MS-EXCEL (Vol-II)

Unit -5

Working with V-LOOKUP and HLOOKUP

Unit -6

Printing, translation and workbook security

Unit -7

Data Table and Pivot Table

Unit - 8

Keyboard Shortcuts

Unit -5

Working with VLOOKUP and HLOOKUP

Learning objectives

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

1) What are VLOOKUP and the advantages of it?
2) What are HLOOKUP and the advantages of it?

Introduction

Getting values from two different sheets is a difficult task when it comes to hundreds and thousands of rows. Example of this is

Sheet1 comprises of

Roll no	**Name**
1	Rahul
2	Arun
3	Arpita
4	Archana

Sheet2 comprises of

Roll no	**Favorite Game**
1	Cricket
2	Hockey
3	Table tennis
4	Lawn tennis

Sheet3 comprises of

Roll no	Name	Favorite Game
1	Rahul	Cricket
2	Arun	Hockey
3	Arpita	Table tennis
4	Archana	Lawn tennis

In this scenario VLOOKUP comes for help.

Now among many students of a question was asked how many marks a student scored in a particular course the HLOOKUP comes for help.

	A	B	C	D	E	F	G
1	Name	Shanu	Arun	Rohit	shyama	Arpita	Shyam
2	English	70	60	56	45	55	54
3	Math Marks	72	50	65	55	56	65
4	Physics	84	58	67	57	54	56
5	Chemistry	69	45	98	87	53	54
6	Maths	79	55	92	65	53	53
7							
8	SHANU'S MARKS IN MATHS						
9					79		

Definition

VLOOKUP also called Cross referencing is a process used in case the data is spread across multiple sheets and it has to be congregated in one sheet.

HLOOKUP is a function that looks for a value in the top row of a table or array of values and returns the value in the same column from a row you specify

VLOOKUP

Sheet-1

Let us enter some data in sheet1

	A	B
1	roll	name
2	1	sandy
3	2	nandy
4	3	andy
5	4	sheena
6	5	ram
7	6	arun
8	7	praveen
9	8	hari
10	9	rohit
11	10	poonam

Column A shows Roll number of the student

Column B shows name of the student

Sheet-2

Let us enter some data in sheet2

	A	B
1	roll	Favorite Dish
2	1	Egg Curry
3	2	Veg Palau
4	3	dum Biriyani
5	4	Chicken curry
6	5	Mutton curry
7	6	curd rice
8	7	Mushroom curry
9	8	sambar
10	9	dal Makhni
11	10	mix veg

Column A shows Roll Number of the student

Column B shows the favorite dish of the student

Step-3

Now copy the value stored in B1 cell of sheet 2 which is **"Favorite Dish"**

Place it in sheet1 C1 cell

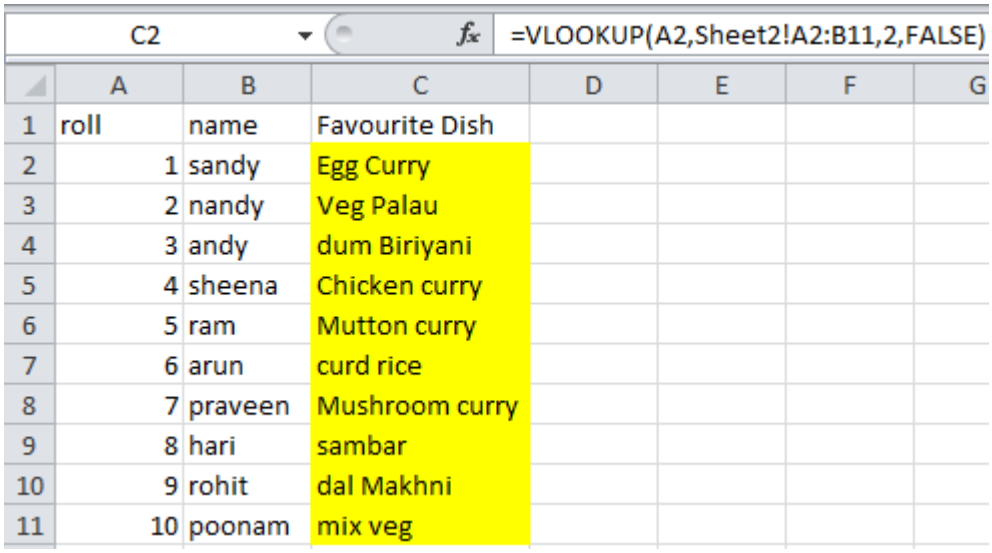
Come down to C2 and run the VLOOKUP formula

C2 fx =VLOOKUP(A2,Sheet2!A2:B11,2,FALSE)

	A	B	C	D	E	F	G
1	roll	name	Favourite Dish				
2	1	sandy	Egg Curry				
3	2	nandy					
4	3	andy					
5	4	sheena					
6	5	ram					
7	6	arun					
8	7	praveen					
9	8	hari					
10	9	rohit					
11	10	poonam					

Step-4

Left click on C2 and drag down till you reach roll 10



C2 =VLOOKUP(A2,Sheet2!A2:B11,2,FALSE)

	A	B	C	D	E	F	G
1	roll	name	Favourite Dish				
2	1	sandy	Egg Curry				
3	2	nandy	Veg Palau				
4	3	andy	dum Biriyani				
5	4	sheena	Chicken curry				
6	5	ram	Mutton curry				
7	6	arun	curd rice				
8	7	praveen	Mushroom curry				
9	8	hari	sambar				
10	9	rohit	dal Makhni				
11	10	poonam	mix veg				

Explaining the VLOOKUP

VLOOKUP(A2,Sheet2!A2:B11,2,FALSE)

1. A2:- the roll number common in both sheet1 and sheet2
2. Sheet2:- Describes the sheet from where the data is to be copied.
3. A2:B11:-Describes the range
4. 2: Stands for the column number
5. False:- Stands only identical values will be recognized
6. True :-Stands for values close to identical values will be recognized

HLOOKUP

HLOOKUP stands for horizontal lookup

Suppose i want to know the mathematics marks of shanu I used the Horizontal lookup

SYNTAX

HLOOKUP("Shanu",A1:G6,6,FALSE)

	A	B	C	D	E	F	G
1	Name	Shanu	Arun	Rohit	shyama	Arpita	Shyam
2	English	70	60	56	45	55	54
3	Math Marks	72	50	65	55	56	65
4	Physics	84	58	67	57	54	56
5	Chemistry	69	45	98	87	53	54
6	Maths	79	55	92	65	53	53
7							
8	**SHANU'S MARKS IN MATHS**						
9					**79**		

Here

"Shanu" stands for the name of the student whose marks are to be found out.

A1:G6 :-Stands for the range which has to be searched.

5 :- this stands for the 5th column which means Marks in Mathematics.

False :- This denotes exact match of the name shanu , the column number and the range defined.

If incorrect values are entered #REF is returned.

Unit -6

Printing, translating and Workbook security

Learning objectives

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

1) How to take a printout, types of printing,
2) What is translation and how translation is done from one language to other.
3) How to protect your data from a stranger by giving a password to the worksheet, workbook

Structure

Introduction

Definition

Printing Worksheets

Translate Worksheet

Email Workbooks

Workbook security

Let us sum up

References

6.9. Check your progress –possible answer

Introduction

Printing in a desired order , quick translation and tight security are the need of the hour. Improper printing leads to poor output which is not liked the individual or the company. Quick translation which converts one language to another is a component which converts from one language to the other is required when someone wants to incorporate another language in the worksheet. Important data is viewed by strangers when they open the file. This protection is given by MS Excel which helps in locking the worksheet and workbook thus protecting it. Feature of this kind of locking are lock a worksheet so that it can be opened but cannot be modified. Work book which can be opened but cannot be modified, complete lock to a workbook and worksheet so

that it cannot be opened by anyone except the concern person, complete lock to a workbook and worksheet with read only option for outside user**s.**

Definition

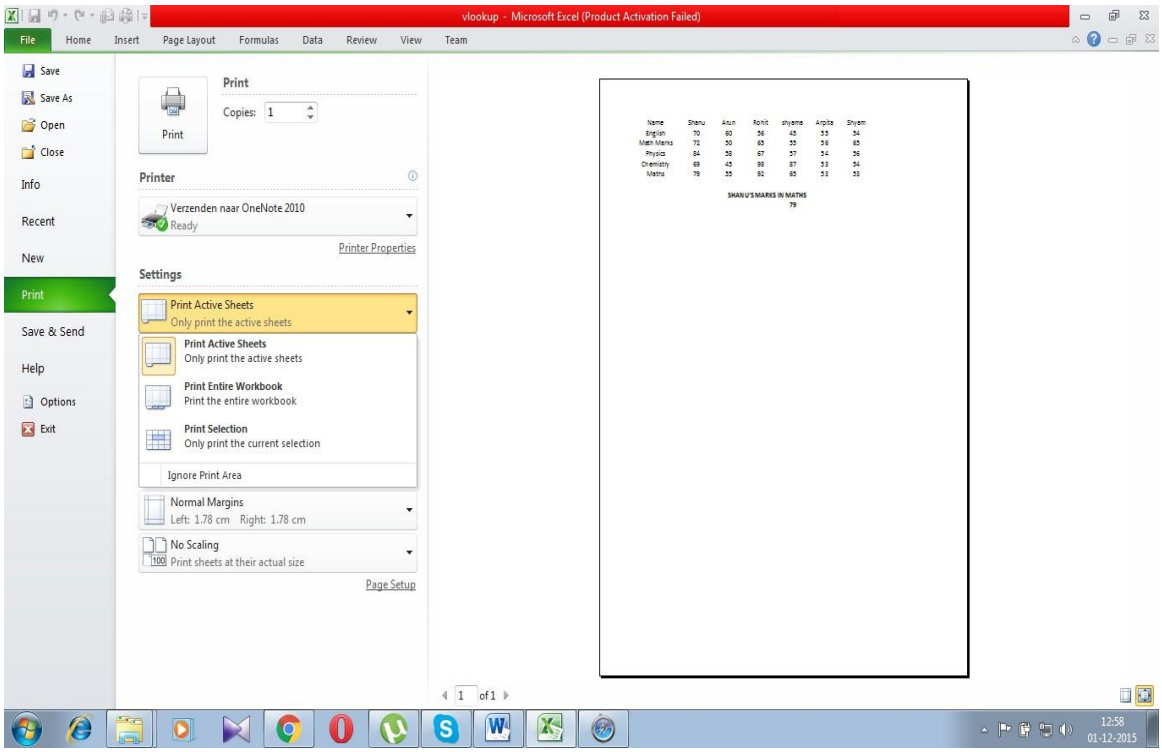
Printing :- Printing is a process for reproducing text and images using current software.

Translation:- Translation is a process of changing the words from one language into a different language

Security :- The process of securing files so that they are inaccessible by other person

Printing Worksheets

To print a worksheet follow the following steps as shown below



Click on file and then print option

The print option in the above screen shows

1. Print button :- To start printing
2. Copies :- Number of copies to be printed
3. Printer :- which printer one uses to print.
4. Settings :-
   a. Print active sheet

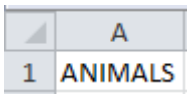
b. Print active sheet from which sheet to which sheet.
c. Print Workbook :- Print the entire workbook
d. Print Selection **:-** Print the selection.

5. Collated **:-** How to print the existing sheet when more than 1 copy is given to print in the fashion
6. 1,1,1;1,2,3
7. Portrait Orientation :- This option is used to print in either portrait /landscape fashion.
8. A4 **:-** select the sheet type (A4,A3,B4,B5, Envelope)
9. Normal Margin**:-** Used to set the margins of the page
10. No Scaling **:-** Printing sheets in their actual size

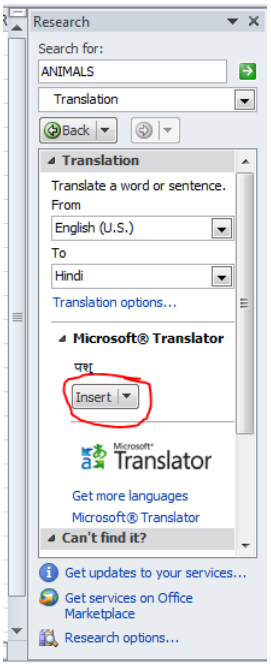
Translate Worksheet

Used to translate the entire worksheet into another language.

