess])		
3	Using RATE to get interest rate of a loan		
4			
5	Loan amount	\$5,000	
6	Monthly payment	\$93.22	
7	Periods (term in months)	60	
8	Compounding periods per year	12	
9			
10	Interest rate	4.50%	

7) LOGICAL FUNCTIONS

IF(): The IF function can perform a logical test and return one value for a TRUE result, and another for a FALSE result. For example, to "pass" scores above 70: =IF(A1>70,"Pass","Fail"). More than one condition can be tested by nesting IF functions. The IF function can be combined with logical functions like AND and OR.

Syntax: =IF (logical_test, [value_if_true], [value_if_false])

logical_test - A value or logical expression that can be evaluated as TRUE or FALSE.

value_if_true - [optional] The value to return when logical_test evaluates to TRUE.

value_if_false - [optional] The value to return when logical_test evaluates to FALSE.

EXCEL FUNCTIONS

D6 : $=IF(C6>=70, "Pass", "Fail")$

A	B	C	D	E	F
1					
2	IF function				
3	Run a test. Return one result if TRUE, another if FALSE.				
4					
5	Name	Score	Result		
6	Anderson	92	Pass		
7	Bautista	85	Pass		
8	Block	65	Fail		
9	Burrows	79	Pass		
10	Chandler	69	Fail		
11	Colby	95	Pass		
12	Crosby	90	Pass		
13	Dove	70	Pass		

Passing score: 70

2.NESTEDIF():More than one condition can be tested by nesting IF functions

Syntax: =NESTED IF (test1, value1, [test2, value2], ...)

D5 : $=IF(C5<64, "F", IF(C5<73, "D", IF(C5<85, "C", IF(C5<95, "B", "A"))))$

A	B	C	D	E	F	G	H
1							
2	Nested IF to assign grades						
3							
4	Name	Score	Grade				
5	Anderson	92	B				
6	Bautista	85	B				
7	Block	96	A				
8	Burrows	79	C				
9	Chandler	82	C				
10	Colby	95	A				
11	Crosby	90	B				
12	Dove	80	C				

Score	Grade
0-63	F
64-72	D
73-84	C
85-94	B
95-100	A

3.AND():The AND function is a logical function used to require more than one condition at the same time. AND returns either TRUE or FALSE. To test if a number in A1 is greater than zero and less than 10, use =AND(A1>0,A1<10). The AND function can be used as the logical test inside the IF function to avoid extra nested IFs, and can be combined with the OR function.

EXCEL FUNCTIONS

Syntax: =AND (logical1, [logical2], ...)

	A	B	C	D	E
1			AND function		
2			Return TRUE if all conditions are TRUE		
3					
4	Score	>75 AND <90			
5	76	TRUE			
6	81	TRUE			
7	78	TRUE			
8	90	FALSE			
9	85	TRUE			
10	100	FALSE			

4.OR():The OR function is a logical function to test multiple conditions at the same time. OR returns either TRUE or FALSE. For example, to test A1 for either "x" or "y", use =OR(A1="x",A1="y"). The OR function can be used as the logical test inside the IF function to avoid extra nested IFs, and can be combined with the AND function.

Syntax: =OR (logical1, [logical2], ...)

	A	B	C	D	E
1			OR function		
2			Return TRUE if any condition is TRUE		
3					
4	Color	Green OR Red			
5	Red	TRUE			
6	Blue	FALSE			
7	Green	TRUE			
8	Red	TRUE			
9	Blue	FALSE			
10	Green	TRUE			

EXCEL FUNCTIONS

5.NOT():The Excel NOT function returns the opposite of a given logical or boolean value. When given TRUE, NOT returns FALSE. When given FALSE, NOT returns TRUE. Use the NOT function to reverse a logical value.

Syntax: =NOT (logical)

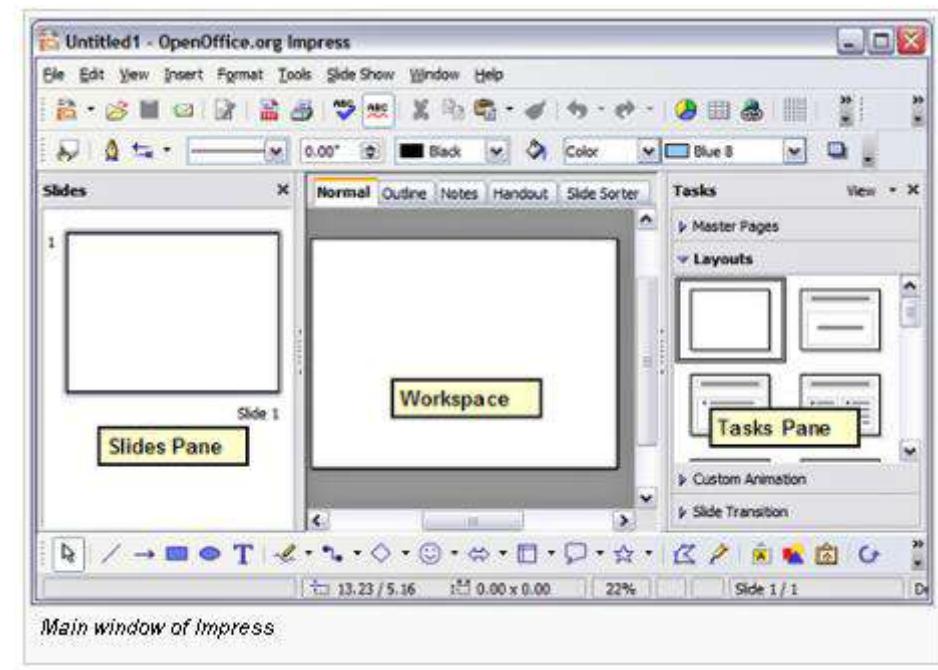
1. When **logical** is FALSE, NOT returns TRUE.
2. When **logical** is TRUE, NOT returns FALSE.

The screenshot shows a Microsoft Excel spreadsheet. The formula bar at the top displays the formula =NOT(ISBLANK(B6)). The cell D6 contains the formula =NOT(ISBLANK(B6)). The cell B6 contains the value 65, which is logically TRUE, so the result in D6 is TRUE. The cell B7 contains the value 59, which is logically FALSE, so the result in D7 is TRUE. The cell B8 contains the value 75, which is logically TRUE, so the result in D8 is TRUE. The column headers A, B, C, and D are visible, along with row numbers 1 through 8. The cell D6 is highlighted with a yellow background.

	A	B	C	D
1				
2		NOT(logical)		
3		Reverse a logical or boolean result value		
4				
5				
6	Value	ISBLANK	NOT(ISBLANK)	TRUE
7	65	TRUE		
8	59	FALSE		
9	75	TRUE		

❖ [Parts of the main impress window](#)

- The main Impress window has three parts: the *Slides pane*, *Workspace*, and *Tasks pane*. Additionally, several toolbars can be displayed or hidden during the creation of a presentation.



- [Slides pane](#)

The *Slides pane* contains thumbnail pictures of the slides in your presentation; in the order they will be shown (unless you change the order). Clicking a slide selects it and places it in the *Workspace*. While it is there, you can apply any changes desired to that particular slide.

Several additional operations can be performed on one or more slides in the Slides pane:

- Add new slides at any place within the presentation after the first slide.
- Mark a slide as hidden so that it will not be shown as part of the slide show.
- Delete a slide from the presentation if it is no longer needed.
- Rename a slide.
- Copy or move the contents of one slide to another (copy and paste, or cut and paste, respectively).

It is also possible to perform the following operations, although there are more efficient methods than using the Slides pane:

- Change the slide transition following the selected slide or after each slide in a group of slides.
- Change the sequence of slides in the presentation.
- Change the slide design. (A window opens allowing you to load your own design.)
- Change slide layout for a group of slides simultaneously. (This requires using the *Layouts* section of the *Tasks pane*.)

- **Tasks pane**

The Tasks pane has five sections.

1. **Master Pages**

Here you define the page style for your presentation. Impress contains 28 prepackaged Master Pages (slide masters). One of them—Default—is blank, and the rest have a background.

2. **Layout**

Twenty pre-packaged layouts are shown. You can choose the one you want, use it as it is or modify it to your own requirements. At present it is not possible to create custom layouts.

3. **Table Design**

Eleven standard table styles are provided in this pane. You can further modify the appearance of a table with the selections to show or hide specific rows and columns, or to apply a banded appearance to the rows and columns.

4. **Custom Animation**

A variety of animations for selected elements of a slide are listed. Animation can be added to a slide, and it can also be changed or removed later.

5. **Slide Transition**

Fifty-six transitions are available, including *No Transition*. You can select the transition speed (slow, medium, and fast). You can also choose between an automatic or manual transition, and how long you want the selected slide to be shown (automatic transition only).

- **Workspace**

The *Workspace* has five tabs: **Normal**, **Outline**, **Notes**, **Handout**, and **Slide Sorter**. These five tabs are called **View buttons**. There are also many toolbars that can be used during slide creation; they are revealed by selecting them with **View > Toolbars**. The *Workspace* is below the View buttons. This is where you assemble the various parts of your selected slide.

Each view is designed to make completing certain tasks easier. In summary:

- *Normal view* is the main view for creating individual slides. Use this view to format and design slides and to add text, graphics, and animation effects.
- *Outline view* shows topic titles, bulleted lists, and numbered lists for each slide in outline format. Use this view to rearrange the order of slides, edit titles and headings, rearrange the order of items in a list, and add new slides.
- *Notes view* lets you add notes to each slide that are not seen when the presentation is shown.
- *Slide Sorter view* shows a thumbnail of each slide in order. Use this view to rearrange the order of slides, produce a timed slide show, or add transitions between selected slides.
- *Handout view* lets you print your slides for a handout. You can choose one, two, three, four, or six slides per page from **Tasks pane > Layouts**. Thumbnails can be re-arranged in this view by dragging and dropping them.

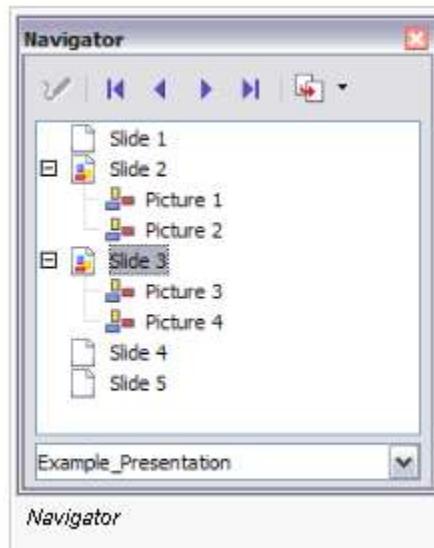
- Toolbars

The various Impress toolbars can be displayed or hidden by clicking **View > Toolbars** and selecting from the menu. You can also select the icons that you wish to appear on each toolbar.

- Navigator

The Navigator displays all objects contained in a document. It provides another convenient way to move around a document and find items in it. The Navigator icon  is located on the Standard toolbar. You can also display the Navigator by choosing **Edit > Navigator** on the menu bar or pressing **Ctrl+Shift+F5**.

The Navigator is more useful if you give your slides and objects (pictures, spreadsheets, and so on) meaningful names, instead of leaving them as the default “Slide 1” and “Picture 1”.



❖ Creating and Editing Slides

- Presentation:

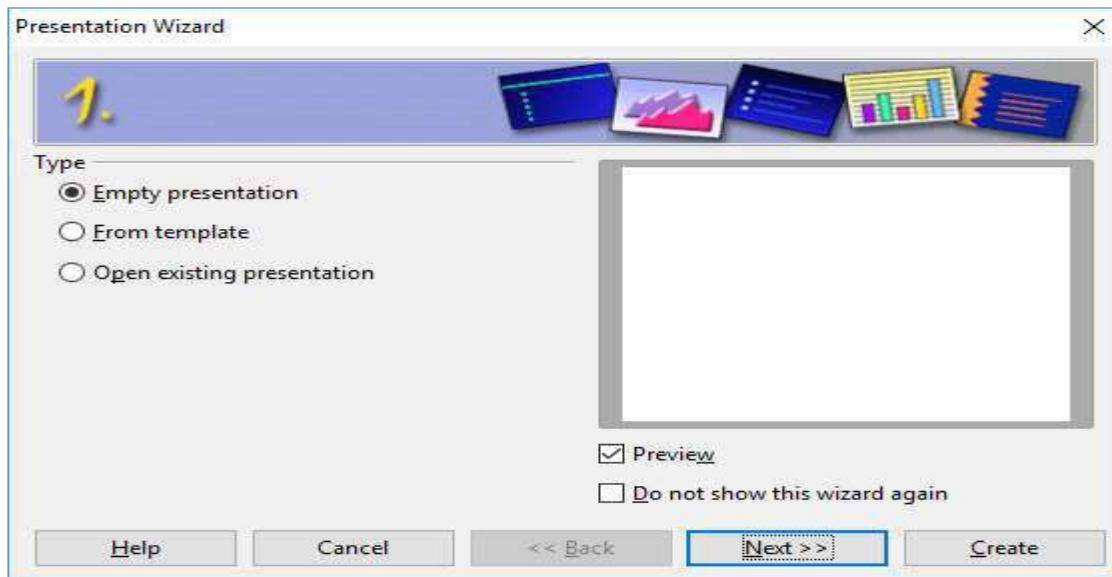
- Presentation is the practice of showing and explaining the content of a topic to an audience or learner. You can add graphics, animation to make your presentation very meaningful
- Open office impress allows you to make customized presentation. You can make your presentation effective by using text, graphics, transition, animation etc.
- You have to use slides to manipulate or add your content.

 To create a slide follow these steps,

Step 1: click on the open office icon and select presentation from the list

Step 2: Open office Impress will display

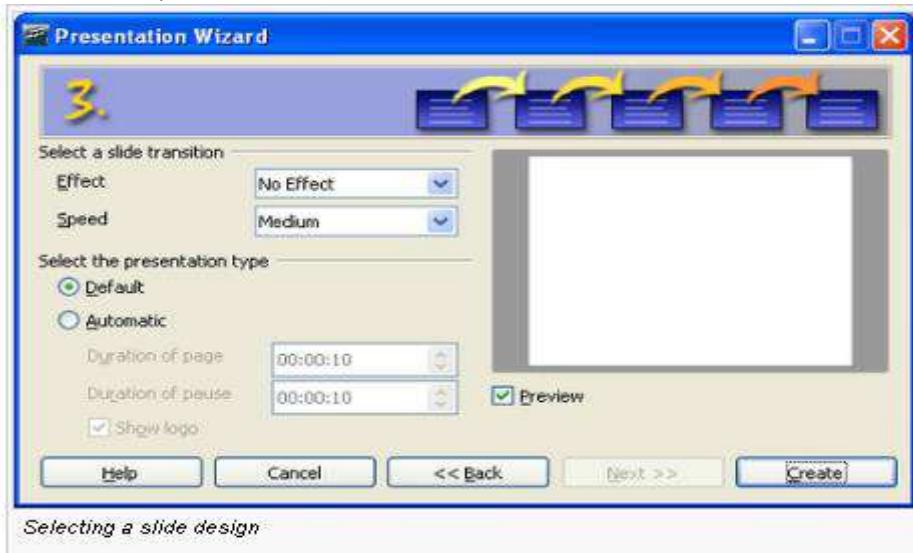
Step 3: select empty presentation from the options. (If you creating presentation first time)



Step 4: on the next screen, select slide design and select presentation background



Step 5: on the next screen, select slide transition



Step 6: click on create button, this appears empty presentation with one slide.

