UNIT - 2

WORKING WITH MS-EXCEL

1. Introduction To MS Excel

- Microsoft Excel is a spreadsheet, developed by Microsoft for Windows, macOS, Android and iOS.
- Microsoft Excel is a spreadsheet program that is used to record and analyze numerical data.
- Alphabetical letters are usually assigned to columns and numbers are usually assigned to rows. The point where a column and a row meet is called a cell.
- The address of a cell is given by the letter representing the column and the number representing a row.

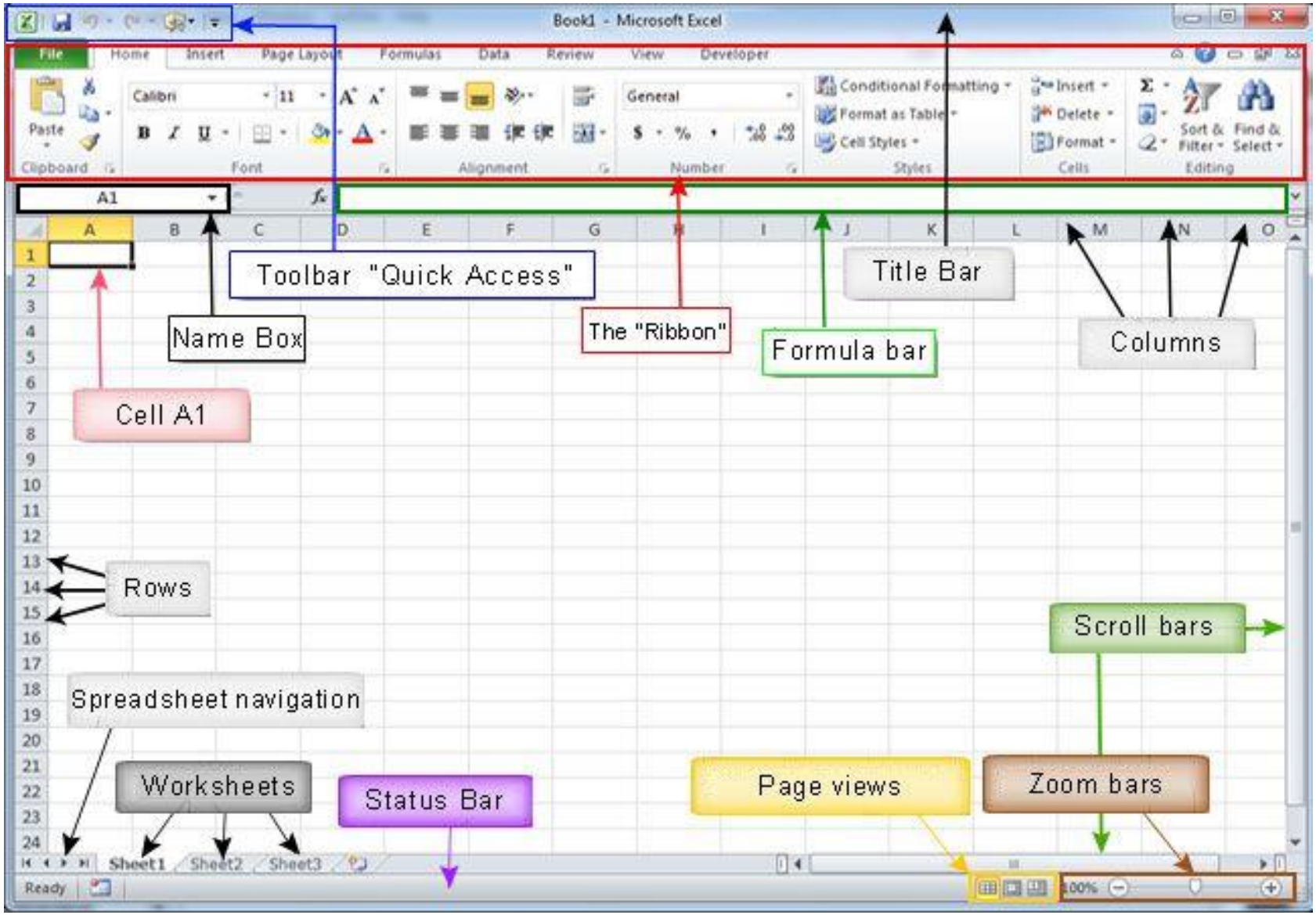


Figure : Overview of Microsoft Excel

2.Use of Microsoft Excel

1. Business Analysis

- The number 1 use of MS Excel in the workplace is to do business analysis.
- Business analysis is essentially using collected data to inform decision making.

2. People Management

- You may be surprised to learn that one of the top uses of Excel in business is to manage people.
- MS Excel is a powerful way to organize information about people, whether they are employees, customers, supporters, or training attendees.

3. Managing Operations

- Excel is relied on heavily to manage the day-to-day operations of many businesses.

4. Mathematical formulas of MS Excel make things easier

- Next best use of MS Excel is that it makes easy for you to solve complex mathematical problems in a much simpler way without much manual effort. There are so many formulas in MS Excel and by using these formulas you can implement lots of operations like finding sum, average, etc.

5. Add sophistication to data presentations

- Next use of MS Excel is that it helps you in adding more sophistication to your data presentations which means that you can improve the data bars, you can highlight any specific items that you want to highlight and make your data much more presentable easily.

6. Manage expenses

- MS Excel helps in managing expenses.
- Eg.- Suppose if a doctor is earning around 50,000 per month then he will make some expenses as well and if he wants to know how much he is exactly spending per month then he can do it with the help of MS Excel easily. He can write his monthly income as well as expenses in the excel tables and then he can get to know that how much he is spending and he can thus, control his expenses accordingly.

3. Creating new sheet, Saving, Opening, Printing Workbook

Create :

- If you are working in MS Excel and want to begin work in a new Excel file, You can easily create a new workbook. To do so , You can use a command on the office menu or a keyboard shortcut.
- 1. Click the office button

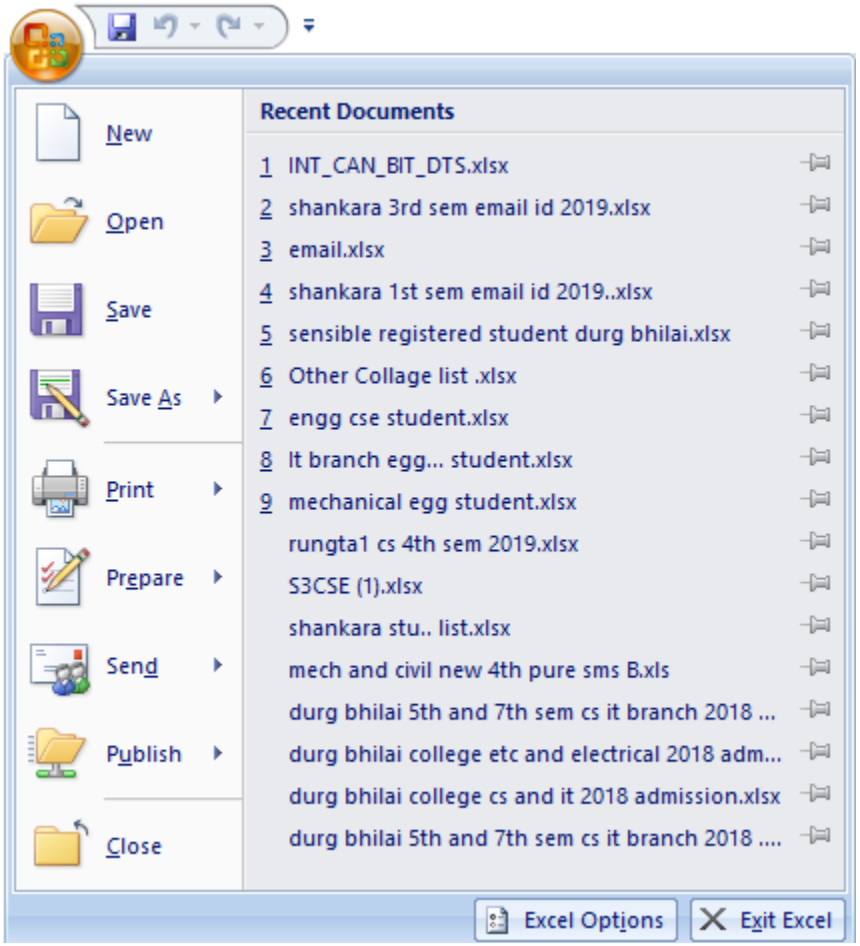


Figure : The Office menu appears

- 2. Choose New

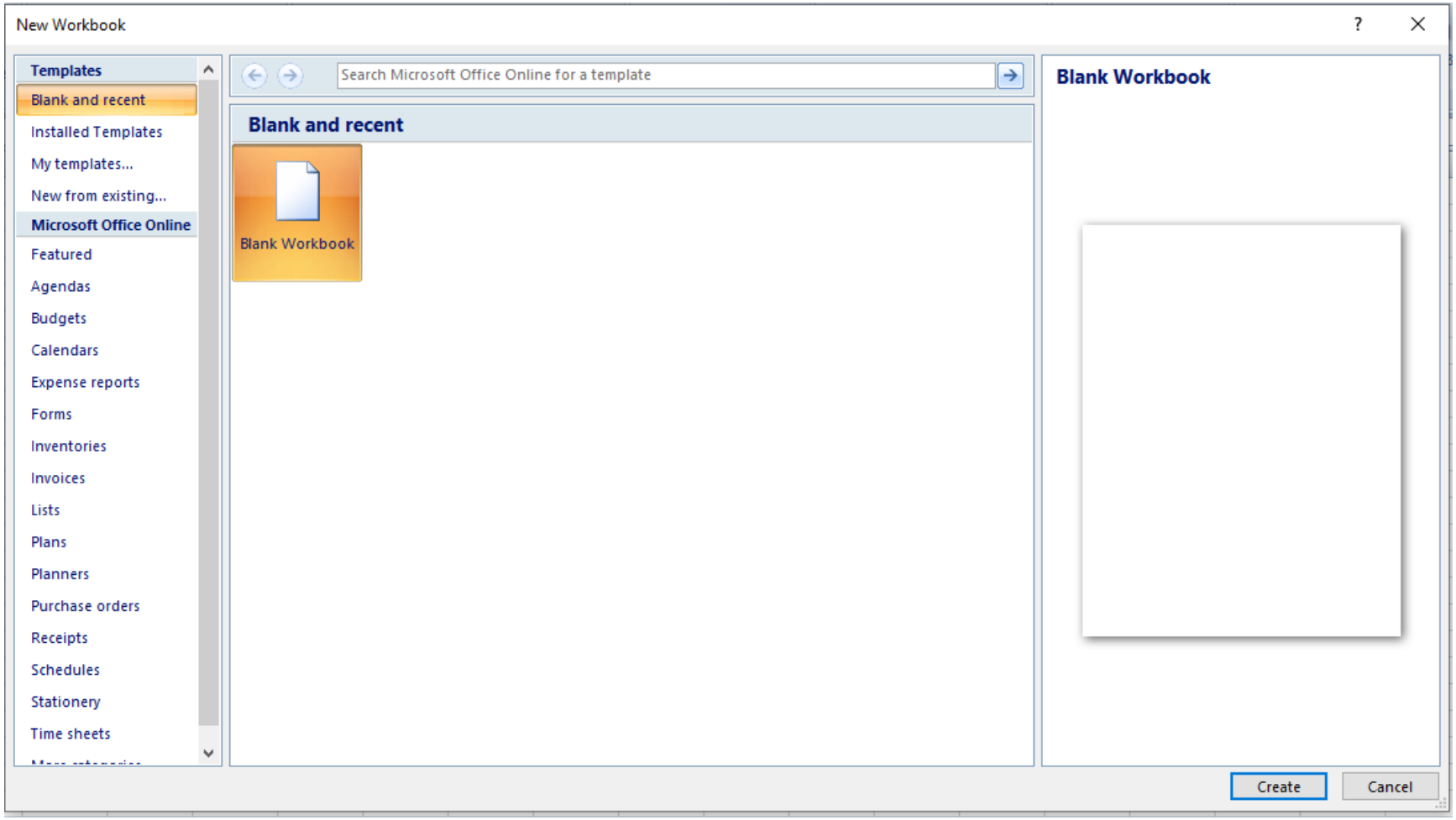


Figure : The new workbook dialog box appears

- 3. Click the blank workbook icon.
- 4. Click the create button : Excel creates a new , blank workbook based on the default template.

Save :

1. Click the office button and choose save.
2. The save as dialog box appears.
3. Click the save in drop down button and select the folder in which you want to save the file.
4. Type the descriptive name for the file in the File name box.
5. Click the save button to save the file in the selected folder.

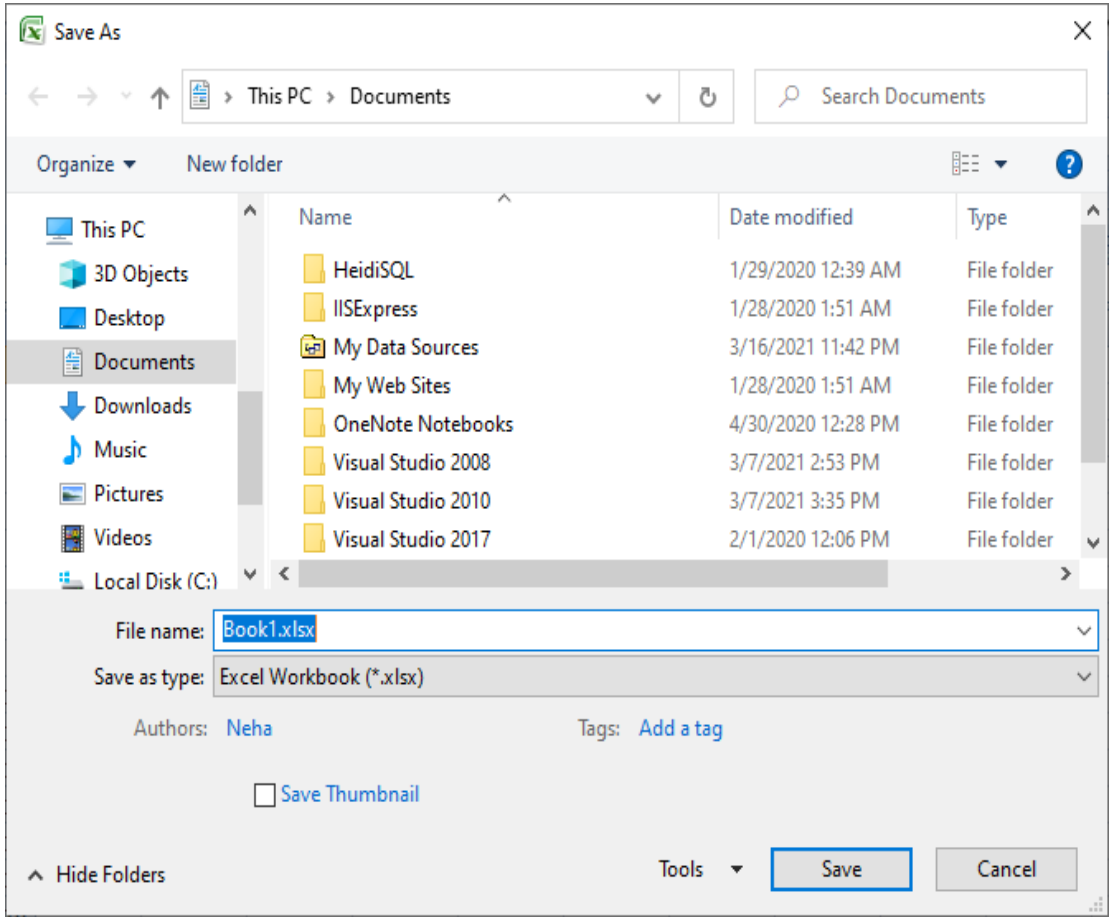


Figure: The save as dialog box is appears

Open :

1. Click the office button and choose Open. The Open Dialog box will appears.
2. Then Select the Drive and folders in which your file is stored.
3. Or type the name of the file in “File Name” dialog box.
4. Click Open Button to open the file.

