

M.K. Institute of Computer Studies, Bharuch
F.Y.B.C.A. (SEM – 1)
105: Data Manipulation and Analysis (DMA)
UNIT-2
NOTES

UNIT-2: Formulas, Chart and Data

2.1 Charts :

2.1.1 Creating 2D and 3D charts (Columns, Line, Pie, Bar, Scatter)

2.1.2 Difference among columns, Line and bar charts.

2.2 Formulas:

2.2.1 sum, average, count, max, min, sumif, pmt, stdev

2.2.2 Logical (if, AND, OR, NOT, TRUE, FALSE)

2.2.3 Date and Day function : Date, day, time, now, Hour, Minute, Second, Month, Days360, weekday

2.3 Data :

2.3.1 Sort Data, Filter Data

2.3.2 Text to columns, Remove Duplication

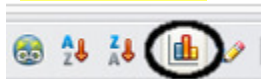
2.3.3 Consolidated Data (sum, count, max, min, average)

2.1 Charts

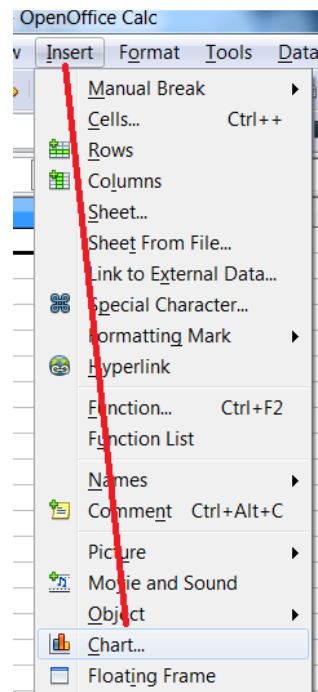
- Charts are used to display series of numeric data in a graphical format.
- It is used to make it easier to understand large quantities of data and the relationship between different series of data.

2.1.1 How to create a chart?

- Select **Insert > Chart** from the menu bar. OR click the **Chart icon** on the main **toolbar**.



OR

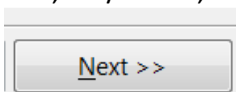


- To create a chart, first **highlight (select)** the data to be included in the chart.
- The selection does not need to be in a single block, as shown below; you can also choose individual cells or groups of cells (columns or rows).

	A	B	C	D
1	Equipment Rentals			
2		Canoes	Boats	Motor
3	Jan	12	23	47
4	Feb	9	31	54
5	Mar	14	27	56
6	Apr	17	28	48
7	May	13	19	39
8	Jun	8	27	52

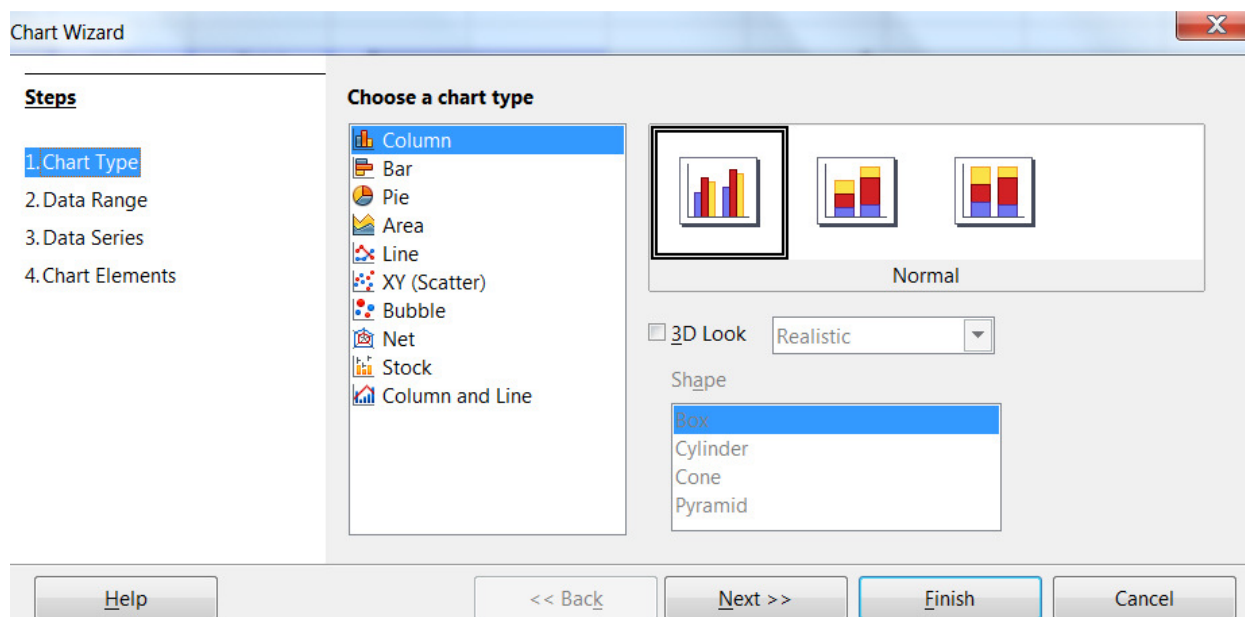
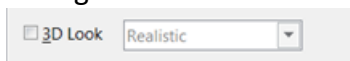
- **Step-1:**

Open office spread sheet different types of charts are available like Area, Bubble, Column and bar; Column and line, Line, Net, Pie/donut, Stock, XY (scatter).



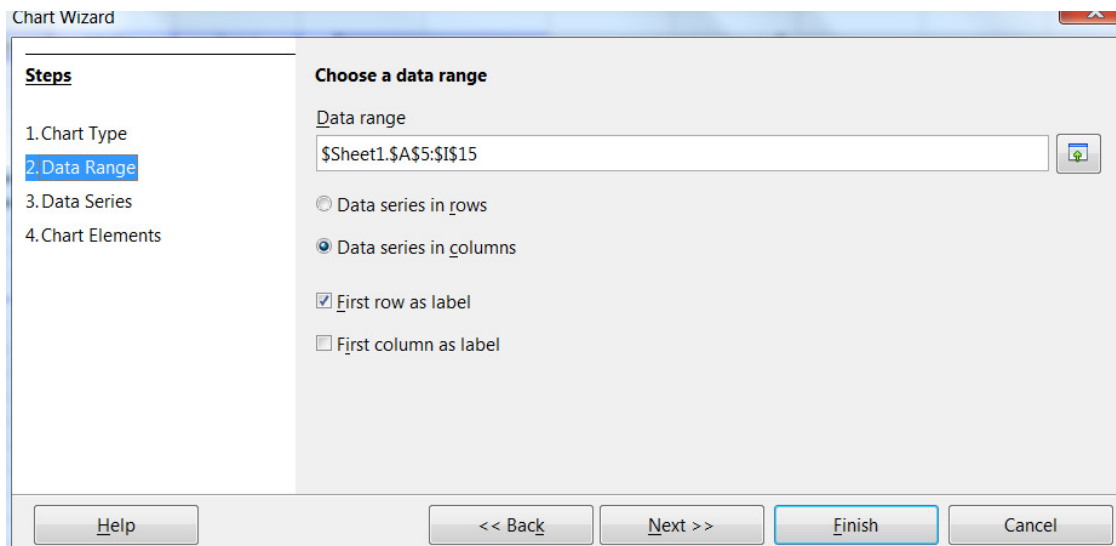
Then Press Next button as shown in figure.

You can select 3D look option to prepare 3D chart.



- **Step-2:**

Then it will ask you for select data range. Here select the data which we want to use in chart. And then press Next button.