Editing slides

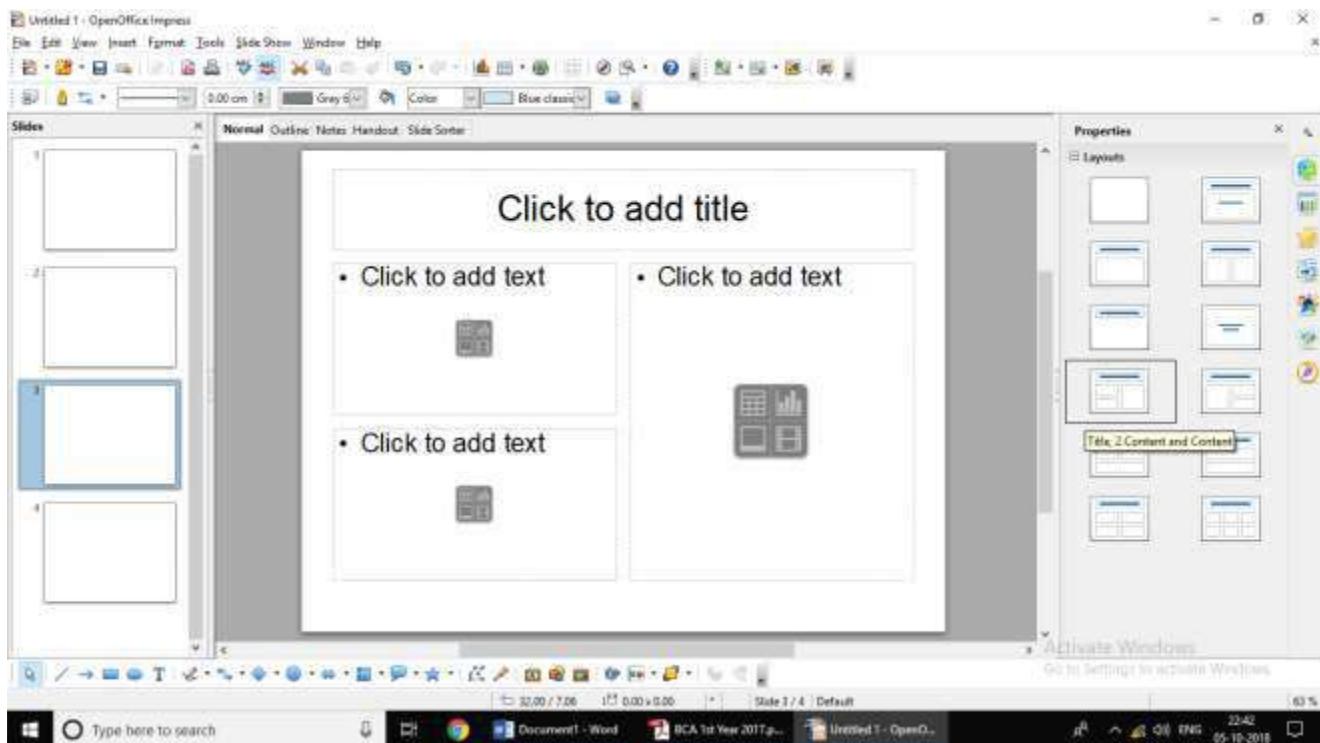
- ✓ You can add slides by following steps,

Step 1: **Insert > Slide**

Step 2: Right-click on the present slide and select **Slide > New Slide** from the pop-up menu.

Step 3: This will create the new slide in your presentation

Step 4: from the right panel, you can select the type of slides from the layout section.



Navigate presentation

You can use the frame on the left side(slide pane) of the window to quickly scroll through your slides. Clicking any of them will open that slide so that you can edit it. You can click the Outline tab to see an outline tree of your presentation. Each slide will be labeled by the slide title.

Preview presentation

You can get a basic feel for the flow of your presentation at this point by pressing F5 to start the slide show. Click the mouse to advance the slides. Use the preview slide show to get an idea of how long the presentation is and how well information flows from one slide to the next.

Editing Presentation

To Change the Layout of the Slides

Before you begin to edit text you may want to change the layout of the cards. In the original template we chose a master layout that has already been created for us. However, you may change the layout of any individual slide in the Slide View. From the Common Tasks panel click

Slide Layout and from the menu choose another layout for that slide. If you do not like what you chose you can go back to this menu and choose to reapply the current master style or you can use **Format → slide layout** and choose the different layouts

 **To Edit Text:**

In the Outline view, place your cursor at the end of a line, delete the text and replace it with your own. Do this for each topic.

 **Insert a New Slide:**

From the Insert menu, choose new slide or click the button on the toolbar. If you want the next slide to be exactly like the one on the screen choose Duplicate from the Insert menu then you can make additional changes to the new card if desired.

 **To Change the Order of the Slides:**

Go to the Slide Sorter menu. Click on one slide and drag it to another place in the slides.

 **To Change the Style, Type, Size, Alignment, Spacing, Indention, and Case of the Text:**

Highlight the text you want to change. From the Format menu choose Alignment, Line Spacing, or Change Case. From the Alignment menu you can choose to left align, centre align, right align, or fully justify the text. From the Line Spacing menu you can choose how much space you want between lines, before and after paragraphs. You may also use any of the buttons above to make these same or additional changes.

 **To Change the Color of the Text:**

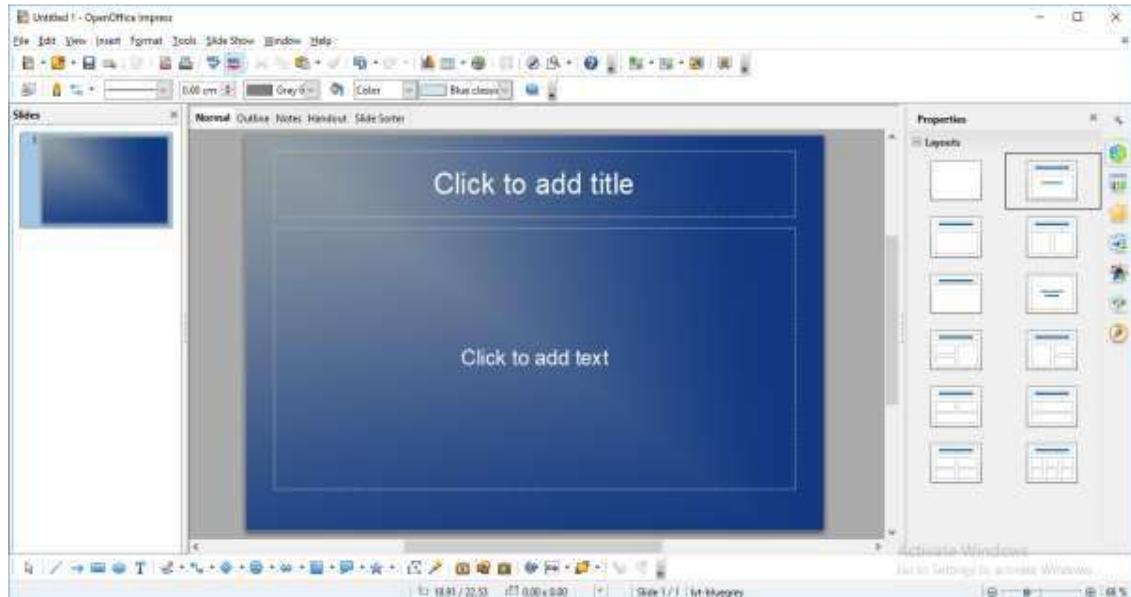
Highlight the text you want to change then click the button at the bottom of the screen and choose the new color.

 **Views of Impress**

Impress gives you different views options by which you can work with your presentation,

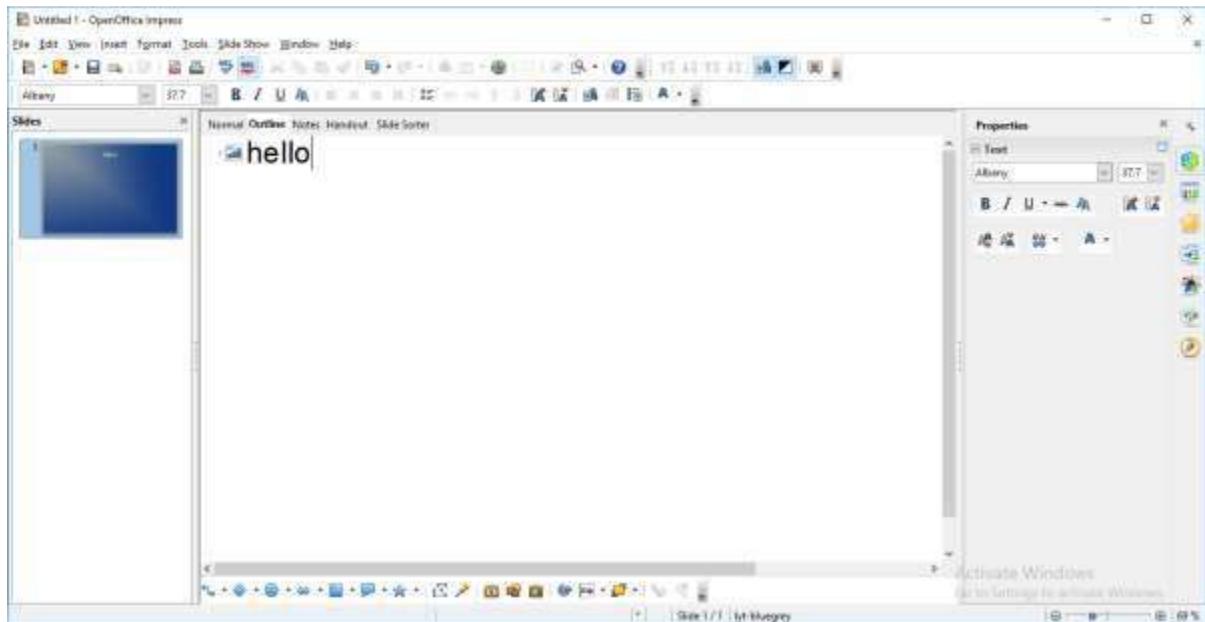
1. Normal view

- This view shows one slide at a time so that you can easily focus on designing the slide
- Impress introduce this view as a standard view
- It consist of the current slide in the middle, the slide pane to the right and task pane to the right
- You can enter or manipulate content of your desired slide from the middle pane.
- You can change the position of your slide from the left pane.



2. Outline view

- In the outline view the slides will appear like a bulleting list
- Outline view contains all the slides of the presentation in their numbered sequence. It shows topic titles, bulleted lists, and numbered lists for each slide in outline format.
- Shows the text of your presentation only so that you can work on your content and see how it flows.
- Only the text contained in the default text boxes in each slide is shown, so if your slide includes other text boxes or drawing objects, the text in these objects is not displayed. Slide names are also not included.



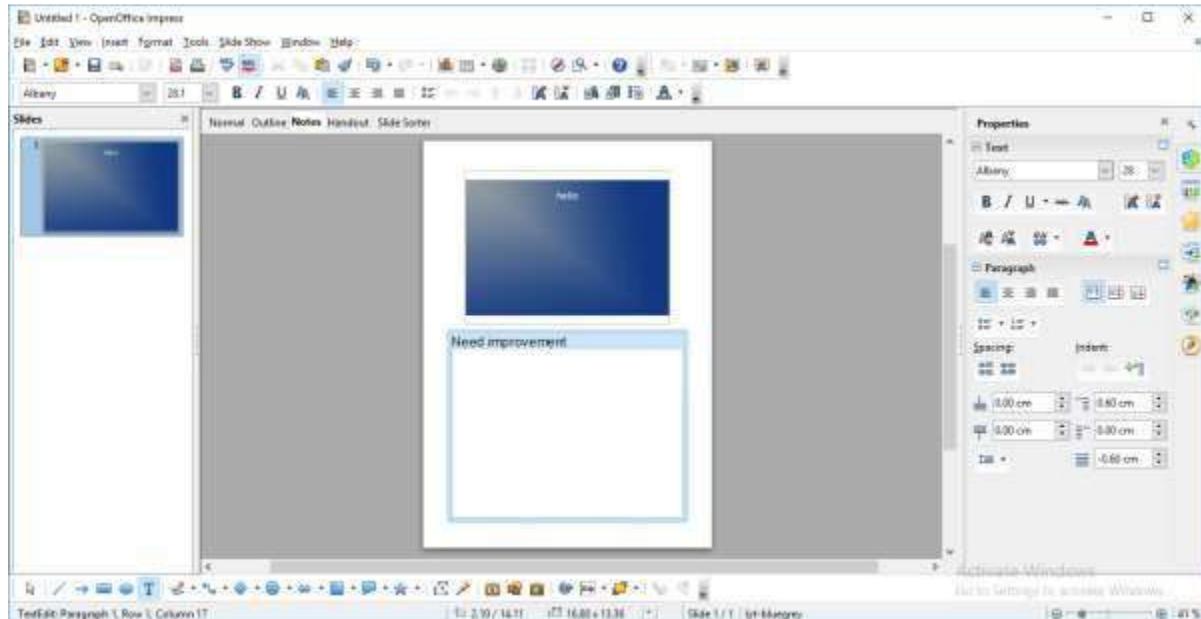
The screenshot shows the Microsoft Word interface in Outline view. The ribbon at the top has tabs for Normal, Outline, Notes, Handout, and Slide Sorter. The 'Outline' tab is selected. The main content area displays a hierarchical outline:

- 1. Creating an Impress Presentation
- 2. First Step
 - Start
 - File > New > Presentation
 - or
 - Right click Quickstarter > Presentation
- 3. Second Step
 - Choose from:
 - Empty presentation
 - New from scratch
 - From template
 - New from existing template

At the bottom left of the window, it says "Outline view".

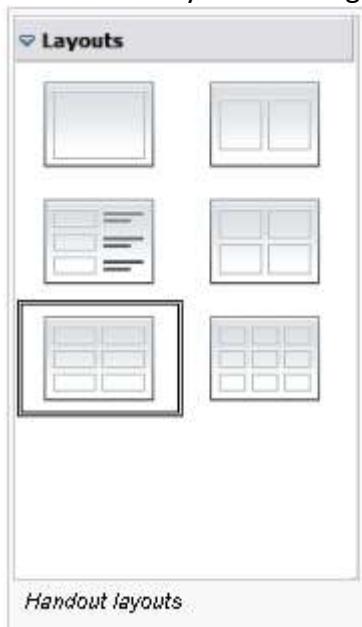
3. Notes view

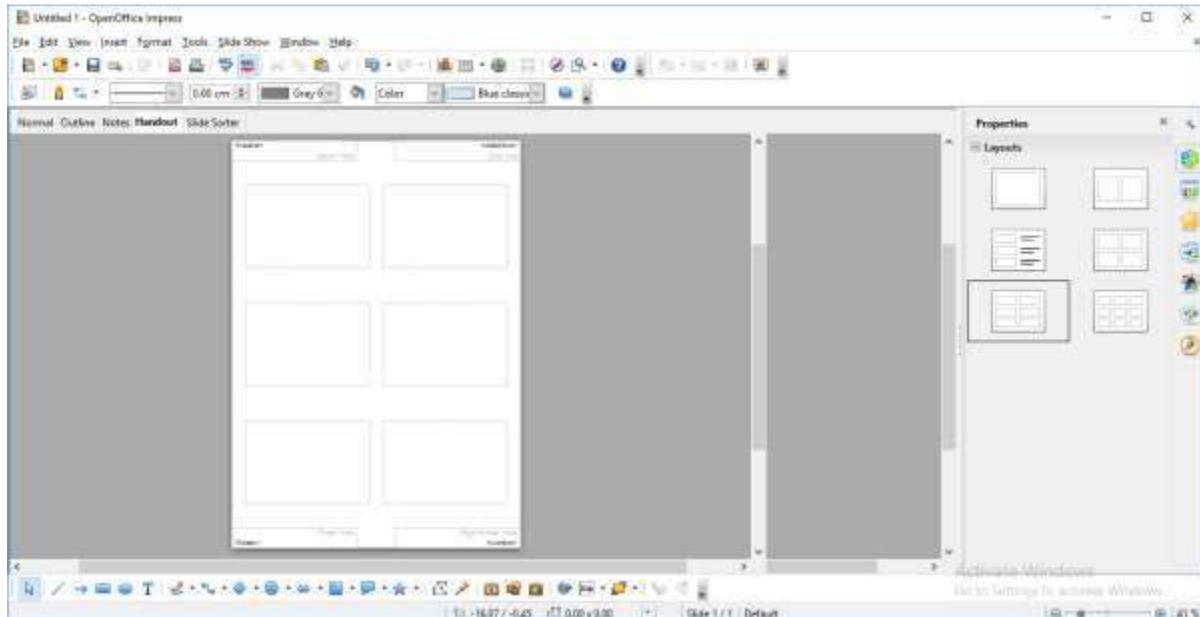
- Shows one slide with a space at the bottom to add notes for yourself or for someone else who will review the presentation
- It shows the current slide in miniature form with a text frame where you can add notes
- This text frame expands as per the need
- Select the slide to which you want to add notes.
 - Click the slide in the Slide pane, or
 - Use the **Previous Slide** and **Next Slide** buttons to move to the desired slide in the Navigator.
- In the text box below the slide, click on the words *Click to add notes* and begin typing. You can resize the Notes text box using the green resizing handles and move it by placing the pointer on the border, then clicking and dragging. To make changes in the text style, press the *F11* key to open the Styles and Formatting window.