Step-1 :- select the cell A1 as shown below



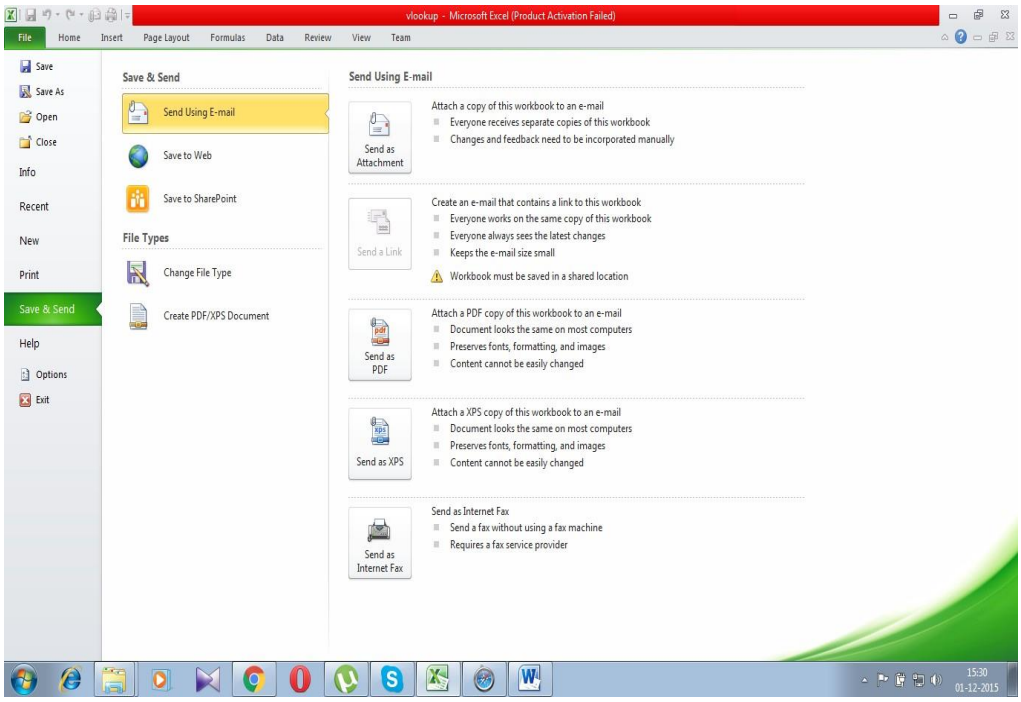
Step-2 :- Go to the review tab and click translate as shown below.



Step-3

	A
1	पशु

Email Workbooks



Workbook security

Workbook security is used to protect a workbook or the worksheets in the workbook. This involves 4 ways of locking the worksheets of the workbook.

1. Protect Sheet
2. Protect Workbook
3. Lock the workbook with a password
4. Lock the workbook with a password and read only

Protect Sheet

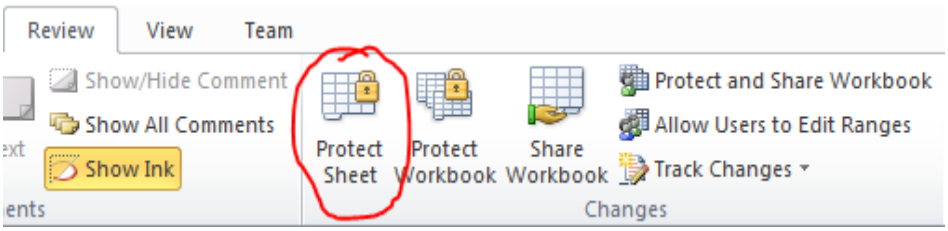
This option is used to lock a particular worksheet.

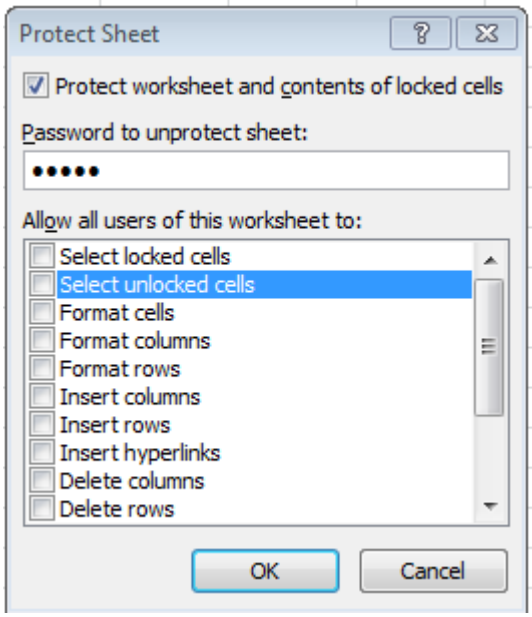
Steps

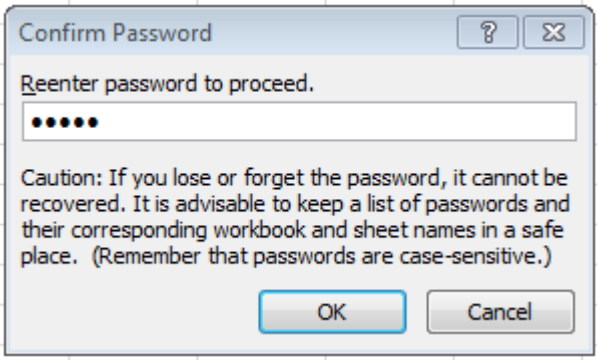
1. Create a new excel workbook
2. Click on sheet1 and start typing your data as shown below

	A	B	C
1	Name	Age	Gender
2	Shanu	25	M
3	Rohit	26	M
4	Asha	16	F

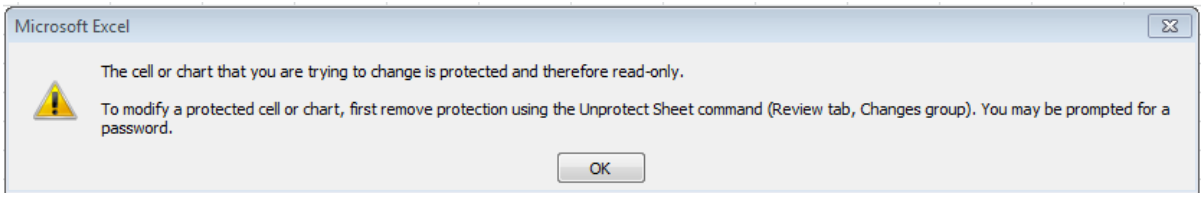
3. Click on Review Tab and click Protect Sheet as shown below



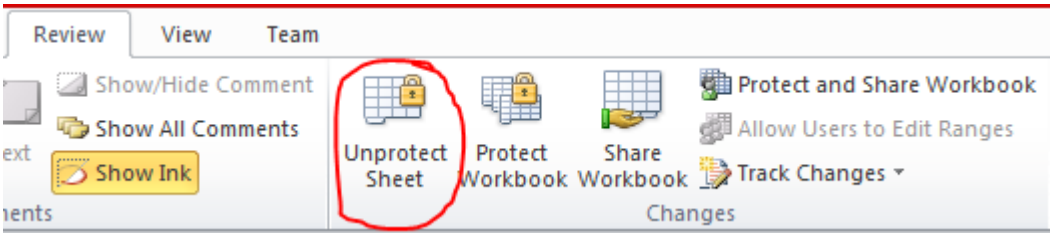
4. 

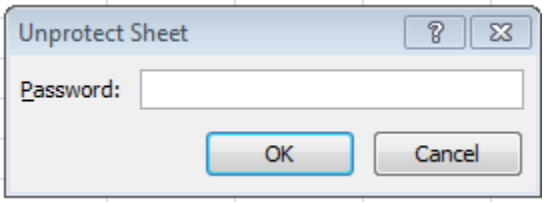
5. 

6. Click on sheet2 and click on sheet1.Now the sheet1 is locked from entering values, editing values ,deleting values.
7. If someone tries to enter data the result comes on the screen as below

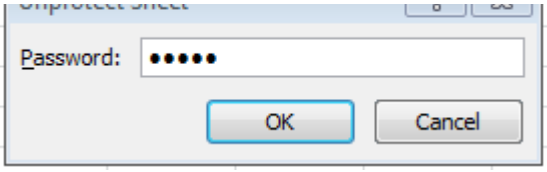


8. Now to unprotect sheet click on



9. 

10. Enter valid password. If password is lost nobody can help you. So be careful

11. 

12. Now I enter a row in excel in row 5 as shown below.

13.

1	Name	Age	Gender
2	Shanu	25	M
3	Rohit	26	M
4	Asha	16	F
5	rahul	18	M

14. Now the sheet is unlocked and like a general worksheet till you protect the sheet.

Protect workbook

This option prevents the workbook from

1. Adding new worksheets
2. Deleting The existing Sheet
3. Moving the existing sheet

Steps

1. Create a workbook named protect
2. Below I have created 3 sheets as shown below

SHEET1

	A	B	C
1	**Name**	**Age**	**Gender**
2	Shanu	25	M
3	Rohit	26	M
4	Asha	16	F
5	rahul	18	M

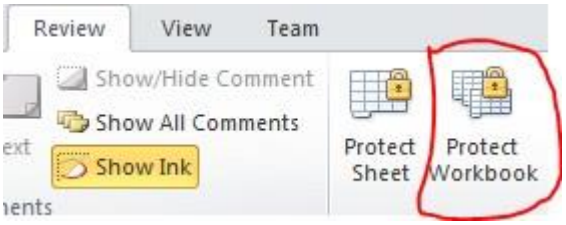
SHEET2

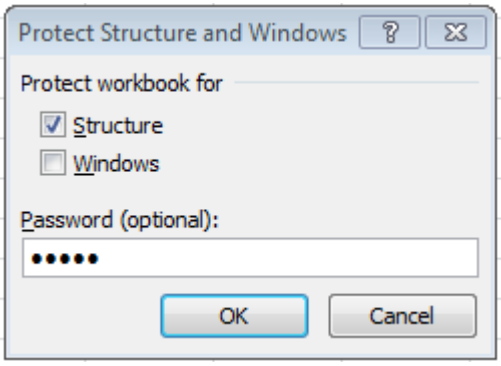
	A
1	**Company**
2	Microsoft
3	Accenture
4	Infosys
5	Satyam
6	Juniper Networks

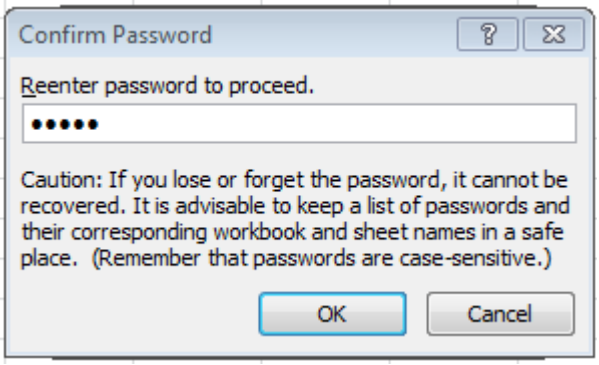
SHEET3

	A
1	**Elements in Chemistry**
2	**Carbon**
3	**Magnesium**
4	**Barium**
5	**sodium**

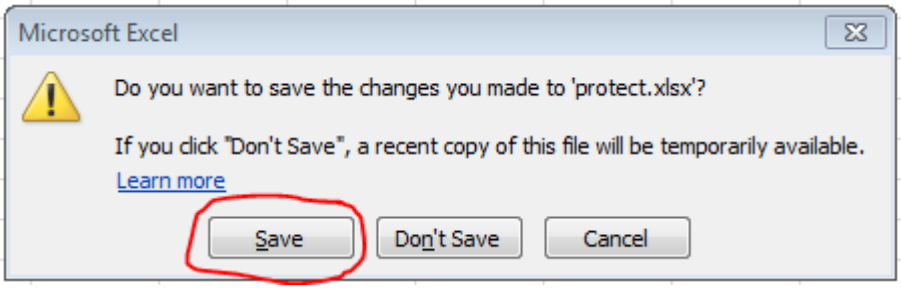
3. To protect a workbook click as shown below



