UNIT 23

LIBRE OFFICE CALC

Learning Objectives

After the completion of this lesson, students will be able to:

- know how to create a spreadsheet through the Libre Office software.
- explore their creative thinking.
- learn how to use the functions.
- learn how to create charts.

Introduction

Libre Office Calc is one of the packages of Libre Office. It is mainly developed for calculation. Each page in Calc is called as spreadsheet. A spreadsheet consists of rows and columns. Libre Office Calc can be opened by following ways.

1. Click Start Button
2. Click Libre Office Calc

23.1 Spreadsheet

There are numerous applications possible using electronic spreadsheets. A few of the common applications are given below.

- Payment of bills
- Income tax calculations
- Invoices or bills
- Account Statements
- Inventory Control
- Cost-Benefits Analysis
- Financial Accounting
- Tender Evaluation
- Result analysis of students

23.1.1 Advantages of using Electronic spreadsheets

The electronic spreadsheet offers several advantages over the manual one. The following are some of the main advantages of electronic spreadsheets.

- Calculations are automated through the built-in mathematical, financial and statistical functions.
- Accurate results to any desired level of decimal points are possible.
- Worksheets can be quite big in size.
- Any part of the worksheet can be viewed or edited.
- Worksheet can be saved and retrieved later.
- Any part or whole of an existing worksheet can be merged with any existing or new work sheet.
- Any part or whole of the worksheet can be printed in a desired format.
- Worksheet data can be viewed in the form of graphs or charts.
- The worksheet information can be transferred to any database or word Processing software.

23.2 Worksheet and Workbook

A worksheet is the area where you perform all the tasks. You can enter and edit data in a work sheet. Combination of one or more worksheet forms a workbook. Every workbook contains three worksheets by default. Sheet-1 is the active worksheet when you open the Libre Office Calc window for the first time.

Column

A column is a vertical line of boxes. The columns are labeled from A to Z and thereafter as AA, AB…….up to AMJ.

Row

A row is a horizontal line of boxes. These are labeled with numbers like 1,2,3….and so on. There are 1,048,575 rows in a worksheet.

Cell

The intersection of a row and a column is known as cell. Each cell is identified by its address. The cell address is a combination of column letter and row number. The first active cell's address will be A1. The name box displays the address of the active cell.

Active Cell

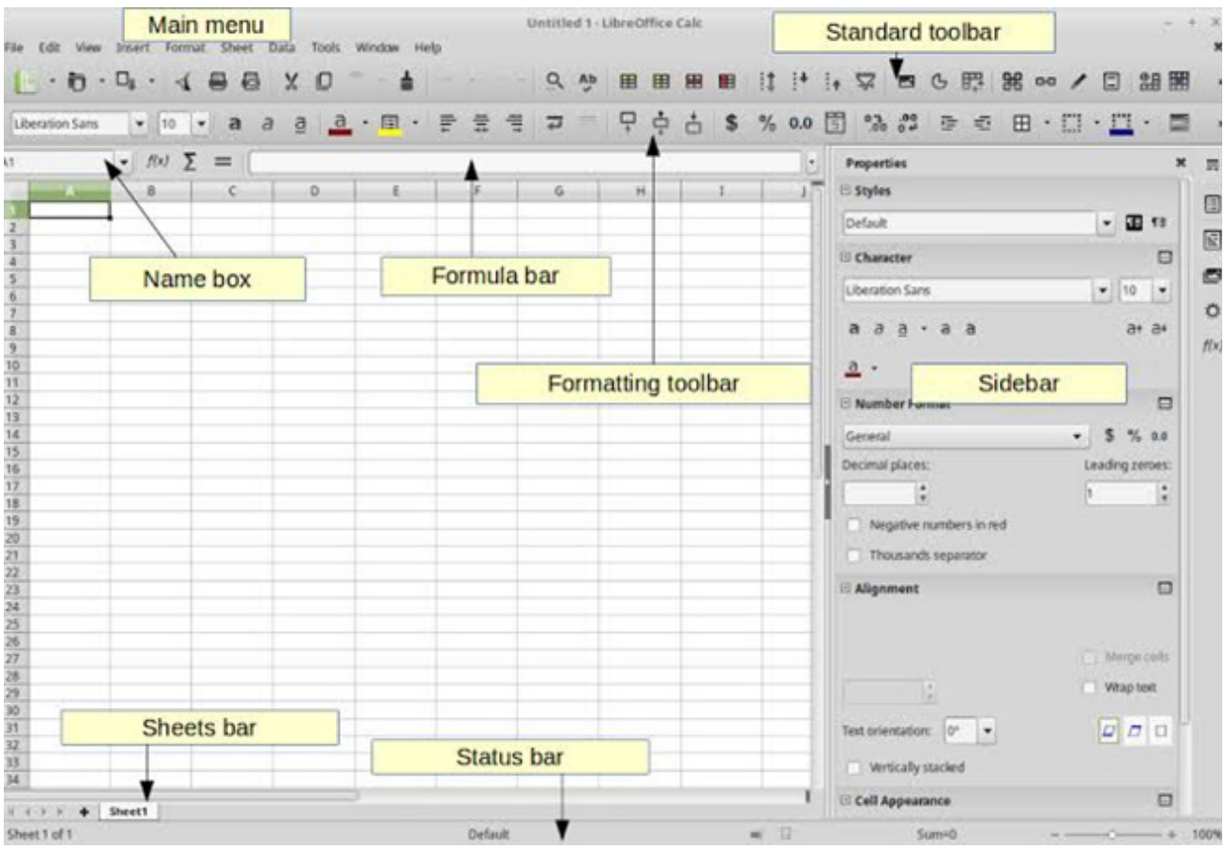
The highlighted cell on the worksheet is the active cell. You can enter your data only in an active cell.

