



INDIAN SCHOOL MUSCAT



CLASS XI

INFORMATION TECHNOLOGY(802)

Chapter – 3 : Office Automation Tools

OpenOffice - Calc

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Some Points to Keep in Mind



- Please keep your **MIC and WEBCAM in MUTE mode** until your teacher asks you to unmute it.
- Please take down notes.
- Ask doubts as and when it comes and write in the **CHAT box**.
- Don't post any non-academic matter in the chat box. Stringent action will be initiated.
- Some times, technology fails, don't panic, hold on - we will be back.



Spreadsheet (OpenOffice Calc)



Introduction:

A spreadsheet stores data in the form of a table comprising of rows and columns. It is used to store, arrange, and sort data, and perform calculations on numeric data. It is similar to the ruled paper accounting worksheets traditionally used for bookkeeping.



Spreadsheet (OpenOffice Calc)



**PLEASE
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The computerized version of a worksheet is called a Spreadsheet application that lets you quickly perform calculations on numerical data, represent data with charts, analyze, and print. Spreadsheets are used in various fields such as banking, finance, accounting, and education.



Untitled 1 - OpenOffice Calc

File Edit View Insert Format Tools Data Window Help

Find

Arial 10 B I U

A1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3															
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Sheet1 / Sheet2 / Sheet3

Sheet 1 / 3 Default STD Average= 100%





Uses of spreadsheets



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Following are some of the popular uses of spreadsheets:

1. Managing financial data such as bank account information, budgets, transactions, billing, and receipts.
2. Handling inventory, reviews, employee information, surveys, etc., using data entry forms.



Uses of spreadsheets



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3. Tracking student performance by calculating grades and other relevant information such as attendance, highest score, and lowest score.
4. Creating lists of items which may not be numeric such as student list, grocery list.
5. Managing company information such as profit and sales by creating graphs from the data.



Different Spreadsheet applications

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There are various spreadsheet applications available that can be used to create and manipulate a spreadsheet.

The most commonly used are – Microsoft Office Excel, Apache OpenOffice Calc, LibreOffice Calc, Google Sheets etc. Microsoft Excel is a proprietary software from Microsoft for Windows.



Different Spreadsheet applications

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Both OpenOffice and Libre Calc are free and open source alternatives to Excel.

Google sheets is a web-based spreadsheet application which allows you to store and edit the spreadsheets online and access them from any computer.



Installing Calc

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Calc is offered free of charge and can be downloaded from HYPERLINK '<http://www.openoffice.org>'
www.openoffice.org calc is the spreadsheet component of Apache OpenOffice an open source office software suite.



Installing Calc

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1. Open the URL:
<https://www.openoffice.org/download/index.html>.
2. Select the operating system and language.
3. Click on – Download full Installation
4. Installing OpenOffice on Windows



Installing Calc



Double click on the downloaded exe file and then click Next on the following screen:

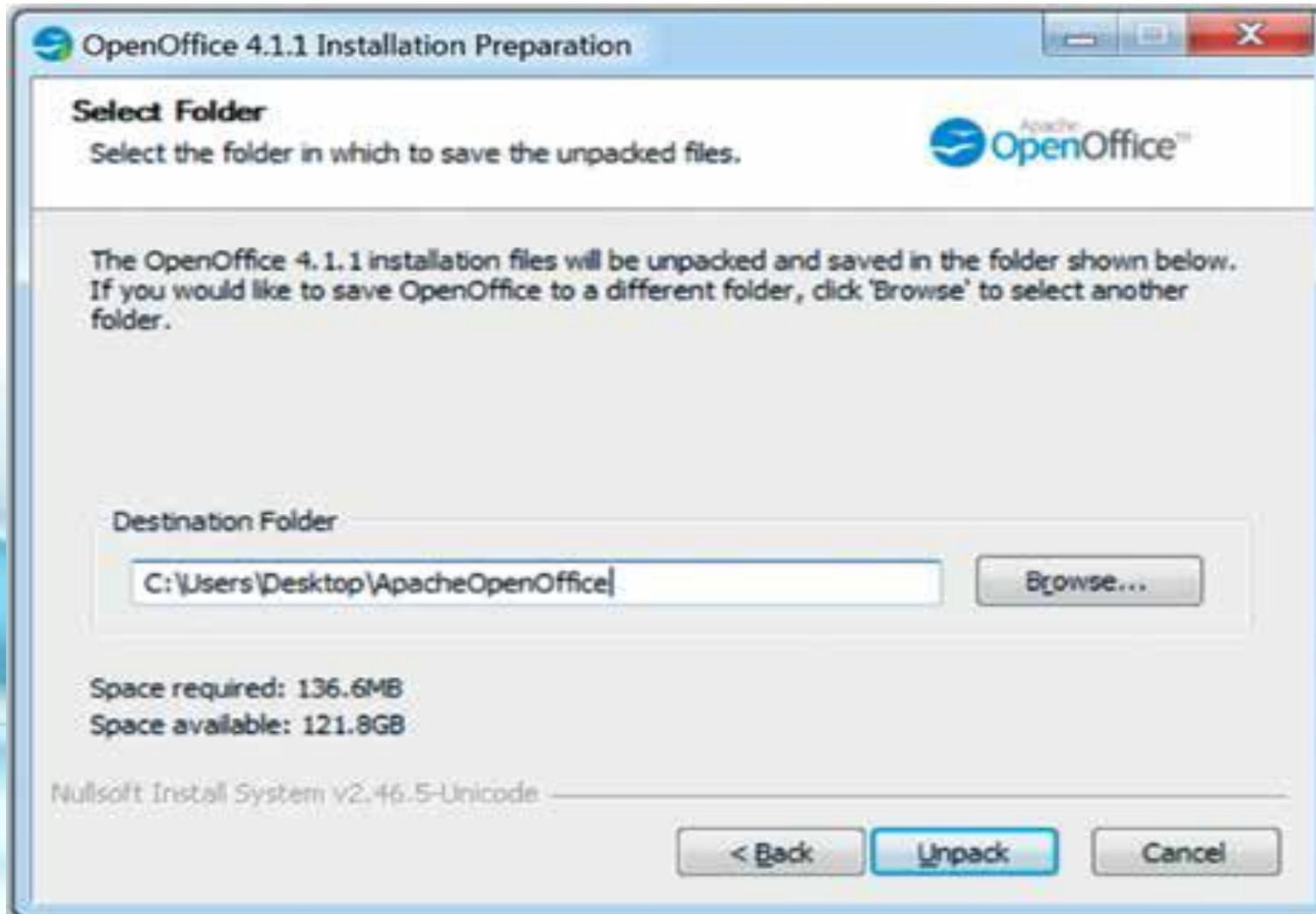


PLEASE
WRITE



Installing Calc

Click on Unpack





Installing Calc

After unpacking, click on Next





Installing Calc

Enter User information and then click on Next



OpenOffice 4.1.1 - Installation Wizard

Customer Information

Please enter your information.

User Name:

Organization:

Install this application for:

Anyone who uses this computer (all users)

Only for me (Shikha)

OpenOffice 4.1.1

< Back Next > Cancel



Installing Calc

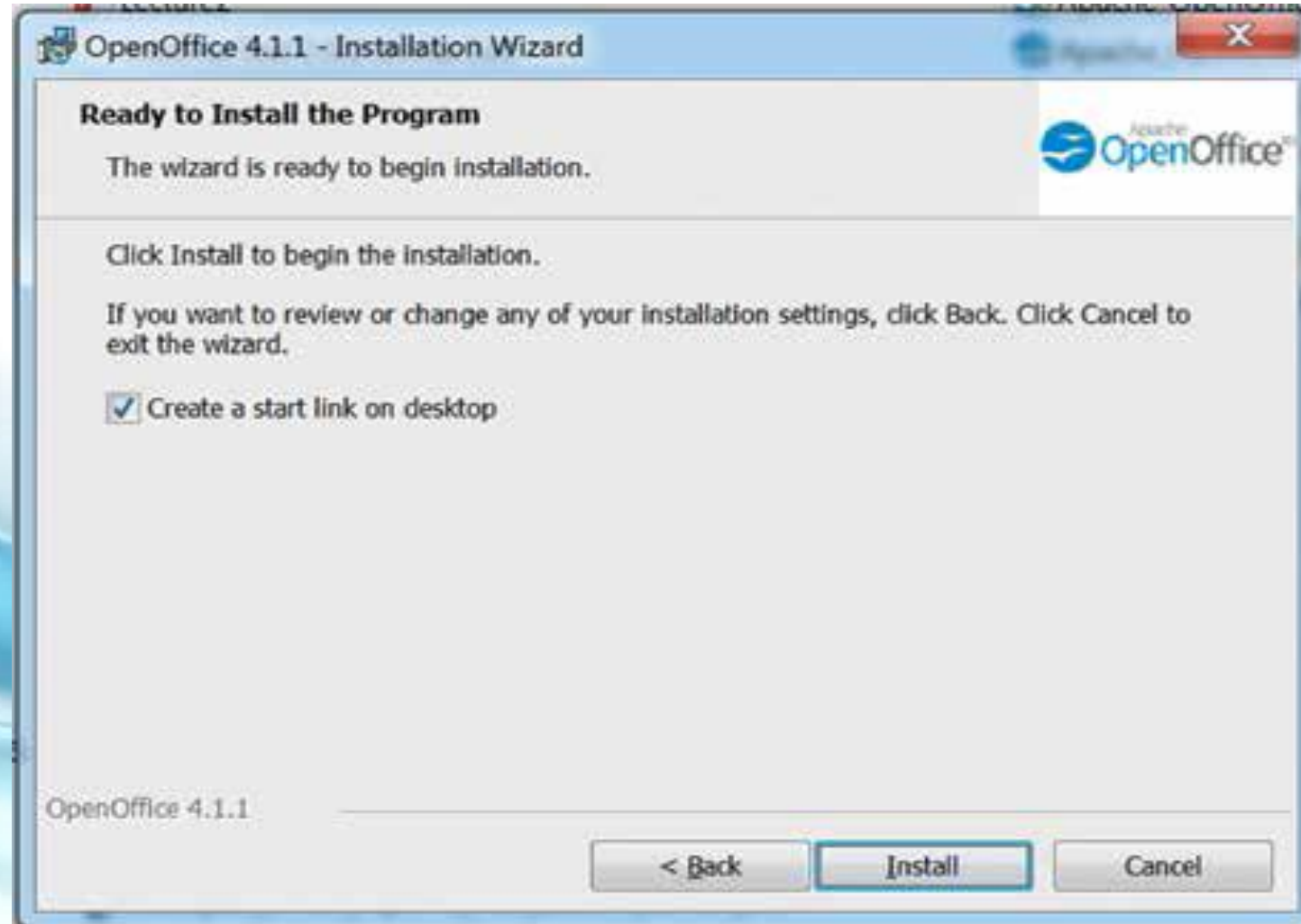
Choose the setup type and then click on Next. It is recommended that the beginners should choose typical.





Installing Calc

Click on Install





Installing Calc

After installation, click on Finish





Installing Calc

Run OpenOffice to check if it has been installed successfully. Click on the Spreadsheet to open OpenOffice Calc.





Main Features of OpenOffice Calc



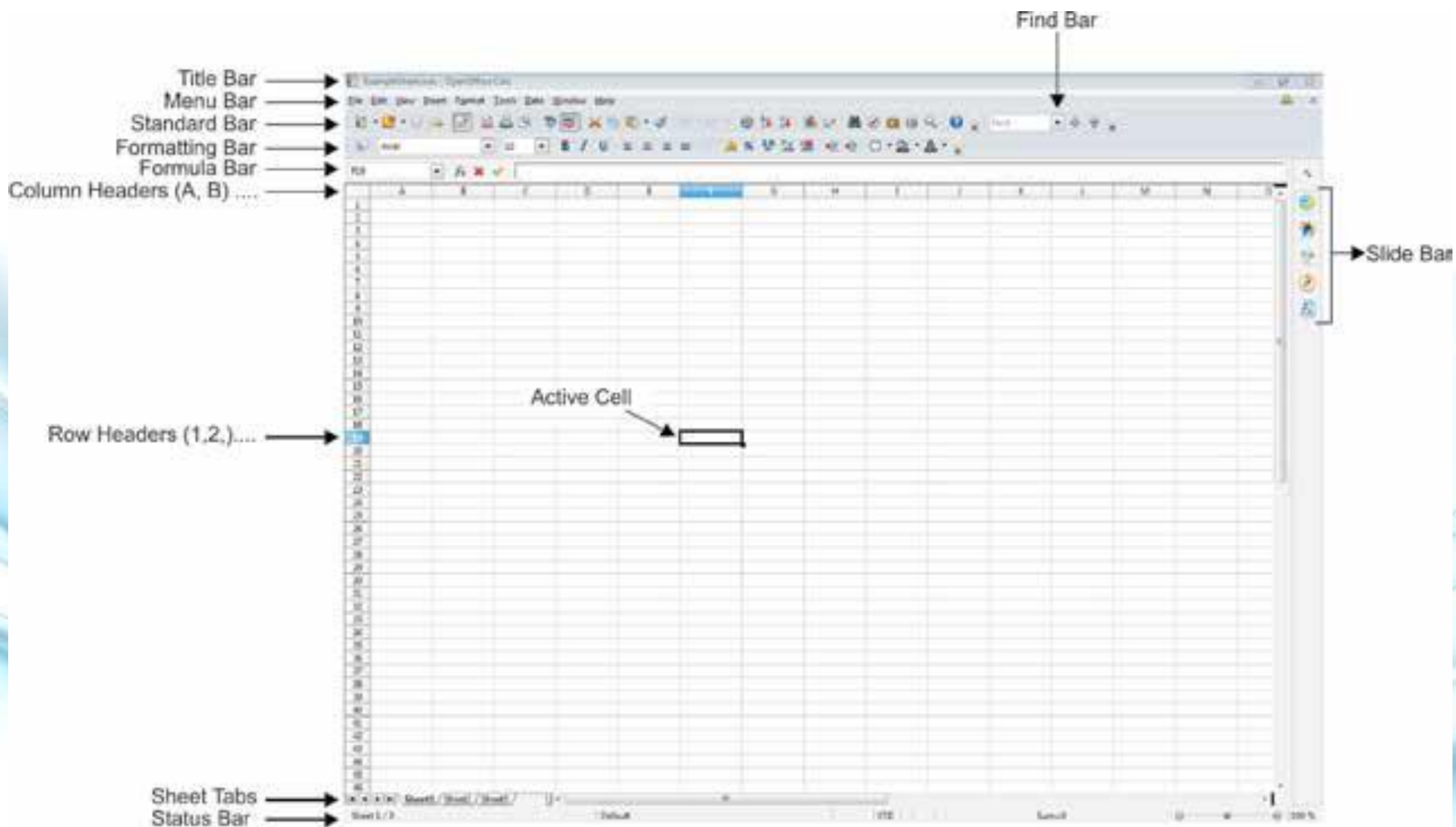
Starting Calc:

To start OpenOffice Calc, there are various ways in which you can start it:

- As a Windows application, you can click Start -> Programs ->OpenOffice
- If the OpenOffice icon is on the desktop, double click the icon.

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Title bar

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The title bar at the top displays the information about the spreadsheet such as name of the current spreadsheet (Example Sheet), extension of the spreadsheet (.ods), and name of the software (OpenOffice Calc). If the spreadsheet is new then its name is Untitled N where N is a number.



Title bar



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The ellipsis (three dots ...) in front of an option implies that a dialog box will open when this option is selected. For example, on selecting the Open option, a dialog box will appear which is meant for the user to enter the location of the file to be opened.



Menu bar

Just below the title bar is the menu bar.

It contains various menu options.

On selecting a menu option, a submenu appears which contains other options related to the main menu option.

**PLEASE
WRITE**



Menu bar

File: It contains commands to create a new file (New), open an existing file (Open), save a file (Save, Save As), print a file (Print), preview a page (Preview Page), close a file (Close), exit the software (Exit) etc.

PLEASE
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Menu bar

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WRITE

Edit: It contains commands to edit a file such as Cut, Copy, Paste, Paste Special, Select All, Find & Replace, Delete Contents, Delete Cells, Headers & Footers.



Menu bar

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WRITE

View: It contains commands to modify the view of the Calc such as Toolbars, Full Screen, Zoom. A small in front of the Toolbars options means on selecting it, another submenu appears.

It shows the list of all the toolbars which can be selected or deselected based on the user's choice of toolbars to be displayed on the Calc main window.

