ଓଡ଼ିଶା ରାଜ୍ୟ ମୁକ୍ତ ବିଶ୍ୱବିଦ୍ୟାଳୟ, ସମ୍ବଲପୁର, ଓଡ଼ିଶା
Odisha State Open University, Sambalpur, Odisha
Established by an Act of Government of Odisha.

COMPUTER APPLICATION

Block

4   MS Excel

STARTING EXCEL

Unit -1

Starting MS Excel

Unit -2
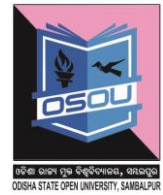
Working with Graphics

Unit -3

Formatting a worksheet

Unit - 4

Working with Charts and other controls

Learning objectives

After the Completion of this unit you should be able to know

1) What is MS Excel and what are its functions
2) The tools used in MS Excel 2010 and their use
3) Working with MS Excel workbook and Excel worksheet

Structure

1.1 Introduction

1.2 Definition

1.3 Working with MS Excel 2010

1.4 Creating a new Excel workbook

1.5 Working with Excel worksheet

1.6 References

1.7 Check your progress – possible answers

1.1 Introduction

MS Excel is a very good tool for the purpose of accounts and other purposes. This simplifies the work load of a person by many folds. MS Excel apart of being a spread sheet tool helps the user to add new work sheets to a workbook. Sheets can be renamed, deleted from a workbook. Workbooks those that we create can be shared among different people via email. This enables transparency in the work force. Password protection helps us protecting confidential data. So let us get started with MS Excel.

1.2 Definition

Excel 2010 is a spread sheet application in the **Microsoft 2010** Office suite that lets you store, manipulate, and analyses data in organized workbooks for home and business tasks.

Rule To Remember:-. An Excel workbook is comprised of Excel worksheets .Each Worksheet is comprised of rows and columns..Total number of rows are 104857 and total number of columns are 16384 from A to XFD.The intersection between a row and a column is called a cell. Total cells = 104857 X 16384 = 1717977088
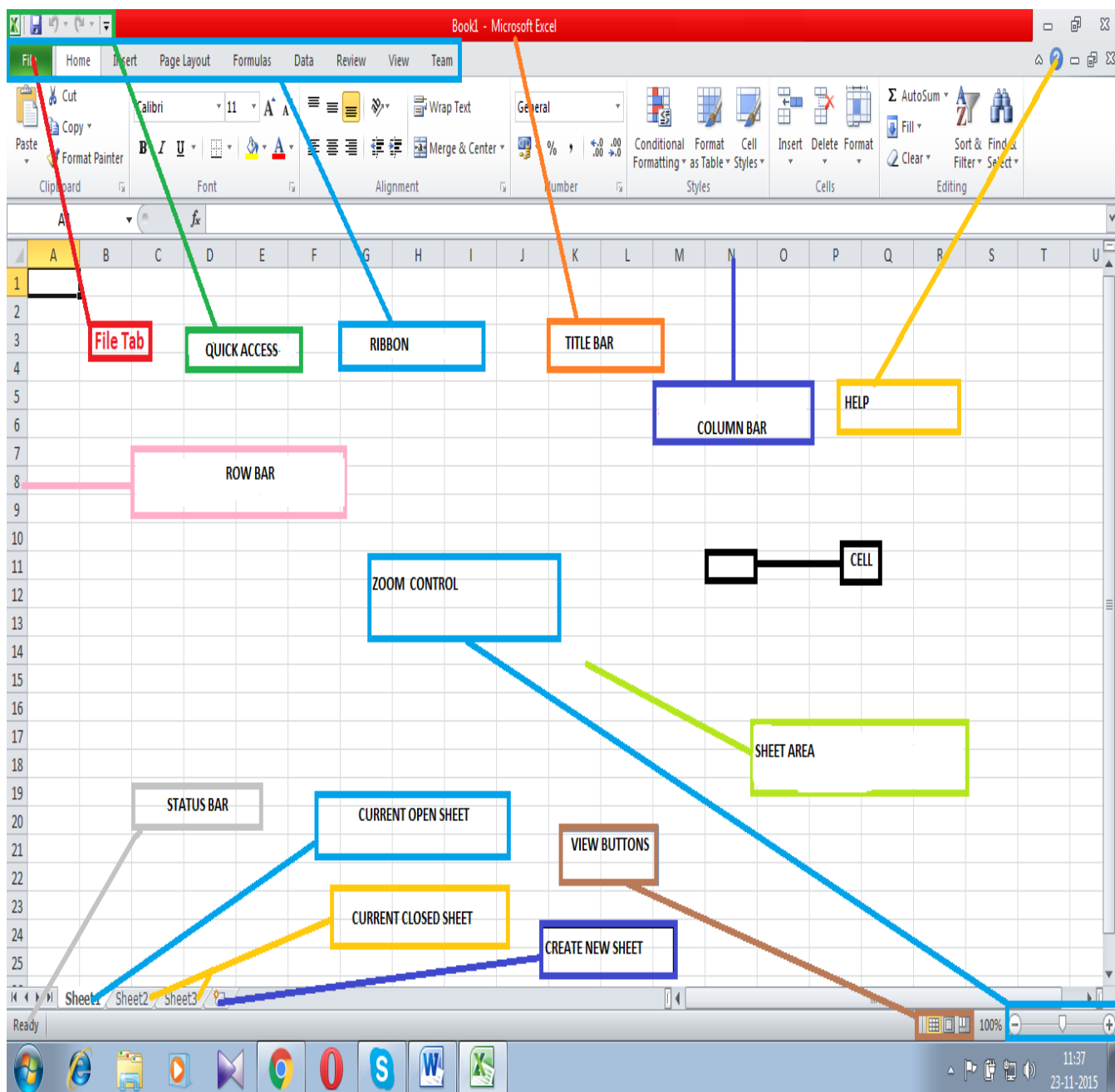
Uses OfMS Excel

Used in data collection, data manipulation and data Analysis which are related to

1. Accounts and financial operations
2. Mathematical operations.
3. Scientific operation.
4. Non Scientific operations.

## 1.3 Working with MS Excel2010

MSExcel 2010 screen

SCREEN-1

1.3.1 Brief description about the tabs

Brief Description about what is written in screen 1.The above screen shows the following components.

1. File Tab
2. Quick Access Tab
3. Ribbon Tab
4. Title Bar

5. Column bar
6. Help menu
7. Row Bar
8. Cell
9. Sheet Area
10. Zoom control
11. View buttons
12. Create New Sheet
13. Current Closed Sheet
14. Current Open Sheet
15. Status Bar
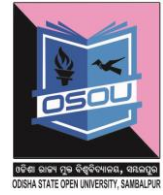
File Tab:- The file tab is used to

➢ Create a new file
➢ Save an existing file
➢ Open very recent files
➢ Save an existing file in another format
➢ Print an existing file

Quick Access Tab:- Quick access tab is used for very fast users who do not have time to go the roundabout process to

1) Open
2) Save
3) Print Preview And Print
4) Quick Print
5) Spelling
6) Undo
7) Redo
8) Sort Ascending
9) Sort Descending
10) Open Recent Files
11) Show More Commands
12) Show Below The Ribbon

Ribbon Tab:-TheRibbon Tab is used for many jobs and we shall be discussing later in this book.

Title Bar :-The title bar is used to show what is the name of the document .When multiple documents are opened at one time the title bar identifies which document is currently active by showing the name of the document at the top.

Column Bar:- The column bar is used to identify in which column the cursor is

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Help:-The help menu gives instant help to the new user as to how to use the MS Excel 2010.

Row Bar:-The row bar is used to identify in which row the user is working.

Cell:-The Cell is the intersection of the row and the column.

Sheet Area:- The sheet area shows the current sheet the user is working on.

Zoom Control:- .The zoom control is used to control the zooming effect of the screen.

View Buttons :- The view buttons option is used to view the page in any of the three formats

1) Normal
2) Page Layout
3) Page Break

Create New Sheet:- This option is used to create new sheet.

Current Open Sheet:- This option is used to print a current open sheet.

Status Bar :-The status bar shows weather the document is in which state **ready** to take values or **Enter** State when values are being entered.

1.3.2 EnteringMS Excel 2010
Step-1
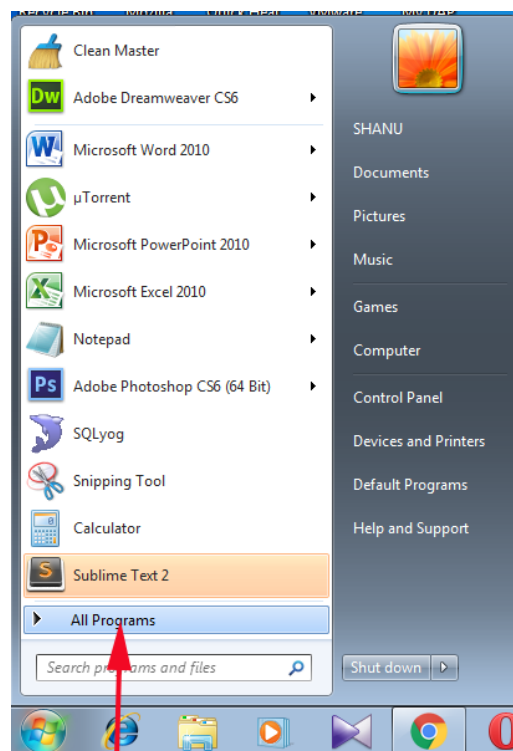
Step-2
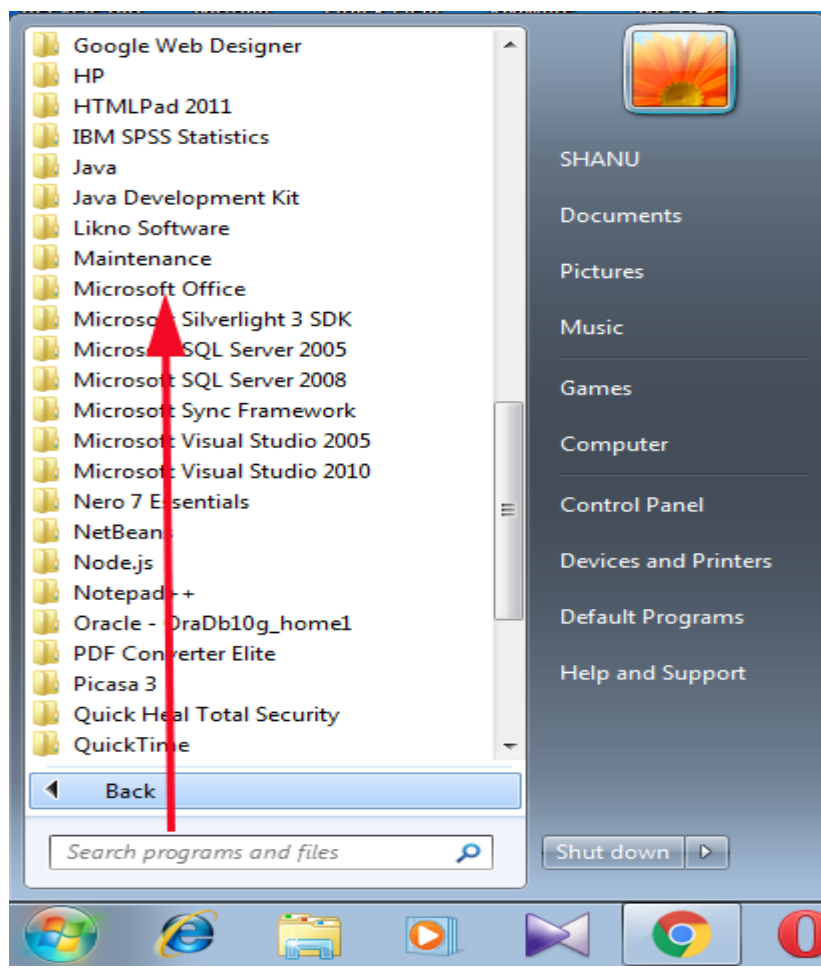
Step-3
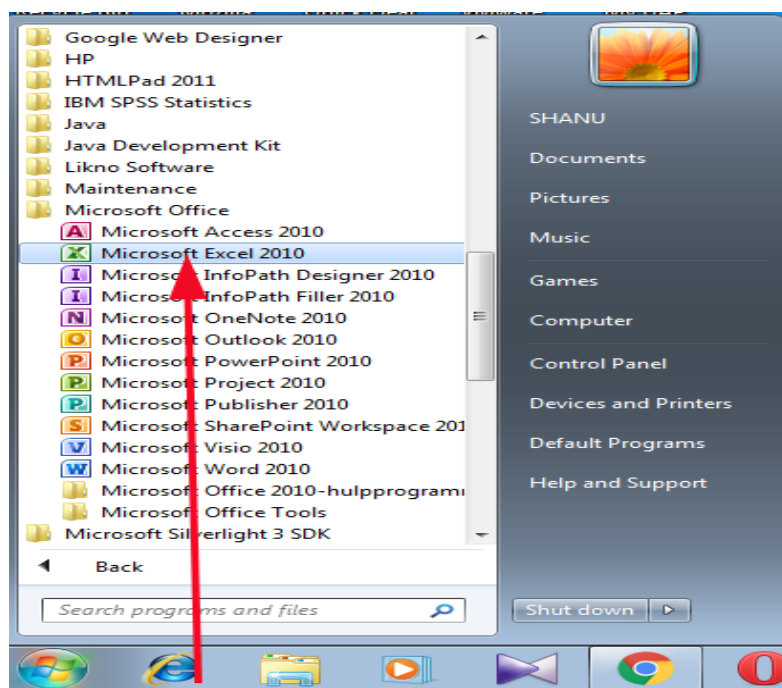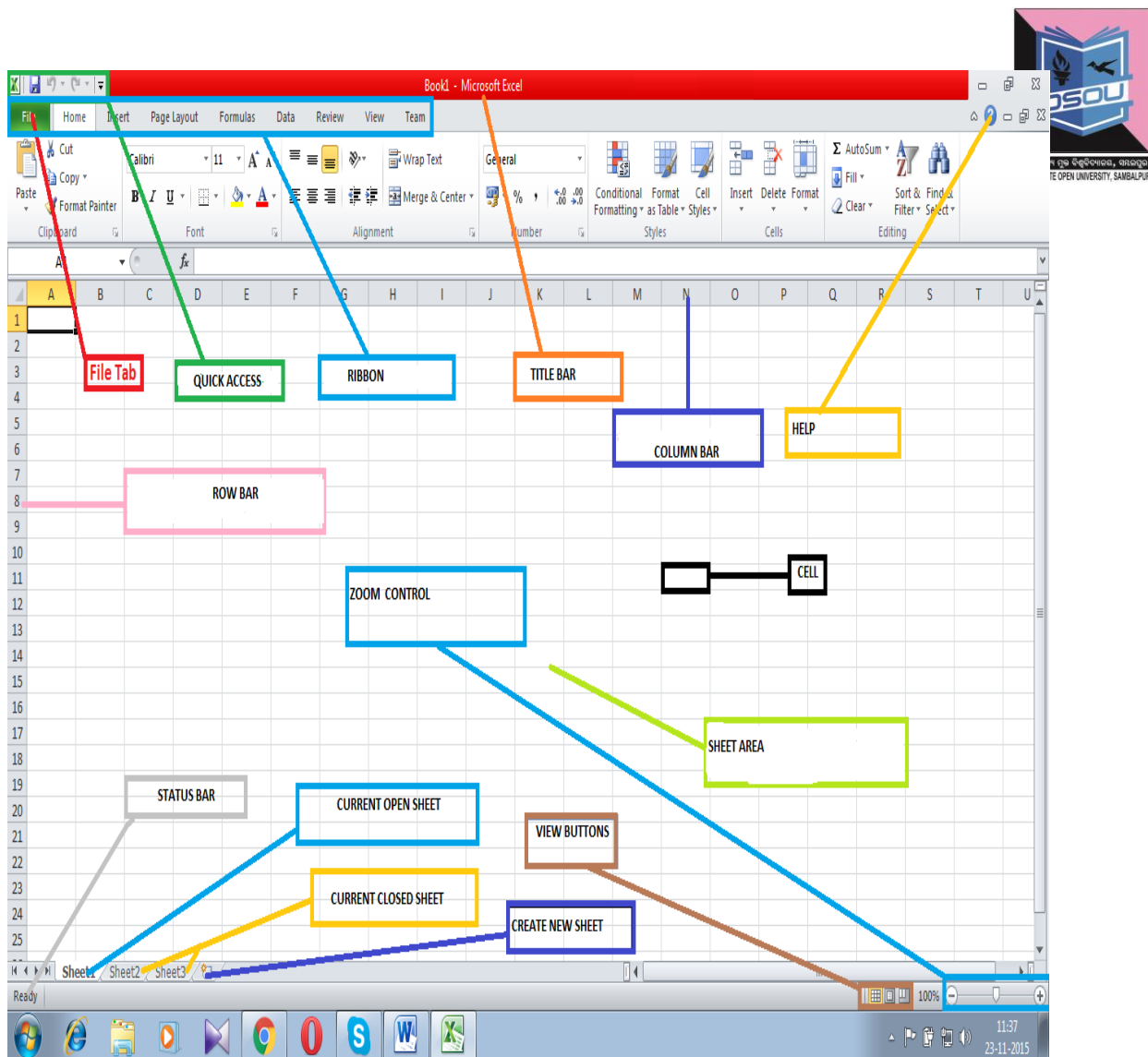
The above worksheet is comprised of the following controls. These controls are file tab, quick access, ribbon, title bar, row bar ,column bar, help, cell, sheet area, zoom control, view buttons, create new sheet, current closed sheet, current open sheet, status bar. Before we dive into learning Excel let us understand what the above controls do in brief.

File tab :-Data that get stored in computer gets stored in the form of files. The file tab helps us create a new file, save the file so that the data that is entered stays there, closes the current file

Quick access :- Quick access helps to do things quickly such as quick save, redo and undo as all the controls are available.

Ribbon :- The ribbon is comprised of various controls which are file, home, page layout, formulas, data, review, view, Team. These controls help to create new files, manipulate files and set protection to files.

- Title bar :- This bar displays the name of the file.
- Row bar :- This bar shows which row we are working on.
- Column bar :- This bar shows which column we are working on.
- Cell :- The intersection between the row and the column is a cell.
- Sheet area :- The sheet on which values are entered.
- Zoom control :- This option is used to control the magnification of the sheet.
- View buttons :- This options is used view the Excel sheet in different ways such as normal, page layout, page break view.
- Create new sheet :- This option is used to create a new sheet.
- Current closed sheet :- This option is used see the currently closed sheet.
- Current open sheet :- This option is used see the current open sheet.
- Help :- This gives complete help about the Excel worksheet and Excel workbook.

1.3.3 Ribbon
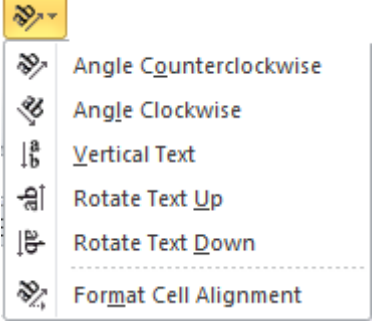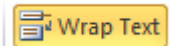The Ribbon is comprised of tabs. These Tabs are
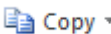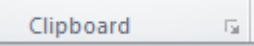
1.3.3.1 File
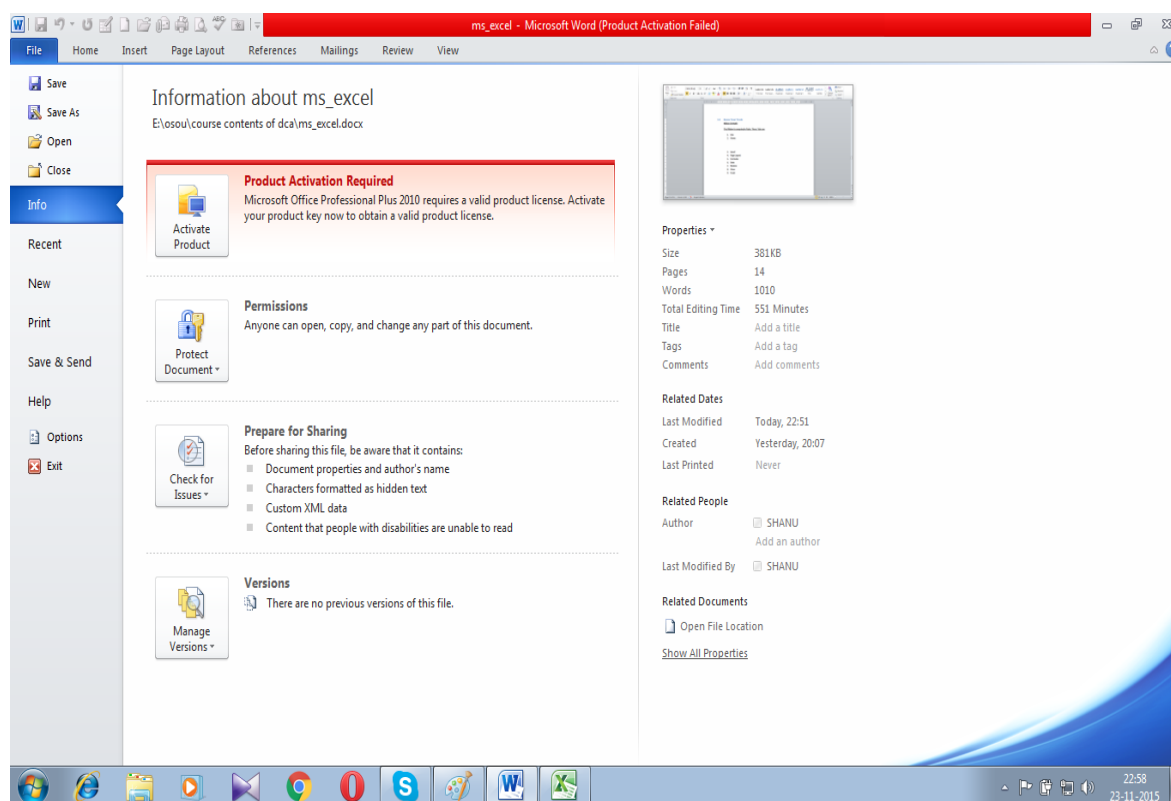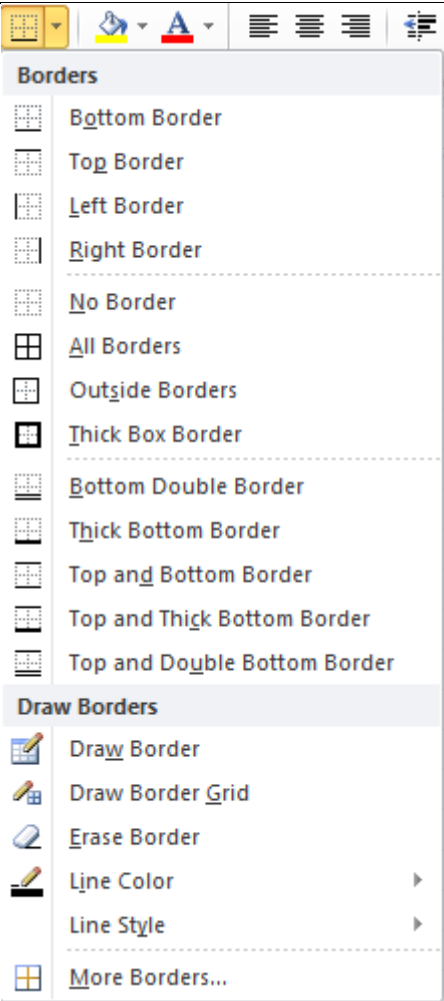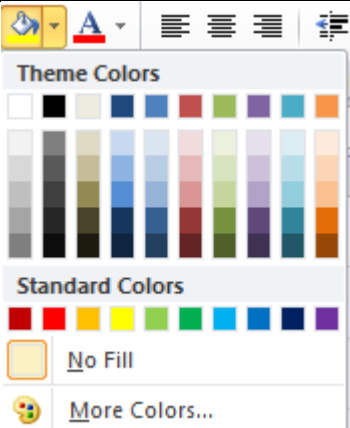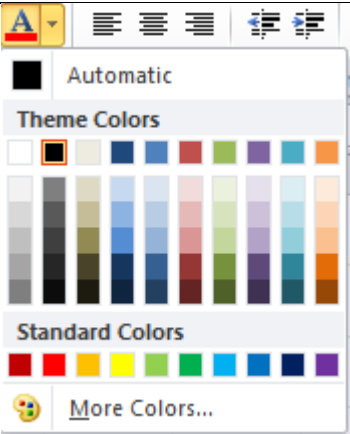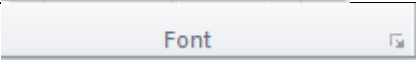
The File option is used to create a new file, save file, save in other formats, close the existing file ,print a file, protect a file ,make a file read only.
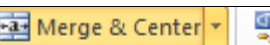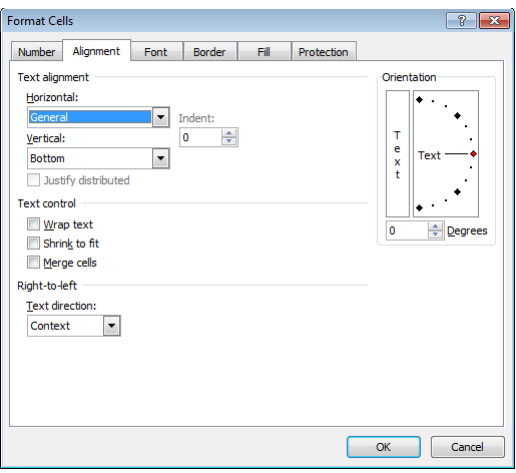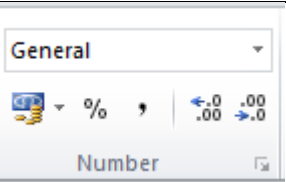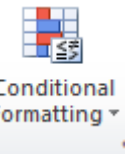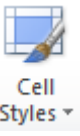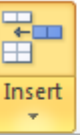
1.3.3.2 Home
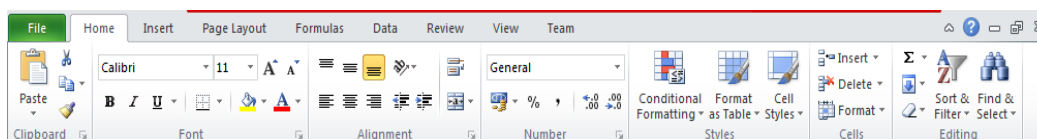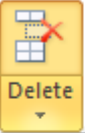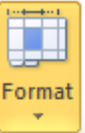
Sl.No	Picture	Description
1	Copy ▾	Copy a selected text
2	Paste	Paste a selected text
3	Format Painter	Copies a font format from one place and places it in another place. Suppose A11 CELL IS COMPRISED OF "HELLO HOW ARE YOU" which is a Calibari(Body) font. And B11 Cell is comprised of "Hi there"which is of Adobe Gothic s Placing the mouse at A11 is copy button is clicked and placing at B11 Format Painter is clicked then both A11 and B11 Cells are of the font Calibari(Body)
4	Clipboard	Show office clipboard task pane. Used when multiple objects are copied from a sheet and are to be placed in the same sheet or another sheet.
5	Calibri	Font type .Used to define the font type. Here the font type is Calibri
6	11	Font size. used to define the size of the font.
7	A	Grow Font .Used to increase the font size of the selected character, word ,sentence or paragraph
8	A	Shrink Font .Used to decrease the font size of the selected character, word

			,sentence or paragraph
9	**B**		Used to make the character, word ,sentence or paragraph bold
10	*I*		Used to make the character, word ,sentence or paragraph italicized
11	U		Used to make the character, word ,sentence or paragraph underlined.
12	**Borders** Bottom Border Top Border Left Border Right Border No Border All Borders Outside Borders Thick Box Border Bottom Double Border Thick Bottom Border Top and Bottom Border Top and Thick Bottom Border Top and Double Bottom Border **Draw Borders** Draw Border Draw Border Grid Erase Border Line Color Line Style More Borders...		Used to set the borders of a cell or a group of selected cells.
13	**Theme Colors** **Standard Colors** No Fill More Colors...		Used to fill the colours in a cell or a group of cells.

14		Use to change the font colours of the text in a cell of a group of selected cells
15	Font	Used to change the formatting of the cells such as sub script,superscript,double strike.
16		Top align the selected text of a cell or group of cells selected.
17		Middle align the selected text of a cell or group of cells selected.
18		Bottom align the selected text of a cell or group of cells selected
19		Left align the selected text of a cell or group of cells selected
20		Middle align the selected text of a cell or group of cells selected.
21		Right align the selected text of a cell or group of cells selected.
22	Angle Counterclockwise / Angle Clockwise / Vertical Text / Rotate Text Up / Rotate Text Down / Format Cell Alignment	Change the orientation of the text of the cells or group of cells selected.
23		Decrease Indent of a cell or a group of cells selected
24		Increase Indent of a cell or a group of cells selected
25	Wrap Text	Wrap a text or unwrap a text of selected cell or group of

|		selected cells
26	Merge & Center Merge & Center Merge Across Merge Cells Unmerge Cells	Merges and canters the contents of a cell or a group of selected cells .
27	Alignment Format Cells Number / Alignment / Font / Border / Fill / Protection Text alignment Horizontal: General / Indent: 0 Vertical: Bottom Justify distributed Text control Wrap text Shrink to fit Merge cells Right-to-left Text direction: Context Orientation Text / 0 Degrees OK / Cancel	Aligns text in cell or group of cells selected
28	General % , .00 .00 Number	Formats the number in the cell, group of selected cells ,column .
29	Conditional Formatting	Conditional formatting is used to identify specific cells among a number of selected cells. for example highlight those numbers that are greater than 70 in a selection.
30	Cell Styles	Cell Style changes the style of the cell. Such as the cell and appear Pink or any colour that the user wants.
31	Insert Insert Cells... Insert Sheet Rows Insert Sheet Columns Insert Sheet	Insert is used to 1. Insert cells to a sheet 2. Insert new rows to a sheet 3. Insert new columns to the sheet 4. Add a new sheet to the workbook.

