LAB ASSIGNMENTS (MS EXCEL 2013)

STARTING MSEXCEL

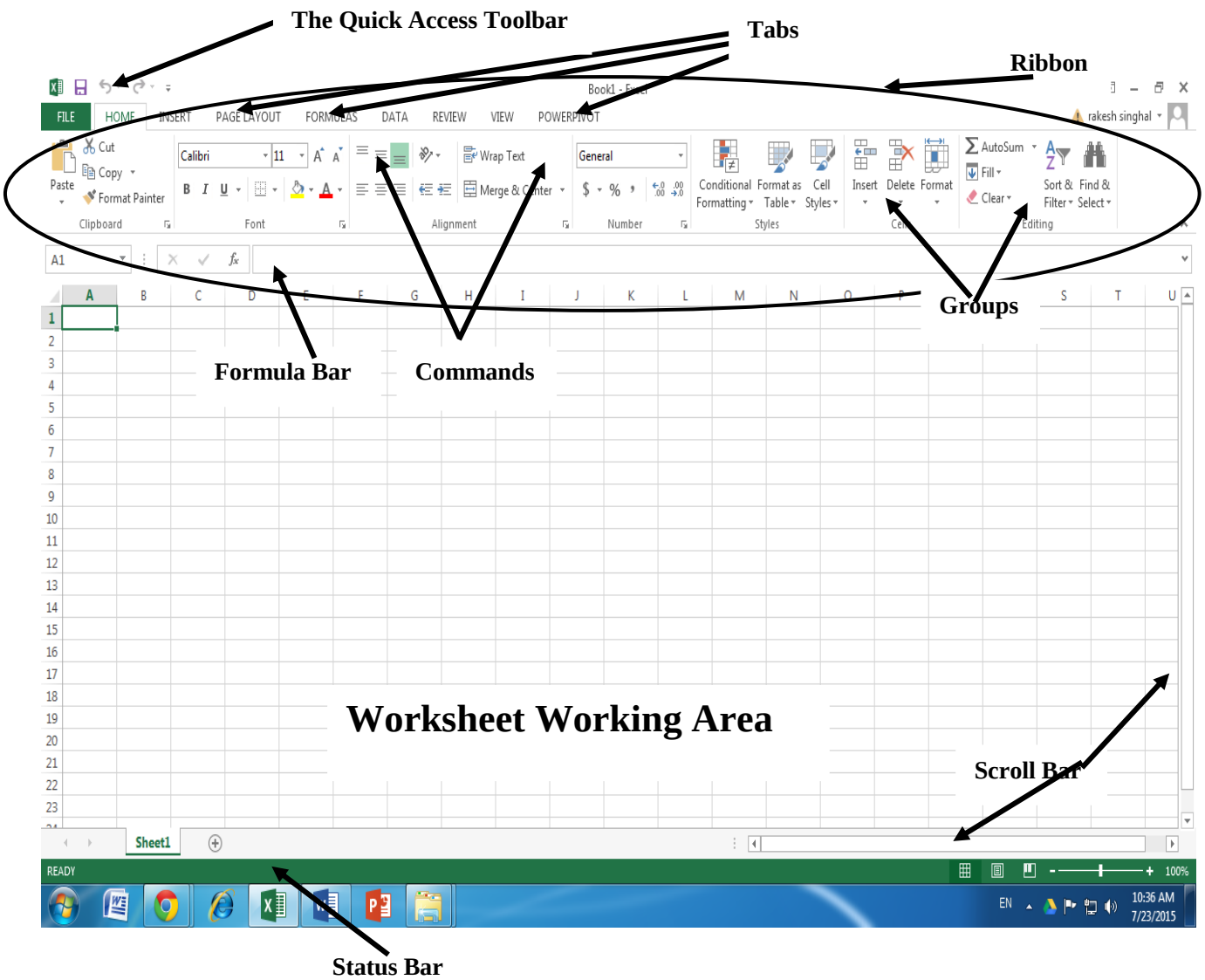
Click onto Microsoft Excel 2013 Icon on the **Task Bar**

or

Click on Windows Button (left bottom Corner) - Click the MS Excel 2013

When Excel is started, a new blank Worksheet appears on the screen, which consists of number of columns (16,384) and rows (10,48,576). Each column names as A, B C…. XFD and rows numbers as 1,2,3…… 10,48,576. Each workbook by default consists of one sheet named as sheet1 but we can add any number of sheet..