Tool bar options



The screenshot displays the Microsoft Excel interface with the 'View' menu open. The 'Toolbars' option is selected, which has opened a secondary submenu. In the 'View' menu, the following options are visible: Normal, Page Break Preview, Toolbars (selected), Formula Bar (checked), Status Bar (checked), Input Method Status, Column & Row Headers (checked), Value Highlighting (Ctrl+F8), Data Sources (F4), Navigator (F5), Sidebar (checked), Full Screen (Ctrl+Shift+J), and Zoom... In the 'Toolbars' submenu, the following options are visible: 3D-Settings, Align, Drawing (checked), Drawing Object Properties (checked), Find (checked), Fontwork, Form Controls, Form Design, Form Navigation, Formatting (checked), Insert, Insert Cell, Media Playback, Picture, Standard (checked), Text Formatting, Tools, Hyperlink Bar, Formula Bar (checked), Customize..., and Reset. The background shows a grid with cell A1 selected.



Menu bar



Insert: It contains commands for inserting Cells, Rows, Columns, Sheet, Sheet From File, Function, Function List, Picture, Chart etc.

Format: It contains commands to alter the layout of the spreadsheet such as formatting Cells, altering Rows, Columns, Sheet.

Tools: It contains options to spellcheck (Spelling), insert macros (Macros) etc.



Menu bar



Data: It contains commands to manipulate data such as Sort, Filter, Validity.

Window: It contains commands to modify the window such as New Window, Close Window.

Help: It contains the options getting help related to OpenOffice Calc such as OpenOffice Help, What's This?, Check for Updates etc. Placing the mouse pointer on any of the icons on the Calc window displays a small box which is called a tooltip which gives a brief explanation of the icon's function.

PLEASE
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Standard bar

PLEASE
WRITE

It lies below the Menu bar. It contains icons which perform similar operations as contained in the Menu bar options such as New, Open, Save, Print, Page Preview, Cut, Copy, Paste, Sort, Chart, Find & Replace, Spelling.



Find bar

**PLEASE
WRITE**

It contains a text box which can be used to enter text which is meant to be searched in the spreadsheet. It highlights the cell which contains the text to be searched. Multiple search results can be traversed by clicking on the up and down arrows or by pressing the Enter key on the keyboard.



Formatting Bar

PLEASE
WRITE













In the Formatting toolbar, the leftmost icon is for the Style & Formatting and the following two boxes are the Font Name and Font Size lists. They show the current settings for the selected cell or area. Click the down-arrow to the right of each box to open the list.



PLEASE
WRITE

Formatting Bar






- Following the boxes, we have the three icons for changing the appearance of the text such as making the text bold (**B**), italics (*I*), and underlining (U).
- Next we have the icons which are used to align the text within a cell as left () , center () , right () , or justify () .
- Merge cells icon () is used to merge multiple cells and form a single cell. It becomes active when multiple cells are selected.
- Format of numbers can be changed by using the Number format icons –
- Currency () , Percent () , Standard () , Add Decimal Place () , Delete Decimal Place () .
- Indentation of text can be increased () or decreased () within a cell using the indent arrows.



Formatting Bar



- Borders of cells can be modified by using the border styles available by clicking on the drop-down of the Border icon ().
- Background Color of cells can be changed by clicking the Background Color icon (). Click on the drop-down for more options of colors.
- Text color can also be changed by clicking the Font Color icon (). Click on the drop-down for more options of colors.

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


Formula bar



PLEASE
WRITE

◆ **Formula Bar:** On the left side of the Formula bar is the Name box which contains a letter and name combination such as C4, whenever you select a cell on the spreadsheet. This combination is called as a cell reference. The cell reference is the address of a cell. The letter is meant for the column and the number for the row.

To the right of the Name box, one can see the Function Wizard () , Sum () , Function () icons. Function Wizard opens a dialog box from which you can search through a list of available functions. Sum icon inserts a formula into the current cell



Formula bar



PLEASE
WRITE

that totals the numbers in the cells above the current cell. If there are no numbers above the current cell, then the cells to the left are placed in the Sum formula. Function icon inserts an equals (=) sign into the selected cell and the Input line, thereby enabling the cell to accept a formula. When new data is entered into a cell, the Sum and Function icons change to Cancel (✖) and Accept (✔) icons.

The contents of the current cell (data, formula, or function) are displayed in the Input line, which is the remainder of the Formula Bar. You can either edit the cell contents of the current cell here, or you can do that in the current cell. To edit inside the Input



Formula bar and Sheets Tab



line area, click in the area, then type your changes. To edit within the current cell, just double-click the cell.

PLEASE
WRITE

Sheet Tabs: A single spreadsheet Calc file can contain multiple sheets. You can traverse individual sheets by using the Sheet tabs. The current active sheet has a white tab. Clicking on another sheet tab displays that sheet, and its tab turns white. Right click on the Sheet tabs will display various options such as inserting, deleting, renaming, moving sheets,



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39

40

Insert Sheet...

Delete Sheet...

Rename Sheet...

Move/Copy Sheet...

Select All Sheets

Sheet Events...

Tab Color...

Copy

Paste

Sheet 1 / 3

Sheet Sequence Number →



Status bar



PLEASE
WRITE

Status Bar: Status bar at the bottom provides information about the spreadsheet and convenient ways to quickly change some of its features. Sheet Sequence number shows the number of the current sheet / total number of sheets in the spreadsheet

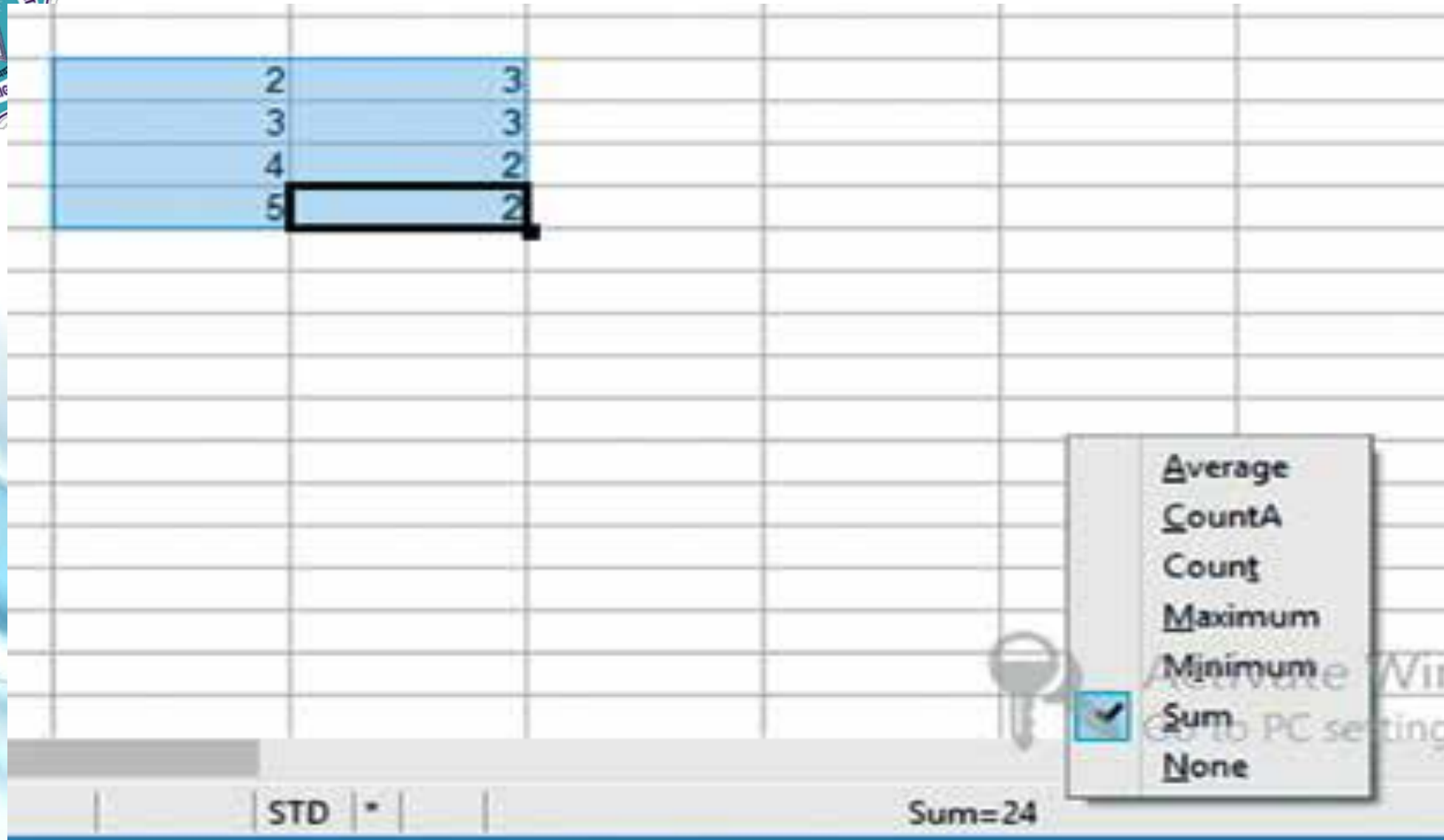


Status bar

Selected cell (or cells) information is also displayed on the Status bar. When a group of cells is selected, the sum of the contents is displayed by default. You can right-click on this field and select other functions, such as the average value, maximum value, minimum value, or count (number of items selected)

PLEASE
WRITE

Status bar

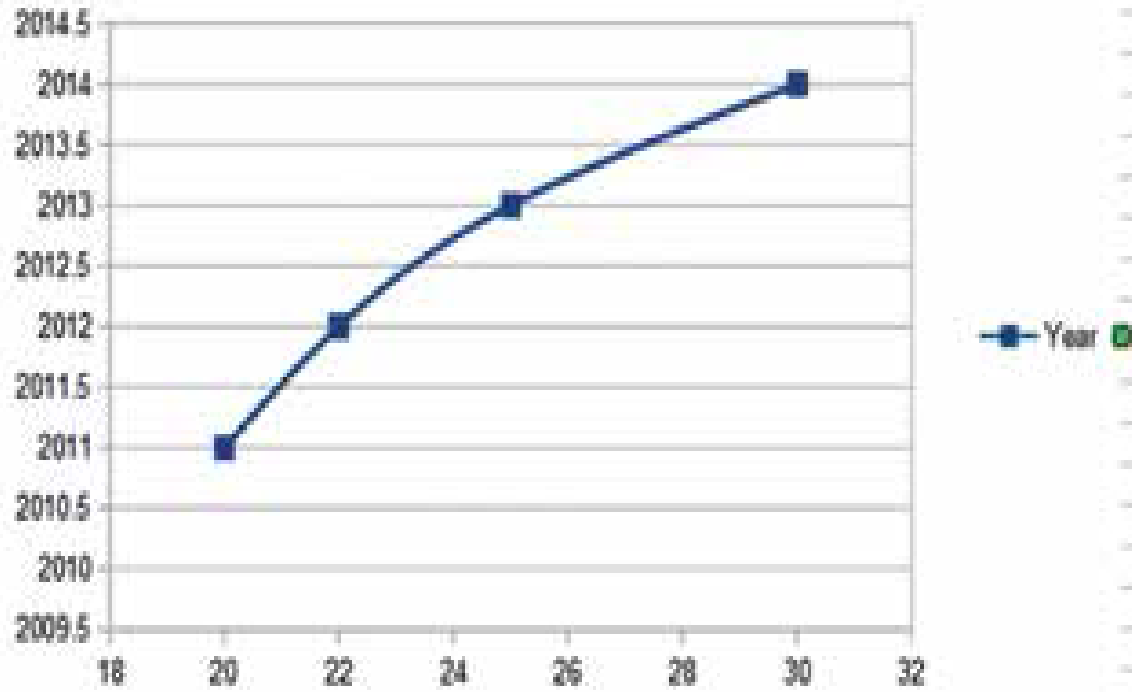




Status bar

PLEASE
WRITE

When the cursor is on an object such as a picture or chart, the information displayed includes the size of the object and its location. To change the view magnification, drag the Zoom slider (bottom left corner) or click on the + and – signs.



Activate Windows
Go to PC settings to activate Windows



Sidebar and Active cell

Sidebar: Located on the right side of the edit views of Calc, sidebar contains frequently used tools grouped in decks such as Properties, Styles and Formatting, Gallery, Navigator. Clicking on any of the vertical tabs opens the deck for that tab.

Active Cell: When you select a cell, you will notice a heavy black border around the selected cell

PLEASE
WRITE



Row headers and Column headers



PLEASE
WRITE

Row Headers: Row headers are in the form of numbers -1,2,3.... which are present at the left of each row.

Column Headers: Column headers are in the form of alphabets – A,B,C,...shown at the top of each column.



Working with Spreadsheets



PLEASE
WRITE

A Spreadsheet consists of a number of individual sheets, each containing cells arranged in rows and columns. A particular cell is identified by its column letter and row number. These cells hold the individual elements—text, numbers, formulas, and so on—that make up the data to display and manipulate. Each spreadsheet can have many sheets and each sheet can have many individual cells.