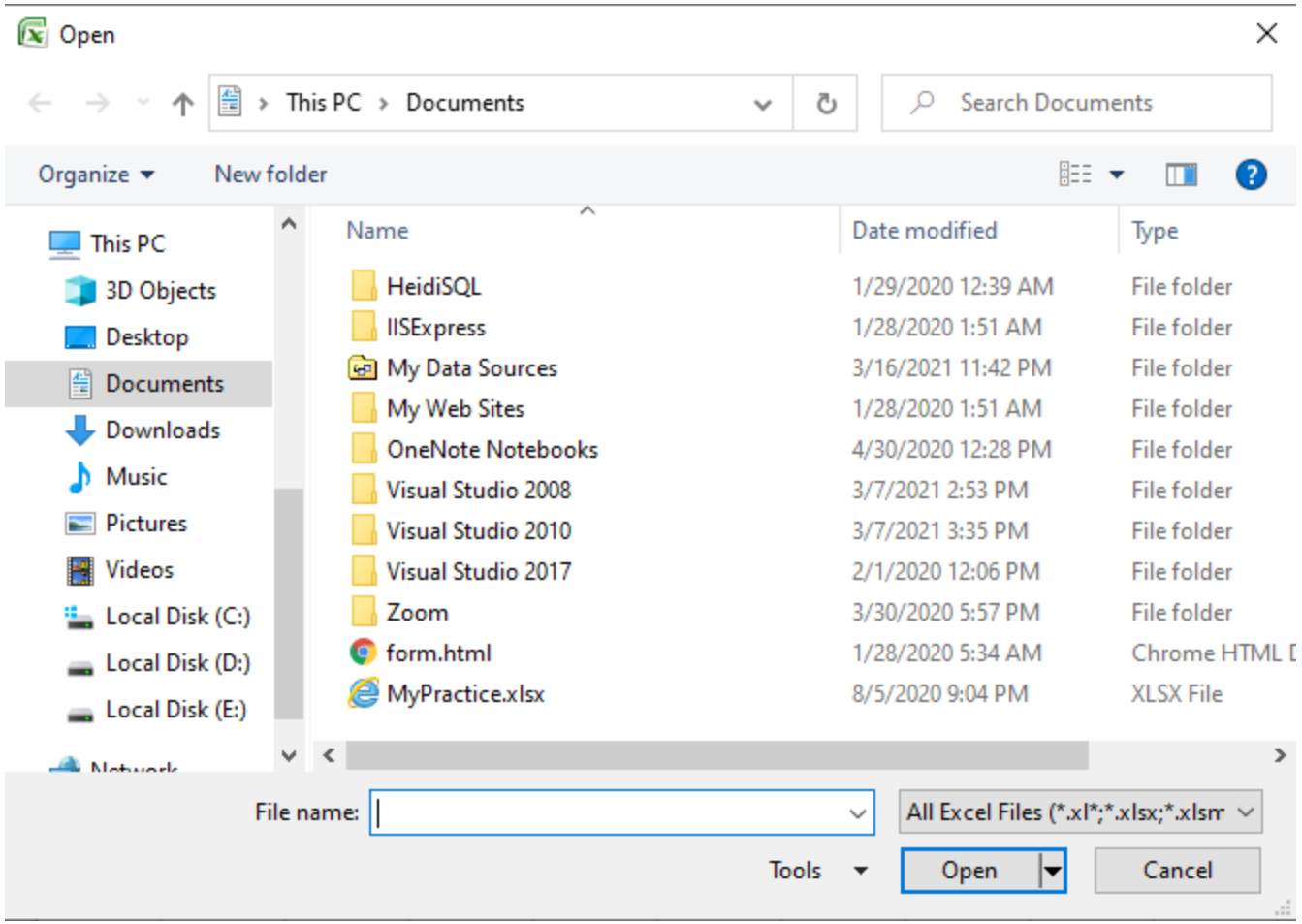


Figure : Open dialog box is appears

Print :

- Select the worksheets that you want to print.
- Click **File** > **Print**, or press CTRL+P.
- Click the **Print** button or adjust **Settings** before you click the **Print** button.

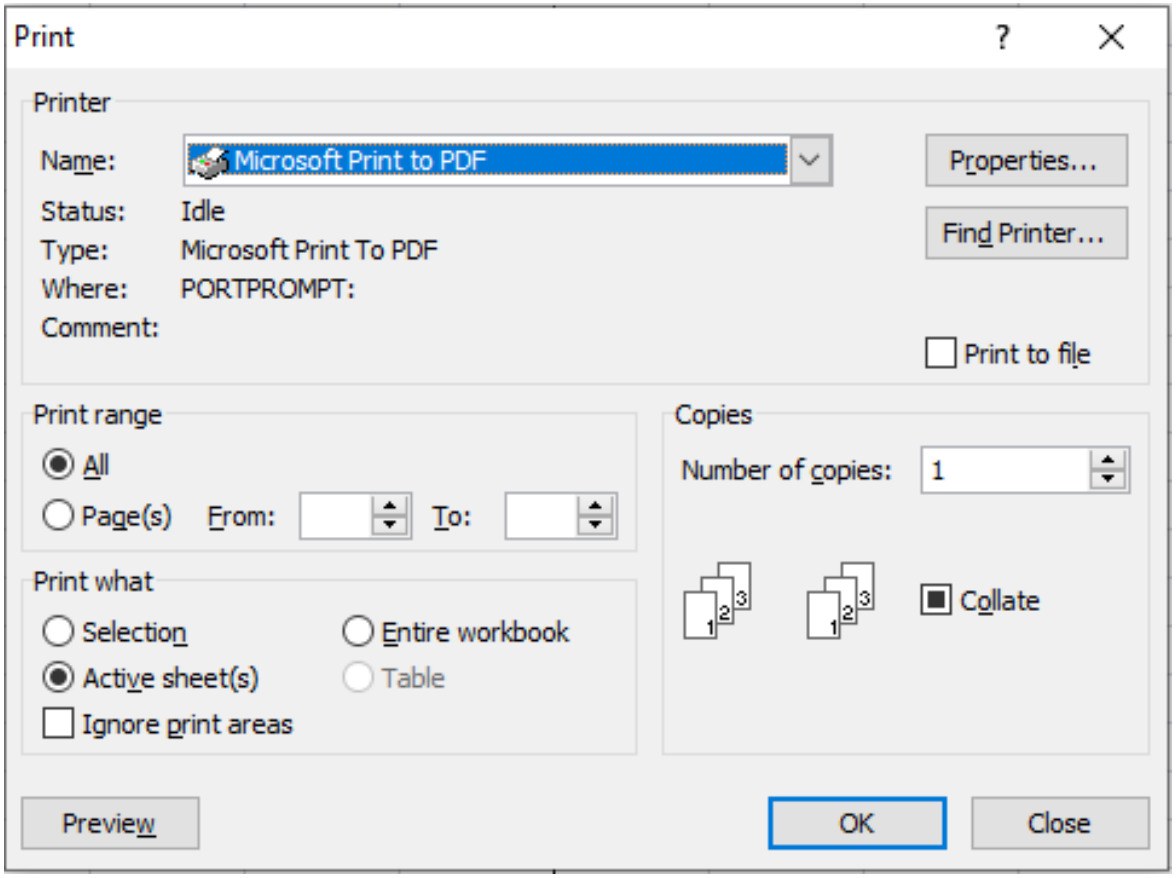
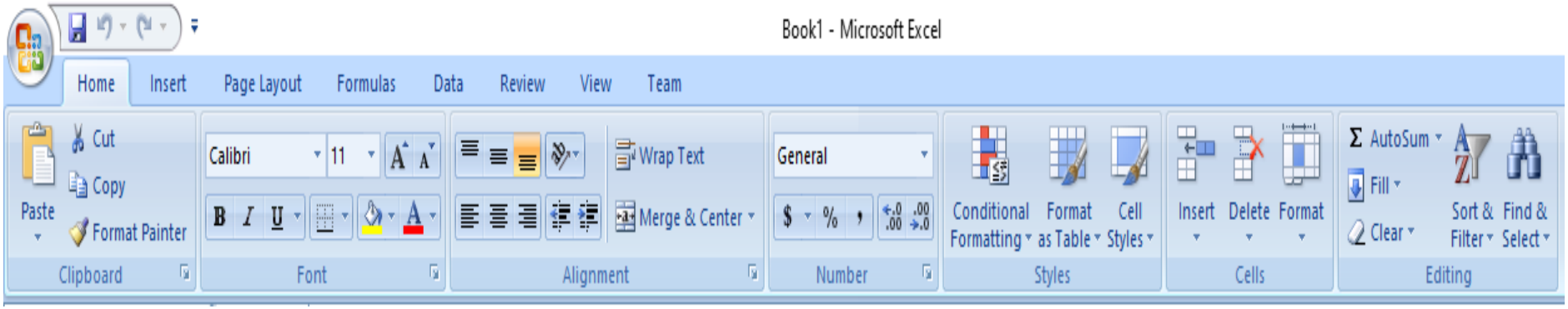


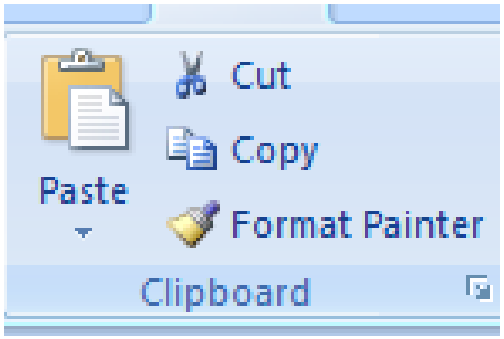
Figure : Print Dialog Box is Appears

4.Home Tab

- The home tab ribbon of Microsoft excel is made up of 7 groups that is the collection of very important command.
- Most of the commands are commonly used in manipulating the data



Home Tab 1.Clipboard Group



Cut, Copy, Paste and Format Painter

Cut : (Ctrl + X) – It is for cutting the select section from the document and placing It on the clipboard.

Copy : (Ctrl + C) - Copies the selected section and places it on the clipboard.

Paste : (Ctrl + V) – Use this command to paste the content of the clipboard to the desired location.

Format Painter : Use this tool to copy formatting from one place And apply the copied format to another place.

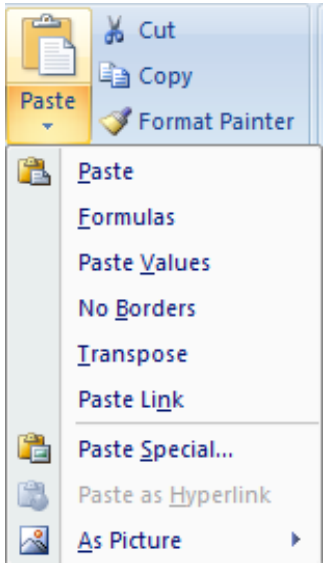
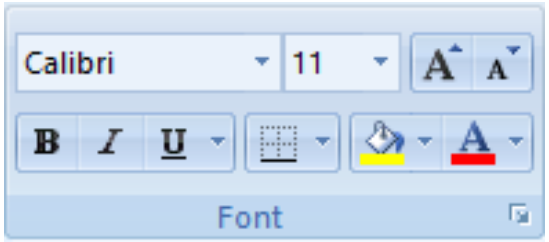


Figure : Various Paste Option

Home Tab 2.Font Formatting Tab Working With Fonts



We use this option to change the font style and font-size. We can make it bold, italic and underline. Also, this group contains border styles, fill color, font color.

Font : Use this tool to change the Font Style. Clicking on the drop down button You will be able to get more fonts.

Font Size : This command is for changing the font size . Highlight the cells you want to change the size of and then select the size you want.

Bold(B) : Make the selected text bold.

Italic (I) : Make the selected text to be italicized.

Underline (U) : Underline the selected text . Using the drop down button you can get the double underline.

Increase font size : this is another way of increasing the font size.

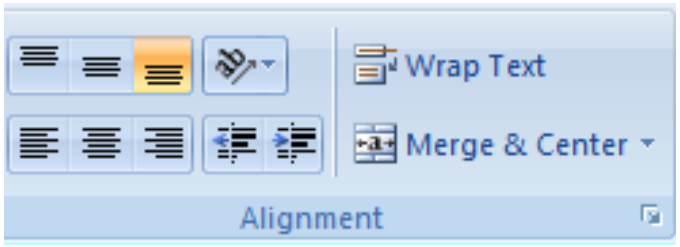
Decrease font size : Use this shortcut for decreasing the font size.

Borders : Use this command for setting the borders in selected cells.

Fill Color : Color the background of selected text.

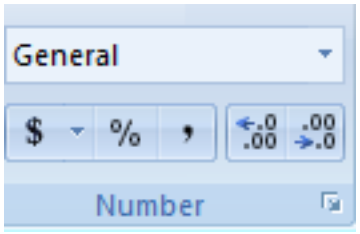
Font Color : Change the text color.

Home Tab 3.The Alignment Group



1. Top Align : This command align text to the top of the cell.
2. Middle Align : this tool will align text such that it will be centered towards the top and bottom of the cell.
3. Bottom Align : Use this command to align text to the bottom of the cell.
4. Align text Left : this tool lets you align text to the left of the cell.
5. Align text Right : this tool lets you align text to the right of the cell.
6. Center : This Command is for centering text in the cell.
7. Decrease Indent : This tool decrease the margin between the cell border and the text in the cell.
8. Increase Indent : This tool increase the margin between the cell border and the text in the cell.
9. Orientation : Use this command to rotate selected text to a diagonal or vertical angle orientation. This is often use for labeling narrow column.
10. Wrap text : This command makes all content visible within a cell by displaying it on multiple lines.
11. Merge and center : This command is used to joined the selected cells into one larger cell and centers the contents in a new cell.

Home Tab 4. The Number Group



- **General :** This command Helps you to choose how the values in a cell are displayed.
- **Accounting number format :** Use this command to set the alternate currency format you want to use for the selected cell. Open drop – down button for more currencies.
- **Percentage Style :** Use this command to apply the percentage format to selected cells.
- **Comma Style :** This displays the content of the cell with a thousand separator.
- **Increase Decimal :** It shows more decimal places.
- **Decrease Decimal :** Show less precise value by showing fewer decimal places.

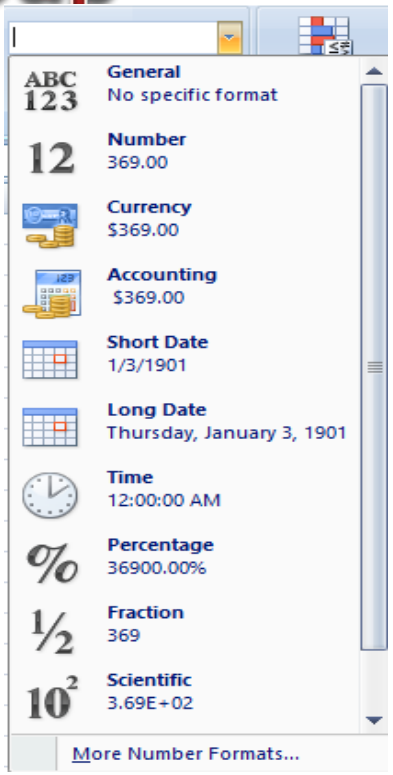
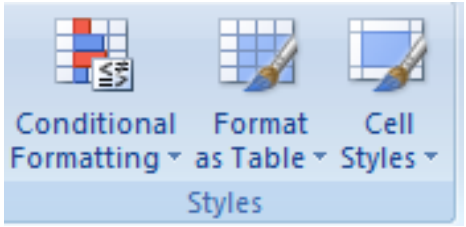


Figure : General

Figure : Accounting Number format

Home Tab 5. Style Group



- **Conditional Formatting :**

This button is used to select different formatting for cells based on particular criteria.

It is possible to highlight interesting cells, emphasize unusual values, and visualize data using Data Bars, Color Scales, and Icon sets.

- **Format as Table :**

Click this button to quickly format a selected range of cells as a table using a gallery of table styles.

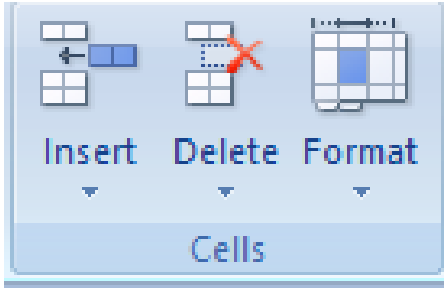
- **Cell Styles :**

This button is used to apply predefined formatting to a single cell.

A gallery of styles will appear.

Move the mouse pointer over the style to see a Live Preview of the style.

Home Tab 6. Cells Group



1. **Insert :**

•To insert cells, sheet rows, or sheet columns, click this button. A list of possible options will appear.

•Click the option that is to be applied to the worksheet.

2. **Delete :**

•This button is used to delete cells, sheet rows, or sheet columns from a worksheet.

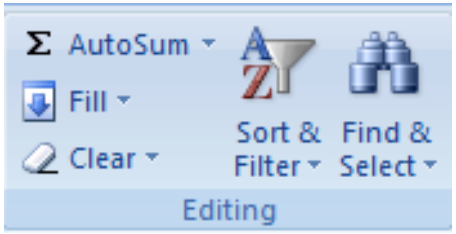
•If the arrow is clicked, a list of available options will appear.

3. **Format :**

•Click this button to change the row or column height and width, to organize worksheets in the workbook, to protect the document, or to hide a sheet in the workbook.

•A list of available options will appear when the arrow is clicked.

Home Tab 7. Editing Group



1. Auto Sum :

- To display the sum of selected cells directly to the right or below the selection, click this button.
- Where the sum is displayed will depend on whether the selection range is a column or row.

2. Fill :

- Click this button to continue a pattern of values in a selected range of cells.

3. Clear:

- This button is used to clear the contents from the cells in the selected range.
- It can also be used to clear the formatting or comments associated with the cell selection.

4. Sort and Filter :

- To sort the data in a selected range of cells, click this button.
- It is also possible to filter out specific data in the selected cells.

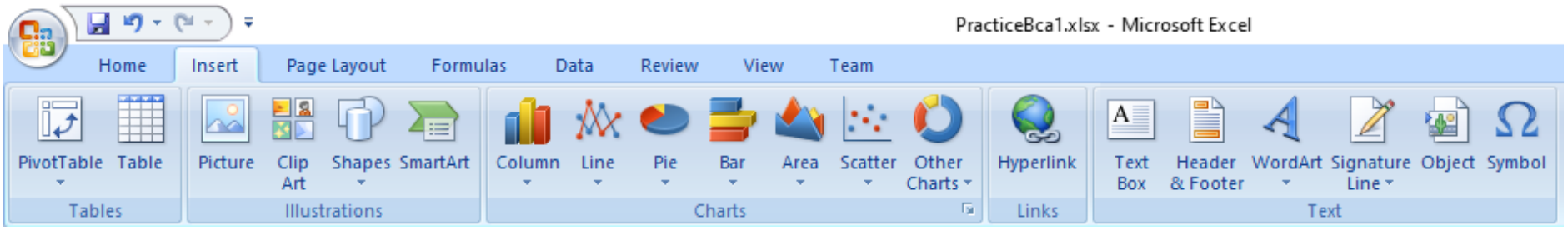
5. Find and Select :

- Click this button to locate specific data in a worksheet or a range of cells.
- It is also possible to replace data within the worksheet or range of cells

Insert Tab

- We use Insert tab to insert the picture, charts, filter, hyperlink etc. We use this option to insert the objects in Excel. To open the insert tab, press shortcut keys Alt+N.
- The insert tab have following groups:

1. Tables
2. Illustrations
3. Charts
4. Links
5. Text



Insert Tab 1. Tables(Pivot tables)

Pivot Table :

- A pivot table is used to display the Excel worksheet table into another Summarize form.
- A pivot table terms all the data into small, concise report that tells exactly what user need to know.

