LibreOffice Calc

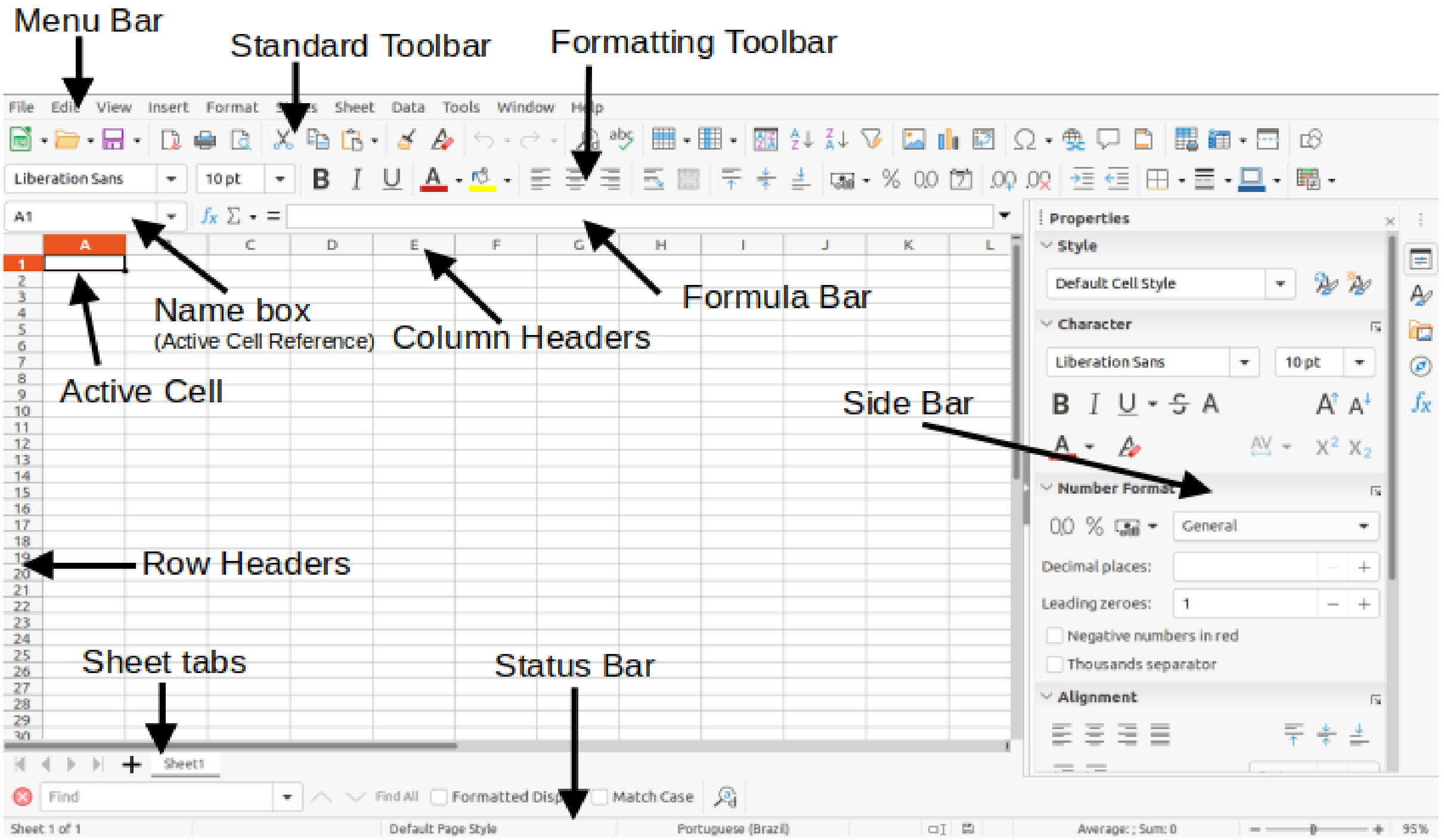


Introduction to Libreoffice Calc Spreadsheet

- Calc is the spreadsheet component of LibreOffice. You can enter data (usually numerical) in a spreadsheet and then manipulate this data to produce certain results.
- It is similar to programs such as Microsoft Excel. It allows you to effectively analyse and manage your data.