32		Delete option is used to 1. Delete cells from a sheet , 2. Delete sheet rows from a sheet, 3. Delete sheet columns from a sheet 4. Delete a complete sheet altogether
33		The format option is used to format a cell or a group of cells. This involves 1. Setting the row height of the cell 2. Setting the column height of the cell 3. Set column width 4. Hide/unhide rows and columns,sheets 5. Cell locking 6. Sheet protection 7. Cell formatting and many more
34		The auto sum tool is used to add numbers written in a row or a column. Look the example below The number highlighted in Yellow is the sum of all the numbers in Green.
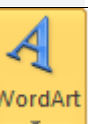
35.		This button is used to fill the cells down, left, right with formulas if given.
36.		This option is used to clear the cell or the group of selected cells.
37.		Used for sorting and filtering. Those in Yellow colour show unsorted while those in blue show sorted numbers those in green show filtered items among the sorted items.

38		The purpose of find and replace is to find a particular text in sheet and replace it with a new text.

1.3.3.3 Insert
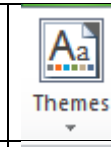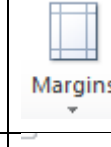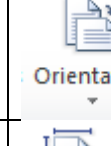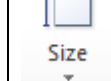
1		Used To create a Pivot Table
2		This button is used to create a table from existing entries. The other features include searching for entries out of many.
3		This button is used to insert a picture in the excel sheet.
4		This button is used to insert a clip art into the worksheet.
5		This button is used to insert various shapes into the worksheet.
6		This button is used to insert a smart art into the worksheet
7		This button is used to create a chart in the excel worksheet.

8		This button is used to create a line graph
	Line	
9		This button is used to create a pie chart in the excel sheet.
	Pie	
10.		This button is used create a bar chart in the excel sheet.
	Bar	
11.		This button is used to create an area chart
	Area	
12		This button is used to create a scatter chart on an excel sheet.
	Scatter	
13		This button is used to create other charts On the excel sheet
	Other Charts	
14		Create a line sparkline based on the column values selected
	Line	
15		Create a column sparkling based on the column values selected
	Column	
16		Creates a win/Loss Sparkline
	Win/Loss	
17		Insert slicer to filter data interactively
	Slicer	
18		This option is used create a hyperlink to link to 1. File 2. Webpage 3. Email address
	Hyperlink	
19		This option is used create a text box in the sheet.
	Text Box	
20		This option is used to create a header and a footer.
	Header & Footer	
21		This option is used to insert a word art into the excel sheet.
	WordArt	
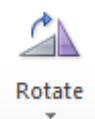
22	Signature Line ▾	Used to insert a digital signature
23	Object	Used to insert an object.This object could be anything starting from an image to pdf document
24	π Equation ▾	Used to write an equations
25	Ω Symbol ▾	Used to insert a symbol.

1.3.3.4 Page layout

Page layout defines how the page should appear when it presented to someone or self.This starts from excel sheet page designing to Excel sheet page printing.The page layout is comprised of the following
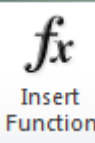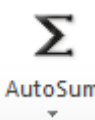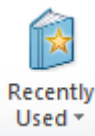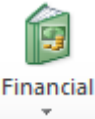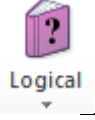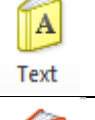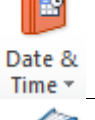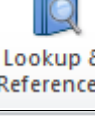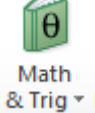
1	Themes ▾	This option is used to change the themes of the sheet
2	Margins ▾	This options is used to set the margins of the page that is going to be printed.It comprises of left, right, top, bottom margins
3	Orientation ▾	This option is used to set the orientation of the page as to landscape or portrait.
4	Size ▾	This option is used to set the size of the page like A4,A3 etc
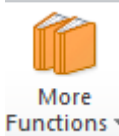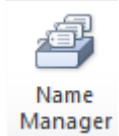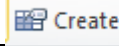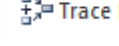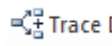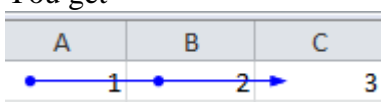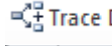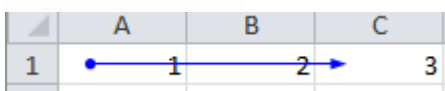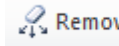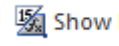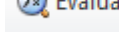
5		Mark a specific area of the sheet for printing
6		This option is used to create a page break so as to ensure where each page will end at the bottom and at the right when a whole worksheet is considered.
7		Choose an image to be shown at the background of the worksheet.
8		Specify rows and columns to repeat in each page
9		Page setup to print
10		Scale to fit maximum contents in a page
11		Sheet options as to how the sheet would be visible during viewing and printing
12		Bring forward an object one level forward .
13		Send the object one level backward.
14		Make the objects hidden or visible
15		Aligns the edges of multiple selected objects.
16		Group multiple objects into one Ungroup an object created from multiple objects.
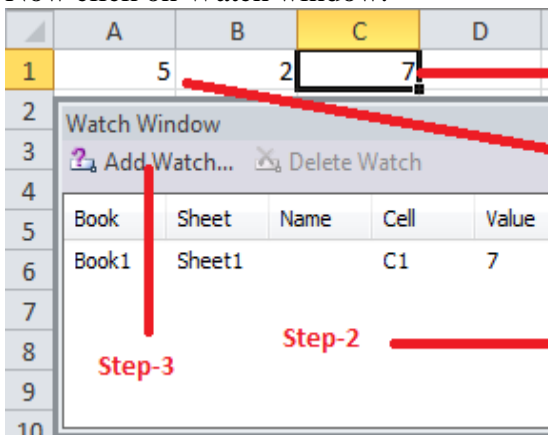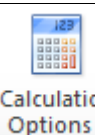
17.	Rotate	Rotate a single object.
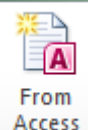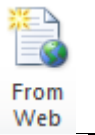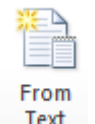
1.3.3.5 Formulas
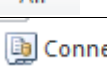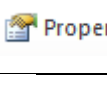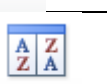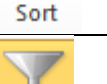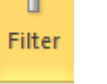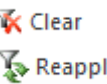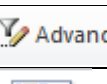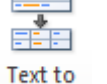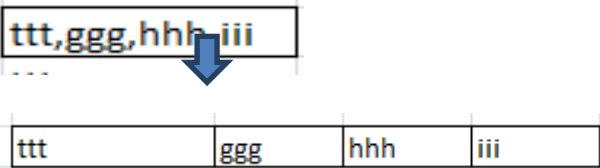
1	Insert Function	Used To insert a function.
2	AutoSum	Do simple calculations such as s Sum Average Count Max Min And many more functions.
3	Recently Used	Make use of very recently used functions which were used while preparing the worksheet.
4	Financial	All financial functions are available here
5	Logical	Perform all logical operations.
6	Text	Perform all textual operations.
7	Date & Time	Perform all date and time functions
8	Lookup & Reference	Lookup and Reference functions
9	Math & Trig	Mathematical and trigonometric functions

10	More Functions ▾	More functions related to Statistical and Engineering.
11	Name Manager	Name Manager
12	f_x Use in Formula ▾	Use a name in the worksheet rather than use a formula.
13	Create from Selection	Create from selection
14	Trace Precedents	Trace Precedents Suppose in A1 cell you wrote 1 In B1 cell you wrote 2 In C1 you had written =A1+B1 Now Click on C1 And click the button Trace Dependents You get A B C ●——1——●——2——→ 3
15	Trace Dependents	Show arrows that indicate what cells effect the value of the current selected cell. Suppose in A1 cell you wrote 1 In B1 cell you wrote 2 In C1 you had written =A1+B1 Now Click on A1 And click the button Trace Dependents A B C 1 ●——1——●——2——→ 3
16	Remove Arrows ▾	Remove Arrows drawn by Trace Precedents and trace dependents
17	Show Formulas	Show formulas instead of values in the cells
18	Error Checking ▾	Check errors in formulas of the cells
19	Evaluate Formula	Shows the formula written in in the particular cell.

20	Watch Window	The watch window is used to see how the values of a cell get changed when one value of the cell is changed as it connected to the cell via a formula. Suppose in A1 cell you wrote 1 In B1 cell you wrote 2 In C1 you had written =A1+B1 Now click on Watch window.
21	Calculation Options ▾	Calculation option is set by default to automatic so that changes in one cell can affect the sheet. It can be set to manual so that the effects don't take effect until the calculation option is set to automatic.
22	Calculate Now	Calculate now calculates the entire workbook if calculation options is set to manual.
23	Calculate Sheet	Calculates the entire sheet now. Important when calculate options is set to manual.
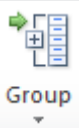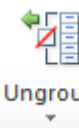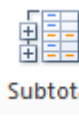
1.3.3.6 Data

1	From Access	Import data from MS Access Database
2	From Web	Import data from the Web
3	From Text	Import data from the text

4	From Other Sources ▾	Import Data from Other sources such as Sql Server Database
5	Existing Connections	Import Data from Existing Connection
6	Refresh All ▾	This option updates the data in the excel sheet with that in the database If any new records were added in the table, old records modified or deleted.
7	Connections	This option is used to add, update, delete connections
8	Properties	This option is used to modify the properties of the connections
9	A↓Z	Sort Ascending
10	Z↓A	Sort Descending
11	A Z Z A Sort	Sort on the basis of the criteria.
12	Filter	Filter items from a selected column or selected group of columns.
13	Clear	Clear Filter
14	Reapply	Reapply filter
15	Advanced	Advanced filtration
16	Text to Columns	Used to break the words separated by a comma or other delimeter into columns ttt,ggg,hhh iii ttt ggg hhh iii
17	Remove Duplicates	Used to remove duplicates in a column,selected columns,selected cells.
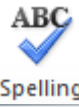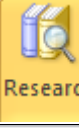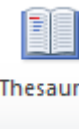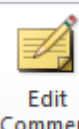
Before Removing Duplicates	After Removing Duplicates
	A
1	1
2	1
3	2
4	2
5	2
6	2
7	3
8	3
9	4
10	4
11	4
12	5
13	5
14	5
15	6
16	6
17	6
18	6

	A
1	1
2	2
3	3
4	4
5	5
6	6

18	Data Validation	Used to enter valid data into the cell.
19	Consolidate	Consolidate data from multiple ranges into a new range

Jan Worksheet

	A	M
1	Name	
2	shanu	
3	rahul	
4	sohan	

Feb worksheet

	A	B
1	Name	Marks
2	shanu	50
3	rahul	50
4	sohan	50

Consolidate in mar worksheet

	A	B
1	Name	Marks
2	shanu	100
3	rahul	110
4	sohan	120

20	What-If Analysis	Used in what if analysis

21		Tie a range of cells together so that they can be colapsed or expanded
	Group	
22		Ungroup a range of cells that were previously grouped
	Ungroup	
23		Used to calculate the subtotal
	Subtotal	
24	Show Detail	Expand a group of cells
25	Hide Detail	Collapse a group of cells.
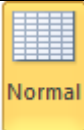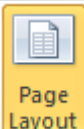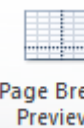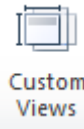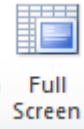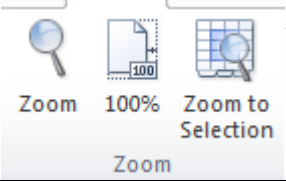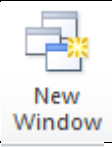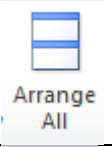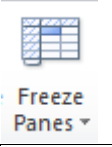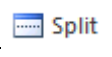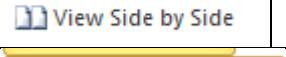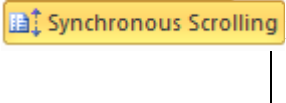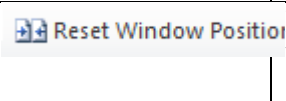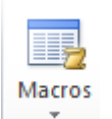
1.3.3.7 Review

1	ABC Spelling	Used to do the spell check
2	Research	Search through reference materials such as encyclopedias and dictionaries
3	Thesaurus	Suggested words with similar meaning.
4	Translate	Translate selected text to a different language
5	New Comment	Add a new comment to the selection.
6	Edit Comment	Edit the existing comment
7	Delete	Delete selected comment
8	Previous	Go to previous comment in sheet

9	Next	Go to the next comment in sheet
10	Show/Hide Comm	Show or hide a comment
11	Show All Comm	Show all comments in the sheet
12	Show Ink	Show or hide any ink annotations on the sheet
13	Protect Sheet	Protect sheet
14	Protect Workbook	Protect workbook
15	Share Workbook	Allow multiple users to work on the same workbook at the same time.
16	Protect and Sha	Protect and share the workbook so that other users can see but cannot modify as the workbook is locked with password
17	Allow Users to	Allow specific users to edit ranges
18	Track Changes ▾	Track all changes done to the document

1.3.3.8 View

1	Normal	View a document in normal view.
2	Page Layout	View a document in page layout view
3	Page Break Preview	View a document in page break preview
4	Custom Views	Custom view
5	Full Screen	View in full screen mode.Press escape key o view in normal view.

6	Ruler Formula Gridlines Heading	Setting the ruler, formula bar,gridlines,headings.
7	Zoom 100% Zoom to Selection Zoom	Zoom controls of the sheet
8	New Window	View a document in a new window when more than one workbook is opened at one time.
9.	Arrange All	Arrange multiple workbooks to be seen at one time
10.	Freeze Panes ▼	Freeze top row or first column or both rows and columns of a sheet.
11.	Split	Split a window
12.	Hide	Hide a window
13	Unhide	Unhide a window
14	View Side by Side	View two documents side by side if both are open.
15	Synchronous Scrolling	If both documents are opened side by side this button is clicked one sheet starts scrolling according to the other when the other is scrolled.
16	Reset Window Position	If both documents are opened side by side this button is clicked it enables both documents to be seen with equal size.
17	Save Workspace	Save current layout of all windows as a workspace so that it can be restored later.
18	Switch Windows ▼	Switch from one window to the other.
19	Macros ▼	Work with Macros

1.3.3.9 Team

Used to plan team projects, schedule tasks, assign resources, and track changes to data

To add or modify Team Foundation work items by using Microsoft Excel or Microsoft Project, you connect your worksheet or project plan to a team project. Establishing this connection binds the document to the selected Team Foundation Server (TFS), team project collection, and team project to exchange information. If you open Excel or Project from Team Explorer, the document is automatically bound to the team project.

If the team project is moved to a different team project collection in the same instance of TFS, your documents will automatically be reconnected. However, if the team project is moved to a different instance of TFS, you must manually reconnect your documents to the new server.

Requirements

To follow these procedures, you must be a member of the **Readers** group or have your **View work items in this node** permission set to **Allow**. See Permission.

To connect Excel or Project to a Team Project

1. Start with a blank worksheet or project plan. If you don't see the **Team** ribbon, see step 2.
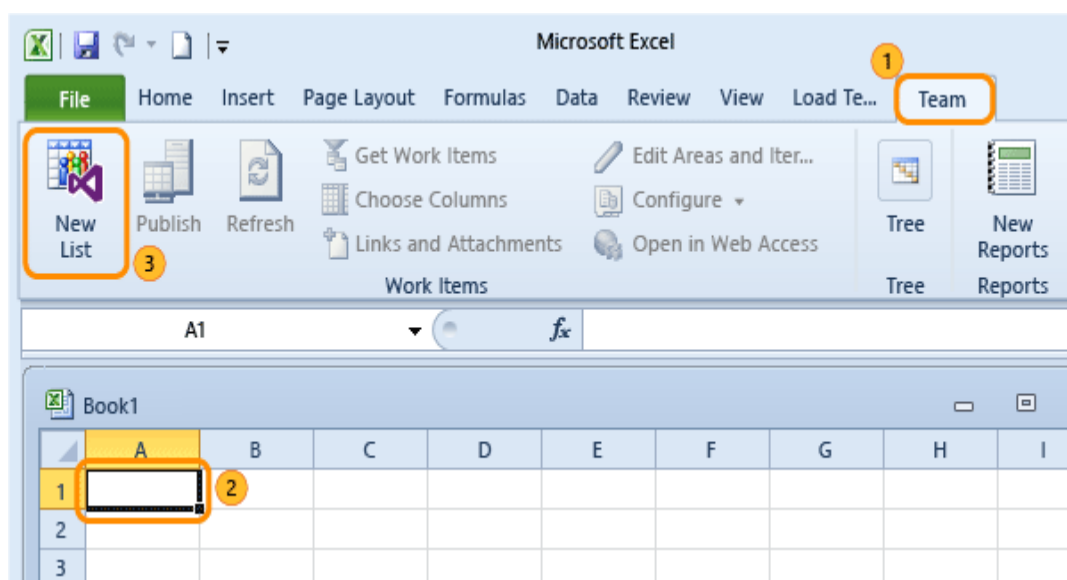
2. Connect to TFS and the team project. If you can't connect, get added as a team member.
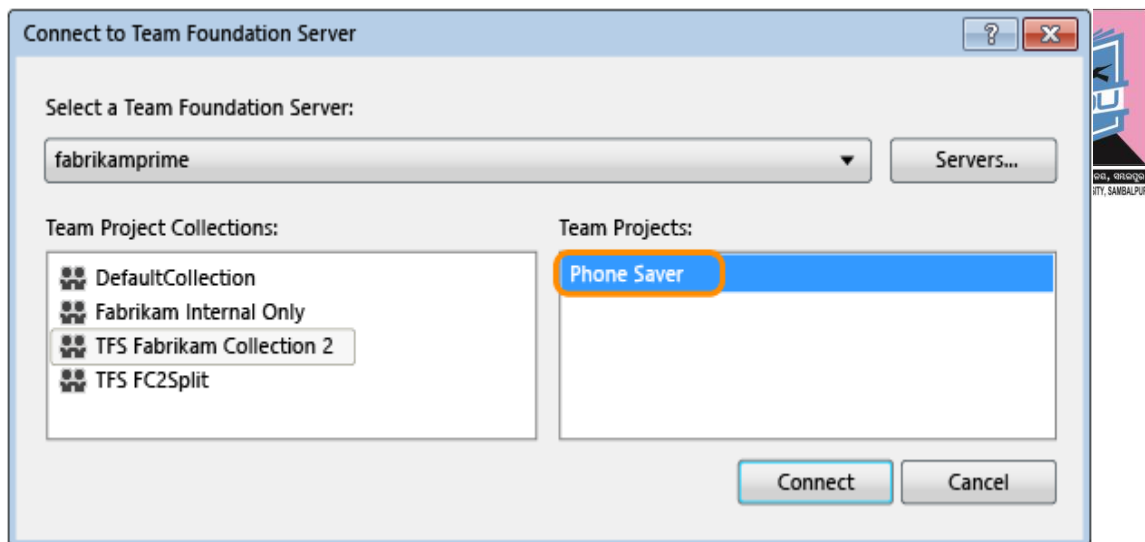
If it is your first time connecting to TFS from Excel or Project, you might have to add TFS to the list of recognized servers.
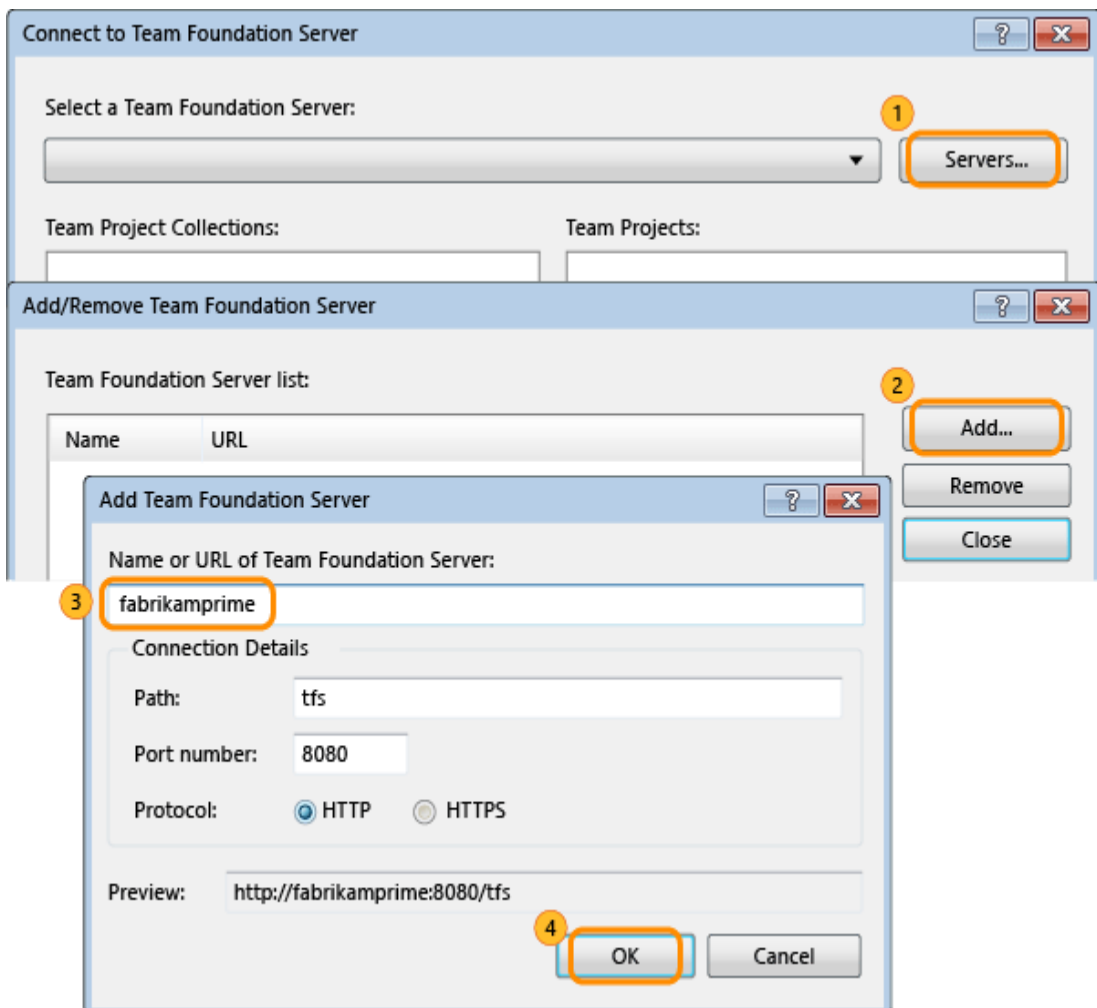
3.   Your worksheet or project plan is now bound to your team project. What this means is that you can add work items to the team

---

project from the Office document or add work items to the Office document from the team project.

Check your progress :-1

Q.1 What are the components of MS Excel Screen ?

A._____

_____

_____

1.4 Creating a new Excel workbook

Step -1
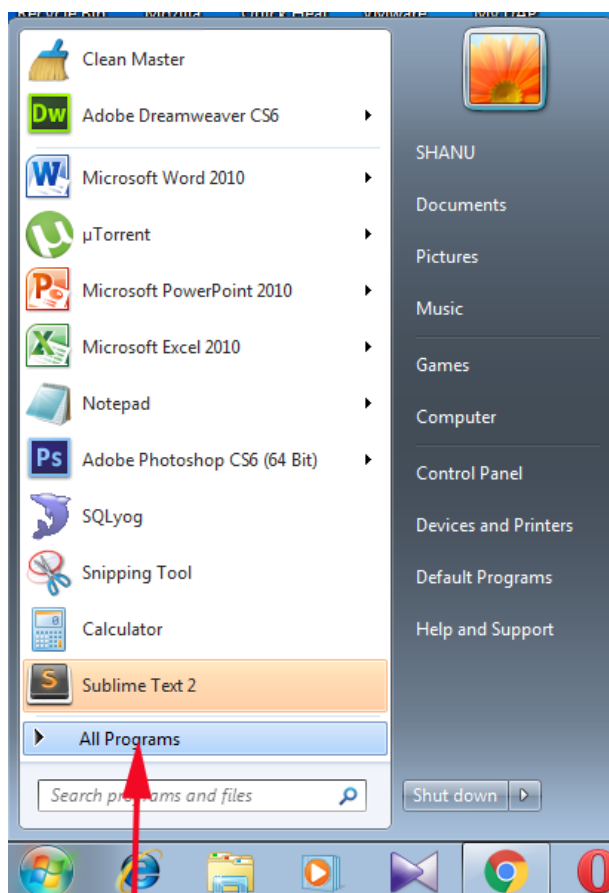
Step-2
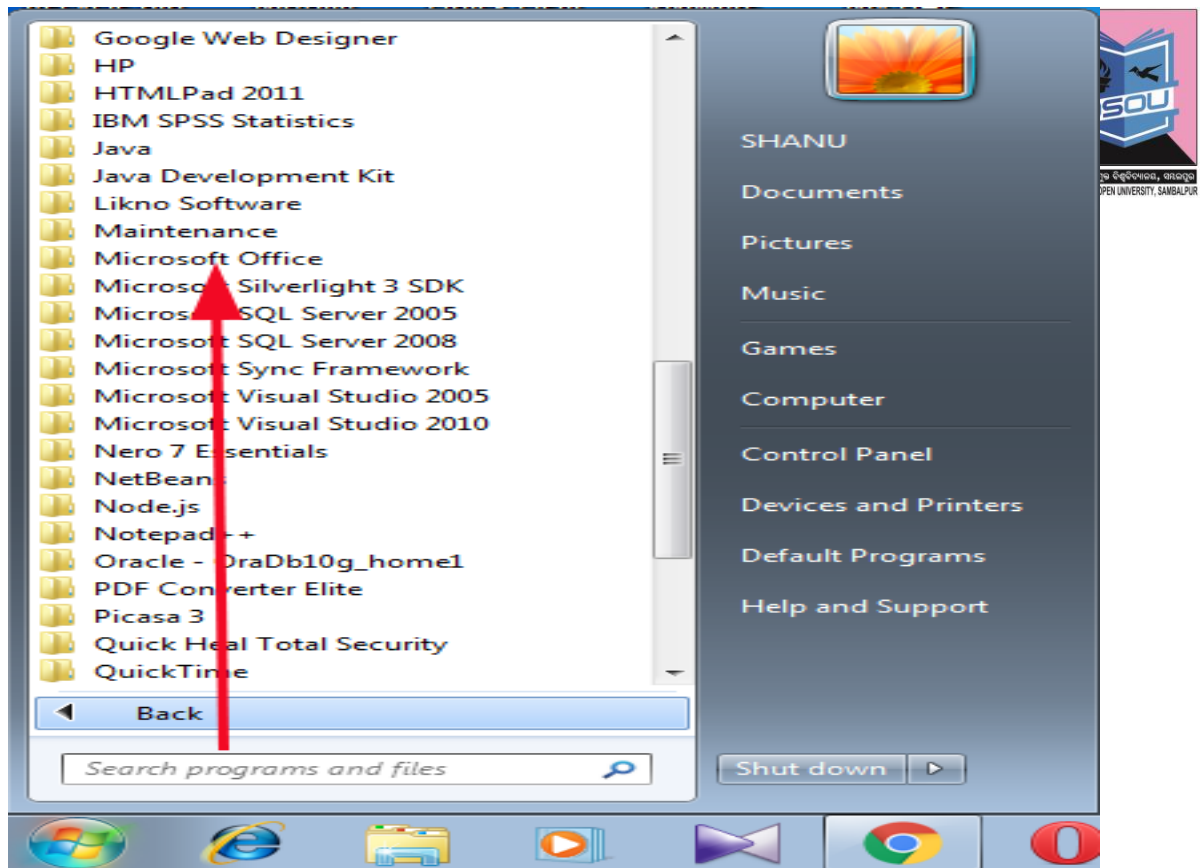
Step-3
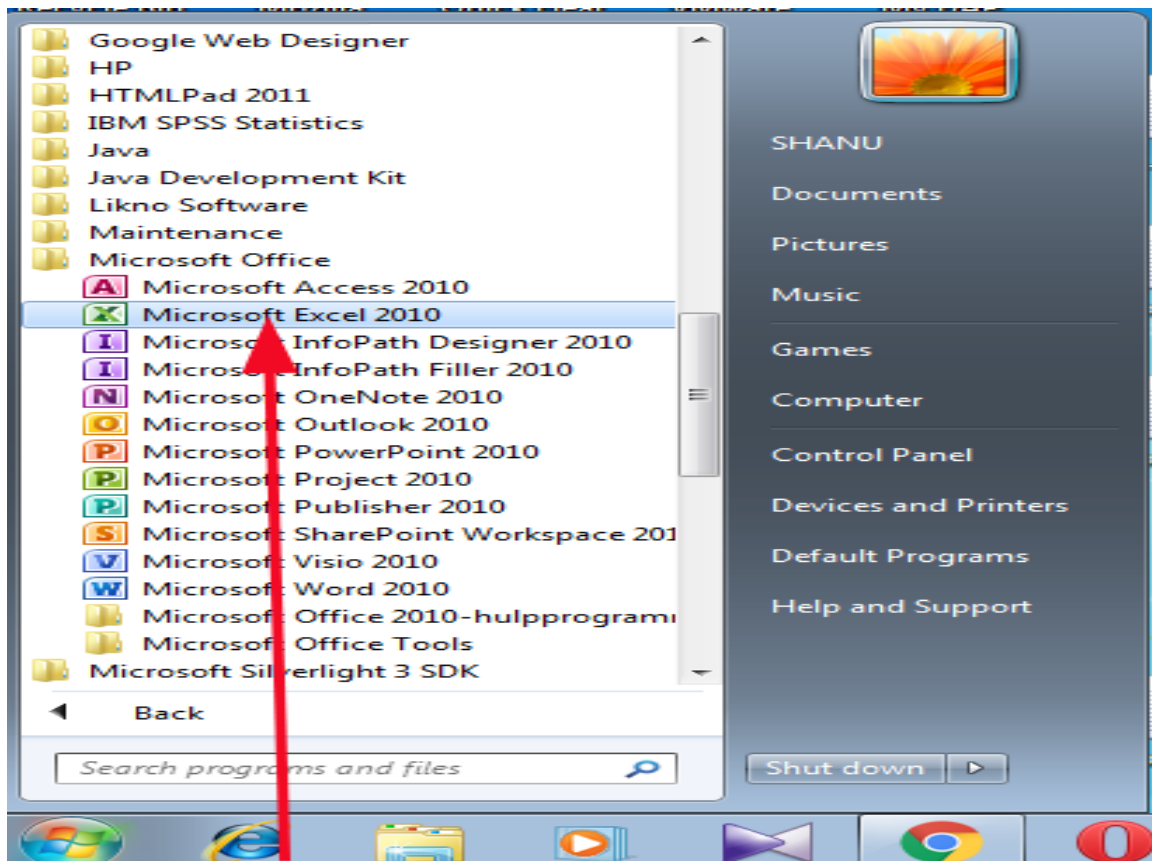
Step-4
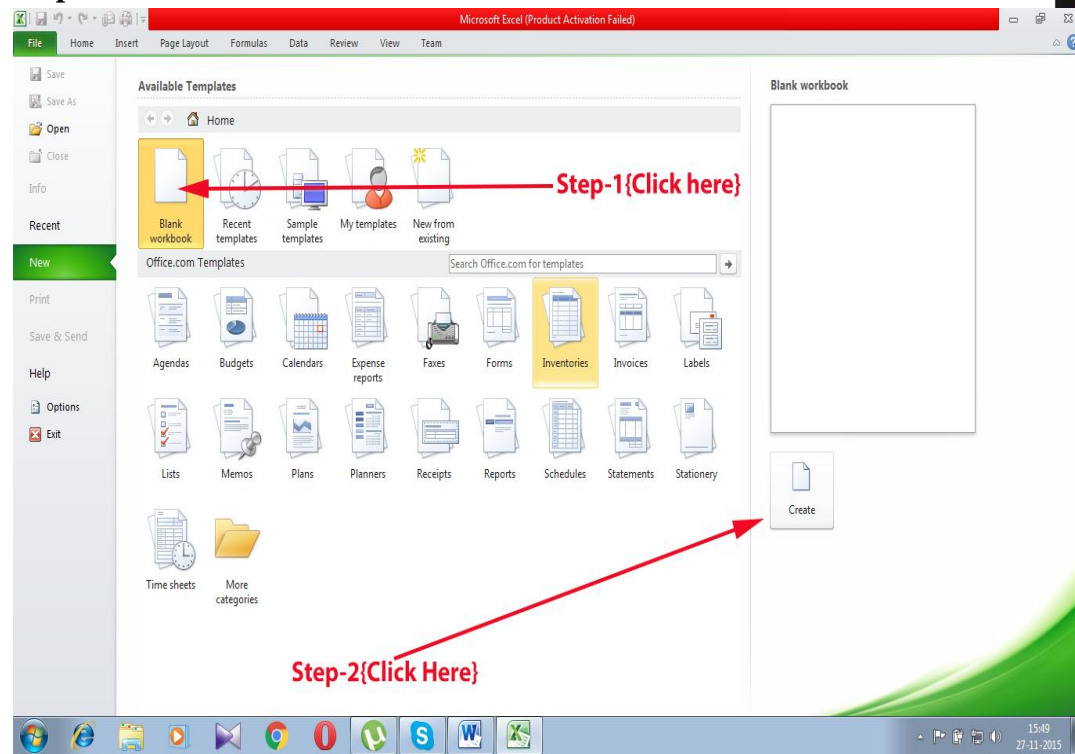
Step-5
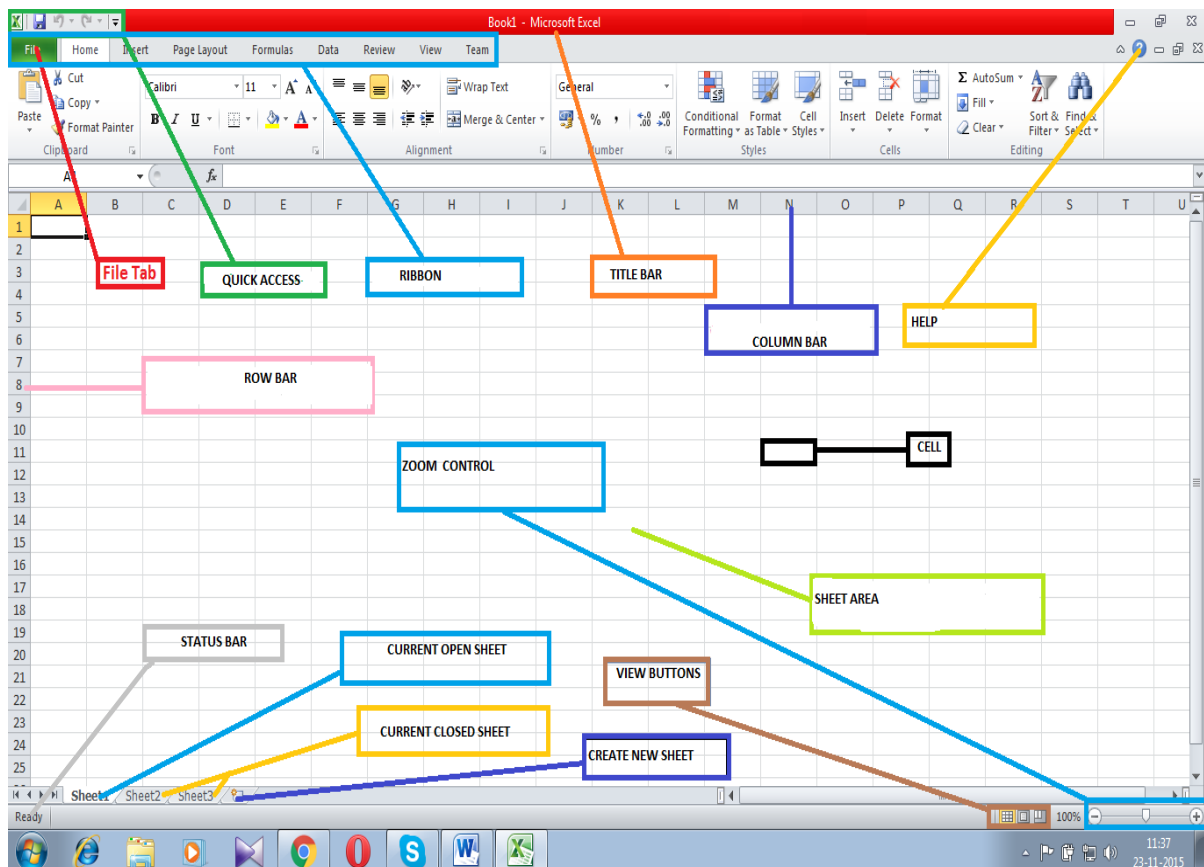
1.5 Working with Excel worksheet