The following is the screen layout and different components of MS Excel 2013.



Practice moving around in the worksheet using Arrow Movement Keys, Page Up, Page Down, Home, Ctrl + Home etc.

Press	To
DOWN ARROW (🡻)	Move to the next row
UP ARROW (🡹)	Move to the previous row
RIGHT ARROW (🡺) or TAB key	Move to the next column
LEFT ARROW (🡸) or Shift TAB	Move to the previous column
PAGE DOWN	Move down to next page (screen)
PAGE UP	Move up to previous page (screen)
HOME	Move to the first column
CTRL+ RIGHT ARROW (🡺)	• Move to last column (if worksheet is blank • Move to last column of the typed matter (if worksheet has data)
CTRL+ LEFT ARROW (🡸)	• Move to first column (if worksheet is blank • Move to previous non blank column of the typed matter (if worksheet has data)
CTRL+HOME	Move to the first cell of the worksheet i.e. A1

1. Exit from the Worksheet either clicking on **File Tab** and selecting **Close** or clicking onto Upper **X** on the Excel Window. Do not save file when prompted
2. Start MS Excel Once Again.

Exercise – 1

Prepare the following worksheet :

Number of Schools in Selected Cities of Rajasthan

District	Secondary	Primary	Total
Ajmer	68	114	
Jaipur	124	186	
Kota	78	64	
Sikar	39	84	
Sawai Madhpur	52	109	
Total			

After completion of the above worksheet do the following:

a) Save the worksheet with name **school** by clicking on **Office Button** followed by **SAVE** or Clicking on to FLOPPY Icon.

b) Find out total number of schools in each district using formula i.e. **=b3+c3** (Remember formula starts with a = sign followed by cell reference and in between operator + , similar to what you do on calculator). You may copy this formula by dragging it to cells downward.

c) Also calculate total number of secondary school and primary school using SUM function. (Guess why we are using function in place of formula =SUM(RANGE))
d) Save worksheet and Exit from MS Excel (Hope you remember how to save and exit from MS Excel)
e) Select cell containing column titles and align them to centre by clicking on **Paragraph group** and clicking on **Centre Alignment text** and also make them **Bold.**
f) **Save** above workbook and **exit from EXCEL (Click on X on the top right corner)**

Exercise – 2: Open the worksheet created in the exercise -1 (school) (Opening existing worksheet – Click on File Tab – Click on Open– click on **school**). Following will be displayed with Total column filled:

Number of Schools in Selected Cities of Rajasthan

District	**Secondary**	**Primary**	**Total**
Ajmer	68	114	
Jaipur	124	186	
Kota	78	64	
Sikar	39	84	
Sawai Madhpour	52	109	
Total			
Average			

After completion of worksheet, do the following:
a) Increase the column width of the column A to so as to accommodate complete text in column.
b) Increase column width of B, C and D together to accommodate data.
c) Find out average number of secondary school using function of average. =AVERAGE(RANGE)
d) Copy this formula across to calculate average for primary and total number
e) Save the file again
f) Insert a column before District Click on Column Heading A – Click on Insert in Cells group
g) Add S.NO. as column title and enter numbers 1 to 5.
h) Add cells for minimum and maximum number of schools and calculate values these values. (Use **=MIN(RANGE)** and **=MAX(RANGE)**)
i) Insert a row between Jaipur and Kota Districts. Click onto Select row header of Kota (entire row would be highlighted) and Choose **Home - Insert Sheet Row**
j) Add following data in the blank row
k) Bhilwara 58 42
l) Copy formula of total from Jaipur to Bhilwara in column E
m) Observe that Total, Average and Minimum are automatically changed. Isn't it great again, no botheration about changing the formula or function?
n) Change the value of Secondary schools to **Jaipur from 124 to 139** and see where the result changes.
o) Make Title of the table and heading row **BOLD** and Centre. Save the worksheet.
p) Save the worksheet (It is always advisable to keep saving worksheet by pressing CTRL S)
q) Try learning Merge and Centre
r) Add a column after Total with heading **% of Primary Schools to Total**.

