#### **EXCEL**

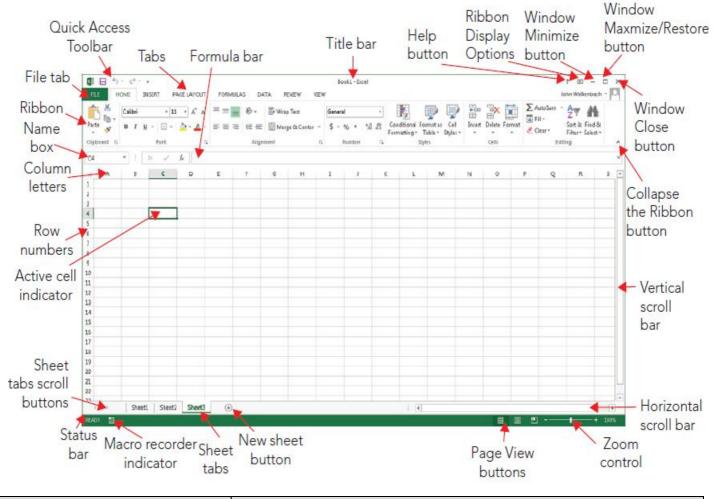
Excel is spreadsheet software that comes with powerful tools and features which enable us to manipulate, analyze, calculate data in desired manner.

Spreadsheet – It is a large sheet containing rows and columns arranged in the form of matrix.

# **HOW TO OPEN MS. EXCEL**

- 1) Method 1
  - a. Click on start button
  - b. Click on all programs
  - c. Click on MS office
  - d. Click on excel
- 2) Method 2
  - a. Click on start
  - b. Click on Run
  - c. Type excel on Name box
  - d. Click on ok button
- 3) Method 3
  - a. Right click on blank space of desktop or any folder
  - b. Go to new
  - c. Click on MS excel worksheet
  - d. Type the name of file
  - e. Press enter
  - f. Right click on it and open it.

# INTRODUCTION TO EXCEL SCREEN



Name Description

-

Active cell indicator	this dark outline indicates the currently active cell (one of the 17,179,869,184 cells on	
	each worksheet).	
Collapse the Ribbon Button	Click this button to temporarily hide the Ribbon. Click it again to Make the Ribbon remain visible.	
Column letters	Letters range from A to XFD — one for each of the 16,384 columns in the worksheet. Yo	
	can click a column heading to select an entire column of cells or drag a column border to change its width.	
File tab	Click this button to open Backstage view, which contains many options for working with	
	your document (including printing) and setting Excel options.	
Formula bar	When you enter information or formulas into a cell, it appears in this bar.	
Help button	Click this button to display the Excel Help system window.	
Horizontal scroll bar	Use this tool to scroll the sheet horizontally.	
Macro recorder indicator	Click to start recording a VBA macro. The icon changes while your actions are being	
Wadi directi del maratti	recorded. Click again to stop recording. Name box This box displays the active cell	
	address or the name of the selected cell, range, or object.]	
New sheet button	Add a new worksheet by clicking the New sheet button (which is displayed after the las	
TVCVV SHEET BUTTON	sheet tab).	
Page View buttons	Click these buttons to change the way the worksheet is displayed.	
Ouick Access Toolbar	This customizable toolbar holds commonly used commands. The Quick Access Toolbar	
Zuick / locoss i obibui	always visible, regardless of which tab is selected.	
Ribbon	This is the main location for Excel commands. Clicking an item in the tab list changes the	
Kibboli	Ribbon that is displayed. Ribbon Display Options A drop-down control that offers three	
	options related to displaying the Ribbon.	
Row numbers	Numbers range from 1 to 1,048,576 — one for each row in the worksheet. You can click	
Now Harriber 3	a row number to select an entire row of cells.	
Sheet tabs	Each of these notebook-like tabs represents a different sheet in the workbook. A	
Sheet tabs	workbook can have any number of sheets, and each sheet has its name displayed in a	
	sheet tab. Sheet tab scroll buttons Use these buttons to scroll the sheet tabs to display	
	tabs that aren't visible. You can also right-click to get a list of sheets.	
Status bar	This bar displays various messages, as well as the status of the Num Lock, Caps Lock, an	
Status bai	Scroll Lock keys on your keyboard. It also shows summary information about the range	
	of cells selected. Right-click the status bar to change the information displayed. Tabs	
	Click these tabs to display different Ribbon commands, similar to a menu.	
Title bar	This displays the name of the program and the name of the current workbook. It also by	
Title bui	default holds the Quick Access Toolbar (on the left) and some control buttons that you	
	can use to modify the window (on the right).	
Vertical scroll bar	Use this to scroll the sheet vertically.	
Window Close button	Click this button to close the active workbook window.	
Window Glose Button Window Maximize/Restore button	Click this button to increase the workbook window's size to fi II the entire screen. If the	
WITHOUT WIGHTINGS / NOSTOLO BULLOTT	window is already maximized, clicking this button returns Excel's window to its prior	
	size so that it no longer fills the entire screen.	
Window Minimize button	Click this button to minimize the workbook window. The window displays as an icon in	
VIII GOW WIII III III ZO DULLOIT	the Windows taskbar.	
Zoom control	Use this to zoom your worksheet in and out.	
200m outil of	Ose this to zoon your worksheet mand out.	