By default Excel is comprised of 3 worksheets. To create a new excel worksheet follow the following steps.
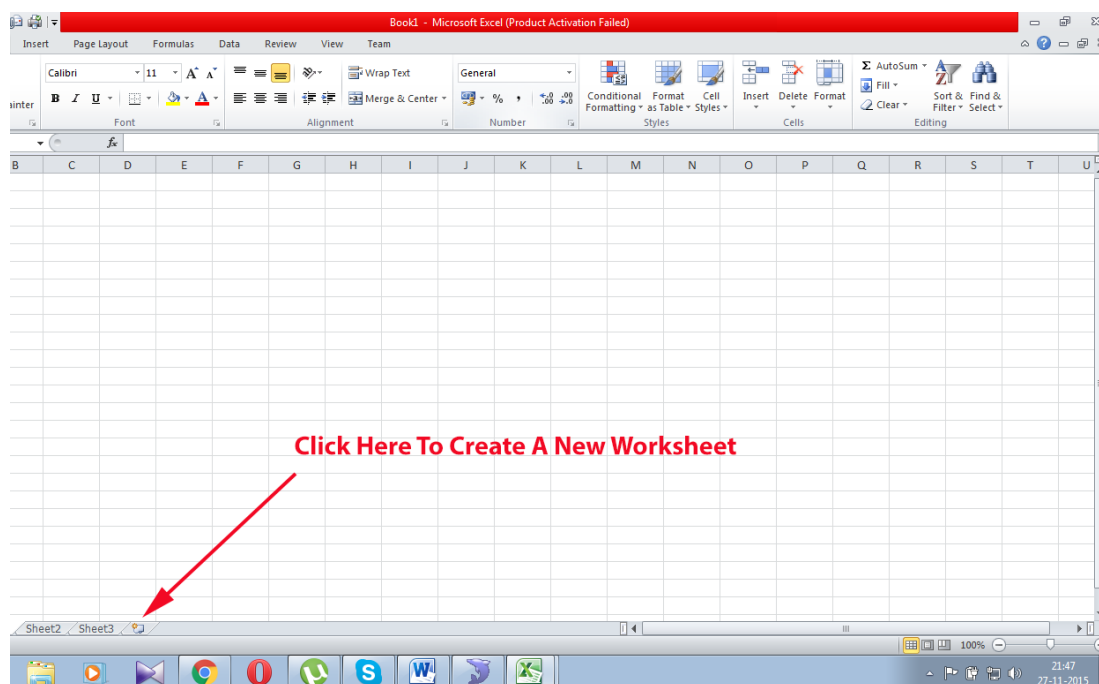
1.5.1 Entering values into worksheet

Open the sheet1 and start entering the values right away as shown below.

	A	B	C	D	E	F
1	Sl.No	Class	section	Name	Age	Gender
2	1	1	A	Ramu	4	M
3	2	1	A	Ajay	4	M
4	3	1	B	Arun	4	M
5	4	1	B	Shyama	4	F

1.5.2 Copy and paste values in the worksheet

To copy and paste the values in the worksheet follow the following steps

Step-1 :- Left click and drag the cells as shown below

	A	B	C	D	E	F
1	Sl.No	Class	section	Name	Age	Gender
2	1	1	A	Ramu	4	M
3	2	1	A	Ajay	4	M
4	3	1	B	Arun	4	M
5	4	1	B	Shyama	4	F

Step-2 :- Click on the [📋 Copy ▾] option

Step:-3:- Click the cell where you want tof paste

Step-4:- click the [📋 Paste] button

1.5.3   Find and replace values in the worksheet

Find and replace a value in MS Excel.

Step-1

Open the excel sheet as shown below

	A	B	C	D	E	F
1	Sl.No	Class	section	Name	Age	Gender
2	1	1	A	Ramu	4	M
3	2	1	A	Ajay	4	M
4	3	1	B	Arun	4	M
5	4	1	B	Shyama	4	F

Step-2
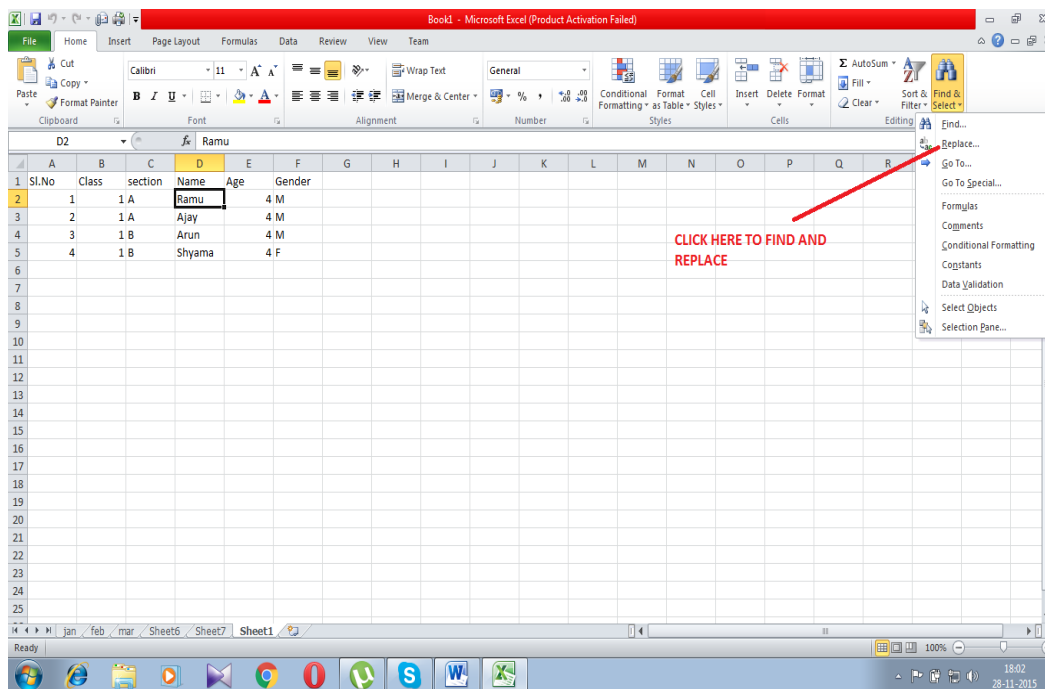
Step-3
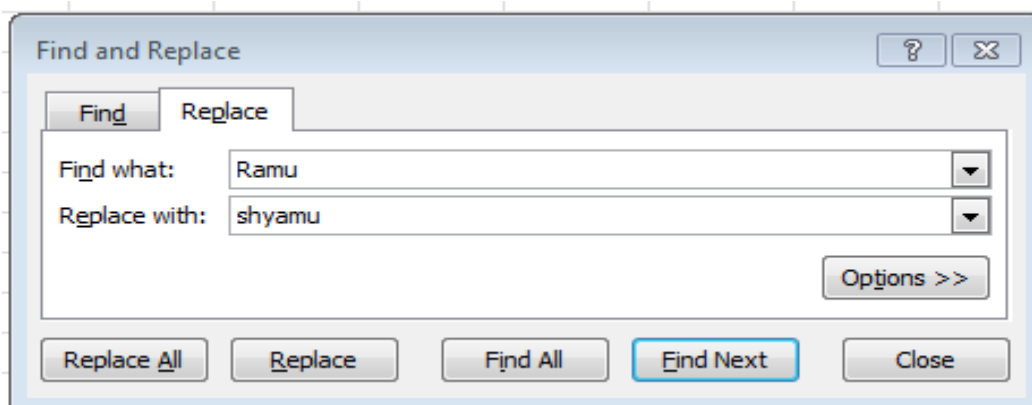
Step-4

Click on Replace button to replace the text

1.5.4 Formulas in worksheet

A formula performs calculations using numbers, addresses of cells and mathematical operators. Formulas are the bread and butter of spreadsheets. Without formulas, a spreadsheet would only contain a static never-changing set of numbers.

Formulas in worksheet are used to automatically calculate the value a cell based on the value of other cell or the values of other cells

Let us say in Cell A1 we store **10**

In Cell B1 we store **20**

We click on cell **C1**

And here we write the formula **=A1+B1** as shown below

	Clipboard			Font		
	SUM	▾	✕ ✓ ƒx	=A1+B1		
◢	A	B	C	D	E	
1	10	20	=A1+B1			

Press enter key

	C1	▾	ƒx	=A1+B1	
◢	A	B	C	D	E
1	10	20	30		

1.5.5   Delete a worksheet
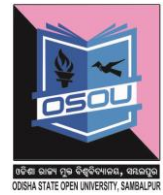
To**Delete** a worksheet **right click** on the **sheet tabsheet2** in the screen and click **delete** option
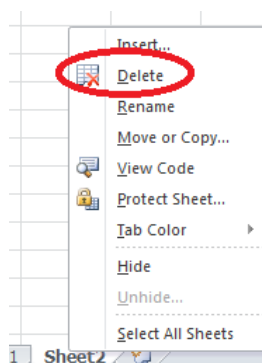
1.5.6   Data filtering

Data filtering is a process of filtering data in a spreadsheet basing on a set of conditions so that only certain data is displayed. Data filtering is used

when a lot of data is present in the worksheet and only specific records are to be seen based on the condition defined.

Step-1

Let us consider the column A as defined below

	A
1	Numbers
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	10

Step-2

Click on the cell A1 in which Numbers in written

Step-3

Click on the filter Button

Sort &
Filter ▼

A↓	Sort A to Z
Z↓	Sort Z to A
↓↑	Custom Sort...
▽=	Filter
▽	Clear
▽	Reapply

	A	
1	Numbe ▼	**Step-4**
2	1	
3	2	
4	3	
5	4	
6	5	
7	6	
8	7	
9	8	
10	9	
11	10	

Step-5
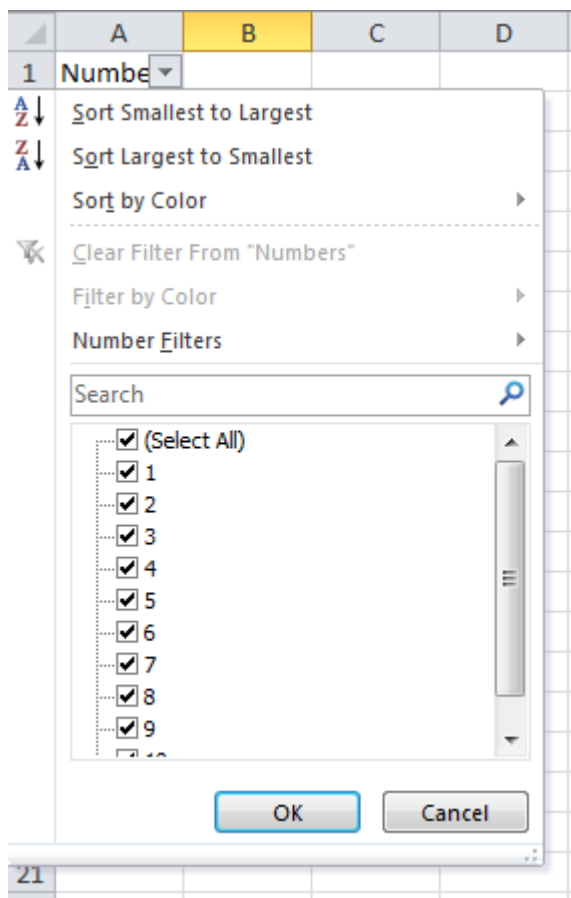
Step-6

Select the values that you want to see
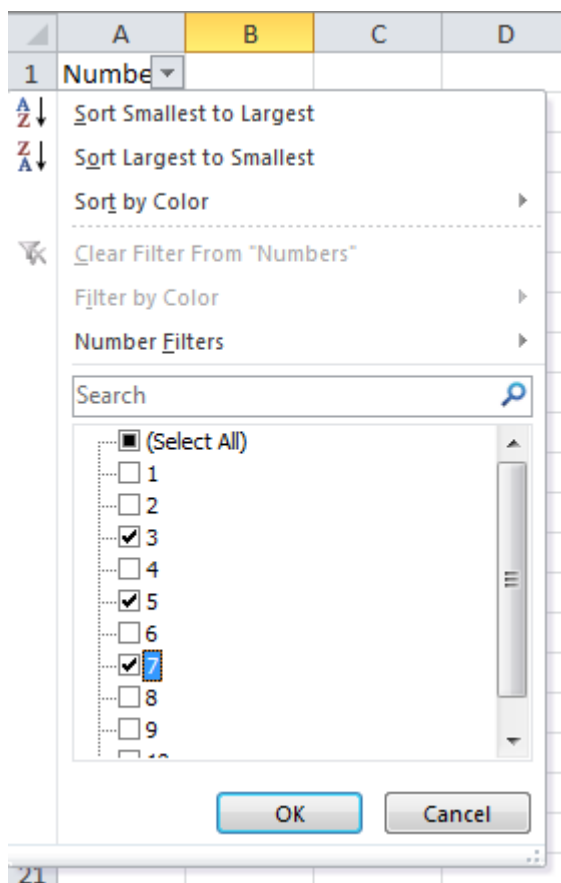
Press OK button and see the filtered result.

Step-7

1.5.7   Data Sorting

Data sorting is a process by which a collection of items is placed into an order such as ascending or descending.

Step-1

Select the cells as shown below

Step-2

Sort largest to smallest
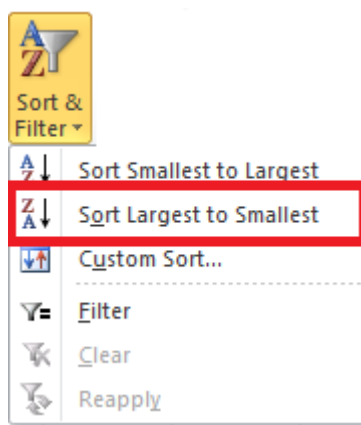
Step-3

1.5.8 Using ranges

A group of cells is called a range.

A1 :- A range that comprises of one row and one column.

A2:B2:-A range that is comprised of one row and 2 columns

The below range shows 3 Rows and 2 Columns

1.5.9 Data validation

Data validation is a feature allows you to set up certain rules that dictate what can be entered into a cell.

Process of Data Validation

Step-1

Select a cell

Step-2

Go to **Data Tab** on the Ribbon
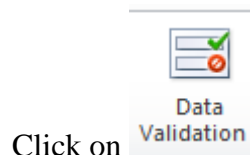
Click on
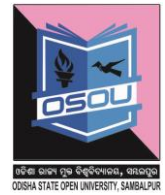
Step-3

Data Validation Setting
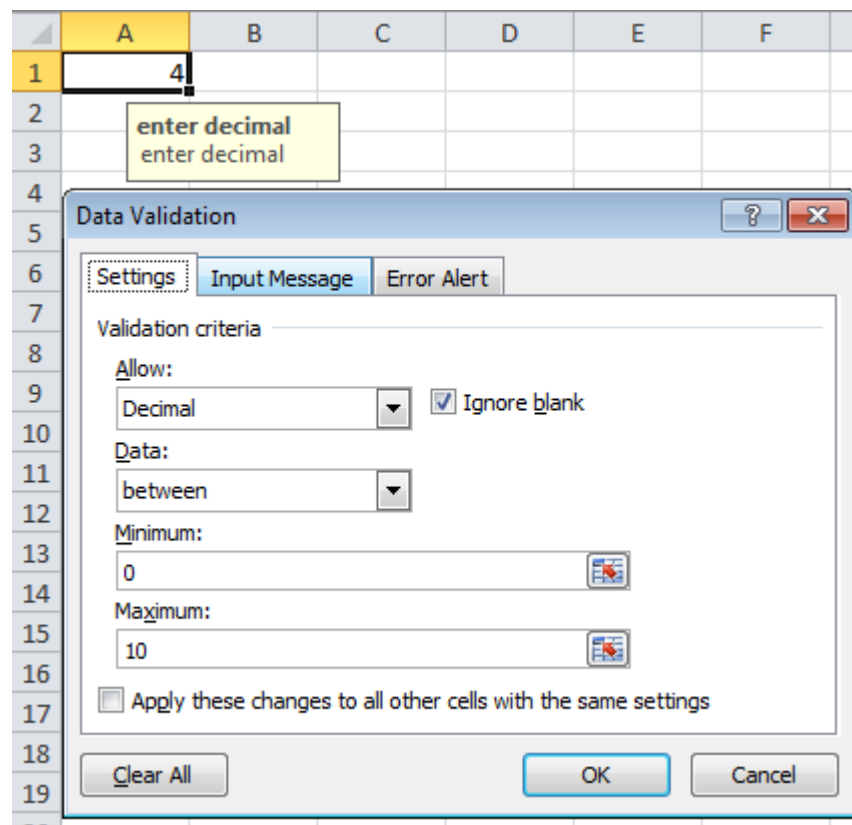
<u>Data validation input</u>
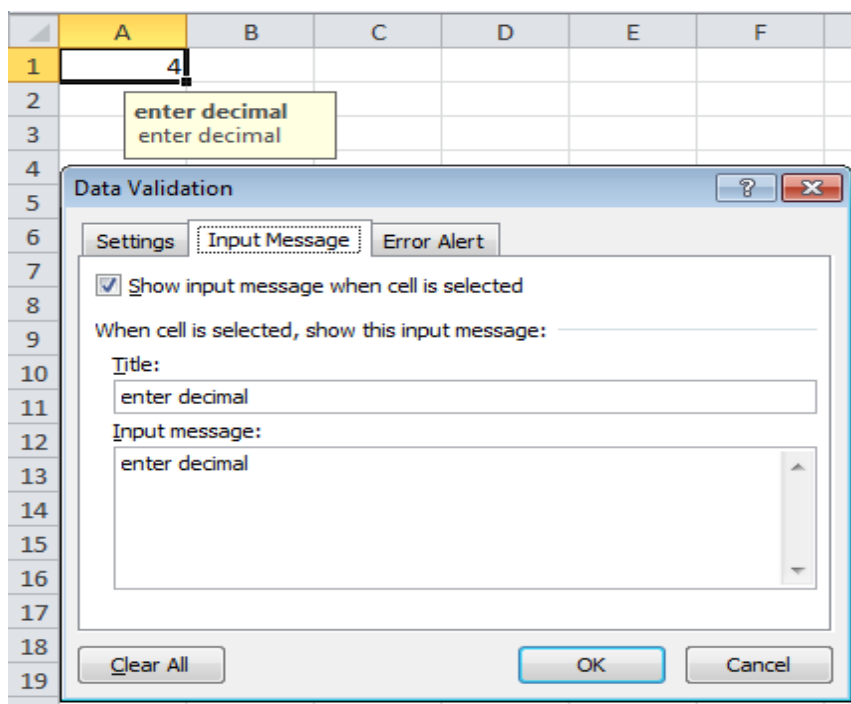
Data validation error
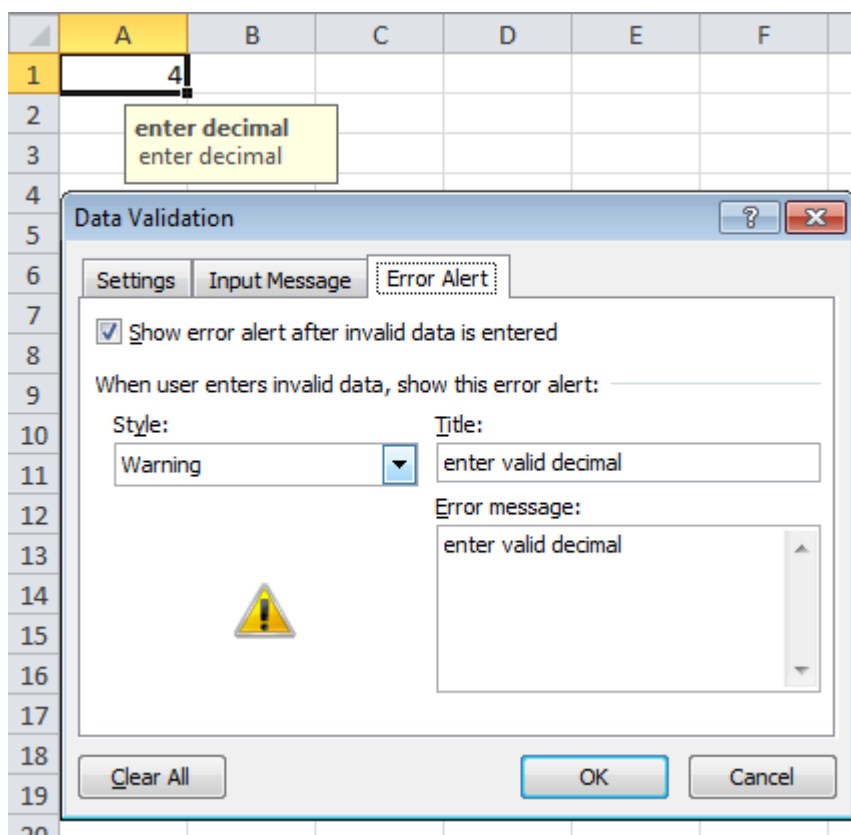
1.5.10 Using styles
Styles is a process of formatting a cell choosing a cell style
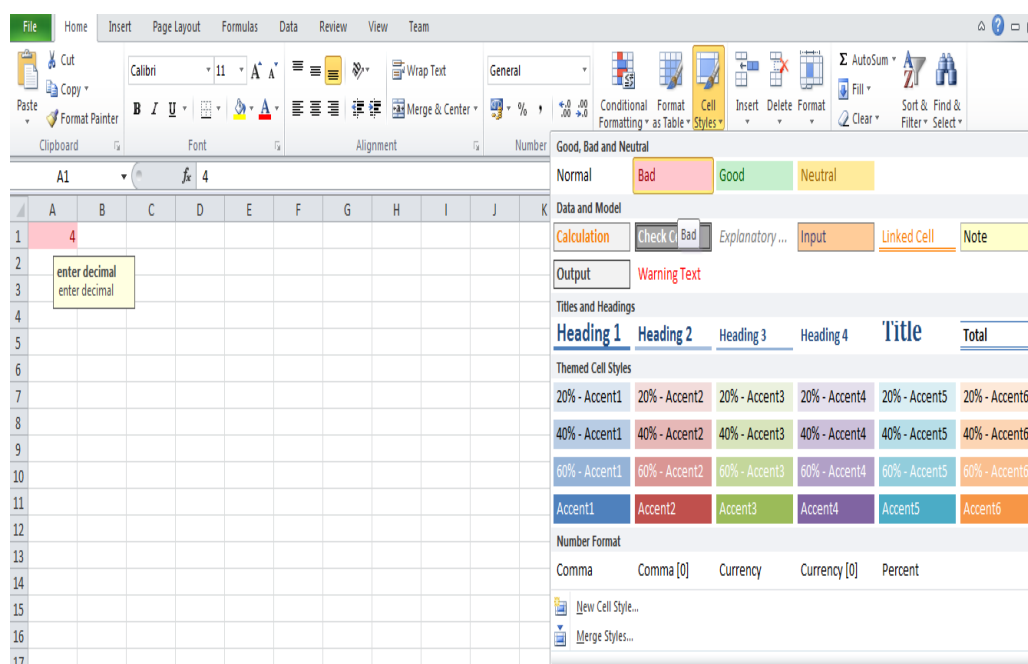
Right click on the cell and you get the following screen as below.
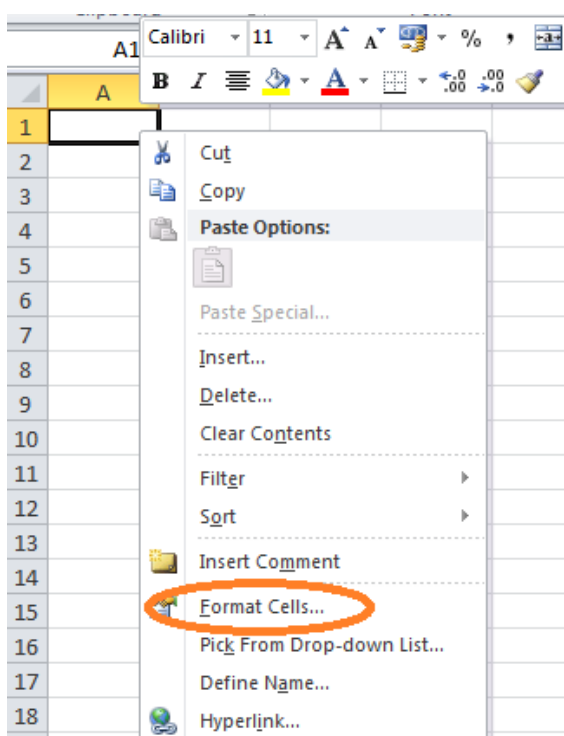
Click on format cells and you get the following screen
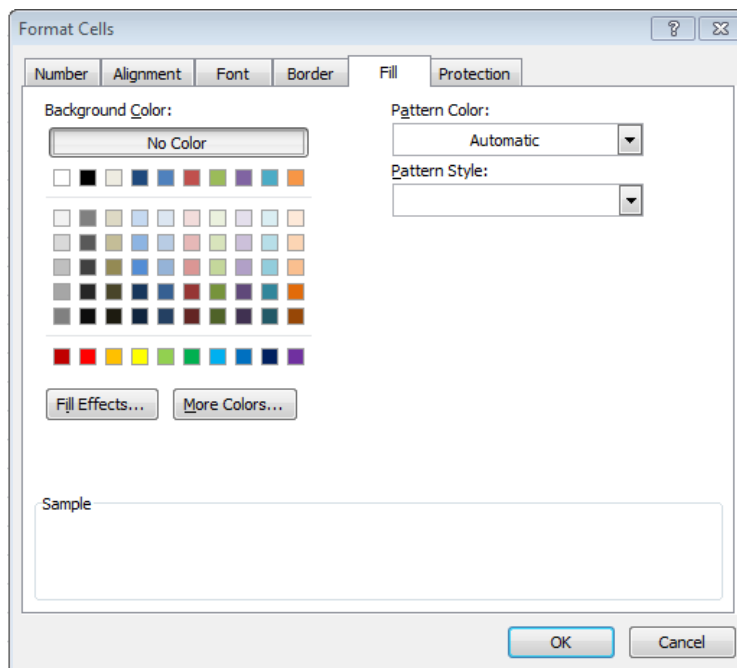
Style is comprised of the following 6 attributes which as defined as below

1. Number:-This attribute states what kind of data the cell is going to hold
   a. General
   b. Number
   c. Currency
   d. Accounting
   e. Date
   f. Time
   g. Percentage
   h. Fraction
   i. Scientific
   j. Text
   k. Special
   l. Custom
2. Alignment:-How the text is going to be aligned in the cell.
3. Font:-What is the font that is going to be used for the cell
4. Border :- How to set border around the cell
5. Fill:- how to fill the cell with various colours
6. Protection:- Protect the cell from other person tampering.