s) Calculate above value (Hint: cell references of Primary Schools/ Total * 100)
t) Once % is calculated copy this to rest of the cells (down)
u) Save the worksheet and exit from EXCEL

Exercise 3: KORES Co. keeps the employee's payroll data in a worksheet as shown below**:**

Kores Company Limited, Jaipur						
S. No.	**Name**	**Earning**				
		Basic Pay	**HRA**	**DA**	**CCA**	**Gross Salary**
1.	Rakesh	178000				
2.	Naveen	123500				
3.	Krishan	27500				
4.	Savitri	69500				
5.	Gopal	48000				
6.	Manish	30500				
7.	Amit	124000				
	Total					

a. Enter the above data in a worksheet and save the workbook as **EMPLOYEE**.
b. In the third column we need to type text BASIC PAY in the same cell and want that it should be displayed in two lines in the same cell. Select the entire row and click on (**Wrap Text** in the **Alignment** Group of the **Home** Tab).
c. Make Title of the Worksheet (**Kores Company Limited, Jaipur**) as BOLD and also place in the Centre of the four Columns in which data is typed. (Select seven cells on top of the columns, Click on to Merge and Centre Icon on the Tool Bar.
d. Calculate HRA (16 % of Basic Pay), DA (21% of Basic Pay), CCA is fixed amount of Rs 1000. Also calculate Gross Salary which is sum of Basic Pay, DA, HRA and CCA.
e. Select the data you have entered and put border on all the cells using **Border in Font Group of HOME tab**. Save your workbook and exit.

Exercise: 4: Open the file EMPLOYEE created in Exercise 3 and add following columns after Gross Salary

Deductions		**Net Salary**
GPF	**SI**	**Total**

a. Calculate GPF and SI, rules for calculating these are as follows.
   I. GPF - 6000 is deducted if basic pay is less than 55000, else 8500 is deducted.
   II. SI, which is 2000 for everyone irrespective of grade pay. Also fill up Total Deduction and Net Salary.
b. Save the workbook again.
c. Change Basic Pay of two or employee and check whether the effects of above changes are reflected in gross salary and net salary.
d. Save the file.
e. Change the formula for calculating SI premium in such a way that 20% of basic pay is deducted for employees getting basic pay more than 80000 and for others SI deduction is 15%.

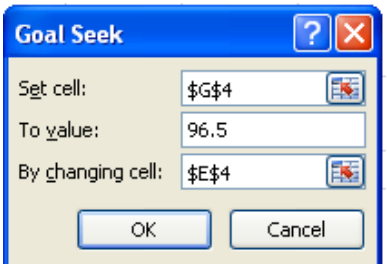
Exercise – 5: Prepare the following worksheet:

ABC Consultants, Jaipur			
Item	**Quantity**	**Unit Price**	**Gross Value**
I7 Computer System	2	55000.00	
Notebook i5	2	43000.00	
Printer	2	12000.00	
Pen Drive	15	560.00	
Total Gross			
Discount		7%	
Amount Payable			
Tax on Amount Payable		4.5%	
Net Amount Payable			

a. Increase the width of the Column A in such a way that entire data is accommodated in the column.
b. Enter a formula to calculate the gross value for I7 Computer System. (**Remember * is used for Multiplication**)
c. Copy this formula for rest of the items
d. Calculate the total of the Gross Values for the all the products using SUM Function.
e. Calculate the Discount, which has been given as 7%. (Do not panic if you type 7% and it shows .07).
f. Calculate the Amount Payable after subtracting Discount Amount form the Total Gross and also calculate Tax and Net Amount Payable.
g. Change the discount rate to 8% and see the changes. Also change Tax Rate to 6.25% and observe the changes.
h. Make Title of the Worksheet (AMC Consultants, Jaipur) as BOLD and also place in the Centre of the four Columns in which data is typed. (Select four cells on top of the columns, Click on to Merge and Centre Icon on the Font Group of the HOME tab.
i. Change discount percentage value from 7% to 10% and see what changes are reflected. Save the worksheet as ITEM.

j. **Using Goal Seek -** Suppose you want that you have an amount available with you of Rs 169800. than how much discount should be offered to you so that you are able to purchase items indicated above. How will you approach this issue - GUESS.

Select **DATA tab – Data Tools – What if Analysis - GOAL SEEK** option and specify desired information



Exercise - 6

Prepare a worksheet as under and fill in the blanks using Worksheet features.