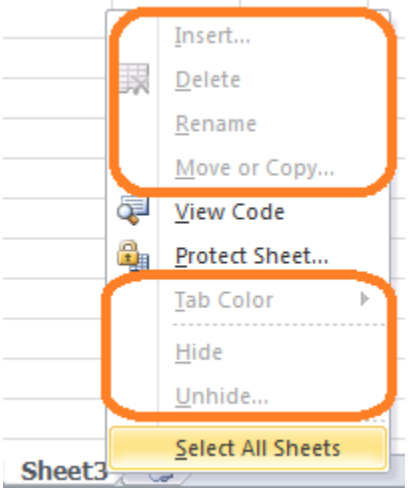




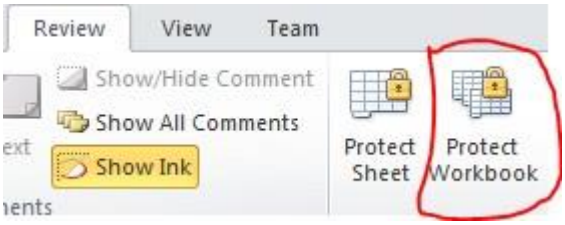
4. Close the workbook and while closing click the save button



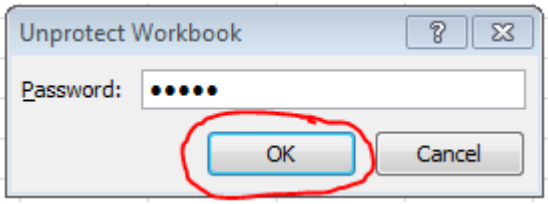
5. Try to open the workbook and you find you are neither able to add new sheets or delete created sheet or move sheet. See below



5. To unprotect a workbook that is protected with a password follow the following steps
   a. Open the workbook
   b. Go to review and go to protect workbook as shown below.



   c. Enter the valid password and click ok button as shown below



   d. The workbook is unlocked and you can add sheets, move sheets and delete sheets

Protect workbook with password and read only

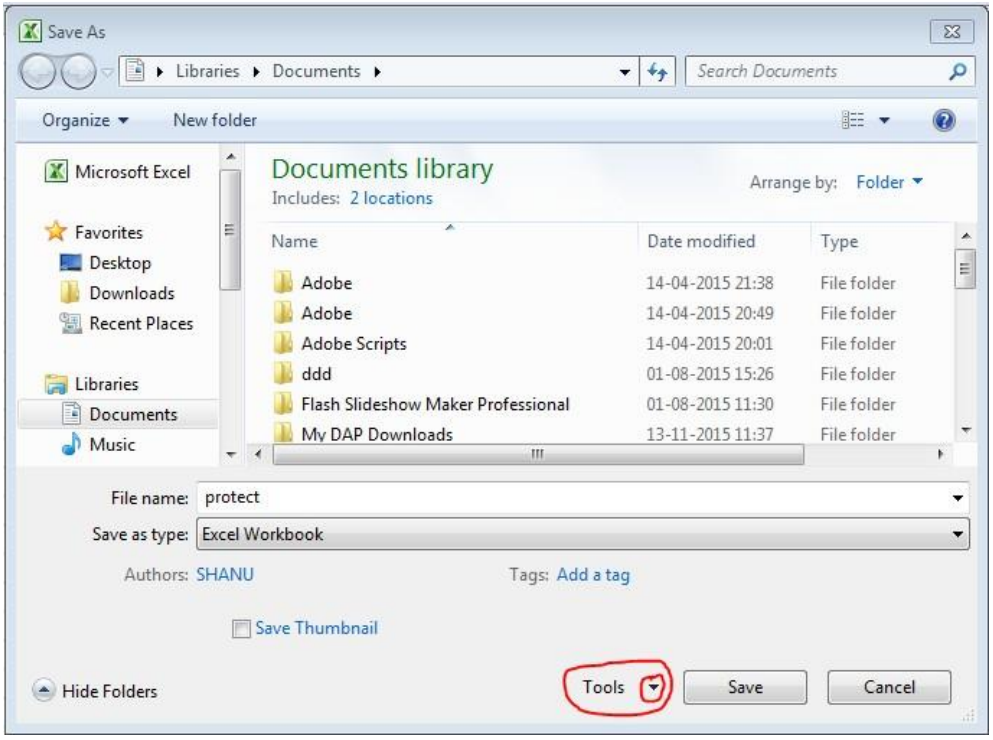
This option is used lock the entire workbook with a password with read only option

Where this kind of scenario is used

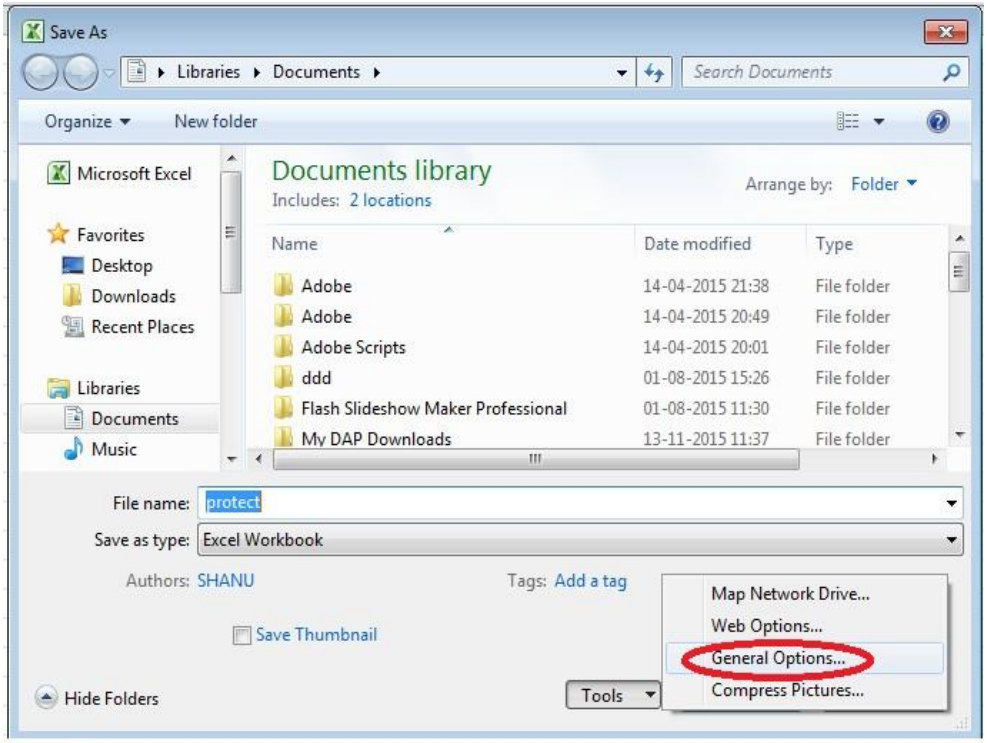
1. Protect vital statistical data by protecting it with password and read only so that the user can see only but cannot modify
2. Protect any sensitive data relating to finance relating to one company being changed by a stranger

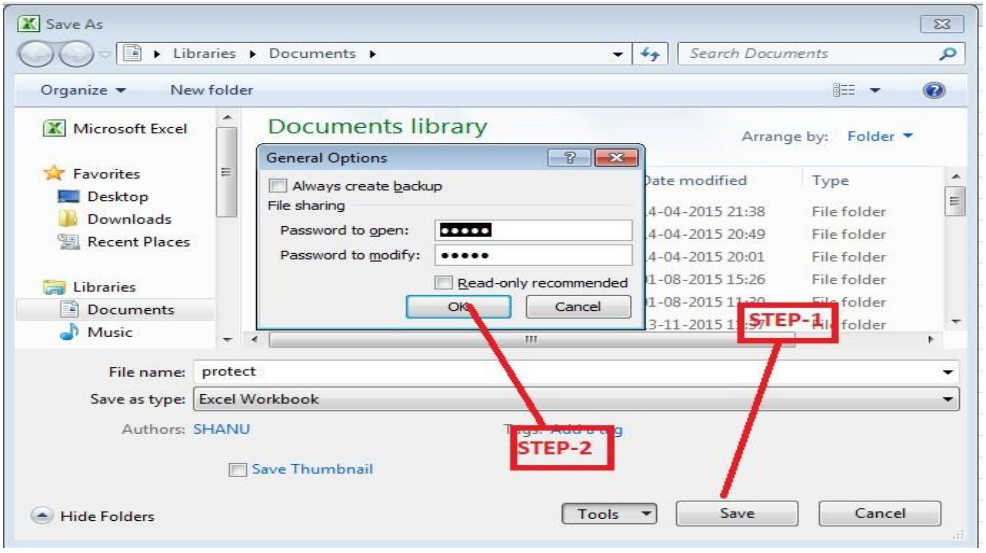
Steps

1. Open the workbook named protect that we had prepared earlier. We are going to lock this workbook so that except you nobody can open except you
2. Go to **File** and then click **Save as** option



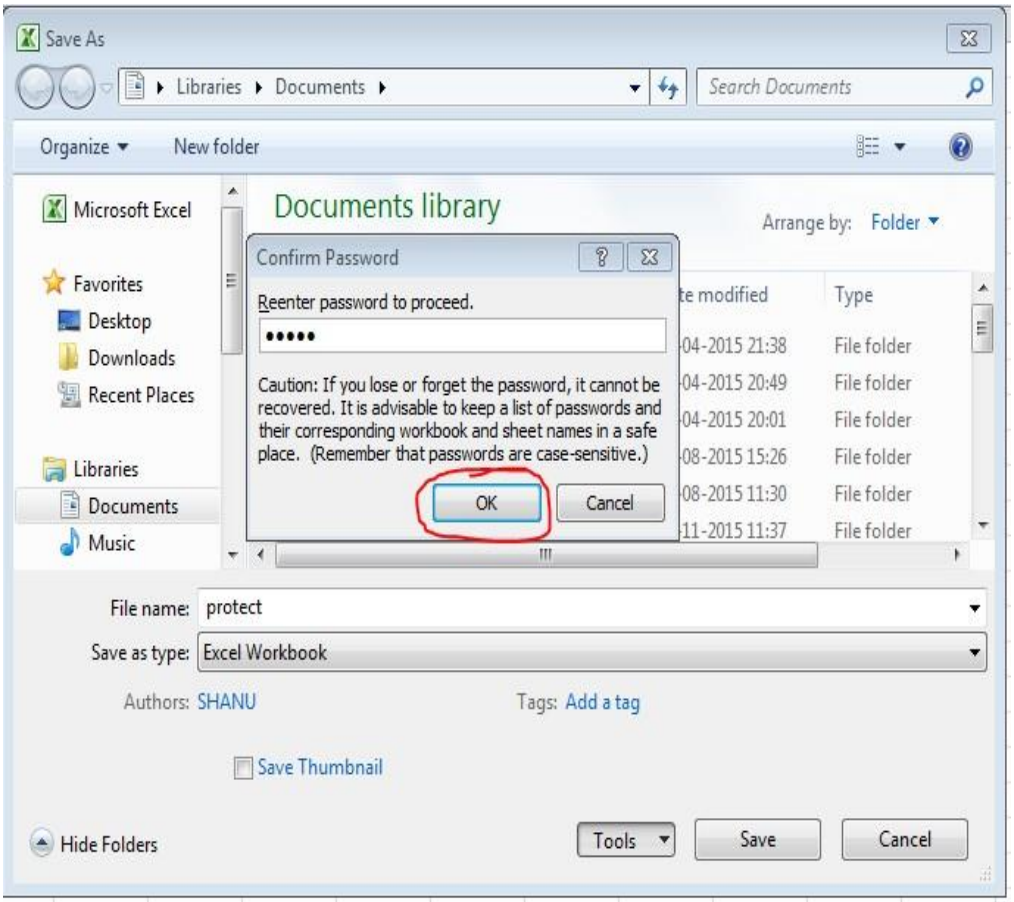
3. Click on Tools down arrow option as below and select General options



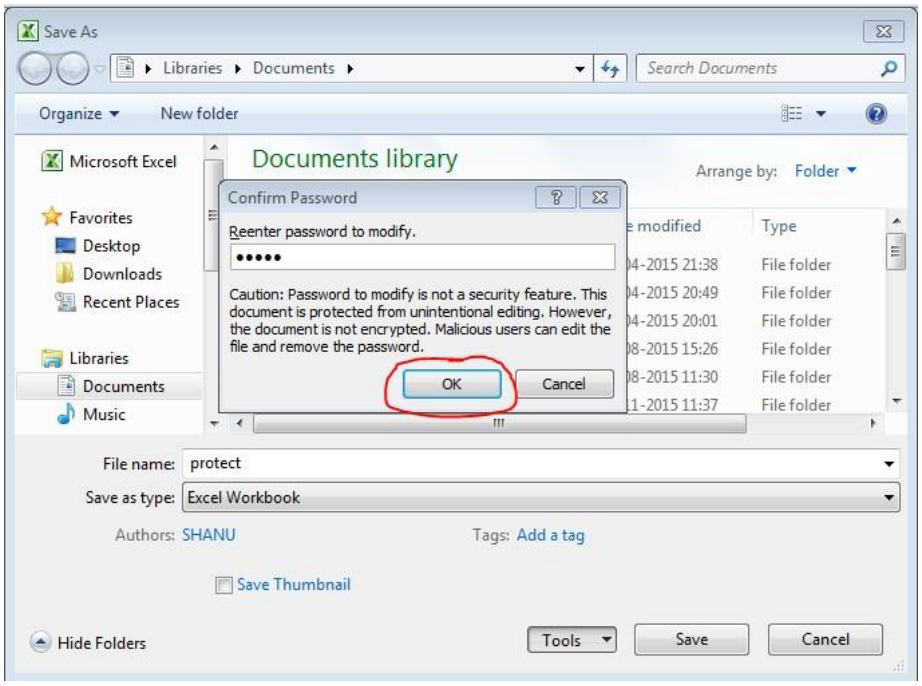


4. Once save option is clicked you get 2 options
   a. Password to open :- This password is to open the workbook
   b. Password to modify :-This password is to modify the workbook.