Other features provided by Calc include:

- Functions, which can be used to create formulas to perform complex calculations on data.
- Database functions to arrange, store, and filter data.
- Data statistics tools, to perform complex data analysis.
- Dynamic charts, including a wide range of 2D and 3D charts.
- Ability to open, edit, and save Microsoft Excel spreadsheets.
- Import and export of spreadsheets in multiple formats, including HTML, CSV, PDF, and Data Interchange Format.


Menu Bar
Standard Toolbar
Formatting Toolbar
File Edit View Insert Format Styles Sheet Data Tools Window Help
Liberation Sans
10 pt
A1
Name box
(Active Cell Reference)
Column Headers
Formula Bar
Active Cell
Side Bar
Row Headers
Sheet tabs
Status Bar
Properties
Style
Default Cell Style
Character
Liberation Sans
10 pt
Number Format
General
Decimal places:
Leading zeroes:
1
Negative numbers in red
Thousands separator
Alignment
Sheet1
Find
Find All
Formatted Disp
Match Case
Sheet 1 of 1
Default Page Style
Portuguese (Brazil)
Average: ; Sum: 0
95%

Element of LibreOffice Calc

Title Bar This bar appears at the top left corner of LibreOffice Calc & Displays the name of application file by default name Untitled1-LibreOffice Calc.

Menu Bar This bar appears below the title bar. It is the collection of command or menus. There following menus appearing in the LibreOffice Calc. File, Edit, View, Insert, Format, Styles, Sheet, Data, Tools, Window, Help.

Status Bar Status Bar appears at the bottom of the Libre Office Calc and displays information about the current spreadsheet.

New Sheet To add new sheet **Click on + Button** indicated left side of **Sheet1**.

Element of LibreOffice Calc

Worksheet : A worksheet is made up of cell arrange in form of Row and Column. In LibreOffice number of sheet can be open depends on memory size. By default one sheet namely sheet1 appears. It is also called spreadsheet.

Workbook : A workbook is a collection of worksheet. The workbook that opens named as **Untitled1.ods**

Active Sheet : The spreadsheet on which we are presently working.

Row : A row is the horizontal sequence of the spreadsheet. A row is named as the number 1, 2, 3 etc In Calc, Total number of row is **10,48,576.**

Column : A Column is the horizontal sequence of the spreadsheet. It is named as **A, B, C, etc.** In Calc Application, total number of column is 1024 (AMJ) (From A to AMJ. The last cell name is **AMJ1048576**.

Element of LibreOffice Calc

Cell: A cell is the intersection of Row and Column. For example, Cell A1 is the intersection of Column A and Row 1. A cell in which mouse pointer is available that cell is known as **Active Cell.** A cells may contain text, numbers, and formulas. Total number of cell in single sheet is **1073741824 (row 1048576 X column 1024= 1073741824).**

Cell Range : A range is identified by its first and last cell address separated by colon. If we want to add cell A1 to cell A5 then we write formula **=Sum(A1:A5).**

Name Box

This appears at left of the formula bar and displays the address of active cell. A cell address consist of column name and row number.

Formula Bar or Input line

This bar appears at the right side of the Name box. It displays formula as well as value entered into the active cell. It is also used to edit formula and content on it.

Cal Spreadsheet Navigation

Method	-	Description
Mouse Pointer	-	Use mouse pointer to select a cell.
Arrow Keys	-	Use the left, right, up and down arrow keys to move accordingly among the cells.
Enter	-	Press the Enter key to move one cell down at a time.
Shift + Enter	-	Press the Shift + Enter key to move one cell down at a time.
Tab	-	Press the Tab Key to move one cell to the right.
Shift + Tab	-	Press the Shift + Tab key to move one cell to the left.
Ctrl + Home	-	Moves the cursor to the first cell (A1).
Ctrl + End	-	Moves the cursor to the last cell on the sheet that contains data.
Ctrl + →	-	Moves the cursor to the last column (AMJ).
Ctrl + ↓	-	Moves the cursor to the last row (1048576).
Shift + Ctrl + F5	-	Moves the cursor to the Name box.