#### **RIBBON TABS**

The commands available in the Ribbon vary, depending upon which tab is selected. The Ribbon is arranged into groups of related commands. Here's a quick overview of Excel's tabs:

- Home: You'll probably spend most of your time with the Home tab selected. This tab contains the basic Clipboard commands, formatting commands, style commands, and commands to insert and delete rows or columns, plus an assortment of worksheet editing commands.
- Insert: Select this tab when you need to insert something in a worksheet a table, a diagram, a chart, a symbol, and so on.
- Page Layout: This tab contains commands that affect the overall appearance of your worksheet, including some settings that deal with printing.
- Formulas: Use this tab to insert a formula, name a cell or a range, access the formula auditing tools, or control how Excel performs calculations.
- Data: Excel's data-related commands are on this tab, including data validation commands.
- Review: This tab contains tools to check spelling, translate words, add comments, or protect sheets.
- View: The View tab contains commands that control various aspects of how a sheet is viewed. Some commands on this tab are also available in the status bar.

# **WORKBOOK AND WORKSHEET**

The file of excel is known as work Book. Every Pages of workbook is called worksheet. By default a workbook has three sheets named as Sheet1, Sheet2, and Sheet3. The file extension of workbook is .xlsx. A work sheet contains 16384 columns (named as A, B....AA, AB.....XFD) and 1048567 Rows (Named as 1, 2, 3......)

Note – The file extension of earlier version from 2007 is .xls

# **ABOUT CELLS**

Excel stores all the information in the cells. A cell contains 32767 characters on it. Before going through data entering in cell, it is ensure that you have knowledge of data types that can be stored in a cell.

A cell contains three types of data

- 1) Text
- 2) Number
- 3) Formulas

Note- A worksheet contains charts, Shapes etc.

#### **NAVIGATION THROUGH WORKSHEET**

Key	Action
Up Arrow	Moves the active cell up one row
Down Arrow	Moves the active cell down one row
Left Arrow or Shift+Tab	Moves the active cell one column to the left
Right Arrow or Tab	Moves the active cell one column to the right
Page Up	Moves the active cell up one screen
Page Down	Moves the active cell down one screen
Alt+Page Down	Moves the active cell right one screen
Alt+Page Up	Moves the active cell left one screen
Ctrl+Backspace	Scrolls the screen so that the active cell is visible
Ctrl+End	Moves the active cell to the intersection of the row with the lowermost entry (highest row number) on the worksheet and the column with the rightmost entry (highest column letter) on the worksheet
Up Arrow	Scrolls the screen up one row (active cell does not change)
Down Arrow	Scrolls the screen down one row (active cell does not change)
Left Arrow	Scrolls the screen left one column (active cell does not change)
Right Arrow	Scrolls the screen right one column (active cell does not change

# **WORKING ON CELLS**

- Entering Data into cells
  - a. Place the cell pointer in the desired cell.
  - b. Type the information the cell
- Editing Data into cells
  - a. Place the cell pointer in the desired cell.
  - b. Double Click on the cell or Press F2 Button
  - c. And edit the information
- Deleting data of a cell
  - a. Place the cell pointer in the desired cell
  - b. Press delete button
- Selecting Cells
  - a. Click on the a cell and Drag over the cells
  - b. Place the cell pointer on the desirer cell and hold the shift key and use arrow key s to select the cells
- Copying and moving cells data

- a. Select the cell or group of cells (range)
- b. Press ctrl +c to copy the cells or press ctrl+x to move the data.
- c. Select cells where the data is going to be copied or moved.
- d. Press ctrl+v
- Drag and Drop method of copying and moving data.
  - a. Select the cell or group of cells(Range)
  - b. Move the mouse pointer on the border of the selection
  - c. Hold Ctrl button if we want to copy the data, if you want to move the data then don't hold he ctrl Bottom.
  - d. And click the left button of the mouse and move the mouse pointer to the onother location of the spread sheet.

