# UCSC

Practical Sheet 04
Libre Office
Introduction to Calc

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. There are so many features provided by the Calc and following are a few of them.

- Functions, which can be used to create formulas to perform complex calculations on data.
- Database functions, to arrange, store, and filter data.
- Dynamic charts; a wide range of 2D and 3D charts.
- Macros, for recording and executing repetitive tasks; scripting languages supported include LibreOffice Basic, Python, BeanShell, and JavaScript
- Ability to open, edit , and save Microsoft Excel spreadsheets.
- Import and export of spreadsheets in multiple formats, including HTML, CSV, PDF, and PostScript.

Calc main window

The Calc main window is shown in the following Figure. The various parts of this display are explained below.
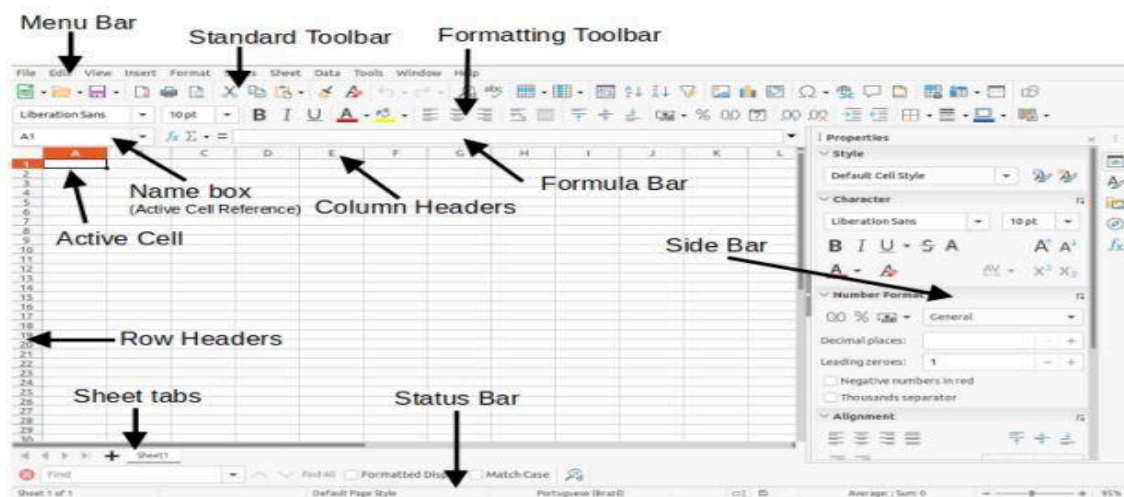
Title bar

The Title bar, located at the top, shows the name of the current spreadsheet. When the spreadsheet is newly created, its name is Untitled X, where X is a number. When you save a spreadsheet for the first time, you are prompted to enter a name of your choice.

Menu bar

Under the Title bar is the Menu bar. When you choose one of the menus, a list of options appears. You can also modify the Menu bar, as explained Setting up and Customizing.

- **File** – contains commands that apply to the entire document, such as **Open, Save, Wizards, Export as PDF, Print, Digital Signatures, Templates.**
- **Edit** – contains commands for editing the document, such as **Undo, Copy, Find and Replace, Track Changes.**
- **View** – contains commands for modifying how the Calc user interface looks, such as **Toolbars, View Headers, Full Screen, Zoom.**
- **Insert** – contains commands for inserting elements into a spreadsheet, such as **Image, Chart, Text Box, Headers and Footers.**
- **Format** – contains commands for modifying the layout of a spreadsheet, such as **Cells, Page, AutoFormat Styles, Align.**
- **Styles** – contains options for applying and managing styles, such as **Heading 1, Footnote, Manage Styles.**
- **Sheet** – contains commands for inserting and deleting elements and modifying the entire sheet, such as **Delete Rows, Insert Sheet, Rename Sheet, Navigate.**
- **Data** – contains commands for manipulating data in your spreadsheet, such as **Define Range, Sort, AutoFilter, Consolidate, Statistics.**
- **Tools** – contains functions to help check and customize a spreadsheet, for example **Spelling, Share Spreadsheet, Macros, Options.**
- **Window** – contains two commands; **New Window** and **Close Window.** Also shows all open windows in other LibreOffice applications.
- **Help** – contains links to **LibreOffice Help** (included with the software), **User Guides,** and other miscellaneous functions; for example **Restart in Safe Mode, License Information, Check for Updates, About LibreOffice.**

Toolbars

The default setting when Calc opens is for the Standard and Formatting toolbars to be fixed at the top of the workspace.