Entering Data in Cells

The data that you enter can be numbers, text, date and time.

- Numbers: To enter in calc we use keyboard or numeric keypad. To enter negative number, we use (-) minus symbol in front number. Numbers are right aligned by default.
- Text: Text is left aligned by default.
- Numbers as text: if the number is entered is 01431, leading with 0 preceded by apostrophe (‘) is considered as text.
- Date and Time: You can separate date element by slash (/) or hyphen (-) and in time by using (:)
- Special character: Click **Insert->special character** to open special character dialog box then select any special character which you want, then click on **ok** Button.
- Note : To edit the cell data/content double click on cell or press F2 key

Saving Spreadsheet

You can save the Calc Spreadsheet by using the steps given below:

1. Go to File Menu→ Select Save or Press Ctrl + S or Click on Save button from Standard Toolbar.
2. If You are saving file for first time, the Save As dialog box will appear.
3. You have to enter the name of file and location where you want to save.
4. Click on Save button.

Saving a Spreadsheet on other location:- You can use Save As command to save the data of the spreadsheet file to a different location or Type format or different file name.

1- Click on File Menu → Save AS Type a name for the Calc, Select File type and select location.

2- Click on Save button.

Opening and Closing

Opening and Closing (Ctrl+O):- You can open existing Calc spreadsheet already created earlier.

1. Click on File Menu→ Select Open or Press Ctrl + O or Click on Open button from Standard Toolbar.
2. A dialog box will appear on your screen, you can select the desired spreadsheet file you want to open.
3. Click on Open button.

Closing Cal spreadsheet:- Two command Close and Exit are similar, yet have an important distinction. Close closes the active spreadsheet, but leaves the Calc application and other spreadsheet file open.

Just Click on X button on the right side of the title bar or go to file menu and choose exit. Before closing any spreadsheet make sure that it should be saved properly.

Printing a Spreadsheet

Printing a Spreadsheet (Ctrl + P):- It is used to print Spreadsheet text matter in a printed page. In order o print sheet you have a number of interactive option available.

For printing a portion of the spreadsheet, do the following:-

1. Select the range of data that you want to print.

2. Go to File menu->Click Print. In the Print dialog box in the General tab page, select the contents to be printed.

   All Sheets:- All sheets will be printed.

   Selected Sheets:- Only selected sheet will be printed.

   Selected Cells:- All selected cells will be printed.

   All pages:- Print all resulting pages.

3. Click on OK Button.

Modifying / Editing Cell Contents

Editing Spreadsheet Data:- You can edit the data in the sheet given in the cell. You have several option to edit the data in sheet like selecting the data, changing font face, font size, font color, and its style, formatting style of the cell.

Formatting Cells (Font, Alignment, Style):- You can perform formatting to the cell according to your need. You can format the cell that what it is going to accept input and its alignment, color, filling, Protection, Font changing and finally setting the height and width of the cell. A cell can be formatted in so many formats like General, Number, Short date, Long Date, Time, Accounting, Percentage, Scientific and Fraction and so on. To change the format of the cell-

1. Go to Format Menu → Select Cells or Press Ctrl+1 key or right click on the cell select format cells.
2. Format cell dialog box will appear.
3. Select any required format which we want & Click on OK button.

Edit Delete Cell Content

You can format the data and text in Calc Spreadsheet by using several different method. To format a cell, select a cell or cells, right click on it and select Format Cells or by using formatting toolbar.

To insert content into a cell:-

1. Click a cell to select it.

2. Type content into the selected cell, then press Enter on your keyboard. The content will appear in the cell and the formula bar. You can also Enter and edit cell content in the formula bar.

To delete cell content:-

1. Select the cell with content you want to delete.

2. Press the Delete key on your keyboard. The cell's content will be deleted.

You will also use Backspace key to delete the content after selection but following dialog box will appear with several options.

Changing Cell Height & Width

A cell is a rectangular box made up of row and column where row is height and column is a width of the cell.