#### FORMATTING OF CELLS

- Formatting using font group
  - a. Select the Cells whose formatting is to be formatted
    - i. Click on the font face list box and select desired font to change the font face of cell data.
    - ii. Click on the size button to increase or decrease the cells data.

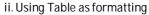


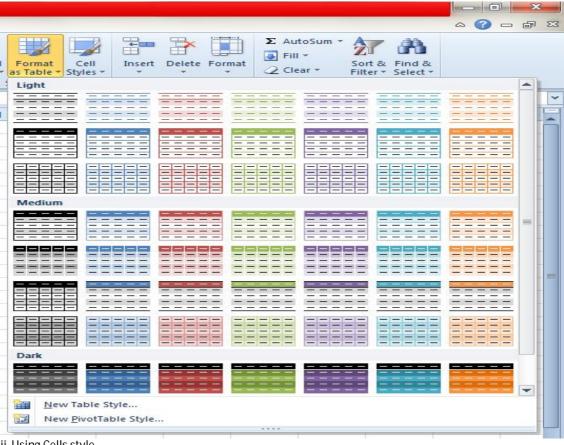
iii. Click Increase font size button to increase the size of increase of the font

iv. Click decrease font size button to increase the size of increase of the font size.

- v. Click Bold button to bold the font.
- vi. Click Italic button to Italic the text.
- vii. Click under line button to under line the text.
- viii. Click the Border button to Giveborder to the cells.
- ix. Click fill cells button to fill the cell
- x. Click font color button to change the font of the text.
- xi. Formatting using Formate painter
  - Select the cells which formate is to be copied.
  - Click on fromate painter button on the clip board group in the Home tab.
  - Click the cell which formate is to be formated.
- Formatting using Style Group
  - 1. Using Conditional formatting
    - i. Conditional formatting enables us to change the formatting according the conditions.
      - There are Five types of conditional formatting
        - a. **Highlight Cell Rules:** Examples include highlighting cells that are greater than aparticular value, between two values, contain specific text string, contain a date, or are duplicated.
          - i. **Greater than ten**: Values greater than ten are highlighted with a differentbackground color. This rule is just one of many numeric-value-related rules thatyou can apply.
          - ii. **Above average**: Values that are higher than the average value are highlighted.
          - iii. **Duplicate values:** Values that appear in the range more than once are highlighted.
          - iv. **Words that contain X:** If the cell contains X (upper- or lowercase), the cell ishighlighted.
          - v. **Data bars:** Each cell displays a horizontal bar, the length of which is proportionalto its value.
        - b. **Top Bottom Rules:** Examples include highlighting the top ten items, the items in The bottom 20%, and items that are above average.
        - c. Data Bars: Applies graphic bars directly in the cells, proportional to the cell's value
        - d. Color Scales: Applies background color, proportional to the cell's value
        - e. **Icon Sets:** Displays icons directly in the cells. The icons depend on the cell's value.
        - f. **New Rule:** Enables you to specify other conditional formatting rules, includingrules based on a logical formula
        - g. Clear Rules: Deletes all the conditional formatting rules from the selected cells
        - Manage Rules: Displays the Conditional Formatting Rules Manager dialog box, inwhich you create new conditional formatting rules, edit rules, or delete rules.

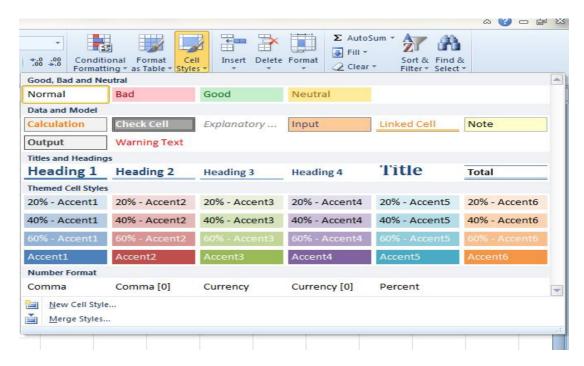






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#### iii. Using Cells style



#### iv. Alignments of data on cells

- On the Home tab, in the Alignment group, do one or more of the following:
- To change the vertical alignment of cell contents, click Top Align 🗐, Middle Align Bottom Align
- To change the horizontal alignment of cell contents, click Align Text Left =, Center Align Text Right =
- To change the indentation of cell contents, click Decrease Indent or Increase Indent

🚡 Wrap Text

Merge & Center ▼

**\*\* \*** 

Alignment

₽₽**₽** 

or

or

To wrap the text in a cell, click Wrap Text.