Calc toolbars can be either fixed in place, or floating, allowing you to move a toolbar to a more convenient location on your workspace. Fixed toolbars can be unfixed and moved

to a different fixed location or become floating toolbars. Likewise, floating toolbars can be fixed.

You can choose the single-toolbar alternative to the default double toolbar arrangement. It contains the most-used commands. To activate it, enable **View > Toolbars > Standard (Single Mode)** and disable **View > Toolbars > Standard and View > Toolbars > Formatting.**

The default set of icons (sometimes called buttons) on toolbars provides a wide range of common commands and functions. You can also remove or add icons to toolbars.

Placing the mouse cursor over an icon, text box, or menu command displays a small box called a tooltip that shows the name of the item's function. To close a tooltip, move away from the underlying component or press the Esc key.

To see a more detailed explanation of an icon, text box, or menu command, do one of the following to open extended tips:
- To activate extended tips just once: press Shift+F1.
- To activate extended tips from the Menu bar: go to **Help > What's This?** and hover the mouse pointer over an icon.
- To turn extended tips on or off: go to **Tools > Options > LibreOffice > General** on the Menu bar and toggle the **Extended tips** checkbox.

Formula Bar

The Formula Bar is located at the top of the Calc workspace. It is permanently docked in this position and cannot be used as a floating toolbar. However, it can be hidden or made visible by going to View > Formula Bar on the Menu bar.


From left to right in as in the figure given, the Formula Bar consists of the following:

- **Name Box** – gives the current active cell reference using a combination of a letter and number, for example A1. The letter indicates the column and the number indicates the row of the selected cell. If you have selected a range of cells that is also a named range, the name of the range is shown in this box. You can also type a cell reference in the Name Box to jump to the referenced cell. If you type the name of a named range and press the Enter key, the named range is selected and displayed.

- **Function Wizard** – opens a dialog from which you can search through lists of available functions and formulas. This can be very useful because it also shows how the functions are formatted.
- **Select Function** – performs a calculation on the numbers in the cells above the selected cell and then places the result in the selected cell. If there are no numbers above the selected cell, then the calculation operates on the cells to the left. The calculation to be performed is selected from a drop-down menu containing options for **Sum, Average, Min, Max, and Count**. The Alt+= keyboard shortcut is equivalent to clicking the **Select Function** icon and selecting the **Sum** option.
- **Formula** – inserts an equals (=) sign in the selected cell and the Input line, allowing a formula to be entered.
- **Input line** – displays the contents of the selected cell (data, formula, or function) and allows you to edit the cell contents. To turn the Input line into a multiline input area for very long formulas, click the **Expand Formula Bar** icon on the right. To edit inside the Input line area, click in the area, then type your changes.

You can also directly edit inside the cell by double-clicking on the cell. When you enter new data into a cell, the **Select Function** and **Formula** icons change to **Cancel and Accept** icons.

Status Bar
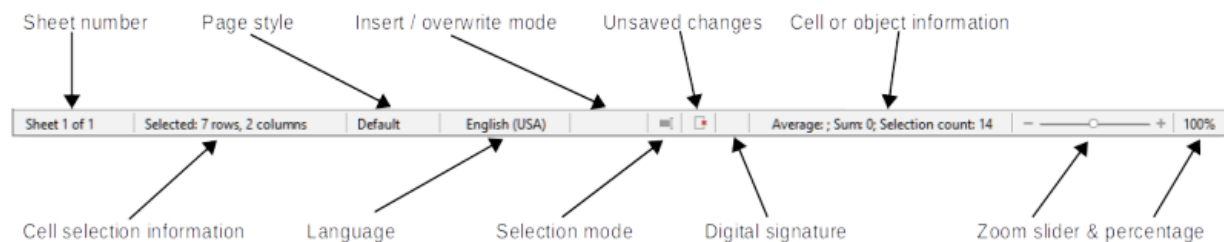
The status bar at the bottom of the workspace provides information about the spreadsheet and convenient ways to quickly change some of its features.

Sheet number
Shows the sequence number of the current sheet and the total number of sheets in the spreadsheet. The sequence number may not be the same as the name on the sheet tab if sheets have been moved. Double-click on this zone to open the Navigator dialog.