Changing the Row Height:- Here are the following steps which let you change the height of the cell in the spreadsheet.

1. Select the cell and Go to **Format>Row>Height,** you see a dialog box.

2. Mention the value of the row height and click on OK. .

Changing the Column Width:- Here are the steps which will let you change the width of the cell in spreadsheet.

1- Select the cell and Go to **Format > Column> Width**, you will see the dialog box.

2- Mention the value of the column width and click on OK.

AutoFit column width:- The AutoFit feature will allow you to set a column's width to fit its contents automatically. Double click by the mouse on column header line. The Column width will be change automatically.

Add/Delete Cell, Row, Column or Sheet

To delete cells (Ctrl+-):-

1. Select the cells you want delete.

2. Go to **Sheet menu -> Select Delete cell or right click on cell-> Select Delete cell or press Ctrl+(-)** key from the keyboard.

3. Then delete cell dialog box will appear on the screen with following option:

i. Shift Cell up: - To delete the cell & shift down cell data to upward.

ii. Shift Cell Left:- To delete the cell and shift right side data to left side.

iii. Delete Entire Row(s):- To delete entire selected Row.

iv. Delete Entire column(s) :- To delete entire selected Column.

Changing Font Face, Size and Style

We have number of commands and tools available to change the font face, Size and Its Style.

Changing Font:- You can change font face of the text or the data entered into the cell. There are number of font available in the application enlisted in the font face list.

1. Select the cells or cells and click on drop down on font and font size and select according to requirement.

2. Change the Font Face, Font Style, Font Size, Color, Effects of the cell and Click on OK.

Alignment of the data in the cell:- We can set the alignment of text value in the cell to the Left, Right, Center, Top Align, Middle Align or bottom align. To align the text follow these steps.

1- Select the cell and Click to any alignment tools you want to apply from the formatting toolbar, or use Format → cells → Alignment tab

2- You can even set your custom alignment too.

3- Select Cell Alignment, Cell orientation, Text control and text direction and then click on OK.

Formula and Function

Formula :

- In Calc, any formula is always start by using an **equal sign**.
- A formula is an expression that operates on values in a range of cells or a cell.
- For example, =A1+A2+A3, which finds the sum of the range of values from cell A1 to cell A3.

Functions

- A function is a predefined formula that performs calculations using specific values in a particular order.
- Calc includes many common functions that can be used to quickly find the sum, average, count, maximum value and minimum value for range of cells.

Cell Referencing

Cell reference refers to the cells or range of cells in spreadsheet. Each cell in a spreadsheet is named by its column and row labels. The row labels are numbers and column labels are letters. Cell referencing is of three types.

- Relative Cell Address
- Absolute Cell Address
- Mixed Cell Address

Relative cell Referencing

- By default all references are relative references.
- When copies across multiple cells, they change based on relative position of rows and column.
- If you copy the formula = A1+B1 from row 1 to row 2, the formula become = A2+B2, A3+b3, A4+b4 etc.

Absolute cell Referencing:-

- It is used when you don’t want a cell reference to change when copied to other cells.
- Unlike relative references, absolute references do not change when copied or filled.
- You can use an absolute reference to keep a row and column constant.
- To create an absolute referencing in a formula we add the dollar sign ($) before the column, before the row or both.

A2 the column and the row do not change when copied.

Mixed cell Referencing

Mixed reference in Calc is a reference where both absolute and relative reference exist. For example:-

A$2 the row does not change.

$A2 the column does not change.

AutoFill

When you want to enter lot of data of some type of repeatable pattern or sequence into your LibreOffice Calc spreadsheet, you can save time by using AutoFill. You can automatically fill cells with data with AutoFill command or the Series Command. AutoFill automatically generate a data series based on defined pattern.

1. On a sheet, click in a cell, and type a number.
2. Click in another cell and then click back in the cell where you typed the number.
3. Drag the fill handle in the bottom right corner of the cell across the cells that you want to fill and release the mouse button.
4. The cells are filled with ascending numbers.