To use additional text alignment options, click the Dialog Box Launcher leave to Alignment, and then on the Alignment tab of the Format Cells dialog box, select the options that you want. For example, to justify the text in a cell, on the Alignment tab, click the drop-down box under Horizontal, and then click Justify.

# **WORKING ON LAYOUT OF WORKSHEET**

- Inserting of cell, rows, sheet, column
  - Insert a cell
    - i. Select the cell or the range
    - ii. On the Home tab, in the Cells group, click the arrow next to Insert, and then click Insert Cells.
    - iii. In the Insert dialog box, click the direction in which you want to shift the surrounding cells.
  - Insert rows on a worksheet
    - i. On the Home tab, in the Cells group, click the arrow next to Insert, and then click Insert Sheet Rows.
  - Insert columns on a worksheet
    - i. then click Insert Sheet Columns.
- Delete cells, rows, or columns
  - On the Home tab, in the Cells group, click the arrow next to Delete, and then do one of the following:
    - To delete selected cells, click Delete Cells.
    - To delete selected rows, click Delete Sheet Rows.
    - To delete selected columns, click Delete Sheet Columns.
    - Tip You can right-click a selection of cells, click Delete, and then click the option that you want. You can also right-click a selection of rows or columns and then click Delete.
    - If you are deleting a cell or a range (range: Two or more cells on a sheet. The cells in a range can be adjacent or nonadjacent.) of cells, in the Delete dialog box, click Shift cells left, Shift cells up, Entire row, or Entire

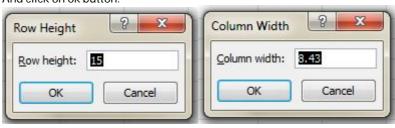
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Column Width...

- If you are deleting rows or columns, other rows or columns automatically shift up or to the left.
- Change the width of a Column and Height of Row
  - Place the cursor, where you want to Change the width of a Column and Height of Row.
  - b. Goto insert tab, in cells group.
  - Row Height. Click Row Height to change height of row and Click

Column widht to chnage the width of column.

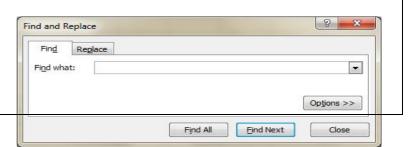
- d. Write no on Row height or Colum width text box.
- And click on ok button.



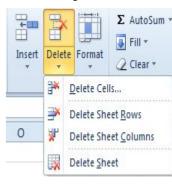
## FINDING AND REPLACING DATA

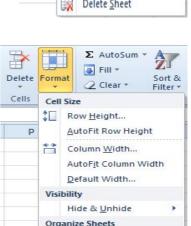
- Finding data
  - Click on A1 cell
  - Go to Editing group of home tab.
  - Click on Find & Replace
  - · And Click on Find.





Σ Aut Fill Delete Format Insert 2 Cle Insert Cells... Insert Sheet Rows Insert Sheet Columns Insert Sheet





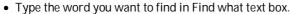
Rename Sheet

Protect Sheet... Lock Cell

Format Cells...

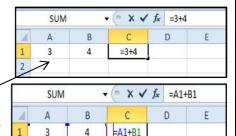
Tab Color Protection 

Move or Copy Sheet...



- And click on find Next Button
- g. Replace data
  - · Click on A1 cell
  - Go to Editing group of home tab
  - Click on Find & Replace
  - And Click on Replace.
  - Type the word you want to find in Find what text box.
  - Type word in replace with text box .
  - And click on find Next Button
  - After than click on Replace buton to replace selected data or Replace All to Replace all the data.

# Find and Replace Find Replace Find what: Replace with: Options >> Replace All Replace Find All Find Next Close



INCOME

10000

20000

25000

10000

10004

10005

10006

10007

10008

=SUM(B2:B10)