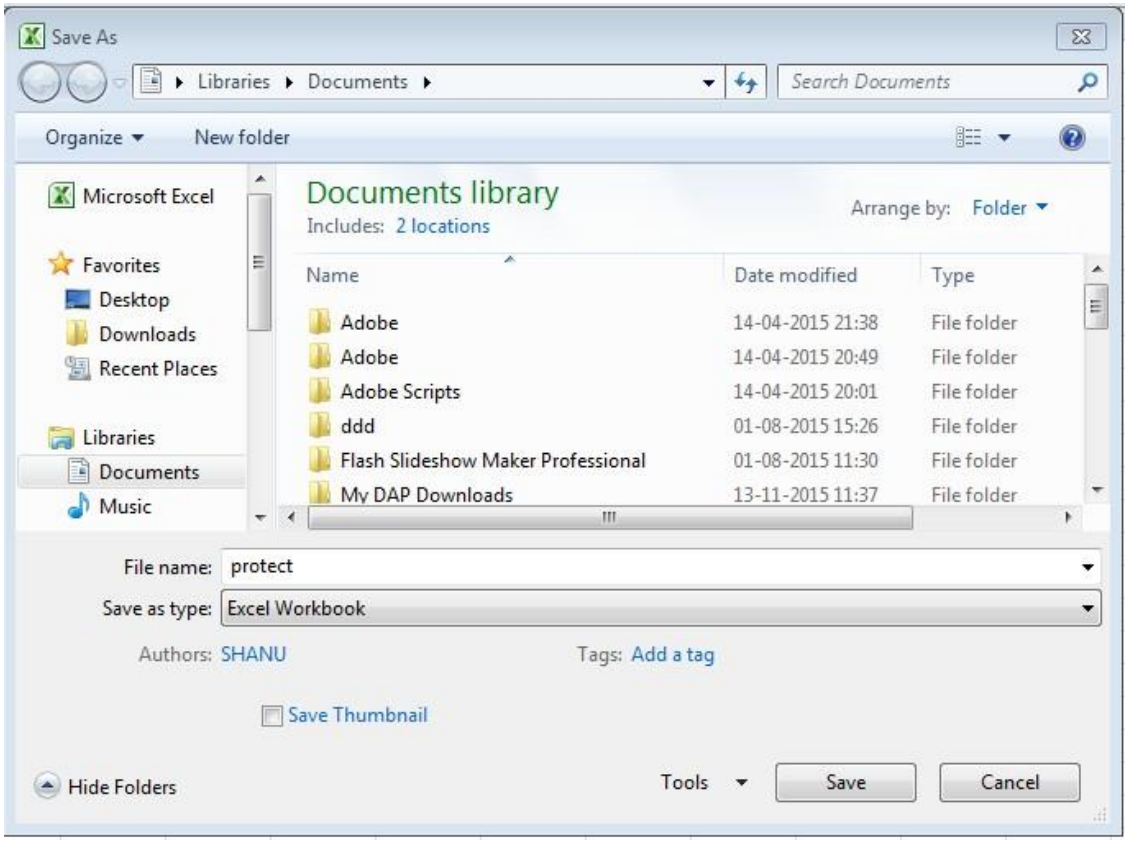
5. The screen shown below is to confirm the password to open. Type the password to open and click OK button



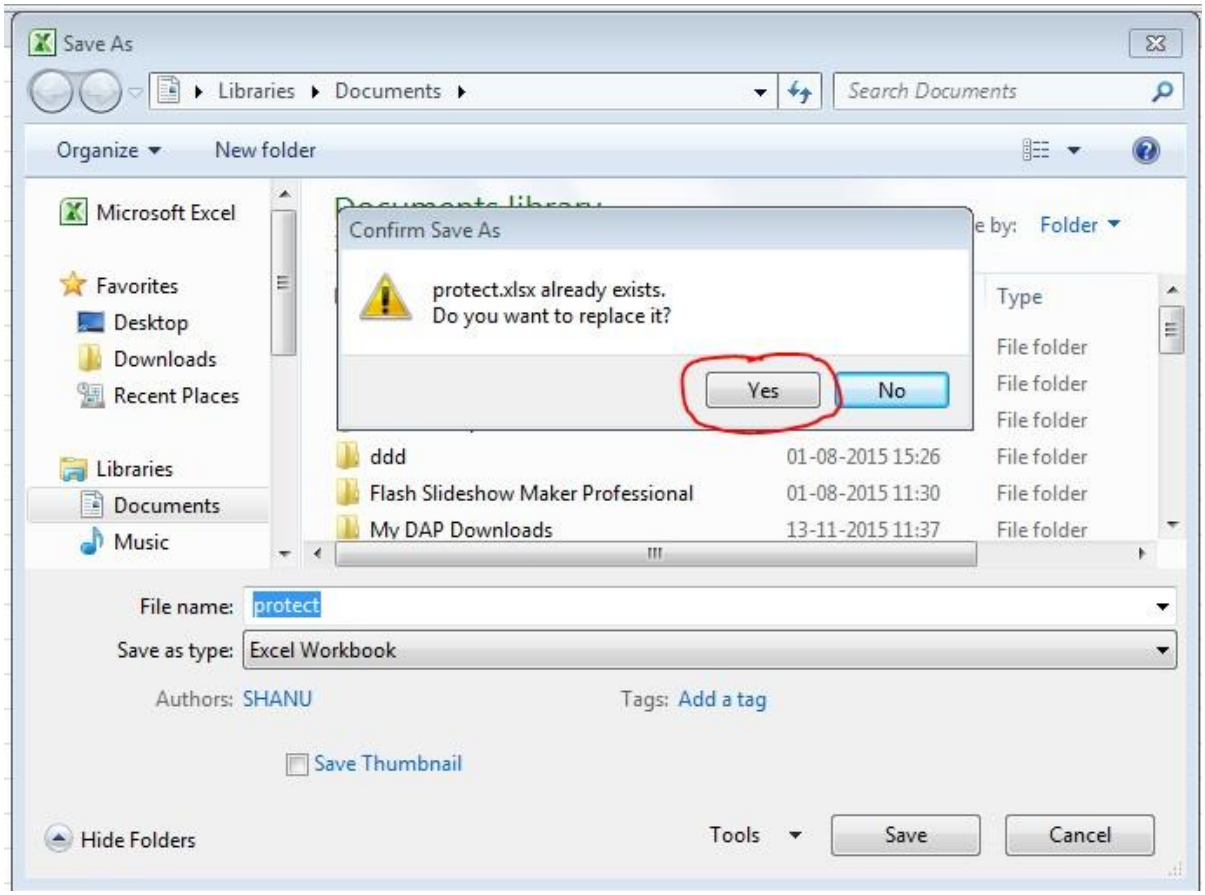
6. Upon clicking the OK button you get an option to confirm the modification password as shown below. Type it and press OK



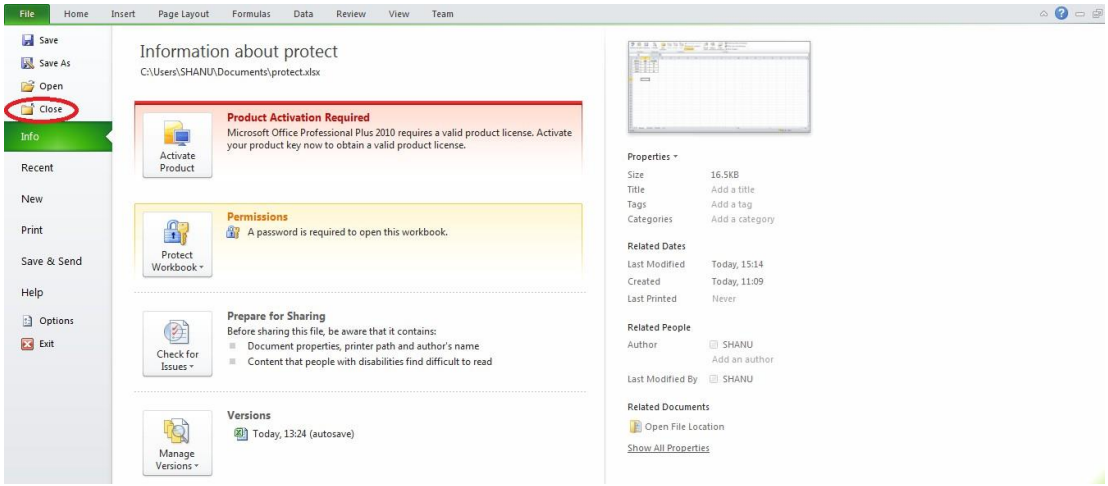
7. Now press the save button as shown below



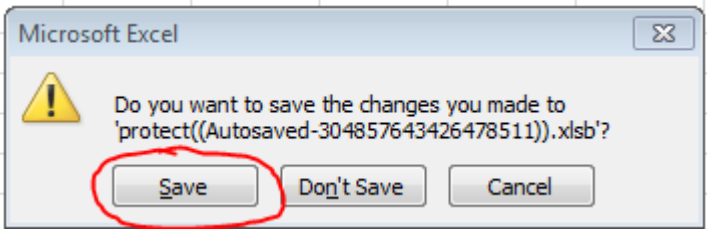
9.If the document already exists press the yes button as shown below.



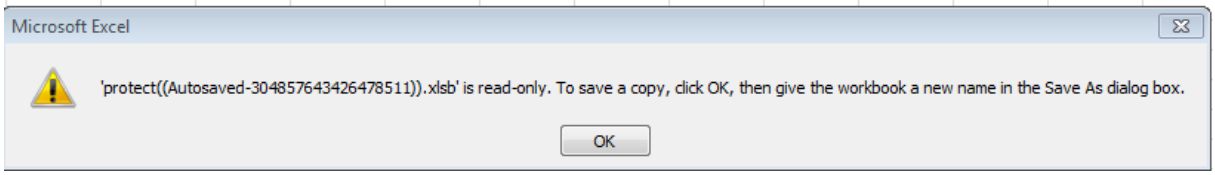
11. Now close the document as shown below



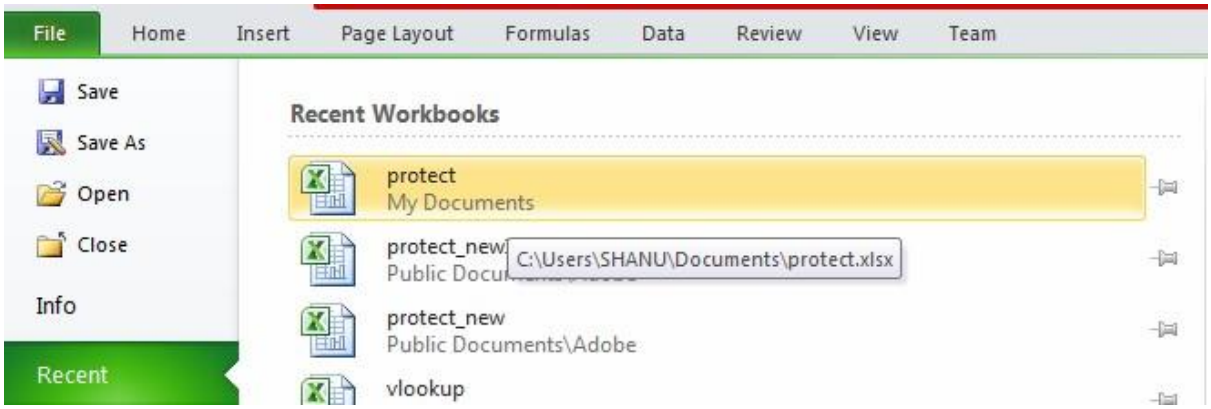
12 You come across this message click save