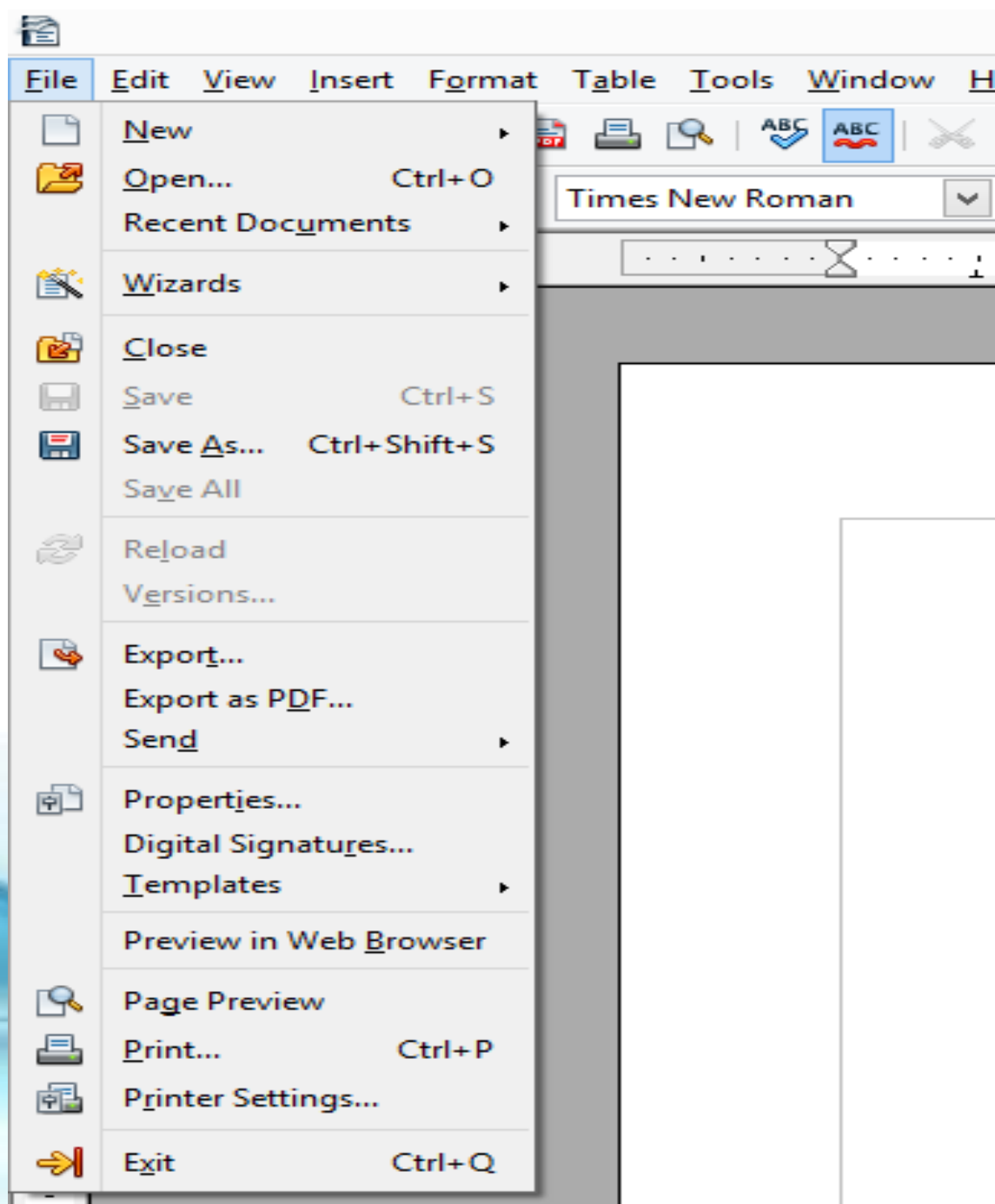


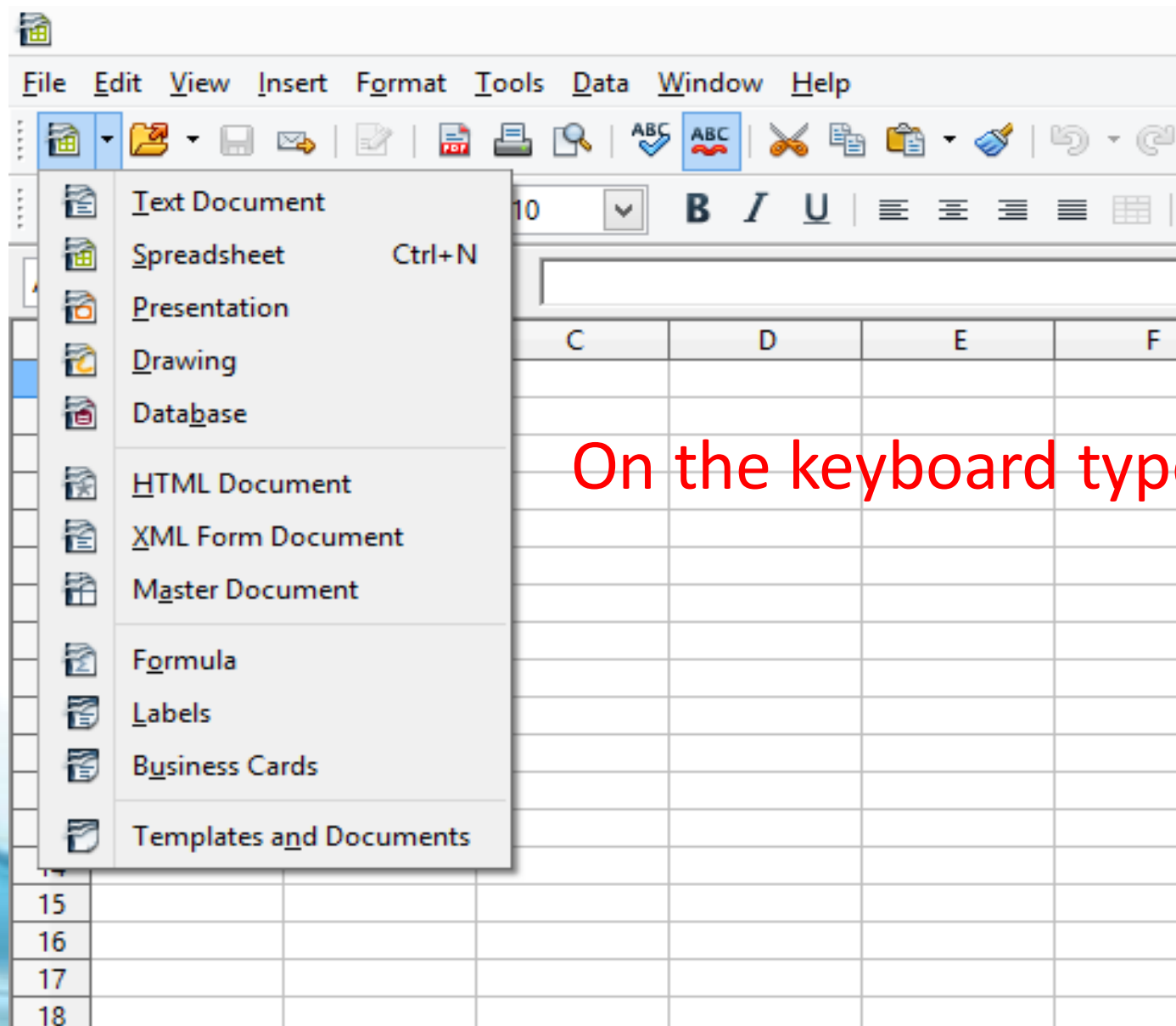
Create a New Blank Worksheet :

There are many ways to create a new blank worksheet as discussed below:

**PLEASE
WRITE**

- On the menu bar, click File-> New->Spreadsheet
- On the Standard bar, click on drop-down of the New icon-> Spreadsheet





On the keyboard type – Ctrl + N.

Creating New Blank Spreadsheet Using Standard Bar

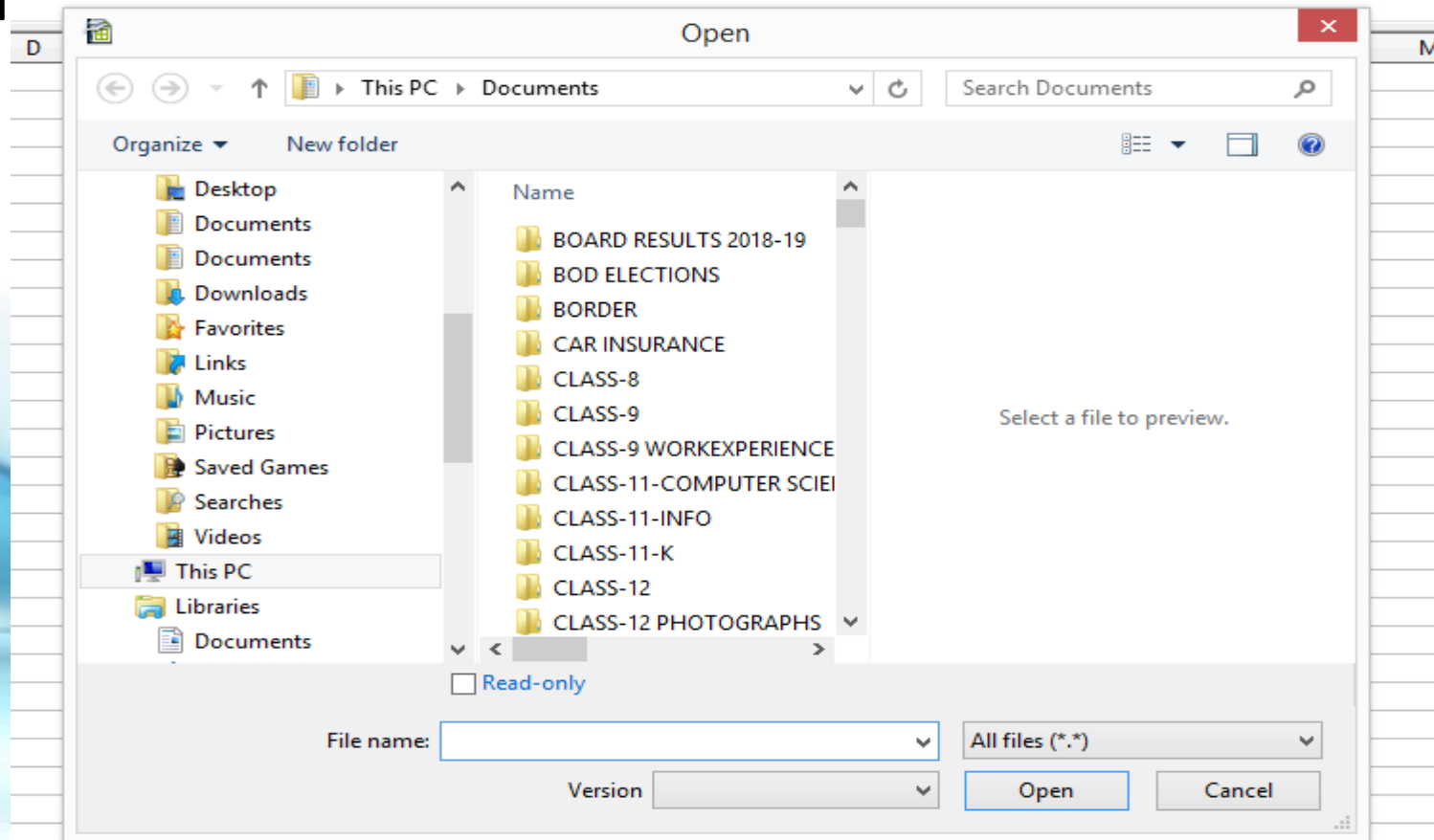


Open an existing Spreadsheet :




On the menu bar, click File->Open, then a dialog box opens up which is used to locate the spreadsheet to be opened

PLEASE
WRITE





PLEASE
WRITE

- On the Standard bar, click on the Open icon (). Click on the drop-down to open a list of recently opened OpenOffice files.

Navigating within Spreadsheets: There are many ways to navigate within a spreadsheet from cell to cell and sheet to sheet.

- Accessing a particular cell – Place the mouse pointer over the cell and click to access that cell. Another way is to type the cell reference or address in the Name box in the Formula bar and press Enter. For example, if you want to access cell D5, then type D5 in the Name box and press Enter. You can see cell D5 is highlighted as shown in Figure 4.11.



Accessing a Cell using Name Box



PLEASE
WRITE

You can also use the Calc Navigator () on the Standard bar or Press F5 which opens the following Navigator dialog box in which you can enter the row number and column letter which you want to access.



Navigator

Column: D

Row: 5

Sheets

- Sheet1
- Sheet2
- Sheet3

Range names

Database Ranges

Linked areas

Graphics

OLE objects

Comments

ExampleSheet (active)





Cell to Cell Navigation:

PLEASE
WRITE

Cell to Cell Navigation: You can use the Mouse and various keys on the keyboard such as Tab, Enter keys, and Arrow keys to navigate from one cell to another.



Sheet to Sheet Navigation:



PLEASE
WRITE

Sheet to Sheet Navigation: Using sheet tabs at the bottom of the spreadsheet, you can navigate between sheets. If you have a number of sheets, then some of the sheet tabs may be hidden behind the horizontal scroll bar at the bottom of the screen. If this is the case, then the four buttons at the left of the sheet tabs.



- Move to last sheet
- Move to next sheet
- Move to previous sheet
- Move to last sheet


The image shows a spreadsheet grid with rows numbered 25 to 31. Below the grid is a sheet tab bar containing four tabs labeled 'Sheet2', 'Sheet3', 'Sheet4', and 'Sheet5'. The 'Sheet4' tab is highlighted with a darker background, indicating it is the active sheet. To the left of the tabs are four navigation icons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow. To the right of the tabs is a left-pointing arrow icon. Below the sheet tabs, the text 'Sheet 4 / 5' is displayed. Labels 'Sheet Tabs' and 'Active Sheet' with arrows point to the sheet tabs and the 'Sheet4' tab respectively.



Saving Worksheet:



On the menu bar, click File->Save

On the Standard bar, click on Save icon ().

PLEASE
WRITE

While saving a new spreadsheet for the first time, a dialog box will open to enter a name and select the location for saving the spreadsheet.



Save As

This PC > Documents

Search Documents

Organize New folder

Name	Date modified
BOARD RESULTS 2018-19	20-Aug-19 10:38 A
BOD ELECTIONS	18-Jan-16 1:25 PM
BORDER	02-Sep-19 10:44 A
CAR INSURANCE	30-May-20 10:38 P
CLASS-8	10-Jan-16 8:50 AM
CLASS-9	08-Apr-15 8:27 AM
CLASS-9 WORKEXPRIENCE	11-Jun-17 7:56 PM
CLASS 11 COMPUTER SCIENCE(2016)	21-Jun-20 9:05 AM

File name:

Save as type:

Automatic file name extension

Save with password

Edit filter settings

Hide Folders

Save Cancel



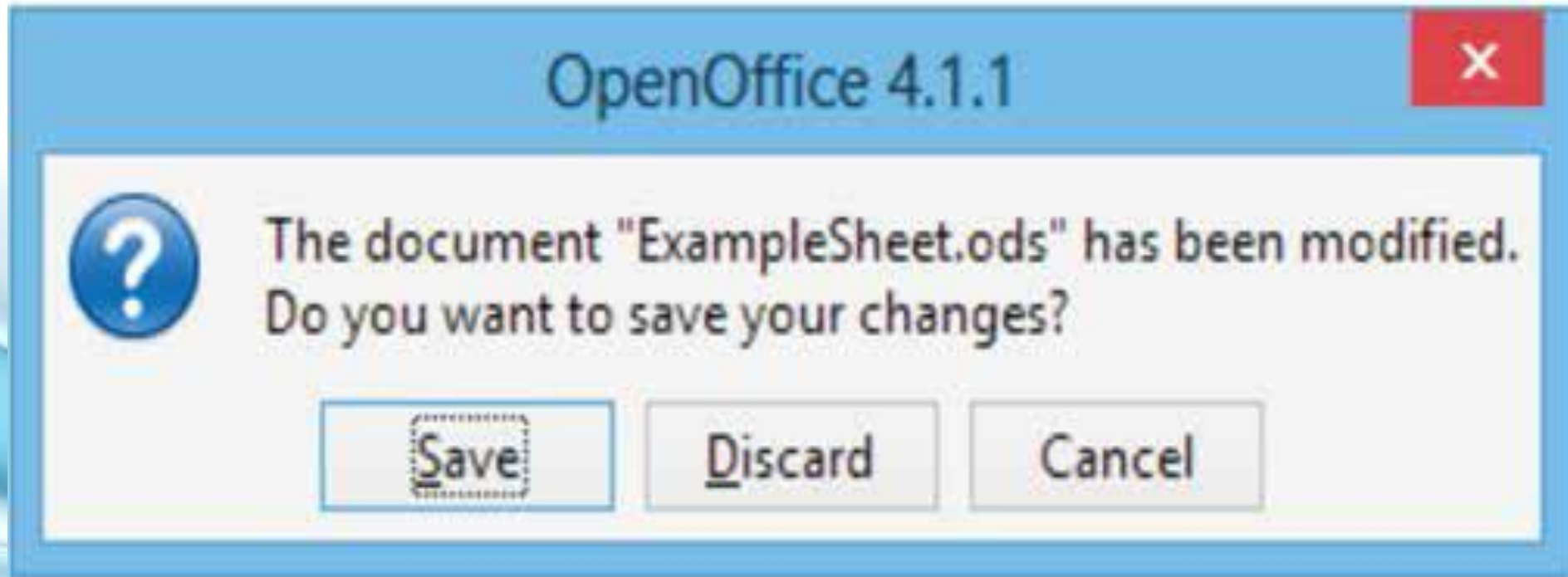
Closing Worksheet:

**PLEASE
WRITE**

On the menu bar, click File->Close
A dialog box opens up if the spreadsheet has not been saved. The dialog box gives options to the user to Save the file, Discard the changes or Cancel the close operation.



Save Dialog Box on Closing a File





Working with Data:



Data – There are various types of data that can be entered in a cell:

Labels – These are alphabetic or alphanumeric entries without numeric value. They can be a combination of letters, numbers, space, special characters etc. Labels are left justified by default.

Numbers or Values – These are numeric data which may be integers or can contain decimals or fractions. Values are right-justified by default.

PLEASE
WRITE



Working with Data:

Formulas – Used to perform calculations such as addition, subtraction, multiplication, division, average. Formulas must begin with an = sign.

PLEASE
WRITE

Entering Data: Data can be entered in an active cell. Following are the steps to enter data in say cell A1



Entering Data:

PLEASE
WRITE

- Click on the A1 cell which is at the top left of the spreadsheet. The heavy black border around the A1 cell indicates that it is the active cell.
- Start typing some text or numbers say “Room 1” and press Enter.
- On pressing Enter the cell below becomes the next active cell. Now the active cell is now A2.



Entering Data in Cell A1



The screenshot shows the Microsoft Excel interface. The menu bar includes File, Edit, View, Insert, Format, Tools, Data, and Window. The toolbar contains icons for file operations and editing. The font settings are set to Arial, size 10, with bold (B) formatting. The active cell is A1, and the formula bar is empty. The spreadsheet grid shows columns A, B, and C, and rows 1 through 10. Cell A1 is highlighted with a blue border.

The screenshot shows the Microsoft Excel interface after data entry. The menu bar and toolbar are the same as in the previous screenshot. The font settings are now set to Arial, size 10, with bold (B) and italic (I) formatting. The active cell is A2, and the formula bar is empty. The spreadsheet grid shows columns A, B, C, and D, and rows 1 through 10. Cell A1 now contains the text 'WELCOME' and is highlighted with a blue border.



Moving Data within a Spreadsheet:

For moving data from one cell to another we have the cut-copy-paste functions. There are various ways to use these functions as described below:

PLEASE
WRITE

Using the Edit Menu: The Cut, Copy, and Paste functions are available in the Edit menu. Following example illustrates the steps to do cut/copy-paste using Edit Menu:



Using the Edit Menu:



- Select the cell whose contents you want to cut or copy (say cell D5).
- Go to the Edit menu on the menu bar and click on Cut/Copy.
- Select the cell where you want to paste the contents of cell D5 (say cell F5).
- Go to the Edit menu and click on Paste. If you have selected Cut option then the contents of D5 will be removed from D5 and pasted in F5.