SUM

A

MONTH

JAN

MAR

APRL

MAY

JUN

AUG

11 TOTAL

2

3 FEB

4

5

6

7

8 JUL

9

10 SEP

# **USING CALCULATIONS FEATURE OF EXCEL**

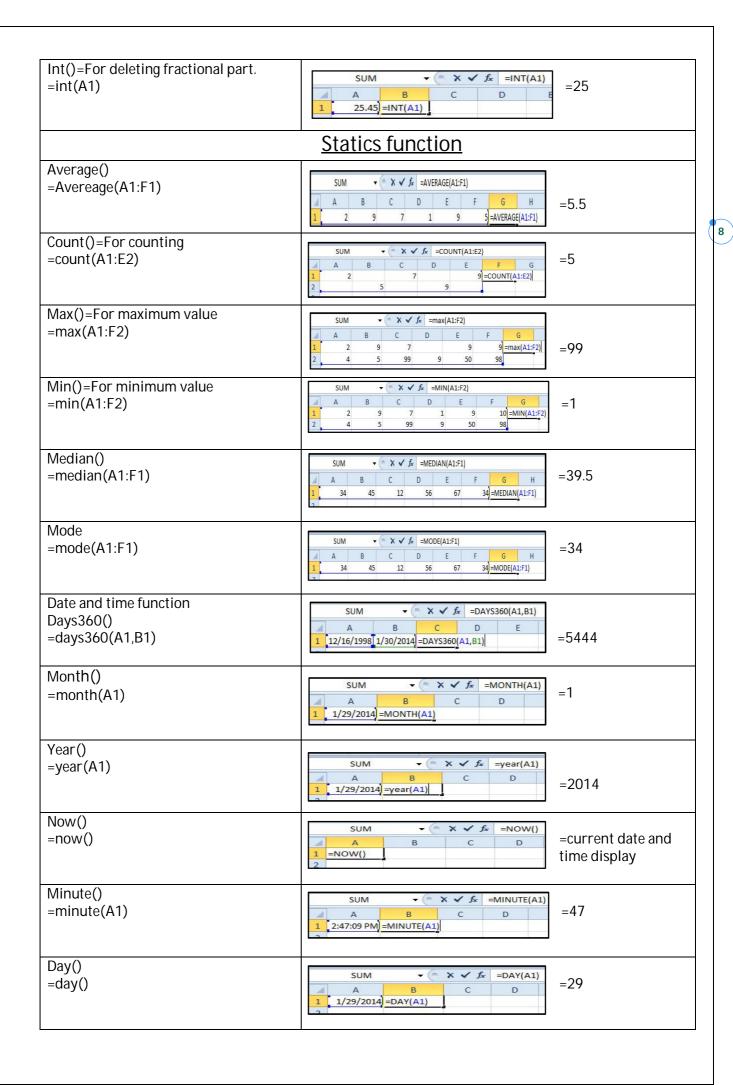
- h. Formula :- general equation to solved same type of mathematical functions.
- i. Types of formulas
  - Cell content base formulas
    - Exp :
  - Cell content address base formulas
    - Exp:
- j. Types of addressing :
  - There are three types of formula addressing.
    - Relative addressing Ex- = A1+B1
    - Absulate addressing or fixed addressing Ex- = \$A\$1+\$B\$1
      - LΛ- ΨΛΨΙ+ΨΟΨΙ
    - Mixed addressing.