Cell selection information
Shows how many rows and how many columns are selected. Blank if the selected cells do not form a rectangular block.

Page style
Shows the page style of the current sheet. To edit the page style, double-click on this field and the Page Style dialog opens.

Language
Shows current default language as selected at **Tools > Options > Language Settings > Languages.**

Insert / overwrite mode
When the user is interacting with a cell in edit mode, this field distinguishes between the insert and overwrite modes. If the cell being edited is in overwrite mode, the field shows the text Overwrite. In other cases, the field is blank. You can press the Insert key on the keyboard, or click on this field, to switch between insert and overwrite modes.

Selection mode
Right-click to open a context menu and select **Standard selection, Extending selection, or Adding selection**. You can also double-click the icon to switch to the next selection mode in sequence. The icon does not change when different selection modes are selected
.
Unsaved changes
The appearance of this icon indicates whether the spreadsheet contains unsaved changes. When there are unsaved changes, click this icon, use **File > Save**, click the **Save** icon on the Standard toolbar, or press Ctrl+S to save the spreadsheet.

Digital signature
If the document has been digitally signed, an icon shows here. You can click the icon to view the certificate. See Chapter 6, Printing, Exporting, E-mailing, and Signing for more information about digital signatures.

Cell or object information
Displays information related to the position of the cursor or the selected element of the spreadsheet. When a group of cells is selected, the sum of the contents is displayed by default. Right-click in this field to select other functions, such as the average value, maximum value, minimum value, or count (number of items selected)

Zoom slider
Drag the zoom slider, click on the slider's rail, or click the + and – symbols to change the view magnification.

Zoom percentage
Indicates the magnification level of the document. Right-click on the percentage to open a list of magnification values from which to choose. Click on the percentage to open the Zoom & View Layout dialog.

Sidebar

The Sidebar is a mixture of toolbar and dialog. When opened (**View > Sidebar or Ctrl+F5)**, it appears on the right side of the window and consists of five decks: Properties, Styles, Gallery, Navigator, and Functions. Each deck has a corresponding icon on the Tab panel to the right of the Sidebar, allowing you to switch between them. The decks are described below.
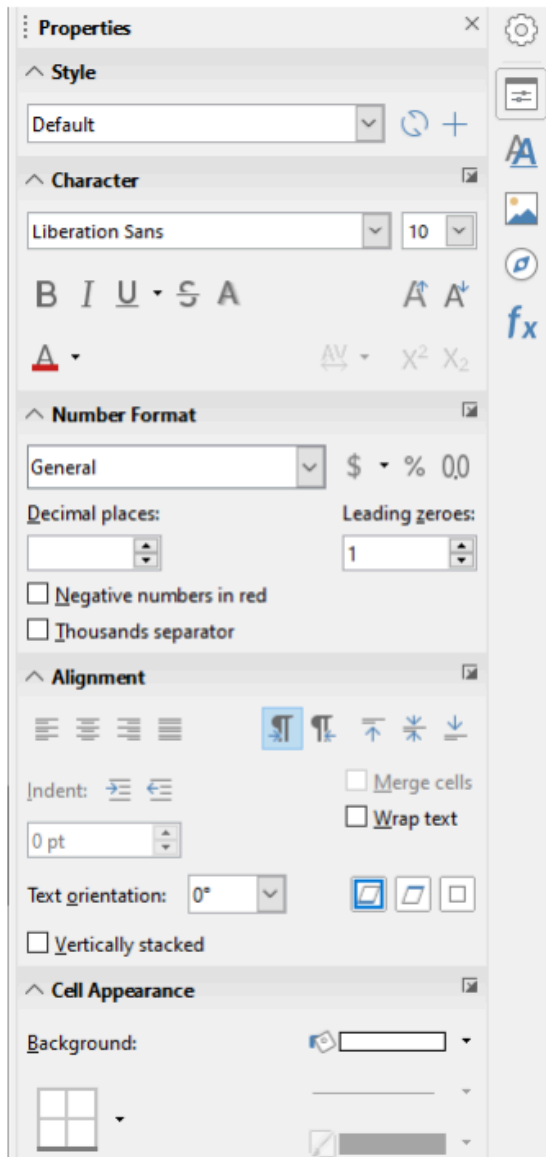

Figure 6: Sidebar

Properties

This deck includes five content panels. These panels, with the exception of the Style panel, have **More Options** buttons that open dialogs with additional options. These dialogs lock the document for editing until they are closed.