Steps :

1. Go to insert menu and select the pivot table option.
2. A dialog box appears which ask for range, click on the text box and then select the data source from the excel sheets with column heading.
3. Now select the place that is new worksheet or existing worksheet.
4. Select anyone option from two options given as below.

i) New worksheet : To insert new table I new worksheet.

ii) Existing worksheet : To insert pivot table in existing file in which the data source is present.

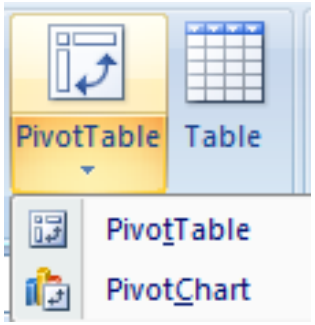
5. Then click on “OK” Button. It will insert pivot table with the selected data source.

How to create pivot table?

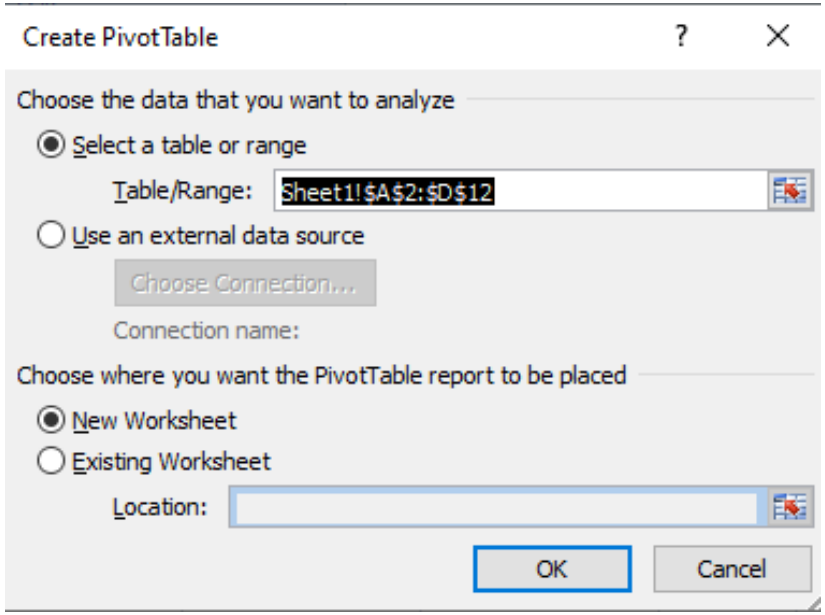
- Insert the data :

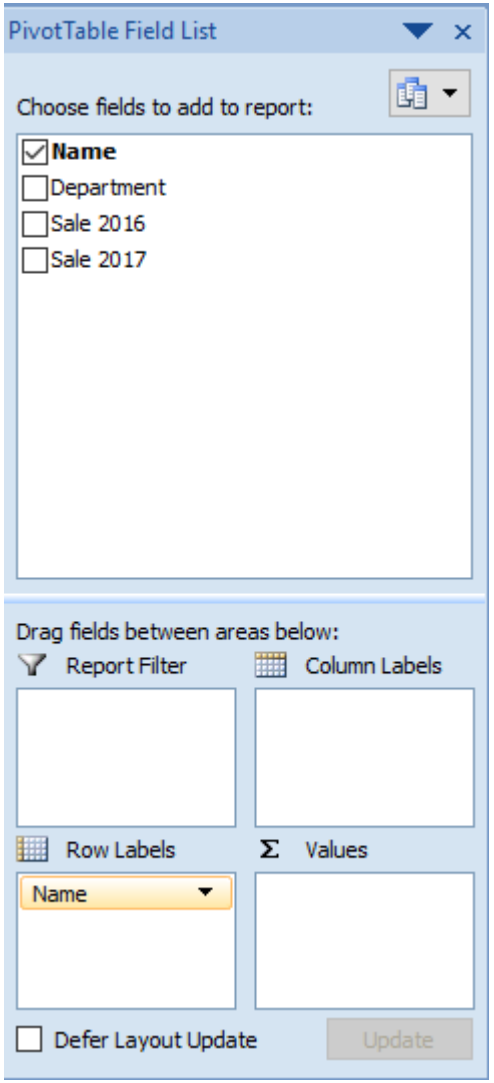
Name	Department	Sale 2016	Sale 2017
ram	Electronics	1200	1100
shyam	hardware	1100	1230
om	Electronics	1134	2200
raman	Electronics	1232	2100
deepak	hardware	1150	1400
raj	hardware	1200	1300
rihan	Electronics	2000	1500
amit	furniture	1280	3200
anil	furniture	800	1240
monu	furniture	2300	1750

- Click on Pivot table :

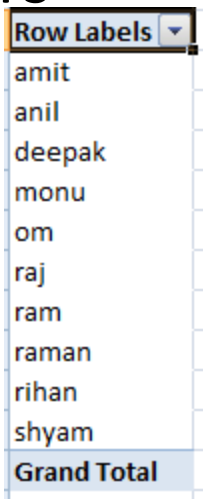


- Dialog box appears where you can select the area.





- Then the Table is appears



Insert Tab (Tables)

Table :

- This button is used to insert a table into the worksheet.
- Tables make it easy to analyze and sort data.

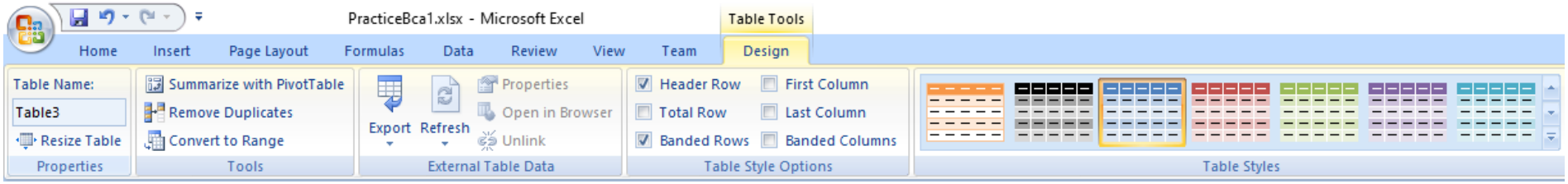


Figure : Table Formatting Options

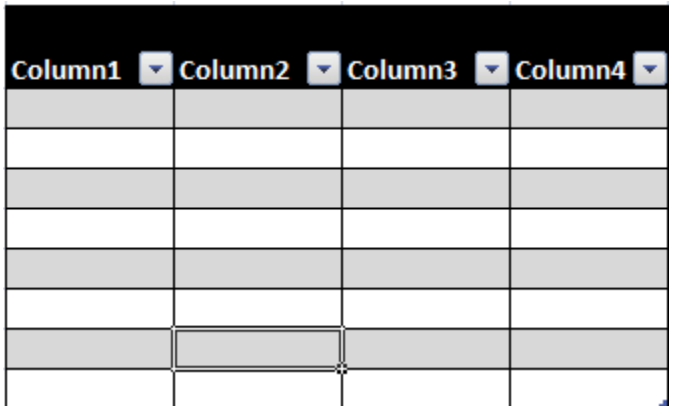


Figure : Tables

Insert Tab 2.Illustrations

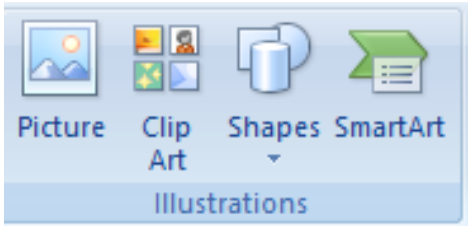


Illustration: - We use this option to insert the Pictures, Online Pictures, Shapes, SmartArt and Screenshot. It means if we want to insert any image, we can use Illustration feature.

Picture :-

•To insert a picture that has been stored on the computer, click this button.

•When the button is clicked, the Insert Picture dialog box will appear.

•This dialog box is used to locate the picture that is to be inserted into the worksheet.

Shapes :-

•Shapes are objects, such as rectangles, circles, lines, and arrows. To insert a shape into the worksheet, click this button.

•When the button is clicked, a gallery of different shapes is displayed.

Smart Art :-

- To insert objects such as organization charts, click this button. A gallery of different objects is displayed.
- This gallery is divided into categories, such as list, process, cycle, hierarchy, relationship, matrix, or pyramid.

Clip Art :

- In excel 2007 , You have the ability to search clip art files on your local computer and on Microsoft office online.
- You can Modify that clip art using picture editing tool.

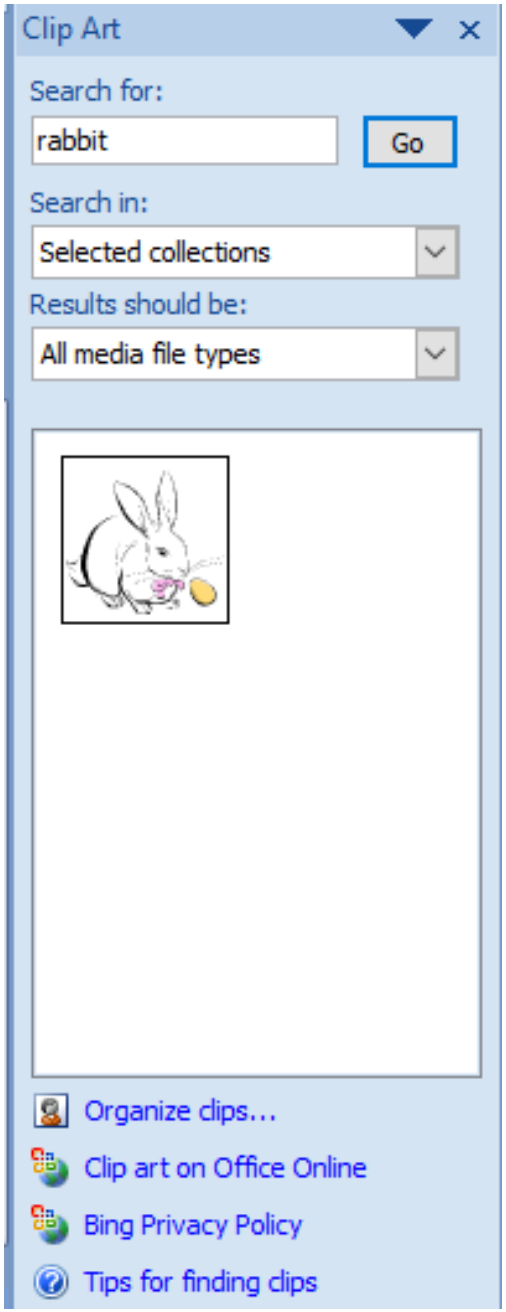
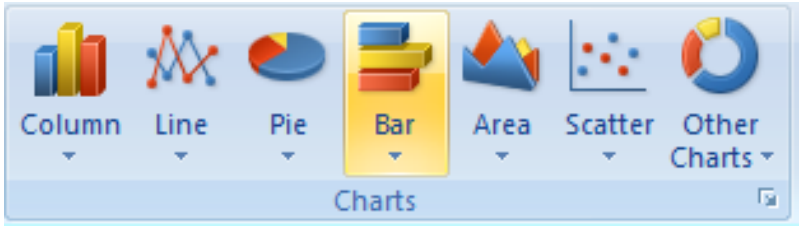


Figure : ClipArt

Insert Tab 3. Chart Group



Charts: -

- Charts is very important and useful function in Excel.

In excel, we have different and good numbers of readymade chart options. We have multiple types of different charts in Excel Column, Bar, Radar, Line, Area, Combo, Pie and Bubbles chart.

- A chart is a visual representative of data in both columns and rows.
- Charts are usually used to analyze trends and patterns in data sets.

Types of Charts :

1) **Column chart:** - It is made up of horizontal or vertical column which represents the comparison of two or more things.

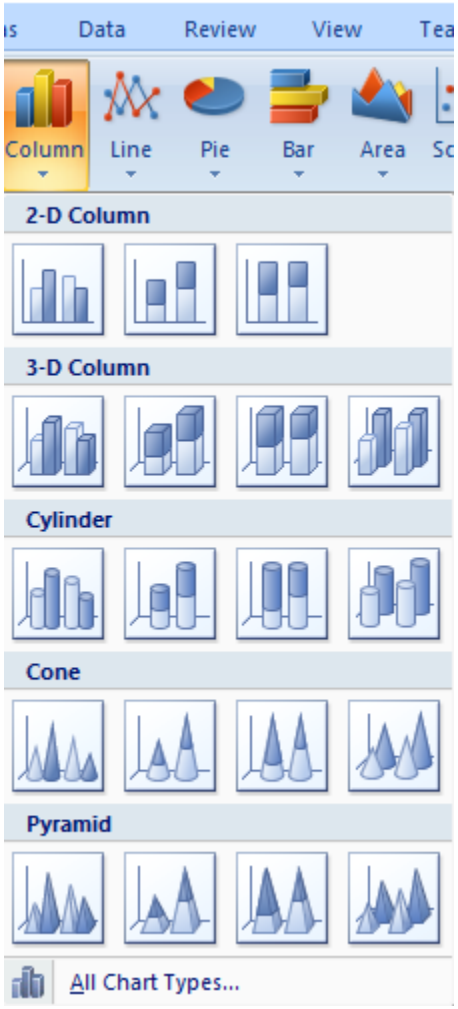


Figure : Column chart

2) Line Chart :

- Line chart is represented through different data series and it represented through different color of shading.
- It shows continuous change over the line.

3) Bar chart:-

- A bar chart is a chart that shows information about two or more discrete objects, events, locations or groups of people, etc.

4) Pie Chart :

- It is a circular graph where the pieces of the pie are used to represent a percent (%)of a whole.
- These charts denote use horizontal and vertical axes to plot charts.
- The circle of the pie represents 100%, The size of each slice show which part of 100% it represents.

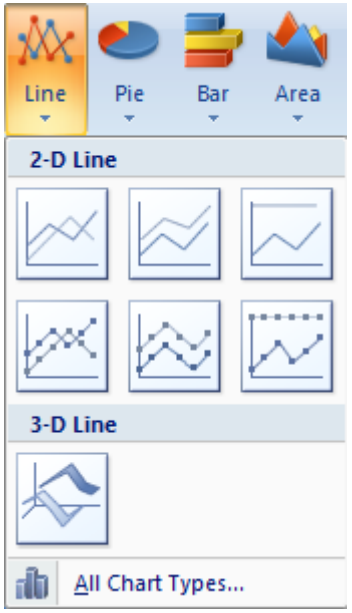


Fig : Line Chart

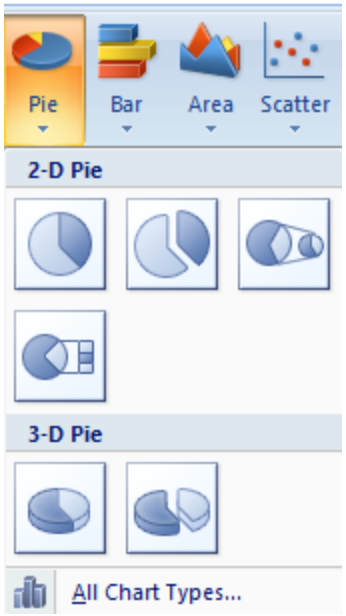


Fig : Pie Chart

Fig : Bar Chart

5) **Area chart:-**

- It emphasizes the magnitude of change over time by displaying the sum of plotted values, an area chart shows the relationship of parts to a whole.
- It combines some of the characteristics of a line chart with a bar chart.