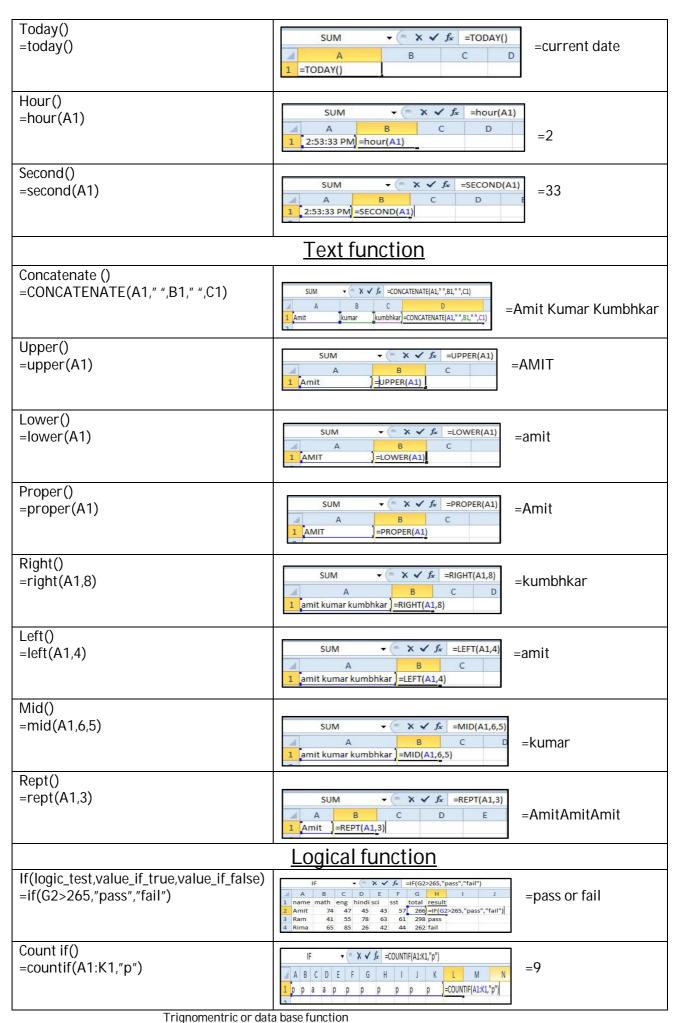
Ex- = \$A1+ B\$A

Range: A rectangular group of cell type of function.

EX: B2:B10

B10					
Mathematical function					
Sum()=For adding Ex:=sum(A1:B1)	SUM				
Product()=For multiplying Ex:=product(A1:B1)	SUM				
Sqrt()=For square root. =sqrt(A1)	SUM				
Power()=For power =power(A1,2)	SUM				





Lone

a) L.A.

b)intrest

c)period

d)installmant

lone calculation →a lone consisting following components

- i. The lone amount
- ii. Interest rate
- iii. Number of payment
- iv. Periods payment amount

The PMT function

The PMT function returns the loan payment per period.

PMT (RATE,NPER,PV,FV,TYPE)

Rate →The interest rate per period=/12

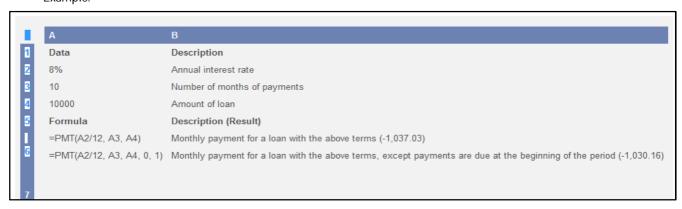
Nper→the total number of payment period=\*12

Pv→this is the present value or the loan amount (-)

Fv→this figure value after the last payment is made.(0)

Type→includes when payment are due either zero or one if you omit tab, it is assume to be zero.

Example:



# The PPMT functions

The PPMT funcation return the principal part of the loan, payment for the given period assuming constant payment amount and a fixed interest.

# PPMT(RATE,PER,NPER,PV,FV,TYPE)

#### Example::



#### The IPMT function

The pv function return the present value for a lone.

 $\mathsf{PVC}(\mathsf{RATE},\mathsf{NPER},\mathsf{PMT},\mathsf{FV},\mathsf{TYPE})$ 

Example::

		A	В
1		Data	Description
2	2	10%	Annual interest
3	3	1	Period for which you want to find the interest
4	1	3	Years of loan
	5	8000	Present value of loan
•	5	Formula	Description (Result)
		=IPMT(A2/12, A3, A4*12, A5	Interest due in the first month for a loan with the terms above (-66.67)
7		=IPMT(A2, 3, A4, A5)	Interest due in the last year for a loan with the terms above, where payments are made yearly (-292.45)

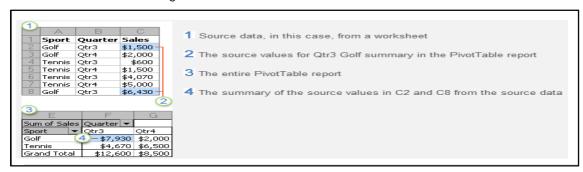
FV(RATE, NPER, PMT, PV, TYPE)

#### Example::

	A	В
1	Data	Description
2	6%	Annual interest rate
3	10	Number of payments
4	-200	Amount of the payment
5	-500	Present value
	1	Payment is due at the beginning of the period (see above)
6	Formula	Description (Result)
7	=FV(A2/12, A3, A4, A5, A6)	Future value of an investment with the above terms (2581.40)

#### Pivot table

A pivot table is essentially a dinemic summery report generated form can report form a data base . the data base can inside a work sheet in and external data file . A pivot table can help to transfer endless rule and column of numbers into meaningfull data.



Filling serise: excle suppose a cell varidty of filling option.

Goto home tab→editing group→fill series. To display the series dialog box. Custom list:

1.to define your own list go to office button  $\rightarrow$  excel option  $\rightarrow$  popular tab  $\rightarrow$  edit custom list.

2.click on new list → type the new list item→click on add.

Functions → pre return formula are called function.