PLEASE
WRITE



Using the Standard bar:



PLEASE
WRITE

But if you have selected the Copy option, then the contents of cell D5 will remain intact and the same will be copied in F5.

Using the Standard bar: The icons are Cut , Copy, and Paste.

Following example illustrates the steps to do cut/copy-paste using Standard bar:



Using the Standard bar:

- Select the cell whose contents you want to cut or copy (say cell D5).
- Click on the Cut / Copy icon in the Standard bar.
- Select the cell where you want to paste the contents of cell D5 (say cell F5).
- Click on the Paste icon in the Standard bar.

PLEASE
WRITE



By Right -Click:



Following steps illustrates how to do cut/copy-paste by right clicking on the cell:

PLEASE
WRITE

- Right-Click on the cell whose contents you want to cut or copy (say cell D5). The following menu is displayed:
- Select the option Cut/Copy.
- Right-Click on the cell where you want to paste the contents of cell D5(say cell F5).
- Select the Paste option.



Right-Click Menu



Co Jx = ICT

	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5								
6			ICT					
7								
8								
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Right-click context menu options:

- Default Formatting
- Format Cells...
- Insert...
- Delete...
- ✗ Delete Contents...
- ✚ Insert Comment
- ✂ Cut
- 📄 Copy
- 📄 Paste
- Paste Special...
- Selection List...



Using AutoFill:

This feature in Calc is used to automatically generate data based on a defined series. A very common example is to enter numbers in the serial number (S.No) column of a table. This is a very frequently used column which usually contains consecutive numbers. Instead of manually typing the serial numbers (say 1 to 100), you can use the AutoFill command in Calc.

PLEASE
WRITE



Using AutoFill:

PLEASE
WRITE

- Click on the first cell of the serial number column and type 1.
- Now drag the fill handle in the bottom right corner of the cell (a solid white + sign) across the cells that you want to fill (in the given example till 5) and release the mouse button. The cells will be filled with ascending numbers 2, 3, 4, 5.



Using AutoFill:

S. No	Item	Price	S. No	Item	Price
1	Bread	20	1	Bread	20
2	Butter	55		Butter	55
3	Biscuit	20		Biscuit	20
4	Chocolate	25		Chocolate	25
5	Mineral Water	20		Mineral Water	20

Fill Handle



Using AutoFill:

Try doing the same exercise with “Monday” typed a cell and you’ll observe that the subsequent cells will be filled with the days – Tuesday, Wednesday,....

The AutoFill command also recognizes customized sort lists that are defined under menu Tools -> Options -> OpenOffice Calc -> Sort Lists. You can also define your own sort list.

PLEASE
WRITE

Creating a sort Lists



Options - OpenOffice Calc - Sort Lists

OpenOffice

- User Data
- General
- Memory
- View
- Print
- Paths
- Colors
- Fonts
- Security
- Appearance
- Accessibility
- Java
- Online Update
- Load/Save
- Language Settings
- OpenOffice Calc
 - General
 - View
 - Calculate
 - Sort Lists
 - Changes
 - Grid
 - Print
- OpenOffice Base
- Charts

Lists

Sun, Mon, Tue, Wed, Thu, Fri, Sat

Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec

January, February, March, April, May, June, July, August, September, October, November, December

Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

Nissan, Iyar, Sivan, Tammuz, Av, Elul, Tishrei, Cheshvan, Kislev, Tevet, Shevat, Adar, Nisan

Entries

Sun

Mon

Tue

Wed

Thu

Fri

Sat

New

Add

Delete

Copy list from: Copy

OK Cancel Help Back



Using AutoFill:

PLEASE
WRITE

In case you want to enter the same value, say, 1 in 10 consecutive cells simply press the Ctrl key while dragging the fill handle. Suppose you want to enter even numbers in a column. For example entering 2, 4, 6, 8....20. Then follow the procedure:



Using AutoFill:



- i) Type the first two values (2 and 4) in the first two cells.
- ii) Then select both the cells and drag the fill handle of the cell containing value 4. You will observe that now the values filled by Calc will be 6,8,10...20.

**PLEASE
WRITE**



Formatting Data

PLEASE
WRITE

Formatting a document means adding elements of style and presentation to documents to improve the readability and make them more attractive. To enhance the appearance of spreadsheets various formatting options are available in the Formatting Bar and Format Menu such as alignment, font, size, and style. Various formats for numbers are also available such as percentage and decimals.

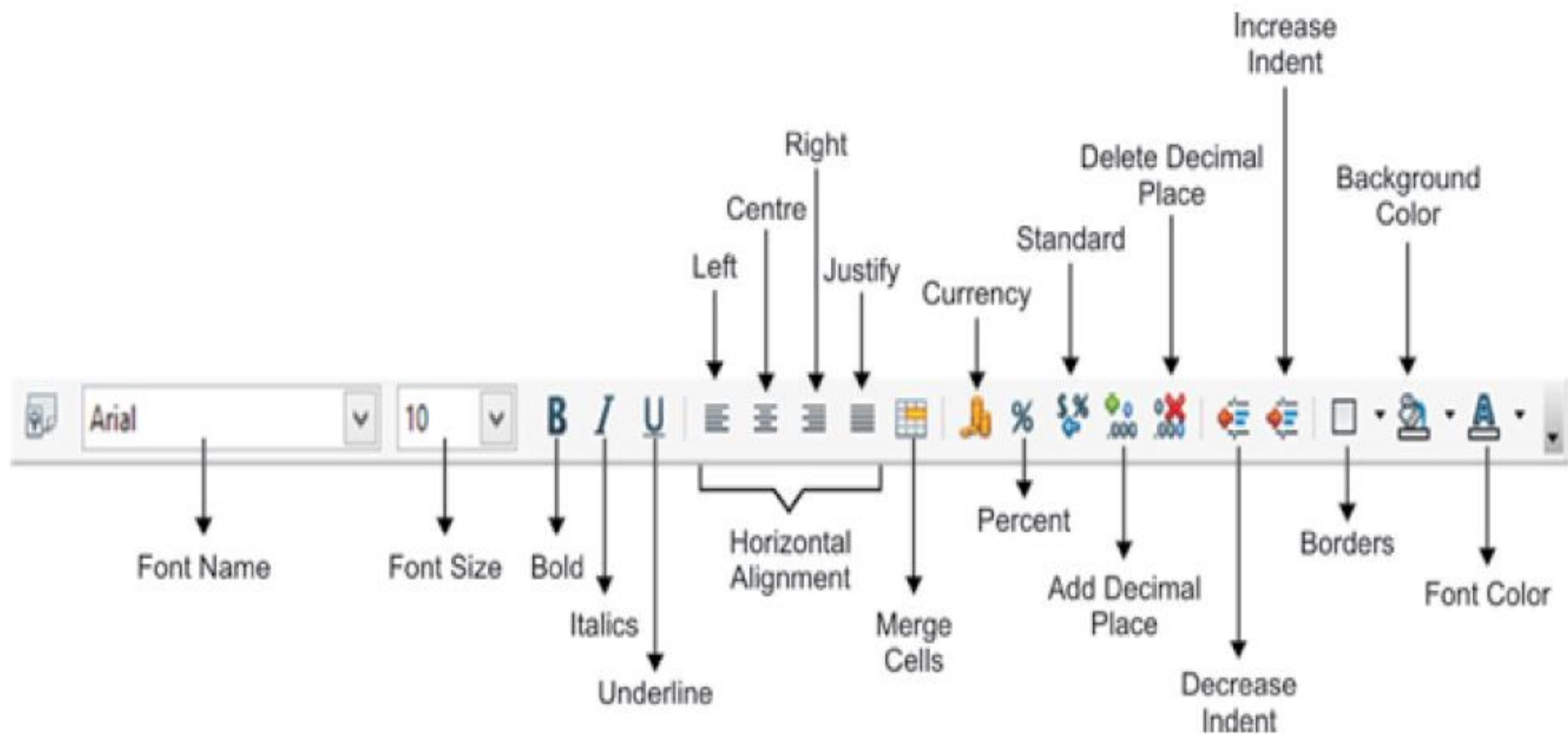


Figure 4.19: Formatting Bar



Formatting Data

PLEASE
WRITE

Numbers as Text: Calc evaluates each cell and determines whether the entry is a Value or Label. Cells containing a combination of values and text is automatically treated as a label such as code of a product - COMP123. Such entries cannot be used for calculations.



Formatting Data



PLEASE
WRITE

However there might be a requirement that a cell containing numbers be treated like a label. For example telephone numbers, aadhar card number, ZIP codes etc. should be treated as labels and not values. Whenever such a requirement arises, prefix each such entry with a single quotation mark ('). The quotation mark will be invisible and the numbers in the cell will be treated as labels.



Formatting Data



PLEASE
WRITE

Font: Font refers to the design for a set of characters. It is the combination of typeface and other qualities, such as size, pitch, and spacing. The font can be changed from the Formatting bar.

Font Name: Various font types are there in Calc such as Arial, Arimo, and Century Schoolbook L. The font type can be selected from the Font Namebox in the Formatting bar.



Formatting Data



**PLEASE
WRITE**

Using the drop down, you can select from the list of font types available in Calc. The appearance of the font types listed in the drop down is how the text will look when a font type setting is applied



Font Names



The screenshot shows the Microsoft Excel interface with the font dropdown menu open. The menu lists the following fonts:

- Arial
- Arial Black
- Arial Narrow
- Arial Rounded MT Bold
- Arial Unicode MS
- Arimo
- Baskerville Old Face
- Batang
- BatangChe
- Bauhaus 93
- Bell MT
- Berlin Sans FB



Formatting Data



PLEASE
WRITE

Font Size: Click on the drop down arrow of the font size which is next to the Font Name box and then select the size you want to use.

Font Style: You can also make the text bold, italics or underlined by clicking on the icons available on the formatting bar respectively.





Horizontal Alignment: Alignment of data in cell with respect to the border of the cells can be done by using the Alignment options:



Formatting Data



Horizontal Alignment: Alignment of data in cell with respect to the border of the cells can be done by using the Alignment options:

- **Left Align**  : The left edge of the text is along the left cell border.
- **Center Align**  : Both the left and right edges are equally distant from the left and right cell borders respectively.
- **Right Align**  : The right edge of the text is along the right cell border.
- **Justify**  : Aligns the text to the left and the right cell borders.

PLEASE
WRITE



Formatting Data

PLEASE
WRITE

Changing Color : You can easily change the color of the background of the cells as well as the text color. On the left the background color is changed and on the right the text color is changed.





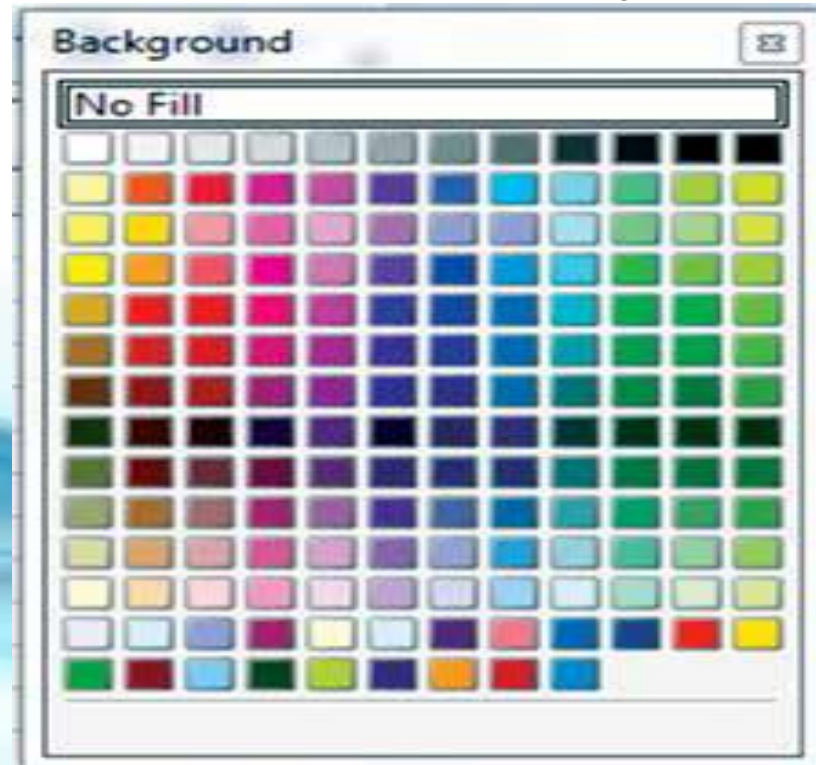
Formatting Data



Steps to change the background color of cells:

- i) Select the cells.
- ii) Click on the Background color icon .
- iii) Select the color from the palette

**PLEASE
WRITE**





Formatting Data



Steps to change the text or font color:

- Select the text or you can select the complete cells.
- Click on the Text color icon .
- Select the color from the palette as

PLEASE
WRITE





Formatting Data



PLEASE
WRITE

Gridlines and Borders : The gray gridlines (vertical and horizontal lines) that you can see in a Calc spreadsheet help you while you're working in a spreadsheet. Gridlines appear automatically showing you how the data is organized into rows and columns. Borders are different from gridlines because they help you highlight important information for people to see.



Formatting Data

PLEASE
WRITE

Borders need to be added if you want to highlight certain cells. One more difference is that gridlines aren't automatically printed, while borders are. Thus, to draw borders around a cell or multiple cells, you can use the Border icon on the Formatting bar





Formatting Data



Gridlines

Borders



Formatting Data



PLEASE
WRITE

Flow of Text: In order to control the flow of text within cells, Calc provides various ways:

Merging / Splitting Cells: In order to merge cells, select the cells and click on the Merge Cells icon in the Standard Bar. To split the merged cells, select the cell and click on the Merge Cells icon.



Formatting Data



PLEASE
WRITE

Wrap Text: It means to break the text into multiple lines i.e., adjusting the row height to fit the text within the cell but keeping the column width of the cell same. Steps to wrap text:

- i) Right-click on the cell.
- ii) Select the option – Format Cells.
- iii) A dialog box opens up. Open the Alignment Tab and check the option– Wrap text automatically

Formatting Data



Format Cells

Numbers Font Font Effects **Alignment** Borders Background Cell Protection

Text alignment

Horizontal Indent Vertical

Default 0 pt Default

Text orientation

Degrees Vertically stacked

0

Reference edge

Properties

Wrap text automatically

Hyphenation active

Shrink to fit cell size

OK Cancel Help Reset



Formatting Data



PLEASE
WRITE

Shrink to Fit : This option shrinks the text to fit in the size of the existing cell. In this case neither the row height nor the column width is changed. The text size is decreased according to the cell. Steps to shrink the text size to fit the cell:

- i) Right-click on the cell.
- ii) Select the option – Format Cells.
- iii) A dialog box opens up. Open the Alignment Tab and check the option– Shrink to fit cell size



Formatting Data

OpenOffice Calc	

Text exceeds the cell

OpenOffice Calc	

After wrapping the text




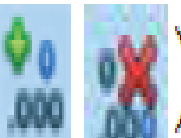
OpenOffice Calc	

After shrinking the text

Difference between Wrap Text and Shrink to Fit



Numeric Data Formatting

In Calc, there are many ways in which numerical data can be formatted i.e., changing the appearance of numbers. Some of the number formats are available on the Standard Toolbar (Currency , Percent , Standard , Add/Delete Decimal place ).

PLEASE
WRITE

For more options, right-click on the cell and click on Format Cells to open a dialog Box. Click on the Numbers tab and then you can select the category of the format as per requirement.



Numeric Data Formatting



Format Cells

Numbers Font Font Effects Alignment Borders Background Cell Protection

Category: Number, Percent, Currency, Date, Time, Scientific, Fraction, Boolean Value

Format: General, -1234, -1234.12, -1,234, -1,234.12, -1,234.12

Language: Default - English (USA)

1234.56789

Options: Decimal places: 0, Leading zeroes: 1, Negative numbers red, Thousands separator

Format code: General

OK Cancel Help Reset



Numeric Data Formatting



PLEASE
WRITE

- **Currency:** In the currency format, you can prefix or suffix currency symbols to the numeric data. The default currency is Rs. which is prefixed to the number, commas are inserted at the thousand, million, billion positions, and two decimal places are added to the number.
- **Percent:** It displays the number as a percentage. Two decimal places are added to the number and the percent symbol (%) is suffixed at the end.