4. Handout view: (Handouts)

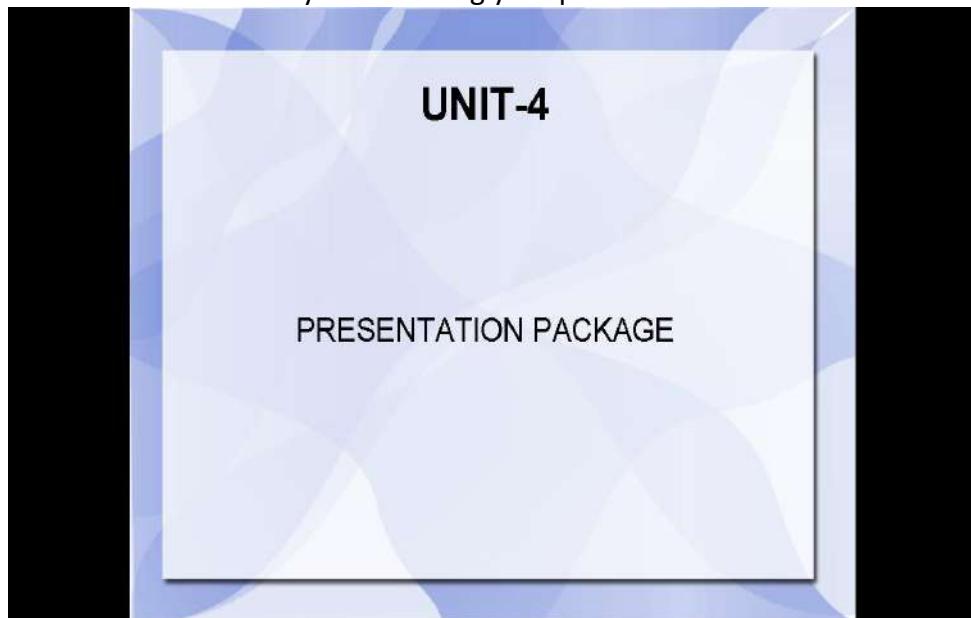
- Handout view is for setting up the layout of your slide for a printed handout. Click the **Handout** tab in the workspace, and then choose **Layouts** in the Tasks pane. Layout contains five choices: 1, 2, 3, 4, 6, or 9 slides per page.
- Enables you to format handouts that you can print and give to your audience.
- In handout view you can design customized header and footer





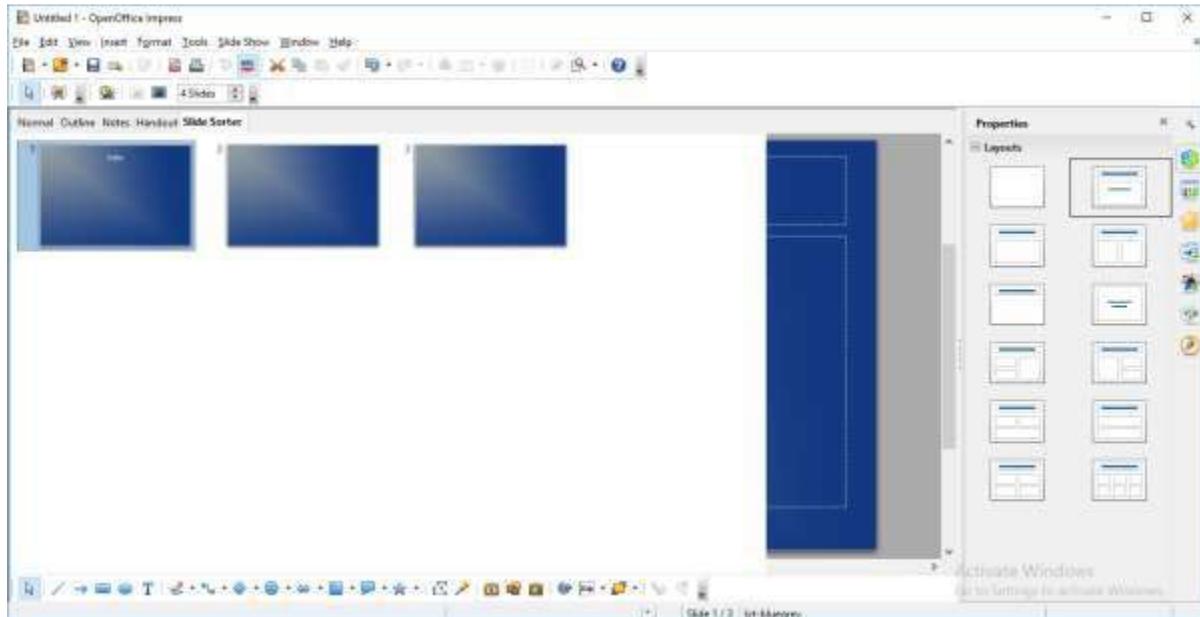
5. Slide show view

- It displays the presentation in full screen slide by slide
- You can use this view when you delivering your presentation to an audience.



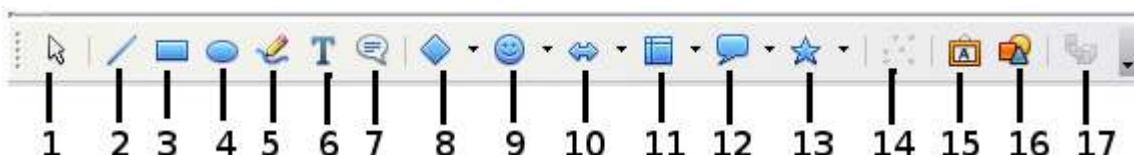
6. Slide sorter view

- Slide Sorter view contains all the slide thumbnails. Use this view to work with a group of slides or with only one slide.
- Like a light tray with physical slides, the slide sorter is handy for re- arranging slide.
- This functionality is similar to normal view and outline view
- This view is generally used to organise the slides



❖ Creating and editing objects in the slide

- If you are unable to find images or clip art for your presentation, Impress provides the tools to draw your own.
- You can create simple shapes and objects with the built in drawing tools, choose from the collection of ready-made shapes, combine simple shapes to create more complex ones, draw an object from scratch, and even add text to your drawings.
- You can also add formatting effects to your shapes, including resizing, rotating, 3D effects such as shadows and beveling, and changing the color of all or part of the shape.
- To create a text into the slides purely depends on the type of view which you using for designing your presentation.
- For e.g., if you using normal view then just click on desired place on the slide and start entering text.
- You can put text, image, audio, video, shapes etc in slide which makes your presentation more interesting.



1 Select | 2 Line | 3 Rectangle | 4 Ellipse | 5 Freeform Line | 6 Text | 7 Callouts | 8 Basic Shapes | 9 Symbol Shapes | 10 Block arrows | 11 Flowcharts | 12 Callouts | 13 Stars | 14 Points | 15 Fontwork Gallery | 16 From File | 17 Extrusion On/Off

❖ Drawing Preset Shapes

- To see Impress's built-in shapes, go to the view → toolbar → Drawing → basic shapes
- Now in basic shapes you can see the different shapes.
- Click on your desired shape.
- And On the slide, click and drag your mouse to create your shape

- Once your shape is in place you can move it around, use the handles to change the size and rotation, and edit it as you would any other object.



Drawing Custom Shapes

To draw your own shapes you can use the freehand drawing tools, *Curve*, *Freeform* and *Scribble*. *Curve* lets you draw shapes with curves; *Freeform* lets you draw shapes with both curves and angles; and *Scribble* lets you draw shapes and lines freehand. You can also combine these tools with other preset shapes.

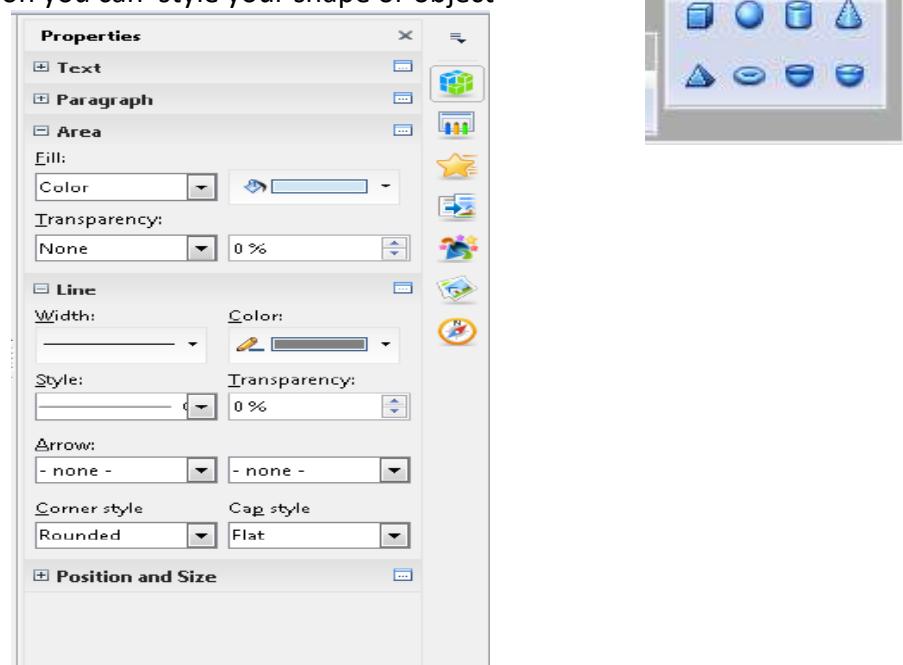
- From the drawing toolbar in the Illustrations group click on curve or line.
- Under curve, the two (2) options are Curve and, Freeform.



Shape Styles

You can also change the color and outline of a shape, or add 3D effects. You can reach these options using the Drawing tool and 3-d object tools

Using tasks pen properties option you can style your shape or object

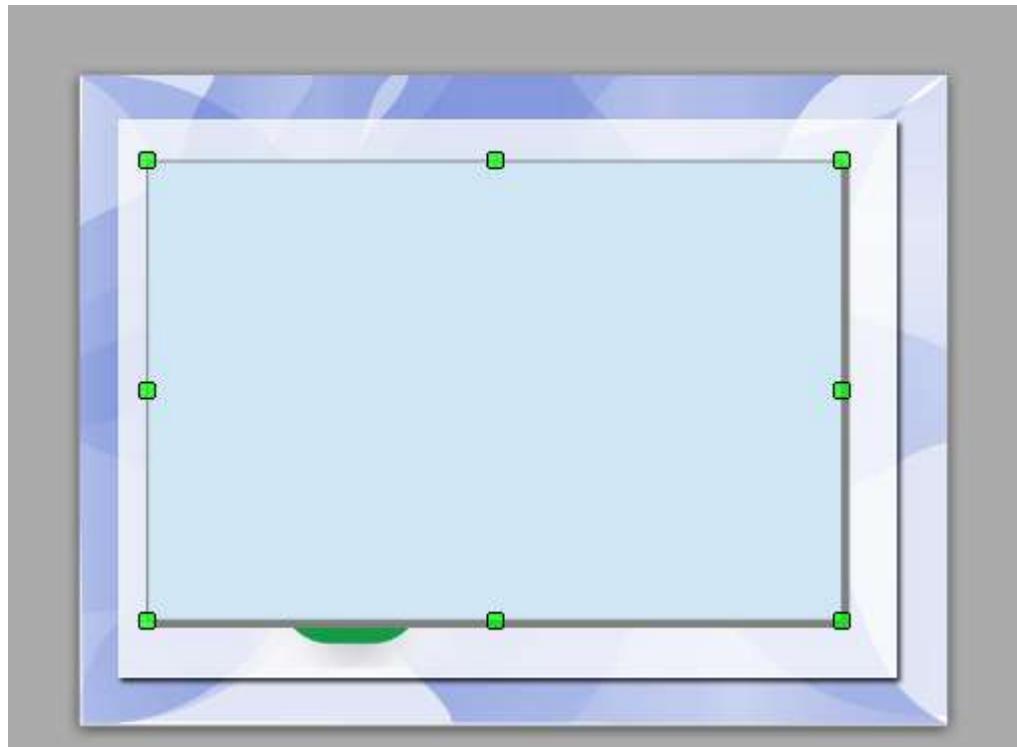


 **Ordering objects**

In addition to aligning objects, Impress gives you the ability to arrange objects in a specific order. The ordering is important when two or more objects overlap because it will determine which objects are in the front or the back.

 **Understanding levels**

When objects are inserted into a slide, they are placed on levels according to the order in which they were inserted into the slide. In the image below, the rectangle is on the top level, but we can change the level to put it behind the other objects.



To change the ordering by one level:

1. Select an object.
2. From the drawing toolbar select **arrange** option, click the Bring Forward or Send Backward command to change the objects ordering by one level. If there are multiple objects on the slide, you may need to click the command several times to achieve the desired ordering.



3. The objects will reorder.



❖ Animation

- **Animation** is the process of making the illusion of motion on a given object. An "object" in this context is anything on a slide, such as a picture, a chart, or a text box.
- Animation is a great way to emphasize a point, control information flow, and increase viewer interest. You can apply animation effects on individual slides, the slide master, or custom slide layouts.

⊕ Apply a built-in animation effect to text or an object

1. Select the text or object that you want to animate.

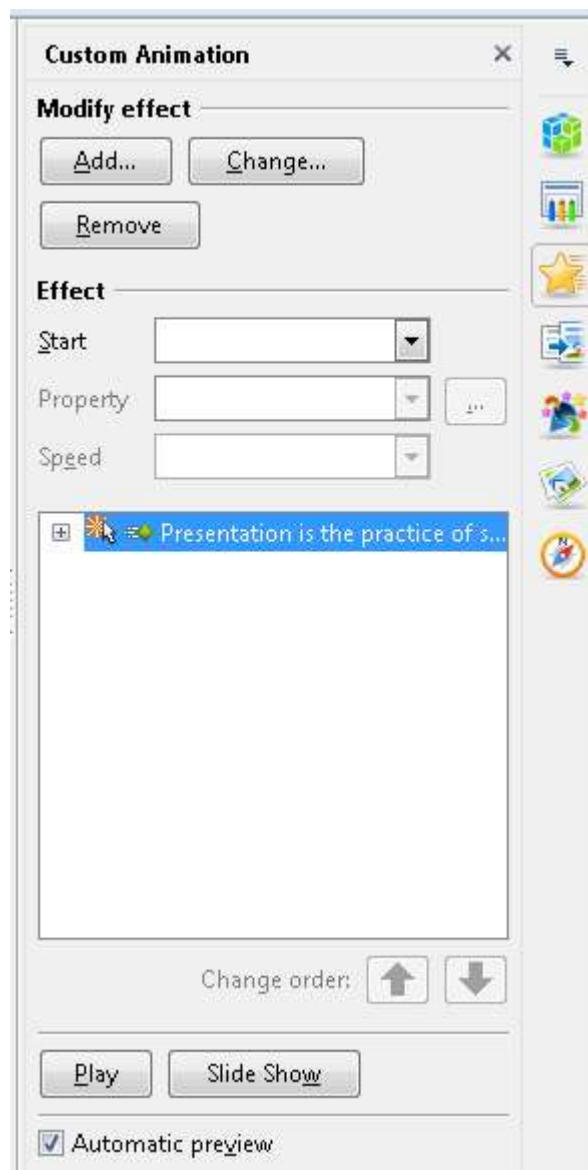
An "object" in this context is anything on a slide, such as a picture, a chart, or a text box. Sizing handles appear around an object when you select it on the slide.