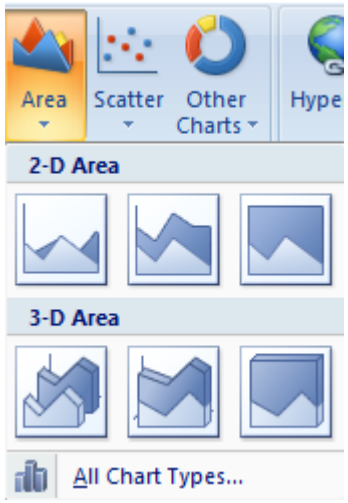


Figure :Area Chart

6) Other chart:-

- Excel offers other chart types, such as Stock, Surface, Doughnut, Bubble, and Radar.
- To locate a menu of all available chart types in newer Excel versions, begin to insert any chart type and click **All Chart Types …**

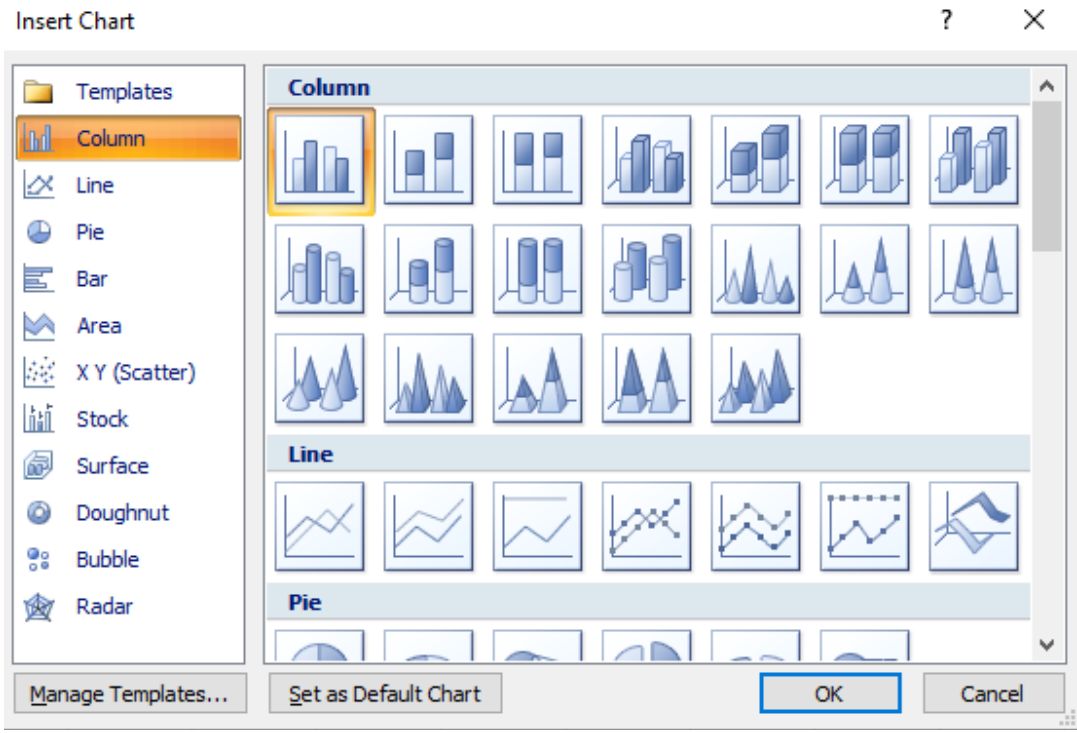


Figure : Other Chart

Steps to create a chart in MS Excel:

1. Open Excel
2. Enter the sample data
3. Select the data you want to represent in graph
4. Click on INSERT tab from the ribbon
5. Click on the Column chart drop down button
6. Select the chart type you want

Example :

hindi	70
English	15
Urdu	5
tamil	7
Marathi	3

Figure : Data

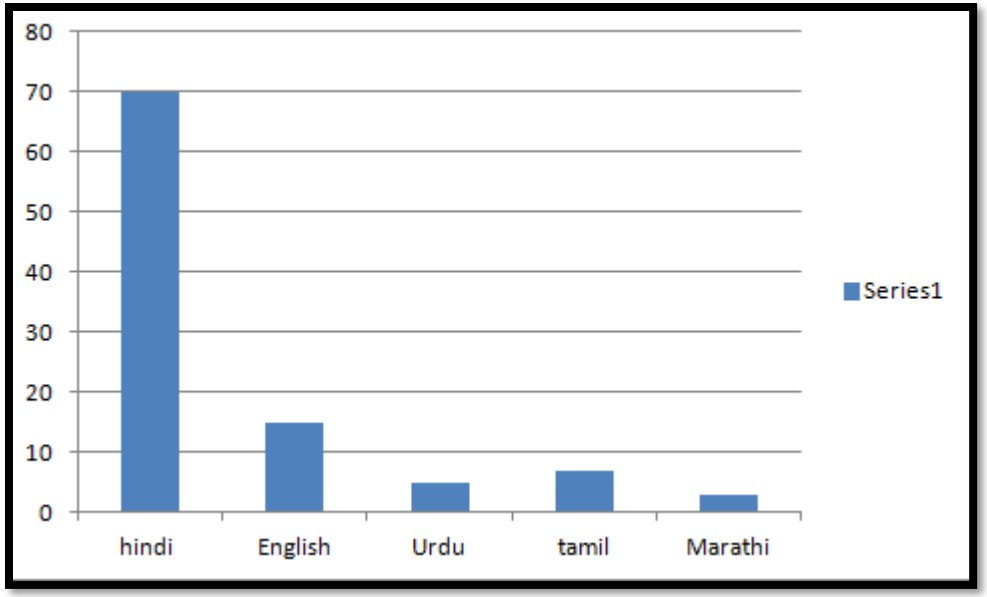


Figure : Column Chart

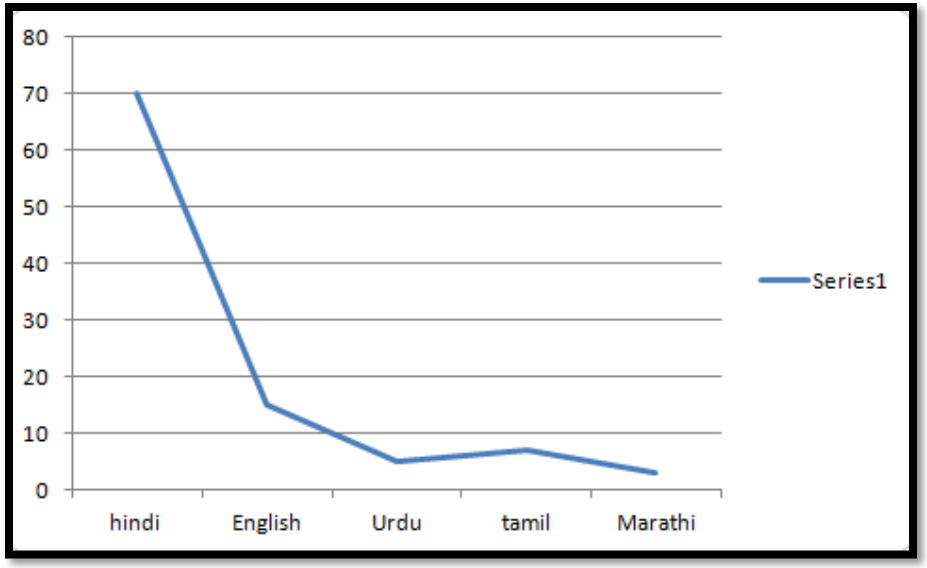


Figure : Line chart

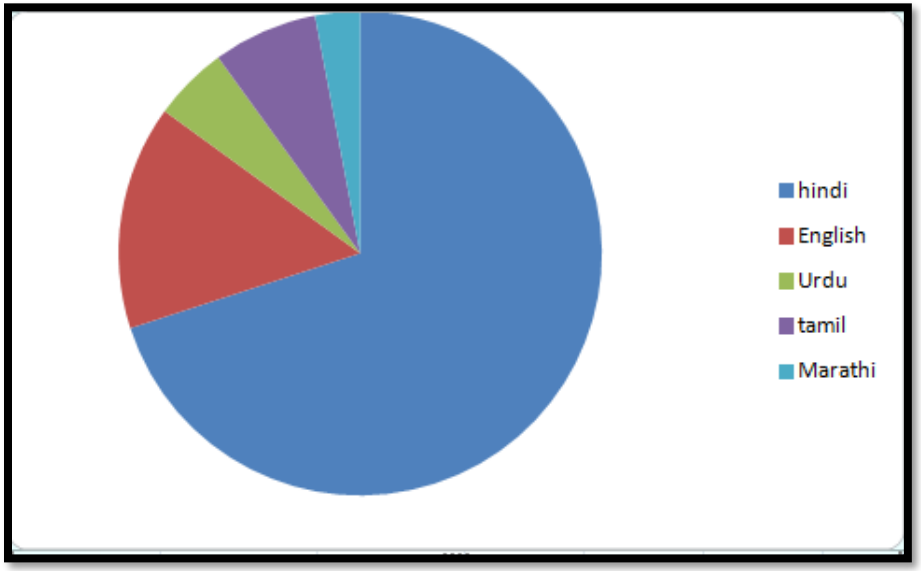


Figure : Pie Chart

Example :

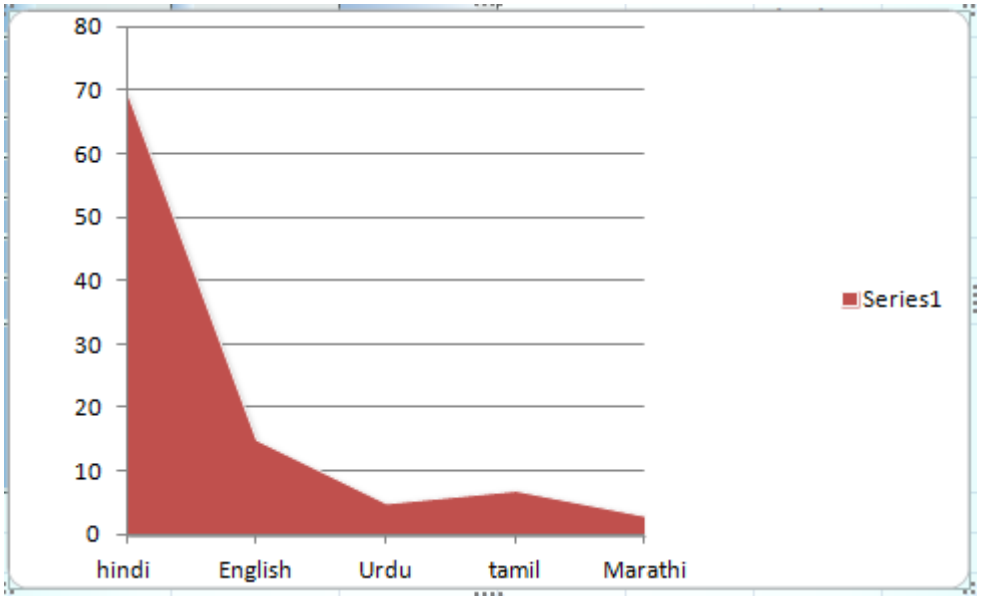


Figure : Area Chart

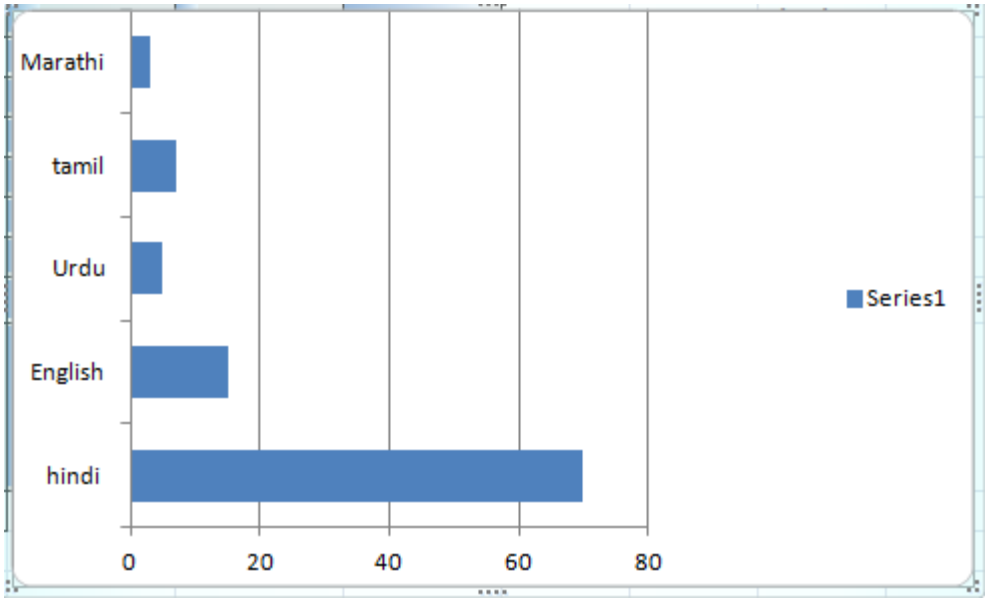
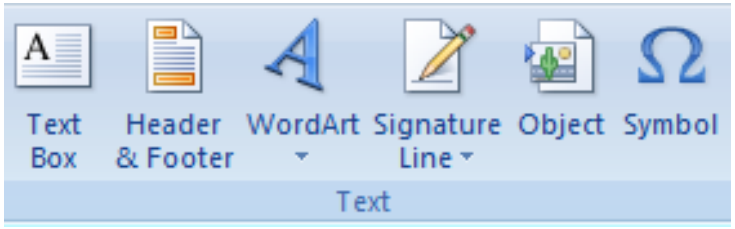


Figure : Bar Chart

Insert Tab 4. Text Group



1. **Text Box**

- This button is used to insert a textbox into the worksheet. Text boxes can be used to highlight an item in a chart or within the worksheet.
- Textboxes can be inserted and/or positioned anywhere within the worksheet page.

2. **Header and Footer :**

- To insert a header and/or footer into a worksheet, click this button.
- The header or footer area of the worksheet will display when this button is clicked. The header or footer can be inserted directly into this area.

3. **Word Art :**

- Click this button to insert a Word Art object into the worksheet or chart. A gallery of Word Art styles will appear.
- Select any of the styles to display the text box. The text box is where the text for the Word Art can be specified.

4. **Signature Line :**

- Use this button to insert a signature line into the worksheet.
- The signature line specifies the individual who is to sign the file in order to access it.

5. **Object:**

- To insert an embedded object, such as documents from other programs, click this button. A dialog box will display from which a list of options can be chosen.
- Click the Create from File option to insert a designated file.

6. **Symbol :**

- This button is used to insert a symbol, such as a copyright symbol, into the worksheet.
- When the button is clicked, a gallery of different symbols will appear

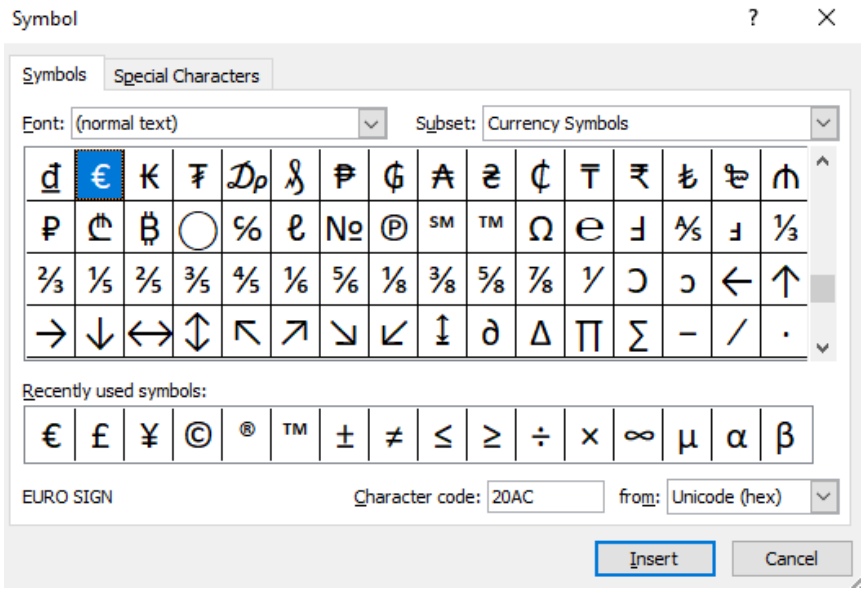


Figure : Symbol

Page Layout Tab

In Page Layout option, we have various commands which we use to prepare the workbook for printing and exporting to PDF format. Through this command, we can adjust the page in the way we want to see after printing.

The Page Layout Tab is divided into the following groups:

1. Themes Group
2. Page Setup Group
3. Scale to Fit Group
4. Sheet Options Group
5. Arrange Group

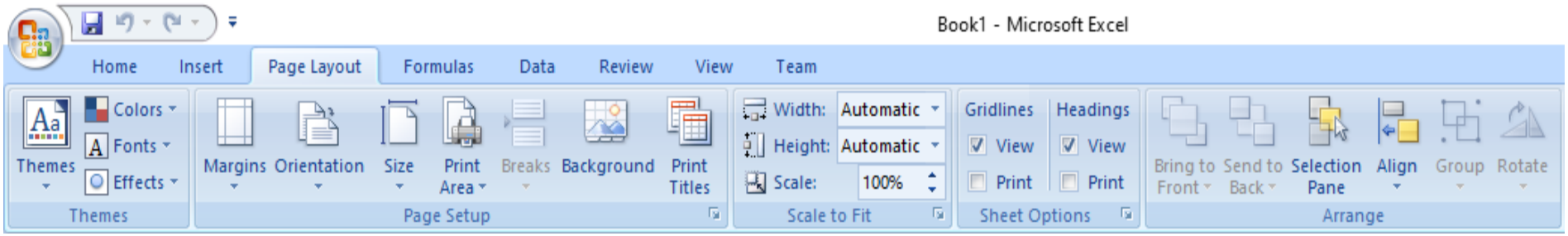
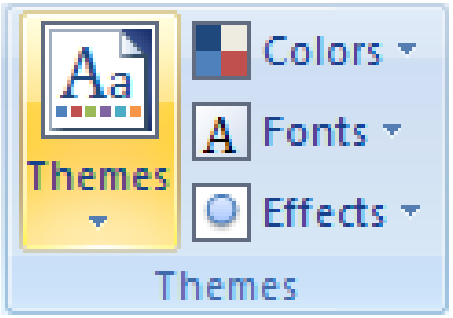


Figure : Page Layout Ribbon

Page Layout 1.Themes Tab



a) Themes: -

- This option is used to change the theme color of workbook by just click of a button.
- Each theme has 12 colors, two fonts (heading and body), SmartArt and the effects for shape.