You can easily make any cell active by using a mouse or a keyboard. If you want to make the cell C2 active, just click on the cell C2. You can also use arrow keys to select a cell.

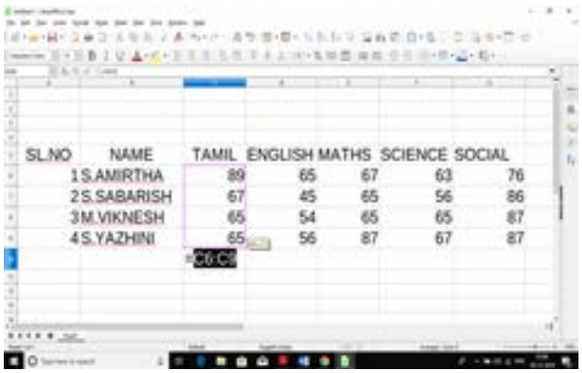
Range of Cells

A group of cells is known as range of cells. It forms a rectangle or a square. For selecting a range of cells, press and hold the shift key and use the arrow key.

In the image given below the range of cells is starting from C6 and ending at C9.



This is represented as C6:C9. Here colon (:) is a range indicator. You can easily deselect cells by clicking anywhere on the worksheet.



23.2.1 Create a New workbook

By default, you always get a workbook (book1) when you open Libre Office Calc application. If you want to create a new workbook then follow the steps given below.

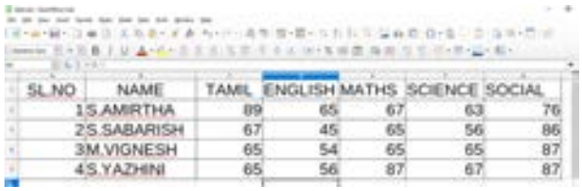
1. On the File menu, click New. The New Workbook task page will appear.
2. Click Blank Workbook on the New Workbook task page. The New Workbook will appear.

23.2.2 Enter Content in a Cell

Enter the following content in the Libre Office Calc sheet.

Sl. No	Name	Tamil	English	Maths	Science	Social
1	S. Amirtha	89	65	67	63	76
2	S. Abarish	67	45	65	56	86
3	M. Vignesh	65	54	65	65	87
4	S. Yazhini	65	56	87	67	87

You can modify content in Calc sheet by moving cursor to that particular cell. The information will be displayed in the formula bar. Click on the text in the formula bar and make changes. You can also modify the text by double clicking on the Cell.



23.2.3 Saving the Worksheet

To save the worksheet created, go to the **File** menu and select the **Save** or **Save As** option.

Type a file name and click on **Save.** For example, to save the students' marks, type the name **Marks** in the **File name** box and click on the **Save** button. You can also click on the Save icon on the Standard toolbar.

23.2.4 Closing the worksheet

In order to close the worksheet, go to File menu and select the Close option.

23.2.5 Opening a Worksheet

To open a worksheet that has been saved, select the **Open** option from the file menu. A dialog box with a list of files will appear on the screen. Select the file that you want by clicking on it and then click on **Open.** You can also click the **Open** icon on the Standard toolbar to open an existing file.

23.2.6 Quitting from LibreOffice

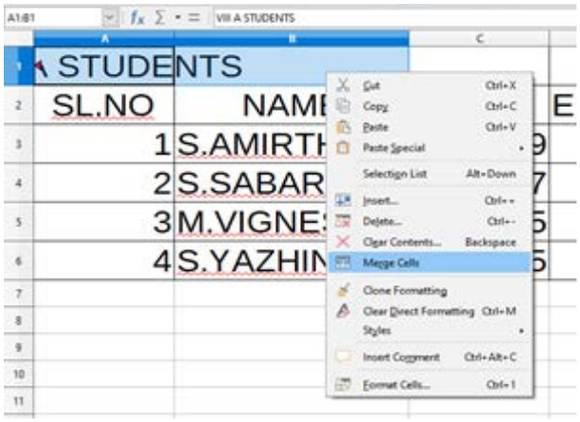
The **Exit Libre Office** option under the **File** menu can be used to quit from Libre Office Calc.