1.5.11 Using themes

A theme is an option by which the entire page design and layout can be changed.

To use themes click on **Page Layout tab** and then click on **themes** to get desired themes as shown below .
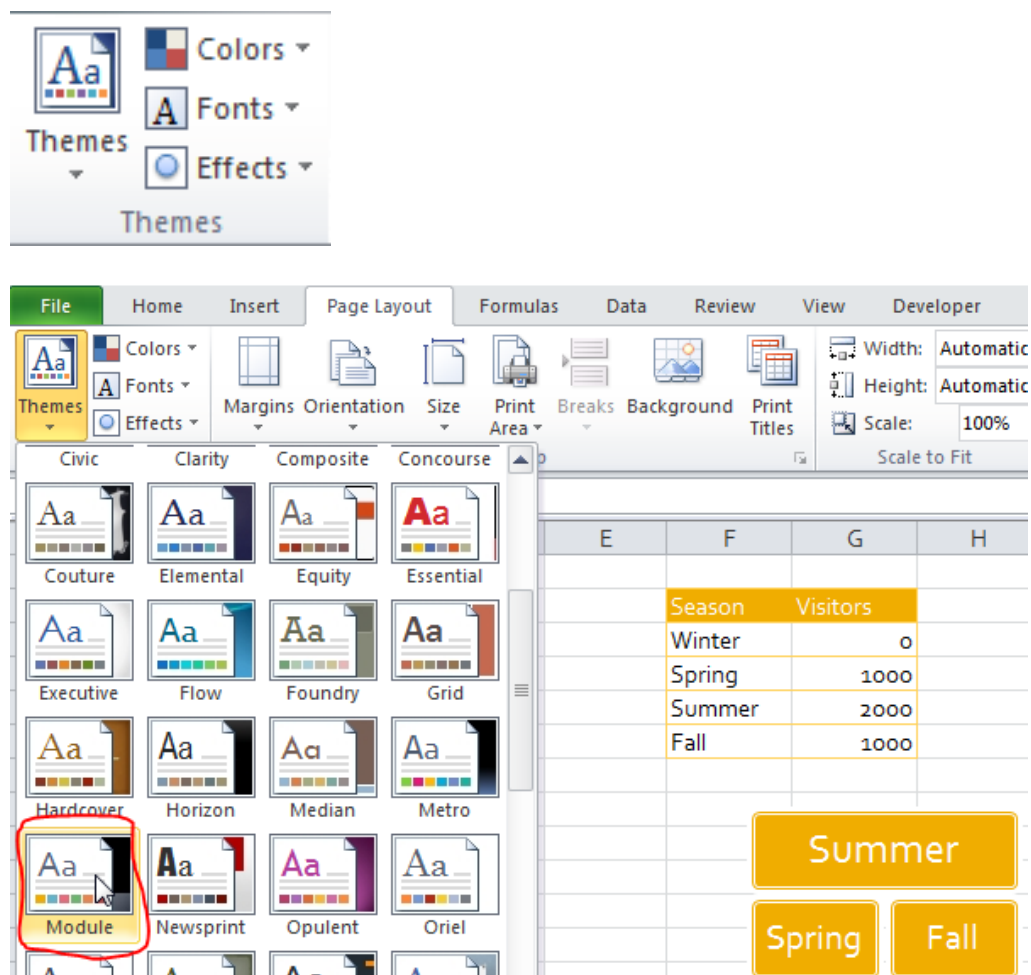
1.5.12 Using templates

An Excel template is a workbook by which other workbooks can be created.

Select any of the templates below and click on the create button
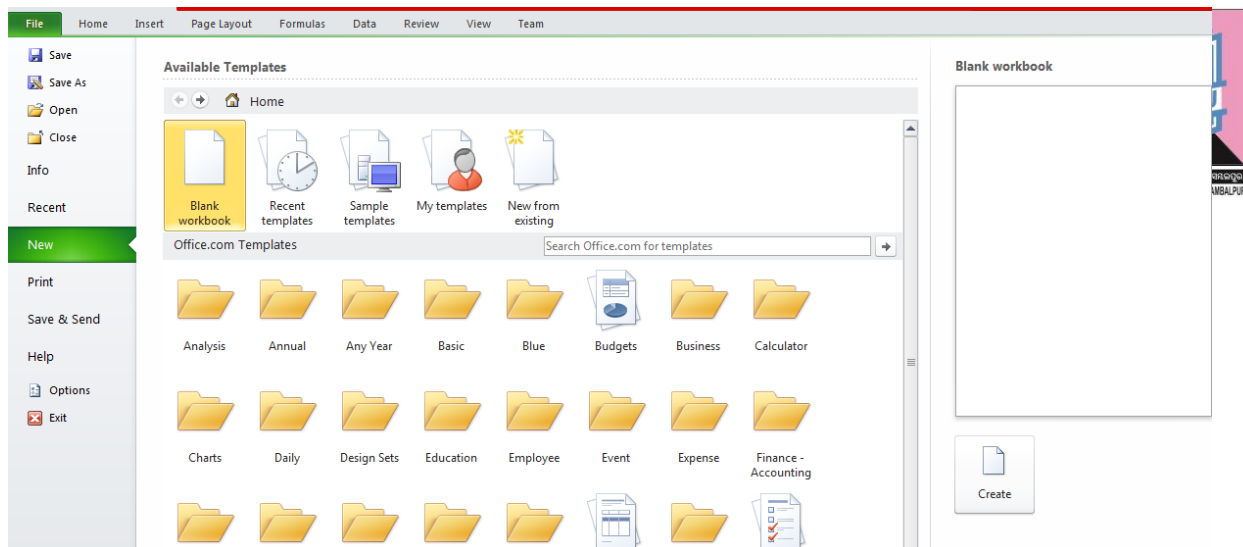
1.5.13 Using Macros

The macro option is used to simplify very complicated task which you repeat several times while working with the worksheet. It so to say works like a tape recorder that records all your operations you do to automate a worksheet .Now let us go practical.

Step -1

Using excel create the sheet as shown below and click on the cell h3 which is coloured in yellow

Step-2

Click on views tab and click on macro option as shown below
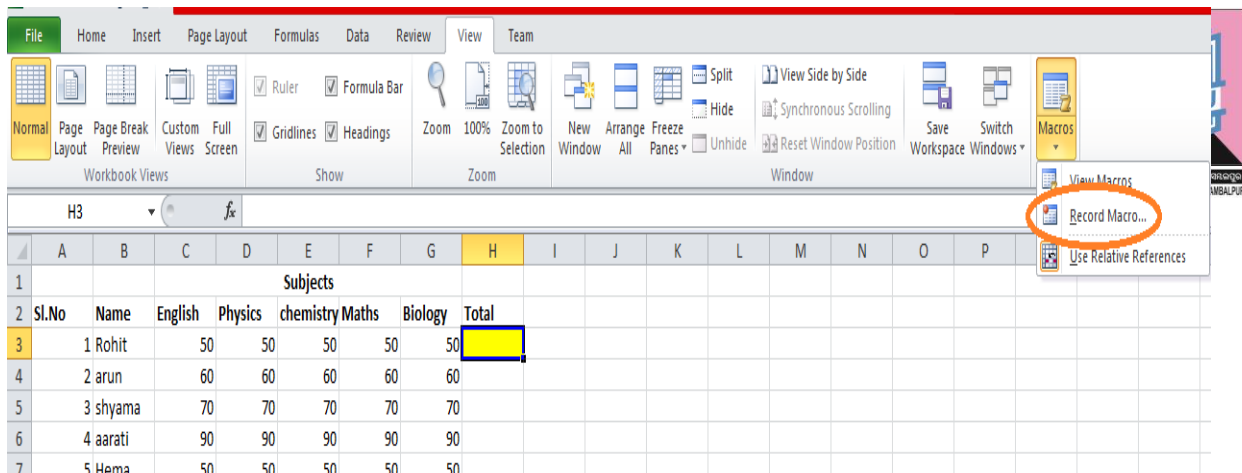
Step-3
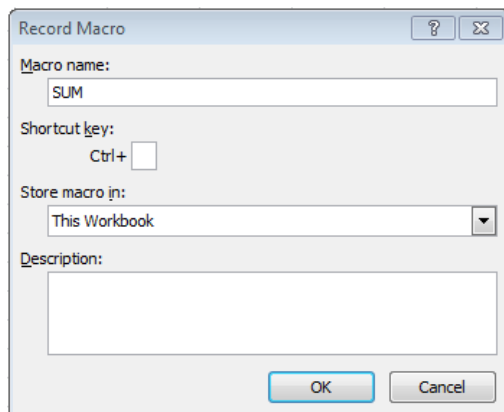
Step-4

Change the macro name .Here I have named it to SUM

	A	B	C	D	E	F	G	H
1					Subjects			
2	Sl.No	Name	English	Physics	chemistry	Maths	Biology	Total
3	1	Rohit	50	50	50	50	50	+F3+G3
4	2	arun	60	60	60	60	60	
5	3	shyama	70	70	70	70	70	
6	4	aarati	90	90	90	90	90	
7	5	Hema	50	50	50	50	50	

Step-5

Press enter key at the h3 cell which is coloured in yellow.

Step-6

Click on H4 which I have coloured in orange.

Step-7

Click on view macros under macros tab

Step-8

Placing the cursor on the orange cell click the run button

Step-9

View the Output as shown below

	A	B	C	D	E	F	G	H
1					Subjects			
2	Sl.No	Name	English	Physics	chemistry	Maths	Biology	Total
3	1	Rohit	50	50	50	50	50	250
4	2	arun	60	60	60	60	60	300
5	3	shyama	70	70	70	70	70	
6	4	aarati	90	90	90	90	90	
7	5	Hema	50	50	50	50	50	

Repeat steps 6 to 9 to calculate other cells as below

Step-10

The rest are shown in green which is completed

⊿	A	B	C	D	E	F	G	H
1					Subjects			
2	Sl.No	Name	English	Physics	chemistry	Maths	Biology	Total
3	1	Rohit	50	50	50	50	50	250
4	2	arun	60	60	60	60	60	300
5	3	shyama	70	70	70	70	70	350
6	4	aarati	90	90	90	90	90	450
7	5	Hema	50	50	50	50	50	250
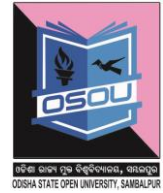
Check your progress 2

Q.1 What are formulas in worksheet ?

A._____

_____

Q.2what is data filtering?

A._____

_____

Q.3 what is data sorting?

A._____

_____

Q.4what is a range?

A._____

Q.5what is data validation?

A._____

_____

Q.6 What is a style ?

A._____

_____

Q.7What is a theme?

A._____

_____

Q.8 What is a template?

A._____

_____

Q.9What is Macros?

A._____

_____

1.6 References

1. Tutorialspoint.com
2. W3schools.com

1.7 Check your progress – possible answers

Check your progress – possible answers 1

A.1 The components of the MS Excel sheet are :

1. File Tab
2. Quick Access Tab
3. Ribbon Tab
4. Title Bar
5. Column bar
6. Help menu
7. Row Bar
8. Cell
9. Sheet Area
10. Zoom control
11. View buttons
12. Create New Sheet
13. Current Closed Sheet
14. Current Open Sheet
15. Status Bar

Check your progress – possible answers 2

A.1 A formula performs calculations using numbers, addresses of cells and mathematical operators.Formulas in worksheet are used to automatically calculate the value a cell based on the value of other cell or the values of other cells

Let us say in Cell A1 we store **10**

In Cell B1 we store **30**

We click on cell **C1**

And here we write the formula **=A1-B1** .The value of C1=20 .C1 changes with change in values of A1, B1.

A.2. Data filtering is a process of filtering data in a spreadsheet basing on a set of conditions so that only certain data is displayed. Data filtering is used when a lot of data is present in the worksheet and only specific records are to be seen based on the condition defined.

A.3.Data sorting is a process by which a collection of items is placed into an order such as ascending or descending.

A.4.A group of cells is called a range.

A1 :- A range that comprises of one row and one column.
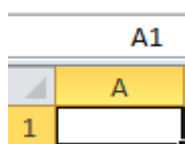
A2:B2:-A range that is comprised of one row and 2 columns

3R X 2 C :- It's a range of 3 rows and 2 columns

A.5 Styles is a process of formatting a cell choosing a cell style. Styles can be applied to a cell , row , selected rows and columns or a sheet.

A.6.Styles is a process of formatting a cell choosing a cell style. Style can be incorporated to cell, group of selected cells and a worksheet.

A.7. A theme is an option by which the entire page design and layout can be changed.

A.8. An Excel template is a workbook by which other workbooks can be created.

A.9. The macro option is used to simplify very complicated task which you repeat several times while working with the worksheet. The macros works like a tape recorder that records all operations one does to automate a worksheet.

Unit -2
Working with graphics

Learning objectives

After the Completion of this unit you should be able to know

1) What is a picture tool and how to use picture tool
2) What is a clip art and how to use clip art
3) What is a shape and how to use shape
4) What is a smart art and how to use smart art
5) What is a word art and how to use word art

Structure

2.1 Introduction

Apart of working with numbers and text a person needs to add graphics.
These graphics are picture, clip art, shape, smart art and word art.Graphics
can be inserted, edited, rotated, deleted from the worksheet.

2.2Definition

> Graphical tool:-A graphical tool used to insert,modify,update,
> delete, showpicture, clip art, shape, smart art ,word art, smart art.
> Picture:- A graphical tool used to insert,modify,update,delete, show
> visual representation of a person, object, or a scene
> Clip art:-A graphical tool that comprises of a collection of pictures
> or images that can be used to insert, modify, update, delete, show
> into a document or another program.
> Shape :-A graphical tools that is used insert, edit, update delete
> graphicalobjectsof various dimensions.
> Smart art :- A graphical tool used to create simple and effective
> diagrams
> Word art :-WordArt is a text styling utility available in Microsoft
> Office applications such as Microsoft Word, Excel, PowerPoint and
> Publisher which helps in providing special effects like outlines,

gradient glow, shadow, bevel, textures and 3-D effects to the text, effects which are unavailable in the standard font formatting tools.

2.3 Graphics

The various graphics that can be used in MS Excel 2010 are

Picture   **Clip Art**   **Shapes**   **SmartArt**   **Word art**
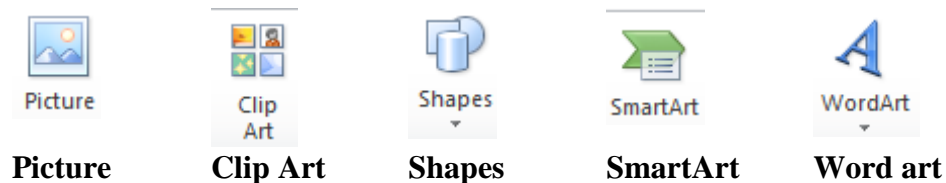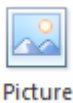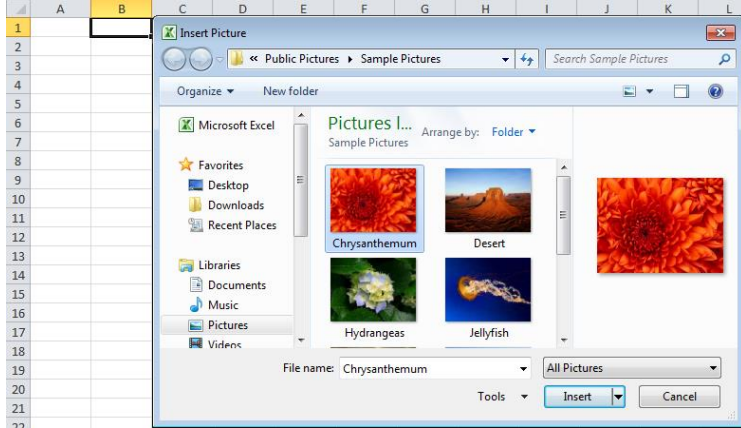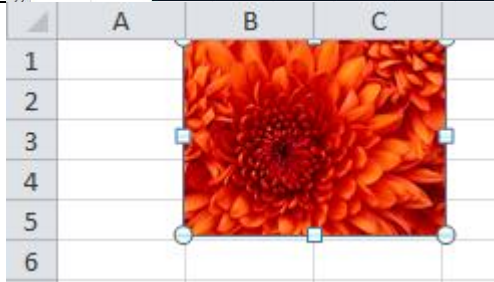
2.3.1 Picture
The Picture option is used to
1. Add a picture
2. Modify the existing picture
3. Delete the existing Picture

2.3.1.1 Add a picture

Step-1	Place the cursor on the cell where you want to add the picture say **B1**
Step-2	Click on the insert tab and click on
Step-3	Click on the insert button shown in the picture to insert.
Step-4	View the inserted picture in cell B2 after resizing

	sing,	

2.3.1.2 Modify and delete existing picture

Step-1	Select the picture that you want to modify	
Step-2	Make Corrections As shown Below	
1	Remove Background	Remove background of the picture
2	Corrections	Make corrections in the picture
3	Color	Change the colour of the picture
4	Artistic Effects	Bring Artistic Effects on the picture
5	Compress Pictures	Compress the picture
6	Change Picture	Change the picture from one picture to the other.
7	Reset Picture	Reset picture
8		Change picture style.
9	Picture Border	Used To change Picture border
10	Picture Effects	Used to change picture effects.
11	Picture Layout	Used to change the picture layout and change to smart art graphics
13	Selection Pane	Selection pane Used to hide or show image.
14	Group / Group Regroup Ungroup	Group :- Used to group 2 images into 1 Regroup :- Regroup 2 images into 1 if they were ungrouped Ungroup :- Ungroup group images

15		Used to crop an image removong unwanted scenes from the image.
16	To delete image	Select image and press del key on the keyboard.
17	Align	Align a picture left ,right,top,bottom ,snap to grid .Used in handling multiple images
17	Bring Forward	Used in multiple images. To use this option add 4 images on the worksheet side by side. Select all the images by pressing control key with the left finger and left clicking the images with the mouse with the right hand. Select align left option.Click bring forward option to bring an image behind another image to the front.
18	Send Backward	Used in multiple images. To use this option add 4 images on the worksheet side by side. Select all the images by pressing control key with the left finger and left clicking the images with the mouse with the right hand. Select align left option.Click bring forward option to bring an image behind another image to send behind.

2.3.1.3Working with clip art

The Clip art option is used to

1.Add a Clip art.

2. Modify the existing clip art

3.Delete the existing clip art
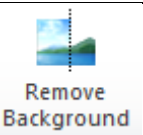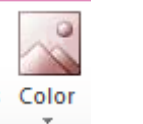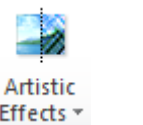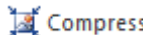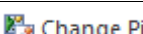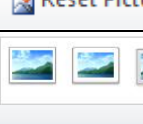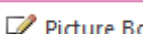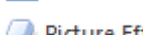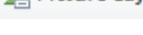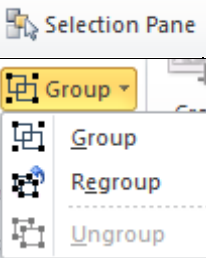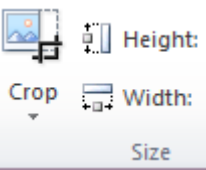
2.3.1.3.1   Add a clip art

Step-1	Place the cursor on the cell where you want to add the clipart say **B1**
Step-2	Click on the insert tab and click on

Step-3	Type the image you want to insert. Here I type cow and get the list of image	
Step-4	Click on the image to get the image on the cell.	

2.3.1.3.2 Modify and delete existing clip art

Step-1	Select the picture that you want to modify	
Step-2	Make Corrections As shown Below	

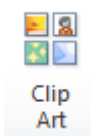| 1	Remove Background	Remove background of the picture
2	Corrections	Make corrections in the picture
3	Color	Change the colour of the picture
4	Artistic Effects ▾	Bring Artistic Effects on the picture
5	Compress Picture	Compress the picture
6	Change Picture	Change the picture from one picture to the other.
7	Reset Picture ▾	Reset picture
8		Change picture style.
9	Picture Border ▾	Used To change Picture border
10	Picture Effects ▾	Used to change picture effects.
11	Picture Layout ▾	Used to change the picture layout and change to smart art graphics
13	Selection Pane	Selection pane Used to hide or show image.
14	Group ▾ / Group / Regroup / Ungroup	Group :- Used to group 2 images into 1 Regroup :- Regroup 2 images into 1 if they were ungrouped Ungroup :- Ungroup group images
15	Crop / Height / Width / Size	Used to crop an image removong unwanted scenes from the image.
16	To delete image	Select image and press del key on the keyboard.
17	Align	Align a picture left ,right,top,bottom ,snap to grid .Used in handling multiple images
17	Bring Forward	Used in multiple images. To use this option add 4 images on the worksheet side by side. Select all the images by pressing control key with the left finger and left clicking the images with the mouse with the right hand. Select align left option.Click bring forward option to bring an image behind another image to the

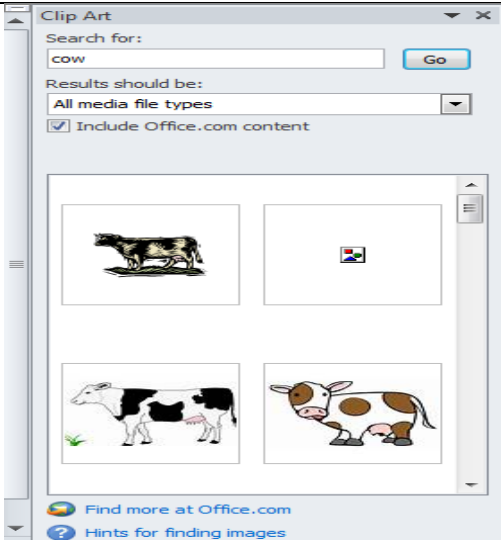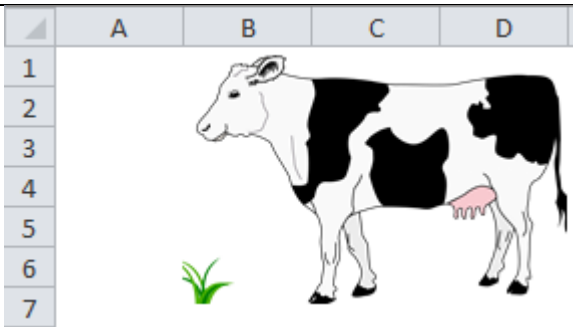|		front.
18	Send Backward	Used in multiple images. To use this option add 4 images on the worksheet side by side. Select all the images by pressing control key with the left finger and left clicking the images with the mouse with the right hand. Select align left option.Click bring forward option to bring an image behind another image to send behind.