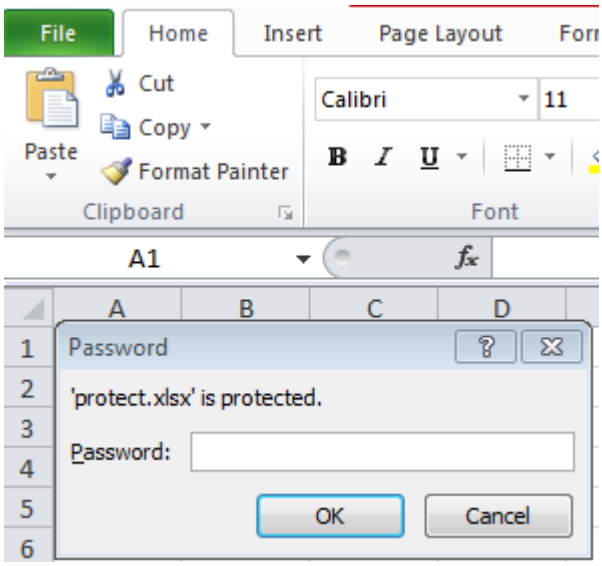
13 and then this click ok



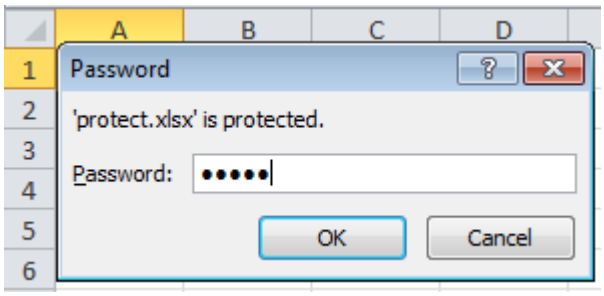
14 Close all documents and now again open Protect.xlsx file as shown below



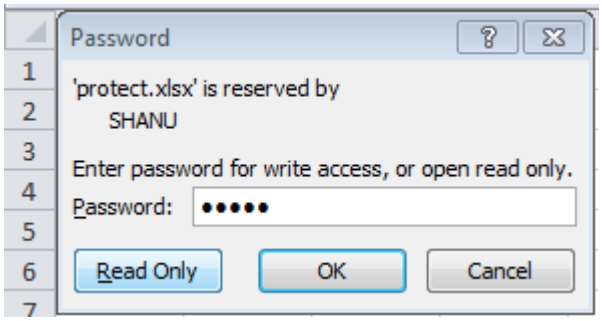
15. The locked workbook is as shown below.



16. Enter the password to open and click OK button



17. Enter the password to modify and click Ok button

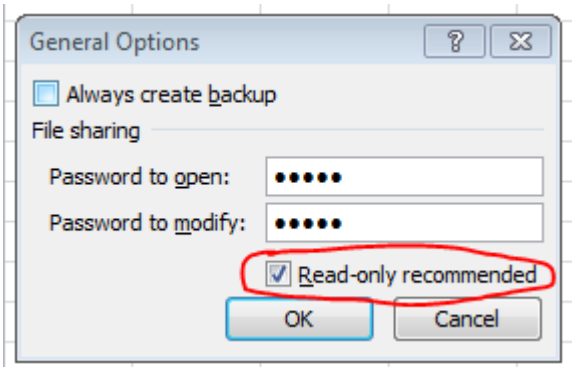


18. The File got opened

	A	B	C
1	Name	Age	Gender
2	Shanu	25	M
3	Rohit	26	M
4	Asha	16	F
5	rahul	18	M

If you are beginner and have already saved your document you can also use save as and choose a different file name to save the document and proceed with the steps we had discussed now. After the file is secure you can erase the unprotected file.

Change the property in the procedure



Save the file.

The file thus save is protected read only file.

Unit -7

Data Table and Pivot Table

Learning objectives

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

1) What is a Data Table.
2) How to create a Data Table.
3) Data Table and its uses.
4) What is a Pivot Table
5) How to create a Pivot Table.
6) Pivot Table and its uses.

Structure

Introduction

Data table is used in small to very large firms where time and money are the important criteria of development of company. Used in high scientific calculations, mathematical calculations, financial operations.

Definition

Data table:- Data Table a range of cells that are used for testing and analyzing outcomes on a large scale. It is a way to see how altering the values in a formula affect the results. Data tables can store the results of multiple scenarios in your spreadsheet, and saves you time in calculating multiple formulas.

Pivot Table:- A pivot table is a program tool that allows you to reorganize and summarize selected columns and rows of data in a spread sheet or database table to obtain a desired report.

Data Table

	A	B	C	D	E	F	G	H	I	J	K	L
1	ITEM NAME	PEN DRIVE										
2	QTY	100										
3	PRICE	200										
4	DISCOUNT	10%										
5	PRICE											
6	Total Price	18000	10	20	30	40	50	60	70	80	90	100
7	QTY	10	90	180	270	360	450	540	630	720	810	900
8		20	180	360	540	720	900	1080	1260	1440	1620	1800
9		30	270	540	810	1080	1350	1620	1890	2160	2430	2700
10		40	360	720	1080	1440	1800	2160	2520	2880	3240	3600
11		50	450	900	1350	1800	2250	2700	3150	3600	4050	4500
12		60	540	1080	1620	2160	2700	3240	3780	4320	4860	5400
13		70	630	1260	1890	2520	3150	3780	4410	5040	5670	6300
14		80	720	1440	2160	2880	3600	4320	5040	5760	6480	7200
15		90	810	1620	2430	3240	4050	4860	5670	6480	7290	8100
16		100	900	1800	2700	3600	4500	5400	6300	7200	8100	9000

Data Table :- Data Table is the process to see different results by altering input cell values in your formula.

Why do we need a Data Table

Data tables have a very wide scope but for now we focus on how to create a Data table.

How to create a Data Table

Step-1

Prepare the Excel Sheet as below

	A	B	C	D	E	F	G	H	I	J	K	L
1	ITEM NAME	PEN DRIVE										
2	QTY	100										
3	PRICE	200										
4	DISCOUNT	10%										
5	PRICE											
6	Total Price	18000	10	20	30	40	50	60	70	80	90	100
7	QTY	10										
8		20										
9		30										
10		40										
11		50										
12		60										
13		70										
14		80										
15		90										
16		100										

Let us consider the above example.

B1 CELL comprises of the name of the item which is pen drive.

B2 CELL comprises of the quantity of the item which is 100.

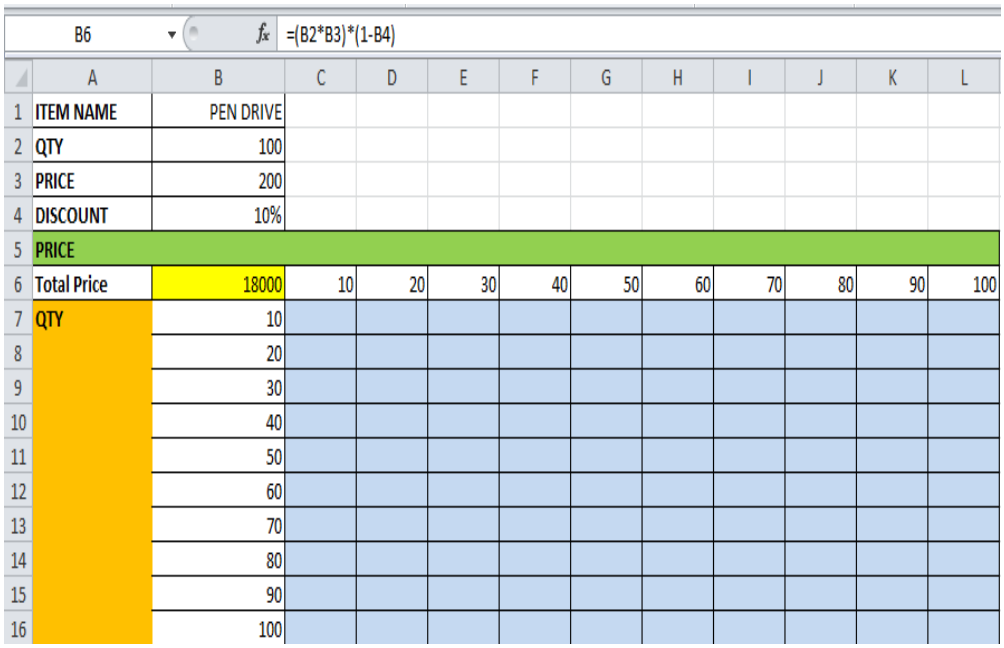
B3 CELL comprises of the price of the item which is 200

B4 CELL comprises of the discount for the item which is 10%

B6 CELL comprises of the net price =(200*100)*(1-10/100)

=20000*(90/100)=18000(By formula)
==(B2*B3)*(1-B4)

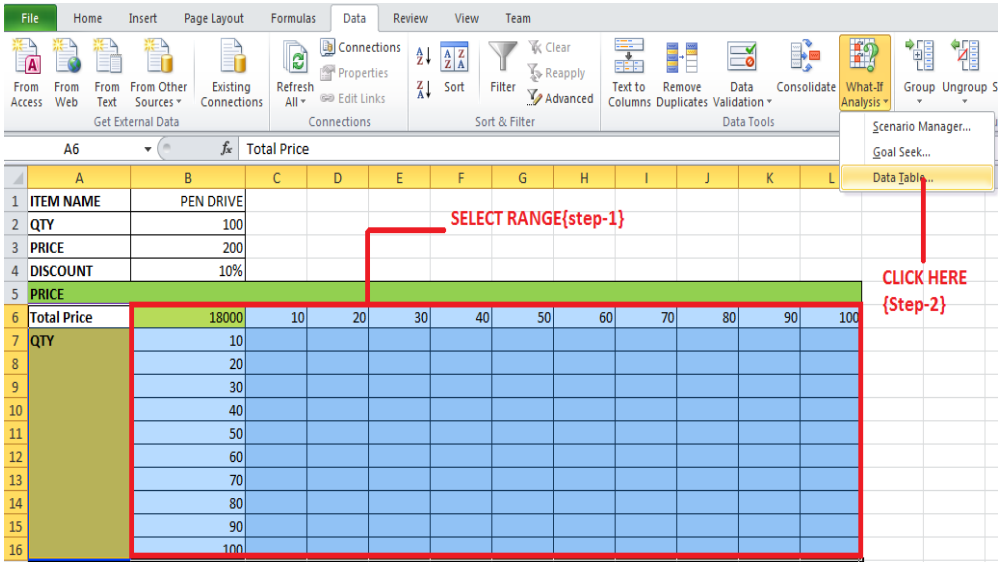
As shown below in yellow



	A	B	C	D	E	F	G	H	I	J	K	L
1	ITEM NAME	PEN DRIVE										
2	QTY	100										
3	PRICE	200										
4	DISCOUNT	10%										
5	PRICE											
6	Total Price	18000	10	20	30	40	50	60	70	80	90	100
7	QTY	10										
8		20										
9		30										
10		40										
11		50										
12		60										
13		70										
14		80										
15		90										
16		100										

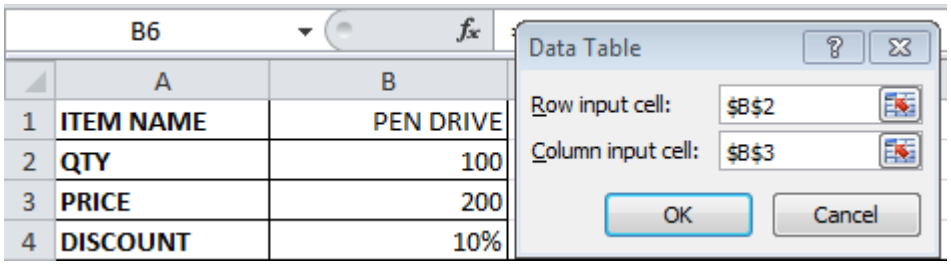
Step-2

To prepare the Data Table



Here 10.20. 30 are price and the qty that we set

Step-3



	A	B
1	ITEM NAME	PEN DRIVE
2	QTY	100
3	PRICE	200
4	DISCOUNT	10%

1. Click on the text box in row input cell
2. Select B2 cell
3. Click on the text box in column input cell
4. Select B3 cell
5. Click the ok button

Step-4 :- The result is as shown

B6 =(B2*B3)*(1-B4)

	A	B	C	D	E	F	G	H	I	J	K	L
1	ITEM NAME	PEN DRIVE										
2	QTY	100										
3	PRICE	200										
4	DISCOUNT	10%										
5	PRICE											
6	Total Price	18000	10	20	30	40	50	60	70	80	90	100
7	QTY	10	90	180	270	360	450	540	630	720	810	900
8		20	180	360	540	720	900	1080	1260	1440	1620	1800
9		30	270	540	810	1080	1350	1620	1890	2160	2430	2700
10		40	360	720	1080	1440	1800	2160	2520	2880	3240	3600
11		50	450	900	1350	1800	2250	2700	3150	3600	4050	4500
12		60	540	1080	1620	2160	2700	3240	3780	4320	4860	5400
13		70	630	1260	1890	2520	3150	3780	4410	5040	5670	6300
14		80	720	1440	2160	2880	3600	4320	5040	5760	6480	7200
15		90	810	1620	2430	3240	4050	4860	5670	6480	7290	8100
16		100	900	1800	2700	3600	4500	5400	6300	7200	8100	9000

Pivot Table

A **pivot table** doesn't actually change the spread sheet or database itself.