Numeric Data Formatting



PLEASE
WRITE

- **Standard:** It sets the number in the cell to the default format by removing any other numeric formatting applied.
- **Decimals:** Decimal places can be inserted or removed by using the Add Decimal place or Delete Decimal place icon respectively. If you want to remove fractional part of a cell or group of cells then you can either use the Delete.



Numeric Data Formatting



PLEASE
WRITE

Decimal place icon on the Standard toolbar or another option is to right-click on the cell (s) and then click on Format Cells to open the dialog box. On the Number tab, you can see the Decimals spin box in the Option section. You can increase or decrease the number of decimal places by using the up and down arrows. Zeros can also be prefixed to the numbers by setting the number of zeros to be prefixed in the Leading Zeros spin box.



Numeric Data Formatting

**PLEASE
WRITE**

Original Number	Currency	Percent	Add Decimal Place	Delete Decimal Place
23456.78	23,456.78	2345678.00%	23456.78	23456.78

Figure 4.29: Number Formats



Formatting Data

- **Date:** By default the date format in Calc is dd/mm/yy. But in case you want to change the format, you can find various date formats in the Format Cells dialog box.

PLEASE
WRITE

Date formats



Format Cells

Numbers | Font | Font Effects | Alignment | Borders | Background | Cell Protection

Category

- Number
- Percent
- Currency
- Date**
- Time
- Scientific
- Fraction
- Boolean Value

Format

- 12/31/99
- Friday, December 31, 1999
- 12/31/99**
- 12/31/1999
- Dec 31, 99
- Dec 31, 1999
- 31. Dec. 1999
- December 31, 1999
- 31. December 1999

Language

Default - English (USA)

05/18/03

Options

Decimal places: 0 Negative numbers red

Leading zeroes: 0 Thousands separator

Format code

MM/DD/YY

OK Cancel Help Reset



Finding and Replacing Data:



PLEASE
WRITE

Data can be searched by using the Find toolbar. If you want to find and replace the data then perform the following steps:

- i) Click on the Edit menu and select the Find & Replace option.
- ii) A dialog box opens in which you can type the text to be searched in the “Search for” text box and the replaced text in the “Replace with” text box. You can find or replace the results individually (Find or Replace) or all of them at one go by clicking on the Find All or Replace All button.



Finding and Replacing Data:



- iii) The Match case check box when checked implies that the searching is sensitive to the case of the text i.e., uppercase and lowercase letters are treated differently. Otherwise uppercase and lowercase letters are treated as equal.

PLEASE
WRITE



Finding and Replacing Data:



- iv) Entire cells check box when checked implies that Calc will search for the whole words that are identical to the text to be searched and if the text to be searched is part of some other text then it will not highlight that in its results. If this check box is not checked then the text to be searched is highlighted even if it is part of cell contents.

PLEASE
WRITE

Finding and Replacing Data:



Find & Replace

Search for

Replace with

Match case

Entire cells

Find

Find All

Replace

Replace All

More Options

Help

Close



Deleting



PLEASE
WRITE

Delete Data: For removing data from a cell, click inside the cell (double-click) and then press the Backspace key according to the text you want to delete. However if you only select the cell (single-click) and then press the Backspace key then this will result in the deletion of all the text within the cell, though the formatting of the cell remains.



Deleting

PLEASE
WRITE

Deleting Data and Formatting: Delete key (or Right-click the cell and select Delete All option) can be used to remove data as well as the formatting from a cell. Selecting the cell and pressing the Delete key opens a dialog box which can be used to delete different aspects of the cell. To delete everything in a cell (contents and format), check Delete all.



Delete Contents



Delete Contents

Selection _____

Delete all

Itext

Numbers

Date & time

Formulas

Comments

Formats

Objects

OK

Cancel

Help



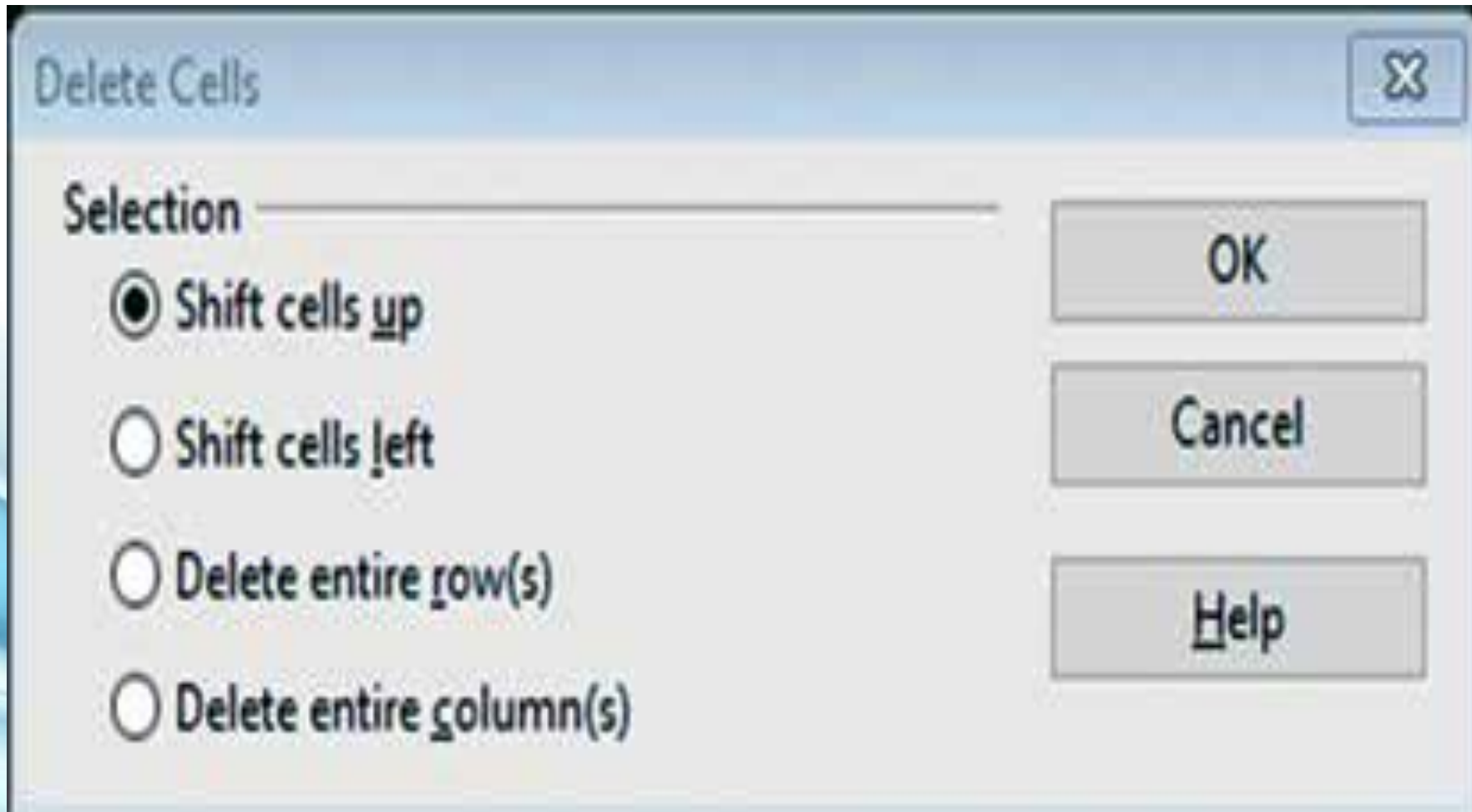
Deleting

PLEASE
WRITE

Deleting Cell(s): Single or multiple cells can be deleted by selecting them and then right-click and select the Delete option. On doing so, a dialog box opens which asks the user to shift cells up or left or delete an entire row or column after deleting the cell(s).



Delete Cells





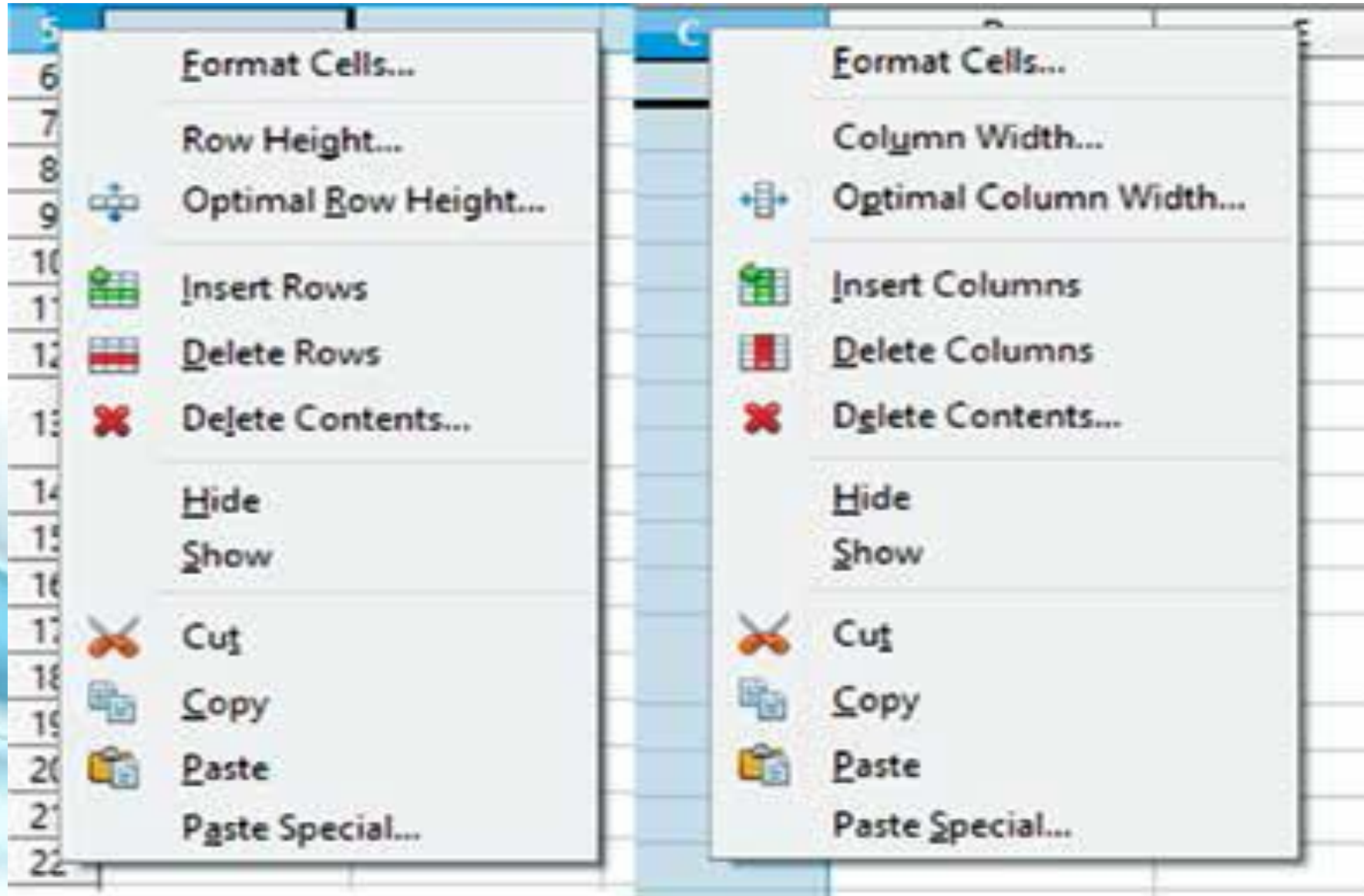
Inserting/Deleting Rows and Columns



Sometimes when you have finished entering data in a spreadsheet you may need to add or remove rows and columns. One way is to select the row or column by clicking on the row header (number) on the left or column header (alphabet) on the top and then right-click. A menu appears which can be used to insert and delete rows or columns and also adjust the height or width of a row or column.



Row and Column Menus



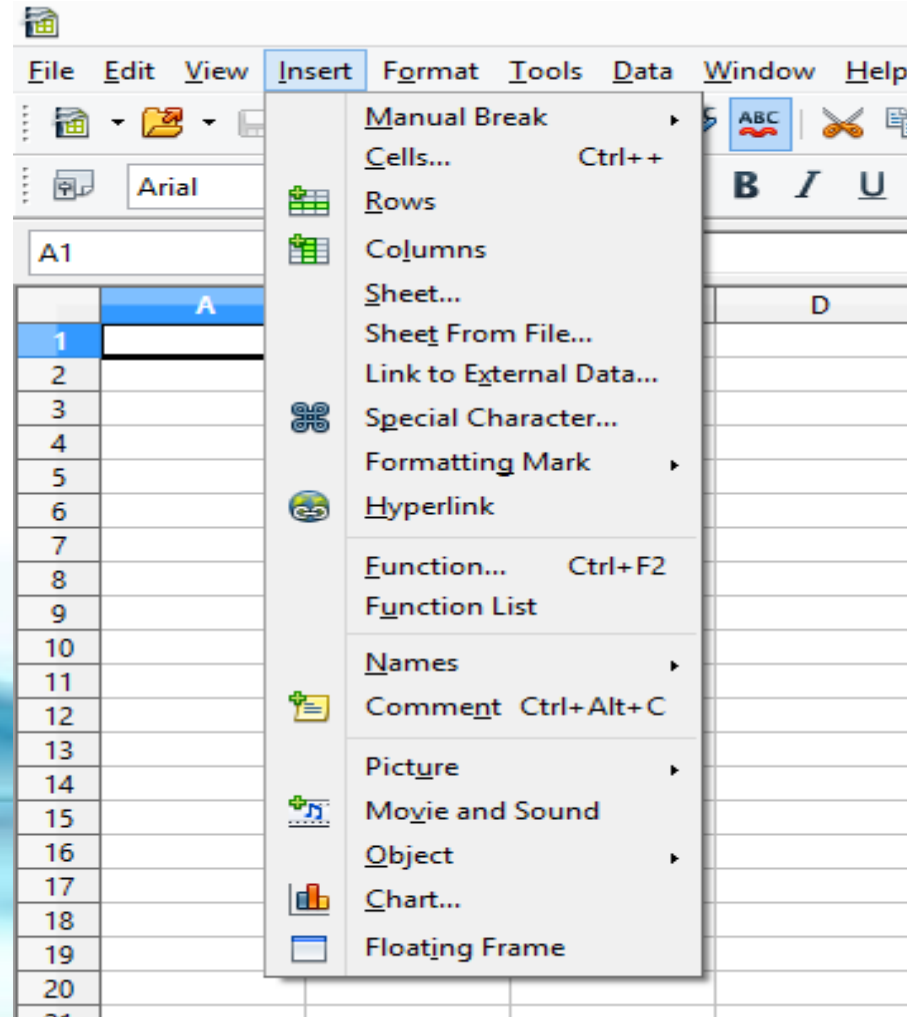
Menu for Row 5

Menu for Column C



Insert menu

Insertion of row and columns can also be performed by using the Insert menu on the Menu bar





Using Formulas and Functions



PLEASE
WRITE

Formulas can be used for basic operations such as addition, subtraction, as well as more complex calculations such as income tax calculations, averaging. The advantage of using formulas is that even if the data is changed, Calc will automatically recalculate the answer without the need to rewrite the formula again. Another advantage of using formulas is that they can be easily copied to a number of cells.



Example



Let us study some examples of creating basic formulas in Calc.

Example 1: Adding data in two numbers and storing the result in cell D6.

Step 1: In cell D6, type the equal sign (=). This informs Calc that D6 will contain a formula.

Step 2: Now type 4+5

Step 3: Press Enter

Cell D6 will contain 9. You can see the formula (=4+5) in the Input line in the formula toolbar

PLEASE
WRITE

Example



The screenshot shows a Microsoft Excel spreadsheet interface. The formula bar at the top displays the formula $=4+5$ in cell D6. The spreadsheet grid has columns labeled A through G and rows numbered 1 through 20. Cell D6 is highlighted with a blue border and contains the number 9. The ribbon at the top includes various toolbars for file operations, font settings (Arial, size 14), and formatting options (bold, italic, underline, text color, fill color, percentage, currency, thousands separator, and decimal places).

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6				9			
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							





Using Formulas and Functions

PLEASE
WRITE

In Calc, a cell reference identifies the location of a cell or group of cells in the worksheet. The cell reference is also called address of a cell. Cell references are used in formulas, functions, and other commands.

Individual cell reference: Each cell is identified by its column letter and row number in this order. For example, the cell reference of the topmost and leftmost cell is A1 (Column=A, Row=1).