23.3 Merge cells

When you type text that is too long to fit in the cell, the text will overlap on the next cell. If you want it to display it in a single line, you can merge the cell.

1. Move to cell A1
2. Type Name list - VIII Std 'A'

3. Go to format in the menu bar and choose merge cells. Or select the cells and press right click of the mouse button. Then select merge cells option.



23.4 Generate Auto Numbers

Libre Office Calc allows you to generate auto numbers. To generate auto numbers, follow the steps given below.

1. Enter first two numbers of the series in two cells.
2. Select both the cells
3. Move the cursor to the right-side bottom of the cell. The cursor will change to plus sign.
4. Drag the plus sign to the cell you desire.
5. The numbers will be generated automatically. You can generate any series by using this method.

23.5 Functions

Functions can be used to perform simple or complex calculations. You can use different formulae in Libre Office Calc. A formula in Libre Office Calc starts with an equal to (=) sign.

23.5.1 Text Formula

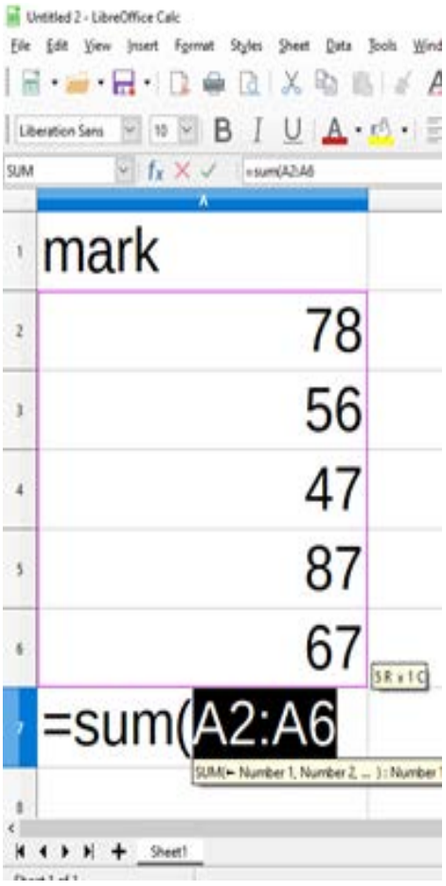
To create a simple text value, enclose it in double quotes. The ampersand (&) character is used to join text values to one another.

For Example = “Libre” & “Office”

The result of this formula is ‘Libre Office’

23.5.2 Statistical Functions

In Libre Office Calc, there are many predefined formulae that can perform specific calculations. Some of them are given in the worksheet.



Function	Description	Example	Result
SUM ()	Calculates the total of a given set of values	= SUM(A2:A6)	335
AVERAGE ()	Calculates the average of given set of values	= AVERAGE(A2:A6)	67
MAX()	Calculates the maximum value from a given set of values	= MAX(A2:A6)	87
MIN ()	Calculates the minimum value from a given set of values	= MIN(A2:A6)	47
COUNT()	Counts the number of values (cell containing numbers)	= COUNT(A2:A6)	5

23.6 Operators in Libre Office Calc

Operators in Libre Office Calc

Some of the operators in Libre Office Cal care: Arithmetic, Relational and Logical.

23.6.1 Arithmetic Operators

Arithmetic operators are used to do some kind of calculations with numeric values. They cannot be used with strings.

Operator	Function	Usage
+	Addition	=20+10
-	Subtraction	=20-3
*	Multiplication	= 30*2
/	Division	=100/4
^	Exponentiation	=5^2
%	Percent	= 10%

23.6.2 Relational Operators

Relational operators are used to compare two values. They form relational expressions. These operators always give a single value as result: True or False

Operator	Function	Usage
=	Equal to	A1 = B2
<>	Not Equal to	C1 <> D1
>	Greater than	B2 > 50
<	Less than	C5 < 100
>=	Greater than or equal to	A1 >= B2
<=	Less than or equal to	E5 <= 5

23.6.3 Logical Operators

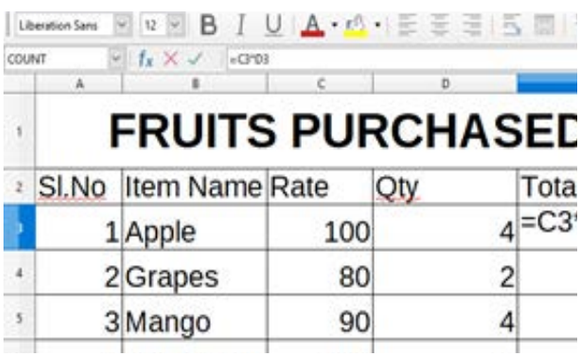
Logical Operators are used to compare two or more relational expressions. These operators also always give a single value as result True or False.