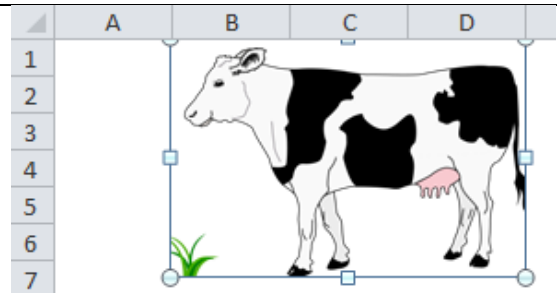## 2.3.1.4 Working with shapes
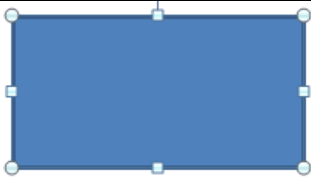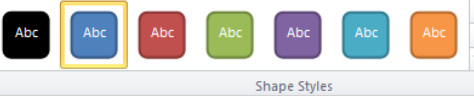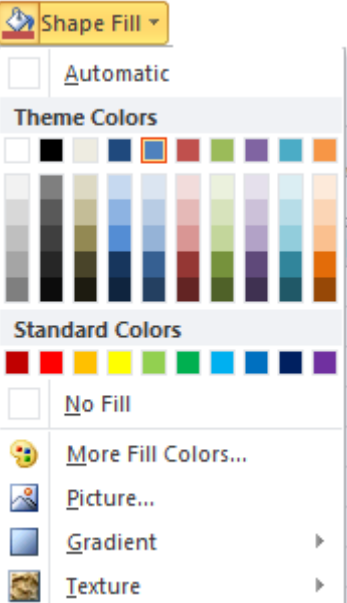
The Shapes   option is used to
1.Add a shape.
2. Modify the existing shape.
3.Delete the existing shape.
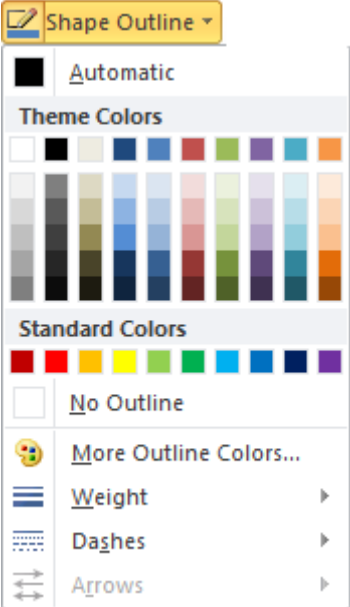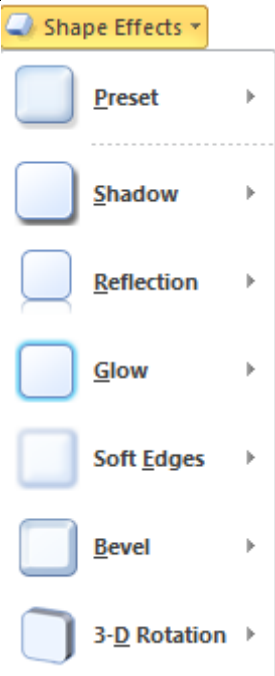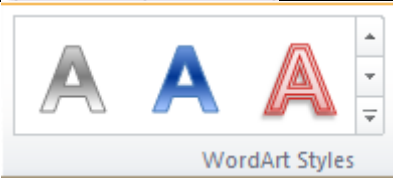
2.3.1.4.1 Add a shape

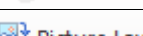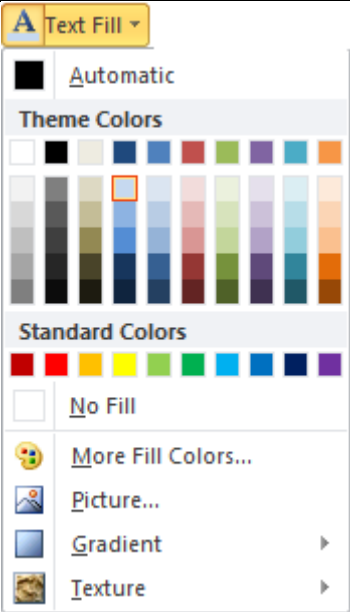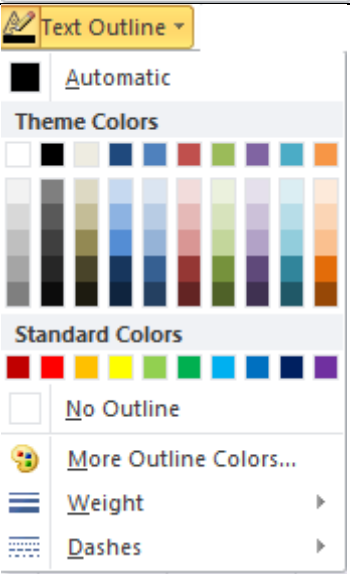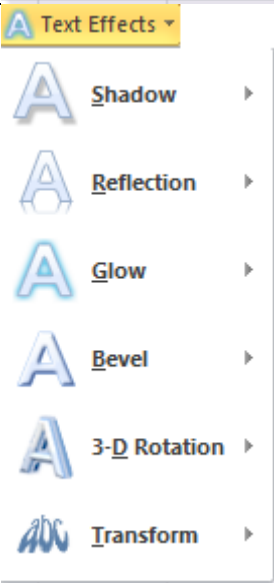| Step-1	Place the cursor on the cell where you want to add the clipart say **B1**
Step-2	Click on the insert tab and click on
Step-3	Select the shape that you want to enter
Step-4	
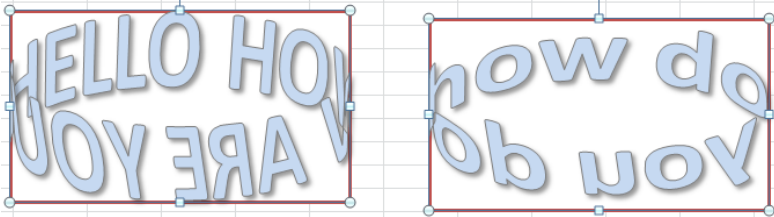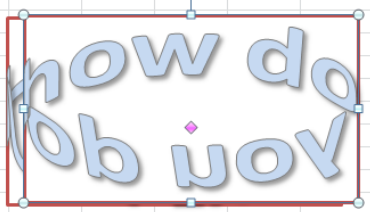
2.3.1.4.2 Modify and delete the existing shape
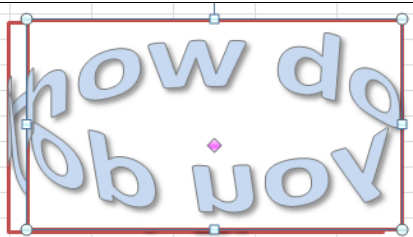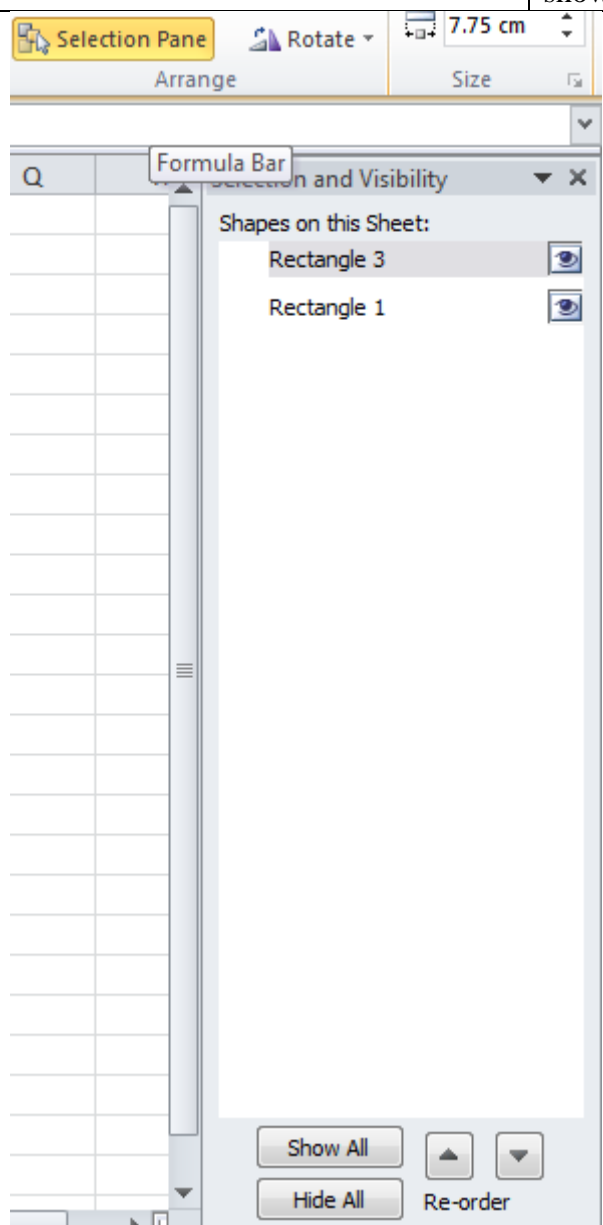
Step-1	Select the shape that you want to modify	
Step-2	Make Corrections As shown Below	
1	To Insert Text	To insert text click on the text and start typing. Shanu is a good boy
2	Edit Shape ▾	This option is used to edit the shape
3	Text Box	This option is used to insert a text box inside the shape
4	Abc Abc Abc Abc Abc Abc Abc Shape Styles	Used To Change The Shape Style
5	Shape Fill ▾ Automatic Theme Colors Standard Colors No Fill More Fill Colors... Picture... Gradient Texture	This option is used to change the spale fill of the object drawn on the sheet

6	Shape Outline ▾ ■ Automatic **Theme Colors** **Standard Colors** No Outline More Outline Colors... Weight ▸ Dashes ▸ Arrows ▸	Create a shape outline of the object
	Shape Effects ▾ Preset ▸ Shadow ▸ Reflection ▸ Glow ▸ Soft Edges ▸ Bevel ▸ 3-D Rotation ▸	Insert shape effects to the shape object created.
7	A A A WordArt Styles	Used to change the word art style as shown below HELLO HOW ARE YOU

8	**A Text Fill ▾** ■ Automatic **Theme Colors** **Standard Colors** □ No Fill 🎨 More Fill Colors... 🖼 Picture... ▢ Gradient ▸ 🖼 Texture ▸	Change the text fill of the shape object inserted.
9	**✐ Text Outline ▾** ■ Automatic **Theme Colors** **Standard Colors** □ No Outline 🎨 More Outline Colors... ≡ Weight ▸ ⋯ Dashes ▸	Used To change Picture border
10	**A Text Effects ▾** A Shadow ▸ A Reflection ▸ A Glow ▸ A Bevel ▸ A 3-D Rotation ▸ abc Transform ▸	Used to change the text effects as shown below HELLO HOW ARE YOU

11	Bring Forward ▼	Bring the selected object forward so that it is hidden by fewer objects that are in front of it.
	Send Backward ▼	Sent the selected object backward so that it is hidden by objects that are in front of it.
	Consider 2 text objects .One containing **HELLO HOW ARE YOU** and the other containing **HOW DO YOU DO**.	
	Stack **HOW DO YOU DO** over **HELLO HOW ARE YOU**	
	Now Click on ▣ Send Backward ▼ after clicking how do you do you find HELLO HOW ARE YOU on the top and HOW DO YOU DO behind	
	Now select the oject that is behind and click bring forward as shown below	
	Now click on ▣ Bring Forward ▼	

13	Selection Pane	Selection pane Used to hide or show image. Secquence objects as shown below
14	Align ▾	The align option is used to align multile objects that you select by pressing the

ctl and left mouse click as shown below and click on align left as shown below.

Below shows neatly stacked objects one over the other with **left align option**

15		Group :- Used to group 2 shapes into 1 Regroup :- Regroup 2 shapes into 1 if they were ungrouped Ungroup :- Ungroup group shapes
16		Used to crop an image removong unwanted scenes from the shape.
17	**To delete shape**	Select image and press del key on the keyboard.
18	Rotate	Rotate a shape.

2.3.1.5 Working with Smart Art
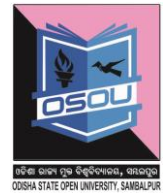
Step-1
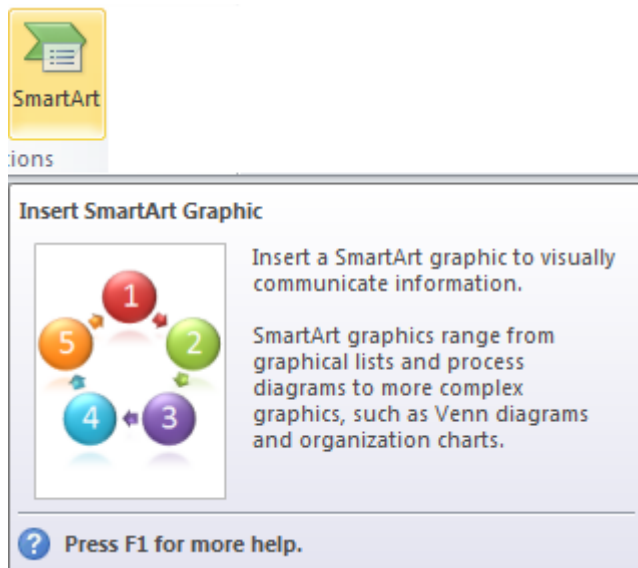
Step-2
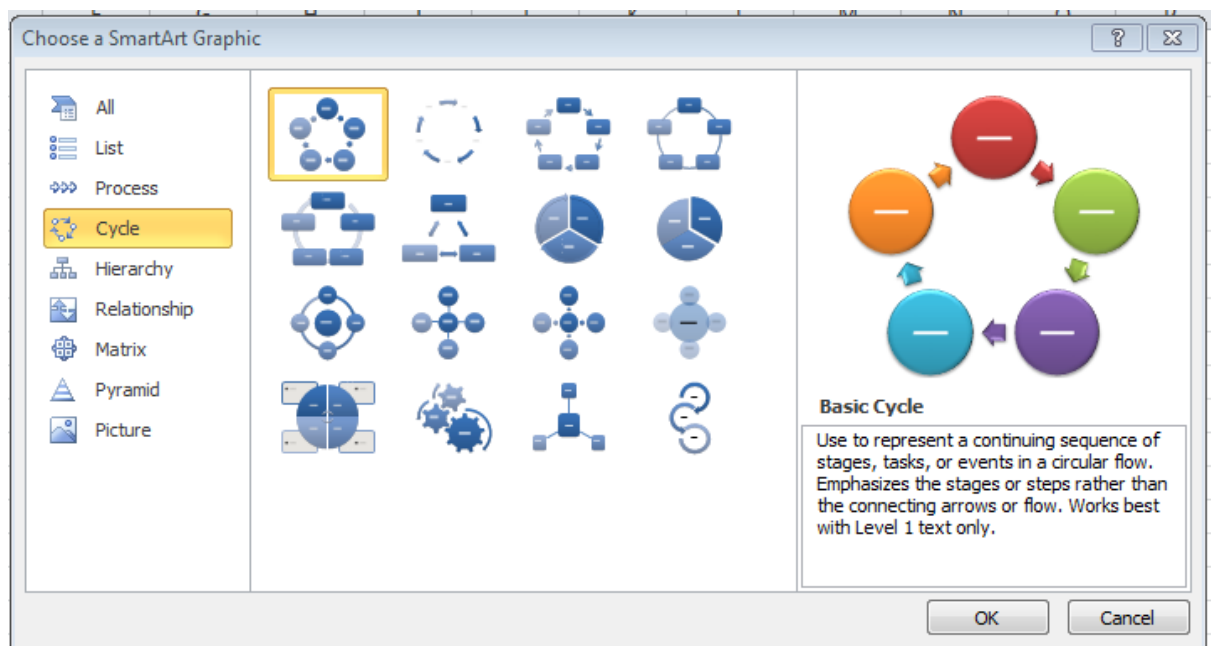
Step-3
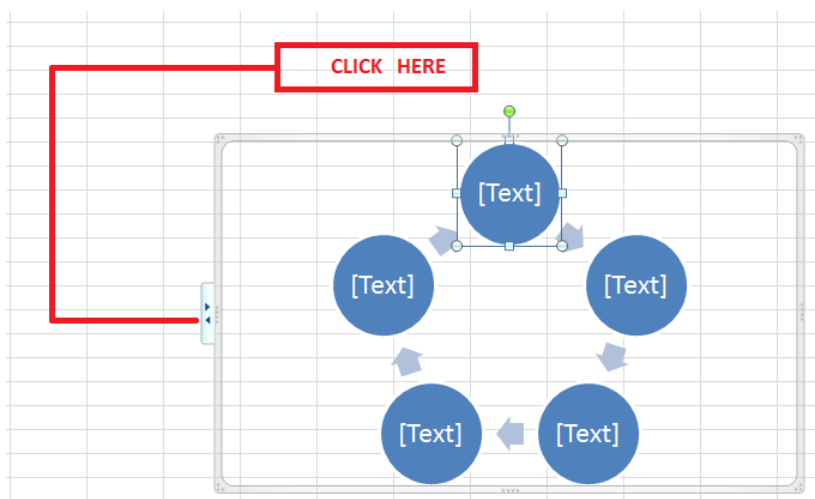
Step-4
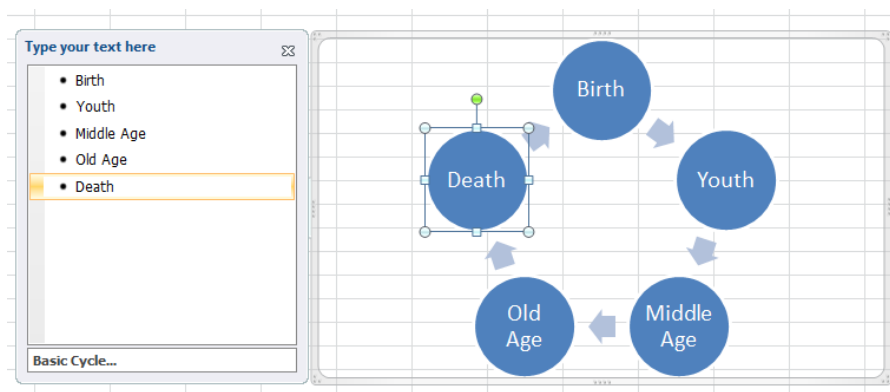
Step-5
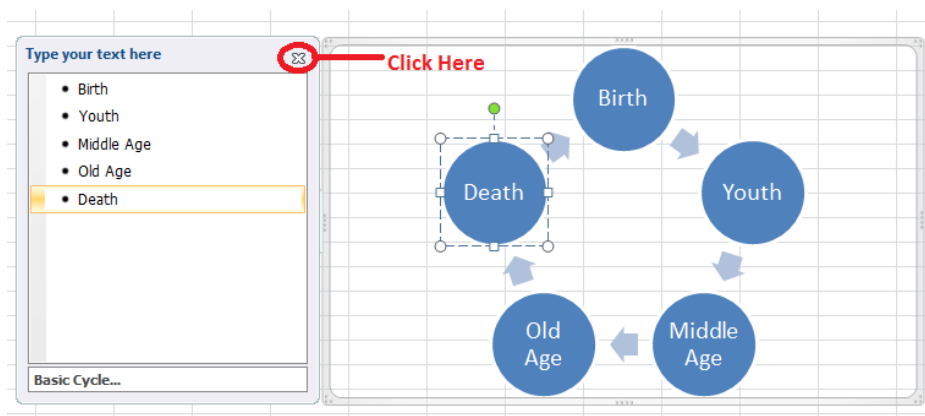
Step-6
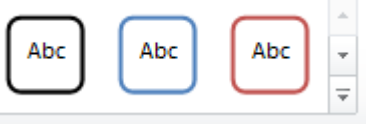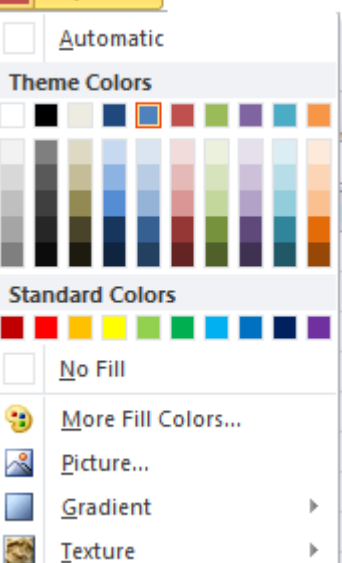
Click
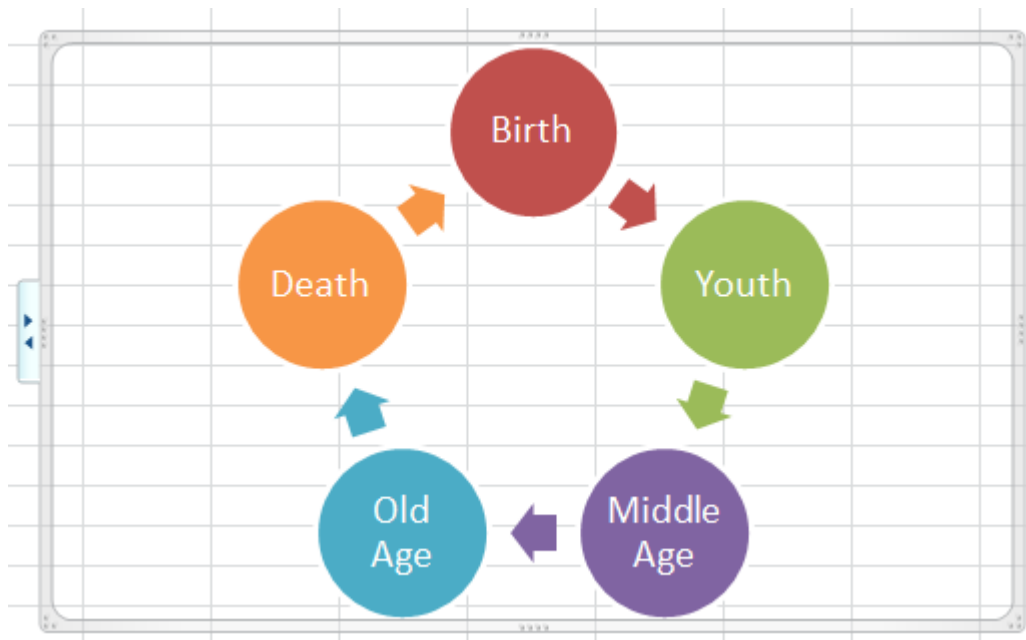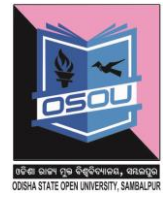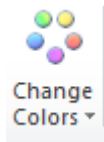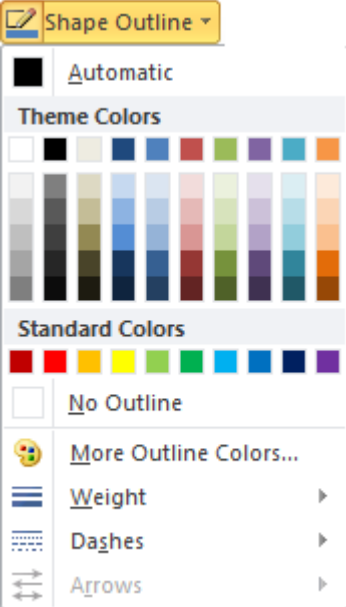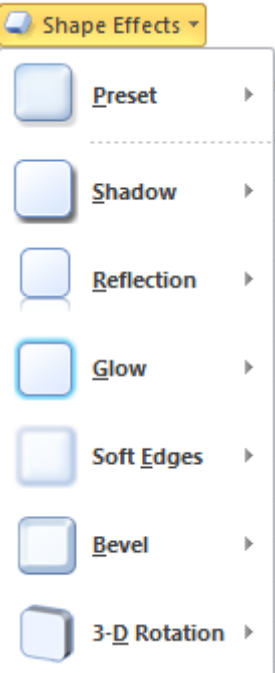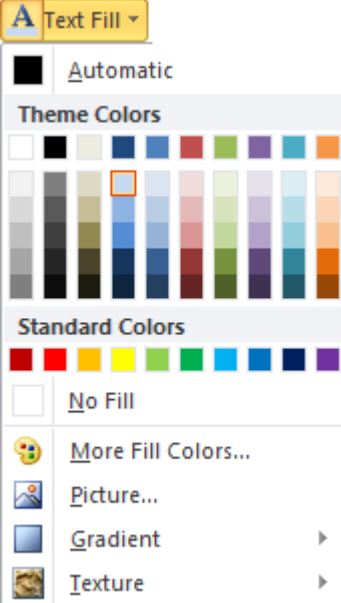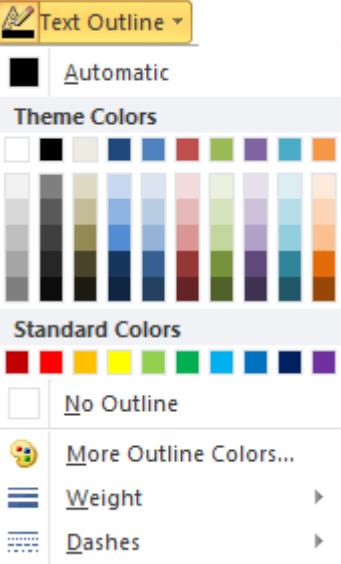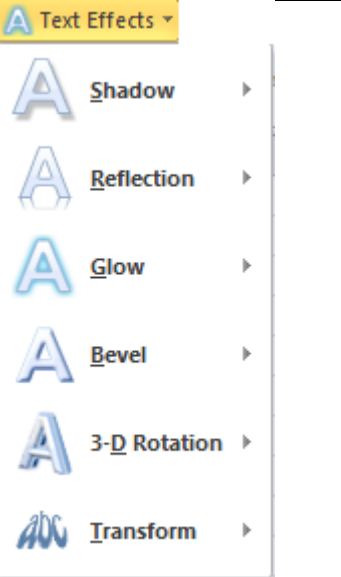
2.3.1.6 Working with Word Art
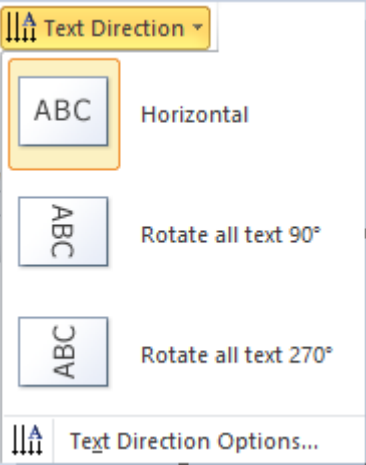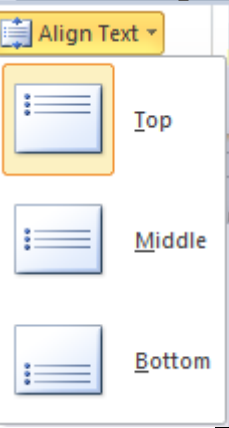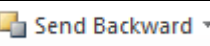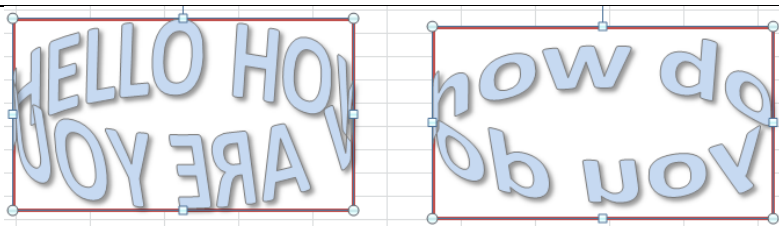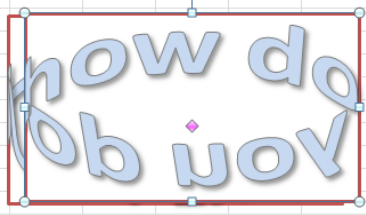
Used to insert decorative text into your document.
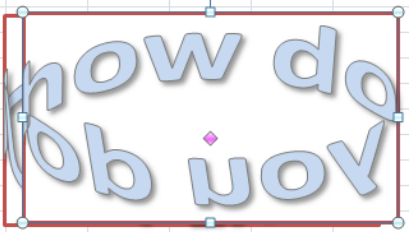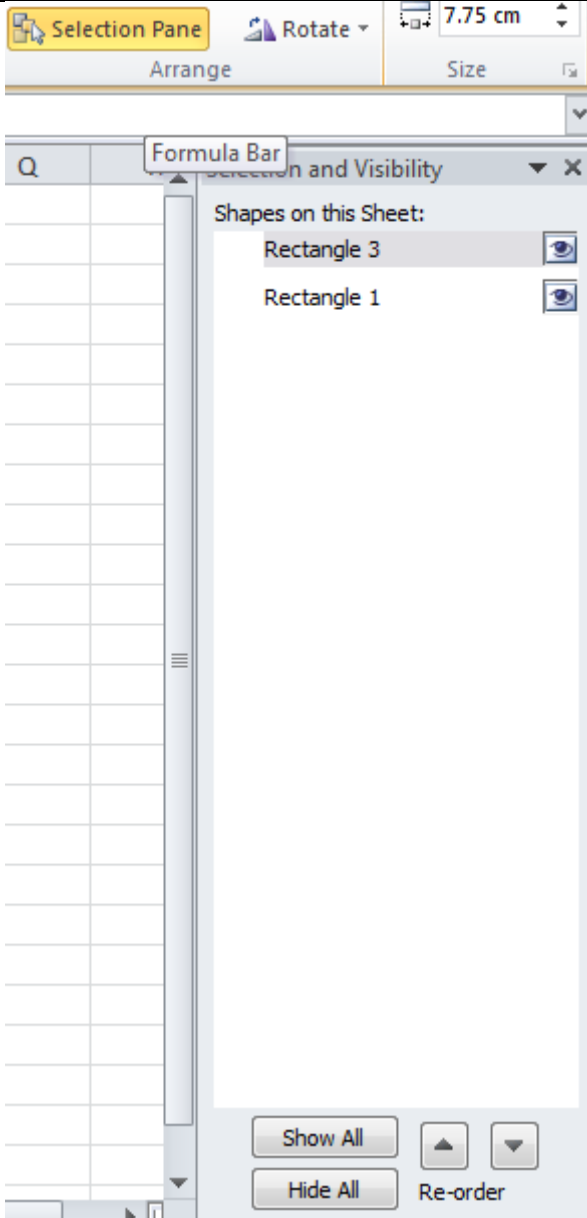
1	To Insert Text	To insert text click on the text and start typing.
		shanu
2	Edit Shape ▾	This option is used to edit the shape
3	Draw Text Box	This option is used to insert a text box
4	Abc Abc Abc	Coloured outline
5	Shape Fill ▾	This option is used to change the shape fill of the object drawn on the sheet
	Automatic	
	Theme Colors	
	Standard Colors	
	No Fill	
	More Fill Colors...	
	Picture...	
	Gradient ▸	
	Texture ▸	
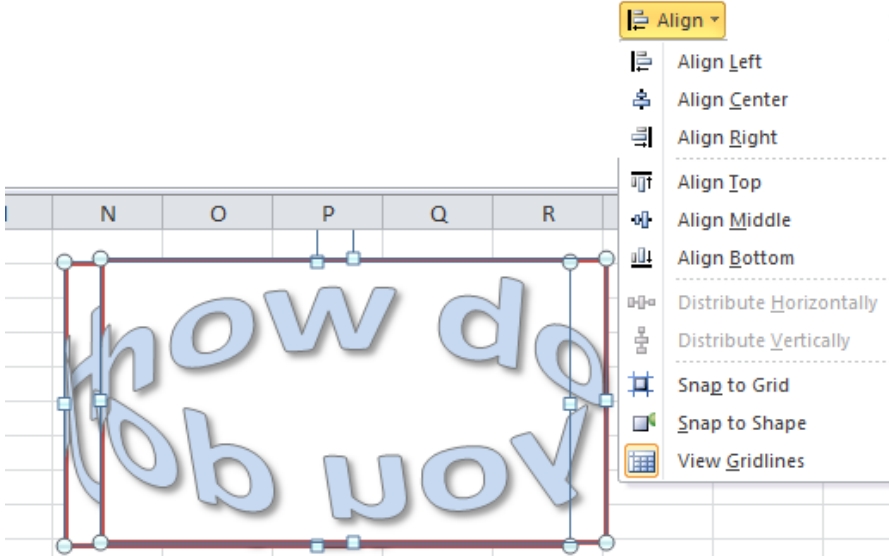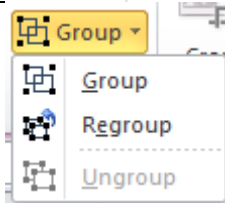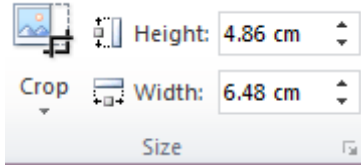
6	Shape Outline ▼ ■ Automatic **Theme Colors** **Standard Colors** ☐ No Outline More Outline Colors... Weight ▶ Dashes ▶ Arrows ▶	Create a shape outline of the object
7	Shape Effects ▼ Preset ▶ Shadow ▶ Reflection ▶ Glow ▶ Soft Edges ▶ Bevel ▶ 3-D Rotation ▶	Insert shape effects to the shape object created.
8	A A A WordArt Styles	Used to change the word art style as shown below HELLO HOW ARE YOU

9	A Text Fill ▾ — Automatic / Theme Colors / Standard Colors / No Fill / More Fill Colors… / Picture… / Gradient ▸ / Texture ▸	Change the text fill of the shape object inserted.
10	Text Outline ▾ — Automatic / Theme Colors / Standard Colors / No Outline / More Outline Colors… / Weight ▸ / Dashes ▸	Used To change Picture border
11	A Text Effects ▾ — Shadow ▸ / Reflection ▸ / Glow ▸ / Bevel ▸ / 3-D Rotation ▸ / Transform ▸	Used to change the text effects as shown below

12		Used to set the text direction
12		Aligns text to top, middle , bottom.
12	Bring Forward ▾	Bring the selected object forward so that it is hidden by fewer objects that are in front of it.
	Send Backward ▾	Sent the selected object backward so that it is hidden by objects that are in front of it.