Sorting

Sorting of data is most important function of Calc spreadsheet for better result according to your requirement. Sorting Tools allow you to sort by date, number, alphabetic order or more. To sort the data follow these steps:-

1. Select range of cells that you want to arrange in sorting order.
2. Then Go to **Data Menu → Sort**
3. Sort dialog box will appear on your screen.
4. Select sorting criteria that you want.
5. Click on OK button.

Applying Filter

Normal Filtering:- Filtering of data is most important function of Calc spreadsheet for better result according to your requirement. Filtering Tools facilitate you to filter your data according to your requirement. To Filter the data follow these steps:-

1. Go to Data Menu.
2. Click on Filter option.
3. Click on Auto Filter option.

Advance Filtering:- Advance Filter also help us to filter our data. To use advance filter follow these steps:-

1. If you want to filter Employee records from the spreadsheet. Then create employee record database in which Name, Address, Salary, field with information are exist.
2. Select range of cells in spreadsheet like A1:C13
3. Go to Data Menu →Filter → More Filter → Standard Filter or Advance Filter.

Formula Functions

Using Formula for Numbers:- A formula is an expression which calculates the value of a cell. Functions are predefined formula and are already available in LibreOffice Calc. You can enter formulas in two ways, either by using the Function Wizard or by typing directly into the cell or into the input line. All formulas begin with an equal sign. When typing in directly, you need to start a formula with one of the symbol =, + or -.

Operators in Formula:- Formula in Calc are like mathematical equation. You can use combination of numbers, cell references and operators to perform fro simple to complex calculations. There are following references and operators used in Libreoffice Calc.

Operator	Name	Example
+	Addition	= 1+1
-	Subtraction	= 5-2
-	Negation	= -12

*	Multiplication	= 5*3
/	Division	= 6/2
%	Percent	15%
^	Exponentiation	2^3

Order of Operation:- The order of operation in Calc follows the same rules you learned in math class. A common technique for remembering the order of operation is the abbreviation (or more properly the "acronym") "PEMDAS"

P	Operation enclosed in parenthesis.
E	Exponent calculations (3^2, for example).
MD	Multiplication and division, whichever comes first.
AS	Addition and Subtraction, whichever comes first.

AutoSum

AutoSum is feature that automatically calculate the data in cell range. Follow these steps to use AutoSum features.

1. Click the cell next to the column or row of numbers to sum up.
2. Click the AutoSum button appears with formula bar or function bar or Function Wizard.
3. Press the <Enter> Key to confirm the action The cell range is totalled in the cell.

Function Wizard

Functions wizard is a tool that helps us first to find the function we want through the library and secondly to introduce the arguments steps by steps. You can open function wizard by using short cut key Ctrl + F2 or Go to Insert>Function.

1. Select the cell that will contain the formula and result will appear.

2. Click the fx button on the Formula Bar to open the Function Wizard.

3. Select category of function to shorten the list.

4. Scroll down through the named functions and select any one function by double clicking on it. When you select a function its description appears on the right hand side of the dialog box.

5. Double click on the function name from the list or click next.

6. The Wizard now display an area to the right where you can enter argument manually by tying

Math Function

There are following Text Function used in LibreOffice Calc.

Sum (Range of Cells):- It is used to add cell values or range of cells.

=sum(A1:A6)

=sum(A1,A2,A3,A4,A5,A6)

=A1+A2+A3+A4+A5+A6

Round :- It is used for round to a specified number of digit.

=round (2634.26,-3) Output 3000.00

Roundup:- It round a number up, away from 0.

=roundup(2345.5678,2) Output 2345.57

Rounddown:- It rounds a number down: towards 0.

=rounddown(2345.5678,2) output 2345.56

Sumif :- It is used to sum the values according to the condition. This function requires three field as given below: 1. Range 2. Criteria 3 Sum Range

=sumif(A1:A6, “>40”)

Power:- It return the result of a number raised to given power.

=power(6,2) Output 36

Mod:- This function returns the remainder of a division.

=MOD(24,5) Output 4

Trunc:- It truncates a number to an integer by removing the decimal part or fractional parts of the number.