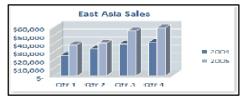
#### **CHARTS**

A chart is a graphical representation of numberic values. A chart is also known as graph. Excel chart features

Provide a verity of chart including bar, column, area, line and many more.

# Types of chart

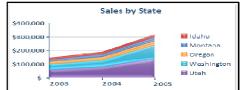
- 1)Column charts → in column charts, categories are typically organized along to emphasize the different between items.
- 2) Line chart→ Data that is arranged in columns or rows on a worksheet can be plotted in a line chart. Line charts can display continuous data over time, set against a common scale, and are therefore ideal for showing trends in data at equal intervals. In a line chart, category data is distributed evenly along the horizontal axis, and all value data is distributed evenly along the vertical axis.
- 3) Pie charts → Data that is arranged in one column or row only on a worksheet can be plotted in a pie chart. Pie charts show the size of items in one data series, proportional to the sum of the items. The data points in a pie chart are displayed as a percentage of the whole pie.
- 4) Bar charts → Data that is arranged in columns or rows on a worksheet can be plotted in a bar chart. Bar charts illustrate comparisons among individual items.
- 5) Area charts  $\rightarrow$  Data that is arranged in columns or rows on a worksheet can be plotted in an area chart. Area charts emphasize the magnitude of change over time, and can be used to draw attention to the total value across a trend.



\$70,000 \$60,000 \$50,000







For example, data that represents profit over time can be plotted in an area chart to emphasize the total profit

#### DATA VALIDATION

Data validation is an Excel feature that you can use to define restrictions on what data can or should be entered in a cell. You can configure data validation to prevent users from entering data that is not valid. If you prefer, you can allow users to enter invalid data but warn them when they try to type it in the cell. You can also provide messages to define what input you expect for the cell, and instructions to help users correct any errors. For example, in a marketing workbook, you can set up acell to allow only account numbers that are exactly three characters long. When users select the cell, you can show them a message such as this one:

To set validation into cell

- Select the cell or range
- Go to data tab
- Click on data validation on the data tools groups
- Click the setting tab set appropriate criteria
- Click the input message tab and specify which message to display when we select the cell (optional)
- Click the error alert tab and specify which error message to display when we make and invalid input.

#### **DATA FORM**

Many user use excel to manage in which the information is arrange in rows .excel offer a simple way to work this type a data through a use of data entry form that excel can create automatically.

- Click on the office button
- Click on excel option
- Goto customizeribbon
- Chooseall commands
- choose the FORM options in drop down list
- Click on add button
- And click ok button

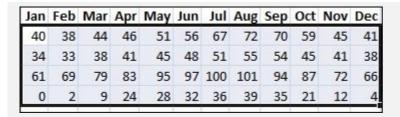
## **FREEZE PANEL**

If you set up a worksheet with row or column heading these heading will not visible. When we scroll down or the right excel Provide the handy to this problem freezing panel.

- Select the row of list
- Gotoview tab
- Click on freezing panel
- select your option where you want to freeze the row and column.

# FILTERING OF DATA

Select the data that you want to filter



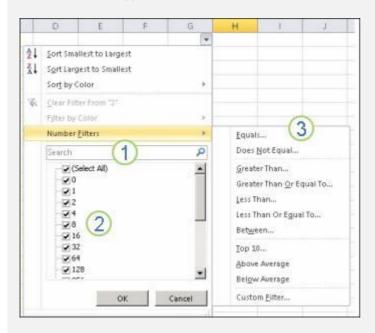
1. On the Data tab, in the Sort & Filter group, click Filter.



2. Click the arrow in the column header to display a list in which you can make filter choices.

Filter by selecting values or searching

3. Selecting values from a list and searching are the quickest ways to filter. When you click the arrow in a column that has filtering enabled, all values in that column appear in a list.



- 1 Use the Search box to enter text or numbers on which to search
- 2Select and clear the check boxes to show values that are found in the column of data
- 3Use advanced criteria to find values that meet specific conditions
- 1. To select by values, in the list, clear the (Select All) check box. This removes the check marks from all the check boxes. Then, select only the values you want to see, and click OK to see the results.
- To search on text in the column, enter text or numbers in the Search box.
   Optionally, you can use wildcard characters, such as the asterisk (\*) or the

question mark (?). Press ENTER to see the results.

#### **SCENARIO MANAGER**

In that type of scenario or in your business and personal life, using templates offers the Following benefit to:

- The documents produced will be consistent, even when they are produced by different people.
- If the templates are carefully developed and reviewed, using them ensures that your documents will be complete with all the needed information, every time.
- Setting up templates with your company logo and contact information ensures that information will appear on every document you create, which helps with branding and promoting your organization.