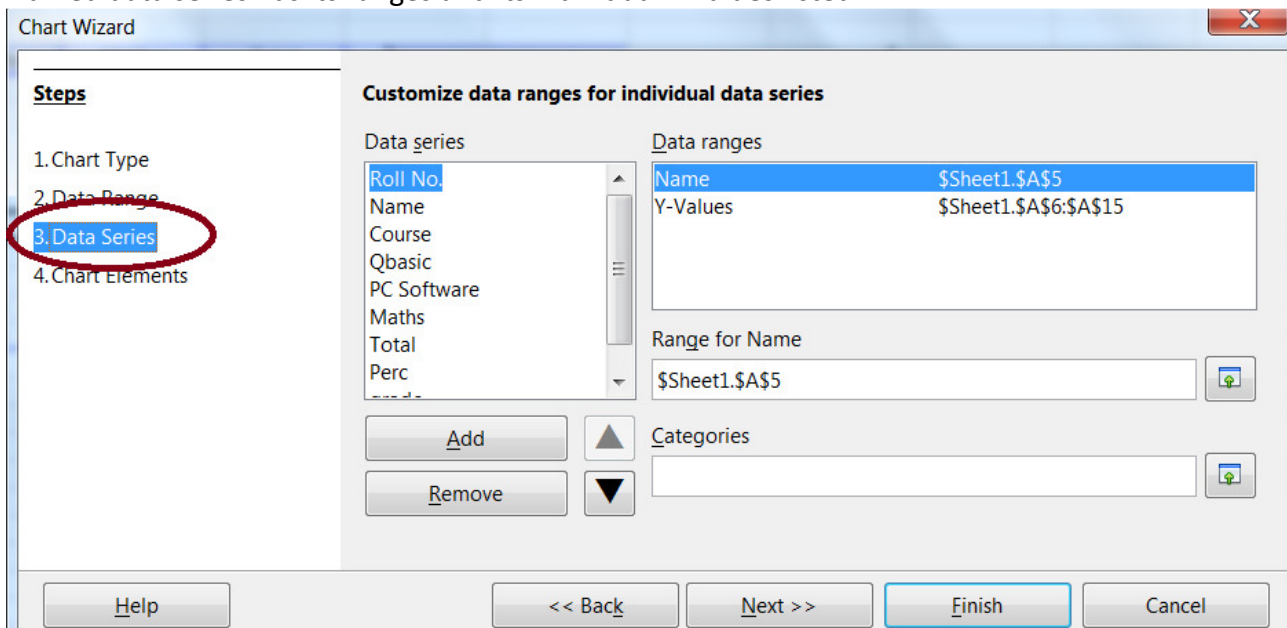


- **Step-3:**

selecting data series.

Here you can add the data that you want to include in the chart.

Each named data series has its ranges and its individual Y-values listed.



- **Step-4:**

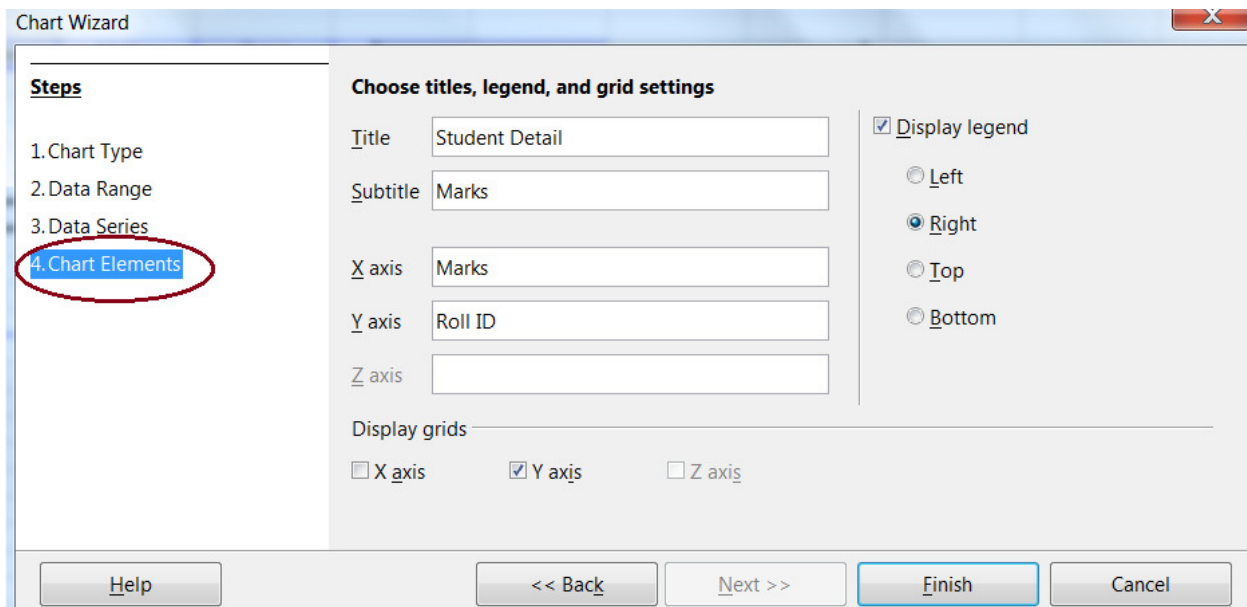
Chart Element.

On this page, you can give your chart a title and, if desired, a subtitle.

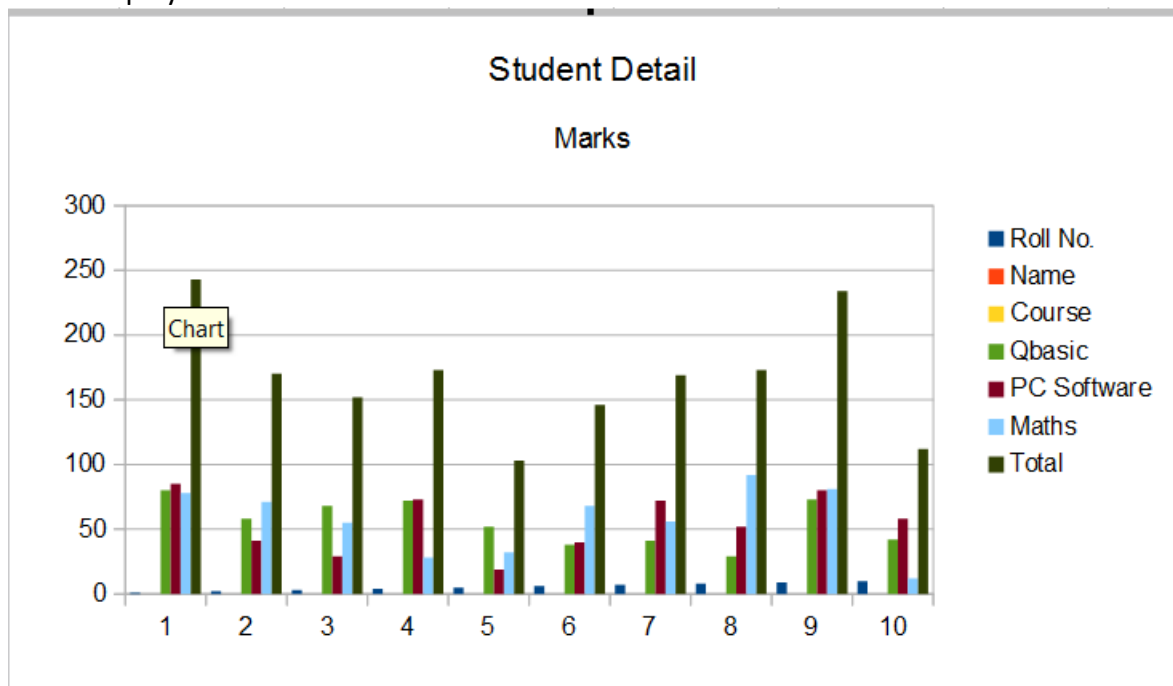
You can also give names to x axis and y axis.

You can leave out the legend or include it and place it to the left, right, top or bottom.

To finish the chart, click Finish.



And it displays a chart as below. **This chart is known as column chart.**



- Same way we can create Line chart, pi chart, Bar chart and scatter chart. As describe below.

2.2 Formulas:

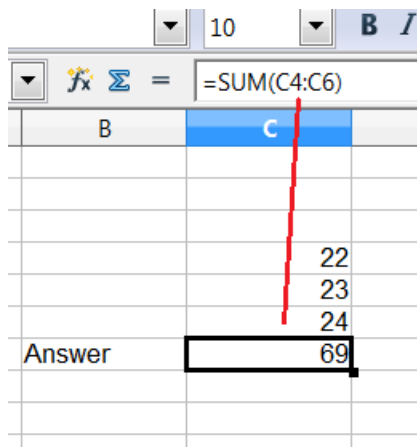
2.2.1 sum, average, count, max, min, sumif, pmt, stddev

- **SUM** : Adds all the numbers in a range of cells.

Syntax : *SUM(Number1; Number2; ...; Number30)*

here, Number 1 to Number 30 are up to 30 arguments whose sum is to be calculated.

Example :



- **Average :** Returns the average of the arguments.

Syntax : *AVERAGE(Number1; Number2; ...Number30)*

Number1; Number2;...Number 0 are numerical values or ranges.

Example : *=AVERAGE(F6:F15)*

	C	D	E	F	G
	Course	Qbasic	PC Software	Maths	Total
1	FYBCA	80	85	78	243
	SYBCA	58	41	71	170
	SYBCA	68	29	55	152
	TYBCA	72	73	28	173
	TYBCA	52	19	32	103
	FYBCA	38	40	68	146
	SYBCA	41	72	56	169
	TYBCA	29	52	92	173
	SYBCA	73	80	81	234
	FYBCA	42	58	12	112
			Average Maths	57.3	

- **count:** Counts how many numbers are in the list of arguments. Text entries are ignored.