Using Formulas and Functions



PLEASE
WRITE

Range of cells – You can use cell referencing for a consecutive range of cells also using a colon (:). For example, cell reference for the range of first five cells in column D is D1:D5 (i.e., D1, D2, D3, D4, and D5). Cell reference for the range of first five cells in row 5 is A5:E5 (i.e., A5, B5, C5, D5, and E5). Cell reference for a group of four cells spanning first 2 columns and first 2 rows of the spreadsheet is A1:B2 (i.e., A1, A2, B1, and B2).



Using Formulas and Functions



When you wish to add a reference to a cell in some other cell then there are two ways. First is to type the cell reference using the keyboard. Second is using the mouse. The steps to insert cell reference using the mouse is as follows:

PLEASE
WRITE

Step 1: Double-Click on the cell in which you want to insert cell reference.

Step 2: Type equal sign (=)

Step 3: Now click on the cell whose reference you want to add. On clicking you will notice that the address of the cell which you have clicked is inserted.

Using Formulas and Functions



For example, steps to add data in two cells D4 and D5 and store the result in cell D6.

Step 1: Enter numbers in cell D4 and D5.

Step 2: Double-click on the cell D6 and type =.

Step 3: Click on cell D4. The address D4 will be inserted in cell D6 after the = sign.

Alternatively you can type D4.

Step 4: Type plus sign (+) in cell D6.

Step 5: Click on cell D5, The address D5 will be inserted in cell D6 after the + sign. Alternatively you can type D5. Formula in cell D6 =D4+D5.

PLEASE
WRITE



Using Formulas and Functions



After you press Enter, D6 will contain the sum of the numbers stored in cells D4 and D5.

**PLEASE
WRITE**

You can view the formula of cell D6 in the Input line of Formula toolbar as shown in . If you double-click on cell D6, then also you can see the formula in cell D6.



Adding Contents of Two Cells



File Edit View Insert Format Tools Data Window Help

Clipboard icons: Paste, Copy, Paste with Source Formatting, Paste without Source Formatting, Paste as Text, Paste as Text with Source Formatting, Paste as Text with Source Formatting and Merge Formatting, Paste as Text with Source Formatting and Merge Formatting (with Bold, Italic, Underline, and Alignment icons).

Font settings: Arial, 10, Bold (B), Italic (I), Underline (U), Bulleted List, Numbered List, Decrease Indent, Increase Indent.

Formula Bar: D6, fx, Σ, =, =D4+D5

	A	B	C	D	E
1					
2					
3					
4					4
5					5
6					9
7					



Adding Contents of Two Cells



Try changing the values in cell D4 and D5 and you will observe that the result in cell D6 will be automatically recalculated and updated. This is one of the most important use of Calc.

**PLEASE
WRITE**



Type of Operators

Type of Operators	Operator	Operation	Example
Arithmetic Operators	+	Addition	=D4 + D5 =5+3
	-	Subtraction	=A2-A3+B1 =3+4+5
	*	Multiplication	=D4 * E4 =56*100
	/	Division	=E3/E2 =34/4 =5/0 will result in an error
	^	Exponentiation	=D4^D5 =5^2

PLEASE
WRITE



Type of Operators



Type of Operators	Operator	Operation	Example
Comparison Operators	=	Equal to	=4=5 =D2=D3
	<	Less than	=4<9 =D4<D5
	>	Greater than	=4>9 =F1>D3
	<=	Less than or equal	=2<=3 =D2<=A1
	>=	Greater than or equal	=2>=3 =D2>=C2
	<>	Not equal to	=2<>5 =A1<>A2

Table 1: Operations in Calc

PLEASE
WRITE



Precedence of Operations:



If multiple operators occur in a formula then the calculation is performed by using the following order:

1. Operations enclosed in parentheses.
2. Exponentiation.
3. Multiplication and division. (If both multiplication and division occurs in a formula then the calculation is performed from left to right.)
4. Addition and Subtraction. (If both addition and subtraction occurs in a formula then the calculation is performed from left to right.)

**PLEASE
WRITE**



Example of precedence of operations

For example, consider the following formula:

$$=1000+3000*500$$

In the above formula, multiplication will be performed first and then addition will be

performed. If you want to perform addition first then you have to enclose the addition

operation in parentheses as shown below:

$$= (1000+3000)*500$$

**PLEASE
WRITE**



Functions



Calc has a set of predefined formulas called functions. They differ from formulas in the sense that in a formula we provide both the operands and the operator, however in functions we only provide operands (or arguments) as functions have predefined operation to be performed on the arguments. Just like a formula, the function also begins with an equal (=) sign.

PLEASE
WRITE



Functions



PLEASE
WRITE

We specify the arguments enclosed in parenthesis () and separated by a comma (,). For example, SUM function is used to add as shown below:

= SUM (3, 4) – This will add numbers 3 and 4.

= SUM (A3, A4) – This will add numbers in cell A3 and A4.

= SUM (3, 4, A3, A4) – This will add number 3, 4, contents of cell A3 and A4.



Commonly used mathematical functions in Calc :



PLEASE
WRITE

1. PRODUCT ($n_1; n_2...$) – To calculate the product of arguments $n_1, n_2...$
2. SQRT (n) – To calculate the square root of a number n
3. POWER ($n; p$) – To calculate power p of a number n .
4. LOG ($n; b$) – To calculate log a number n to base b .
5. ROUND ($n; d$) – To round a number n to digits d .
6. SIN (n), COS (n), TAN (n) – To calculate sine, cosine and tangent of n .



Commonly used mathematical functions in Calc :



7. **RANDBETWEEN (f; l)** – Returns a random number between f and l.
8. **QUOTIENT (a; b)** – To calculate integer quotient of division a/b.
9. **ABS (n)** – To calculate the absolute value of a number n.
10. **AVERAGE (n1; n2....)** – To calculate average of arguments n1, n2...



Commonly used mathematical functions in Calc :



**PLEASE
WRITE**

For the function which contains multiple arguments such as SUM (), PRODUCT (), AVERAGE (), if the arguments are consecutive then you can use a range of cells such as A1:A5 which means cells A1, A2, A3, A4, and A5.



For example, addition of the numbers in cells A1:A5 in cell A6 is shown



PLEASE
WRITE

The screenshot shows a spreadsheet application interface. The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, and Help. The toolbar contains icons for file operations, editing, and formatting. The font settings are set to Arial, size 10, with bold, italic, and underline options. The active cell is A6, and the formula bar shows the formula `=SUM(A1:A5)`. The spreadsheet grid shows columns A, B, C, and D, and rows 1 through 7. Cell A6 is highlighted, and its value is 9.

	A	B	C	D
1	1			
2	1			
3	2			
4	2			
5	3			
6	9			
7				



Relative and Absolute Addressing



Relative Addressing

PLEASE
WRITE

The cell in column A, row 1 is addressed as A1. You can address a range of adjacent cells by first entering the coordinates of the upper left cell of the area, then a colon followed by the coordinates of the lower right cell. For example, the square formed by the first four cells in the upper left corner is addressed as A1:B2. By addressing an area in this way, you are making a relative reference to A1:B2. Relative here means that the reference to this area will be adjusted automatically when you copy the formulas.



Relative Addressing



File Edit View Insert Format Tools Data W

Font: Arial 10

Formula Bar: COUNTA = A2 + B2

	A	B	C
1	NUM-1	NUM-2	TOTAL
2	10	5	= A2 + B2
3	20	6	
4	30	7	
5	50	8	
6			
7			
8			
9			

File Edit View Insert Format Tools Data Window

Font: Arial 10

Formula Bar: C3

	A	B	C	D
1	NUM-1	NUM-2	TOTAL	
2	10	5	15	
3	20	6		
4	30	7		
5	50	8		
6				
7				
8				
9				



Relative Addressing



File Edit View Insert Format Tools Data Window

Arial 10 B

C2:C5 fx Σ = = A2 + B2

	A	B	C	D
1	NUM-1	NUM-2	TOTAL	
2	10	5	15	
3	20	6	26	
4	30	7	37	
5	50	8	58	
6				
7				

File Edit View Insert Format Tools Data Window

Arial 10 B I

C3 fx Σ = = A3 + B3

	A	B	C	D
1	NUM-1	NUM-2	TOTAL	
2	10	5	15	
3	20	6	26	
4	30	7	37	
5	50	8	58	
6				
7				



Absolute Addressing

PLEASE
WRITE

Absolute Addressing: In some cases the requirement is to retain the cell address even if it is copied to some other cell or when using AutoFill. In such cases, absolute addressing is used. Dollar signs (\$) are used to hold a column and/or row address constant. When you enter an address in a cell that is prefixed with a \$ sign, then Calc stores the absolute address of the cell.



Absolute Addressing



	A	B	C	D
1	3.14			
2				
3				
4	Radius	Area		Area
5	10	314		314
6	20	1256		0
7	30	2826		0
8				



Mixed Addressing



PLEASE
WRITE

Mixed Addressing : Sometimes a combination of absolute and relative addressing is used such as \$A3, B\$5, A5+\$B4, \$A1+B\$1. In such cases, whichever part (row or column) is prefixed with \$ remains unchanged and the ones not prefixed with \$ are calculated in a relative manner.



Mixed Addressing



File Edit View Insert Format Tools Data Window Help

Arial 10 B I U

B6 =A6+ A\$3

	A	B	C
1			
2	BONUS		
3	200		
4			
5	GROSS SAL	NET SAL	
6	2000	2200	
7	1000	1200	
8	1500	1700	
9			



Sorting and Filtering Data

PLEASE
WRITE

Sorting: Data can be easily sorted in Calc by using the sort command available on the Standard toolbar (Sort Ascending , Sort Descending) and also in the Data menu which opens a dialog box for more options.



Sort Dialog Box



Sort

Sort Criteria Options

Sort by _____

NET SAL

Ascending
 Descending

Then by _____

- undefined -

Ascending
 Descending

Then by _____

- undefined -

Ascending
 Descending

OK Cancel Help Reset



Steps to sort using the Standard Toolbar:



**PLEASE
WRITE**

Step 1: Select the cells you want to sort.

Step 2: Click on the Sort Ascending icon on the
Standard Toolbar.

Data will be sorted according to the first column of
the selected cells.



Steps to sort using the Sort command:



PLEASE
WRITE

Step 1: Select the cells you want to sort.

Step 2: Click on the Sort option in the Data menu which opens a dialog box.

Step 3: You can change the select the column based on which you want to sort the data. Also you can select the Ascending or Descending option.

Step 4: Click on OK



Sorting using Multiple Columns:



PLEASE
WRITE

You can also select multiple criteria (up to 3) to sort with each criterion applied one after the other. For example, you have the following data as given in Table and you want to sort it in ascending order according to the price per item and then if two items have the same price then in descending order of the number of items and if two items have the same price and the number then according to their code sorted alphabetically in increasing order.



Example

PLEASE
WRITE

Item Code	Number of Items	Price per Item (in Rs.)
B45	34	234
A23	22	234
A43	12	65
S12	10	30
S13	22	234



Steps to do sorting using multiple columns



Step 1: Select the cells you want to sort including the headings

Step 2: Since the data you have selected contains headers (Price per Item and Number of Items) which you don't want to be included in sorting then open the Options tab in the same dialog box and check the option Range contains column headers.

Step 3: Click on the Sort option in the Data menu which opens a dialog box.

Step 4: In the Sort by section select the Price per Item column and ascending radio button.

PLEASE
WRITE



Steps to do sorting using multiple columns



PLEASE
WRITE

Step 5: In the Then by section select the Number of Items column and descending radio button.

Step 6: Lastly in the next Then by section select the Item Code and ascending radio button

Step 7: Click on OK



Sort

Sort Criteria Options

Sort by _____

Price per Item (in Rs.) Ascending Descending

Then by _____

Number of Items Ascending Descending

Then by _____

Item Code Ascending Descending

OK Cancel Help Reset



The result after sorting

PLEASE
WRITE

Item Code	Number of Items	Price per Item (in Rs.)
S12	10	30
A43	12	65
B45	34	234
A23	22	234
S13	22	234



Filtering Data



Applying a filter means displaying data based on some conditions or filters. Filters can be applied by using the Filter option in the Data menu. Three types of filters can be applied – AutoFilter, Standard Filter and Advance Filter. Let us study AutoFilter and Standard filter in detail.

AutoFilter – This filter is added on the topmost row of the selected data in the form of a drop down list from which you can select data to be displayed or in other words apply filters.



Filtering Data Example

Given the following data in the table, the following are the steps to apply Auto Filter to display all the Female candidates.

Name of the Student	Gender	Marks (out of 100)
Aditi	Female	89
Piyush	Male	75
Bharti	Female	98
Suman	Female	59
Gaurav	Male	98



Filtering Data Example



Step 1: Select the data

PLEASE
WRITE

Step 2: Select Data menu and click on Filter >AutoFilter

Step 3: On the topmost cell of each column you will observe drop-down boxes. Click on the drop down in the gender column and you will see all the unique values in that column.

Step 4: Select the Female entry in the drop-down



Filtering Data Example



The resulting sheet will contain all the female entries and the drop-down in the column in which filter is applied (Gender) will be colored in blue

Name of the Student ▼	Gender ▼	Marks (out of 10) ▼
Aditi	Female	89
Bharti	Female	98
Suman	Female	59



Filtering Data Example



You can apply filters to other columns also. Suppose in the above example, data was to be filtered for all the females students having 98 marks. Then click on the drop-down of the Marks column and select the 98 entry in the drop-down. The output will be as shown

Name of the Stude ▼	Gender ▼	Marks (out of 10) ▼
Bharti	Female	98



Standard Filter



Standard filter is used to provide more options for filtering such as combining multiple filters by using AND and OR operator. AND operator implies that all the filters must be satisfied for displaying the data. OR operator implies that at least one filter should be satisfied for displaying the data.

PLEASE
WRITE

AND Operator Example - Suppose in the Table, you have to select the male students having more than 75 marks. Following are the steps to filter data based on this criterion:



AND Operator Example



Step 1: Select the data

Step 2: Select Data menu and click on Filter->Standard Filter. A dialog box will open.

Step 3: Add the criteria for Gender = Male AND Marks > 75

Step 4: Click on Ok. The output will be as shown

PLEASE
WRITE

The screenshot shows a 'Standard Filter' dialog box with the following configuration:

Operator	Field name	Condition	Value
	Gender	=	Male
AND	Marks (out of 100)	>	75
	- none -	=	
	- none -	=	

Buttons at the bottom: More Options, Help, OK, Cancel.



Standard Filter



Name of the Student	Gender	Marks (Out of 100)
Gaurav	Male	98

PLEASE
WRITE

OR Operator Example – Suppose in the Table , you have to select the female students or students having more than 75 marks. Following are the steps to filter data based on these criterion:



Standard Filter



Step 1: Select the data

Step 2: Select Data menu and click on Filter->Standard Filter.

A dialog box will open.

Step 3: Add the criteria for Gender = Female *OR* Marks > 75

Step 4: Click on Ok. The output will be as shown

PLEASE
WRITE



OR Operator Example



Standard Filter

Filter criteria

Operator	Field name	Condition	Value
	Gender	=	Female
OR	Marks (out of 100)	>	75
	- none -	=	
	- none -	=	

More Options Help OK Cancel



OR Operator Example - output

Name of the Student	Gender	Marks (out of 100)
<u>Aditi</u>	Female	89
<u>Bharti</u>	Female	98
<u>Suman</u>	Female	59
<u>Gaurav</u>	Male	98



AND-OR Operators Example

PLEASE
WRITE

AND-OR Operators Example - Suppose in Table 3, you have to select the *female* students whose name begins with the letter “S” or *male* students whose name begins with letter “G”. Following are the steps to filter data based on this criterion:

Step 1: Select the data

Step 2: Select Data menu and click on Filter->Standard Filter.

A dialog box will open.



AND-OR Operators Example



PLEASE
WRITE

Step 3: Add the criteria for Gender = *Female AND* Name of the Students *Begins with* "S" *OR* Gender = *Male AND* Name of the Students Begins with "G"

Step 4: Click on Ok. The output will be as shown



AND-OR Operators Example



Standard Filter

Filter criteria

Operator	Field name	Condition	Value
	Gender	=	Female
AND	Name of the Studer	Begins with	S
OR	Gender	=	Male
AND	Name of the Studer	Begins with	G

More Options Help OK Cancel



OUTPUT



Name of the Student	Gender	Marks (out of 100)
<u>Suman</u>	Female	59
<u>Gaurav</u>	Male	98



Removing AutoFilter

PLEASE
WRITE

Removing AutoFilter – Select the cells as selected while adding the filter. From the Data menu, select Filter->Remove Filter. The filters will be removed. The screen shot is shown in the next slide.