2. To add an animation to your slide, choose Slide Show > Custom Animation from the menu, to open the Custom Animation task pane.

The screenshot shows a Microsoft PowerPoint interface. On the left, the 'Slides' pane displays five slides numbered 1 to 5. The second slide is selected and contains the title 'Presentation' and a bulleted list of text. On the right, the 'Custom Animation' task pane is open, showing the 'Effect' section with a 'Start' dropdown set to 'On mouse click'. A note in the pane says: 'First select the slide element and then click 'Add...' to add an animation effect.' At the bottom of the task pane, there are 'Change order!' buttons and 'Play' and 'Slide Show' buttons.

3. Add the First Animation Effect.

- With the first object selected, the Add button becomes active in the Custom Animation task pane.
- Select a style of effect, such as Entrance, Emphasis, Exit or Motion Paths from the tabs at the top of the dialog box. Choosing one of these styles will reveal a different selection of animations effects.
- Make sure the Automatic preview box is checked to preview the animation on the slide.
- Click on different animations and you will see a preview of the effect on your slide.
- Make your selection.
- Click OK



4. Modify Animation Effects on Open Office Impress Slides.

To modify the custom animation effect, select the drop-down arrow beside each of the three categories - Start, Direction and Speed.

1. Start

- On click - start the animation on the mouse click
- With previous - start the animation at the same time as the previous animation (could be another animation on this slide or the slide transition of this slide)
- After previous - start the animation when the previous animation or transition has finished

2. Direction

- This option will vary depending on which Effect you have chosen. Directions can be from top, from right side, from bottom and so on

3. Speed

- Speeds vary from Slow to Very Fast

Step 5: Change the Order of the Animations on Open Office Impress Slides.

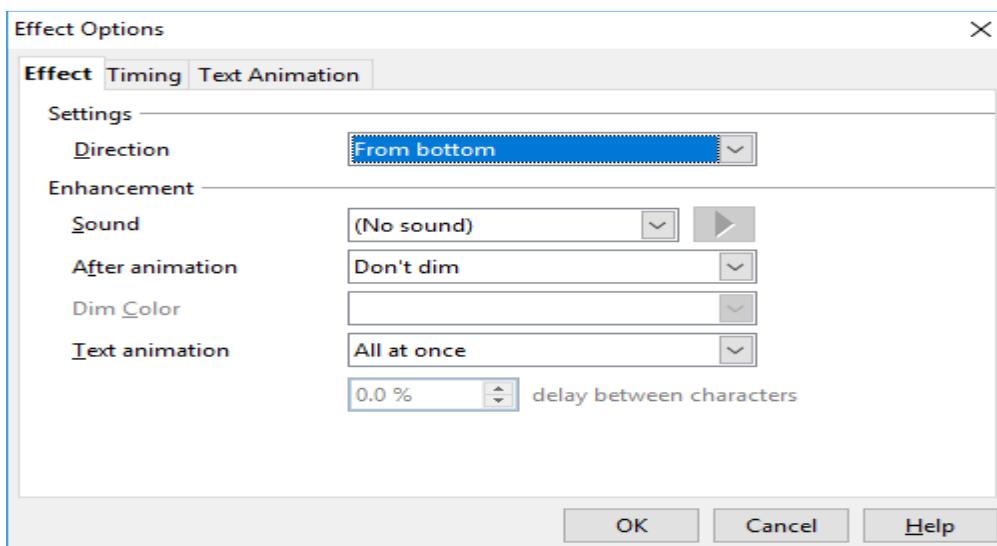
- Move Animation Effects Up or Down in the List after applying more than one custom animation to a slide, you may wish to reorder them.
- For example, you will likely want the title to show first and other objects to appear as you refer to them.

1. Click on the animation to move.
2. Use the Re-Order arrows at the bottom of the Custom Animation task pane to move the animation up or down in the list.

Step 6: Animation Effect Options in Open Office Impress.

- Apply additional animation effects to objects on your Open Office Impress slide such as sound effects or dim the previous bullet Points as each new bullet appears.

1. Select the property button.
2. The Effect Options dialog box opens.
3. On the Effects tab of the Effect Options dialog box, make your selections for this animation effect.

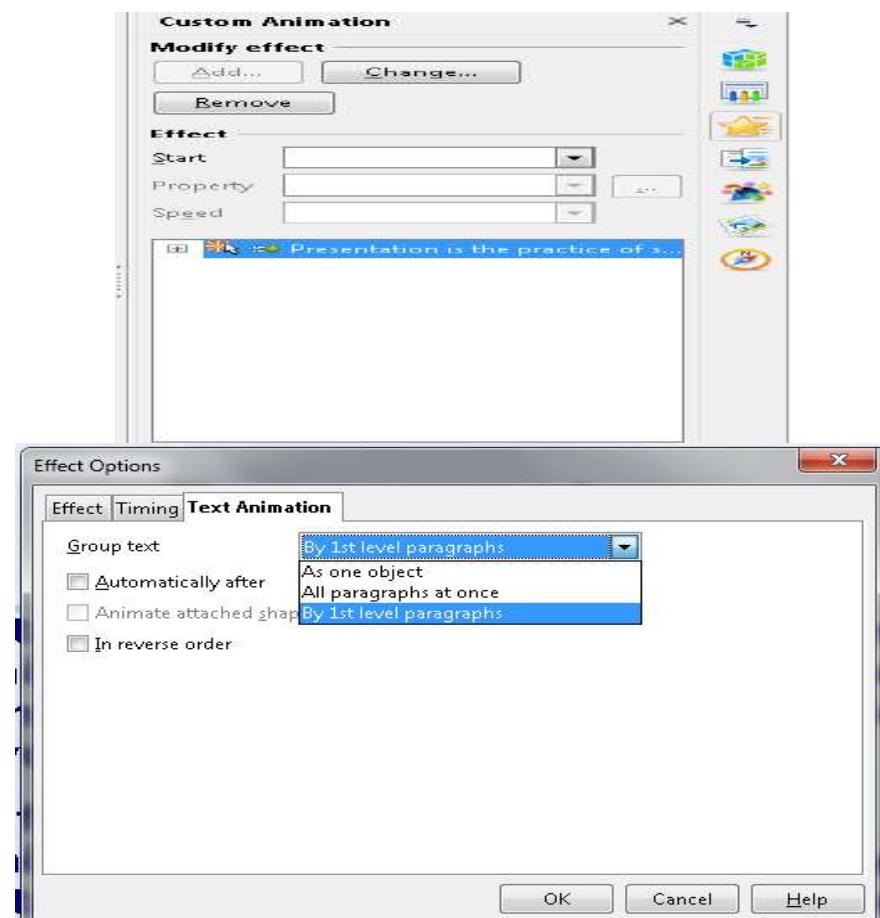


Step 7: Add Timings to Custom Animations in Open Office Impress.

- Timings are settings that allow you to automate your open office Impress presentation.
- You can set the number of seconds for a Specific item to show on screen and/or delay the start of the Animation.
- On the Timing tab of the Effect Options dialog box you can also modify settings previously set.

Step 8: Text Animations in Open Office Impress.

- Text Animations allow you to introduce text on your screen by paragraph level, automatically after a set number of seconds or in reverse order.



Step 9: Slide Show Preview in Open Office Impress

1. Check to make sure the Automatic preview box is checked.
2. When you click the Play button at the bottom of the Custom Animation task pane, this single slide will play in the current window, showing any animations applied to the slide.
3. To see the current slide in full screen, choose any one of the following methods

- Click the Slide Show button at the bottom of the Custom Animation task pane. The slide show will play in full screen, starting from this current slide.
- Choose Slide Show > Slide Show from the menu or press the F5 key on your keyboard.

4. To view the complete slide show in full screen, return to the first slide in your presentation and choose one of the methods in Item 3 above.

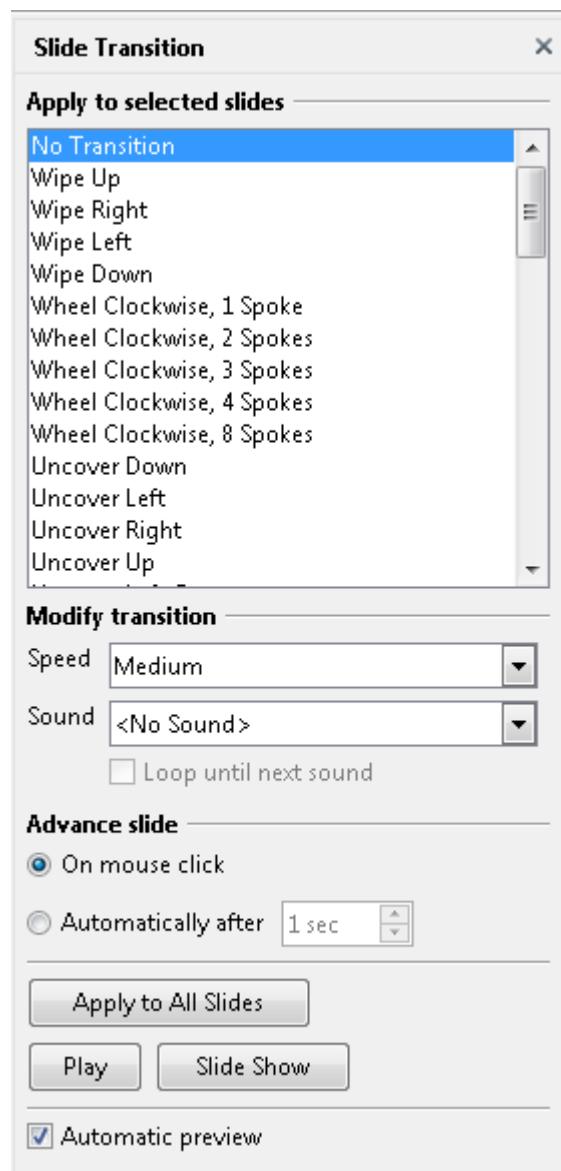
Slide Transition:

- Transitions determine the effects applied when you move from one slide to another during an on-screen presentation
- The slides themselves are animated by using transitions.
- You can add an effect that determines how a slide will appear.
- You can add slide transition to change look of the presentation

Follow these steps to add transition

Step 1: select a slide on which you want to add a transition

Step 2: select slide show -> slide transition option



Step 3: This step appears a slide transition panel on the right side

Step 4: you can select the transition option from the panel

Step 5: select any of the slide transition like clockwise, uncovered left, uncovered right etc.

Step 6: You can handle the speed of the slide coming on the screen like slow, medium and fast

Step 7: you can add different kind of sounds to your slides (here you have option to play sound once or in the looping manner.)

Step 8: you can select transition on predefined time period or transition on mouse click.

Step 9: if you want to apply same transition to all slide then press “apply to all slides”

Step 10: check the preview to view the final look.

Note: Advance determines when the current slide proceeds to the next.

a. On mouse click advances the presentation to the next slide, or displays the next bullet point, only when you click the mouse.

b. Automatically after xx seconds, makes the transition xx seconds after the preceding transition ended

❖ CREATING AND RUNNING SLIDE SHOW

There are at least three ways to start a slide show:

1) Select **View** menu < **Slide Show**

2) Click the projector button on the lower left part of the screen

3) Hit the **F5** Key

- Go to the next slide: press the SPACE BAR, ENTER, PAGE DOWN, or right arrow key.
- Go to the previous slide: press BACKSPACE, PAGE UP, or the left arrow key.
- Exit slide show (at any time): hit Esc
- Access the pen tool (to draw in the screen): CTRL + P
- Erase pen: hit E
- Hide pointer: hit A

❖ Slide master

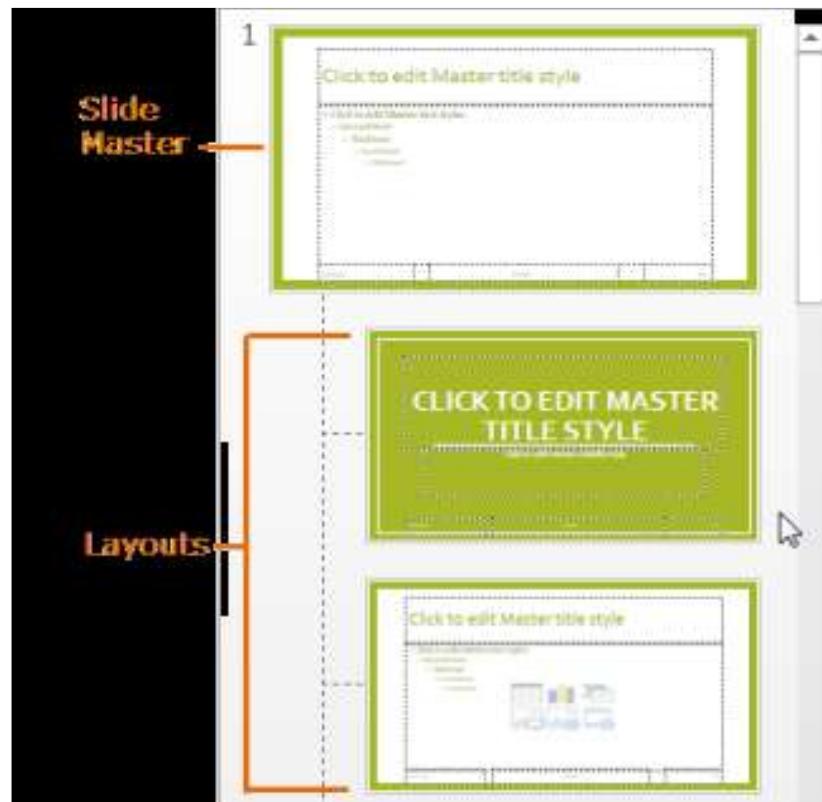
➤ When you want all your slides to contain the same fonts and images (such as logos), you can make those changes in one place—the Slide Master and they'll be applied to all your slides.

To open Slide Master view → master → slide master

- Every slide in presentation may have one master slide
- A master slide determines the text formatting style for the rest of the slides.
- If you change anything in master slide then these changes will be reflect in other slides
- Master slide generalized the layout for the presentation.

➔ The master slide is the top slide in the thumbnail pane on the left side of the window. The related slide layouts appear just below the slide master: When you edit the slide master, all slides that follow that master will contain those changes. However, the majority of changes that you make will most likely be to the slide layouts related to the master.

→ When you make changes to layouts and the slide master in Slide Master view, other people working in your presentation (in Normal view) can't accidentally delete or edit what you've done. Conversely, if you're working in Normal view and find that you're unable to edit an element on a slide (such as, "why can't I remove this picture?") it may be because the thing you're trying to change is defined on the Slide Master. To edit that thing, you must switch to Slide Master View.