=trunc(5623.5623) Output 5623

=trunc(5623.5623,2) Output 5623.56

Int:- It also truncates a number to an integer by removing the decimal part or fractional parts of the number. Unlike Trunc this function does not release any number after decimal points

=int(5623.5623) Output 5623

=int(5623.5623,2) Output Err 508

ABS:- This function returns an absolute value.

=ABS(-5) Output 5

=ABS(+5) Output 5

SQRT:- This function returns square root of given number.

=SQRT(16) Output 4

=SQRT(-16) Output Err 502

=SQRT((ABS(-16)) Output 4

Fact:- It returns factorial of given number.

=FACT(5) Output 120

=FACT(-5) Output Err 502

=FACT((ABS(-5)) Output 120

PRODUCT:- It multiply the given numbers.

=PRODUCT(A1:A3) =PRODUCT(A1,A2,A3)

=PRODUCT(5,7) Output 35

GCD:- It returns greatest common divisor of two or more number .

=GCD(12,15,18) Output 3

LCM:- It returns least common multiple of a given two or more number.

=LCM(12,16) Output 48

Statistical Function

Count:- It is used to count the numeric value in the given cell range.

=count(A1:A10)

=count(4,5,6,7,6,4,3,2,3)

=count(A1,B4,C6,D7)

Countif:- It is also used to count the numeric values in the given cell range but with a condition (criteria)

=Countif(A1:A10, “>50”)

=Countif(A1:A10,”<50”)

Min:- Function is used to gives the minimum value in the given range of cell.

=Min(A1:A10) =min(5,6,7,7,-5,-39,-78)

Max:- Function is used to gives the Maximum value in the given range of cell.

=Max(A1:A10) =Max(5,6,7,7,-5,-39,-78)

Counta:- It counts the number of cell in a range that is not empty.

=Counta(A1:A10)

Countblank:- It counts the number of blank cell.

=Countblank(A1:A10)

Average:- This function calculates average of the number in cell range.

=Average(A1:A10)

=Average(A1,A2,A3,A4,A5,A6)

=(A1+A2+A3+A4+A5+A6)/6

Logical Function

If:- It is used to find the result according to the condition. If condition is true it return ‘one’ or ‘true’ if the condition is false it return ‘zero’ or ‘False’

=if(A3>40,”Pass”,”Fail”)

=if(50>30,”True”,”False”) Output True

=if(50>30,”1”,”0”) Output 1

AND:- It check whether all arguments are true and returns True if all arguments are True.

=AND((50>40),(70>30)) Output True

=AND((52>40),(70<30)) Output False

=AND((50<40),(70>30)) Output False

=AND((20>40),(70<30)) Output False

OR:- It check whether any arguments are true and returns True if all arguments are True.

=OR((50>40),(70>30)) Output True

= OR((52>40),(20>30)) Output True

= OR((50<40),(70>30)) Output True

= OR((20>40),(70<30)) Output False

Date & Time Function

NOW():- It is used to display current date and time.

=now()

Today():- It is used to display the current date of computer.

=today()

Weekday():- This function is used to display the day of the week. Corresponding to given data.

=weekday(“29”)

days360:- This function is used to display the number of day between two days.

=days360(“09/02/2021”,”09/02/2020”)

Date():- It change the number in date.

=date(2021,09,03) Output 09/03/2021

Time():- It change the number into time.

=Time(17,56,30) Output 05:56:30 PM

Day():- This function return the day number from given date.

=Day(“09/03/2021”) Output 3

Month():- This function return the month from given date.

=Month(“09/03/2021”) Output 9

Year():- This function return the year from given date.

=Year(“09/03/2021”) Output 2021

Ctrl + ; Display Current Date

Ctrl + : Display Current Time

Text Function

Concatenate:- This function joins two or more strings.

=concatenate(“Hello”,”World”) Output HelloWorld

len():- This function returns number of character in string.

=len(“Infomax”) Output 7

rept():- This function repeats the given string.

=rept(“infomax”,5) Output infomaxinfomaxinfomaxinfomaxinfomax

left():- This function extract text from left side of string.