File Edit View Insert Format Tools **Data** Window Help



Times New Roman 11

G13:I18

	A	B
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

- Define Range...
- Select Range...
- Sort...
- Filter**
- Subtotals...
- Validity...
- Multiple Operations...
- Text to Columns...
- Consolidate...
- Group and Outline
- Pivot Table
- Refresh Range



- AutoFilter
- Standard Filter...
- Advanced Filter...
- Remove Filter**
- Hide AutoFilter





Creating Charts and Graphs

PLEASE
WRITE

In Calc, you can create graphs and charts to represent the data graphically. Some times, it is very difficult to analyze spreadsheets containing huge amount of data. For example, analyzing the academic performance of students of a school over the past 10 years. Such analysis can be done effectively by using charts which provide a visual presentation of data.



Creating Charts and Graphs



PLEASE
WRITE

Various types of charts can be created in Calc. It offers a choice of 10 chart types such as Column chart, Bar chart, Pie chart, Area chart. Each of the chart types has several sub-types.



Creating Charts and Graphs



Following are the steps required to insert a chart:

Step 1: Select the data which is to be included in the chart.

Step 2: Go to the Insert menu and select the Chart option as shown, another way is to click on the Chart icon in the Standard toolbar.

Step 3: Chart wizard dialog box is displayed as shown in which is used to insert various options related to the chart such as the type of chart, data range, data series and elements of the chart.

Step 4: Select the chart type (Column chart, Bar chart, Pie chart etc.) and click on the Finish button.

PLEASE
WRITE



The screenshot displays the Microsoft Excel application window. The 'Insert' menu is open, and the 'Chart...' option is selected. The menu items are as follows:

- Manual Break
- Cells... (Ctrl++)
- Rows
- Columns
- Sheet...
- Sheet From File...
- Link to External Data...
- Special Character...
- Formatting Mark
- Hyperlink
- Function... (Ctrl+F2)
- Function List
- Names
- Comment (Ctrl+Alt+C)
- Picture
- Movie and Sound
- Object
- Chart...**
- Floating Frame

The background shows a grid with column 'D' selected and row '7' highlighted. The ribbon includes 'File', 'Edit', 'View', 'Insert', 'Format', 'Tools', 'Data', 'Window', and 'Help'. The font is set to Arial.

Chart Wizard



Steps

1. Chart Type

2. Data Range

3. Data Series

4. Chart Elements

Choose a chart type

- Column
- Bar
- Pie
- Area
- Line
- XY (Scatter)
- Bubble
- Net
- Stock
- Column and Line

Normal

3D Look Realistic ▼

Shape

- Box
- Cylinder
- Cone
- Pyramid

Help

<< Back

Next >>

Finish

Cancel



PLEASE
WRITE

Example



Month	Expenditure
Jan	200
Feb	300
Mar	150
Apr	223
May	34
Jun	12
Jul	70
Aug	133
Sep	245
Oct	354
Nov	221
Dec	567

Table 4: Monthly Expenditure of a Firm for the Year 2015



Column Chart:

PLEASE
WRITE

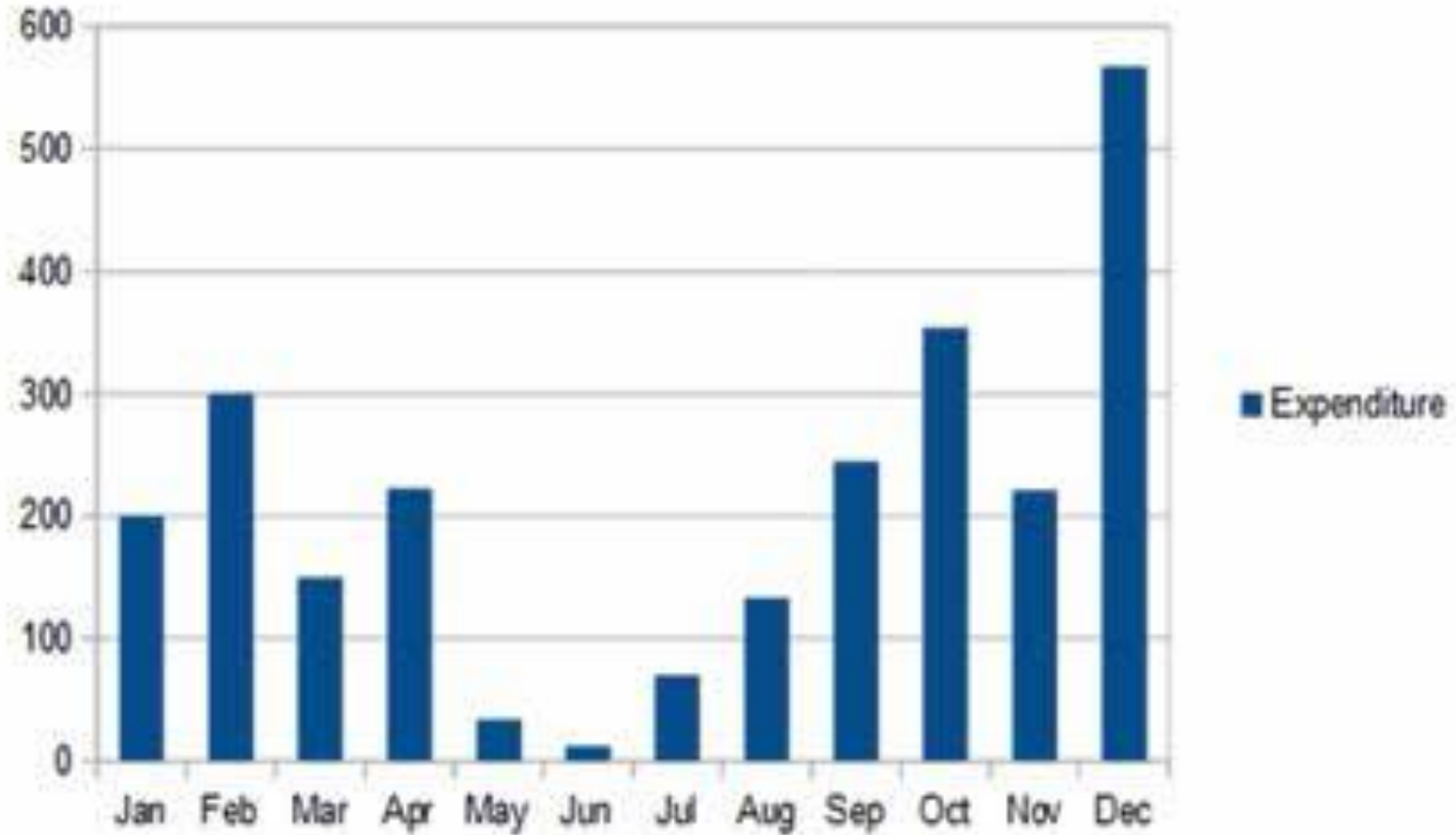
A Column chart is used to compare values across categories by using vertical bars. The Column chart can be inserted by selecting the Column option in the Chart type of the Chart Wizard. You can also select from the various subtypes of Column chart from the Wizard. The Normal Column chart for the data



Column Chart:



PLEASE
WRITE





Bar Chart:

PLEASE
WRITE

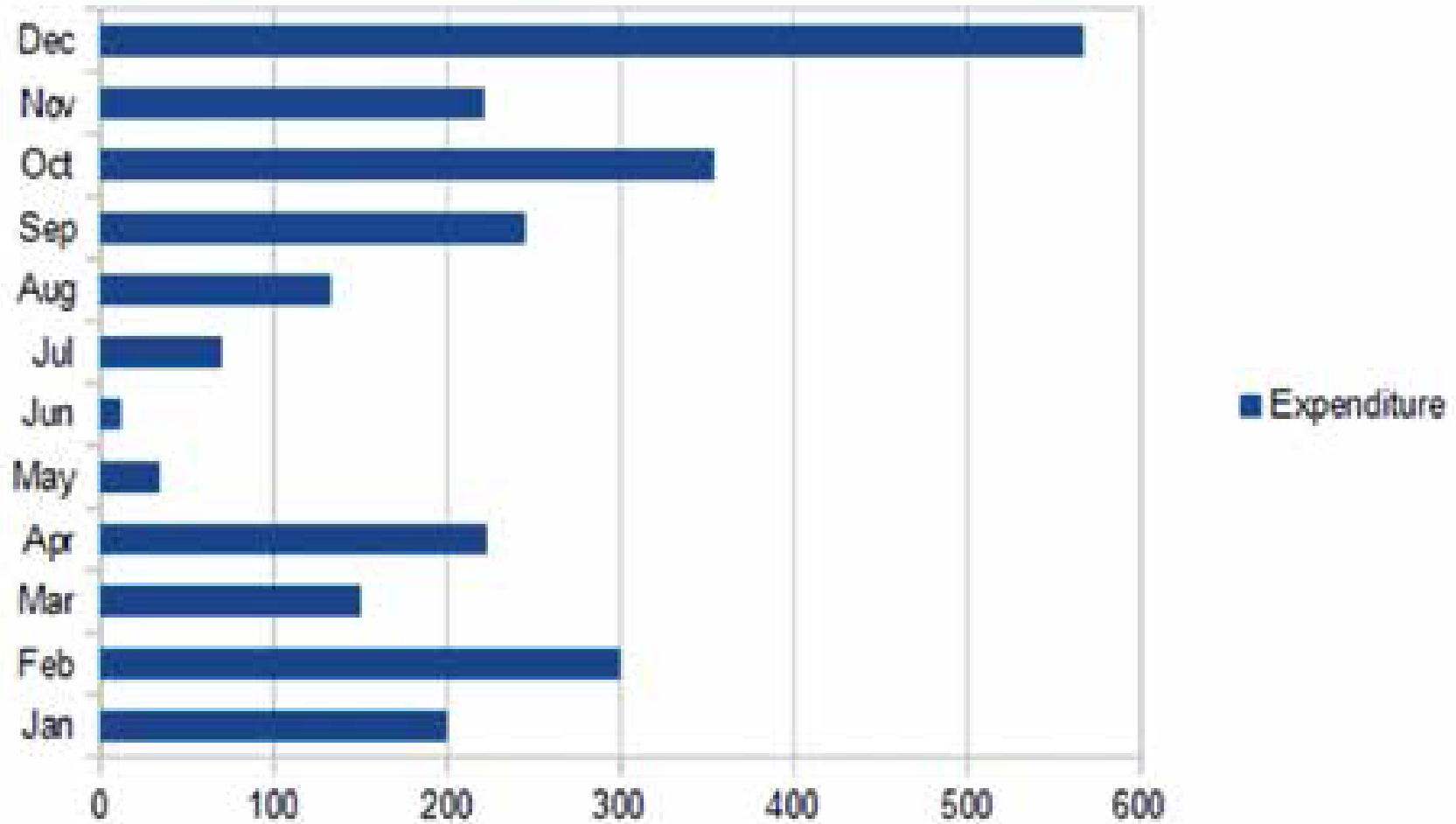
A Bar chart is the horizontal version of a column chart. It is used if you have large text labels. Select the Bar chart option in Step 3 above to create a Normal Bar chart for the Table is shown.



Bar Chart:



PLEASE
WRITE





Pie Chart :



PLEASE
WRITE

A Pie chart is used to display the contribution of each value (slice) to a total (pie) i.e., it can be used to plot various pieces of a single entity. The Normal Pie chart for Table is shown.



Pie Chart :



PLEASE
WRITE



- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

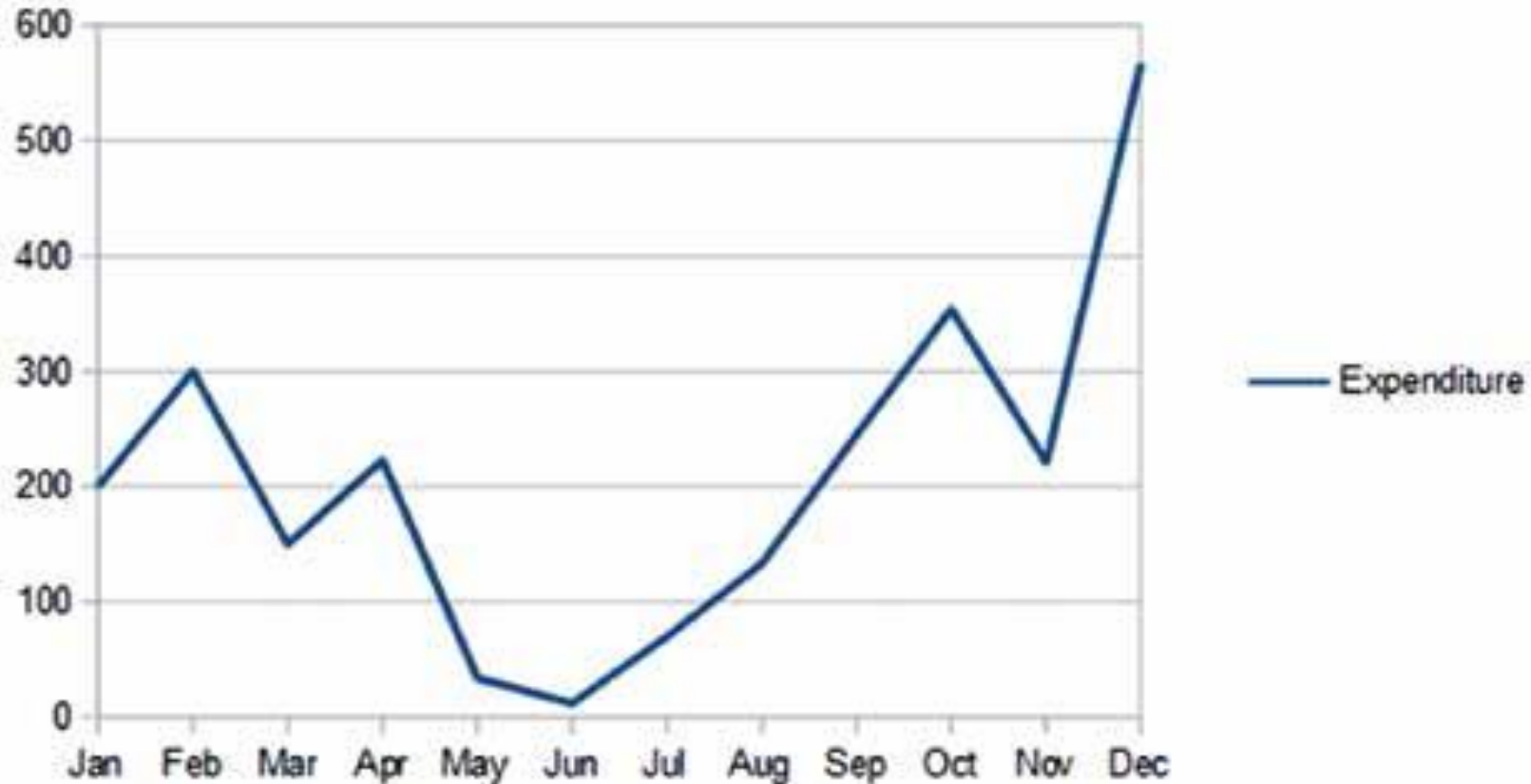


Line Chart :

A Line chart is used to compare trends and changes in values over time. The line chart (lines only) for the data in Table as shown.