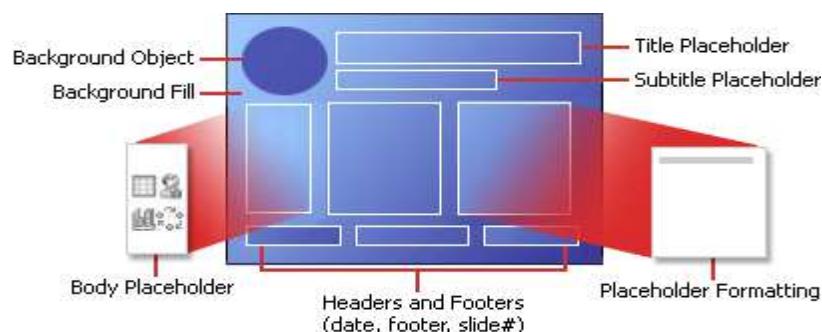


SLIDE LAYOUTS

You change and manage slide layouts in Slide Master View. Every theme has a several slide layouts. You choose the layouts that best match your slide content; some are better for text and some are better for graphics.

What is a slide layout?

- Slide layouts contain formatting, positioning, and placeholders for all of the content that appears on a slide. Placeholders are the containers in layouts that hold such content as text (including body text, bulleted lists, and titles), tables, charts, Smart Art graphics, movies, sounds, pictures, and clip art. Slide layouts also contain the theme (colors, fonts, effects, and the background) of a slide.



- Impress includes built-in slide layouts, and you can modify these layouts to meet your specific needs, and you can share your custom layouts with other people who create presentations by using Impress.
- In Normal view, you'll apply the layouts to your slides (shown below).



- Each slide layout is set up differently — with different types of placeholders in different locations on each layout.
- Every slide master has a related slide layout called Title Slide Layout, and each theme arranges the text and other object placeholders for that layout differently, with different colors, fonts and effects. The following pictures contrast the title slide layouts for two themes: first the Basis theme and then the Integral theme.
- You can change anything about a layout to suit your needs. When you change a layout, and then go to Normal view, every slide you add after that will be based on this layout and will reflect the changed look of the layout. However, if there are existing slides in your presentation that are based on the old version of the layout, you'll need to reapply the layout to those slides.

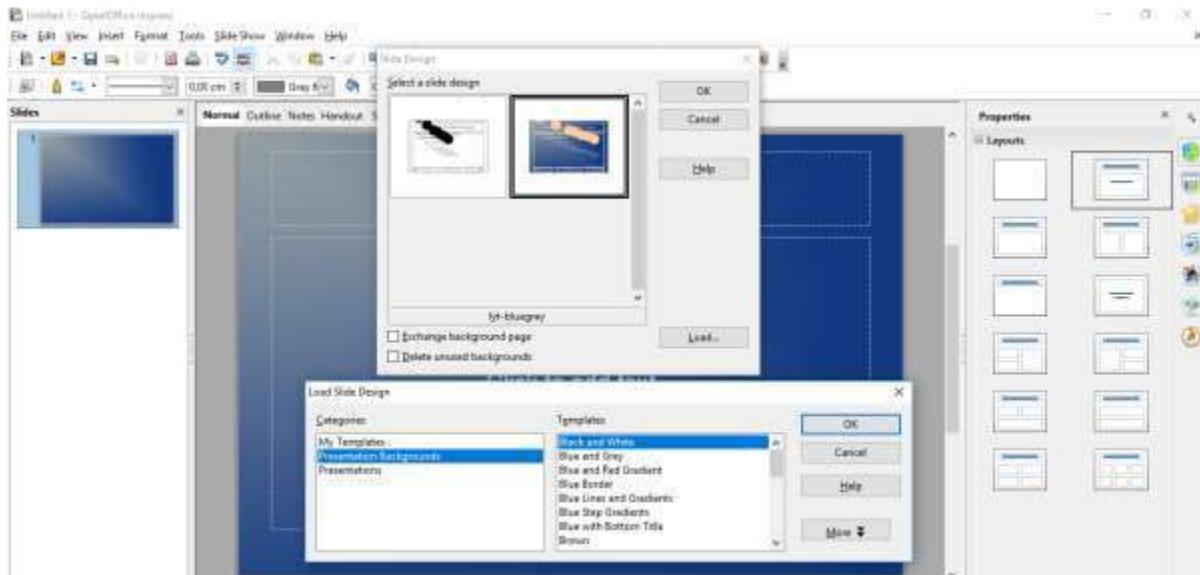
❖ Templates

- A template is a pattern or blueprint of a slide or group of slides.
- Templates can contain layouts, theme colours, theme fonts, theme effects, background styles, and even content.
- You can create your own custom templates and store them, reuse them, and share them with others. Additionally, you can find many different types of free templates built-in to impress.
- Follow these steps,

Step 1: select format -> slide design from the menu bar

Step 2: the design dialog box will appear, click the load button

Step 3: from the category list select presentation backgrounds.



Step 4: select any of the template from the list

Step 5: click ok

Step 6: return to the slide mode.

SPEAKER NOTES

The speaker notes or notes pages are a reserved space for each slide in your presentation that is intended to be used by the presenter for many different purposes.

The presenter can add some key points that he wants to cover during a Power Point presentation or meeting, and don't want to miss.

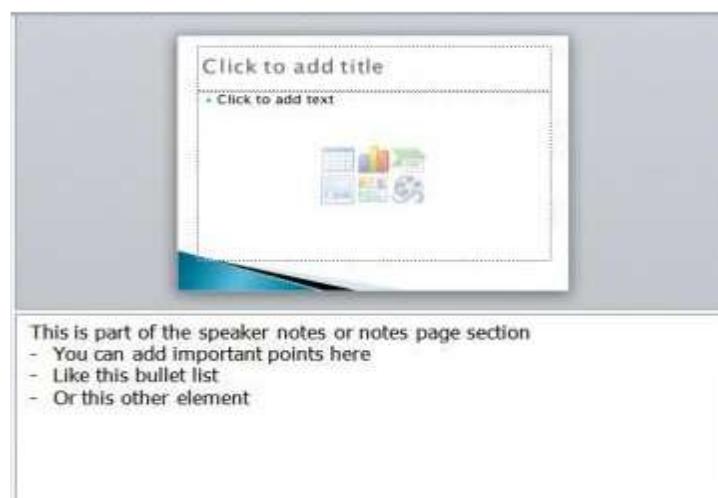
The **speaker notes** can be printed separately or there is additional software that you can use to display the notes in a separate screen for example in front of the presenter, while the audience is watching the presentation at the background of the presenter.

Entering speaker notes for each slide is easy, just need to locate the bottom area of the slide and start entering text there.

To view your speaker notes or notes pages in a better view or prepare it for printing you can change the view in your presentation.

Open your Impress file or start a new presentation

Click on View tab and then choose master → Notes Master.



Rehearsal timing

Rehearse timing can control the time of the presentation accurately. The amount of time you spend on each slide is recorded and you can save those timing to run the show automatically in the future.



Prepare the slides, start the show using a special icon, tell your imaginary audience what you want to tell for the first slide, then advance to the next slide and so on. Open Office records the display time for each slide, so the next time you play the show with automatic slide changes, the timing will be as recorded.

To record a show with rehearse timings

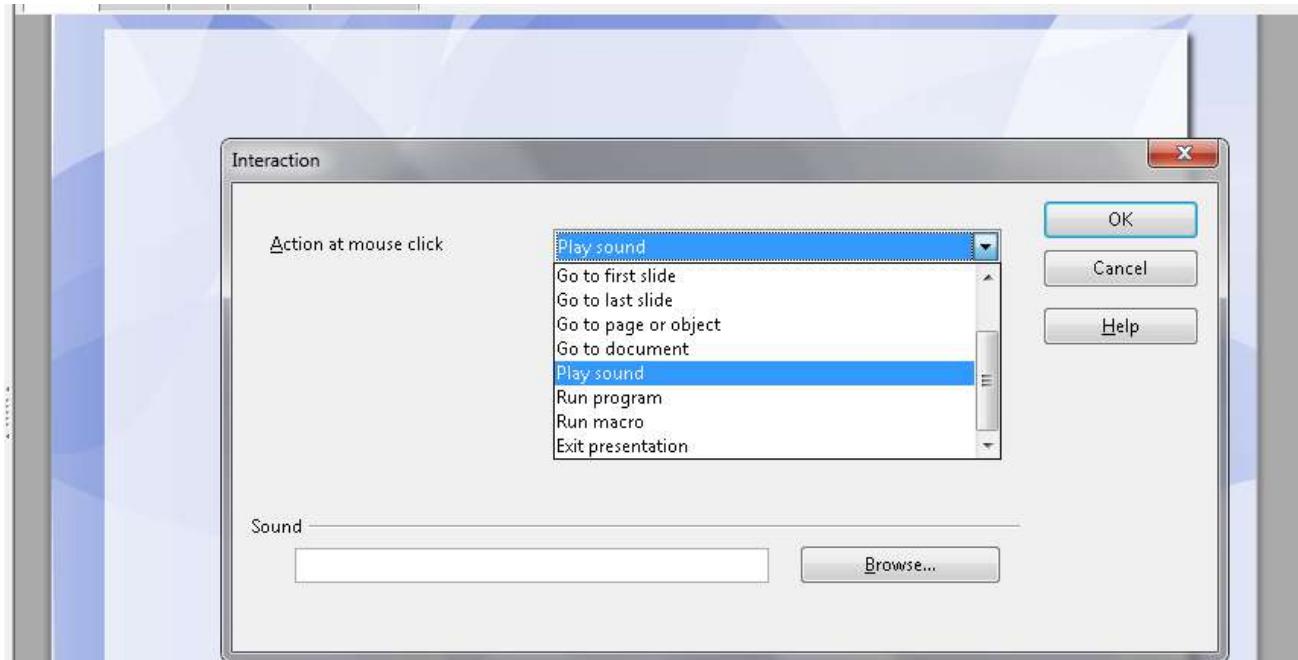
1. Open a presentation, go to Slide Show → Rehearse Timing
2. Start the slide show .In the Slide show you see the first slide, and a timer in the bottom corner.
3. When it's time to advance to the next slide, click the timer. To keep the default setting for this slide,
4. Click the slide, but not the timer. Continue for all slides in your presentation.
5. Open Office has recorded the display time for each slide. Save your presentation.
6. Now go to slide show → slide show settings and click on **AUTO** So next time when you run your slide show it will automatically changes the slides according to the rehearse time which is recorded earlier
7. If you want the whole presentation to auto-repeat, open the menu **Slide Show - Slide Show Settings**. Click **Auto** and **OK**.

insertion of sound and video file in presentation

Showing a video or playing a piece of sound during your slide presentation is a great way to help get your message across.

Here is a steps how you add a video or a piece of sound.

1. On the left side of the screen, click the thumbnail of the slide that you want to add the video or sound to.
2. On the **Insert** menu, select **Movie and Sound**. The **Select File** window opens.
3. Locate your video file or sound file in the window, select it and click **Interaction**



- Now select **play sound** from the interaction menu
- ❑ And browse the sound file
- ❑ Click on ok
- ❑ To preview the video or sound, use the icons on the **Media Playback** toolbar that displayed when you added the video or sound

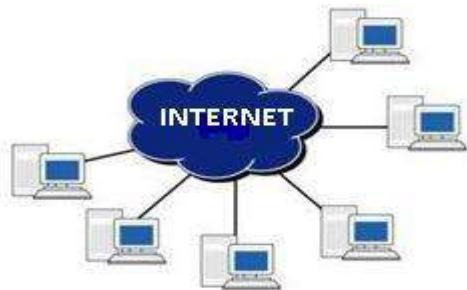
How to set your power point presentation to run continuously until you press ESC

1. To set that up, select **Slide Transition** in the task pane (right).
2. Under **Advance slide** choose **Automatically after** and set a time.
3. Click the **Apply to All Slides** button (or set a different time for different slides).
4. Next, to set the looping: from the main menu, choose **Slide Show > Slide Show Settings**.
5. In the dialog, choose **Auto** and set the spinner for the period of time to elapse between the end of one cycle and the beginning of the next. If you want continuous viewing, set it to 0

Concept of Network:

"The term "network" refers to a group of entities (objects, entity, people,etc.) which are connected to one another. A network, therefore, allows material or immaterial elements to be circulated among all of these entities, based on well-defined rules"

"A computer network is a group of computers and devices interconnected to each other allowing the computers to communicate with each other and share resources and information".



INTERNET

Internet is a global network that connects billions of computers across the world with each other and to the World Wide Web. It uses standard internet protocol suite (TCP/IP) to connect billions of computer users worldwide. It is set up by using cables such as optical fibers and other wireless and networking technologies. At present, internet is the fastest mean of sending or exchanging information and data between computers across the world.

- Internet is called the network of networks.
- The Internet is essentially a global network of computing resources.
- Connects thousands of computer network all over the world.
- It is a network of networks sharing a common mechanism for addressing computers, and a common set of communication protocols.
- It allows exchange of information between two or more computers on a network.
- Each computer in Internet is called a host, is independent.
- The Internet is a huge ocean of information of resources and services such as inter-linked hypertext documents of the World Wide Web (WWW), online banking, file transfer and sharing, online gaming, online education, books, movies, sports and email etc.
- Developed by ARPANET (Advance Research Project Agency Network) in 1968 around.
- Equipment required for using Internet
 - OS
 - Web browser
 - Internet service provider (ISP)
 - Telephone line
 - Modem

 **History and Evolution of the Internet**

The Internet completely revolutionized communication and technology across the Globe. Internet was discovered through a combined effort of multiple researchers and programmers.

Given below are a few important points which played an extremely important role in the development of the Internet:

- The internet started with development of ARPANET system of the Advanced Research Projects Agency (ARPA) of the Department of Defense, U.S.
- ARPANET was the first WAN and had only four sites in 1969.
- Internet evolved from basic ideas of ARPANET for interconnecting computers.
- Commercializing and making Internet usage convenient for the general public started in the 1970s
- The development of Transmission Control Protocol (TCP) enabled different machines and networks across the world to assemble data packets.
- In the 1980s that the TCP/IP approach was adapted by researchers and technologists.
- In 1993, the web browser was introduced.
- The late 1990s was the time when thousands of Internet Service Providers has taken up the market and people started using Internet widely.
- Internet now is widely used across the globe.

 **Application of Internet:**

1. **Email:** E-mail, also known as electronic mail, is the most widely used and successful of Internet applications. Whether judged by volume, popularity, or impact, e-mail has been and continues to be the principle Internet application. The volume of e-mail continues to increase because there are more users, and because users now can attach documents of various types to e-mail messages. Email has become an important part of personal communications for hundreds of millions of people, many of whom have replaced it for letters or telephone calls. In business, e-mail has become an important advertising medium, particularly in instances where the demand for products and services is time sensitive.
2. **Web Browsing:** The web browsing is another application of major importance. Web browser was developed in a highly commercialized environment. It mainly deals with public prospective. Browsers help the user to connect to multiple commercial and non-commercial websites for getting information as well as shopping and other commercial purposes. The examples of web browsers are Internet Explorer, Google Chrome, Mozilla Firefox, etc.
3. **Peer-to-peer:** Peer-to-peer networking is based on sharing of resources, such as hard drives, files, etc. Each computer in this network serves as both client and server as and when needed. Each computer has its own capabilities and responsibilities.

4. Search engine: It can be used to search anything and everything. Most popular search engines are Google and yahoo.

5. Shopping:

Shopping has become easier with the advent of internet. You can buy or sell online.

6. Communication:

This is a major role of the internet. It helps people to communicate either with the use of social networking websites or through e mails. Even chatting is a major use of the internet.

7. Job search:

Nowadays, many people search for their jobs online as it is quicker and there is a larger variety of job vacancies present.