=left(“infomax”,4) Output info

right():- This function extract text from right side of string.

=right(“infomax”,3) Output max

Mid():- This function extract text from middle of the string.

=mid(“infomax computer academy”,9,8) Output computer

Exact:- This function return true if both strings exactly matched. (match the case of text also)

=exact(“infomax”,”infomax”) Output True

=exact(“Infomax”,”infomax”) Output False

upper():- This function changes the lower case letter into upper case.

=upper(“infomax”) Output INFOMAX

lower():- This function changes the upper case letter into lower case.

=lower(“INFOMAX”) Output infomax

Proper():- This function write every first letter of each word capital.

=proper(“infomax computer academy”) Output Infomax Computer Academy

Database Function

The database function always works on database. These functions always take three arguments Database, Database field and Search Criteria.

1. Database is the cell range defining the database.
2. Database field specifies the column where the function operates on after the search criteria of the first parameter is applied and the data rows are selected.
3. Search Criteria always shows in the separate table. It is the cell range cotaining search criteria.

DSUM():- This function return the total of all cells in the database field in all rows (record) that matches the specified search criteria.

=DSUM(Database,Databasefield,SearchCriteria)

=DSUM(A1:C10,”QTY”,A12:C13)

DMAX():- This function return maximum content of the field in database (all records) that matches the specified search criteria.

=DMAX(Database,Databasefield,SearchCriteria)

=DMAX(A1:C10,”QTY”,A12:C13)

DMIN():- This function return minimum content of the field in database (all records) that matches the specified search criteria.

=DMIN(Database,Databasefield,SearchCriteria)

=DMIN(A1:C10,”QTY”,A12:C13)

DCOUNT():- This function count the number of quantity whose price is fit according the criteria.

=DCOUNT(Database,Databasefield,SearchCriteria)

=DCOUNT(A1:C10,”QTY”,A12:C13)

DCOUNTA():- This function count of all non blank cell of data range where contents corresponds to the search criteria.

=DCOUNTA(Database,Databasefield,SearchCriteria)

=DCOUNTA(A1:C10,”QTY”,A12:C13)

Charts in calc

Chart in Calc spreadsheet:- Charts and graphs are powerful tools now a day to present your information to the reader. Libreoffice Calc offers a variety of different chart and graphs format for your data. This made easy to a user to understand or represent the data in the sheet. You can make it even easier by saving your favourite chart as chart template. To create a chart follow these steps:-

1. Click inside the cell range that you want to present in your chart.

2. Click the Insert chart icon on the standard toolbar. You see a chart preview and the Chart wizard and follow the instructions in the charts wizard to create the chart.

Choosing the right Chart:- Once results are determined that the chart is to display, choose the chart that best suits this purpose. The most popular charts are Column, Line, Pie and Bar Charts.

Bar Chart:- Data that is arranged in column or rows on a spreadsheet can be plotted in a bar chart. Bar charts illustrate comparison among individual items.

Column Chart:- Data that is arranged in column or rows on a sheet can be plotted in the column chart. Column charts are useful for showing data changes over the period of time or for illustrating among items. In column charts categories are typically organized along the horizontal axis and values along the vertical axis.

Pie Chart:- Data that is arranged in one column or row only on a sheet can be plotted in pie chart. Pie charts show the size item in one data series proportional to the sum of items. The data points in a pie chart are displayed as a percentage of the whole pie.

Line Chart:- Line charts are used to illustrate trends over time. Each value is plotted as a points on the chart and is connected to other values by a line. Multiple items are plotted using different lines.

Area Chart:- Data that is arranged in columns or rows on a sheet can be plotted in the area chart. Area chart emphasis the magnitude of change over time and can be used to draw attention to the total value across a trend.

Surface Chart:- Data that is arranged in column or rows on a sheet can be plotted in a surface chart. A surface chart is useful when you want to find optimum combination between two sets of data.

Stock Chart:- Data that is arranged in column or rows in specific order on a worksheet can be plotted in a stock chart. As its name implies, a stock chart is most often used to illustrate the fluctuation of stocks.