Syntax : *=COUNT(Value1; Value2; ... Value30)*

Value1; Value2, ... are 1 to 30 values or ranges representing the values to be counted.

Example : The entries 2, 4, 6 and eight in the Value 1-4 fields are to be counted.

=COUNT(2;4;6;"eight") = 3. The count of numbers is therefore 3.

- **max:** Returns the maximum value in a list of arguments.

Syntax : *MAX(Number1; Number2; ...Number30)*

Number1; Number2;...Number30 are numerical values or ranges.

Example : **=MAX(A1;A2;A3;50;100;200)** returns the largest value from the list is **200.**

=MAX(A1:B100) returns the largest value from the list.

Maths	Total	Perc	grade
78	243	81.00	Distinction
71	170	56.67	Second
55	152	50.67	Second
28	173	57.67	Second
32	103	34.33	Fail
68	146	48.67	Pass
56	169	56.33	Second
92	173	57.67	Second
81	234	78.00	Distinction
12	112	37.33	Fail
	Max.	81	max(H4:H13)
	Percentage		
	Min.	34.33	min(H4:H13)
	Percentage		

[Note***Returns 0 if no numeric value and no error was encountered in the cell range(s) passed as cell reference(s).

Text cells are ignored by MIN() and MAX().

The functions MINA() and MAXA() return 0 if no value (numeric or text) and no error was encountered.

Passing a literal string argument to MIN() or MAX(), e.g. MIN("string"), still results in an error.]

- **min:** Returns the minimum value in a list of arguments.

Syntax : MIN(Number1; Number2; ...Number30)

Number1; Number2;...Number30 are numerical values or ranges.

Example : **=MIN(A1;A2;A3;50;100;200) returns the largest value from the list is 50.**

=MIN(A1:B100) returns the largest value from the list.

See figure of MAX function.

- **sumif:** Adds the cells specified by a given criteria. This function is used to browse a range when you search for a certain value.

Syntax : SUMIF(Range; Criteria; SumRange)

Range is the range to which the criteria are to be applied.

Criteria is the cell in which the search criterion is shown, or the search criterion itself. If the criteria is written into the formula, it has to be surrounded by double quotes.

SumRange is the range from which values are summed. If this parameter has not been indicated, the values found in the Range are summed.

Example :To sum up only negative numbers: **=SUMIF(A1:A10;"<0")**

=SUMIF(A1:A10;">0";B1:10) - > sums values from the range B1:B10 only if the corresponding values in the range A1:A10 are >0.

- **pmt:** Returns the periodic payment for an annuity with constant interest rates.

Syntax :PMT(Rate; NPer; PV; FV; Type)

Rate is the periodic interest rate.

NPer is the number of periods in which annuity is paid.

PV is the present value (cash value) in a sequence of payments.

FV (optional) is the desired value (future value) to be reached at the end of the periodic payments.

Type (optional) is the due date for the periodic payments.

Type=1 is payment at the beginning and Type=0 is payment at the end of each period.

In the OpenOffice Calc functions, parameters marked as "optional" can be left out only when no parameter follows.

For example, in a function with four parameters, where the last two parameters are marked as "optional", you can leave out parameter 4 or parameters 3 and 4, but you cannot leave out parameter 3 alone.

Example :

What are the periodic payments at a yearly interest rate of 1.99% if the payment time is 3 years and the cash value is 25,000 currency units. There are 36 months as 36 payment periods, and the interest rate per payment period is 1.99%/12.

=PMT(1.99%/12;36;25000) = -715.96 currency units.

The periodic monthly payment is therefore 715.96 currency units.

- **stddev**: Estimates the standard deviation based on a sample.

Syntax :STDEV(Number1; Number2; ...Number30)

Number1, Number2, ... Number30 are numerical values or ranges representing a sample based on an entire population.

Example: =STDEV(A1:A50)

returns the estimated standard deviation based on the data referenced.

2.2.2 Logical (if, AND, OR, NOT, TRUE, FALSE)

- **if**: Specifies a logical test to be performed.

Syntax :IF(Test; ThenValue; OtherwiseValue)

Test is any value or expression that can be TRUE or FALSE.

ThenValue (optional) is the value that is returned if the logical test is TRUE.

OtherwiseValue (optional) is the value that is returned if the logical test is FALSE.

Examples: =IF(A1>5;100;"too small")

If the value in A1 is higher than 5, the value 100 is entered in the current cell; otherwise, the text "too small" (without quotes) is entered.

[In the OpenOffice Calc functions, parameters marked as "optional" can be left out only when no parameter follows. For example, in a function with four parameters, where the last two

parameters are marked as "optional", you can leave out parameter 4 or parameters 3 and 4, but you cannot leave out parameter 3 alone.]

For example If you want to calculate grade of student according to percentage then if condition is as below:

=IF(H4>=70;"Distinction";IF(H4>=60;"First";IF(H4>=50;"Second";IF(H4>=40;"Pass";IF(H4<40;"Fail")))))

	A	B	C	D	E	F	G	H	I
13									
1									
2									
3	Roll No.	Name	Course	Qbasic	PC Software	Maths	Total	Perc	grade
4	1	Bhavesh	FYBCA	80	85	78	243	81.00	Distinction
5	2	Alpa	SYBCA	58	41	71	170	56.67	Second
6	3	manish	SYBCA	68	29	55	152	50.67	Second
7	4	Shivani	TYBCA	72	73	28	173	57.67	Second
8	5	Nimisha	TYBCA	52	19	32	103	34.33	Fail
9	6	Bharat	FYBCA	38	40	68	146	48.67	Pass
10	7	Ramesh	SYBCA	41	72	56	169	56.33	Second
11	8	Pranav	TYBCA	29	52	92	173	57.67	Second
12	9	Aditi	SYBCA	73	80	81	234	78.00	Distinction
13	10	Ajay	FYBCA	42	58	12	112	37.33	Fail
14									
15									
16									
17									
18									
19									
20									

IF(H4>=70;"Distinction";IF(H4>=60;"First";IF(H4>=50;"Second";IF(H4>=40;"Pass";IF(H4<40;"Fail")))))

- **AND: Returns TRUE if all arguments are TRUE. If one of the elements is FALSE, this function returns the FALSE value.**

The arguments are either logical expressions themselves (TRUE, 1<5, 2+3=7, B8<10) that return logical values, or arrays (A1:C3) containing logical values.

When a function expects a single value, but you entered a cell range, then the value from the cell range is taken that is in the same column or row as the formula.

If the entered range is outside of the current column or row of the formula, the function returns the error value #VALUE!

Syntax : AND(LogicalValue1; LogicalValue2 ...LogicalValue30)

- **LogicalValue1; LogicalValue2 ...LogicalValue30** are conditions to be checked.
- All conditions can be either TRUE or FALSE.
- If a range is entered as a parameter, the function uses the value from the range that is in the current column or row.
- The result is TRUE if the logical value in all cells within the cell range is TRUE.

Example :The logical values of entries 12<13; 14>12, and 7<6 are to be checked:

=AND(12<13;14>12;7<6) returns FALSE.

=AND (FALSE;TRUE) returns FALSE.

- **OR: Returns TRUE if at least one argument is TRUE. This function returns the value FALSE, if all the arguments have the logical value FALSE.**

The arguments are either logical expressions themselves (TRUE, 1<5, 2+3=7, B8<10) that return logical values, or arrays (A1:C3) containing logical values.

When a function expects a single value, but you entered a cell range, then the value from the cell range is taken that is in the same column or row as the formula.

If the entered range is outside of the current column or row of the formula, the function returns the error value #VALUE!

Syntax : OR(LogicalValue1; LogicalValue2 ...LogicalValue30)

- **LogicalValue1; LogicalValue2 ...LogicalValue30** are conditions to be checked.
- All conditions can be either TRUE or FALSE.
- If a range is entered as a parameter, the function uses the value from the range that is in the current column or row.
- **Example : The logical values of entries 12<11; 13>22, and 45=45 are to be checked.**
=OR(12<11;13>22;45=45) returns TRUE.
=OR(FALSE;TRUE) returns TRUE.

- **NOT: Complements (inverts) a logical value.**

Syntax :NOT(LogicalValue)

LogicalValue is any value to be complemented.

Example: =NOT(A).

If A=TRUE then NOT(A) will evaluate FALSE.