- **Style:** Options for applying, updating, or creating cell and page styles.

- **Character:** Options for formatting the text, such as font name, size, and color. Some controls, such as superscript, only become active when the text cursor is active in the Input line of the Formula Bar or the cell.
- **Number Format:** Options for formatting numbers, including decimals, currency, dates, or numeric text.
- **Alignment:** Options for arranging the text in various ways, including horizontal and vertical alignment, wrapping, indenting, merging, text orientation, and vertical stacking.
- **Cell Appearance:** Options include background color and border formats, including line color and style.

Styles

Enables the user to apply existing styles, modify existing styles, or create new styles. This deck can also be opened by selecting **Styles > Manage Styles** on the Menu bar, selecting **View > Style**s on the Menu bar, or pressing F11.

Gallery

Enables the user to add images, diagrams, or other objects that are available in the Gallery themes. This deck can also be opened by selecting **View > Gallery** on the Menu bar.

Navigator

This deck is similar to the Navigator dialog opened by selecting **View > Navigator** from the Menu bar or pressing F5. See "Using the Navigator" on page 39.

Functions

This deck contains a list of Calc's many functions organized by category. It is a simpler version of the Function Wizard, which is opened by selecting **Insert > Function** on the Menu bar, clicking the **Function Wizard** icon on the Formula Bar, or pressing Ctrl+F2.

To the right side of the title bar of each open deck is a **Close Sidebar Deck** button, which closes the deck to leave only the Tab panel of the Sidebar open. Click any button in the Tab panel to toggle on / off the display of the associated deck. To hide the Sidebar, or reveal it if already hidden, click on the left edge **Hide/Show** button. To adjust the deck width, drag on the left edge of the Sidebar

Spreadsheet layout

Individual cells

The main section of the screen displays the cells in the form of a grid, with each cell located at the intersection of a column and a row.
At the tops of the columns and the left ends of the rows are a series of header boxes containing letters and numbers. The column headers use alpha characters that start

with A and increase to the right. The row headers use numerical characters that start at 1 and increase down.

These column and row headers form the cell references that appear in the Name Box on the Formula BarIf the headers are not visible on the spreadsheet, go to **View > Headers** on the Menu bar.

Sheet tabs

A spreadsheet file can contain many individual sheets. At the bottom of the grid of cells in a spreadsheet are sheet tabs. Each tab represents a sheet in a spreadsheet. Create a new sheet by clicking on the plus sign to the left of the sheet tabs.

Clicking on a tab enables access to an individual sheet. When a sheet is active, the tab is highlighted. Select multiple sheets by holding down the Ctrl key while clicking on the sheet tabs.

To change the default name for a sheet (Sheet1, Sheet2, and so on):
1. Right-click on the sheet tab and select **Rename Sheet** in the context menu. A dialog opens allowing you to type in a new name for the sheet.
2. Click **OK** when finished to close the dialog.

To change the color of a sheet tab:
1. Right-click on the sheet tab and select **Tab Color** in the context menu to open the Tab Color dialog.
2. Select a color and click **OK** when finished to apply the color and close the dialog.
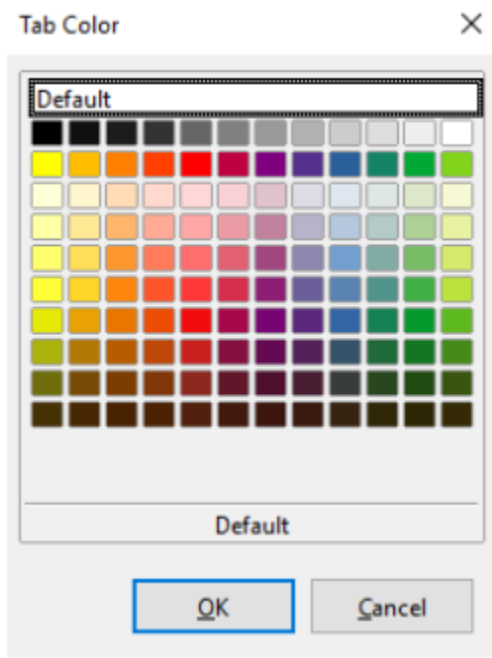
Creating, opening, and saving spreadsheets

Creating and opening

Creating and opening spreadsheets is identical to creating and opening documents in the other LibreOffice modules.