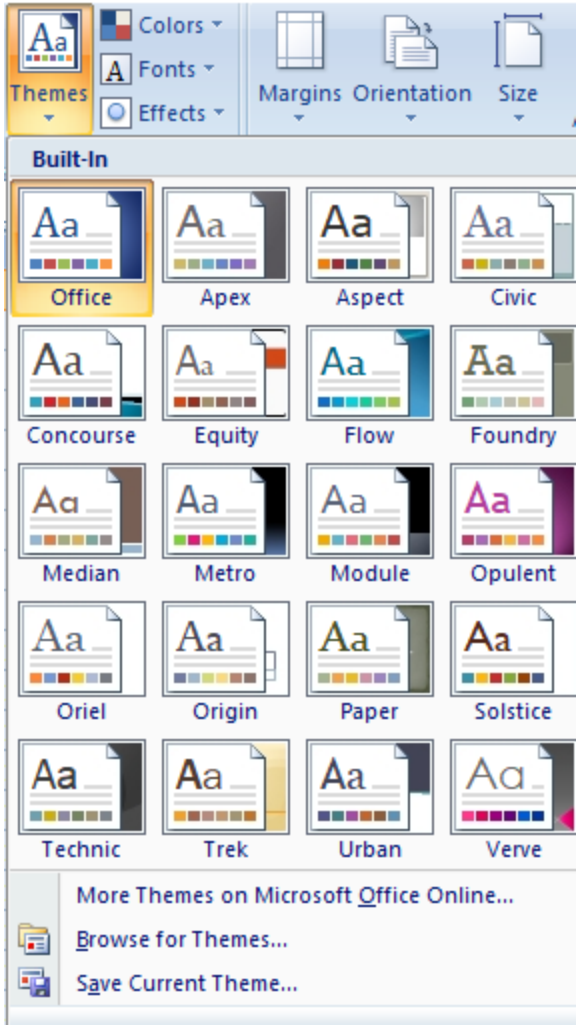
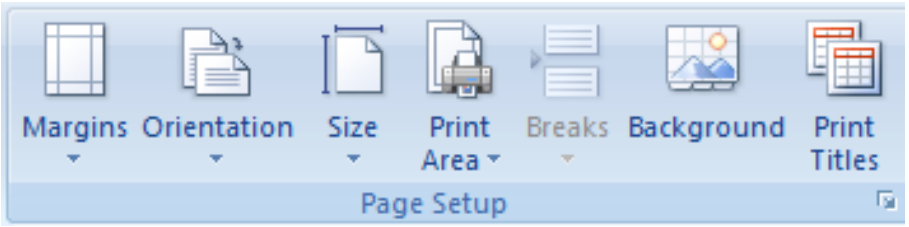


Figure : Themes Group

Page Layout 2.Page Setup Group



Margins:

•The first Page Setup option is Margins, which lets you control the white space in your document.

• We would like to switch margins in the worksheet from Normal to Narrow so we can see more of data when we print this file.

•Go ahead and click on Margins command and then select Narrow from the drop down menu.

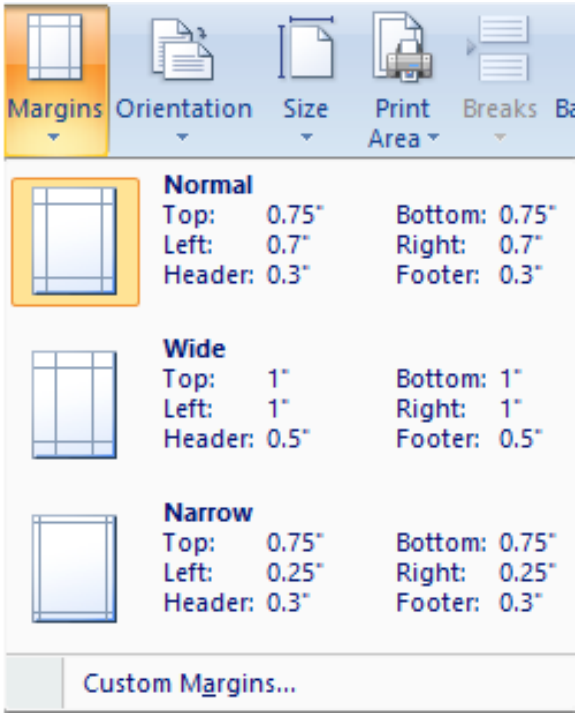


Figure : Margins Tab

Orientation - Drop-Down. Lets you switch between Portrait and Landscape.

Size - Drop-Down. Lets you select from all the different available paper sizes. The More Paper Sizes displays the "Page Setup" dialog box, Page tab.

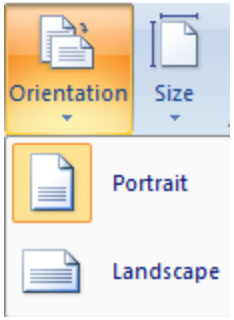


Figure : Orientation

Figure : Size

- **Print Area** - Drop-Down. This drop-down contains the commands: Set Print Area and Clear Print Area.
- The default print area for Excel is ALL of the data. Unless you have set up your pages this can make for a very confusing pile of paper, especially if you have lots of columns.
- Another way is to set the print area. To do this highlight the data you want to print, click on the page layout, print area, set print area.

Name	Maths	Science	Hindi	English	Sanskrit	Total
Aditya	98	76	79	76	53	382
Anita	65	56	81	74	55	331
Anushka	89	94	85	100	69	437
Arun	87	98	78	45	45	353
Krishna	87	100	83	71	57	398
Nisha	67	56	67	94	85	369
Prateek	54	65	80	75	54	328
Ram	98	95	84	98	56	431
Renuka	76	98	82	73	58	387
Rohan	67	92	87	95	67	408
Shesh	78	93	86	96	68	421
Sudha	78	76	53	67	87	361
Sudhir	76	77	78	77	52	360

Figure : Selecting the print area

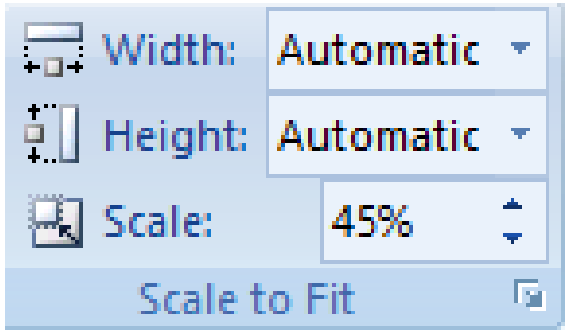
Name	Maths	Science	Hindi	English
Aditya	98	76	79	76
Anita	65	56	81	74
Anushka	89	94	85	100
Arun	87	98	78	45
Krishna	87	100	83	71
Nisha	67	56	67	94
Prateek	54	65	80	75
Ram	98	95	84	98
Renuka	76	98	82	73

Figure : Previewing the print area

- **Breaks** - Drop-Down. This drop-down contains the commands: Insert Page Break, Remove Page Break and Reset All Page Breaks.
- **Background** - Displays the "Sheet Background" dialog box to let you add a background image to the back of a worksheet. This caption changes to 'Delete Background' if an image is assigned to the active worksheet.

Page Layout 3. Scale to Fit Tab

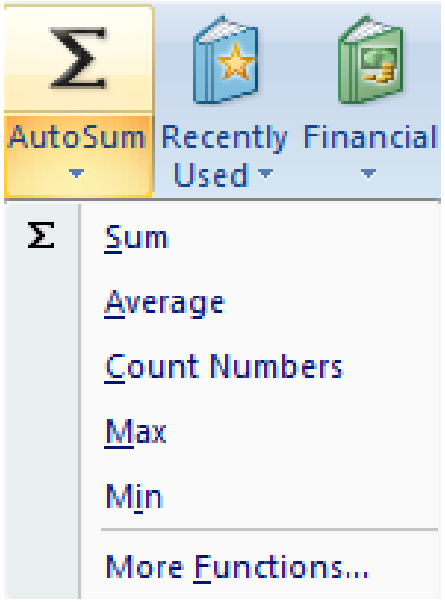
- **Scale to Fit: -**This option helps to fit the page for printing by shrinking or enlarging its size to better fit the pages. We can use Scale to fit to adjust the width and height by describing the scale %age.
- If your worksheet has a lot of columns, you can use the **Scale to Fit** options to reduce the size of the worksheet to better fit the printed page.



Formulas Tab 4.Function Library

Mathematical Function :

To perform basic mathematical operations such as addition, subtraction, or multiplication; combine numbers; and produce numeric results, use the following arithmetic operators.



1. Sum : This Function is used to perform the addition of two or multiple operands.
2. Average : In order to take the average of more than one range using a single function, first start the = AVERAGE function. After adding your first range press "," (comma) and then select the second range of values, end the function with a parenthesis (bracket) and press enter.
3. MIN/MAX

I. MIN - Will return the smallest number found in a set of values.

II. MAX - Will return the highest number found in a set of values.

4. COUNT - Counts the number of cells in a range than contain numbers

Example :

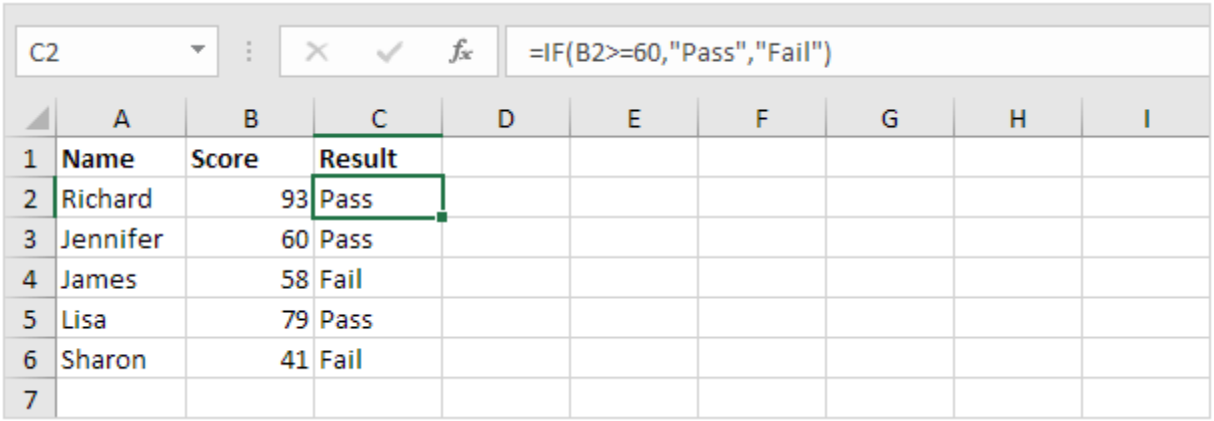
	A	B	C	D	E	F	G
1	Order Number	Date	Customer	Amount	Country	City	Phone
2	1	5/1/2016	Customer1	$125.00	Canada	Ottawa	(555) 555-0001
3	2	5/1/2016	Customer6	$175.00	Canada	Halifax	(555) 555-0006
4	3	5/1/2016	Customer2	$150.00	United States	Washington	(555) 555-0002
5	4	5/2/2016	Customer1	$250.00	Canada	Ottawa	(555) 555-0001
6	5	5/2/2016	Customer1	$215.00	Canada	Ottawa	(555) 555-0001
7	6	5/2/2016	Customer2	$315.00	United States	Washington	(555) 555-0002
8	7	5/2/2016	Customer3	$125.00	United Kingdom	London	(555) 555-0003
9	8	5/2/2016	Customer1	$ 50.00	Canada	Ottawa	(555) 555-0001
10	9	5/2/2016	Customer7	$750.00	United States	New York	(555) 555-0007
11	10	5/2/2016	Customer4	$ 35.00	France	Paris	(555) 555-0004
12	11	5/3/2016	Customer5	$250.00	China	Beijing	(555) 555-0005
13	12	5/3/2016	Customer5	$115.00	China	Beijing	(555) 555-0005
14	13	5/4/2016	Customer4	$175.00	France	Paris	(555) 555-0004
15	14	5/4/2016	Customer5	$125.00	China	Beijing	(555) 555-0005
16	15	5/4/2016	Customer1	$150.00	Canada	Ottawa	(555) 555-0001
17	16	5/4/2016	Customer7	$150.00	United States	New York	(555) 555-0007
18	17	5/4/2016	Customer1	$150.00	Canada	Ottawa	(555) 555-0001
19	18	5/4/2016	Customer1	$250.00	Canada	Ottawa	(555) 555-0001
20	19	5/4/2016	Customer4	$135.00	France	Paris	(555) 555-0004
21	20	5/4/2016	Customer2	$400.00	United States	Washington	(555) 555-0002
22							
23			Sum:	=sum(D2:D21			
24				SUM(**number1**, [number2], ...)			

Sum:	=SUM(D2:D21)
Average:	=AVERAGE(D2:D21)
Max:	=MAX(D2:D21)
Min:	=MIN(D2:D21)
Count:	=COUNT(D2:D21)

Sum:	$4,090.00
Average:	$ 204.50
Max:	$ 750.00
Min:	$ 35.00
Count:	20

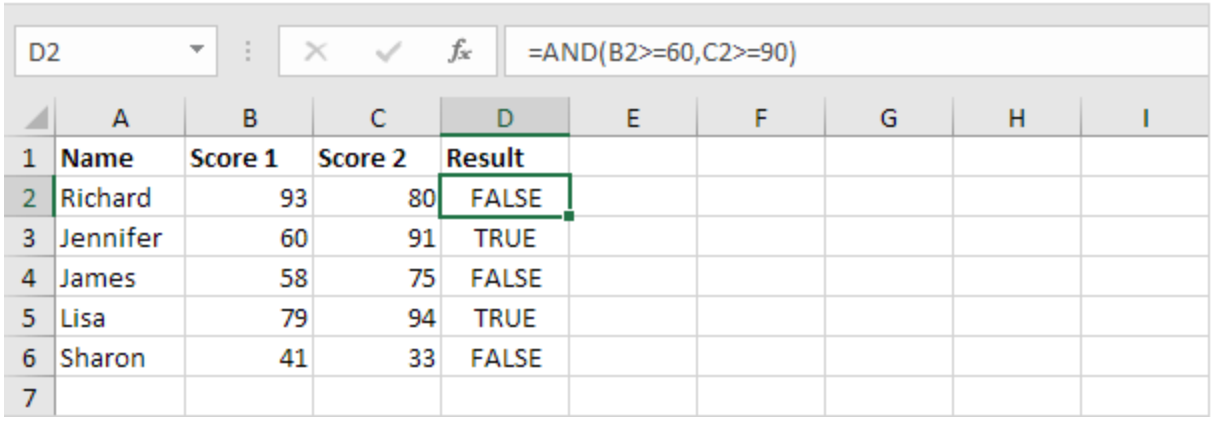
Logical Function

1. If : The IF function checks whether a condition is met, and returns one value if true and another value if false.



	A	B	C	D	E	F	G	H	I
1	**Name**	**Score**	**Result**						
2	Richard	93	Pass						
3	Jennifer	60	Pass						
4	James	58	Fail						
5	Lisa	79	Pass						
6	Sharon	41	Fail						
7									

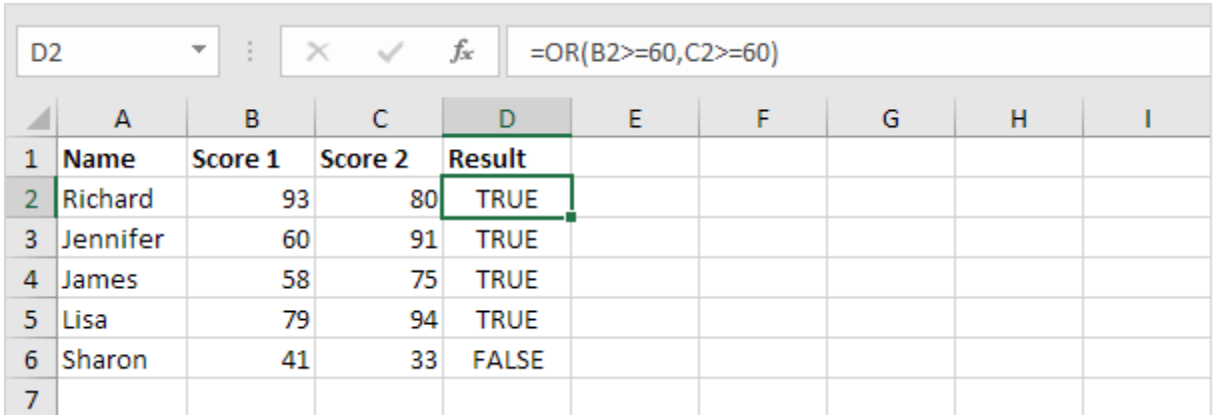
2. And : The AND Function returns TRUE if all conditions are true and returns FALSE if any of the conditions are false.



	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	FALSE					
3	Jennifer	60	91	TRUE					
4	James	58	75	FALSE					
5	Lisa	79	94	TRUE					
6	Sharon	41	33	FALSE					
7									

Logical Function

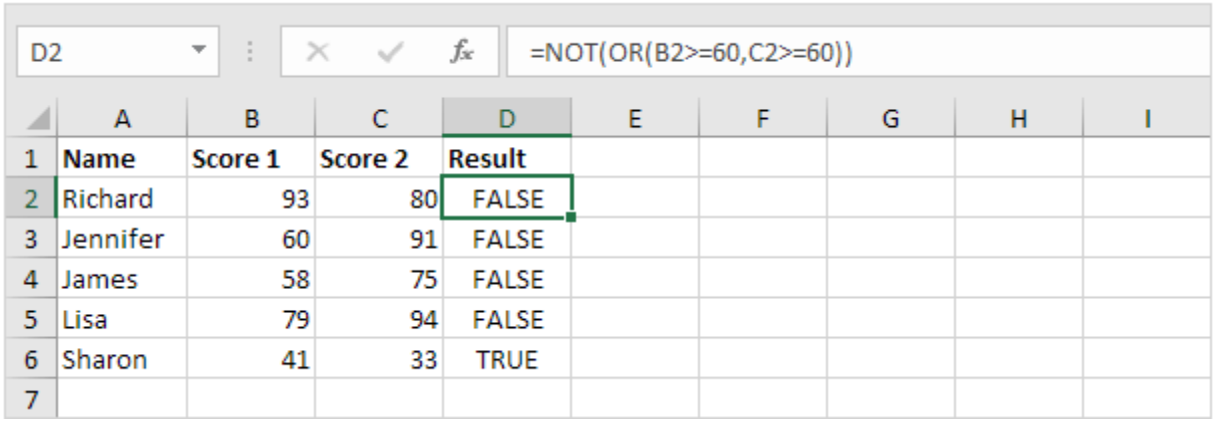
3. Or : The OR function returns TRUE if any of the conditions are TRUE and returns FALSE if all conditions are false.