8. Hobbies:

Those who are having certain hobbies can try to improve on it by reading up on many aspects of their hobby.

9. Research:

Research papers are present online which helps in the researcher doing a literature review.

10. Studying:

Now right from kinder garden children are exposed to internet and computers. They find many useful things to learn on the internet (though with supervision). Up to doctorate level education, people rely on internet for their education. Online educational books have even reduced the need for a library.

How Internet Works?

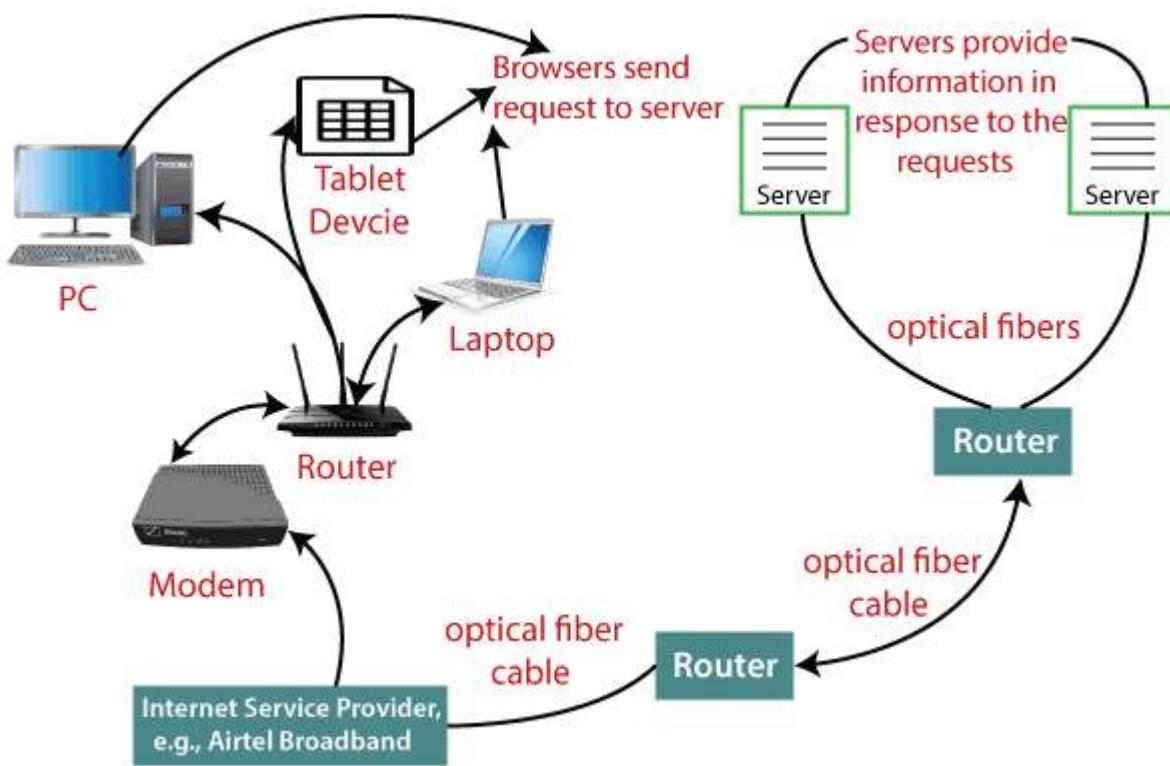
The internet works with the help of clients and servers. A device such as a laptop, which is connected to the internet is called a client, not a server as it is not directly connected to the internet. However, it is indirectly connected to the internet through an Internet Service Provider (ISP) and is identified by an IP address, which is a string of numbers. Just like you have an address for your home that uniquely identifies your home, an IP address acts as the shipping address of your device. The IP address is provided by your ISP, and you can see what IP address your ISP has given to your system.

A server is a large computer that stores websites. It also has an IP address. A place where a large number of servers are stored is called a data center. The server accepts requests sent by the client through a browser over a network (internet) and responds accordingly.

To access the internet we need a domain name, which represents an IP address number, i.e., each IP address has been assigned a domain name. For example, youtube.com, facebook.com, paypal.com are used to represent the IP addresses. Domain names are created as it is difficult for a person to remember a long string of numbers. However, internet does not understand the domain name, it understands the IP address, so when you enter the

domain name in the browser search bar, the internet has to get the IP addresses of this domain name from a huge phone book, which is known as DNS (Domain Name Server).

For example, if you have a person's name, you can find his phone number in a phone book by searching his name. The internet uses the DNS server in the same way to find the IP address of the domain name. DNS servers are managed by ISPs or similar organizations.



When you turn on your computer and type a domain name in the browser search bar, your browser sends a request to the DNS server to get the corresponding IP address. After getting the IP address, the browser forwards the request to the respective server.

Once the server gets the request to provide information about a particular website, the data starts flowing. The data is transferred through the optical fiber cables in digital format or in the form of light pulses. As the servers are placed at distant places, the data may have to travel thousands of miles through optical fiber cable to reach your computer.

The optical fiber is connected to a router, which converts the light signals into electrical signals. These electrical signals are transmitted to your laptop using an Ethernet cable. Thus, you receive the desired information through the internet, which is actually a cable that connects you with the server.

Furthermore, if you are using wireless internet using wifi or mobile data, the signals from the optical cable are first sent to a cell tower and from where it reaches to your cell phone in the form of electromagnetic waves.

The internet is managed by ICANN (Internet Corporation for Assigned Names and Numbers) located in the USA. It manages IP addresses assignment, domain name registration, etc.

The data transfer is very fast on the internet. The moment you press enter you get the information from a server located thousands of miles away from you. The reason for this speed is that the data is sent in the binary form (0, 1), and these zeros and ones are divided into small pieces called packets, which can be sent at high speed.

Advantages Of Internet (Benefits):

- **Information, knowledge, and learning**

The Internet contains an endless supply of knowledge and information that allows you to learn about almost any topic or question you may have.

Using a search engine like Google, you can ask virtually any question and find a web page with an answer to that question.

There are also millions of videos on sites like YouTube that help explain various topics and even online courses that can be taken to help teach you about many different subjects.

- **Connectivity, communication, and sharing**

In the past, it would take days and sometimes even months to receive a letter from someone else.

Today, with the Internet, you can send an e-mail to anyone in the world and often have it delivered in less than a minute.

Other forms of communication, such as chat and VOIP, also allow you to have instant communication with anyone in the world.

Online forums are also places where people who share common interests can connect with each other and talk about what they enjoy or ask other experts in the field questions.

- **Address, mapping, and contact information**

With the help of GPS technology, the Internet can help map and direct you to almost every place in the world.

You can quickly route to your location or find businesses in your area that may sell or provide you with a service you need.

Today's search engines are also smart enough to know your location and help give you the most relevant searches for your area.

For example, if you need a plumber and search for plumber, you will be given local plumbers in your area.

- **Banking, bills, and shopping**

The Internet gives you access to your bank account to view your balance, make transactions, and send money. Also, many services enable you to view and pay your bills electronically.

Online shopping is another huge advantage of the Internet, giving anyone with Internet access the ability to find products that interest them and buy them without having to visit a store.

The Internet gives everyone easy access to compare prices between companies and even see what others think about a product through online reviews to help make better purchasing decisions.

- **Selling and making money**

If you are a business or want to sell anything, the Internet is a perfect place to sell most goods. Because anyone in the world with Internet access can find your website, you have access to more people than you ever could with a local retail store.

The Internet is always on and always available, which means you have the potential of selling goods every day at all times.

The Internet also gives all businesses the ability to advertise their product or service to everyone in the world or specify an exact demographic they want to reach.

There are other ways someone can make money online by performing other online services.

- **Collaboration, work from home, and access to a global workforce**

The Internet is the perfect place to work with other people from around the world. There are dozens of online services that allow you to work with other people and, with the ability to have instant communication; it can even make producing new products and services faster. An Internet connection provides many people with the ability to work from home or have a virtual office. Today, many businesses allow their employees to work from home using their computers and Internet connection. Working from home can help save people money by not having to pay for child care and save them money and time by eliminating the daily commute to and from work every day.

- **Donations and funding**

With access to a much wider audience, anyone with an Internet connection can quickly make a donation to their favourite charity or help fund projects and ideas that interest them.

Also, those looking for charity can find many online services that help make it easier to help donate or support their causes.

- **Entertainment**

The Internet gives everyone access to an endless supply of entertainment, with access to watch videos, watch movies, listen to music, and even play games online.

- **Internet of Things**

The Internet helps make devices in your home connected and smarter by giving them access to the Internet. For example, the Nest thermostat can be connected to the Internet to help control the heating and cooling in your home. Also, once these devices are connected, they can be controlled remotely using your computer or smart phone. By connecting IOT (Internet of Things) devices to your home, it can become smarter and more efficient and help save energy, money, and time.

- **Cloud computing and cloud storage**

The Internet connects your computers and Internet-enabled devices to cloud services, like cloud computing and cloud storage. With cloud computing, a device can have access to more powerful computers and even supercomputers to perform complex tasks while you or your business works on other tasks.

Cloud storage synchronizes data across any of your Internet-connected devices, so you have access to your files from anywhere. It makes backing up information easier and safer — your data is securely stored in a professionally-maintained server. So, if you are using a cloud storage backup service and your home or office burned down, you would not lose all your valuable data.

Dis-Advantages of Internet (limitations):

- **Theft of personal information** such as name, address, credit card number etc.
- **Virus threats** nothing but a program which disrupts the normal functioning of your system.
- **Spamming** refers to receiving unwanted e-mails in bulk, which provide no purpose and needlessly obstruct the entire system.

- **Pornography** This is perhaps the biggest threat related to children's healthy mental life. A very serious issue concerning the Internet.
- **Bullying, trolls, stalkers, and crime** Anyone who has spent time on the Internet has encountered trolls or abusive people. Another issue that has increased over the years is cyber bullying.
- **Addiction, time waster, and causes distractions** Surfing and playing games on the Internet can quickly become very addictive. Doing so can lead to spending a lot of frivolous time on the Internet, instead of doing something productive. On this same note, the Internet can hamper workplace productivity as well.
- **Never being able to disconnect from work** The Internet is great for giving its users the ability to work from anywhere. However, you may be expected to be available to work at any time of the day, even if you had not previously agreed to be available. For example, you may be at home and get a notification that you have received an important work-related e-mail and then end up working on the content of that e-mail without getting paid.
- **Identity theft, hacking, viruses, and cheating** With access to billions of computers, computer hackers and malicious users can hack accounts and steal personal information that could be used for identity theft. The Internet also connects all computers to each other, so hackers can scan millions of computers and quickly identify what computers are vulnerable to attack.
- **Spam and advertising** It's great that the Internet can facilitate reaching a much wider audience than traditional advertising methods (e.g., newspaper, TV, and radio). However, because digital advertising can be sent on a massive scale, you might see more spam in your inbox than junk mail in real life.
- **Depression, loneliness, and social isolation** Social networking sites can also lead to depression as many people tend to compare their lives with others. The Internet and online games facilitate communication with others. Although you may find new connections around the world, you may also find yourself disconnecting from those in your real life.
- **Health issues and obesity** As with watching TV, spending too much time on the computer surfing the Internet or playing games can also lead to obesity and an unhealthy lifestyle.
- **Buying things that you don't need** The Internet reduces the barriers for consumers to make purchases, so users may find themselves purchasing products without putting much thought into whether they should. Also, for some people, buying items on the Internet can become so addictive that it causes serious debt.
- **Though, internet can also create havoc, destruction and its misuse can be very fatal, the advantages of it outweigh its disadvantages.**

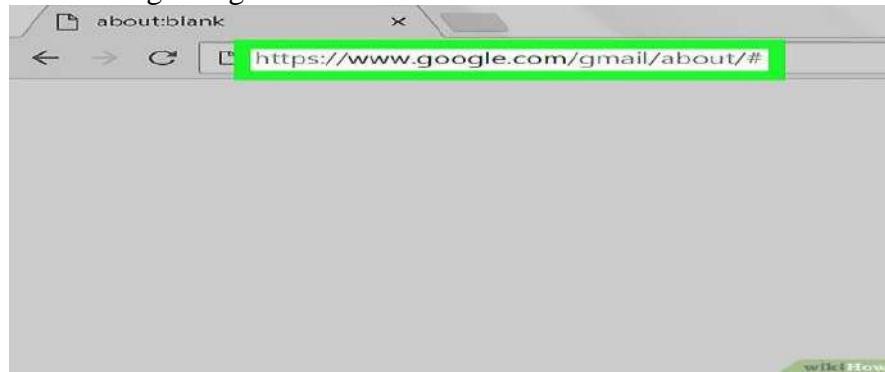
Creating a Gmail account

Do you want to make a new free Google email account? Whether you want to set up a new Gmail account for yourself, your child, or a friend, this can be done in just a few minutes. Creating a Gmail account is the same as creating a Google account, so you'll get access to other features such as Sheets, Docs, and the ability to sync your web browsing sessions on Chrome.

Things You Should Know

- You can create a Gmail account for yourself, your child, or a friend.
- On desktop, go to Gmail. Click "Create an account". Enter your name, a Gmail address, password, and account recovery options.
- On a phone or tablet, open the Gmail app. Tap "Sign in" → "Google" → "Continue" → "Create an account".

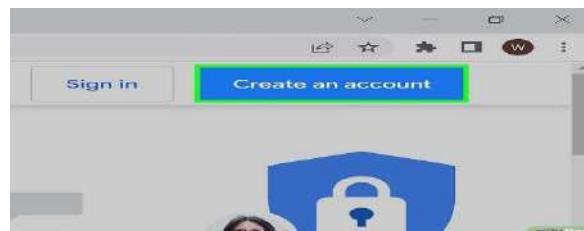
1. Go to <https://www.google.com/gmail/about> in a browser. This will open a page with information regarding Gmail.



If you're creating a Gmail account for your child and want to manage the account's privacy settings and content filters, you'll need to follow slightly different steps:

- Go to <https://www.google.com>.
- Click **Sign in** → **Create account** → **For my child**.
- Enter your child's information to create their account.

2.

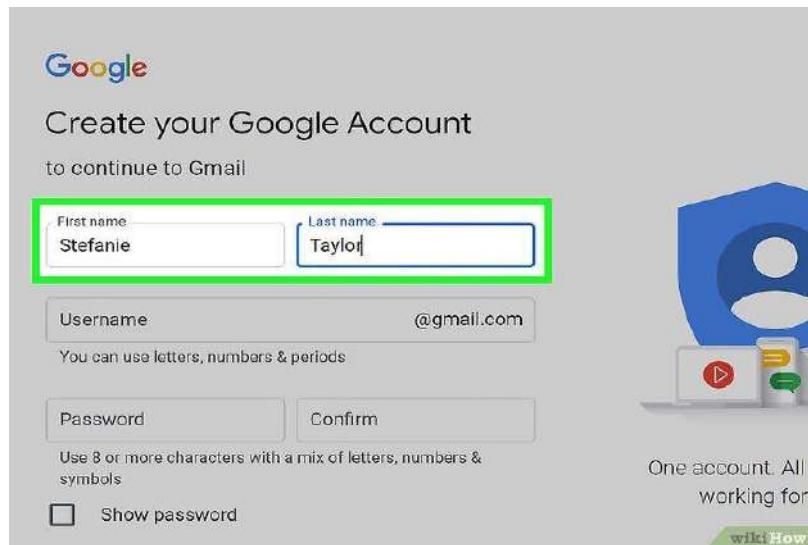


Click **Create an account**. This will be a blue button at the top-right corner of the window.

You can also find this in the middle of the screen, next to **For work**.

You'll be redirected to the Google Account creation page.