- **TRUE: The logical value is set to TRUE. The TRUE() function does not require any arguments, and always returns the logical value TRUE.**

Syntax : TRUE()

Example

If A=TRUE and B=FALSE the following examples appear:

=AND(A;B) returns FALSE

=OR(A;B) returns TRUE

=NOT(AND(A;B)) returns TRUE

- **FALSE :Returns the logical value FALSE. The FALSE() function does not require any arguments, and always returns the logical value FALSE.**

Syntax: FALSE()

Example

=FALSE() returns FALSE

=NOT(FALSE()) returns TRUE

2.2.3 Date and Day function : Date, day, time, now, Hour, Minute, Second, Month, Days360, weekday

- **Day** : Returns the day of given date value.

The day is returned as an integer between 1 and 31. You can also enter a negative date/time value.

Syntax :DAY(Number)

Number, as a time value, is a decimal, for which the day is to be returned.

Examples

=DAY(1) returns 31 (since OpenOffice starts counting at zero from December 30, 1899)

=DAY(NOW()) returns the current day.

=DAY(C4) returns 5 if you enter 1901-08-05 in cell C4 (the date value might get formatted differently after you press Enter).

- **Date: This function calculates a date specified by year, month, day and displays it in the cell's formatting.**

The default format of a cell containing the DATE function is the date format, but you can format the cells with any other number format.

Syntax: DATE(Year; Month; Day)

- **Year** is an integer between 1583 and 9957 or between 0 and 99.
- **Month** is an integer indicating the month.
- **Day** is an integer indicating the day of the month.
- If the values for month and day are out of bounds, they are carried over to the next digit. If you enter =DATE(00;12;31) the result will be 12/31/00. If, on the other hand, you enter =DATE(00;13;31) the result will be 1/31/01.

Example

=DATE(00;1;31)

display 1/31/00 if the cell format setting is MM/DD/YY.

- **Time :** **TIME** returns the current time value from values for hours, minutes and seconds.

This function can be used to convert a time based on these three elements to a decimal time value.

Syntax : TIME(Hour; Minute; Second)

- Use an integer to set the **Hour**.
- Use an integer to set the **Minute**.
- Use an integer to set the **Second**.

- **Examples**
 =TIME(0;0;0) returns 00:00:00
 =TIME(4;20;4) returns 04:20:04

- **Now :** Returns the computer system date and time.

The value is updated when you recalculate the document or each time a cell value is modified.

Syntax : NOW()

- NOW is a function without arguments.

Example

=NOW()

returns the current time and date.

- **Hour :** Returns the hour for a given time value.

The hour is returned as an integer between 0 and 23.

Syntax : HOUR(Number)

- **Number**, as a time value, is a decimal, for which the hour is to be returned.

Examples

=HOUR(NOW())

returns the current hour

=HOUR(C4)

returns 17 if the contents of C4 = 17:20:00.

- **Minute :** Same as Hour, it returns minutes for a given time.

Calculates the minute for an internal time value. The minute is returned as a number between 0 and 59.

Syntax : MINUTE(Number)

Number, as a time value, is a decimal number where the number of the minute is to be returned.

Examples

	C	D	E	F	G
			now function	12:37:16	
			minute function	37	

- **Second :** Returns the second for the given time value. The second is given as an integer between 0 and 59.

Syntax : SECOND(Number)

- **Number**, as a time value, is a decimal, for which the second is to be returned.

Examples

=SECOND(NOW()) returns the current second
=SECOND(C4) returns 17 if contents of C4 = 12:20:17.

- **Month :** Returns the month for the given date value. The month is returned as an integer between 1 and 12.

Syntax : MONTH(Number)

Number, as a time value, is a decimal for which the month is to be returned.

Examples

=MONTH(NOW()) returns the current month.
=MONTH(C4) returns 7 if you enter 2000-07-07 to cell C4 (that date value might get formatted differently after you press Enter).

- **Days360:** Returns the difference between two dates based on the 360 day year used in interest calculations.

Syntax: DAYS360("Date1"; "Date2"; Type)

- If **Date2** is earlier than Date1, the function will return a negative number.
- The optional argument **Type** determines the type of difference calculation.
- If **Type** = 0 or if the argument is missing, the US method (NASD, National Association of Securities Dealers) is used.
- If **Type** <> 0, the European method is used.

Examples

=DAYS360("2000-01-01";NOW())
returns the number of interest days from January 1, 2000 until today.

- **Weekday :** Returns the day of the week for the given date value.

The day is returned as an integer between 1 (Sunday) and 7 (Saturday) if no type or type=1 is specified.

If type=2, numbering begins at Monday=1; and if type=3 numbering begins at Monday=0.

Syntax : WEEKDAY(Number; Type)

Number, as a date value, is a decimal for which the weekday is to be returned.

Type determines the type of calculation.

For Type=1, the weekdays are counted starting from Sunday (this is the default even when the Type parameter is missing). For Type=2, the weekdays are counted starting from Monday=1. For Type=3, the weekdays are counted starting from Monday=0.

Examples

=WEEKDAY("2000-06-14") returns 4 (the Type parameter is missing, therefore the standard count is used).

The standard count starts with Sunday as day number 1.

June 14, 2000 was a Wednesday and therefore day number 4).

=WEEKDAY("1996-07-24";2) returns 3 (the Type parameter is 2, therefore Monday is day number 1).

July 24, 1996 was a Wednesday and therefore day number 3).

=WEEKDAY("1996-07-24";1) returns 4 (the Type parameter is 1, therefore Sunday is day number 1.

July 24, 1996 was a Wednesday and therefore day number 4).

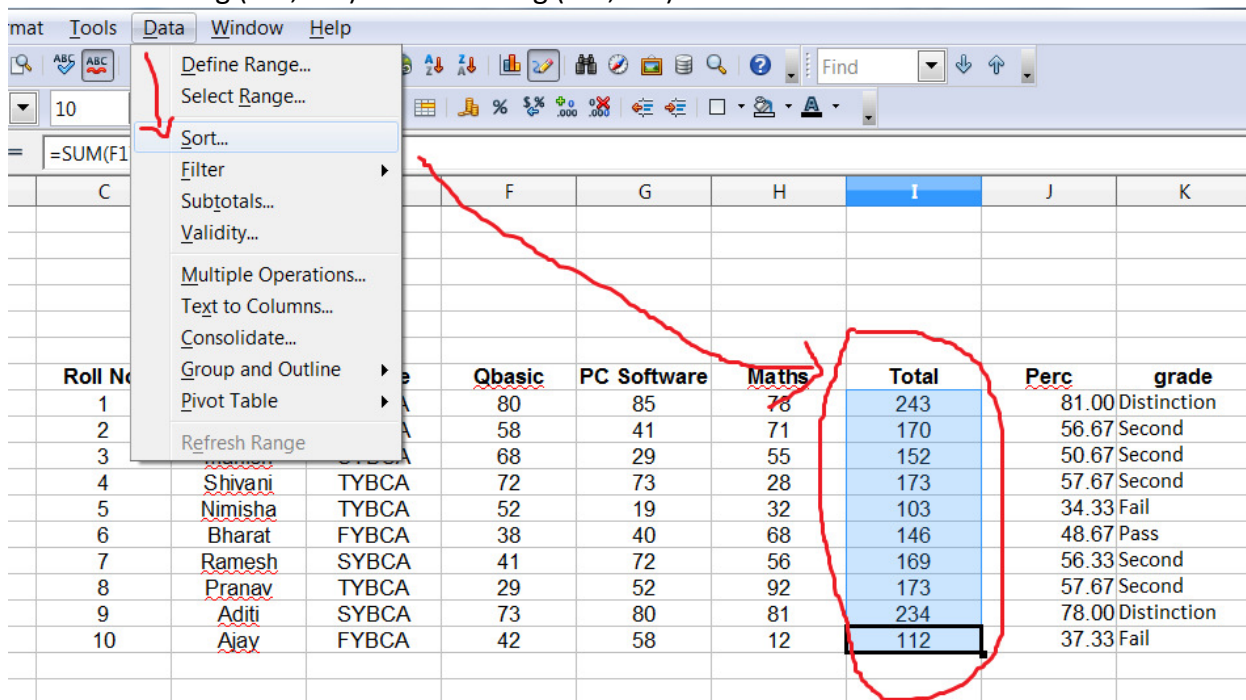
=WEEKDAY(NOW()) returns the number of the current day.