	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	TRUE					
3	Jennifer	60	91	TRUE					
4	James	58	75	TRUE					
5	Lisa	79	94	TRUE					
6	Sharon	41	33	FALSE					
7									

4. Not :

- The NOT function changes TRUE to FALSE, and FALSE to TRUE.
- For example, take a look at the NOT function in cell D2 below.

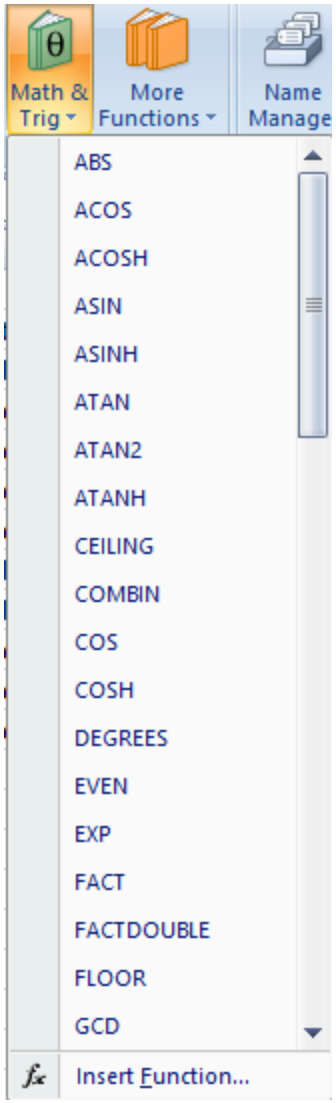


	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	FALSE					
3	Jennifer	60	91	FALSE					
4	James	58	75	FALSE					
5	Lisa	79	94	FALSE					
6	Sharon	41	33	TRUE					
7									

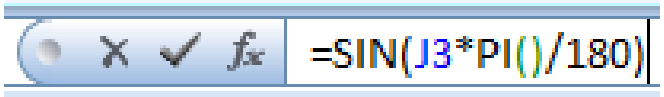
Math and Trig Functions in ms Excel :

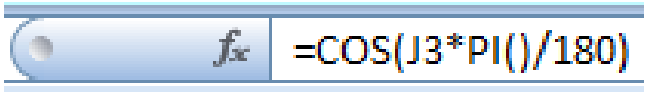
1. **SIN/COS/TAN function :** The Excel function returns the sine/cose/tane of angle given in radians.

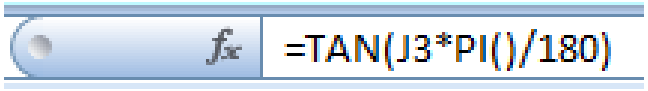
- To supply an angle to SIN/COS/TAN in degrees, multiply the angle by PI()/180 or use the Radians function to convert to radians.



S.No.	Angle	Sin	Cos	Tan
1	60	0.866025404	0.5	1.732051



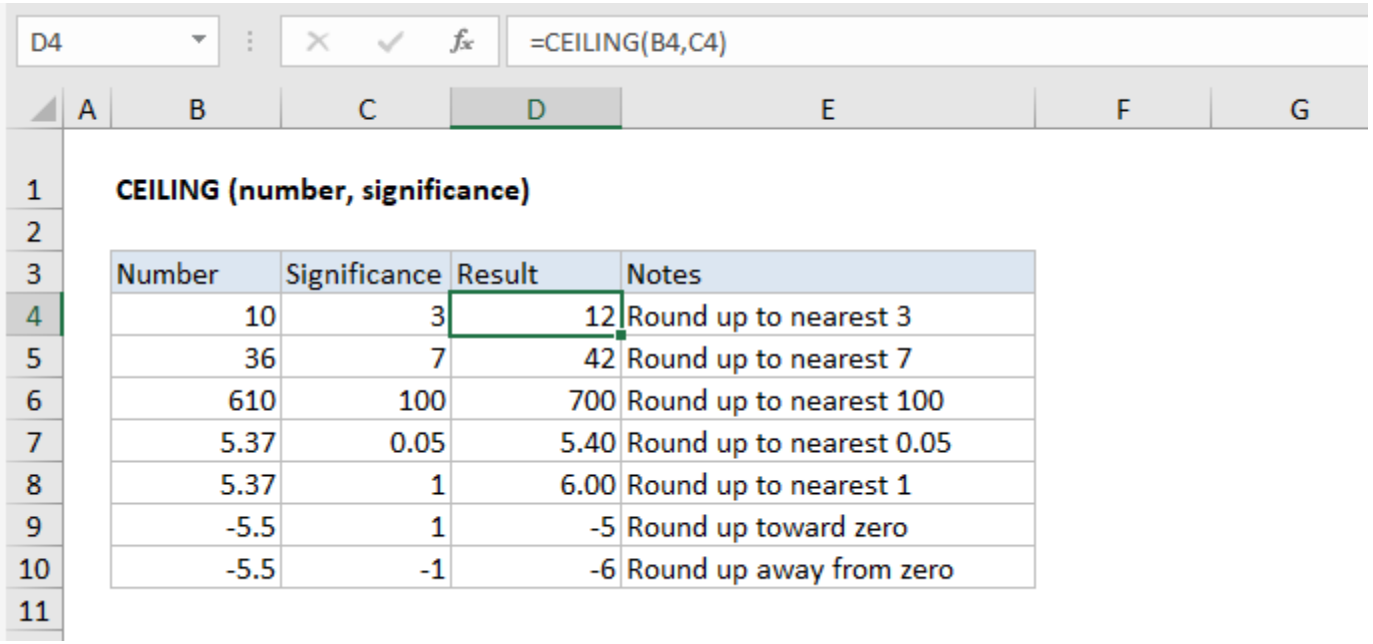




2. Ceiling and Floor Function :

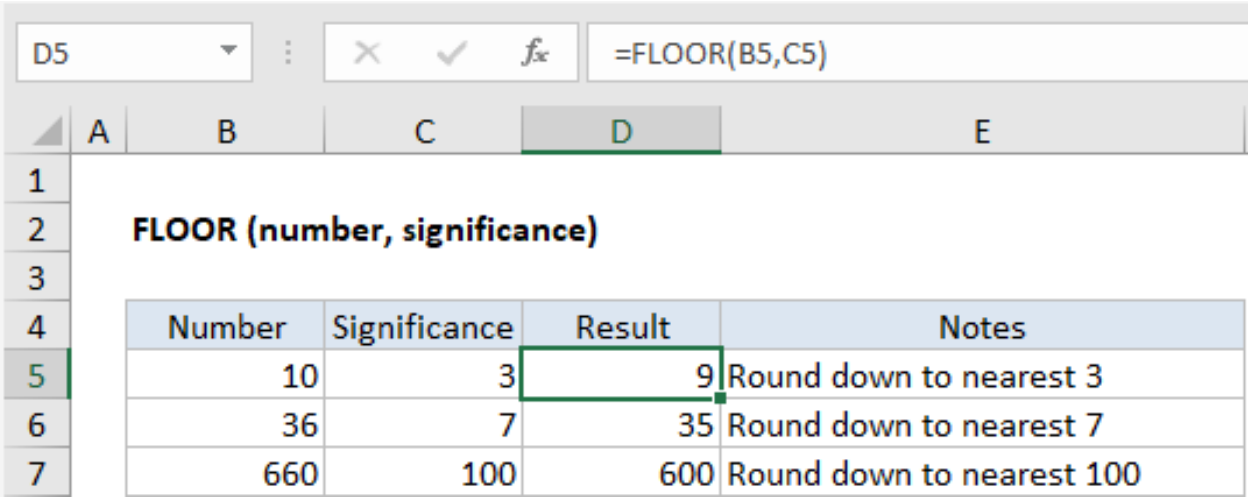
Ceiling Function : The Excel CEILING function is categorized under Math and Trigonometry functions. The function will return a number that is rounded up to a supplied number that is away from zero to the nearest multiple of a given number.

- **Formula :**
- =CEILING(number, significance)



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

- **Floor Function :** The Microsoft Excel FLOOR function returns a number rounded down based on a multiple of significance.
- The FLOOR function is a built-in function in Excel that is categorized as a Math/Trig Function.
- **Formula :**
- FLOOR(number, significance)



3. **MOD function :**

- The MOD function is categorized under Excel Math and Trigonometry functions. The function helps find a remainder after a number (dividend) is divided by another number (divisor).
- **Formula**
- =MOD(number,divisor)

4. **FACT function :** The Microsoft Excel FACT function returns the factorial of a number.

- **Formula**
- =FACT(number)

5. **LOG function :** Returns the logarithm of a number to the base you specify.

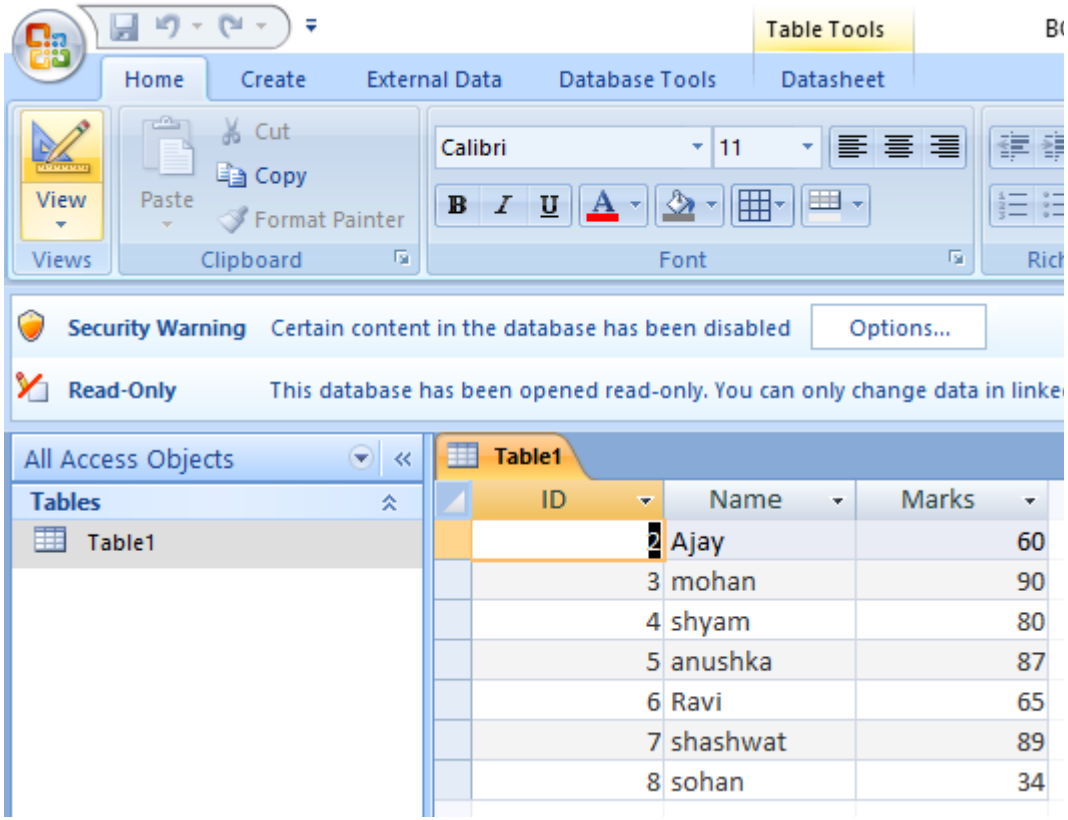
- **Formula :**
- =LOG(number, [base])

DATA TAB 1. GET EXTERNAL DATA FROM MS ACCESS

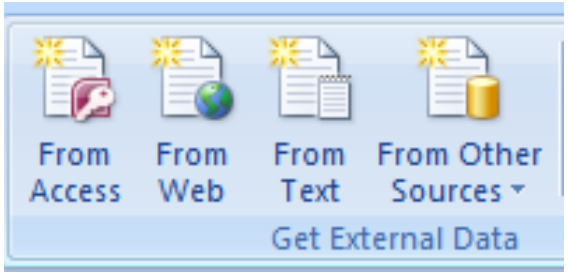
It is mainly used import data from a simple external database powered by Microsoft Access database. We will import the products table into excel.

STEPS :

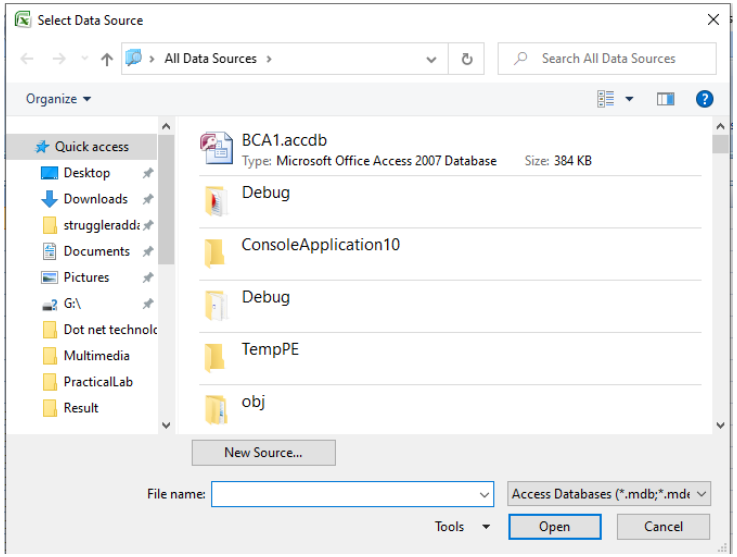
1. Create a record in Ms access data base.



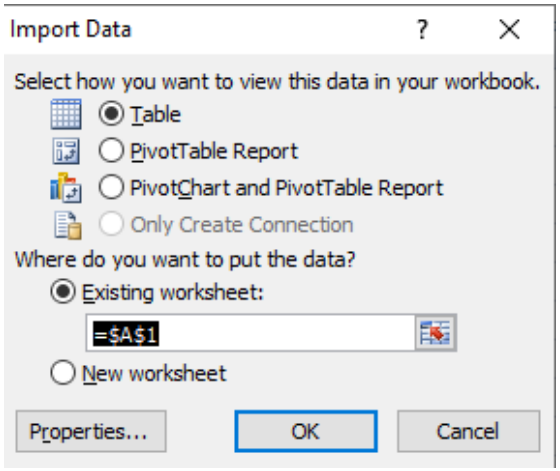
2. Open a new workbook
3. Click on the Data tab
4. Click on from Access button as shown below



5. The following dialog box will appear.



- Browse to the database that you was create in ms access and
- Click on Open button



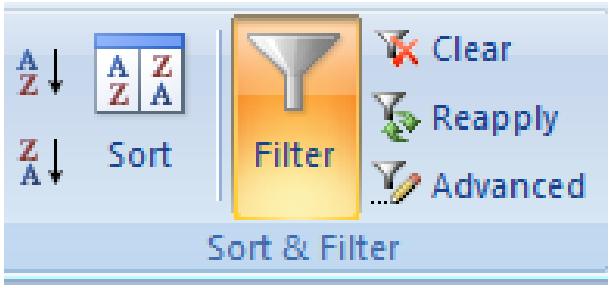
- Click on OK button
- You will get the following data

	A	B	C
1	ID	Name	Marks
2	2	Ajay	60
3	3	mohan	90
4	4	shyam	80
5	5	anushka	87
6	6	Ravi	65
7	7	shashwat	89
8	8	sohan	34

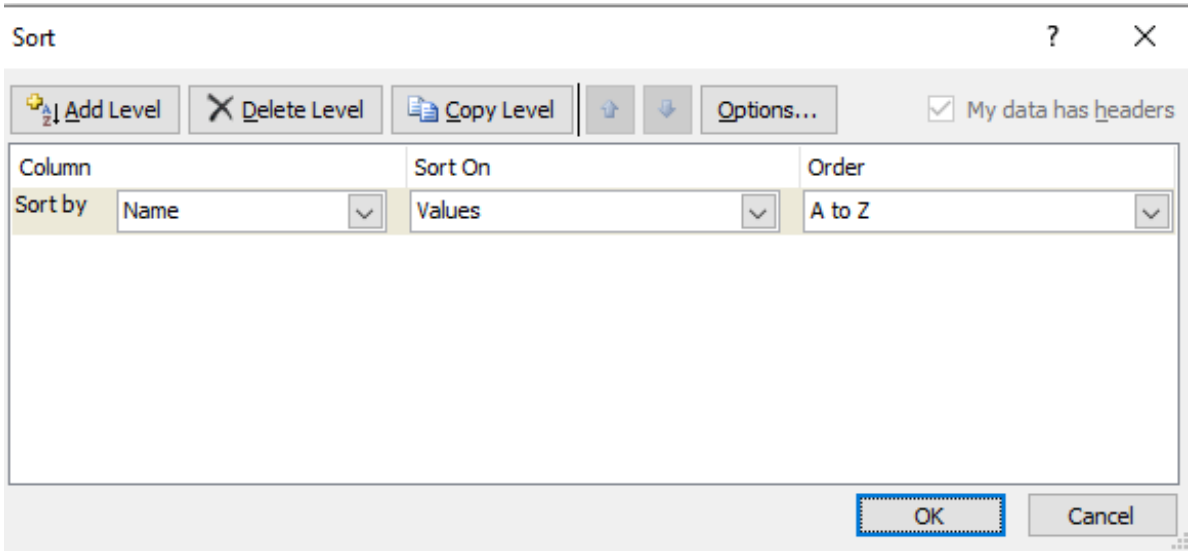
DATA TAB 2. SORT AND FILTER OPTION

Sort data :

- For a quick sort, click the arrow below the Sort & Filtering icon in the Editing group of the Home ribbon and choose the Sort A to Z / Z to A icons in the Sort & Filter group of the Data ribbon.
- In Excel , these are labeled Sort Smallest to Largest and vice versa.