Let us consider the following Excel Sheet from which we are going to derive the pivot table

	A	B	C	D	E	F	G
1	DEPARTMENT	DESIGNATION	EMPLOYEE ID	EMPLOYEE NAME	AGE	GENDER	SALARY
2	MATH	LECTERURE	1	SANTOSH	25	M	60000
3	PHYSICS	READER	2	ARPITA	27	F	70000
4	CHEMISTRY	PROFESSOR	3	ARCHANA	32	F	80000
5	BOTANY	LECTERURE	4	ALOK	23	M	40000
6	ZOOLOGY	READER	5	ASHOK	26	M	50000

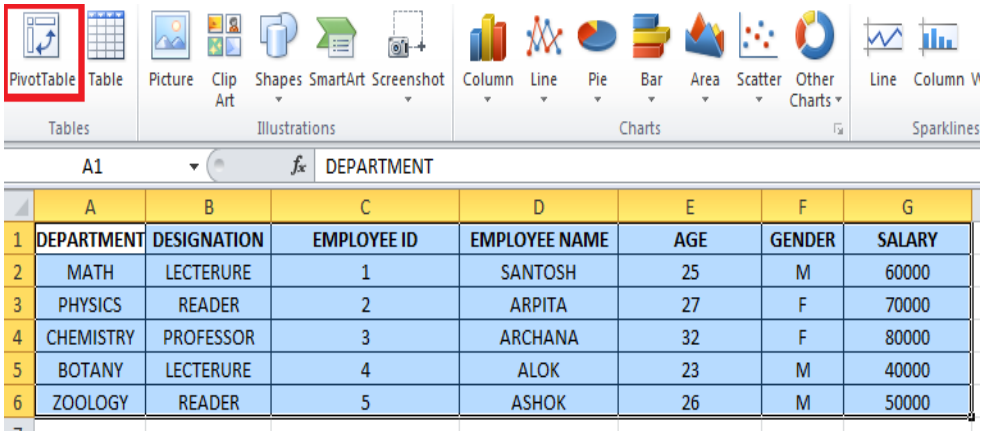
Step-1

First select the table as shown below

	A	B	C	D	E	F	G
1	DEPARTMENT	DESIGNATION	EMPLOYEE ID	EMPLOYEE NAME	AGE	GENDER	SALARY
2	MATH	LECTERURE	1	SANTOSH	25	M	60000
3	PHYSICS	READER	2	ARPITA	27	F	70000
4	CHEMISTRY	PROFESSOR	3	ARCHANA	32	F	80000
5	BOTANY	LECTERURE	4	ALOK	23	M	40000
6	ZOOLOGY	READER	5	ASHOK	26	M	50000

Step-2

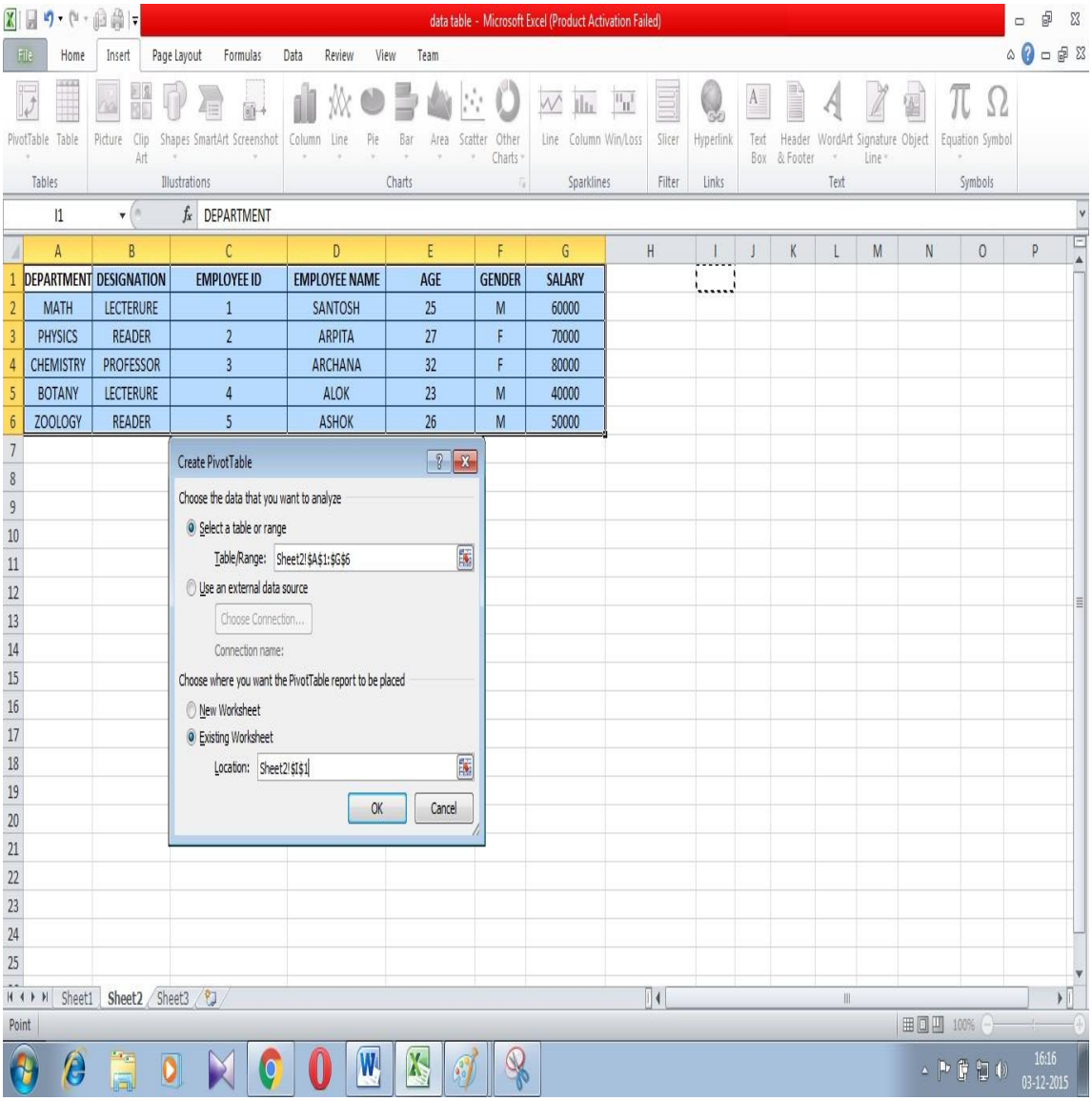
Click on Pivot Table as shown below



	A	B	C	D	E	F	G
1	DEPARTMENT	DESIGNATION	EMPLOYEE ID	EMPLOYEE NAME	AGE	GENDER	SALARY
2	MATH	LECTERURE	1	SANTOSH	25	M	60000
3	PHYSICS	READER	2	ARPITA	27	F	70000
4	CHEMISTRY	PROFESSOR	3	ARCHANA	32	F	80000
5	BOTANY	LECTERURE	4	ALOK	23	M	40000
6	ZOOLOGY	READER	5	ASHOK	26	M	50000

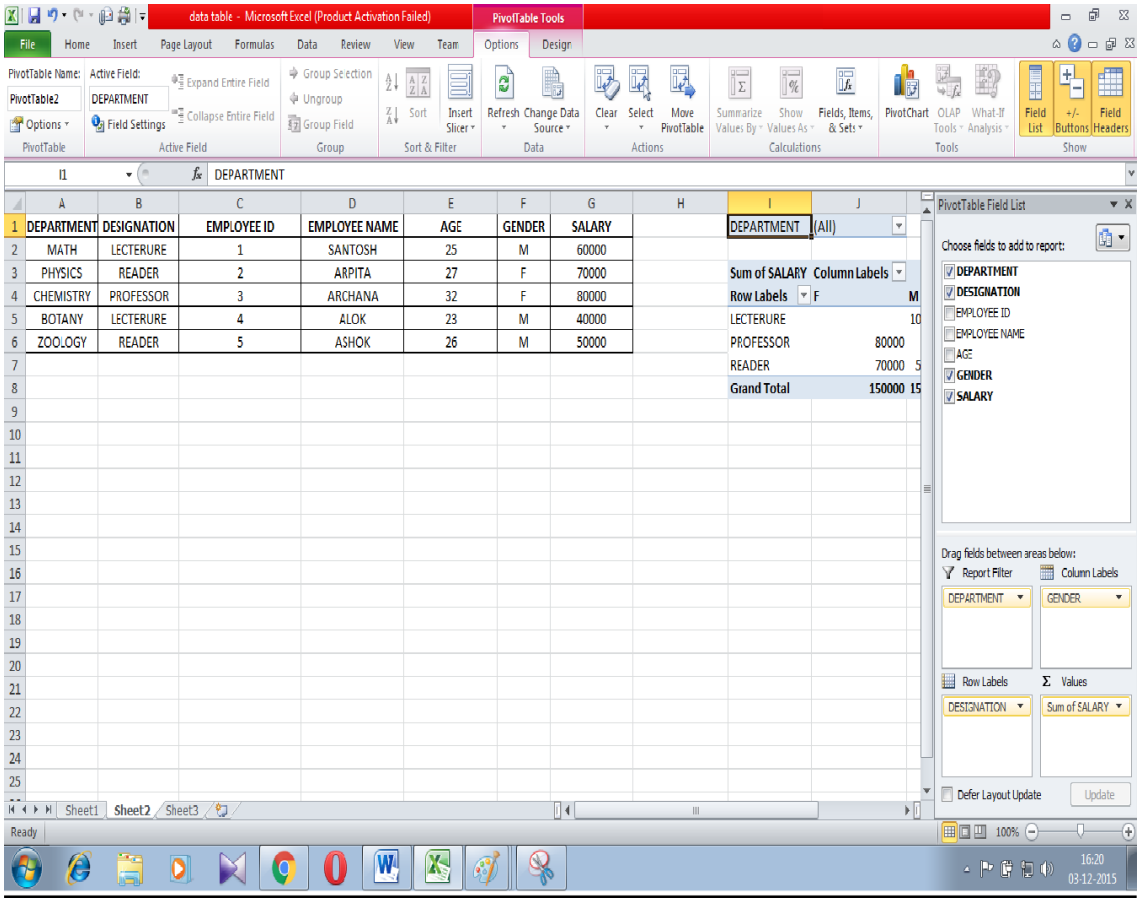
Step-3

Choose Existing Worksheet and location I1



DEPARTMENT	DESIGNATION	EMPLOYEE ID	EMPLOYEE NAME	AGE	GENDER	SALARY
MATH	LECTERURE	1	SANTOSH	25	M	60000
PHYSICS	READER	2	ARPITA	27	F	70000
CHEMISTRY	PROFESSOR	3	ARCHANA	32	F	80000
BOTANY	LECTERURE	4	ALOK	23	M	40000
ZOOLOGY	READER	5	ASHOK	26	M	50000