2.3 Data :

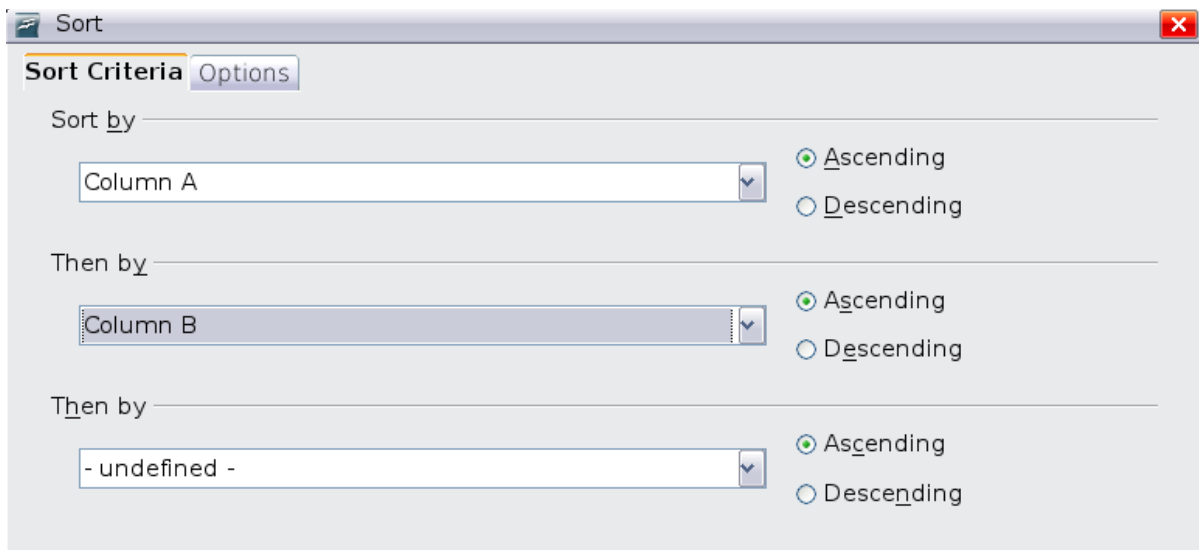
2.3.1 Sort Data, Filter Data

SORT DATA

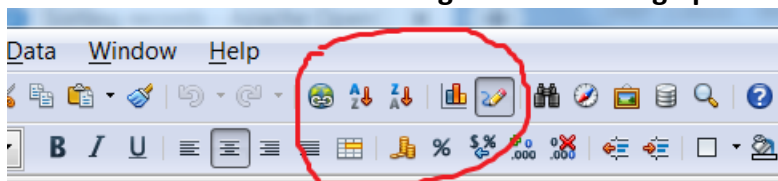
- Sorting arranges the cells on the sheet.
- In Calc, you can sort by up to three criteria, with each criterion applied one after the other.
- In addition, sorting is often useful when you add new information.
- After you have added information, you can then sort it to update the sheet.
- Highlight the cells to be sorted, then **select Data > Sort** to open the Sort dialog, or click the **Sort Ascending** or **Sort Descending** toolbar buttons.
- Using the dialog, you can sort the selected cells using up to three columns, in either ascending (A-Z, 1-9) or descending (Z-A, 9-1) order.



Roll No	Qbasic	PC Software	Maths	Total	Perc	grade		
1	80	85	78	243	81.00	Distinction		
2	58	41	71	170	56.67	Second		
3	68	29	55	152	50.67	Second		
4	Shivani	TYBCA	72	73	28	173	57.67	Second
5	Nimisha	TYBCA	52	19	32	103	34.33	Fail
6	Bharat	FYBCA	38	40	68	146	48.67	Pass
7	Ramesh	SYBCA	41	72	56	169	56.33	Second
8	Pranav	TYBCA	29	52	92	173	57.67	Second
9	Aditi	SYBCA	73	80	81	234	78.00	Distinction
10	Ajay	FYBCA	42	58	12	112	37.33	Fail



- You can also select sort ascending and descending option from tool bar.

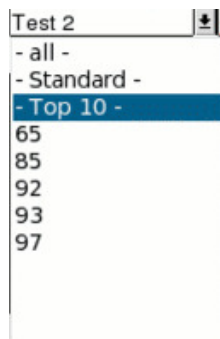


FILTER DATA

- Filtering data in a spreadsheet means to set conditions so that only certain data is displayed. It is done to make it easier to focus on specific information in a large database or table of data.
 - Filters works with records or rows of data in the database. The conditions that are set are compared with one or more fields in the record. If the conditions are met, the record is displayed.
 - If the conditions are not met, the record is filtered out so that it isn't displayed with the rest of the data records.
 - Filtering does not permanently remove records; it just temporarily hides them from view.
 - For open filter option select data from menu bar -> select filter.
 - **There are three type of filtering:**
 - [1] Auto filter**
 - [2] Standard filter**
 - [3] Advance filter.**

1. Auto Filter

- It is the simplest filter.
- It is apply on a specific column.
- After creating an auto filter for a specific column, a combo box is added to the column. The combo box provides quick access to each of the auto filter types.

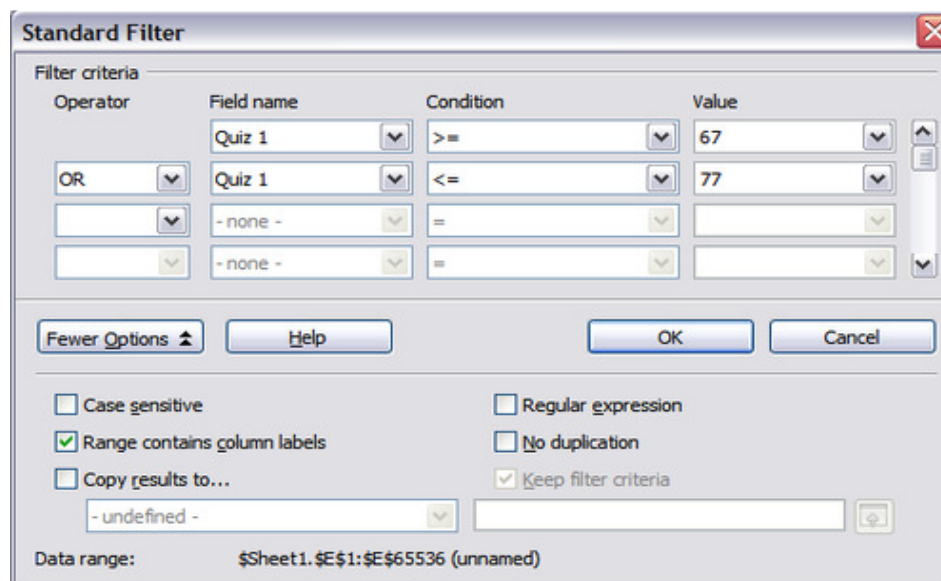


- The All auto filter causes all rows to be visible.
- The Top 10 auto filter displays the ten rows with the largest value. An auto filter entry is created for each unique entry in the column.
- To create an auto filter, first select the columns to filter.
- You can place the auto filter in any row, only the rows below the auto filter are filtered.
- Remove an auto filter by repeating the steps to create the auto filter— unchecked the option auto filter.

11:00	Red	Blue	Green	White	Orange
12:00	Silver	All	Red	Green	Red
13:00	Yellow	Top 10	Blue	Silver	Black
14:00	Brown	Standard Filter...	Red	Green	Black
15:00	Purple	Blue	Silver	Orange	Purple
16:00	Blue	Brown	Yellow	Red	Green
17:00	Blue	Green	Red	Green	Black
18:00	Red	Purple	Black	Yellow	Brown
19:00	Silver	Red	Red	White	Purple
20:00	Orange	Silver	Blue	Black	Silver

2. Standard Filter

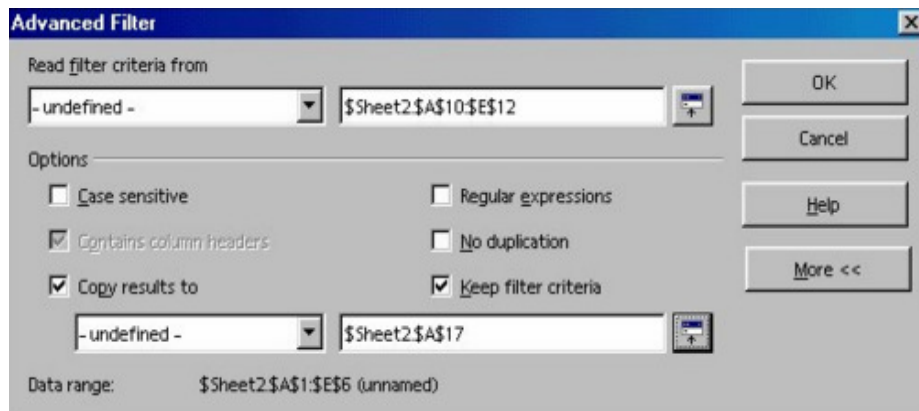
- Use Data > Filter > Standard Filter to open Standard Filter dialog and limit the view based on 1 to 3 filter conditions. Use Data > Filter > Remove Filter to turn off the filter.
- Standard filter is used for multiple filtering the data.(see figure)
- As shown in figure we can filter data on particular condition base. Also we can filter data by comparing more than 2 conditions.