- For a more complex sort, go to the Data ribbon, click the arrow below the Sort & Filter icon in the sort and filter group and choose Custom Sort.



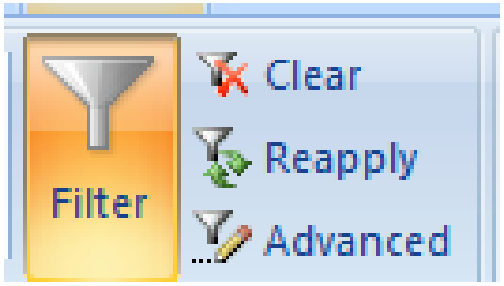
- Under Column, choose the first column that you would like to sort. If you want to sort multiple columns, click the Add Level button.
- Under Sort On, choose how you would like to sort.
- Under Order, choose A to Z (ascending), Z to A (descending), or Custom List.
- Click OK to perform the sort.

Filter data :

- Go to the Data ribbon, and then click Filter in the Sort & Filter group.
- Check the box next to the criteria you wish to match and click OK. Click on the arrow next to another heading to further filter the data.

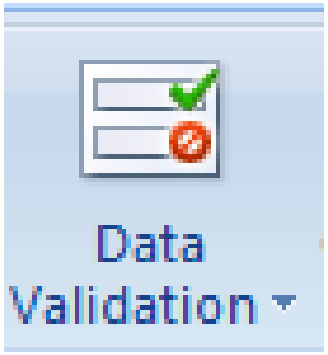
To clear the filter, choose one of these options:

- Go to the Data ribbon and click the Clear icon in the Sort & Filter group.

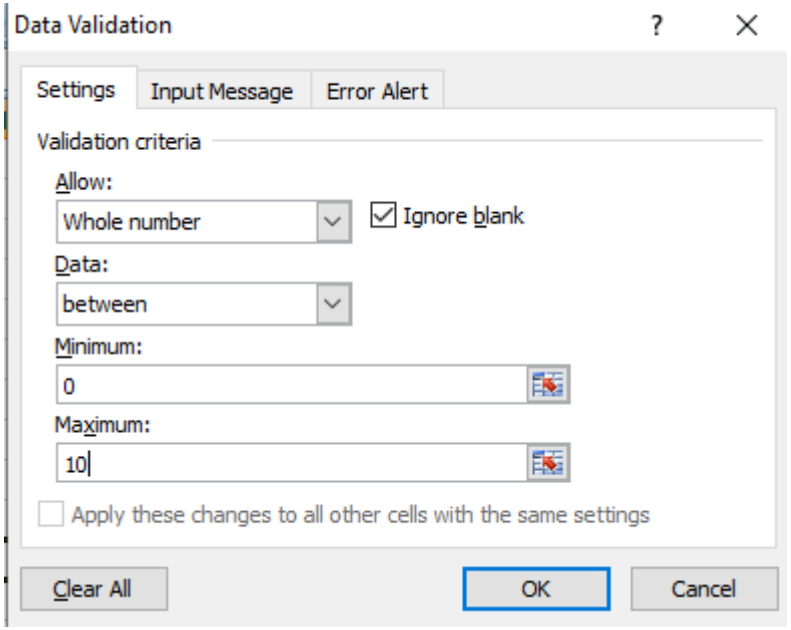


DATA TAB 3. DATA VALIDATION

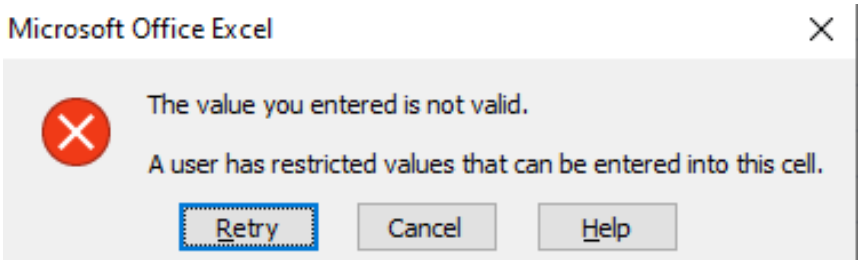
- MS Excel data validation feature allows you to set up certain rules that dictate what can be entered into a cell. For example, you may want to limit data entry in a particular cell to whole numbers between 0 and 10. If the user makes an invalid entry, you can display a custom message as shown below.
- Click on the data tab and then click on the validation.



•The dialog box appears set the validation as your need.



•Then if you entered the value that is not under the set range it will give you a message .

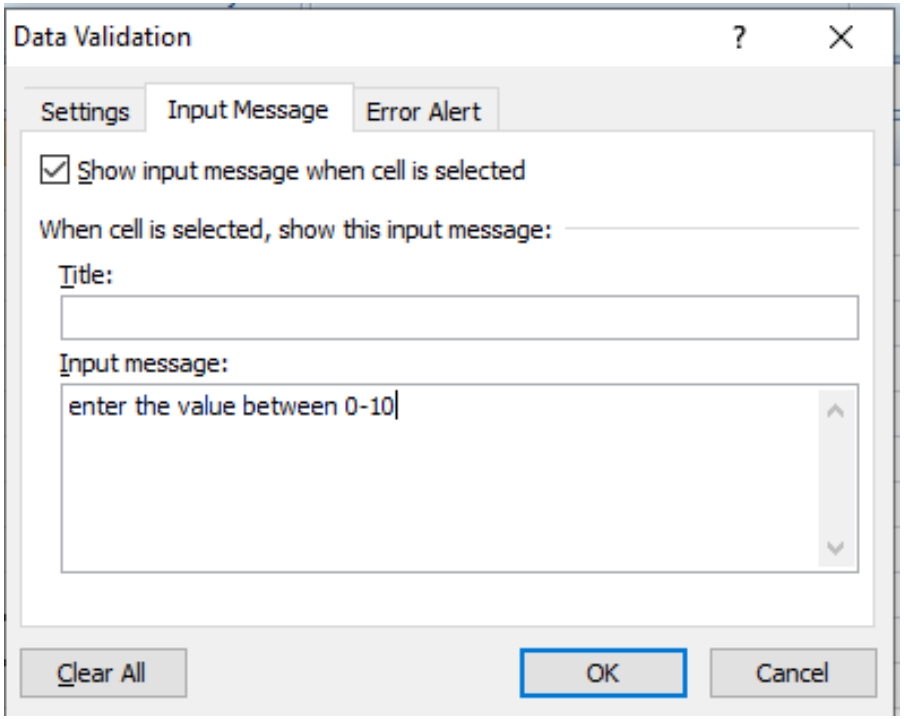


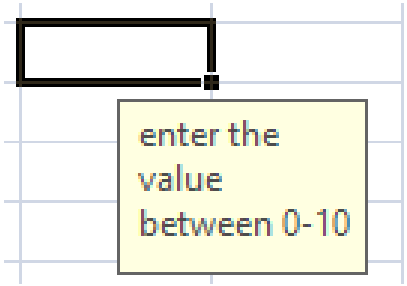
Settings Tab :

- **Any Value** − Selecting this option removes any existing data validation.
- **Whole Number** − The user must enter a whole number.For example, you can specify that the entry must be a whole number greater than or equal to 50.
- **Decimal** − The user must enter a number. For example, you can specify that the entry must be greater than or equal to 10 and less than or equal to 20.
- **List** − The user must choose from a list of entries you provide. You will create drop-down list with this validation. You have to give input ranges then those values will appear in the drop-down.
- **Date** − The user must enter a date. You specify a valid date range from choices in the Data drop-down list. For example, you can specify that the entered data must be greater than or equal to January 1, 2013, and less than or equal to December 31, 2013.
- **Time** − The user must enter a time. You specify a valid time range from choices in the Data drop-down list. For example, you can specify that the entered data must be later than 12:00 p.m.
- **Text Length** − The length of the data (number of characters) is limited. You specify a valid length by using the Data drop-down list. For example, you can specify that the length of the entered data be 1 (a single alphanumeric character).
- **Custom** − To use this option, you must supply a logical formula that determines the validity of the user's entry (a logical formula returns either TRUE or FALSE).

Input Message Tab

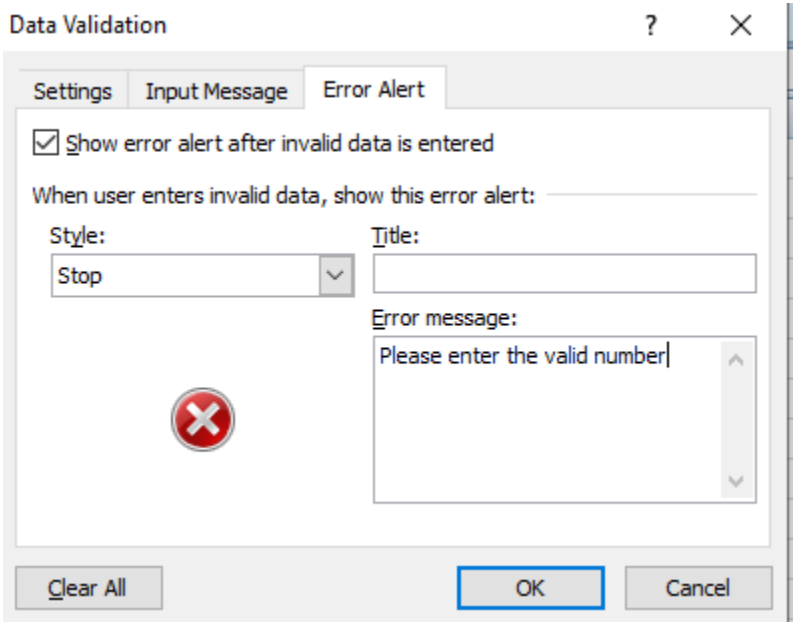
You can set the input help message with this tab. Fill the title and Input message of the Input message tab and the input message will appear when the cell is selected.

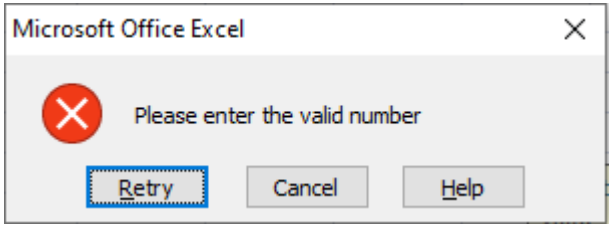




Error Alert Tab:

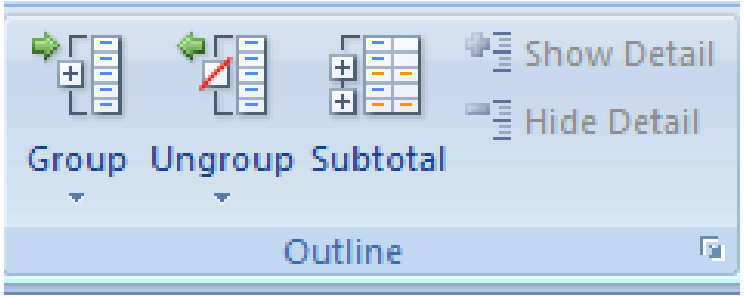
You can specify an error message with this tab. Fill the title and error message. Select the style of the error as stop, warning or Information as per you need.





Data tab 4.Group and Ungroup

- Group is a tool in excel with which we can group two or more rows or columns together, it helps to represent the group of rows or columns together, also it gives us an option of minimize and maximize the group.
- minimizing the group hides those rows or columns grouped together and maximizing shows the group, Group option is available in the data tab under the outline section.

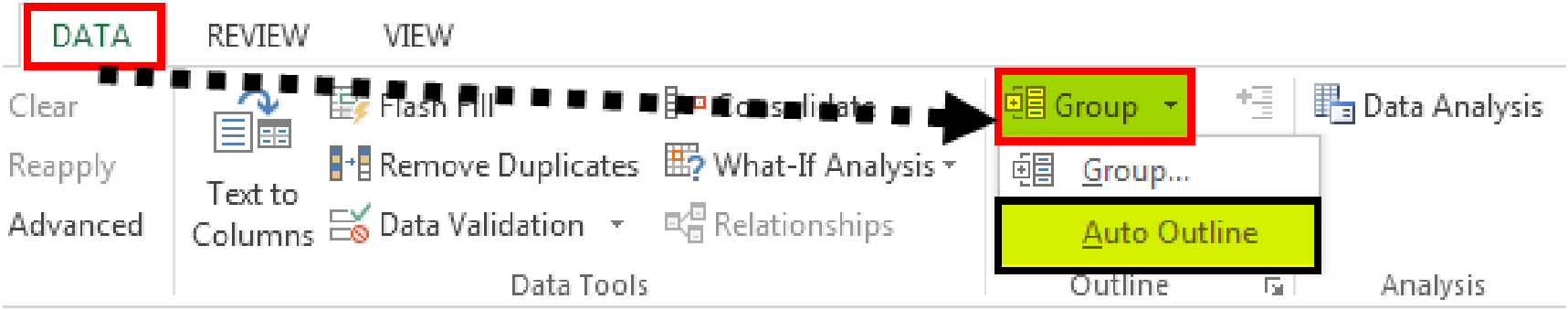


STEPS:

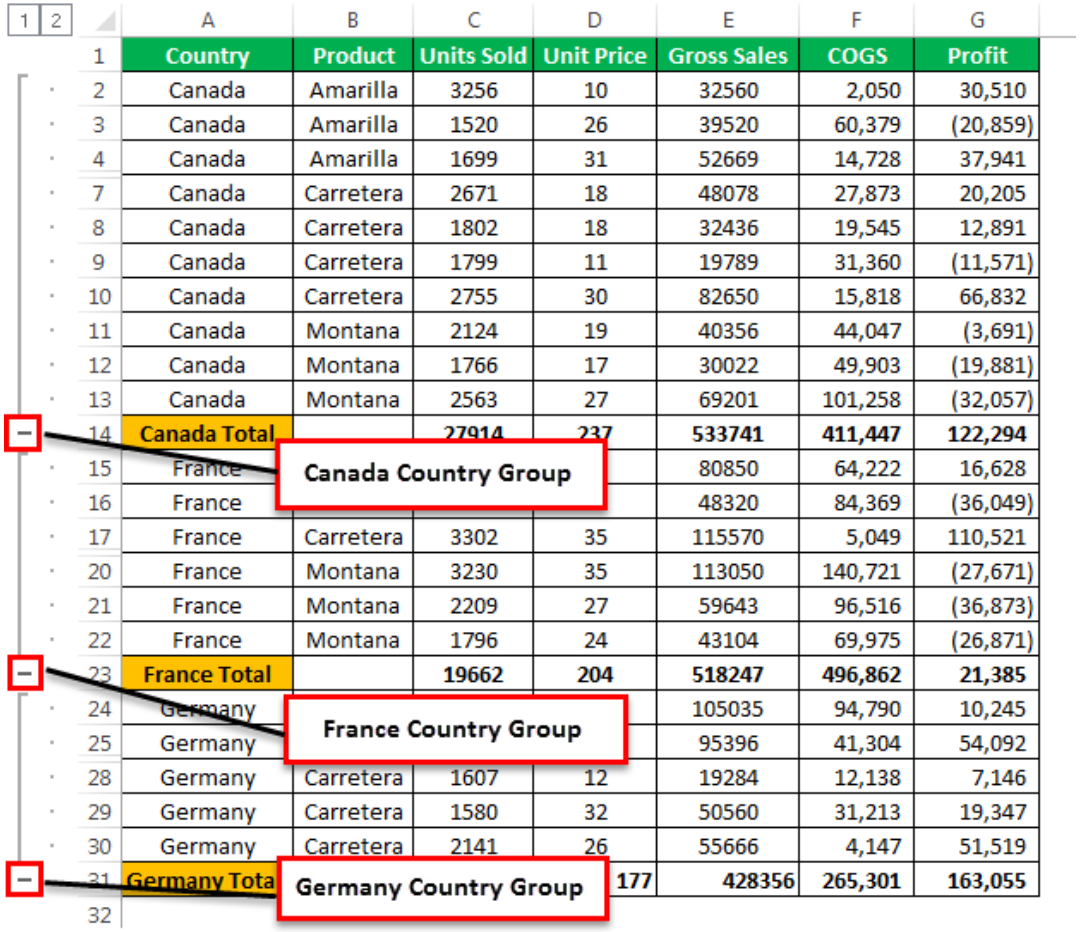
- Enter the records which you want to group.

	A	B	C	D	E	F	G
1	Country	Product	Units Sold	Unit Price	Gross Sales	COGS	Profit
2	Canada	Amarilla	3256	10	32560	2,050	30,510
3	Canada	Amarilla	1520	26	39520	60,379	(20,859)
4	Canada	Amarilla	1699	31	52669	14,728	37,941
5	Canada	Amarilla	3467	12	41604	35,172	6,432
6	Canada	Amarilla	2492	18	44856	9,315	35,541
7	Canada	Carretera	2671	18	48078	27,873	20,205
8	Canada	Carretera	1802	18	32436	19,545	12,891
9	Canada	Carretera	1799	11	19789	31,360	(11,571)
10	Canada	Carretera	2755	30	82650	15,818	66,832
11	Canada	Montana	2124	19	40356	44,047	(3,691)
12	Canada	Montana	1766	17	30022	49,903	(19,881)
13	Canada	Montana	2563	27	69201	101,258	(32,057)
14	France	Amarilla	2450	33	80850	64,222	16,628
15	France	Amarilla	2416	20	48320	84,369	(36,049)
16	France	Carretera	3302	35	115570	5,049	110,521
17	France	Carretera	1512	20	30240	29,272	968
18	France	Carretera	2747	10	27470	6,739	20,731
19	France	Montana	3230	35	113050	140,721	(27,671)
20	France	Montana	2209	27	59643	96,516	(36,873)
21	France	Montana	1796	24	43104	69,975	(26,871)
22	Germany	Amarilla	3001	35	105035	94,790	10,245
23	Germany	Amarilla	3407	28	95396	41,304	54,092
24	Germany	Amarilla	2666	23	61318	48,731	12,587
25	Germany	Carretera	1957	21	41097	32,979	8,118
26	Germany	Carretera	1607	12	19284	12,138	7,146
27	Germany	Carretera	1580	32	50560	31,213	19,347
28	Germany	Carretera	2141	26	55666	4,147	51,519
29							

- Select the rows or columns you wish to group.
- On the Data tab, in the Outline group, click the Group command.