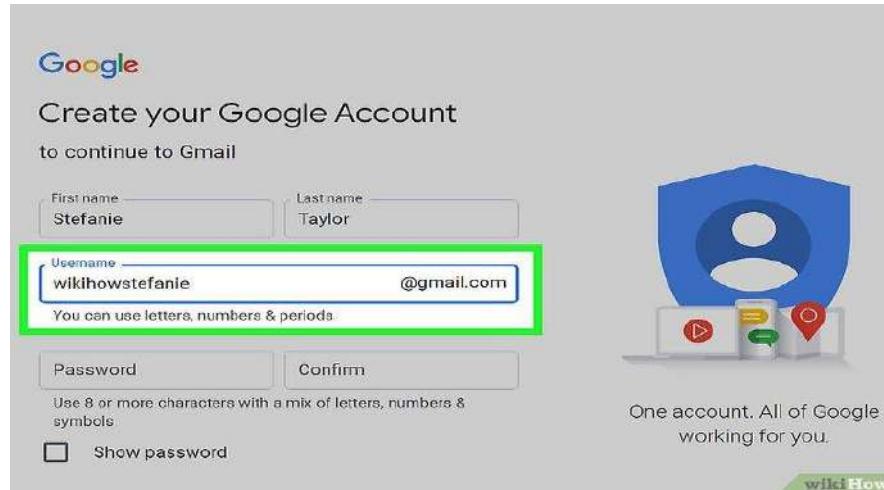
3.



Enter your first and last name. Type your first name into the "First name" text box near the top of the page, then enter your last name in the "Last name" box next to it.

If you're creating a Gmail account for a friend, enter their information in the fields provided.

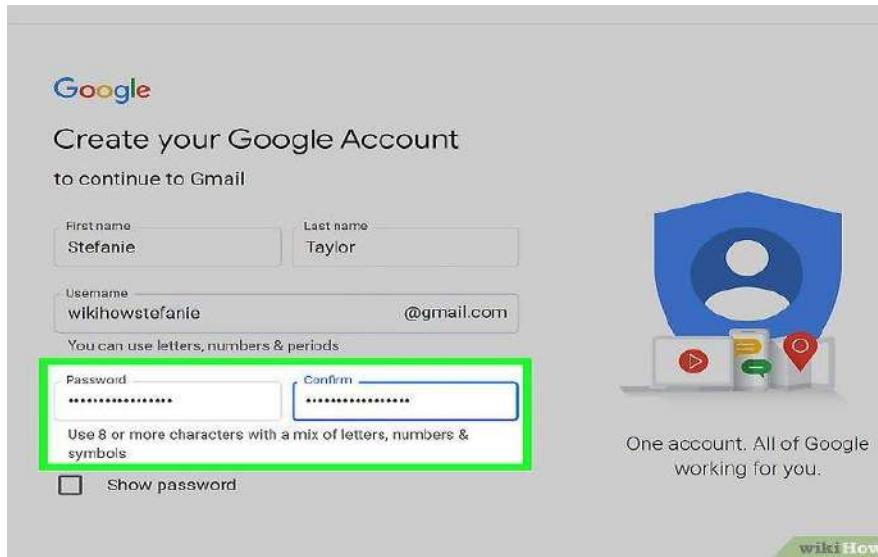
4.



Create a Gmail username. In the "Username" field, type in the username you want to use for your email address. You can use letters, numbers, and periods. This is the name which appears before the "@gmail.com" section of the address.

- a. You must enter a unique username that isn't being used by someone else. If it's taken, you'll see: **That username is taken. Try another.**
- b. If the username you want is taken, try using a period to separate names, or add a number at the end.

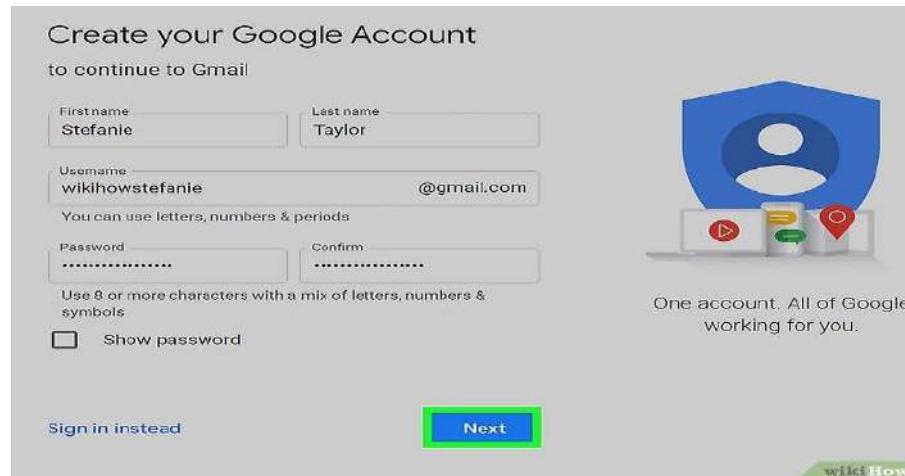
5



Enter and confirm your new password. Type your preferred password into the "Password" text box near the bottom of the page, then type the same password into the "Confirm password" box to the right of the first password box.

- These passwords must match before you can proceed. Make sure to use a strong password to avoid any unauthorized access to your account.
- Check the box next to **Show password** to toggle password visibility.

6.



Click Next. This is the blue button at the bottom of the page.

7.

Phone number (optional)
+1 2542356981

Google will use this number only for account security. Your number won't be visible to others. You can choose later whether to use it for other purposes.

Recovery email address (optional)
wikihow@gmail.com

We'll use it to keep your account secure

Month Day Year

Your birthday

Gender

Why we ask for this information

Back Next

Your personal info is private & safe

wikiHow

Enter account recovery options. While not mandatory, you can add up to two types of account recovery options to your Gmail profile:

- **Phone number:** Type your phone number into the "Phone number" field near the top of the page.
- **Recovery email address:** Type any other email address into the "Recovery email address" field near the top of the page.

8.

Recovery email address (optional)
wikihow@gmail.com

We'll use it to keep your account secure

Month Day Year

Your birthday

Gender

Why we ask for this information

Back Next

Your personal info is private & safe

wikiHow

Add your date of birth. Click the "Month" drop-down box and select the month of your birthday, then type the day and year into the "Day" and "Year" text boxes, respectively.

9.

Recovery email address (optional)
wikihow@gmail.com

We'll use it to keep your account secure

Month Day Year

Your birthday

Gender Male

Why we ask for this information

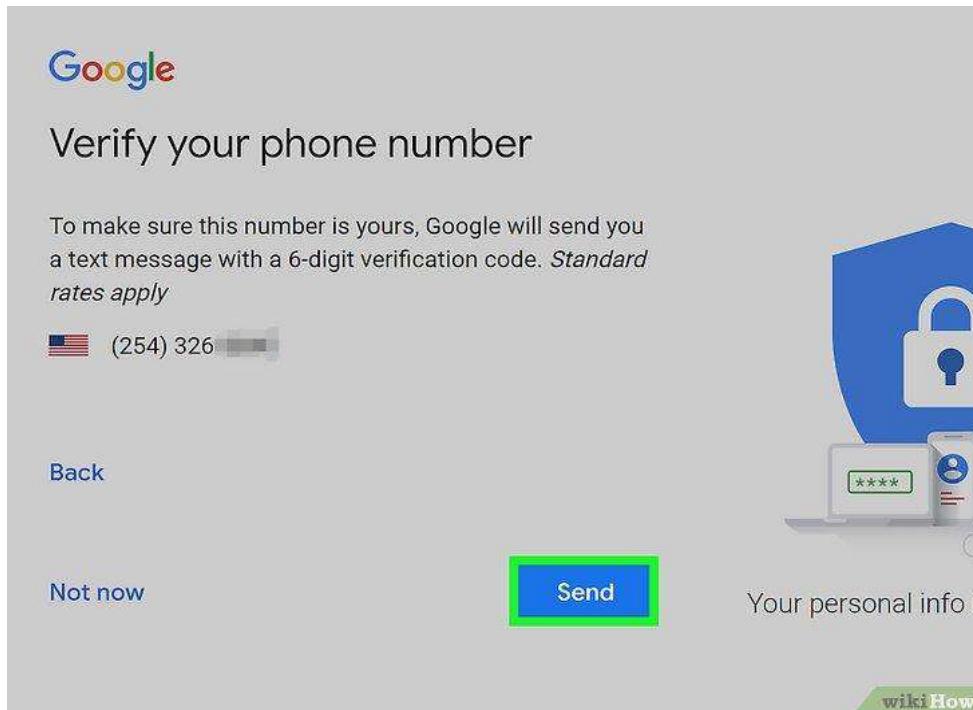
Back Next

Your personal info is private & safe

wikiHow

Select a gender and click **Next**. Click the "Gender" drop-down box, then select one of the gender options in the resulting drop-down menu. Then, click the blue button at the bottom of the page.

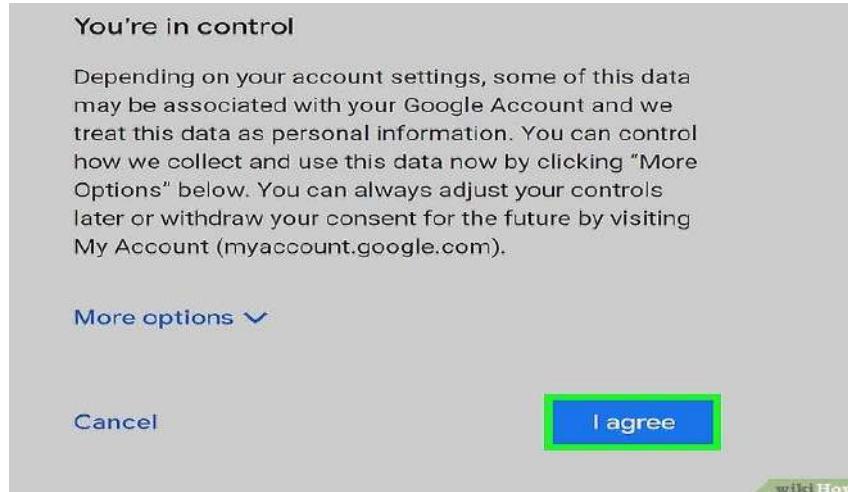
10.



Verify your phone number. If you added a phone number as an account recovery option, you'll need to verify your number.

- Click **Send** when prompted. Enter the verification code into the field. This will be in the format: **G-000000**. Click **Verify**.
- You may see the **Get more from your number** page. You can opt to receive video calls and messages with your number, and make Google services more relevant to you. To opt out, click **Skip**.

11.



Scroll down and click **I agree**. You must agree to Google's Privacy and Terms to create an account.

- Click **More options** to personalize your Google experience now. You can customize your **Web & App Activity**, **Ad personalization**, and **YouTube History**. You'll be signed into your new Google account. To use Gmail and access your inbox, click **Gmail** next to **Images**. Be sure to log out if you're using a public computer.

 **Google Form:**



Google Forms: Creating, Editing, and Distributing

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About

Google forms is a free Google application that allows you to quickly create and distribute a form to gather information. Form responses are saved in a Google spreadsheet in Google drive.

Opening Google Forms

Step 1. Open Google Chrome.

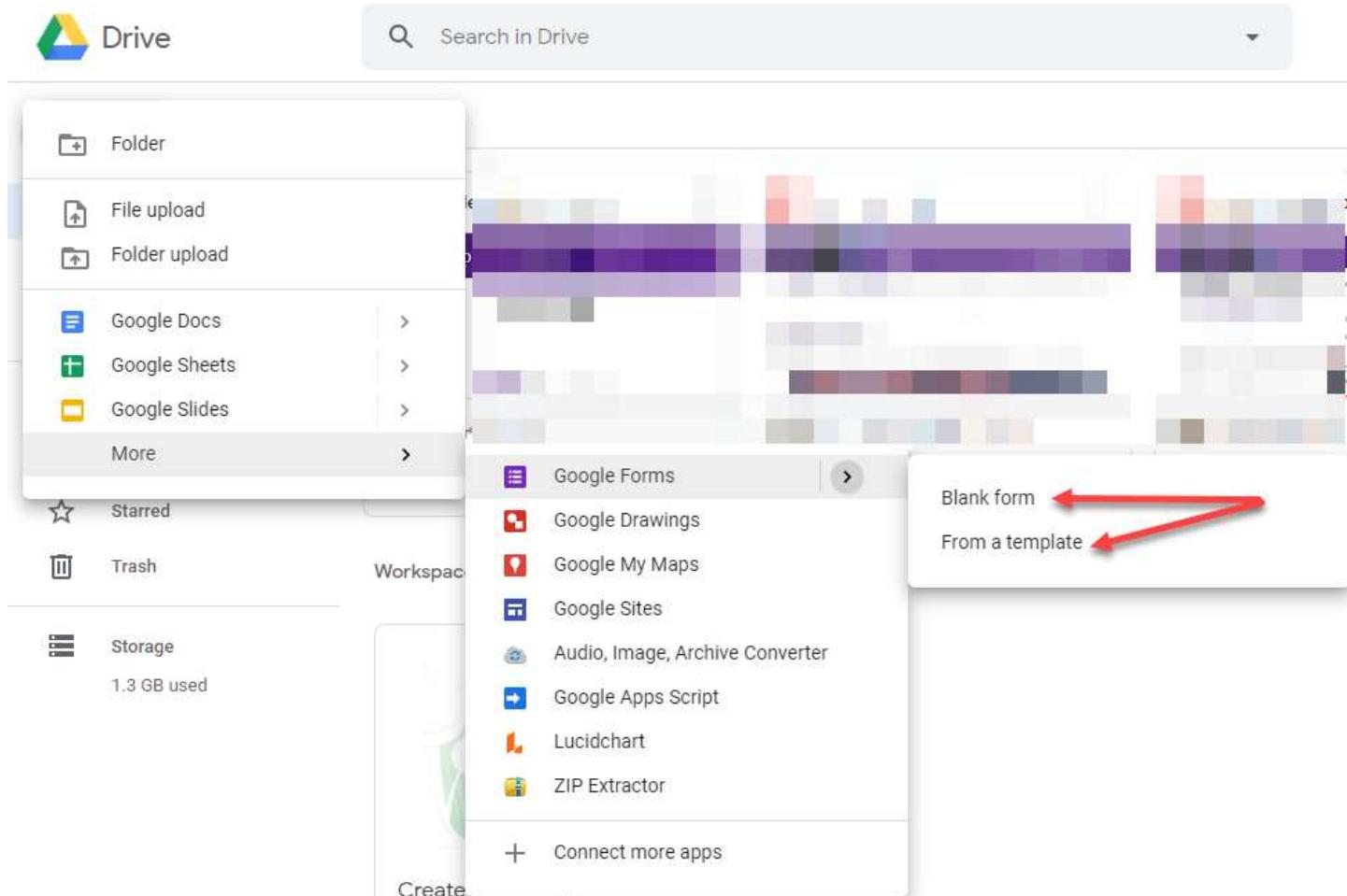
Step 2. Go to <http://drive.google.com>

Step 3. Enter your full UWW email address, then click **next**.

Step 4. Enter your UWW password, then click **Sign in**.

You will now be signed into Google Drive.

Step 5. Select **New > More > Google Forms** from the available menu. Choose either a **Blank form** or **From a template**.



Editing Google Forms

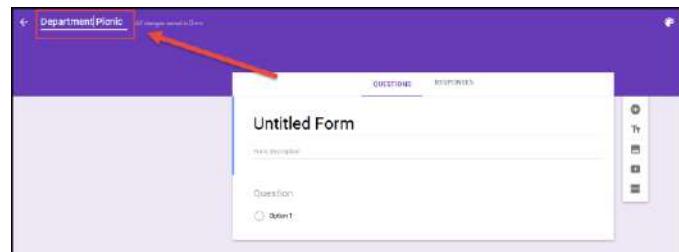
Creating a New Form from Template or by using a Blank form

Step 1. The Template gallery General tab offers a number of form templates. Or, simply click on Blank form to start from scratch.