3. Advance Filter

- An advanced filter supports up to 8 filter conditions.

- The criteria for an advanced filter is stored in a sheet.
- The first step in creating an advanced filter is entering the filter criteria into the spreadsheet.
- Select an empty space in the Calc document.
- Duplicate the column headings from the area to be filtered into the area that will contain the filter criteria.
- Enter the filter criteria underneath the column headings. The criterion in each column of a row is connected with AND. The criteria from each row are connected with OR.
- After creating one or more sets of filter criteria, apply an advanced filter as follows:
- Select the sheet ranges that contain the data to filter.
- Use Data > Filter > Advanced Filter to open the Advanced Filter dialog.
- Select the range containing the filter criteria and any other relevant options.
- Click OK.



2.3.3 Consolidated Data (sum, count, max, min, average)

- **Data > Consolidate** provides a way to combine data from two or more ranges of cells into a new range while running one of several functions (such as Sum or Average) on the data. During consolidation, the contents of cells from several sheets can be combined in one place.
1. Open the document that contains the cell ranges to be consolidated.
For proper understanding let's take an example:
 - Create a new spread sheet.
 - In **Sheet1**, Add records for **Deposited** and **withdraw** amount for the month **January** as shown below.

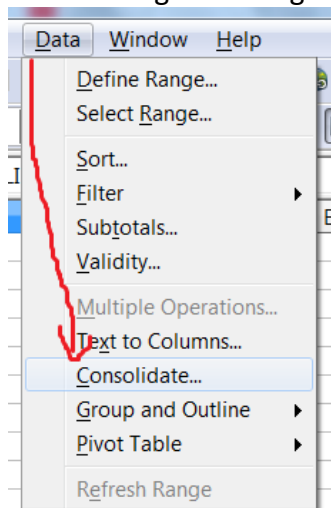
	A	B	C
1	<u>Details</u>		
2			
3	<u>Name</u>	<u>Withdraw</u>	<u>Deposit</u>
4	AAA	9000	10000
5	BBB	5000	7000
6	CCC	4500	7000
7	DDD	9000	11000
8	EEE	8000	14000
9	FFF	7500	15500
0	GGG	6000	7800
1	HHH	6600	8900

- In **Sheet2**, Add records for **Deposited** and **withdraw** amount for the month **February** as shown below.

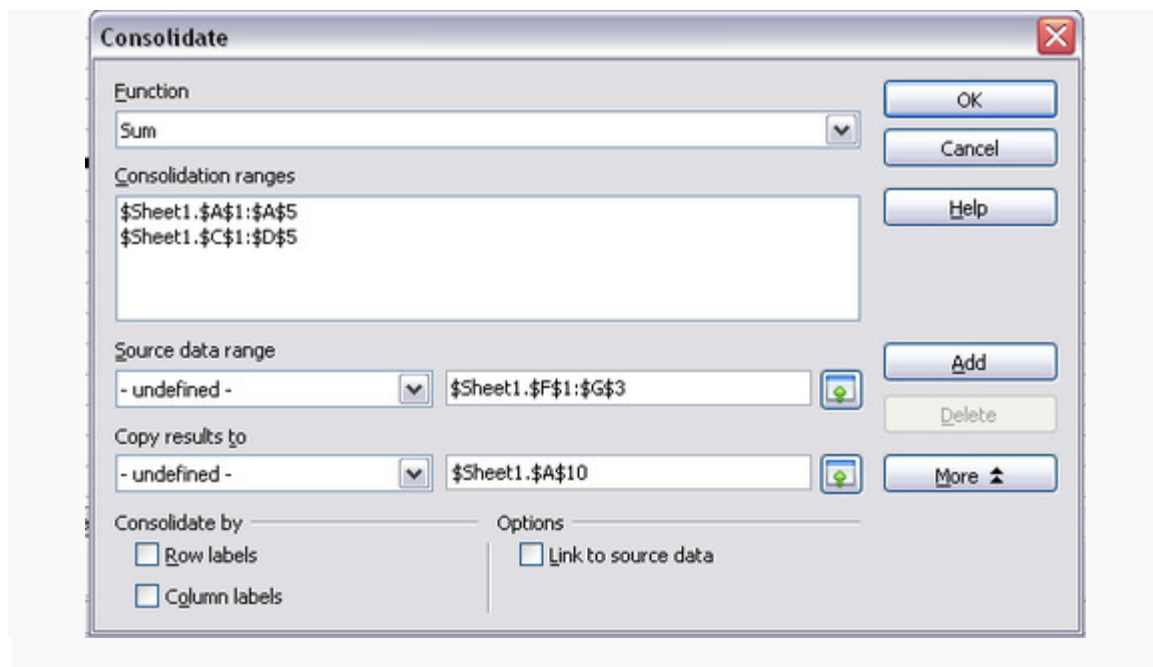
	A	B	C
	<u>Details</u>		
	Name	Withdraw	Deposite
	AAA	8000	12000
	BBB	5400	7200
	CCC	700	8000
	DDD	10000	13000
	EEE	6000	11000
	FFF	5000	12000
	GGG	6500	7000
	HHH	7000	8000

Sheet-2 FEB Month 1

- Use another sheet-3 for display result.
- Choose **Data > Consolidate** to open the Consolidate dialog. The figure shows this dialog after making the changes described below.

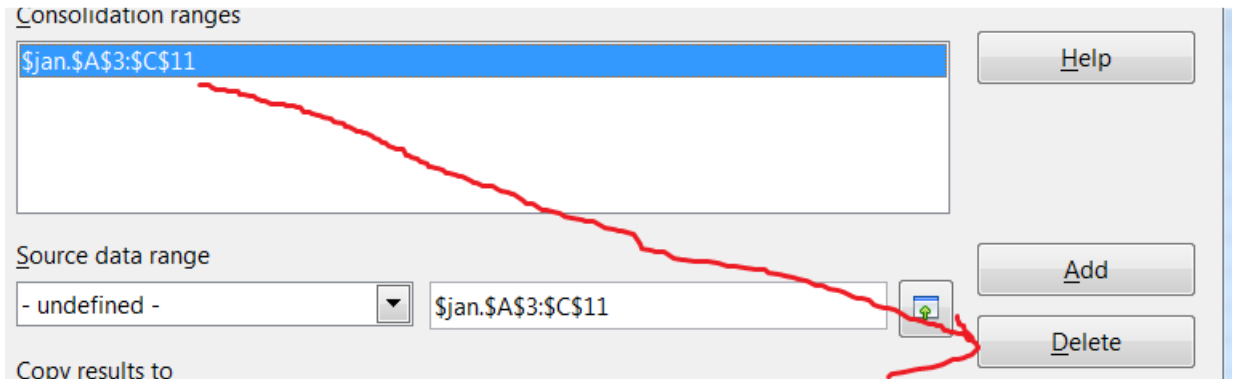


It will open dialog box as shown below.

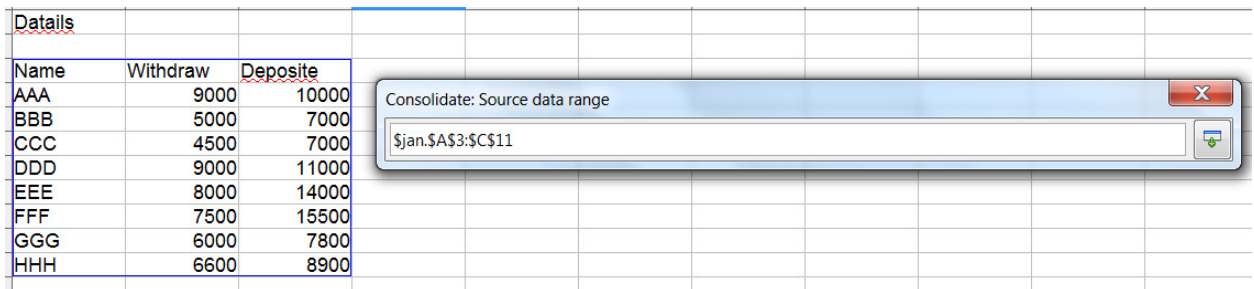


Different functions are available in Function Option.