- Then you can see the groups as follows



	Country	Product	Units Sold	Unit Price	Gross Sales	COGS	Profit
2	Canada	Amarilla	3256	10	32560	2,050	30,510
3	Canada	Amarilla	1520	26	39520	60,379	(20,859)
4	Canada	Amarilla	1699	31	52669	14,728	37,941
7	Canada	Carretera	2671	18	48078	27,873	20,205
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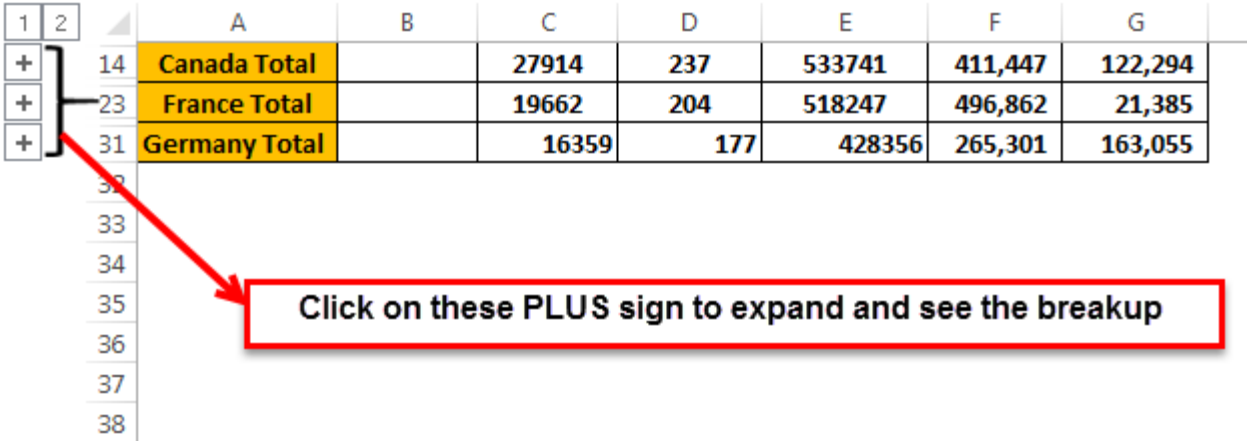
9	Canada	Carretera	1799	11	19789	31,360	(11,571)
10	Canada	Carretera	2755	30	82650	15,818	66,832
11	Canada	Montana	2124	19	40356	44,047	(3,691)
12	Canada	Montana	1766	17	30022	49,903	(19,881)
13	Canada	Montana	2563	27	69201	101,258	(32,057)
14	**Canada Total**		**27914**	**237**	**533741**	**411,447**	**122,294**
15	France				80850	64,222	16,628
16	France				48320	84,369	(36,049)
17	France	Carretera	3302	35	115570	5,049	110,521
20	France	Montana	3230	35	113050	140,721	(27,671)
21	France	Montana	2209	27	59643	96,516	(36,873)
22	France	Montana	1796	24	43104	69,975	(26,871)
23	**France Total**		**19662**	**204**	**518247**	**496,862**	**21,385**
24	Germany				105035	94,790	10,245
25	Germany				95396	41,304	54,092
28	Germany	Carretera	1607	12	19284	12,138	7,146
29	Germany	Carretera	1580	32	50560	31,213	19,347
30	Germany	Carretera	2141	26	55666	4,147	51,519
31	**Germany Total**			**177**	**428356**	**265,301**	**163,055**
32							



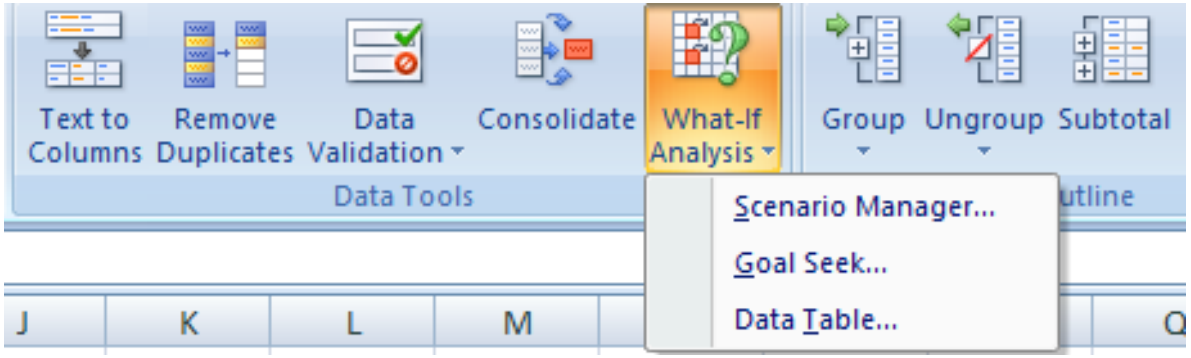
14	**Canada Total**		**27914**	**237**	**533741**	**411,447**	**122,294**
23	**France Total**		**19662**	**204**	**518247**	**496,862**	**21,385**
31	**Germany Total**		**16359**	**177**	**428356**	**265,301**	**163,055**

UNGROUP THE DATA :

- To ungroup data in a list in Excel:
- Select the rows or columns you wish to ungroup.
- On the Data tab, in the Outline group, click the Ungroup command.

DATA TAB 5. GOAL SEEK

- **Goal Seek** is Excel's built-in What-If Analysis tool that shows how one value in a formula impacts another.
- More precisely, it determines what value you should enter in an input cell to get the desired result in a formula cell.



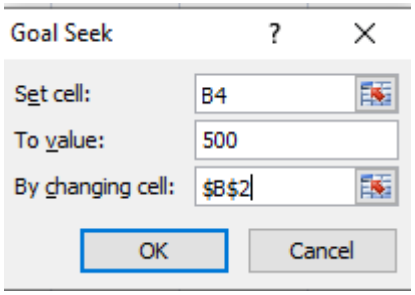
Steps :

- On the **Data** tab, in the **Data Tools** group, click **What-If Analysis**, and then click **Goal Seek**.
- In the **Set cell** box, enter the reference for the cell that contains the formula that you want to resolve.
- In the **To value** box, type the formula result that you want.
- In the **By changing cell** box, enter the reference for the cell that contains the value that you want to adjust.

Step 1 :

	A	B
1	Principle	1500
2	Rate	4
3	Time	5
4	Interest	300

Step 2 : Click on what-if-analysis and then click on goal seek following dialog box will appear

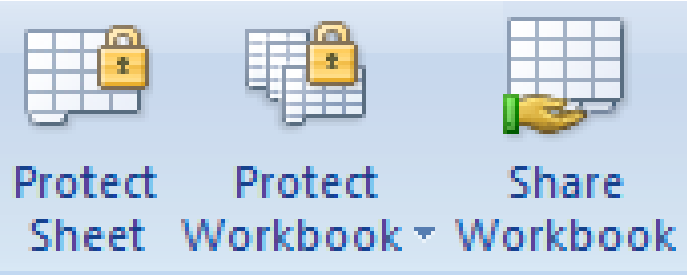


Step 3 :

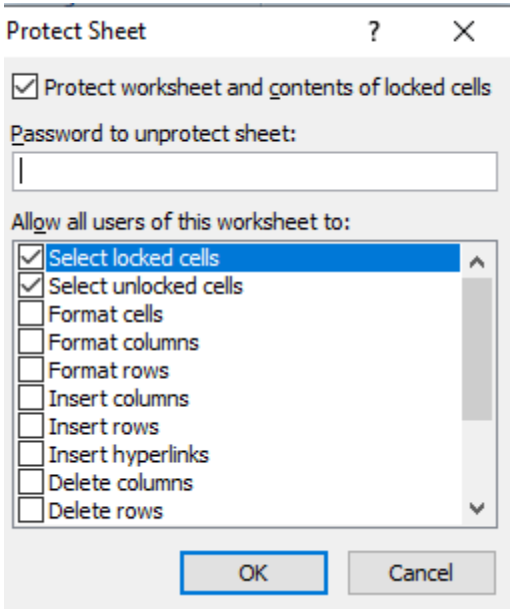
	A	B
1	Principle	1500
2	Rate	6.666667
3	Time	5
4	Interest	500

REVIEW TAB 1. PROTECT SHEET

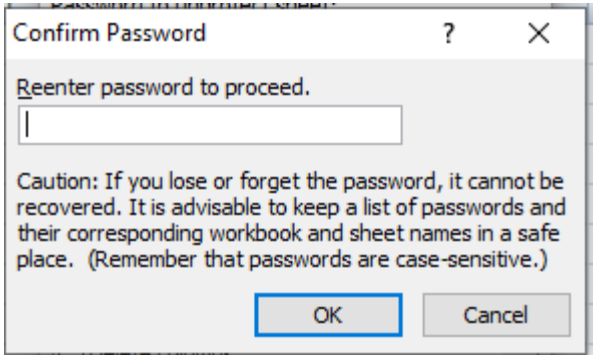
- To prevent other users from viewing hidden worksheets, adding, moving, deleting, or hiding worksheets, and renaming worksheets, you can protect the structure of your Excel worksheet with a password.
- To protect the structure of your worksheet, follow these steps:
- Click **Review** > **Protect Worksheet**.



- Enter a password in the **Password** box.



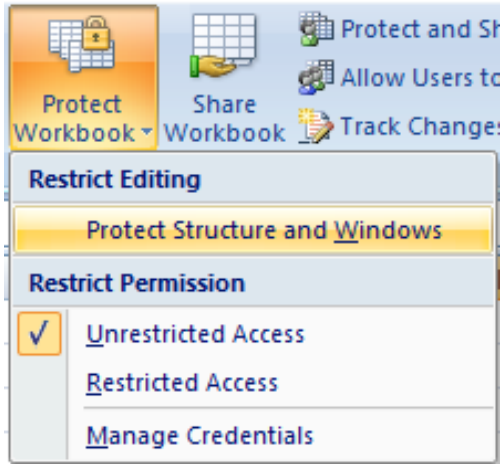
- Select **OK**, re-enter the password to confirm it, and then select **OK** again.



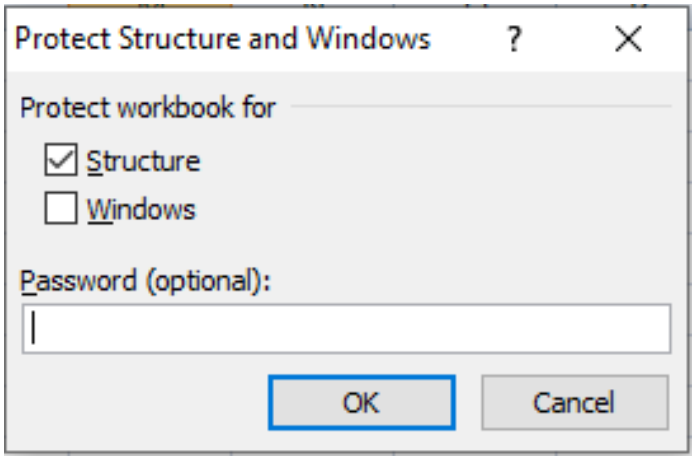
REVIEW TAB 2.PROTECT WORKBOOK

- To prevent other users from viewing hidden worksheets, adding, moving, deleting, or hiding worksheets, and renaming worksheets, you can protect the structure of your Excel workbook with a password.
- To protect the structure of your workbook, follow these steps:

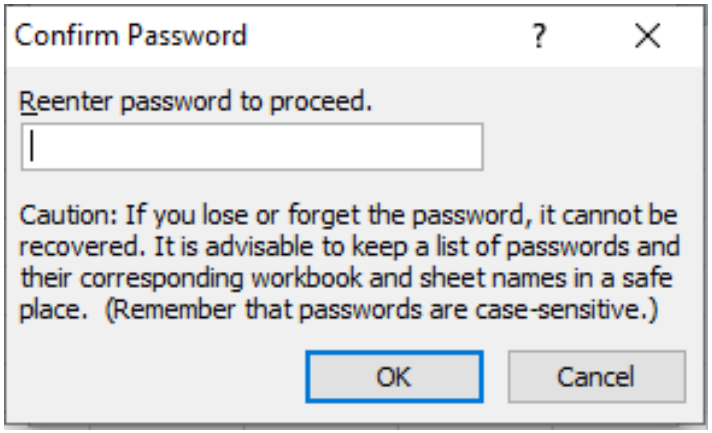
1. Click **Review** > **Protect Workbook>Protect Structure and windows**

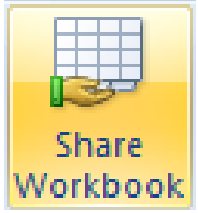


2. Enter a password in the **Password** box.



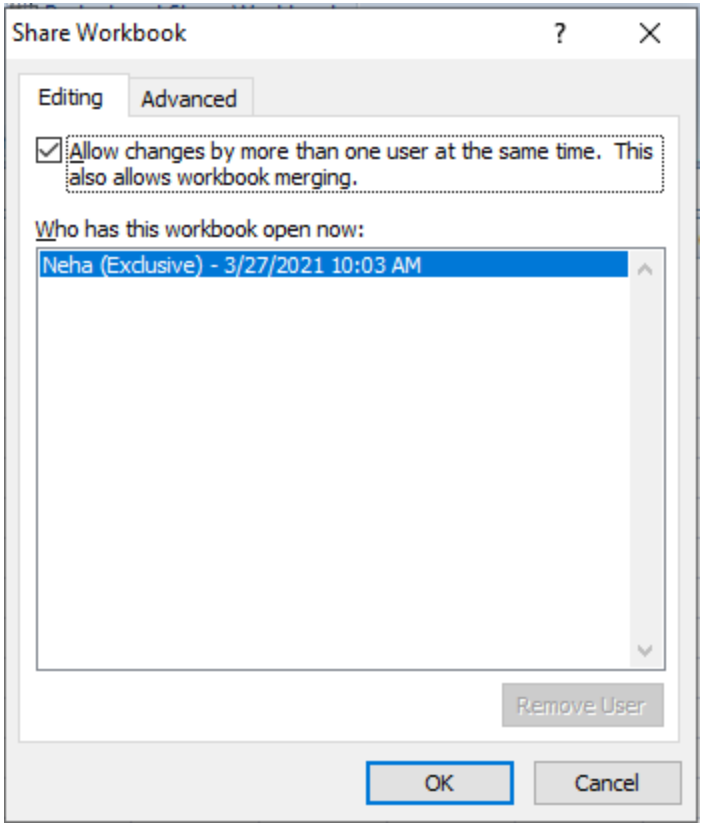
3. Select **OK**, re-enter the password to confirm it, and then select **OK** again.



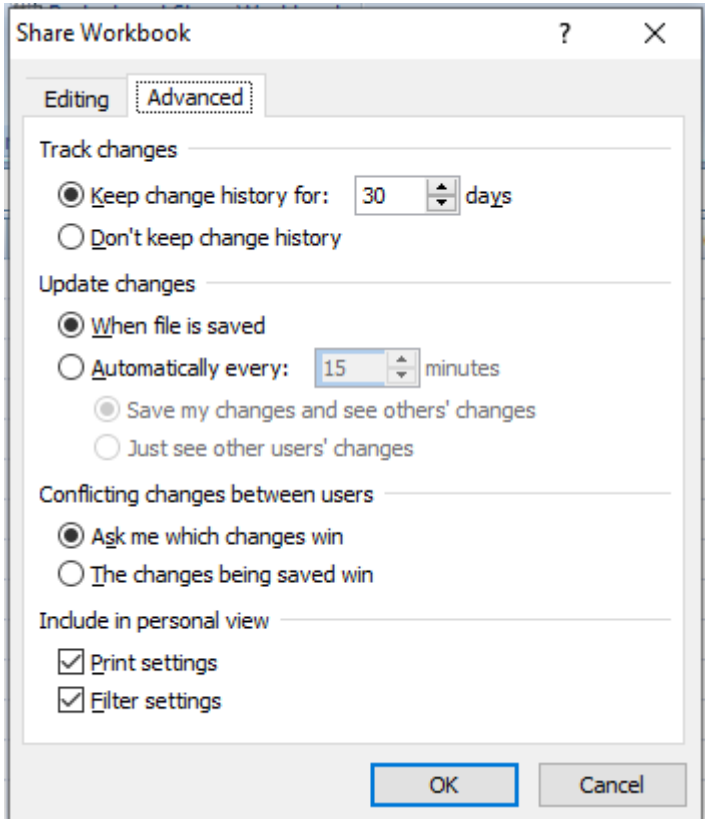


REVIEW TAB 3. SHARE WORKBOOK

- Click the Review tab.
- Click Share Workbook in the Changes group.
- The Share Workbook dialog box will appear, and you select the Allow changes by more than one user at the same time. This also allows workbook merging check box on the Editing tab.



- Optionally, switch to the Advanced tab, select the desired settings for tracking changes, and click OK.



- Save you Excel file to a network location where other people can access it (the fastest way is by using the Ctrl + S shortcut).

VIEW TAB

- Page Breaks : View a preview of where page will break when this document is printed
- Page layout : View the document as it will appears on the printed page.
- Freezing panes : keep a portion of the sheet visible while the rest of the sheet scrolls.
- Split : Split the window into multiple resizable panes containing views of your worksheet.

  You can use this features to view multiple distant parts of your worksheet at once.
- Hide : Hide the current window so that it can not be seen.

  to bring the window back , click on the unhide button.