Step-4



DEPARTMENT	DESIGNATION	EMPLOYEE ID	EMPLOYEE NAME	AGE	GENDER	SALARY
MATH	LECTERURE	1	SANTOSH	25	M	60000
PHYSICS	READER	2	ARPITA	27	F	70000
CHEMISTRY	PROFESSOR	3	ARCHANA	32	F	80000
BOTANY	LECTERURE	4	ALOK	23	M	40000
ZOOLOGY	READER	5	ASHOK	26	M	50000

DEPARTMENT	(All)		
Sum of SALARY	Column Labels		
Row Labels	F	M	Grand Total
LECTERURE		100000	100000
PROFESSOR	80000		80000
READER	70000	50000	120000
Grand Total	150000	150000	300000

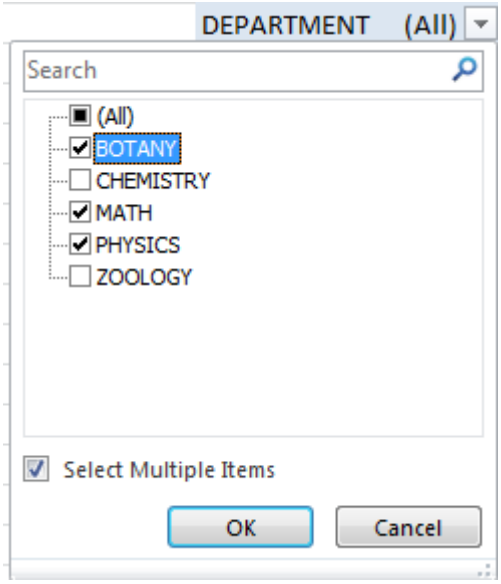
Step-5 :- The Pivot Table is created

I	J	K	L
DEPARTMENT	(All)		
Sum of SALARY	Column Labels		
Row Labels	F	M	Grand Total
LECTERURE		100000	100000
PROFESSOR	80000		80000
READER	70000	50000	120000
Grand Total	150000	150000	300000

Looking at the above screen we find that it is very easy to calculate the sum of both female and male and also find the grand total of the male and female employees.

Filtering Data using Pivot Table

You can filter data from a pivot table as shown below



Here the above screen pops up and shows two options

1. Select multiple items unchecked {This allows you to see individual departments }
2. Select multiple items checked {This allows you to see multiple departments}

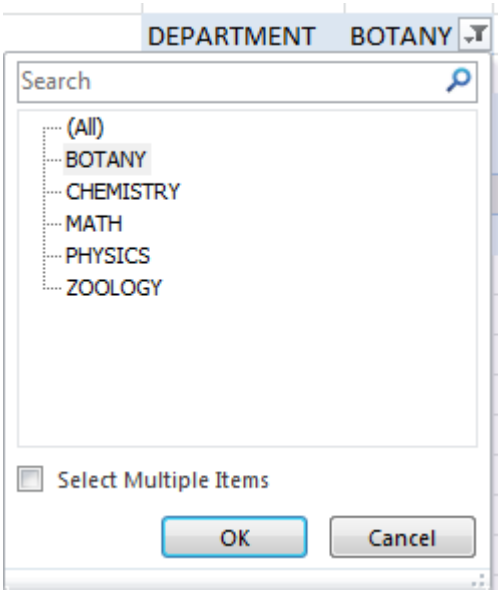
Upon pressing the ok button you can see the data of three departments

1. Botany
2. Math
3. Physics

As below

DEPARTMENT	(Multiple Items)		
Sum of SALARY			
	F	**M**	**Grand Total**
LECTERURE		100000	100000
READER	70000		70000
Grand Total	**70000**	**100000**	**170000**

Now if I want to search for botany as shown below



You get the results showing department of BOTANY.

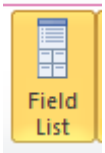
DEPARTMENT	BOTANY	
Sum of SALARY		
	M	**Grand Total**
LECTERURE	40000	40000
Grand Total	**40000**	**40000**

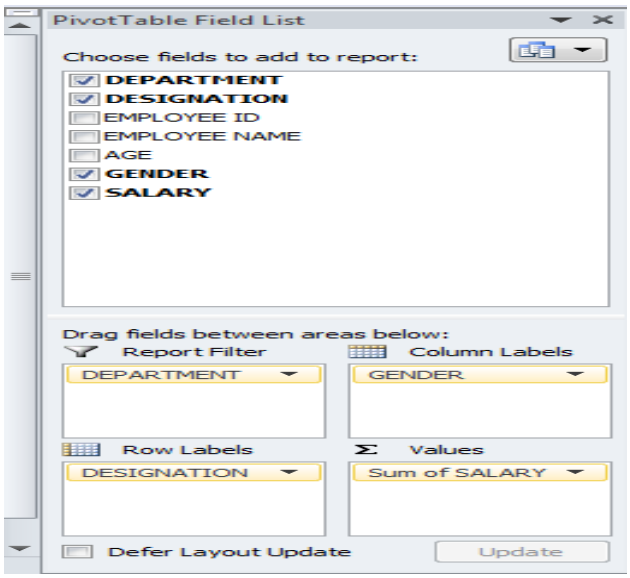
Discussing about the field list of Pivot Table

3.4.2.1 Field list

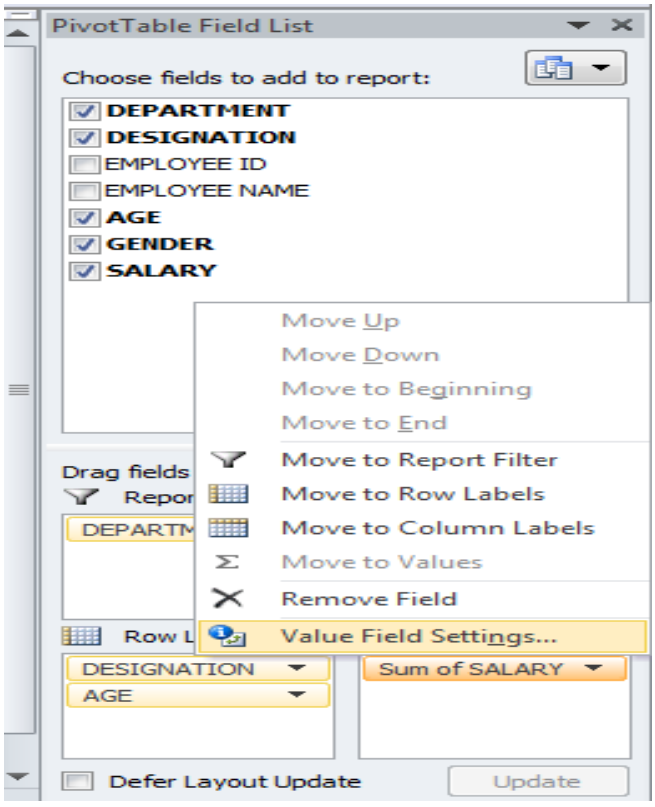
I	J	K	L	M
DEPARTMENT	(Multiple Items)			
	Column Labels			
	M		**Total Sum of SALARY**	**Total Sum of AGE**
Row Labels	**Sum of SALARY**	**Sum of AGE**		
LECTERURE	**100000**	**48**	**100000**	**48**
23	40000	23	40000	23
25	60000	25	60000	25
READER	**50000**	**26**	**50000**	**26**
26	50000	26	50000	26
Grand Total	**150000**	**74**	**150000**	**74**

Selecting this Pivot Table when we click options and click on field list as below



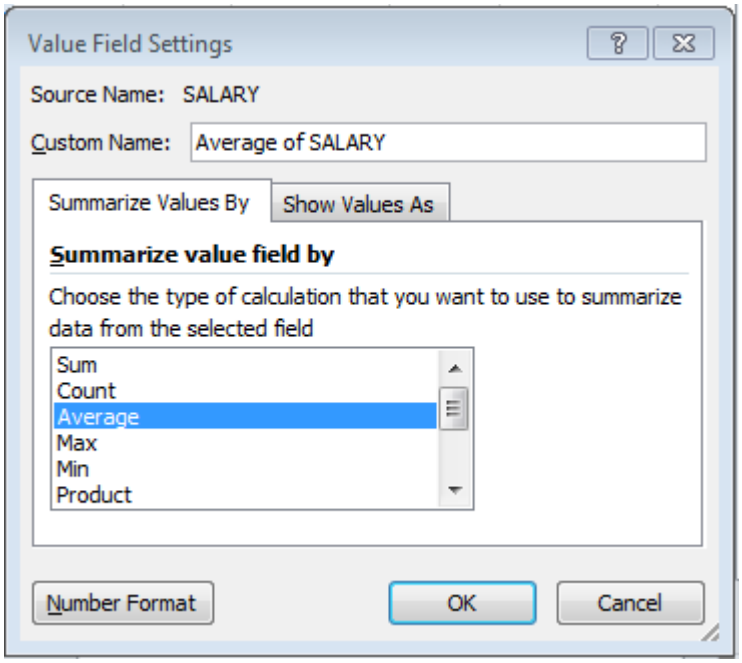


Working with field values of a Field list in Pivot table

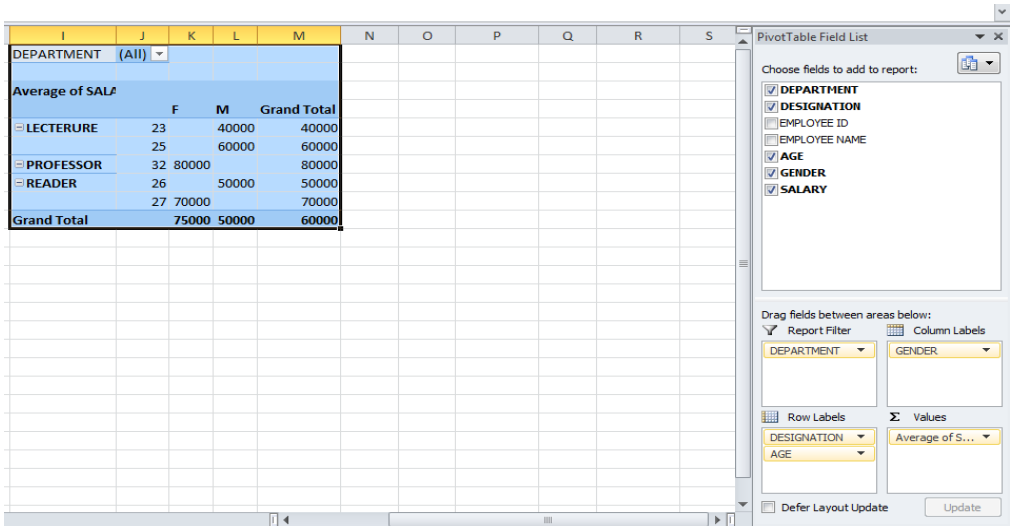


In the earlier case we use to find only the auto sum of the salary but a part of auto sum of salary many more functions can be run which include

1. Count
2. Average
3. Max
4. Min
5. Product
6. Count Numbers
7. StdDev
8. Var
9. Varp



Upon clicking Average I find the sum of the average of salaries as below.



DEPARTMENT	(All)			
Average of SALA				
		F	M	Grand Total
LECTERURE	23		40000	40000
	25		60000	60000
PROFESSOR	32	80000		80000
READER	26		50000	50000
	27	70000		70000
Grand Total		75000	50000	60000

Unit -8

Keyboard Shortcuts

Learning objectives

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

1) What are the shortcuts used in MS Excel and their use

Introduction

Shortcuts keys quicken the speed of work by many times when working with large excel sheets. Professionals those who work on excel master these shortcut keys as as combination of keys help them to work on various sheets which involve navigation inside sheets, working with data selections, insert or edit data, data formatting and many more. So to understand what is shortcut keys let us get started.

Definition

Shortcut key: - A special key combination that causes a specific command to be executed.

Working with shortcuts

Navigating inside worksheets

Sl.No	Keys	Role
1	Arrow Keys	Move one cell up, down, left, or right in a worksheet.
2	Page Down/Page Up	Move one screen down / one screen up in a worksheet.
3	Alt+ Page Down/Alt+Page Up	Move one screen to the right / to the left in a worksheet.
4	Tab /Shift +Tab	Move one cell to the right / to the left in a worksheet.