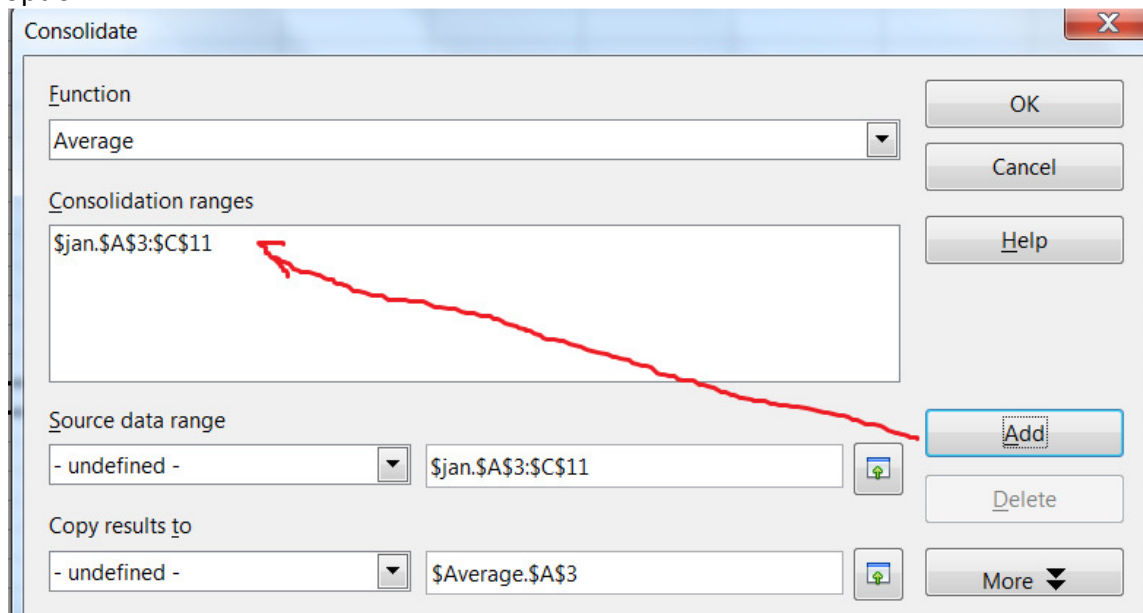
3. As per data of sheet1 and sheet2, here we want to **calculate deposit amount and withdraw amount of January and February**. And we want to display **result in Sheet-3**.
4. Select appropriate function from function dialog box. Here to calculate amount we use SUM function. As shown in figure above.
5. As per figure if Consolidate data range is not blank then first clear these data. for this, select **data range -> delete** option.



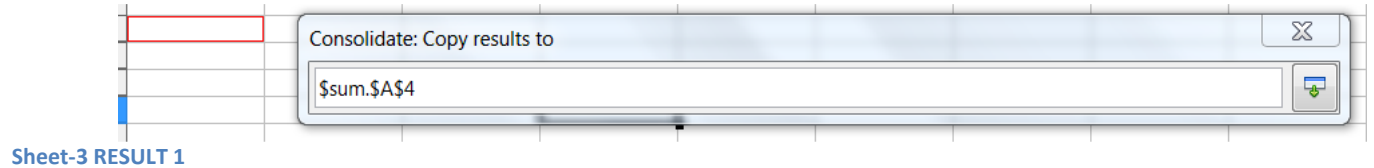
6. Now in next step select source data range option from dialog box shown in step-2. And select data from sheet-1. For that click on Shrink icon



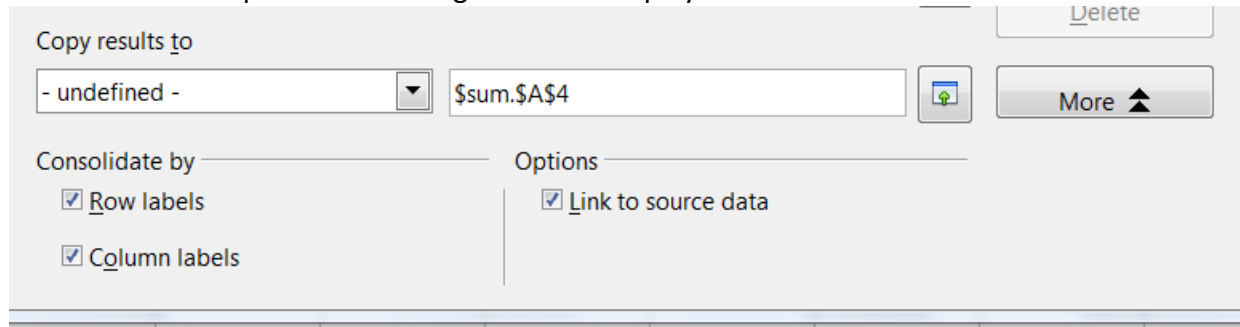
And then add this range by clicking in Add button. It will add data range to the Data range option.



7. Perform same step to add Sheet-2 data.
8. In next step select **copy result to** option. For add result sheet-3. For that click on shrink button.



9. Click on more option from dialog box it will display some more button.



Here, **link to source data** option must be checked.

If we make any changes in sheet-1 and sheet-2 that will affect the result in sheet-3, if we this option is checked.

10. Finally click on OK button. so sheet-3 display result.

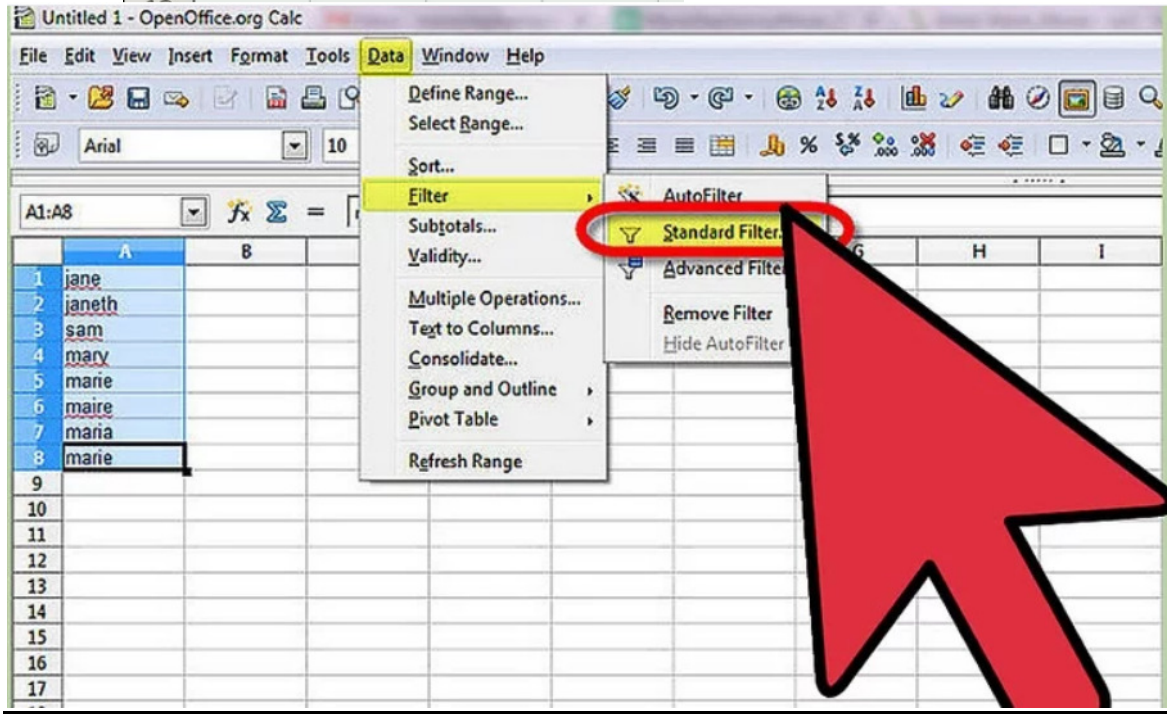
	RESULT	
Name	Withdraw	Deposite
AAA	17000	22000
BBB	10400	14200
CCC	5200	15000
DDD	19000	24000
EEE	14000	25000
FFF	12500	27500
GGG	12500	14800
HHH	13600	16900

Same way we can use average, count ,min and max functions also.