Rajasthan Financial Corporation

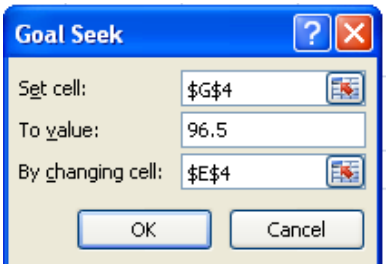
S.No	Particulars	Target	Expenditure/ Utilized			% Utilization
			Up to last month	Current month	Total	
1.	Civil Works at the head Office	345000	115000	145000		
2.	Gardening	80000	7000	15000		
3.	Machinery & Equipments for the office	315000	273000	17000		
4.	Vehicles	277000	0	217000		
5.	Training for officers and employees	70000	42300	0		
6.	Technical Assistance	5000	1000	3000		
7.	Furniture/Fixture	15000	2000	9000		
8.	Salaries & Allowances	490430	139000	47000		
9.	Operating Costs	71000	13000	21000		
10.	Miscellaneous	30000	1000	2500		
	Total					

a. Format the worksheet as above. Most of the features to format the worksheet have already been covered in the previous exercises. Select Column heading and give them a different colours. (Home – Styles - Cell Styles and select appropriate Style).

b. Calculate % utilization of the target. Select different formatting for cells for % Utilization

c. Save the worksheet as **RFC.**

d. **Using Goal Seek -** Suppose you want that % utilization for Civil Works should be 96.5%, than how much amount should be the expenditure in the current month. How will you approach this issue - GUESS.



e. Select **DATA tab – Data Tools – What if Analysis - GOAL SEEK** option and specify desired information e.g. in the Set Cell specify cell address of the % utilization of civil works i.e. G4, in the to value - enter 96.5 and by changing cell - E4. Click OK after specifying these values.

Exercise - 7

The following statement shows that actual expenditure incurred on various account heads at RIPA for last three years. Prepare the following worksheet.

Budget of HCM RIPA

S. No.	Account Head	Actual Expenditure			Average of last three years	Estimate for 2020-21	% increase over 2017-18
		2017-18	2018-19	2019-20			
1	Salaries	800000	830000	850000			
2	Travel Expenses	70000	90000	100000			
3	Medical Charges	60000	70000	75000			
4	Office Expenses	110000	130000	170000			
5	Advt., Sales & Publicity Expenses	8000	9000	12000			
	Total :						

After completion of worksheet, perform the following:

a. Place Title (Budget of HCM RIPA) in the centre of the table.
b. Format the heading row of the table in such a way that data is displayed as given above, i.e. longer text is displayed in more than one line in the same cell. (Hint: Select the cells and click on (**Wrap Text** in the **Alignment** Group of the **Home** Tab).
c. Make heading row as **BOLD** and **CENTER**
d. Calculate the total expenditure for all the account head for each year. Also calculate average expenditure for last three years.
e. Calculate the estimates for the year 2020-21 by assuming that it is 15% higher than the average of last three years
f. Calculate the increase in percentage for the year 2020-21 with respect to the year 2017-18. (Increase is calculated after subtracting 2017-18 expenses from the estimate for the year 2020-21 and dividing it by expenditure of the year 207-18.
g. Draw Border around the Table by Clicking onto BORDER Icon on the Font Group of HOME tab.
h. Save the worksheet as **BUDGET.**
i. Exit form MS Excel.

Exercise – 8 Prepare following spreadsheet to see the expenses incurred on various items.

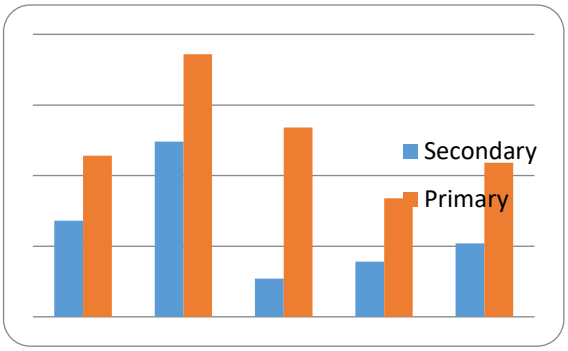
S. No.	Item name	Amount Spent	% Expenses of Total Expenditure
1	House Rent	3000	
2	Milk	970	
3	Kitchen	1750	
4	Bills	1950	
5	Education	1200	
6	Petrol	2500	
7	Entertainment	560	
8	Miscellaneous	800	
	Total		
	Salary Received	23500	
	Savings from Salary		