5	Ctrl + Arrow Keys	Move to the edge of next data region (cells that contains data)
6	Home	Move to the beginning of a row in a worksheet.
7	Ctrl + Home	Move to the beginning of a worksheet.
8	Ctrl +End	Move to the last cell with content on a worksheet.
9	Ctrl + f	Display the Find and Replace dialog

		box (with Find selected).
10	Ctrl + h	Display the Find and Replace dialog box (with Replace selected). Repeat
11	Shift + F4	last find.
12	Ctrl +g Or F5	Display the 'Go To' dialog box.
13	Ctrl + Arrow Left , Ctrl +Arrow	Inside a cell: Move one word to the left / to the right.
Right 14	Home/ End	Inside a cell: Move to the beginning / to the end of a cell entry.
15	Alt +Arrow Down	Display the AutoComplete list e.g. in cell with dropdowns or auto filter
16	End	Turn 'End' mode on. In End mode, press arrow keys to move to the next nonblank cell in the same column or row as the active cell. From here use arrow keys to move by blocks of data, home to move to last cell, or enter to move to the last cell to the right.

Work with Data Selections

1	Shift +Space	Select the entire row
2	Ctrl + Space	Select the entire column
3	Ctrl+ Shift + *	Select the current region around the active cell.
4	Ctrl+a ,Ctrl +Shift +Spacebar	Select the entire worksheet or the data-containing area. Pressing ctrl+a a second time then selects entire worksheet.
5	Ctrl +Shift +Page Up	Select the current and previous sheet in a workbook.

6	Ctrl +Shift + o	Select all cells with comments.
7	Shift +Arrow Keys	Extend the selection by one cell.
8	Ctrl +Shift +Arrow Key	Extend the selection to the last cell with content in row or column.
9	Shift +Page Down /Shift +Page Up	Extend the selection down one screen / up one screen.
10	Shift +Home	Extend the selection to the beginning of the row.
11	Ctrl +Shift + Home	Extend the selection to the beginning of the worksheet.
12	Ctrl +Shift +End	Extend the selection to the last used cell on the worksheet (lower-right corner).

Manage Active Selections

13	F8	Turn on extension of selection with arrow keys without having to keep pressingshift.
14	Shift +F8	Add another (adjacent or non-adjacent) range of cells to the selection. Usearrow keys andshift+ arrow keys to add to selection.
15	Shift +Backspace	Select only the active cell when multiple cells are selected.
16	Ctrl +	Show active cell within selection. Move
Backspace 17	Ctrl + .	clockwise to the next corner of the selection.
18	Enter / Shift + Enter	Move active cell down / up in a selection.
19	Tab/Shift +Tab	Move active cell right / left in a selection.
20	Ctrl +Alt +Left Arrow Ctrl +Alt +Right Arrow	Move to the right / to the left between non-adjacent selections (with multiple ranges selected).
21	Esc	Cancel Selection

Select Inside Cells

22	Shift +Left Arrow / Shift +Right arrow	Select or unselect one character to the left / to the right.
23	Ctrl +Shift +Left Arrow/Ctrl + Shift +Right Arrow	Select or unselect one word to the left / to the right
24	Shift +Home / Shift +End	Select from the insertion point to the beginning / to the end of the cell.

Insert or edit data

Undo / Redo Shortcuts

1	Ctrl + z	Undo last action (multiple levels).
2	Ctrl +y	Redo last action (multiple levels).

Work with Clipboard

3	Ctrl +c	Copy contents of selected cells.
4	Ctrl +x	Cut contents of selected cells.
5	Ctrl +v	Paste content from clipboard into selected cell.
6	Ctrl +Alt +v	If data exists in clipboard: Display the Paste Special dialog box.
7	Ctrl+Shift+[+]	If data exists in clipboard: Display the Insert dialog box to insert blank cells.

Edit Inside Cells

8	F2	Edit the active cell with cursor at end of the line.
9	Alt +Enter	Start a new line in the same cell.
10	Enter	Complete a cell entry and move down in the selection. With multiple cells selected: fill cell range with current cell.
11	Shift +Enter	Complete a cell entry and move up in the selection.
12	Tab /Shift +Tab	Complete a cell entry and move to the

		right / to the left in the selection.
13	Esc	Cancel a cell entry
14	Backspace	Delete the character to the left of the insertion point, or delete the selection.
15	Delete	Delete the character to the right of the insertion point, or delete the selection.
16	Ctrl +Delete	Delete text to the end of the line.
17	Ctrl+; (semicolon)	Insert current date.
18	Ctrl+Shift+: (colon)	Insert current time.
19	Ctrl +t	Show all content as standard numbers. (So 14:15 becomes 14.25 etc for the entire file) To undo press ctrl + t again
Edit Active or Selected Cells		
20	Ctrl+ d	Fill complete cell down (Copy above cell).
21	Ctrl +r	Fill complete cell to the right (Copy cell from the left).
22	Ctrl+”	Fill cell values down and edit (Copy above cell values).
23	Ctrl+’	Fill cell formulas down and edit (Copy above cell formulas).
24	Ctrl+|	Insert a table (display Create Table dialog box).
25	Ctrl+-	Delete Cell/Row/Column Menu
26	Ctrl +- with Row of column Selected	Delete row / delete column.
27	Ctrl+ Shift+ +	Insert Cell/Row/Column Menu
28	Ctrl +Shift + + (row /column selected)	Insert row/ insert column
29	Shift +F2	Insert / Edit a cell
30	Shift+ F10 then m	comment. Delete comment
31	Alt +f1	Create and insert chart with data in

		current range as embedded Chart Object.
32	F11	Create and insert chart with data in current range in a separate Chart
33	Ctrl +k	sheet. Insert a hyperlink.
34	Enter (in a cell with a hyperlink)	Activate a hyperlink.

Hide and show elements

35	Ctrl+9	Hide the selected rows
36	Ctrl+shift +9	Unhide any rows within a selection
37	Ctrl +0(zero)	Hide the selected columns
38	Ctrl+ shift +0	Unhide any hidden columns within the selection*.
39	Ctrl +’	Alternate between displaying cell values and displaying cell formulas. Accent grave /not a quotation mark
40	Alt +Shift+Right arrow	Group rows or columns.
41	Alt +shift +Left Arrow	Ungroup rows or columns.
42	Ctrl +6	Alternate between hiding and displaying objects.
43	Ctrl +8	Display or hides the outline symbols.
44	Ctrl +6	Alternate between hiding objects, displaying objects, and displaying placeholders for objects.

Adjust Column Width And Row Height

45	Alt + o, ca	Adjust Column width to fit content
46	Alt +o,cw	Adjust Columns width to specific value
47	Alt +o,ra	Adjust Row height to fit content
48	Alt +o,re	Adjust Row height to specific value

Format data

Format Cells

1	Ctrl +1	Format Cells Dialog
2	Ctrl +b /Ctrl +2	Apply or remove bold formatting
3	Ctrl + i/ Ctrl +3	Apply or remove italic formatting.
4	Ctrl +u/Ctrl +4	Apply or remove an underline.
5	Ctrl +5	Apply or remove strikethrough formatting.
6	Alt +’	Display the Style dialog box.
7	Ctrl +Shift +f	Display the format cells with fonts Tab active

Number formats

8	Ctrl+Shift +$	Apply the Currency format with two decimal places.
9	Ctrl +Shift +~	Apply the General number format.
10	Ctrl +Shift +%	Apply the Percentage format with no decimal places.
11	Ctrl +Shift +#	Apply the Date format with the day, month, and year.
12	Ctrl+Shift +@	Apply the Time format with the hour and minute, and indicate A.M. or P.M.
13	Ctrl +Shift +!	Apply the Number format with two decimal places, thousands separator, and minus sign (-) for negative values.
14	Ctrl + Shift +^	Apply the Scientific number format with two decimal places.
15	F4	Repeat last formatting action: Apply previously applied Cell Formatting to a different Cell

Apply Borders To Cel s

16	Ctrl +Shift + &	Apply outline border from cell or selection
17	Ctrl +shift + _	Remove outline borders from cell or selection
18	Ctrl +1 Then Ctrl+ Right arrow /Left Arrow	Access border menu in 'Format Cell' dialog. Once border was selected, it will show up directly on the next Ctrl+ 1
19	Alt +t	Set top border
20	Alt + b	Set bottom
21	Alt +l	border Set Left
22	Alt + r	Set Right Border
23	Alt +d	Set Diagonal And Down Border
24	Alt + u	Set Diagonal And Up Border

Align Cells

25	Alt+h,ar	Align Right
26	Alt+h,ac	Align Center
27	Alt+h,al	Align Left

Formulas and names

Formulas

1	=	Start A Formula
2	Alt+ =	Insert the AutoSum formula.
3	Shift +F3	Display the Insert Function dialog box.
4	Ctrl +a	Display Formula Window after typing formula name.
5	Ctrl + Shift +a	Insert Arguments in formula after typing formula name.
6	Shift +F3	Insert a function into a formula .

7	Ctrl +Shift +Enter	Enter a formula as an array formula
8	F4	After typing cell reference (e.g. =E3) makes reference absolute (=E4)
9	F9	Calculate all worksheets in all open workbooks.
10	Shift +F9	Calculate the active worksheet.
11	Ctrl +Alt +F9	Calculate all worksheets in all open workbooks, regardless of whether they have changed since the last calculation.
12	Ctrl +Alt + Shift +F9	Recheck dependent formulas, and then calculates all cells in all open workbooks, including cells not marked as needing to be calculated.
13	Ctrl +Shift +u	Toggle expand or collapse formula bar.
14	Ctrl +’	Toggle Show formula in cell instead of values

Names

15	Ctrl+F3	Define a name or dialog.
16	Ctrl +Shift	Create names from row and column
17	+F3 F3	labels. Paste Defined Name Into Formula

Manage multiple worksheets

1	Shift +F11/Alt +Shift +F1	Insert a new worksheet in current workbook
2	Ctrl +Page Down / Ctrl +Page Up	Move to the next / previous worksheet in current workbook.
3	Shift +Ctrl +Page Down/ Shift +Ctrl +Page Up	Select the current and next sheet(s) / select and previous sheet(s).

4	Alt +o then hr	Rename current worksheet (format, sheet, rename)
5	Alt +e then l	Delete current worksheet (Edit, delete)
6	Alt +e then m	Move current worksheet (Edit, move)

Manage multiple workbooks

1	F6/Shift +F6	Move to the next pane / previous pane in a workbook that has been split.
2	Ctrl +F4	Close the selected workbook window.
3	Ctrl+ n	Create a new blank workbook (Excel
4	Ctrl +Tab/Ctrl +shift +Tab	File) Move to next / previous workbook window.
5	Alt +Space	Display the Control menu for Main Excel window.
6	Ctrl +F9	Minimize current workbook window to an icon. Also restores ('un-maximizes') all workbook windows.
7	Ctrl+F10	Maximize or restores the selected workbook window.
8	Ctrl +F7	Move Workbook Windows which are not maximized.
9	Ctrl+F8	Perform size command for workbook windows which are not maximzed.
10	Alt +F4	Close Excel

Various Excel features

1	Ctrl + o	Open File.
2	Ctrl + s	Save the active file with its current file name, location, and file format.
3	F12	Display the Save As dialog box.
4	F10 or Alt	Turn key tips on or off.
5	Ctrl + p	Print File (Opens print menu).
6	F1	Display the Excel Help task pane.
7	F7	Display the Spelling dialog box.
8	Shift +F7	Display the Thesaurus dialog box.
9	Alt + F8	Display the Macro dialog box.
10	Alt +F11	Open the Visual Basic Editor to create Macros.

Work with Excel Ribbon

1	Ctrl + F1	Minimize or restore the Ribbons
2	Alt/F10	Select the active tab of the Ribbon and activate the access keys. Press either of these keys again to move back to the document and cancel the access keys. and then arrow left or arrow right
3	Shift +F10	Display the shortcut menu for the selected command.
4	Space /Enter	Activate the selected command or control in the Ribbon, Open the selected menu or gallery in the Ribbon
5	Enter	Finish modifying a value in a control in the Ribbon, and move focus back to the document.

6	F1	Get help on the selected command or control in the Ribbon. (If no Help topic is associated with the selected command, the Help table of contents for that program is shown instead.)

Data Forms

1	Tab/Shift +Tab	Move to the next / previous field which can be edited.
2	Enter/Shift +Enter	Move to the first field in the next / previous record.
3	Page Down/Page Up	Move to the same field 10 records forward / back.
4	Ctrl +Page Down	Move to a new record.
5	Ctrl + Page	Move to the first record
Up 6	Home/End	Move to the Beginning/End Of the field

Work with Smart art graphics

1	Arrow Keys	Select Element
2	Esc	Remove focus from selection
3	F2	Edit Selection Text in if possible (in formula bar).