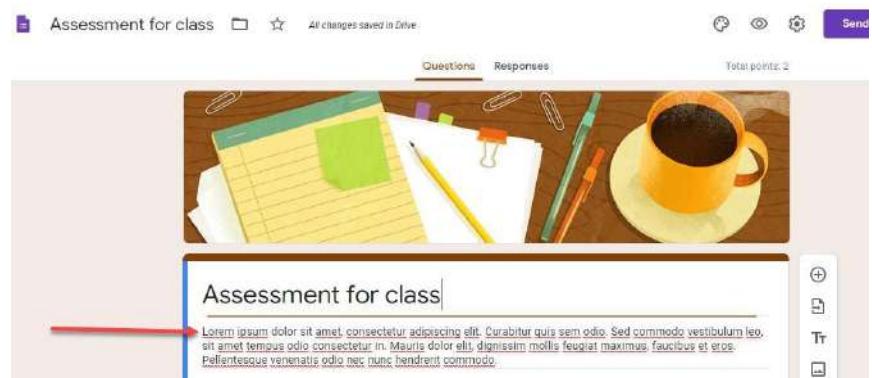
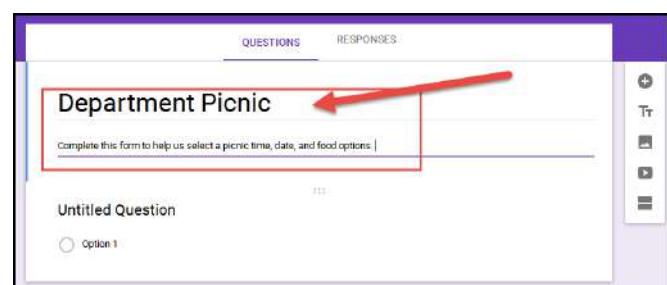


Editing your form

Step 1. Name the Form. Click the “Untitled Form” name in the top left corner of the screen, then enter the form’s name. Hit the “Enter” key to submit your changes. If using a template, click on the template title to change to a unique name of your choosing.



Step 2. Form description: Enter the description by clicking on that field. When using a template, you may find stock text in this field. Highlight and delete to replace with your description.



Edit Questions

- Step 1.** Select “Untitled question” to enter your first question text.
Step 2. Use the dropdown to the right of the question to select the question type.

- Step 3.** Select each option to enter option text.
Step 4. Hit the “Enter” key to create a new option.

Note: Click the X to the right of each option to delete that option.

Note: Click the **Add Other** link to add an “Other” option to your list.

Department Picnic
Department picnic form

What department are you in?

Multiple choice

ICIT
LTC
Option 3
Add option or ADD 'OTHER'

Add Questions

- Step 1.** Use the question toolbar to the right to add a new question, insert a new title and description, inset a picture, insert a video, or add a new section.
Step 2. Follow the steps above to edit the new question.

Department Picnic
Department picnic form

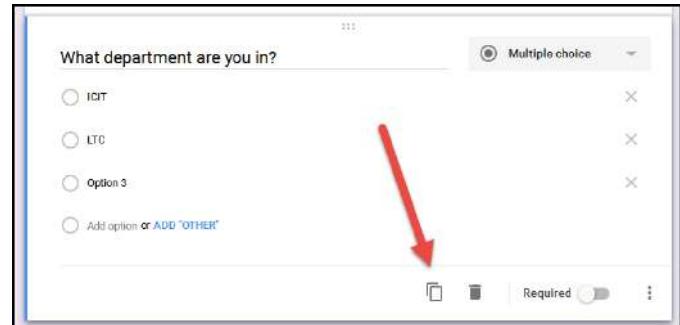
What department are you in?

Multiple choice

ICIT
LTC
Option 3
Add option or ADD 'OTHER'

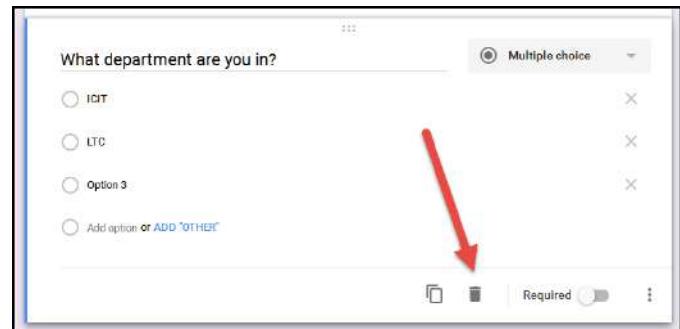
Copy/Duplicate Question

Copying a question allows you to quickly add a new question with the same format as your current question.



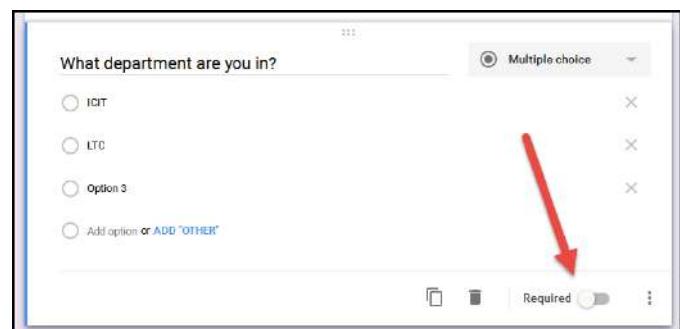
Delete Questions

The delete button allows you to delete the selected question and options from the list.



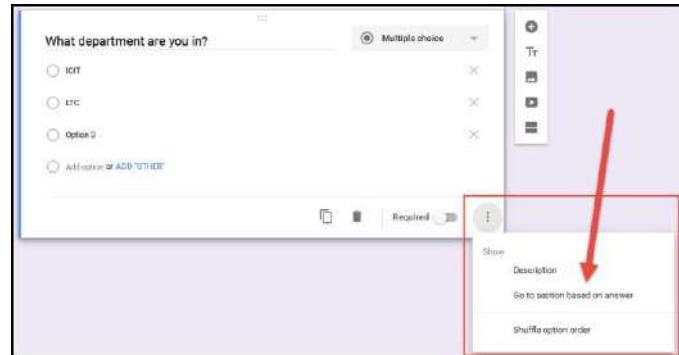
Required Questions

Select the “Required” button to make a question required.



More Button

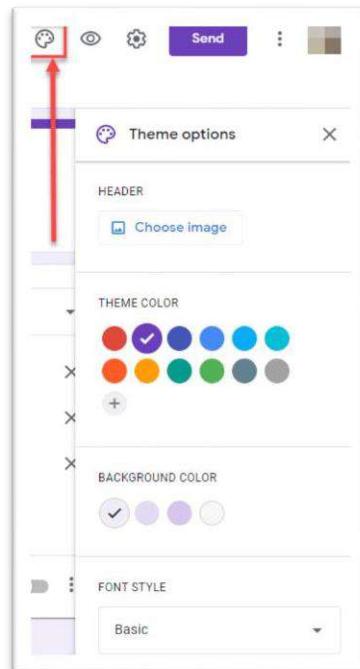
The ⋮ (More) button allows you to shuffle the order of questions and go to a new section based on a question answer.



Form Colors/Themes

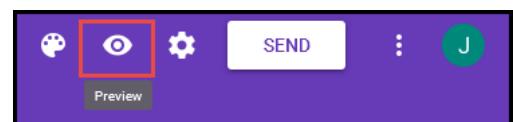
You can change the form color or theme by clicking the (Color Palate) button in the top right corner of the page.

Click the button to select a header image on a theme or upload your own.



Preview Form

Click the “Preview” button to open a new browser tab with a final view of your form. Close out of that tab to return to the “Edit Form” view to make changes.



Advanced Form Settings

Click the  (Settings) button to customize your form.



General Tab: Allows you to restrict users from your form, collect email addresses of users filling out your form, limit 1 response, etc.

Settings

General Presentation Quizzes

Collect email addresses

Response receipts (?)

Requires sign in:

Restrict to users in University of Wisconsin-Whitewater and its trusted organizations (?)

Limit to 1 response
Respondents will be required to sign in to Google.

Respondents can:

Edit after submit

See summary charts and text responses

Cancel Save

Presentation Tab: Allows you to display a progress bar, shuffle question order, and submit another form response. You can also modify your confirmation message once a user submits a form.

Settings

General Presentation Quizzes

Show progress bar

Shuffle question order

Show link to submit another response

Confirmation message:

Your response has been recorded.

Cancel Save

Quizzes: Allows you to set this form as a quiz, set grade options, etc.

Settings

General Presentation **Quizzes**

Make this a quiz
Assign point values to questions and allow auto-grading.

Quiz options

Locked mode on Chromebooks

 Respondents aren't allowed to open tabs or other applications while taking this quiz. Respondents must take this quiz using a managed Chromebook. [Learn more](#)

Turn on locked mode

Release grade:

Immediately after each submission

Later, after manual review
Turns on email collection

Respondent can see:

Missed questions 

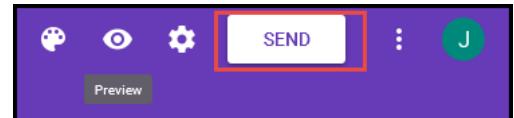
Correct answers 

Point values 

Cancel **Save**

Send Form

Click the **Send** button to view different ways to distribute your form.



Send Via Email: You can send your form via email to recipients or send the form email to yourself, then use Outlook to forward the form link to others.

Send form X

Automatically collect respondent's University of Wisconsin-Whitewater email address

Send via Email Go <> [f](#) [t](#)

Email

To _____

Subject
Department Picnic

Message
I've invited you to fill out a form:

Include form in email

[Add collaborators](#) Cancel Send

Copy Form Link: Click the “link” icon to display the Form’s URL link. Select the **Shorten URL** option to display a short link option.

Click the **Copy** link in the bottom right to copy the link.

Send form X

Automatically collect respondent's University of Wisconsin-Whitewater email address

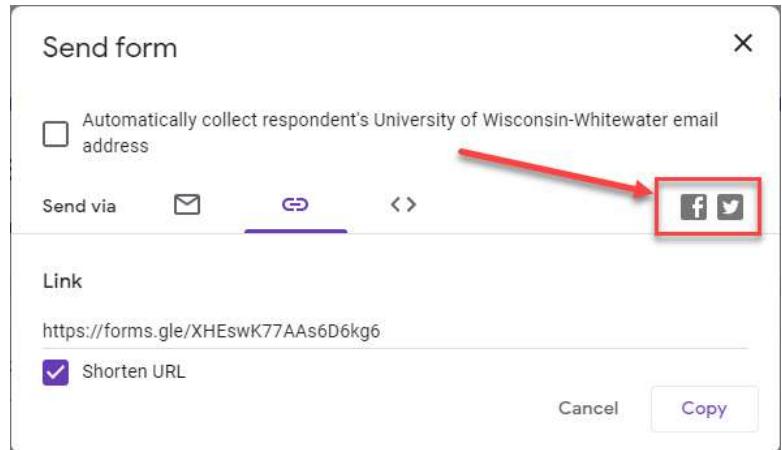
Send via Link Go <> [f](#) [t](#)

Link
<https://forms.gle/XHEswK77AAAs6D6kg6>

Shorten URL

Cancel Copy

Social Media: Click any one of the social media icons to share the form link using a social media platform.

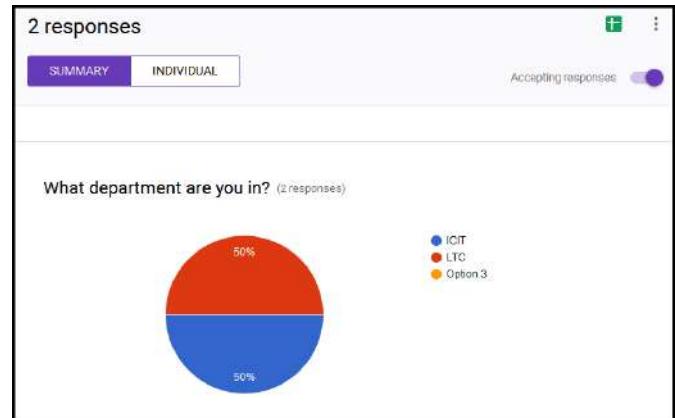


Viewing Responses

Click the **Responses** tab to view user responses to your form.

The screenshot shows the 'Responses' tab for a form titled 'Department Picnic'. An arrow points to the tab itself, which is highlighted with a red border. Below the tab, the form title 'Department Picnic' and subtitle 'Department picnic form' are visible. A question 'What department are you in?' has three responses listed: '1. I CIT', '2. LTC', and '3. Option 3'.

Summary: Shows a pie chart percentage of responses for each question.



Individual: Displays each form response individually. Click the < or > button to move between each response.

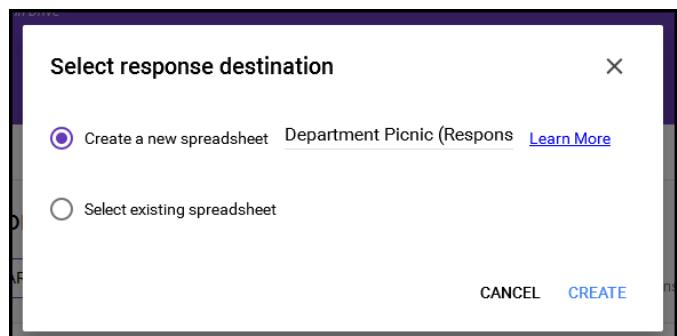
A screenshot of the Google Forms interface. The top navigation bar shows 'QUESTIONS' and 'RESPONSES' with a count of '2'. Below this, a card displays '2 responses'. There are two tabs: 'SUMMARY' (selected) and 'INDIVIDUAL'. A red arrow points from the 'INDIVIDUAL' tab to the card below. The card has a title 'Department Picnic' and a subtitle 'Department picnic form'. It contains a question 'What department are you in?' with the answer 'LTC'. At the bottom right of the card, there is a red arrow pointing to the 'Accepting responses' toggle switch, which is currently turned on (blue).

Spreadsheet View: Click the (Create Spreadsheet) icon to create and view form responses in Google Sheets. Select to create a new spreadsheet or add to an existing spreadsheet.

Once a spreadsheet is created, click the again to open the spreadsheet.

Note: If you wish to be notified of any new form submissions, select **Tools > Notification Rules** from the Google Sheet menu. Select your notification preference, then click **Save** to save your changes.

Note: Do not modify the sheetsheet data until after you have collected all responses. Modifying the form could result in incorrect data placement.



Close Form

You can close the form for submission by selecting the **Responses** tab, then clicking the **Accepting Responses** toggle. You can modify the message respondents will see if they try to access your form while it is closed. Click the toggle again to reopen your form.

A screenshot of the Google Forms interface. The top navigation bar shows 'QUESTIONS' and 'RESPONSES' with a count of '2'. Below this, a card displays '2 responses'. There are two tabs: 'SUMMARY' (selected) and 'INDIVIDUAL'. A red arrow points from the 'INDIVIDUAL' tab to the card below. The card has a title 'Department Picnic' and a subtitle 'Department picnic form'. It contains a question 'What department are you in?' with the answer 'LTC'. At the bottom right of the card, there is a red arrow pointing to the 'Not accepting responses' toggle switch, which is turned on (blue). A message at the bottom of the card reads 'This form is no longer accepting responses.'

View Form and Form Responses in Google Drive

To edit your form or view your form response spreadsheet, go to Google Drive then select your form. Use the search box at the top of the page to find your form if the form was saved in a folder.



Delete Form

To delete your form completely, locate your form in Google drive, right click on the form name, then select **Delete**. You may also delete the form responses by following the same steps.

Note: Use the search box at the top of the page to locate your form if you cannot find it on your main Google drive page.