Consider 2 text objects .One containing **HELLO HOW ARE YOU** and the other containing **HOW DO YOU DO**.

Stack **HOW DO YOU DO** over **HELLO HOW ARE YOU**

Now Click on Send Backward ▾ after clicking how do you do you find HELLO HOW ARE YOU on the top and HOW DO YOU DO behind

	Now select the oject that is behind and click bring forward as shown below	
	Now click on [Bring Forward ▼]	
13	[Selection Pane]	Selection pane Used to hide or show image. Secquence objects as shown below

14	Align ▾	The align option is used to align multile objects that you select by pressing the ctl and left mouse click as shown below and click on align left as shown below.

Below shows neatly stacked objects one over the other with **left align option**

15		Group :- Used to group 2 shapes into 1 Regroup :- Regroup 2 shapes into 1 if they were ungrouped Ungroup :- Ungroup group shapes
16		Used to crop an image removong unwanted scenes from the shape.
17	**To delete shape**	Select image and press del key on the keyboard.
18		Rotate a shape.

Check your progress

Q.1. Define the following
- ➢ Graphics
- ➢ Picture
- ➢ Shape
- ➢ Clipart
- ➢ Smart art
- ➢ Word art

2.4 Let us sum up

Graphical tools are the tools the a person uses to insert a picture, shape,clipart,smartart or a wordart. All controls have various properties to control them. Processes involved are inserting ,editing and deleting, Picture tool in used to insert picture, modify a picture, delete a picture. Apart of this there are other options which are remove background which is used to remove the background. Corrections option is used sharpen and soften the picture. Color option is used to colour the picture. Artistic effect is used add an artistic effect to the picture. Compress picture is used to compress the picture, clipart so as to reduce the size of the picture. Change picture is used to change the picture on the excel sheet. Reset picture is used to reset the picture. Picture style option is used to change the style of the picture. Picture border option enables us to add a border around a picture. Picture effects give an effect to the picture. Some of these effects are preset, shadow,reflection, glow, soft edges, bevel, 3D rotation. Picture layout is used to change the picture layout of picture. Bring forward, send backward is used manage the pictures if they are stacked one over the other. The selection pane is comprised of images with selection and visibility option which are used to select the desired image with show and hide option. The align option is used to align multiple selected picturesleft,center,right,top,middle,bottom, snap to grid,snap to shape, view gridlines. The group option of the menu is used to group 2 pictures. Ungroup option is used to ungroup the grouped pictures. Rotate option is used to rotate the picture. The crop option is used to crop the picture. The height option is used to change the height of the picture. The width option is used to change the width of the picture / clipart.The shapes option is used to insert shapes, edit shape, change the shape outlinecolour, shape fill, change shape effects. Bring forward, send backward,The word art is used to insert word art into the Excel.. The text fill is used to change the text fill. The text outline is used to change the text outline. The text outline is used to change the text outline.

2.5 References

1. Tutorialspoint.com
2. W3schools.com

- Graphical tool:- A graphical tool used to insert, modify, update, delete, show picture, clip art, shape, smart art ,word art, smart art.
- Picture :-   A graphical tool used to insert, modify, update, delete, show visual representation of a person, object, or a scene
- Clip art:-   A graphical tool that comprises of a collection of pictures or images that can be used to insert, modify, update, delete, show into a document or another program.
- Shape :- A graphical tools that is used insert, edit, update delete graphical objects of various dimensions.
- Smart art :- A graphical tool used to create simple and effective diagrams
  Word art :-WordArt is a text styling utility available in Microsoft Office applications such as Microsoft Word, Excel, PowerPoint and Publisher which helps in providing special effects like outlines, gradient glow

Unit -3
Formatting a worksheet

Learning objectives

After the Completion of this unit you should be able to know

1. Formatting a worksheet

2. Text decoration

Structure

3.1 Introduction

3.2 Definition

3.3 Formatting a worksheet

3.4 Text decoration

3.5 Let us sum up

3.6 References

3.7 Check your progress –

3.1 Introduction

MS Excel worksheet which is used to enter values has to be formatted to meet the needs of the user. Formatting of the worksheet is done in the following ways that we are going to discuss in this unit. These include adjusting the margins of the worksheet. The margins are top, bottom, left, right. Setting margins effect the worksheet layout and its printing. Page orientations are of two types. These are Portrait and Landscape. Inserting page breaks inserts page breaks in the worksheet. Setting background changes the background of a worksheet. Freeze panes are used when scrolling very large worksheets. Freeze panes help in keeping rows and columns steady while the one scrolls across the sheet. The best example is payroll of 10000 employees in a worksheet. Conditional formatting formats the cells based on a particular condition.

We shall be learning about setting cell type. This involves incorporating what kind of cell a cell is as cells are of various types. These are general,number,currency,accounting,date,time,percentage,fraction,scientific,text,special and custom. In this unit we shall also be learning about the fonts and how to implement fonts. Fonts are defined by font type and font size. Text decoration is done to beautify the text. Text beatification can be

done by making the text bold, italic, underline, double underline, strikethrough, cell rotation is a feature where in contents of the cell are rotated as per the need of the user. Setting colors is used to set the colour of the cell. These are of two types which are fore color and back color.Text alignment is used to align the text as per the needs of the user. Merge and wrap are used to merge the cells and wrap the text in it. Borders and shades are used to set the border of the cell and change the fill colour of cell. So let us get started.

3.2 Definition

Formatting a worksheet means changing the design, style, type in cell of the worksheet by the user as per the requirement and need.

3.3 Formatting a worksheet

3.3.1 Adjusting margins in a worksheet

Margins define how much space to be left from the 4 corners of the sheet. These include top, bottom, left, right .To adjust the margins of a worksheet click on page layout ->margins
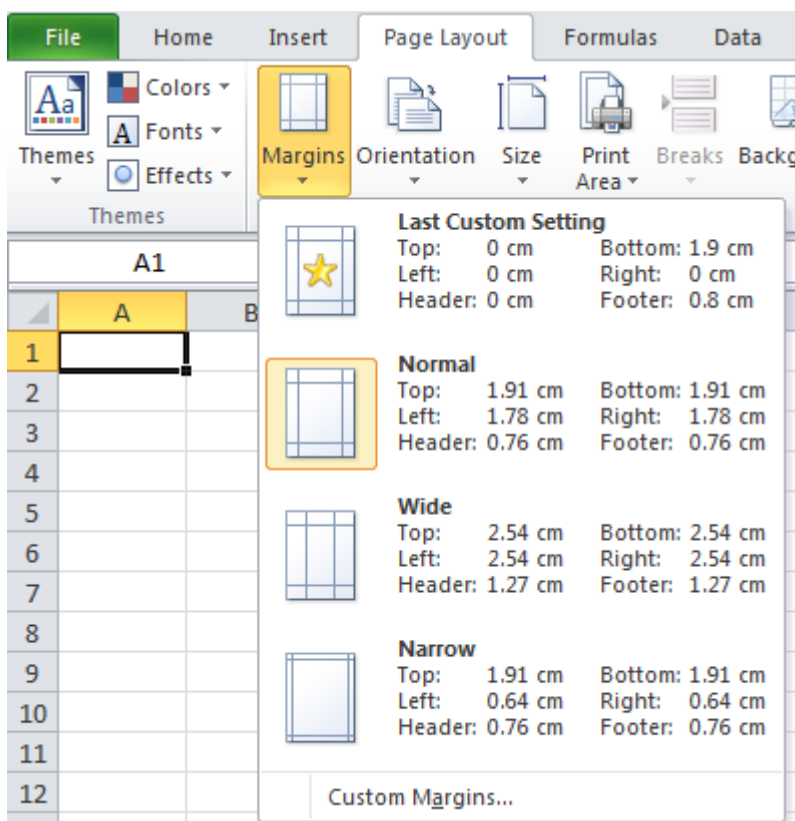
Click on custom margins and set the print settings as below
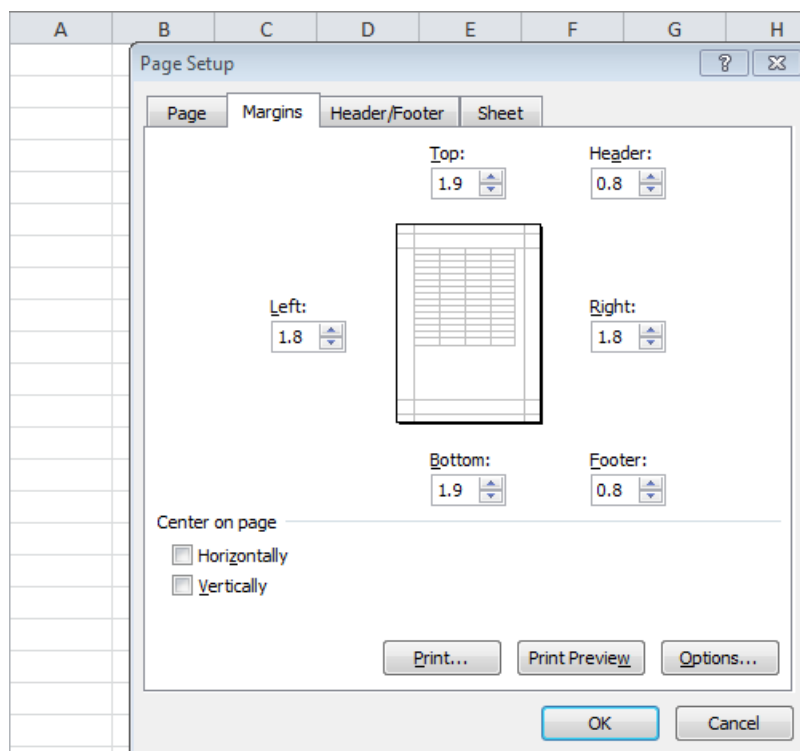
The above option has options such as center on page horizontally and vertically. These options are used to center on page vertically and horizontally. Print option prints the sheet. Print preview option shows a print preview of the sheet before printing. The options page is used to set the page orientation to portrait and landscape as shown below
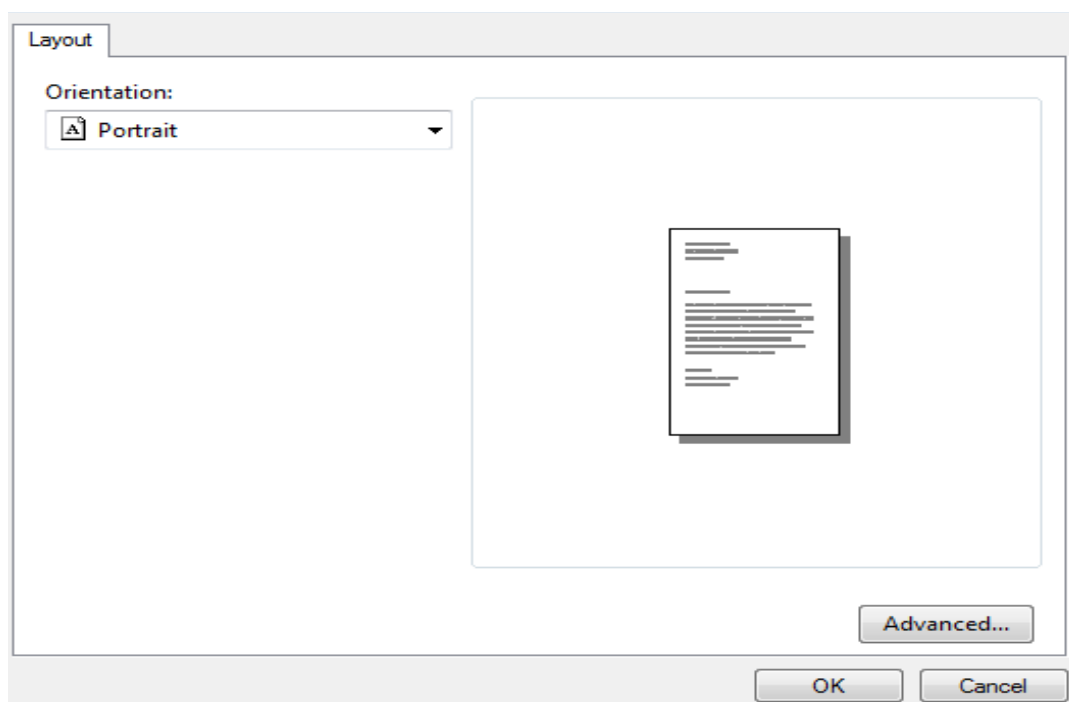
Clicking on the advanced button
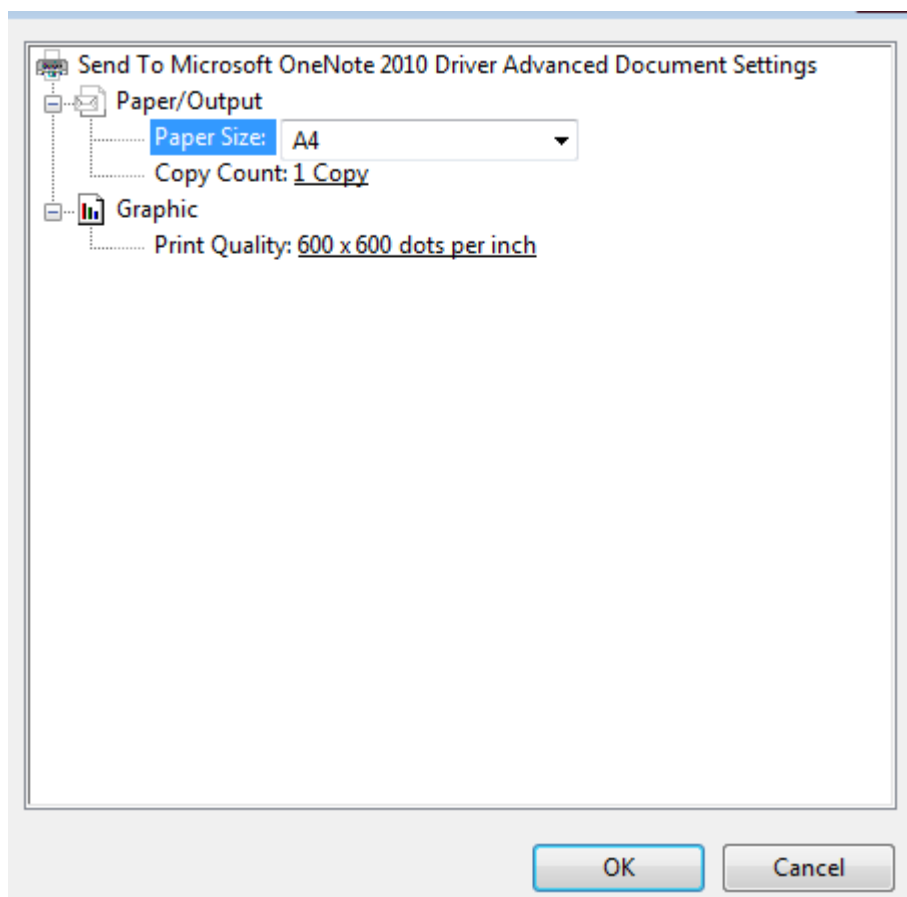
The above screen shows on which paper the printing is going to take place such as A4,A3 and setting the print quality.
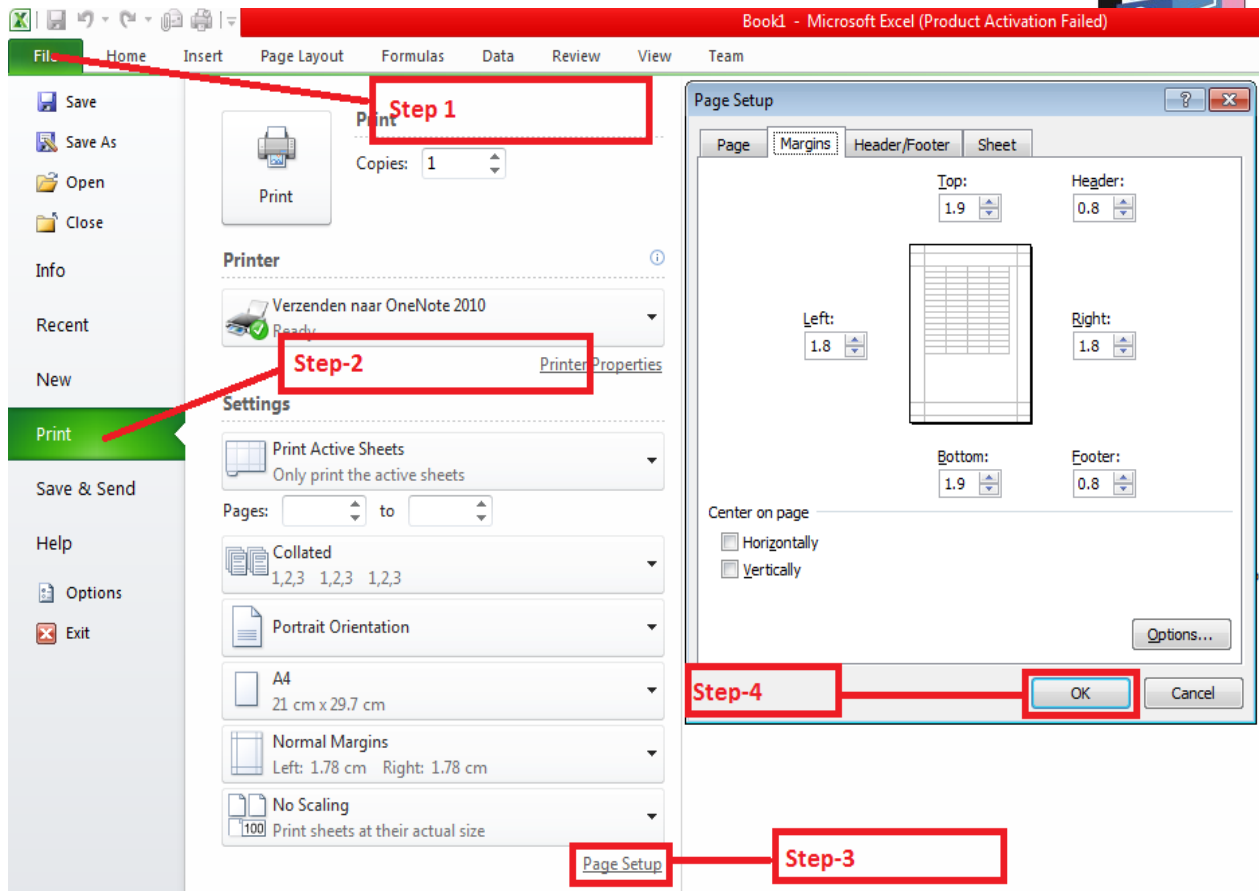
3.3.2 Page orientation in a worksheet

Page orientation in a worksheet can be

1. Portrait
2. Landscape

One way for page orientation
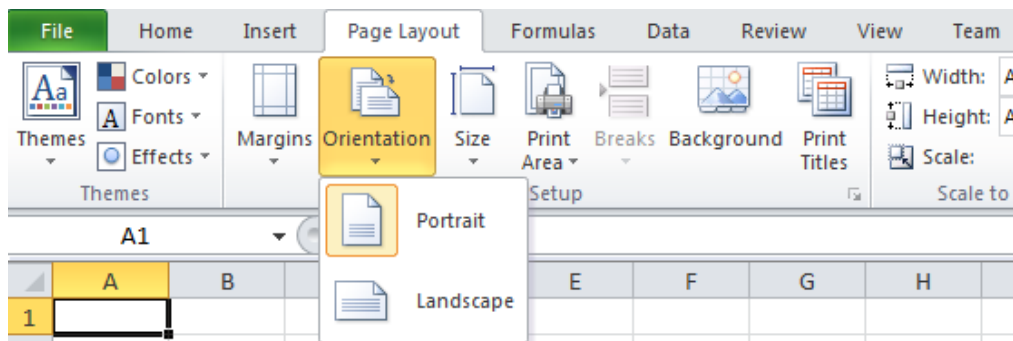
Second way for page orientation
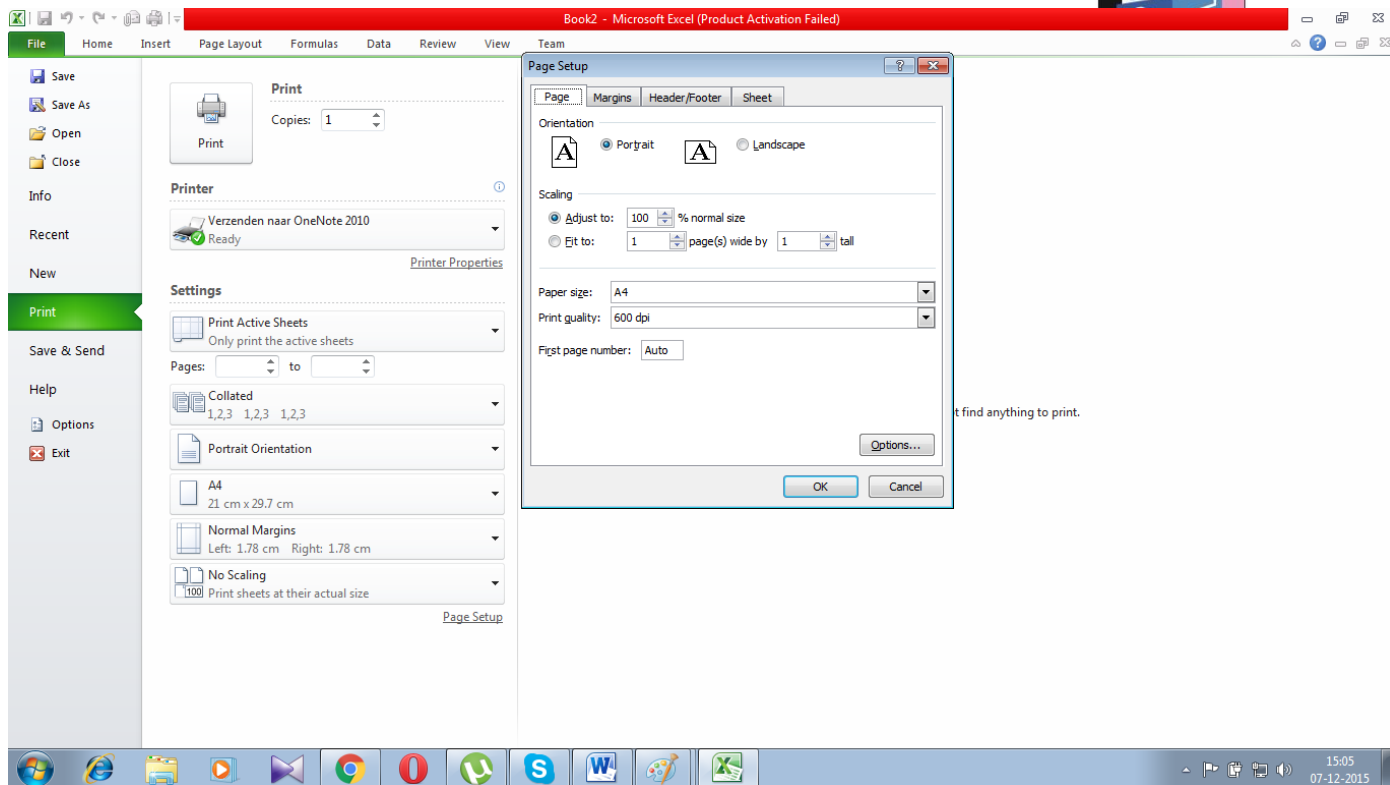
3.3.3 Setting header and footer in a worksheet
One Way
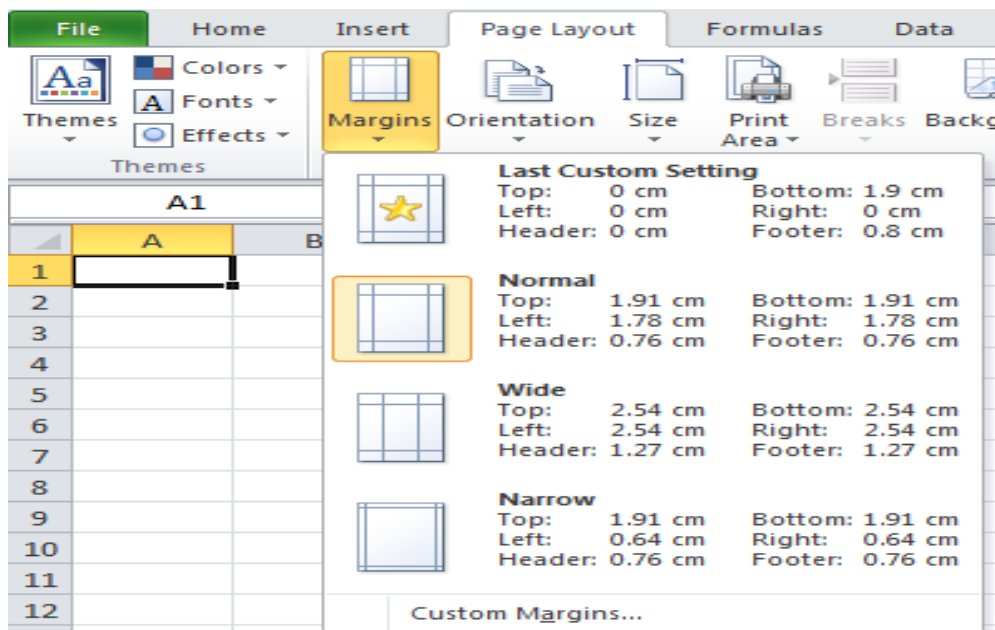
Click on **Custom Margins** and see as below

You can set you won header /footer by clicking custom header and custom footer or select header and footer from the drop down.
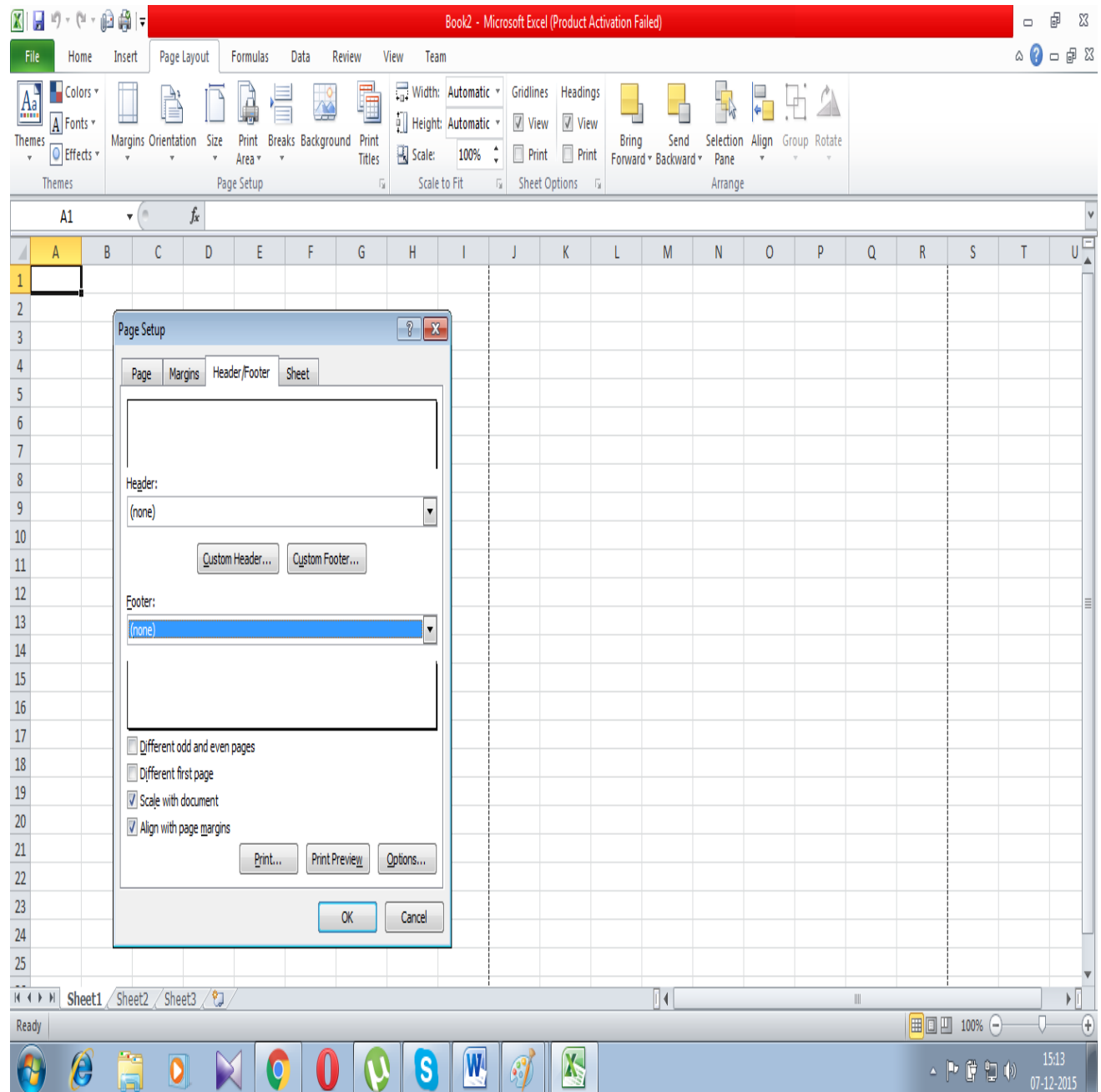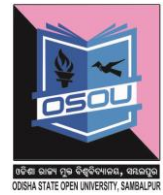
Another Way