4. Below Data you can define Minimum Range as 25 and Maximum range as 45 and Click on OK Button.

5. You select Department Column>Data Menu>Validity>Criteria>select list> Enter the name of Department as Purchase, Sales etc. which will reflect in drop down list. You can select the department of employee.

What if Analysis

Goal seek is a what if analysis tool that helps you to find the input value that results in a target values that you want. We can say that if you know the result that you want from a formula. But not the input value the formula needs to get that result, you can use the Goal Seeks features.

Using Goal Seek:- Goal seek tools need three parameters:-

1. The formula cell:- This is the cell contains the formula we want to resolves.

2. Target Value: - The required value that we want our formula to resolve to.

3. The variable cell:- The cell that contains the unknown data that we want to find a value.

1. Select the cell containing the formula.

2. Click on Tools Menu

3. Select Goal Seek Option, A goal seek dialog box will appear.

4. In the goal seek dialog box fill the parameters. The formula cell is already filled in. Type in the target value and click the variable cell to auto fill the cell reference value in dialog.

5. Goal seek now calculates and displays the result in another pop up dialog. Choose yes to insert the result into variable.

6. Now the student knows that he must achieve Marks 74 or greater in the Computer exam in order to pass the course.

Data Validation

Data validation is a features that defines restrictions on what data can or should be entered in a cell. Through data validation you can restrict the user to choose predefined words in dropdown menu. For example you could use data validation to make sure a value is number between 20 and 50, make sure a text entry is less than 10 character. It facilitate you to stop invalid user input. Follow these steps for data validation:-

1. Write down the column on your spreadsheet as Employee ID, Name of the Employee, Age of Employee and Department.

2. Select the column Age of Employee >Click on Data Menu and Click on Validity, A validity dialog box will appear.

3. In validity dialog box click on Criteria>All whole number >Click on data and select valid range.

4. Below Data you can define Minimum Range as 25 and Maximum range as 45 and Click on OK Button.

5. You select Department Column>Data Menu>Validity>Criteria>select list> Enter the name of Department as Purchase, Sales etc. which will reflect in drop down list. You can select the department of employee.

Freezing Panes

Freezing Panes:- Whenever you are working with a lot of data, it can be difficult to compare information in your spreadsheet. Fortunately, Libreoffice Calc includes several tools that make it easier to view content from different parts of your file at same time, such as ability to freeze Rows or column and split window of your spreadsheet.

Freeze First column and Row:- To freeze the first column and row, execute the following steps.

1. Click on view menu
2. Select Freeze Cells
3. Freeze First Column or Row

Unfreeze Panes:- To unlock all rows and columns, follow these steps.

1. Click on View Menu
2. Select Freeze Rows and Column.

Pivot Table & Charts

Pivot Table & Charts:- Charts is the graphical representation of any data enter in sheet. This made easy to a user to understand or represent the data in the Sheet. In LibreOffice Calc it is easy to create professional looking charts. Simply by choosing a chart type, a chart layout and chart style. You can make it easier by saving your favourite charts as chart template that you can then quickly apply whenever you create a new chart.

Pivot Table :- To analyze data in depth and to answer unanticipated questions about your data, use a pivot table or pivot chart report. It is strong and updated feature of Libreoffice Calc to use derivative data along with charts. To create Pivot Table Report: Follow these steps:-

1. Select Range of cell in Libreoffice Calc Spreadsheet.

2. Go to insert Menu --> Select Pivot Table or Data Menu --> Select Pivot Table --> Insert or Edit, a dialog box will appear.

3. In the opened dialog box click on OK button.

4. Pivot Table layout window will appear.

5. In this window Select Available fields, drag & drop Employee field into the Row fields, City fields into Column fields and Sales fields into the data fields and Click on OK button.

6. Then following spreadsheet file will display the Pivot table Report.

To create Pivot Charts:-

1. Select Pivot Table Report according to following figure:

2. Go to insert menu→Select Chart →Chart Wizard will appear on the screen. In this wizard click on chart type as you want & click on Next button.

3. Then write Title, Subtitle, X axis information of charts & click on Finish button.

4. Following chart will appear on your screen.