Clicking on the LibreOffice menu entry, desktop icon, or tile opens the LibreOffice Start Center from where you can select the individual components of LibreOffice. You can also choose to open an existing file or use a template. The thumbnails in the Start Center include an icon showing the type of file (text, spreadsheet, drawing, presentation).

Figure 3: LibreOffice Start Center
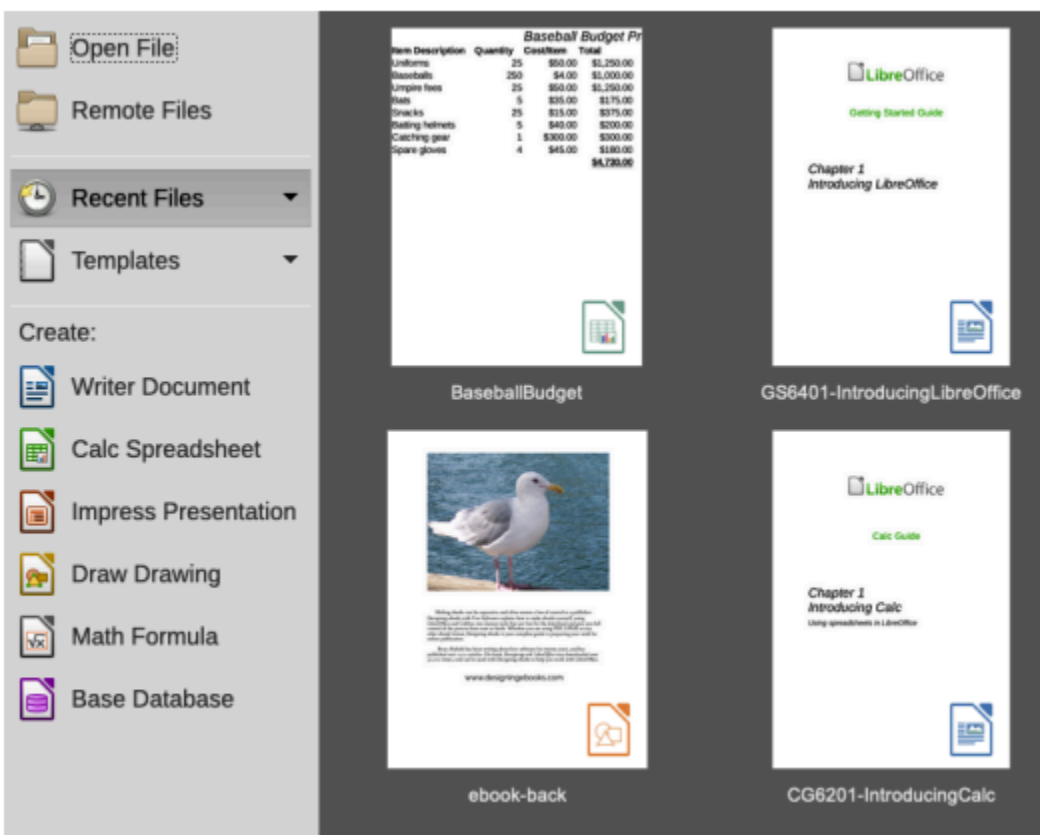
Opening a CSV file

Comma-separated values (CSV) files are spreadsheet files in a text format where cell contents are separated by a character such as a comma or semi-colon. Each line in a CSV text file represents a row in a spreadsheet. Text is entered between quotation marks. numbers are entered without quotation marks.

To open a CSV file in Calc:

1. Choose **File > Open** on the Menu bar, click the **Open** icon on the Standard toolbar, or press Ctrl+O and locate the CSV file that you want to open.
2. Select the file and click **Open**. By default, a CSV file has the extension .csv. However, some CSV files may have a .txt extension.
3. The Text Import dialog (Figure 8) opens. Here you can select options for importing a CSV file into a Calc spreadsheet.
4. Click **OK** to open and import the file.

Saving spreadsheets

You can save sheets as follows:
- **Save** – use if you are keeping the document, its current filename and location.
- **Save As** – used to create a new document, or change the filename and/or file format, or save the file in a different location on your computer.
- **Save Remote** – use if your document is already stored in a remote server or will be stored in a remote server.
- **Save a Copy** – use to save a copy of your current document and keep it open for more editing.
- **Save All** – use to save all the files open in your current session.

Figure 9: The Save As dialog