■ For longer documents like reports or newsletters, the benefit of using a template increases, because designing all the formatting in such documents can be time consuming. Take a look at the templates available to you via Word now.

Scenario Summary				INPUT			
	Current Values:	System	Name of Customer	Product	Quantity	Price	Totle price
Changing Cells:	ourient values.	Jystom	Avinash	Mouse	10	200	2000
\$A\$1	Name of Customer	Name of Customer	Aman	Monitor	18	7000	126000
\$B\$1	Product	Product	Abhishek	Keyboard	d 24	250	6000
\$C\$1	Quantity	Quantity	Abhinav	C.P.U	20	12000	240000
\$D\$1	Price	Price	Akshya	U.P.S	9	700	6300

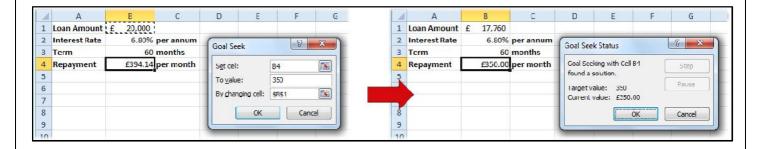
1		
	1	5

\$E\$1	Totle price	Totle price	
\$A\$2	Avinash	Avinash	
\$B\$2	Mouse	Mouse	
\$C\$2	10	10	
\$D\$2	200	200	
\$E\$2	2000	2000	
\$A\$3	Aman	Aman	
\$B\$3	Monitor	Monitor	
\$C\$3	18	18	
\$D\$3	7000	7000	
\$E\$3	126000	126000	
\$A\$4	Abhishek	Abhishek	
\$B\$4	Keyboard	Keyboard	
\$C\$4	24	24	
\$D\$4	250	250	
\$E\$4	6000	6000	
\$A\$5	Abhinav	Abhinav	
\$B\$5	C.P.U	C.P.U	
\$C\$5	20	20	
\$D\$5	12000	12000	
\$E\$5	240000	240000	
\$A\$6	Akshya	Akshya	
\$B\$6	U.P.S	U.P.S	
\$C\$6	9	9	
\$D\$6	700	700	
\$E\$6	6300	6300	

# **GOAL SEEK**

It determines the value that you need to enter in a single input cell to produce a result that you want in a dependent (formula) cell.

Place the cursor on cell . Choose **DATA → DATA TOOLS → WHAT-IF-ANALYSIS → GOAL SEEK.** Excel display the goal seek dialog box.



# **ADDING A DATA TABLE**

Sometimes the chart tells the full story that you want to tell, but other times the audience may benefit from seeing the actual numbers on which you have built the chart. In these cases, it is a good idea to include the data table with the chart. A data table contains the same information that appears on the datasheet.

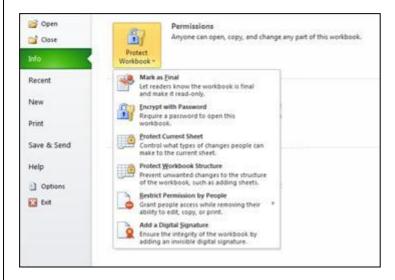
To display the data table with a chart, click Chart Tools ⇔ Design ⇔ Chart Layouts ⇔ Add Chart Element ⇔ Data Table and choose to include a data table either with or without a legend key.

# PROTECT THE EXCEL WORKBOOK

To protect your Excel 2010 spreadsheet, use the following options.

- 1. In an open spreadsheet, click the File tab. The Backstage view opens.
- 2. In the Backstage view, click Info.
- 3. In **Permissions**, click **Protect Workbook**. The following options appear:

The following image is an example of the Protect Workbook options.



- Mark as Final Make the document read-only
- Encrypt with Password Set a password for the document
- Protect Current Sheet Protect the worksheet and locked cells
- Protect Workbook Structure Protect the structure of the worksheet
- Restrict Permission by People Install Window Rights Management to restrict permissions
- Add a Digital Signature Add a visible or invisible digital signature

# **MICRO**

It is a advance feature that can speed up editing or formatting a excel document. If record sequence of menu selecting choose so that a series of action are completed in step one. Typical use of micro area.

#### Recording a micro

- Click the view tab.
- Click the micro and click record micro group.
- In the micro name box, type a name of micro.
- Click on close button.
  - For Stop recording
- In the micro group click micro button and click stop recording.