a. Format the worksheet as given above and also calculate total expenditure.
b. Salary Received is also given; therefore calculate monthly savings from the salary.
c. Also calculate % expenses incurred on each head of the total. Remember when you copy the formula down; the cell references are automatically changed. Therefore you need to keep total as constant by using in the formula before row number of the total.
d. How much would you be saving if Entertainment expenses were increased to 1350?
e. Save the worksheet as **HOUSE-BUDGET.** Exit from MS Excel.

Exercise – 9: Open the worksheet **school** created in exercise- 1 which is as follows.

Prepare a COLUMN chart-taking District on the X-axis and number of Secondary Schools on the Y-axis using the following steps:

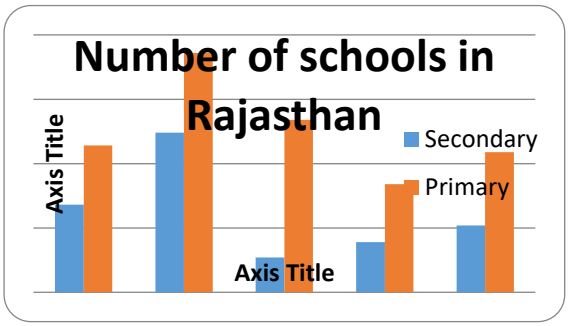
a. Select data consisting **of district names, secondary school and primary school.**
b. Click onto INSERT TAB and select **COLUMN** from **CHARTS** group.
c. Select **Column** chart type.
d. The chart as displayed will be shown.



Exercise 10: Apply a Chart Layout

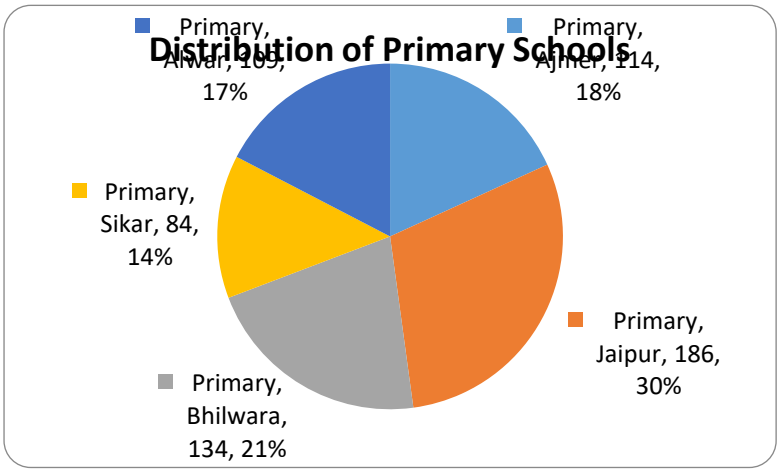
Since we do not have titles for the chart, x –axis and y-axis therefore by applying layout we can place these titles on the chart.

a. Click your chart. The Chart Tools become available.
b. Choose the Design tab.
c. Select appropriate chart layout (Layout 9) from Chart Layout group.
d. Excel applies the layout to your chart.
e. In Chart Title Box, Type **Comparison of Schools in Rajasthan**.
f. In X Axis Title), type **District**
g. In Y Axis Title, type **No. of Schools**
h. Save the file.



Exercise – 11 – Moving Chart to new sheet

a. Click your chart. The Chart Tools become available.
b. Choose the **Design tab**.
c. Click the **Move Chart button** in the Location group. The Move Chart dialog box appears.
d. Click the New Sheet radio button.
e. Type School Comparison - to name the chart sheet. Excel creates a chart sheet named School Comparison and places your chart on it.

Exercise 12: Prepare a Pie Chart showing % of primary schools in each of the district of the total primary school.

a. The Title of the Graph should be **Distribution of Primary Schools**.
b. The Chart should be placed on a separate sheet called **Primary School**
c. The Category Data and % should be displayed outside the chart. (Layout – Data Labels - More Label Options)