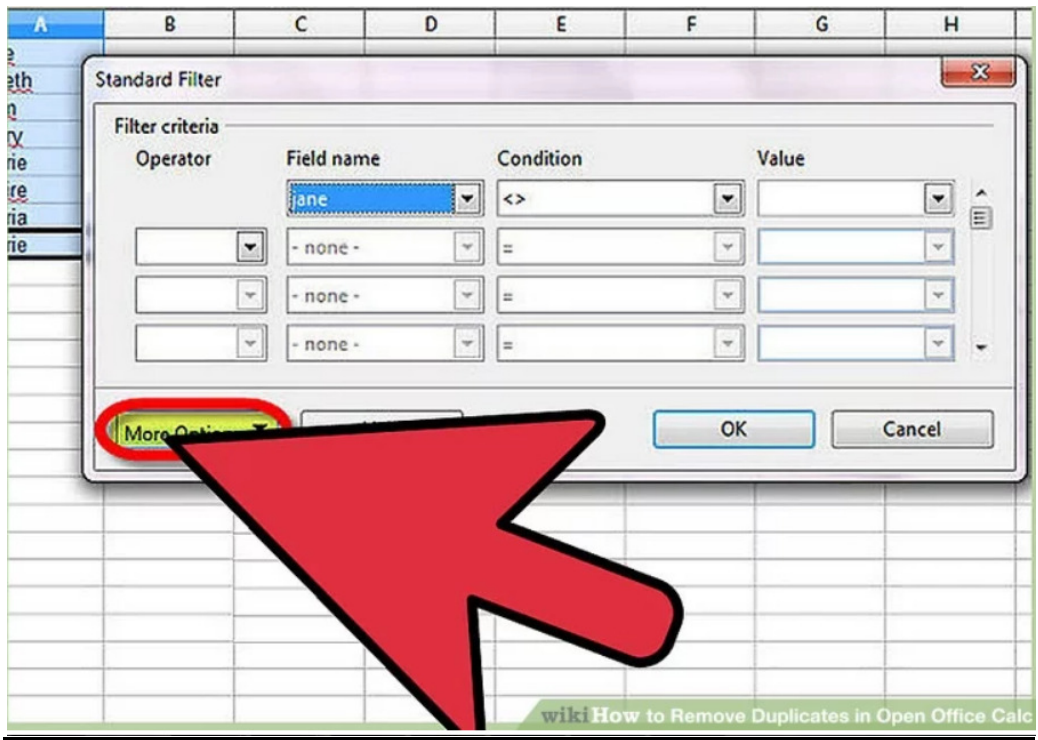
❖ **Step to removing duplicate data.**

- Step 1: Select the data that you want to filter. After that Go to **Data >> Filter >> Standard Filter**.

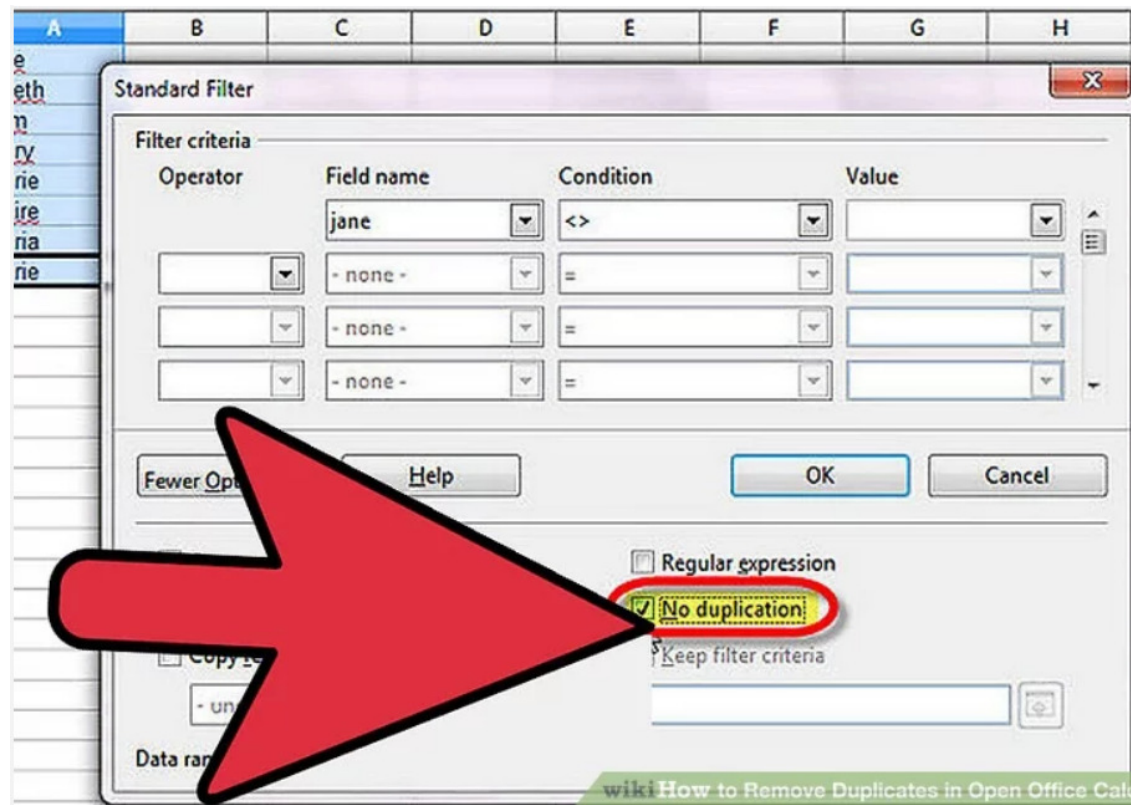
	A	B	C	D
1	Name	PO	Other	Other
2	Jack	344	t	e
3	Jack	344	r	
4	Jack	344	t	g
5	Alice	344		
6	Alice	344	e	
7	Mack	344		
8	Jack	344	r	
9	Alice	344		g
10	Mack	344	e	
11	Greg	344	e	g
12				



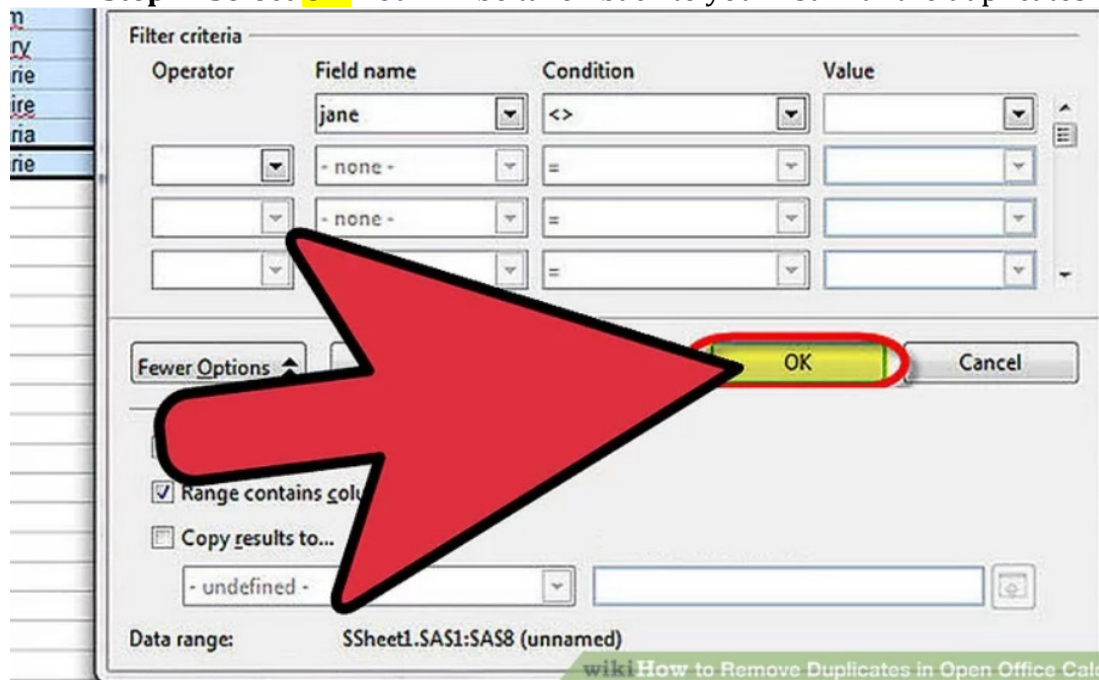
❖ **Step2** : Click on **More Options**. This will take you to more advanced options.



- **Step 3: Click on No Duplicates.** Change Field Name to 'none'. If you want to create a separate list, click on Copy To... and select a cell address; such as B1.



- **Step 4: Select Ok.** You will be taken back to your list with the duplicates removed.



Final output will be below.

A1:AMJ6 $f(x)$ Σ = Name

	A	B	C	D
1	Name	PO	Other	Other
2	Jack	344	t	e
3	Alice	344		
4	Mack	344		
5	Greg	344	e	g
6				