Click on print and page setup
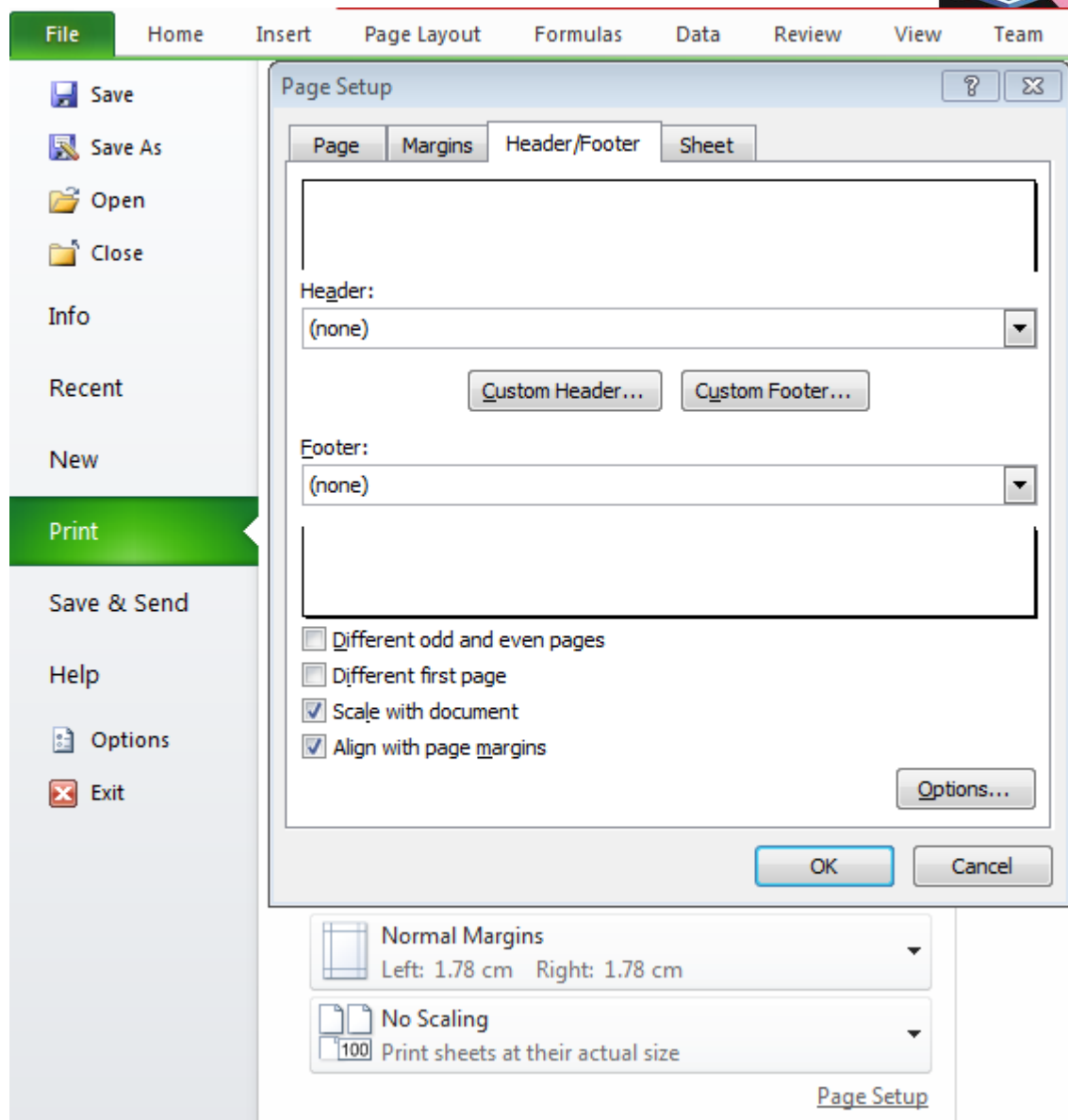
3.3.4 Inserting page breaks in a worksheet

The page breaks is used to create a page breaks on the worksheet.
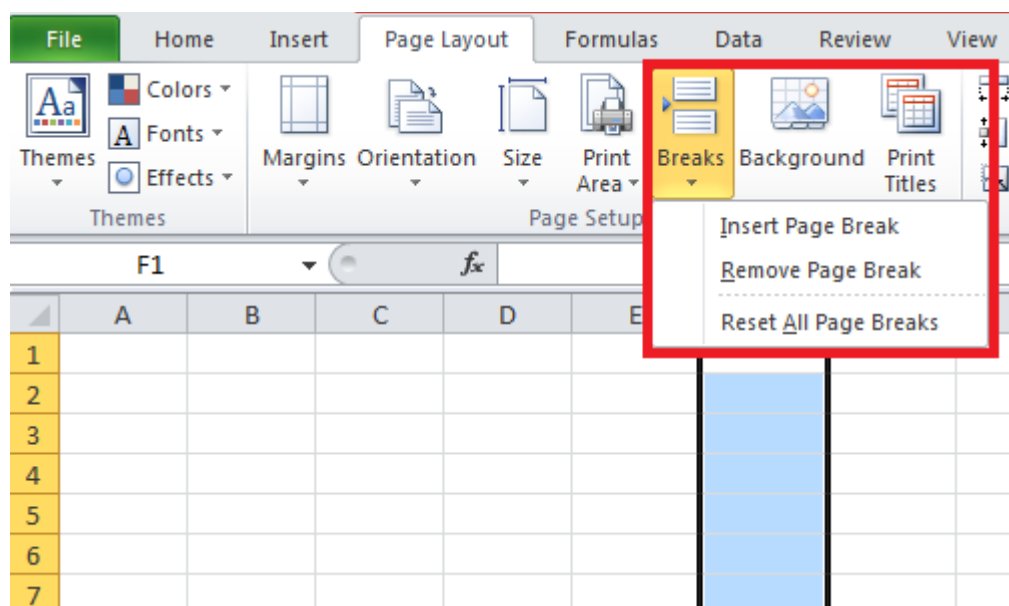
3.3.3.1 Insert page break

Click any of the row numbers shown in yellow color in the above figure
and click insert page break. This inserts a page break which means rest of
the content would be printed in the subsequent page.

3.3.3.2 Remove page break

To remove the page break click the row where the page break was done
and click remove page break

3.3.3.3 Reset page break

It removes all the page breaks that were done manually and resets the page
break according to the margin of the page defined.

3.3.5 Setting background in a worksheet
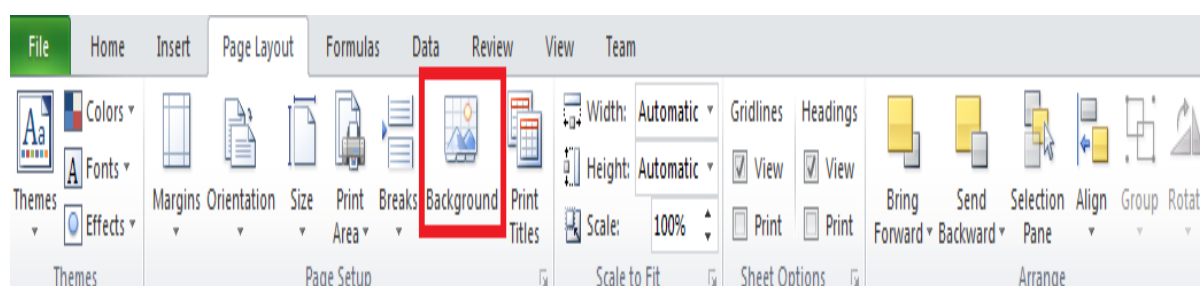
The background is set to set the background of the worksheet as shown
below

3.3.6 Freeze panes in a worksheet

3.3.6.1 Why use freeze panes in a worksheet

If the worksheet is very   big and so big that after scrolling a few rows and after scrolling few columns one loses track of the row header and column header. In such cases freeze panes are used
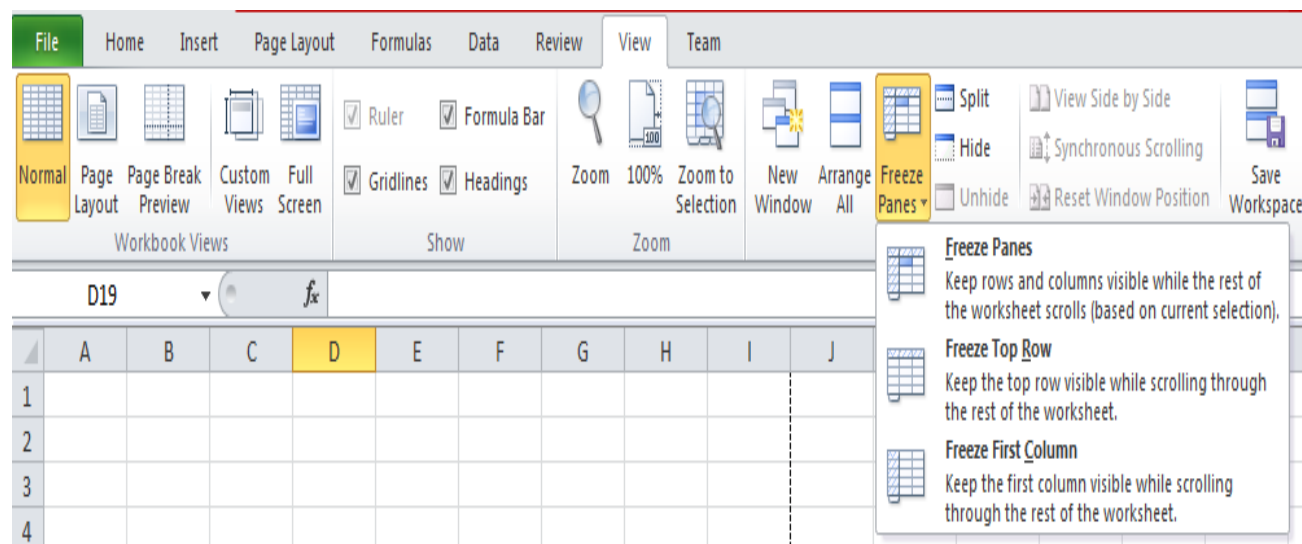
The freeze panes option is used to freeze the

1. Freeze top row
2. Freeze first column
3. Freeze panes

3.3.6.1.2 Freeze top row

To freeze the top row select the top row as shown in the diagram and click freeze top row
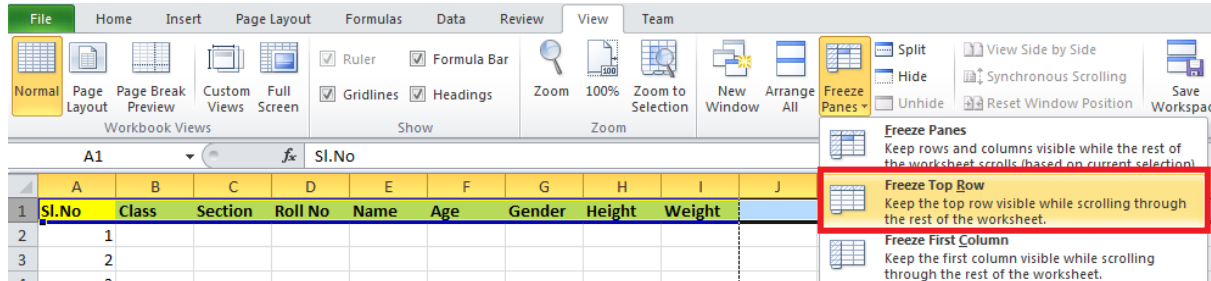
3.3.6.1.3 Freeze first column

This option is used to freeze the first column of the worksheet as shown below.
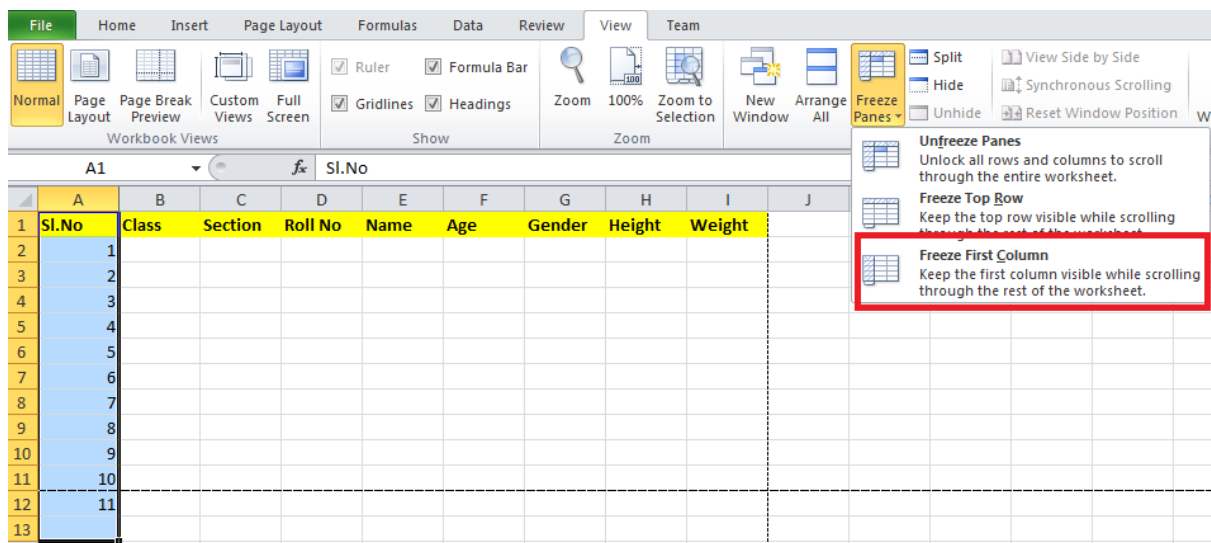
3.3.6.1.4 Freeze Panes

This option is used to keep the rows and columns visible while the rest of the worksheet is scrolling

	A	B	C	D	E	F	G	H	I	J	K
1	Sl.No	Class	Section	Roll No	Name	Age	Gender	Height	Weight		
2	1										
3	2										
4	3										
5	4										
6	5										
7	6										
8	7										
9	8										
10	9										
11	10										
12	11										
13											
14											

3.3.7 Conditional formatting

Conditional formatting is used to format a range of values based on a condition

Step-1

Step-2

Step-3

- **New Rule :** Used in   New Formatting Rule, where you define a custom conditional formatting rule to apply to the cell selection.

- **Clear Rules :** Used to clear rules from selected cells or the entire sheet.

- **Manage Rules :** Add ,Edit ,delete rules for conditional formatting.

3.3.8 Format cell
Right click on the cell to set the cell type. This option is used in setting the cell type and formatting cells. This is comprised of the following options. These are number, alignment, font, border, fill, protection.

3.3.8.1 Number
This option is used to set the cell type as shown below. This option is applicable to a particular cell, a column, set of selected columns, row, set of

selected rows, set of selected cells., the entire worksheet. This option is used for faster data entry where the user may miss writing Rs in front of the amount where the amount is being entered.

Cell Type
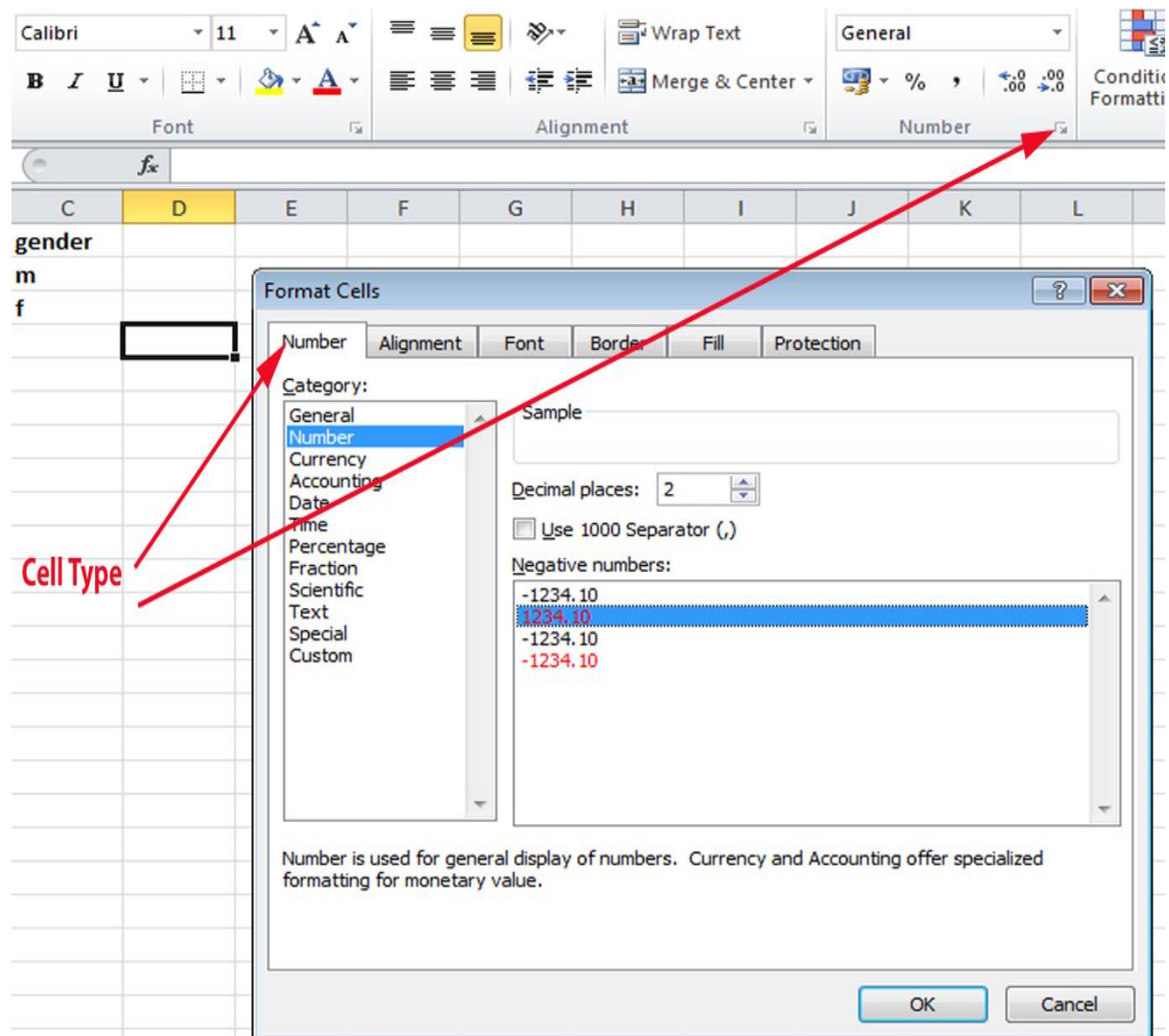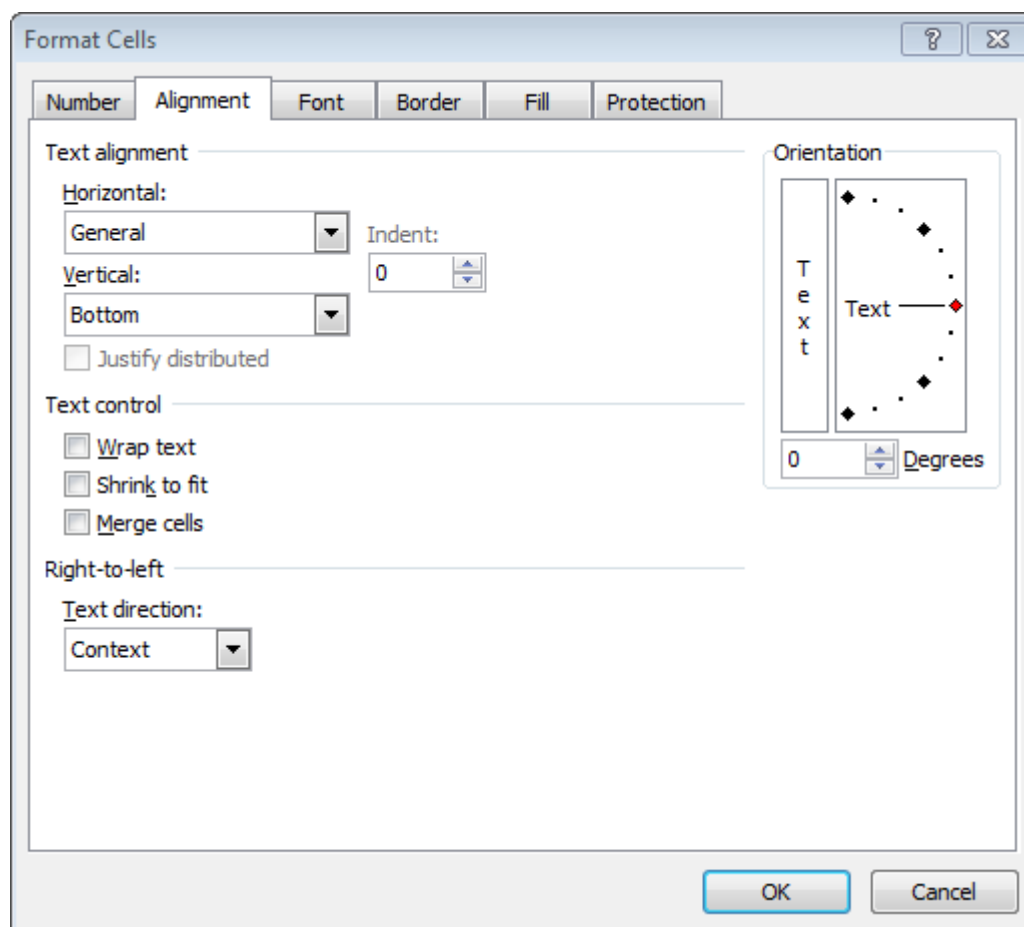
3.3.8.2 Alignment

The alignment can be done horizontally and vertically. Apart of it the text direction can be changed by few degrees. The text control is used to wrap the text when a lot text is entered into a particular cell. Shrink to fit reduces the size of the text in order to fit the text into one cell. The merge cells option is used to merge one or more cells into 1 cell and the text direction.

3.3.8.3 Font

This option is used to set the type of fonts of a cell. Fonts are defined by font name, font style and font size. Right click on the cell to set the fonts. The font option is used to set the font name, font style and font size. Below it shows the underline style which are none, single, double, double accounting. The font color can be changed by changing the font color. Apart of this there are options to subscript text, superscript text and strikethrough. The color of the font can be changed here.
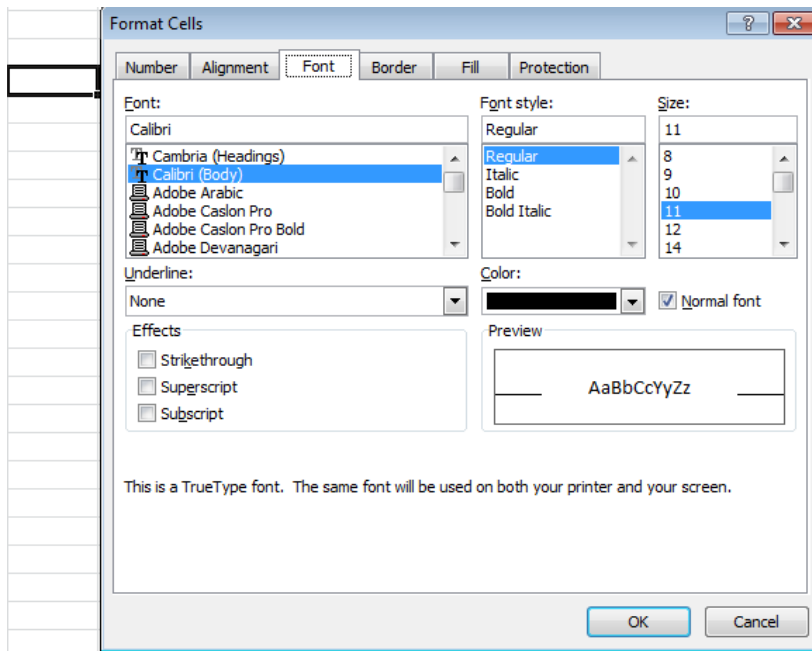
3.3.8.4 Border

This option is used set the border around the cell or a group of cells
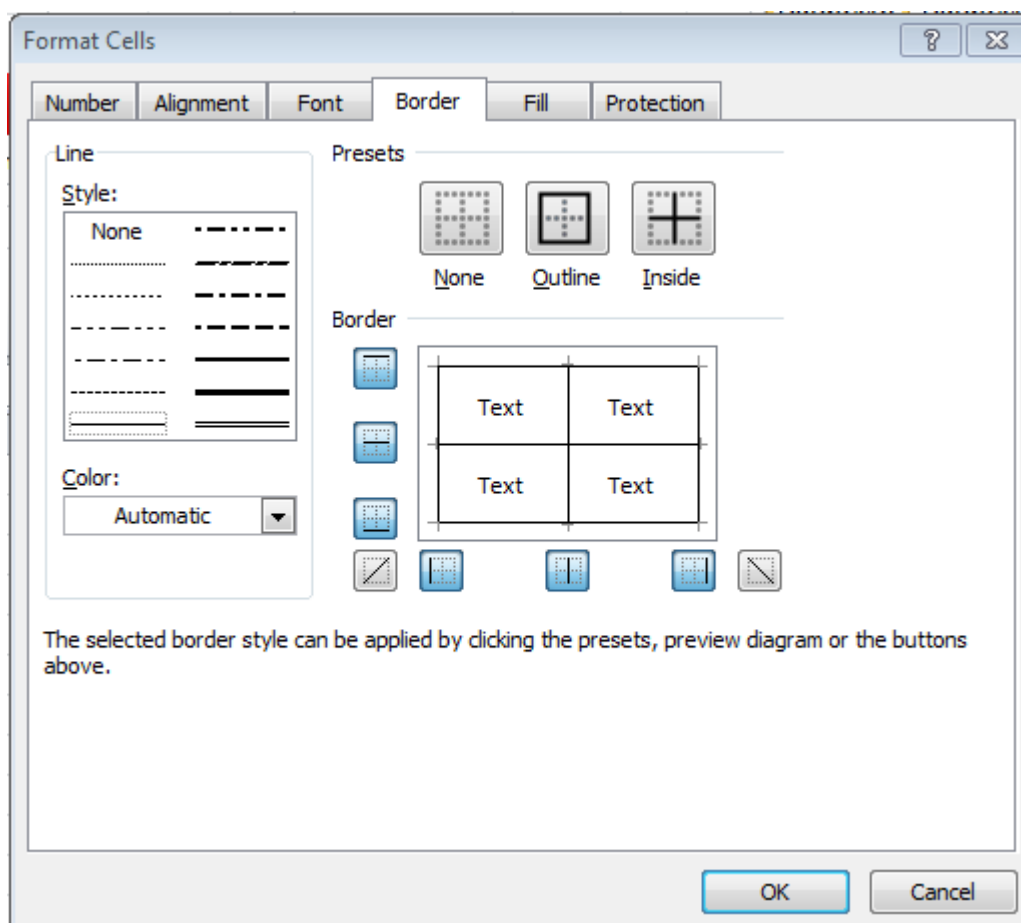
The border option is comprised of line style which defines the line of the borders of the cells. The color option is used to define the colour of the border. There are options such as presets which define where the border would be inside, outside, both inside and outside and none. Borders those that are not required can be removed as per user requirement.