**PLEASE
WRITE**





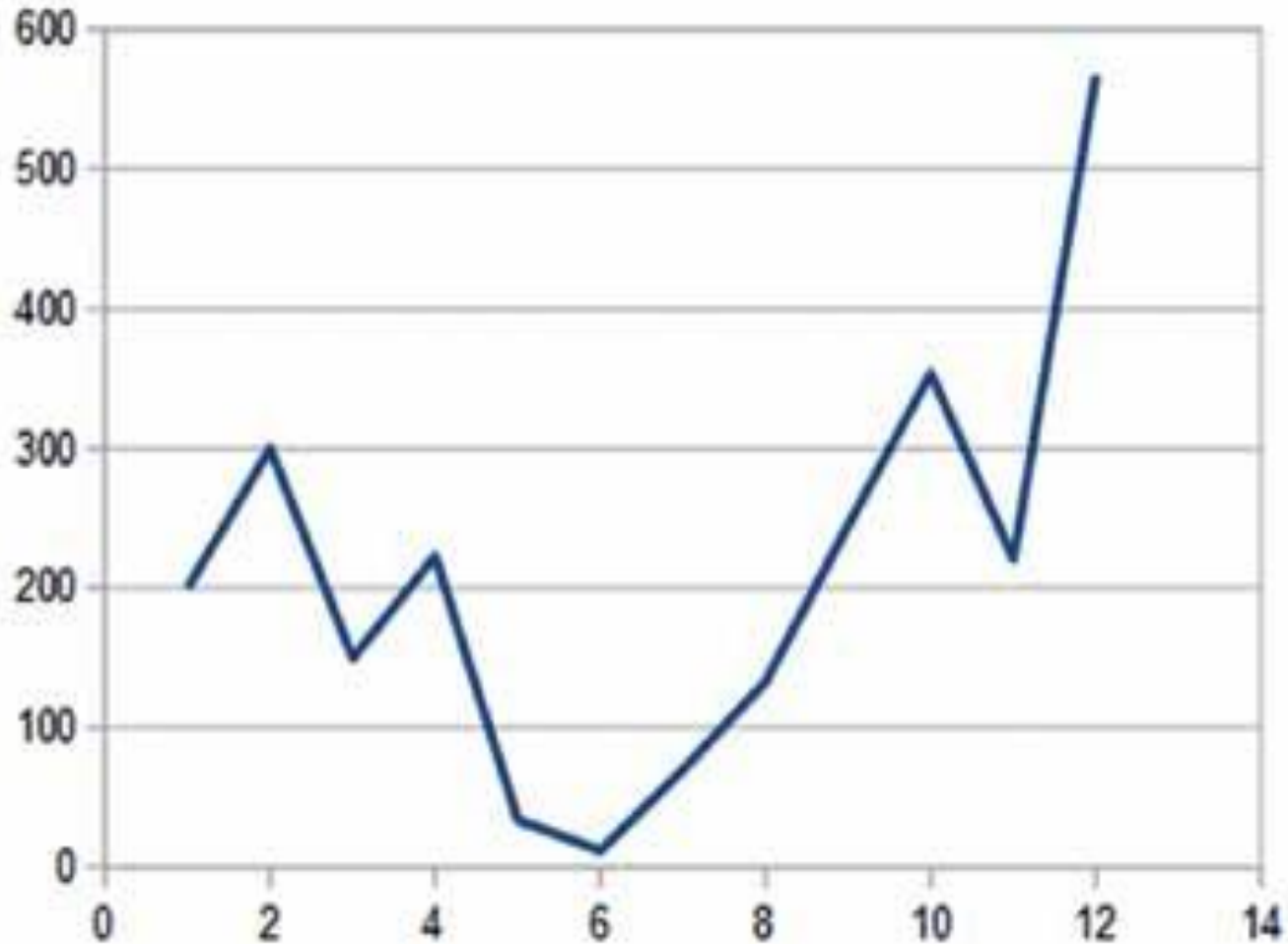
Scatter Chart :

PLEASE
WRITE

A Scatter chart is used to display relationships between variables. The scatter chart for the data in the previous Table is shown. Note that the X axis labels are not the month names as in the case of line chart but numbers.



Scatter Chart :



— Expenditure

PLEASE
WRITE



Inserting Title : You can insert title and subtitle of the graph and titles of X-axis and Y-axis in the Chart Elements of the Chart Wizard as shown.



**PLEASE
WRITE**

The screenshot shows the 'Chart Wizard' dialog box, specifically the 'Chart Elements' step. The 'Steps' list on the left includes: 1. Chart Type, 2. Data Range, 3. Data Series, and 4. Chart Elements (which is highlighted). The main area is titled 'Choose titles, legend, and grid settings'. It contains the following fields and options:

- Title:** Monthly Expenditure for the Year 2015
- Subtitle:** (Empty field)
- X axis:** Month
- Y axis:** Expenditure
- Z axis:** (Empty field)
- Display legend:** Display legend
 - Left
 - Right
 - Top
 - Bottom
- Display grids:**
 - X axis
 - Y axis
 - Z axis

At the bottom, there are buttons for 'Help', '<< Back', 'Next >>', 'Finish' (highlighted with a blue border), and 'Cancel'.



After inserting the chart elements, the Points and Lines chart for the previous Table is shown.



Monthly Expenditure for the Year 2015



PLEASE
WRITE



Legends :

PLEASE
WRITE

Most commonly located on the right of the chart, legends help the readers of the chart to decode the charted data by associating descriptive text with the colors or patterns of data in the chart.

You can modify the placement of legends or even remove them in the chart by using the Chart Wizard->Chart Elements as shown in the right panel



Grids:

PLEASE
WRITE

To make the data in a chart that displays axes easier to read, you can display horizontal and vertical chart gridlines.

By default the horizontal gridlines are displayed.

You can turn on and off the gridlines by using the Chart Wizard->Chart Elements as shown before.



Resizing and Moving Charts



PLEASE
WRITE

After the chart has been inserted, you can easily move and resize it. Click anywhere in the chart area and drag it to another position in the spreadsheet for moving the chart. For resizing it, click on the chart and then click and drag any of the chart resizing handle (Eight green small squares on the border of the chart as shown



Deleting and Modifying charts



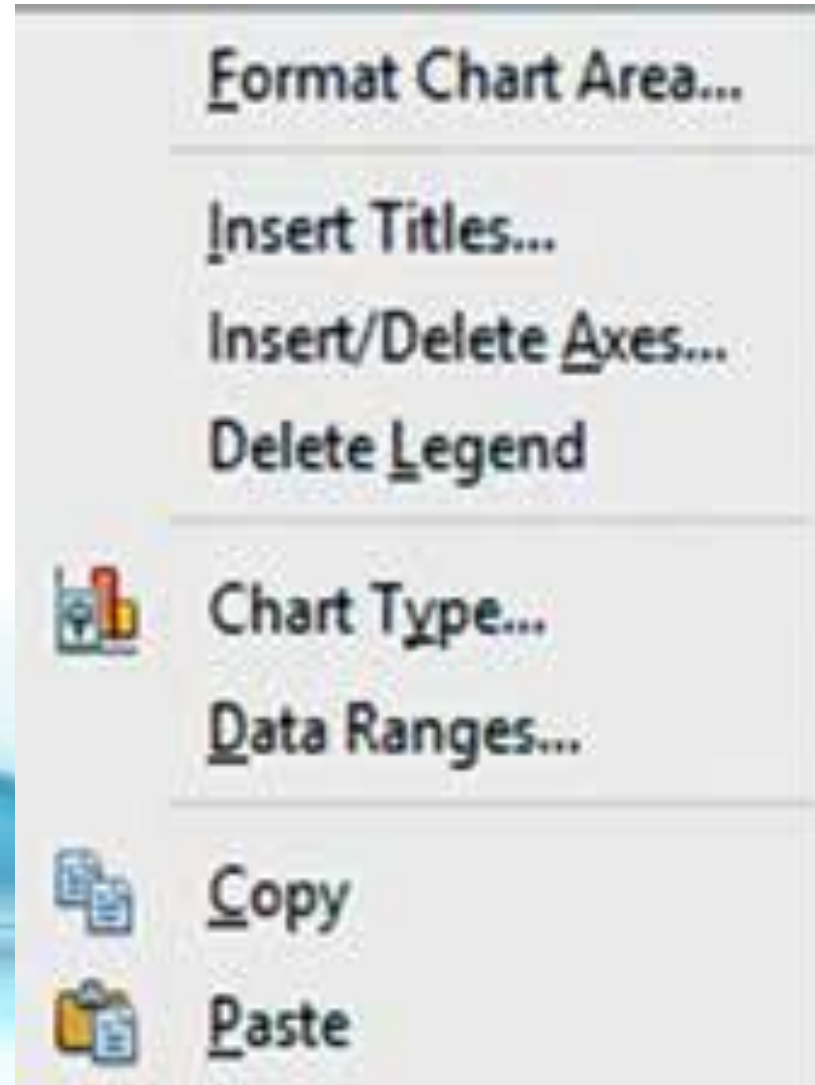
Deleting Charts: Select the chart and then press the Delete key on the keyboard for deleting a chart.

Modifying Charts: After the chart has been inserted you easily modify the chart. Double-click on the chart and then right-click. You can see various options such as Chart type, legends, titles, as shown

PLEASE
WRITE



Modifying charts





Macros



A macro is a recording of each and every command and action you perform to complete a task. A macro records your mouse clicks and keystrokes while you work and play them back later. When you run the macro, it plays those actions back in the exact same order. Thus, if you want to repeat the actions multiple times you just need to run the macro.

PLEASE
WRITE



Create/Record Macros:



1. Go to the Tools tab on the Menu bar->Macros->Record Macro as shown.

Observe a small dialog box has appeared on the worksheet displaying Stop Recording.

2. Calc has started recording the Macro. Until you stop the recording, every Calc command and keystroke will be recorded in the macro, in the order in which they are entered.

PLEASE
WRITE



Create/Record Macros:

PLEASE
WRITE

Suppose the following tasks were performed:

- a) We created all borders in the cells A1:C3.
- b) Then we changed the background color of cells A1:C3 to green.



Create/Record Macros:



3. After we have done all the required tasks, we will stop recording the macro by clicking on the Stop recording option on the dialog box . A new dialog box will open (OpenOffice Basic Macros) in which you have to specify the name of the macro and the location for saving it (We have named the macro as Color Change and saved it in My Macros folder) as shown.

PLEASE
WRITE



Record Ma... [Close]

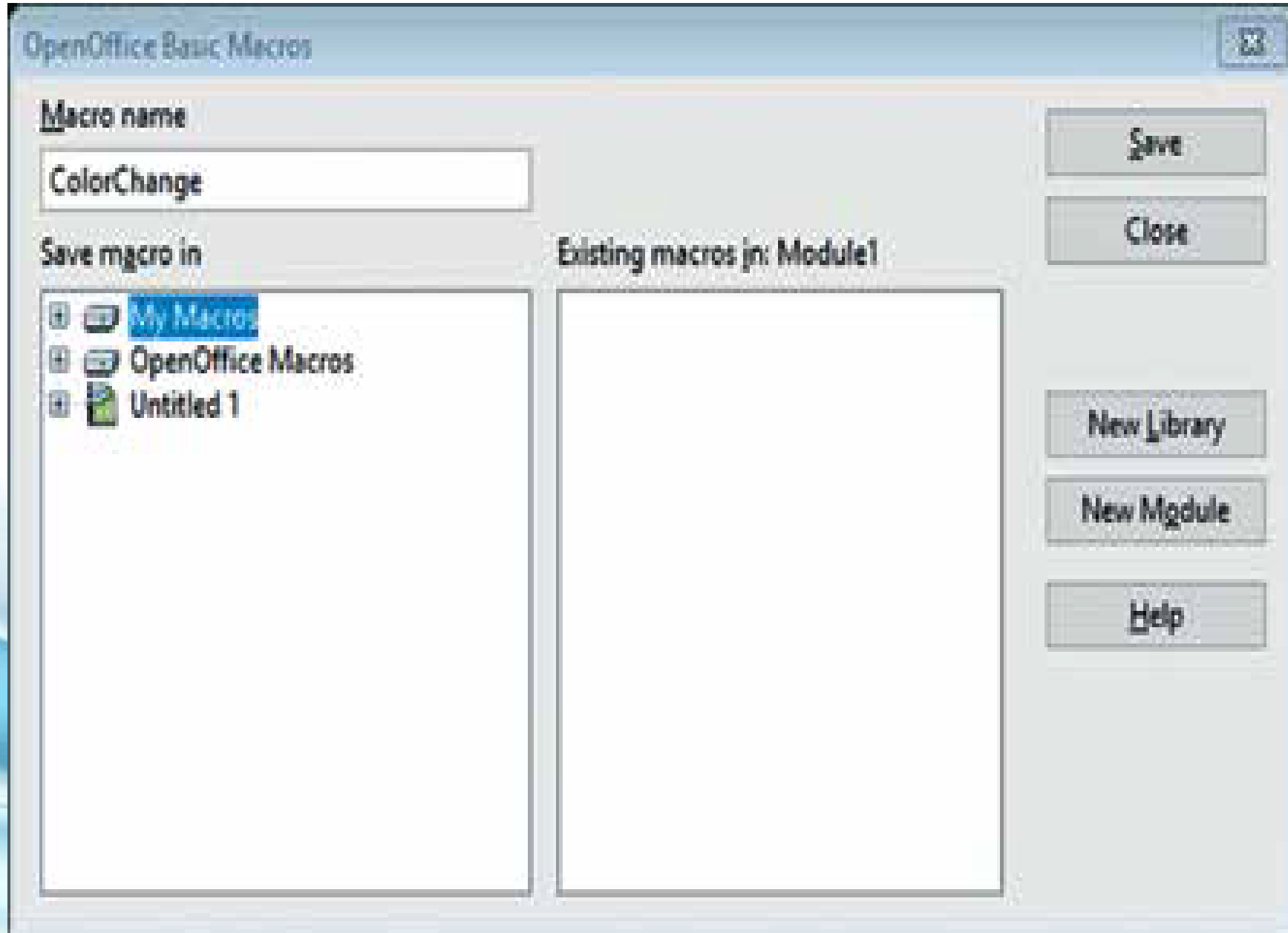
Stop Recording [fx] [Σ]

File Edit View Insert Format Tools Data Window Help

Spelling... F7
Language
Detective
Goal Seek...
Solver...
Scenarios...
Share Document...
Merge Document...
Protect Document
Cell Contents
Gallery
Media Player
Macros
Extension Manager...
XML Filter Settings...
AutoCorrect Options...
Customize...
Options...

Record Macro
Run Macro...
Organize Macros
Digital Signature...
Organize Dialogs...

	A	C	D
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			





Run/Use Macros created:



Now we have a macro that can perform in a single operation all the tasks we have performed during recording of the macro.

PLEASE
WRITE

Run/Use Macros created:

Following are the steps to run/use a macro that we have already created:

1. Go to the Tools tab on the Menu bar->Macros->Run Macros.
2. A dialog box will open, showing all the macros created. We will select the one to run and then click on Run button.



Run/Use Macros created:



PLEASE
WRITE

3. The tasks performed during recording of the macro will be repeated in the same order in which they were performed. (Running ColorChange Macro will create borders around the cells A1:C3 and set their background color to green.)

By default, recorded macros use absolute cell referencing, which means that exact cell locations are recorded into the macro.





Delete Macros:



Following are the steps to delete a macro that we have already created:

PLEASE
WRITE

1. Go to the Tools tab on the Menu bar->Macros->Organize Macros and select the OpenOffice Basic option.
2. A dialog box listing the macros created will open as shown in Figure. Select the macro you want to delete and then click on the Delete button.



OpenOffice Basic Macros

Macro name
ColorChange

Macro from

- My Macros
 - Standard
 - Module1
- OpenOffice Macros
- Untitled 1

Existing macros in: Module1

- ColorChange

Buttons: Run, Close, Assign..., Edit, Delete, Organizer..., Help





Printing Spreadsheets



PLEASE
WRITE

Calc offers various options for printing spreadsheets. Many details can be selected for what is to be printed and what not. For printing, open the File tab on the Menu bar and select the Print option. A dialog box will open in which you can select various options such as:

1. All Sheets, Selected Sheets or Selected Cells.
2. All pages or specific pages. Specific page numbers separated by comma or range of pages (such as 1:10) can be entered in the Pages box.



3. Number of Copies

After selecting the options, click on Print to print the spreadsheet(s).



EXAMPLE-GRAPHS.ods - OpenOffice Calc

File Edit View Help

Find

Print

8.50 in (Letter)

11.00 in

1 / 1

Print

General OpenOffice Calc Page Layout Options

Printer

Fax
Microsoft XPS Document Writer
Send To OneNote 2013
Webex Document Loader

Details Properties...

Range and copies

All sheets
 Selected sheets
 Selected cells

Number of copies 1

Collate

Thereof print

All pages
 Pages 1

Print in reverse page order

Help Print Cancel



OLD SYLLABUS-JULY 2020



Part B - Vocational Skills

UNIT No.	Unit
1	Computer Organization & OS: User perspective.
2	Networking and Internet.
3	Office automation tools:
4	Multi Media Design: (Open Source Design Tools) (REMOVED)
5	Troubleshooting: Hardware, Software and Networking.



NEW SYLLABUS-JULY 2020



Part B

Subject Specific Skills

Unit -1 : Computer Organization + **TROUBLE SHOOTING SOFTWARE,HARDWARE**

Unit -2 : Networking And Internet

Unit-3 : Office Automation Tools

Unit-4: RDBMS **(NEWLY ADDED)**

Unit-5: Fundamentals of Java **(NEWLY ADDED)**

Total



Any Questions?