Operator: NOT, AND, OR

Example

Akshay's mother has purchased some fruits from the market. Make a list of fruits and find how much each fruit costs her.

1. Make the initial worksheet
2. Type the formula = C3* D3in Cell E3.
3. Similarly, type all the formulae in the other cells as given
4. To calculate the grand total, Type the formula = E3 + E4+E5 +E6 in Cell E7 and press the enter key to get the result. Or Type the formula =sum (E3:E6) in Cell E7 and press the enter key to get the result.
5. Save the file with the name 'Market'.



23.7 Sorting Data

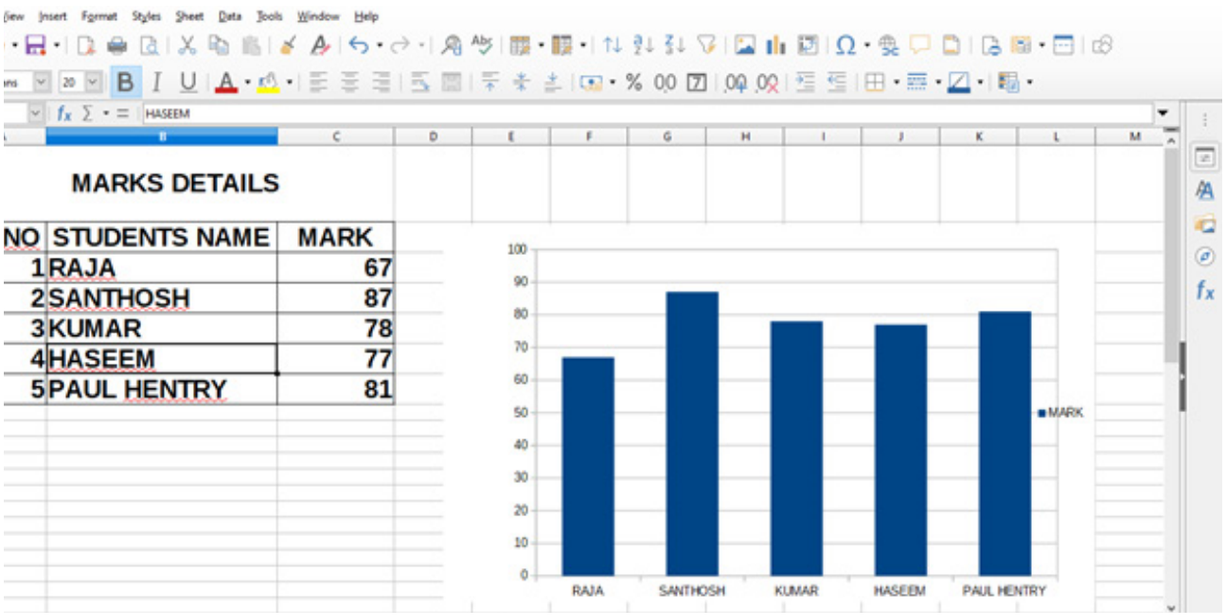
Arranging a given set of data according to a particular order (ascending or descending) is called sorting.

- Select the data which you want to Sort
- Click on **Data → Sort**

23.8 Working with Charts

One of the most popular features of Libre Office Calc software is to generate charts based on numeric data. The purpose of chart is to visualize the data for easy understanding. To draw a chart, follow the procedure given below:

- Select the data which you want to chart.
- Click on **Insert → Chart** or click on the Insert Chart icon.



TEXTBOOK EXERCISES

10JZB

I. Choose the best answer.

1. All functions begins with an _____ sign
   a) = b) - c) > d) }
2. _____ function is used to calculate the total of a given set of values.
   a) Average b) Sum c) Min d) Max
3. The _____ character is used in text formula.
   a) Ampersand b) Comma
   c) Exclamation d) Hyperlink
4. Which of the following is a relational operator?
   a) + b) > c) - d) NOT
5. The _____ function returns the smallest value in a set of values.
   a) Average b) Sum c) Min d) Max

II. Answer in detail.

1. Explain count function with an example.
2. What is the purpose of charts?
3. What is the use of Sorting?
4. What is the use of MAX () and MIN () functions?
5. What is cell address?