Another way to set the borders is as below
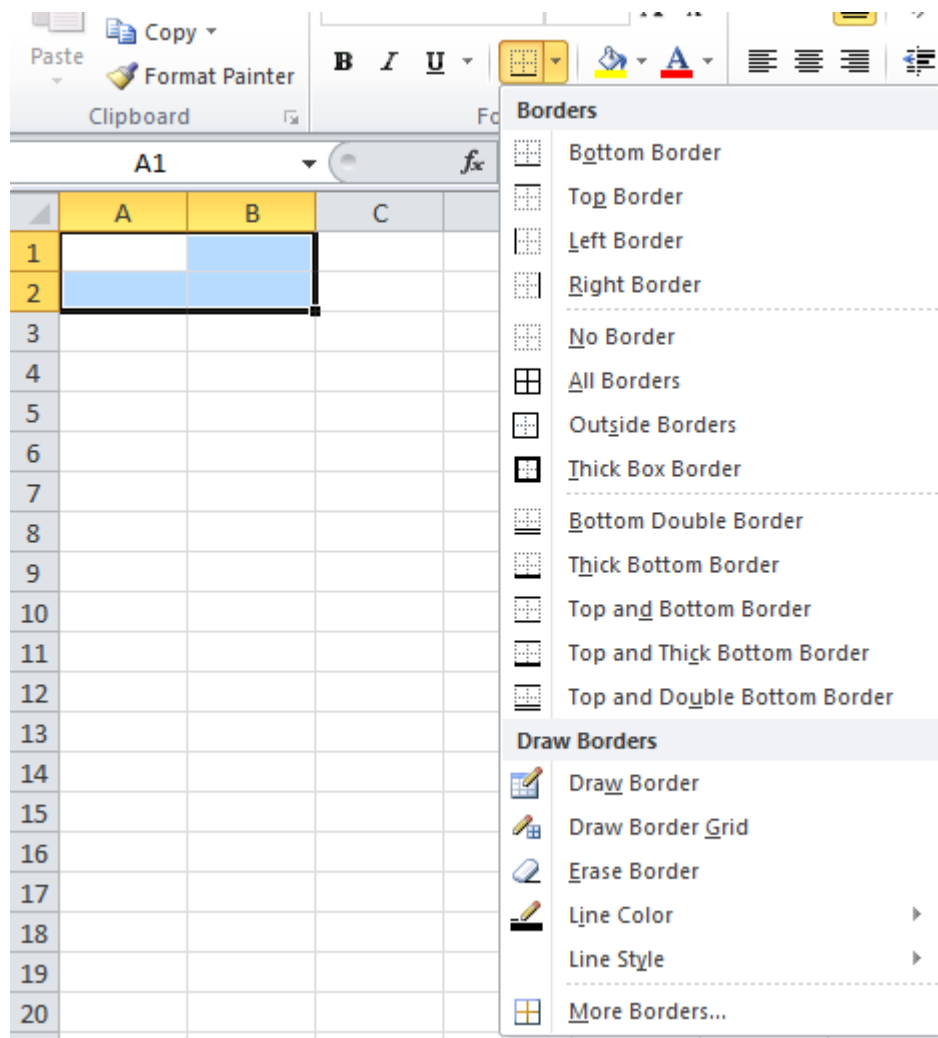
Another way to set the border is as below

3.3.8.5 Fill

The shading or fill can be applied to a cell or a group of cells in 2 ways and they are

One Way
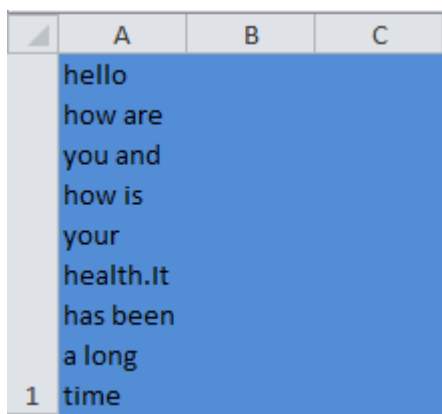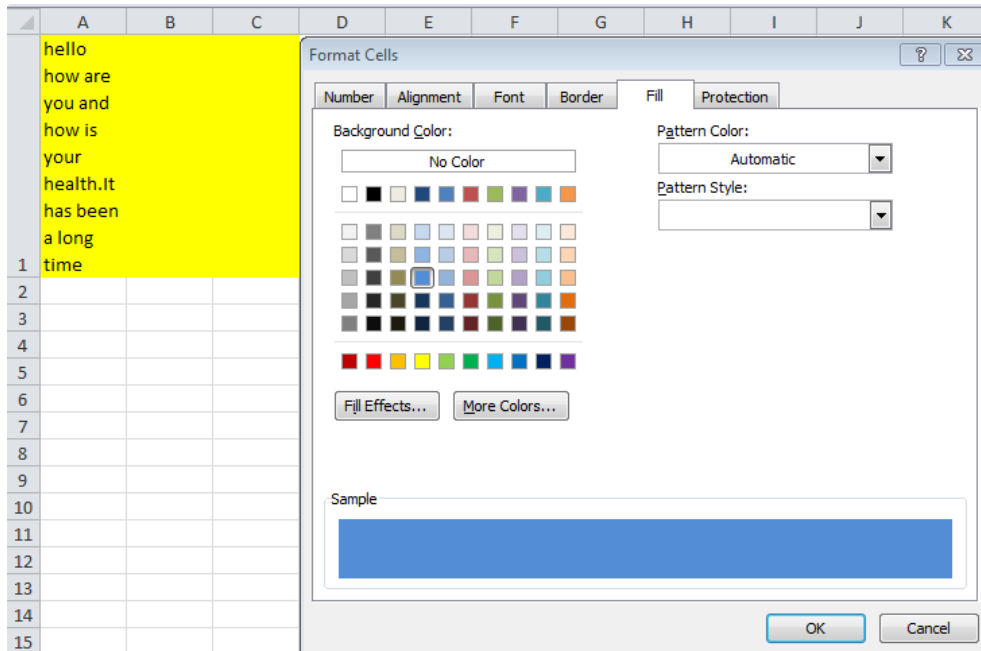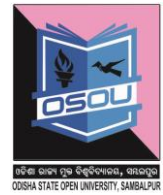
Another way
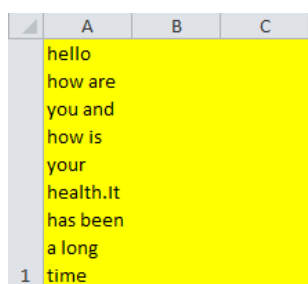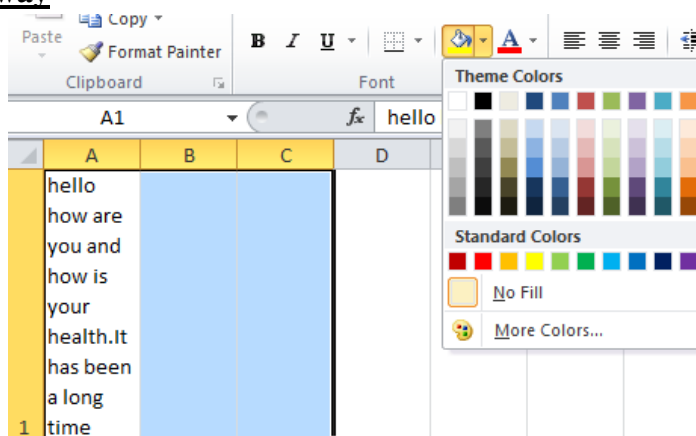
3.4 Text decoration

Text decoration is changing the look and feel of the text. Text direction is done in following 7 ways. They are

1. **Bold** :- Ctrl + B :- This option is used to make the text **bold**. Another way to do this is click the Home Tab ->Click B in the Font group.
2. **Italic:-**Ctrl + I :- This option is used to make the text *italic*. Another way to do this is click
   The Home Tab->Click I in the Font group
3. **Underline:-**Ctrl +U :- This option is used to <u>underline</u> the text. Another way to do this is click
   The Home Tab->Click U in the Font group
4. **Double Underline :-**This option is used to double underline the text. To do this click on the home tab
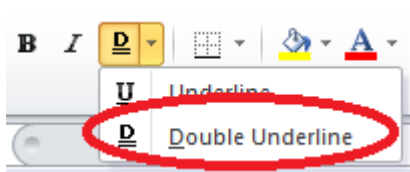
5. Strike through :-This option is used to strike through the text. To do this right click on the cell and select option.
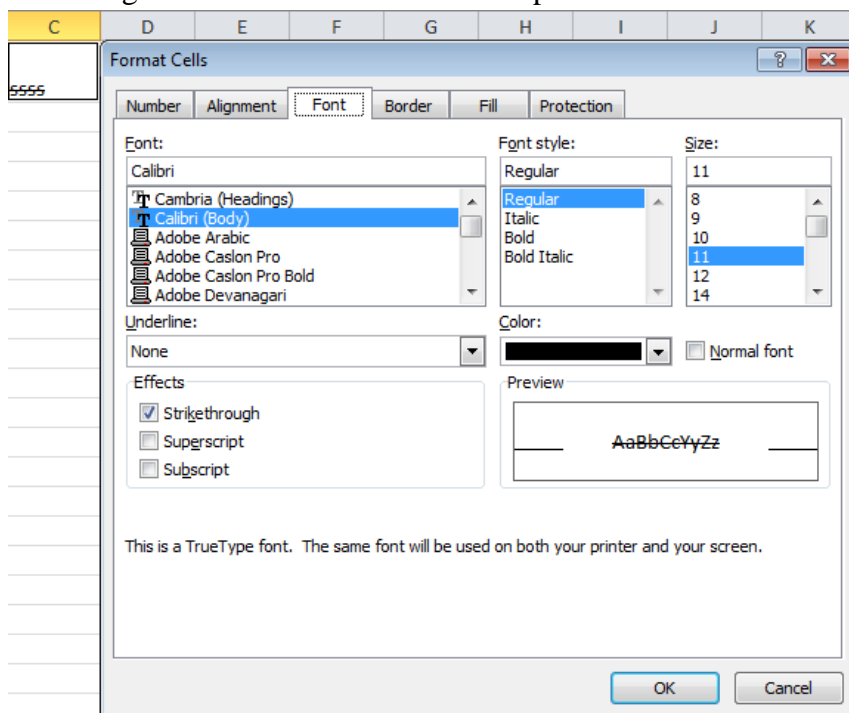
6. Superscript :-This option is used to superscript the text as below.
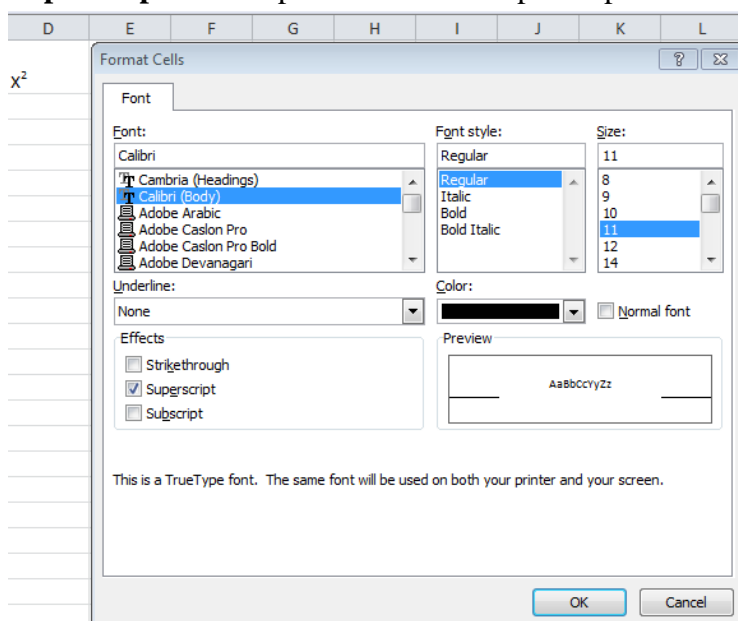
7. **Subscript:-**The option is used to subscript the text in the cell. As below

---
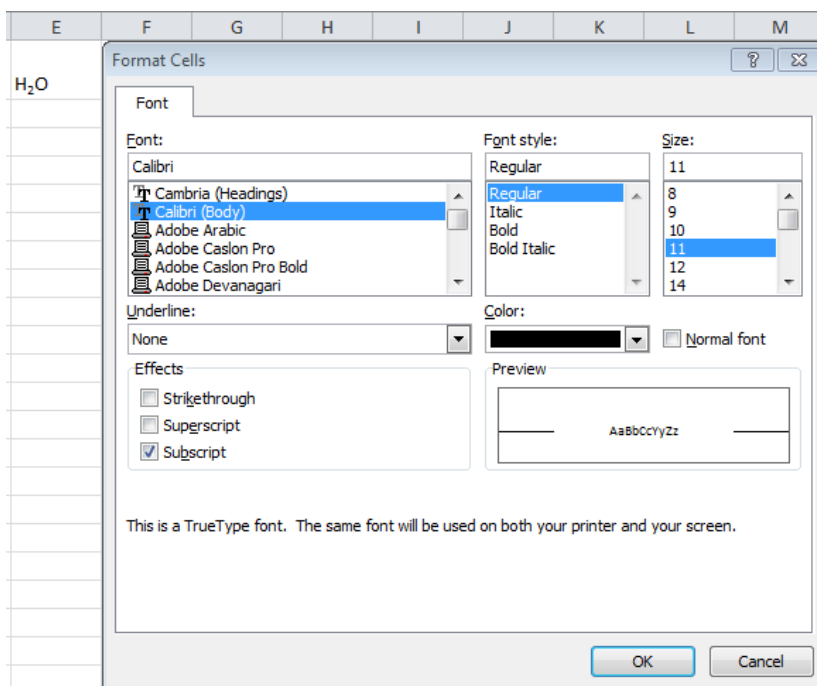
Check your Progress 1

Q.1 Cells are classified into various types ? What are they ?

A._____

_____

_____

Q.2. Worksheet can be formatted in various ways, what are they

A._____

_____
_____

3.5 Let us sum up

The worksheet has to be formatted to meet the needs of the user. Worksheet is formatted by various ways and they are adjusting margins in a worksheet, changing the page orientation in a worksheet, setting the header and footer in a worksheet, inserting page breaks in a worksheet, setting background in a worksheet, freeze panes in a worksheet, use of conditional formatting, format cell of a worksheet by changing number, alignment, font, border,

---

fill. Text decoration is used to change the look and feel of the text. Text decoration is done in the following 7 ways and they are bold, italic, underline, double underline, strike through, superscript, subscript

3.6 References

1.tutorialspoint.com

2.google.com

3.7 Check your progress possible answers

Answers to check your progress 1

A.1general,number,currency,accounting,date,time,percentage,fraction,scientific,text,special and custom

A.2 Worksheet can be formatted in various ways and they are adjusting margins in a worksheet, changing the page orientation in a worksheet, setting the header and footer in a worksheet, inserting page breaks in a worksheet, setting background in a worksheet, freeze panes in a worksheet, use of conditional formatting, format cell of a worksheet by changing Number, alignment, font, border, fill.
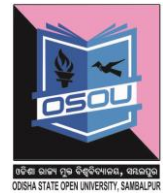
Learning objectives

After the Completion of this unit you should be able to know

1) How to design various kinds of charts
2) Text decoration

Structure

4.1 Introduction

Charts are very important in order show pictorially the growth and development of a business. This chart shows in which sectors a business has achieved maximum revenue while in which sectors the business needs development. Apart of charts there are other controls such as zoom in and zoom out which helps to zoom in and zoom out the worksheet. Special symbols control help to add special symbols in a worksheet wherever required. The comment option is used to add comment to the cell.
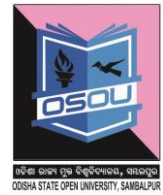
4.2 Definition

Chart :-A chart, also called a graph, is a graphical representation of data, in which "the data is represented by symbols.

Symbol :-A character that is not a letter of a number is a symbol.

Comment :- A comment a written statement the expresses the opinion about a cell.

Special symbol :- A character that is not a letter, number.

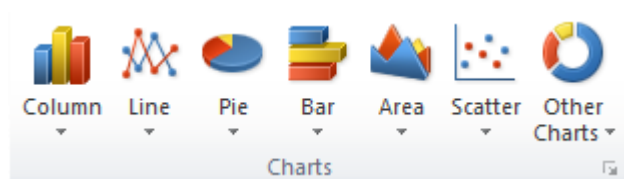## 4.3 Working with charts

4.3.1 Creating chart

To Create a chart in Excel first create a excel entry as shown below

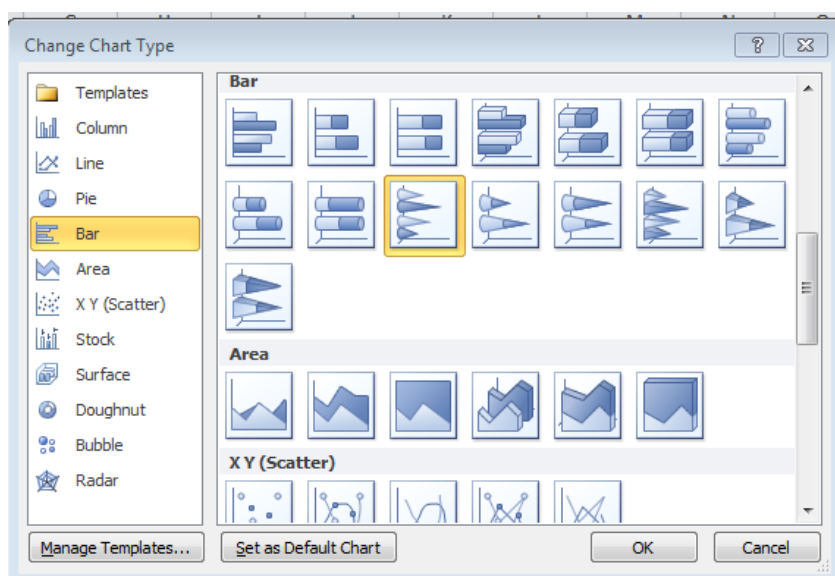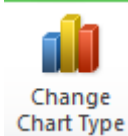|	A	B
1	name	Age
2	shanu	25
3	ramu	54
4	Geeta	34
5	Pallavi	23

Click on insert tab and select any of the charts defined below
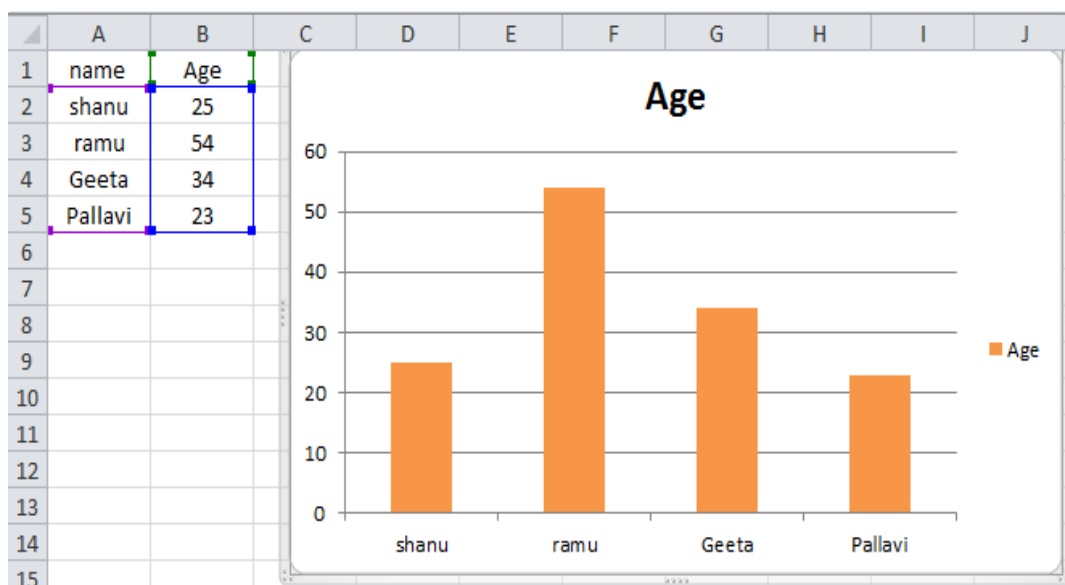
4.3.2 Manipulating a chart

To manipulate a chart select
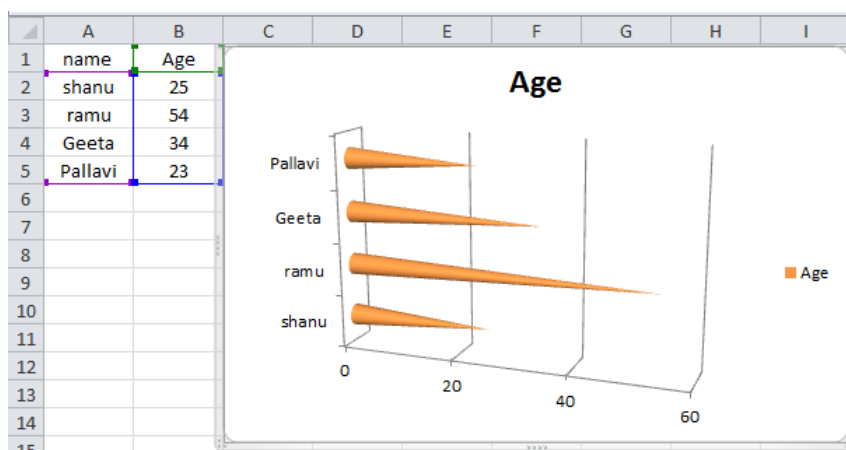
4.4 Zoom In Out
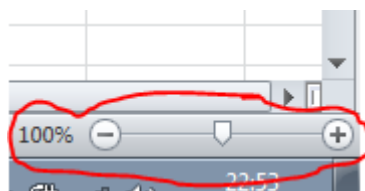
The zoom in out control is used to magnify the excel sheet and reduce magnification of the excel sheet. The + symbol increases the magnification and - symbol reduces the magnification. You can also drag the zoom control left to reduce the magnification and right to increase the magnification.

4.5 Special symbols

Click on the insert special symbol click the insert tab and click the
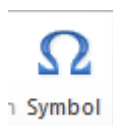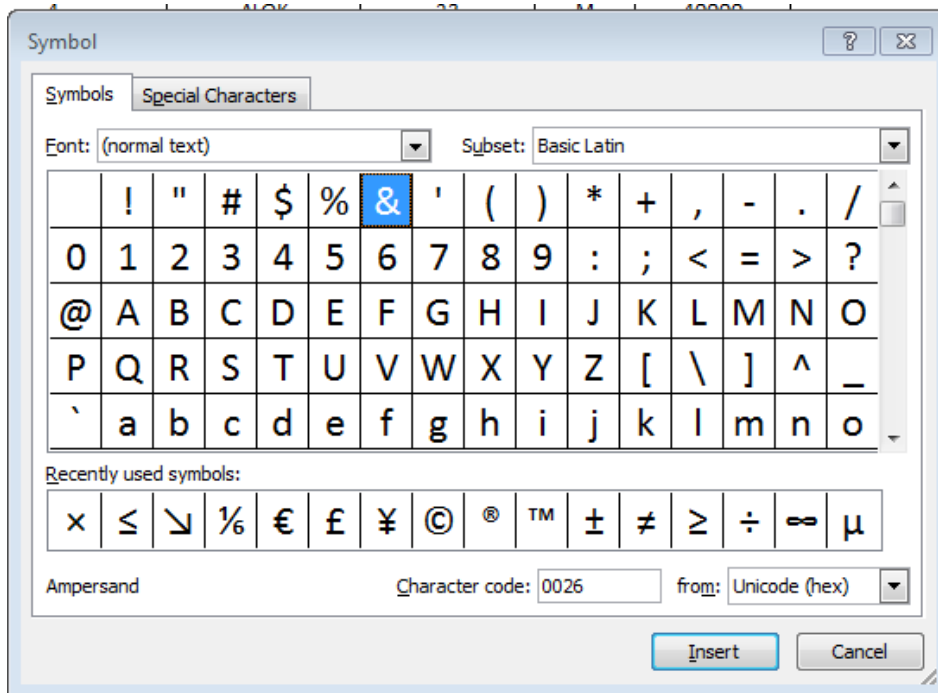
4.6 Comments

4.6.1 Insert Comments

To comment a cell follow the following steps.

Step-1

Click on the cell and press Shift +F2 To add comment or go to Review -
>New Comment.

Step-2
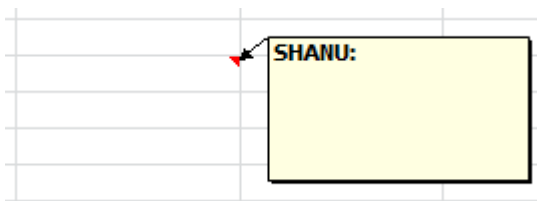
Step-3
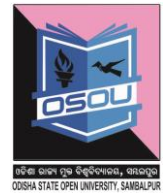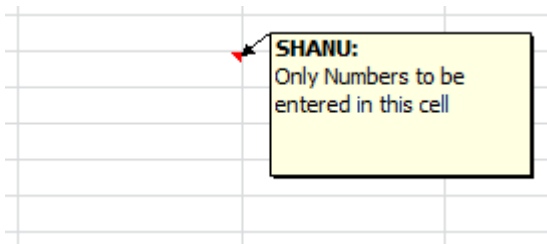
Step-4

Once done click on another cell

4.6.2 View Comment

Step-1

Click on the cell marked with a red dot
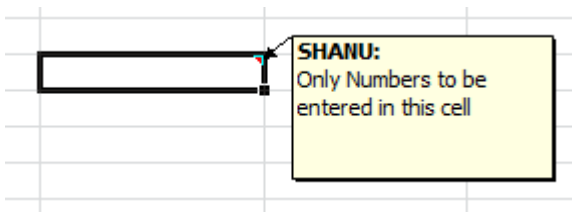
4.6.3 Edit Comment

Step-1

To Edit the comment click the cell
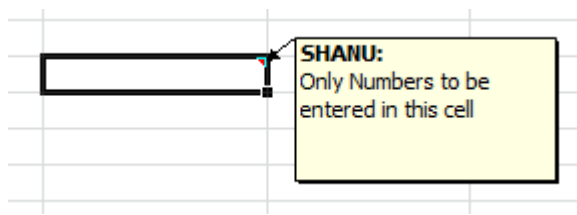
4.6.4 Delete Comment

Step-1

To delete the existing comments click
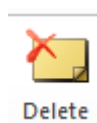
4.6.5 Previous Comment

To go to previous comment click

4.6.6 Next Comment

To go to next comment click

4.6.7 Show Comment

Step-1
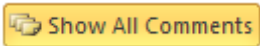
Click on the cell

Step-2

Click on show/hide comment to show/hide comment

4.6.8   Show all comments

Click [Show All Comments]
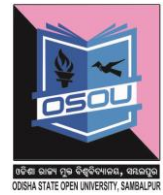
4.7   Adding Textbox

To insert a textbox click on Insert Tab and click the Text Box as shown below
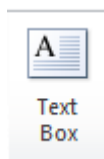
4.8   Undo changes

4.8.1   Undoing changes in an unsaved worksheet

To undo changes on a cell click on the cell and press Ctrl +Z.

4.8.2   Undo changes in a saved document

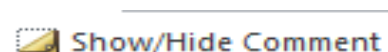Undo changes is a process to get back to the previous values of worksheet or a workbook. In case of worksheet the option to undo changes is ctrl + z .In case of workbook there is an auto save which saves the work every 1 minute to time defined by the user. This option is achieved by clicking on file => option =>save. Here clicking on the 2 checkboxes

- ➢ Save auto recover every 10 minutes
- ➢ Keep the last auto saved version if I close without saving
- ➢ Auto recover file location
- ➢ Default file location
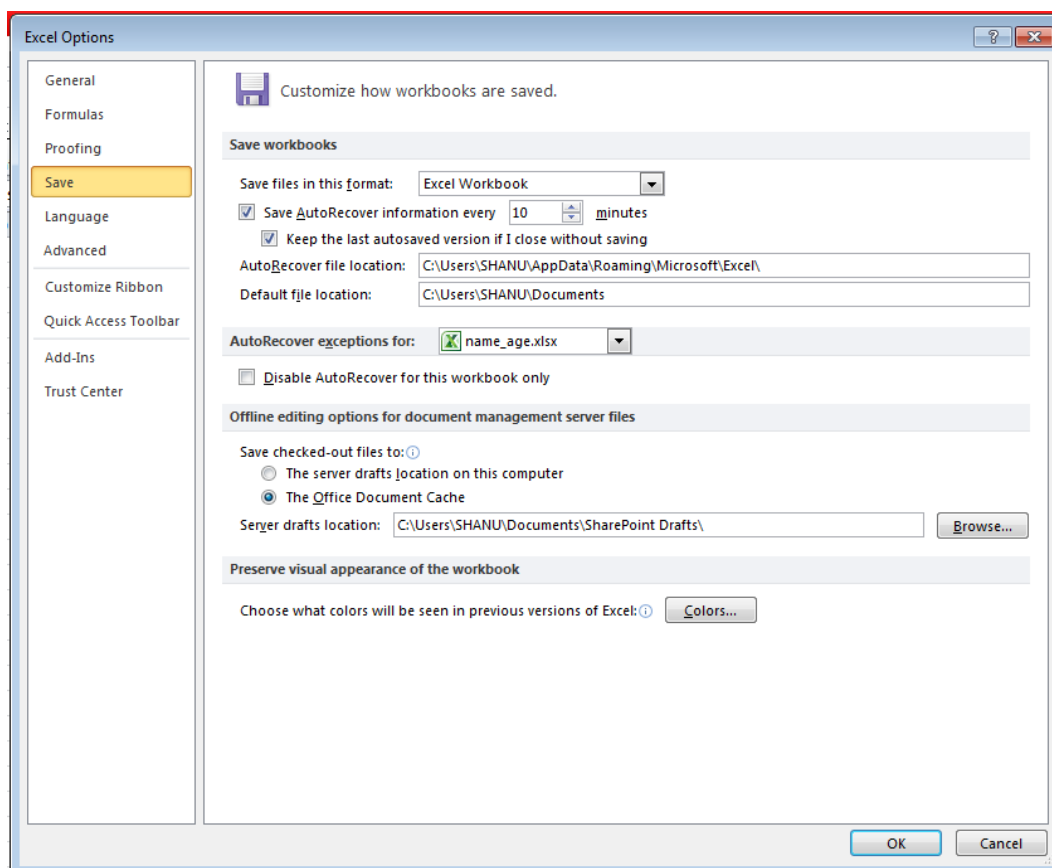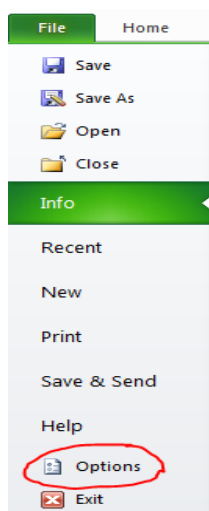
Have the above two check boxes checked and set the auto recover time to
10 minutes. This way the file is saved in auto recovery every 10 minutes. If
anything goes wrong you can recover the workbook from the workbook
you prepared 10 minutes ago.

Q.1 What is a chart? What are the uses of a chart?

A._____

_____

_____

Q.2. What is a zoom in out control?

A._____

_____

Q.3. What is a special symbol?

A._____

_____

Q.4. What is a comment?

A._____

_____

Q.5. What is undo changes?

A._____

4.9 Let us sum up

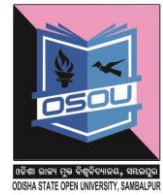Chart is a graphical representation of data, in which "the data is represented by symbols. Charts are used in business meetings ,business evaluation, understanding what are the sectors that one has to strengthen up to match the market expectations. charts are of various types. Some of the most prominent charts are the bar and the pie chart. Zoom in out control controls the magnification of the Excel sheet to enable viewers to see clearly. Special symbols are used to be incorporated on the worksheet for a particular purpose of the user. Comments are given to cell to have a descriptive description for which purpose that particular cell is being used.

4.10 References

1.tutorialspoint.com

2.google.com

4.11 Check your progress possible answers

Answers to check your progress 1

A.1. A chart, also called a graph, is a graphical representation of data, in which the data is represented by symbols. The uses of chart are comparative study, business analysis, data analysis, market survey etc.

A.2. Zoom in out option is used to zoom in and zoom out the excel sheet.

A.3. A character that is not a letter of a number is a symbol.

A.4. A comment a written statement the expresses the opinion about a cell

A.5. Undo changes is a process to get back to the previous values of worksheet or a workbook. In case of worksheet the option to undo changes is ctrl + z .In case of workbook there is an auto save which saves the work every 1 minute to time defined by the user. This option is achieved by clicking on file => option =>save. Here clicking on the 2 checkboxes

 ➢ Save auto recover every 10 minutes
 ➢ Keep the last auto saved version if I close without saving
 ➢ Auto recover file location
 ➢ Default file location