

LibreOffice
The Document Foundation

*How to Create a
Home Finances Budget
Using LibreOffice Calc*

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Note for Mac users

Some keystrokes and menu items are different on a Mac from those used in Windows and Linux. The table below gives some common substitutions for the instructions in this chapter. For a more detailed list, see the application Help.

Windows or Linux	Mac equivalent	Effect
Tools > Options menu selection	LibreOffice > Preferences	Access setup options
<i>Right-click</i>	<i>Control+click</i>	Open a context menu
<i>Ctrl (Control)</i>	⌘ (Command)	Used with other keys
<i>F5</i>	<i>Shift+⌘+F5</i>	Open the Navigator
<i>F11</i>	<i>⌘+T</i>	Open the Styles and Formatting window

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Why use LibreOffice Calc for your budget?

There are many reasons why you might want to create a budget. Maybe you need to track your expenses to "find" some money that's gone missing, or perhaps your debt is growing and you realize that the more you understand the fine details of your financial life, the easier it will be to gradually change your habits and improve it.

Now here's the problem: for most of us, whenever lots of numbers get involved, two bad things happen:

- We make mistakes with our calculations, and
- We find it difficult to absorb the real significance of all those rows and rows of figures.

Either way, a budget's many benefits can be lost through simple human limitations. But computers were built just for this kind of work. A properly designed spreadsheet document can both eliminate errors and intelligently display your data in a way that focuses your attention on just the details you need to know. And, like everything else associated with LibreOffice, Calc spreadsheets are absolutely free!

What is a spreadsheet?

A spreadsheet is simply a document that is particularly good at storing and displaying combinations of numbers and words while performing automated calculations on the numbers. The trick (and it's not nearly so complicated as you might think) is to arrange your numbers in ways that allow LibreOffice Calc to get its work done as quietly and efficiently as possible.

Designing the layout for a new Calc spreadsheet

To get started, you'll need to create a new Calc spreadsheet. On the top menu bar, click on **File > New > Spreadsheet**.

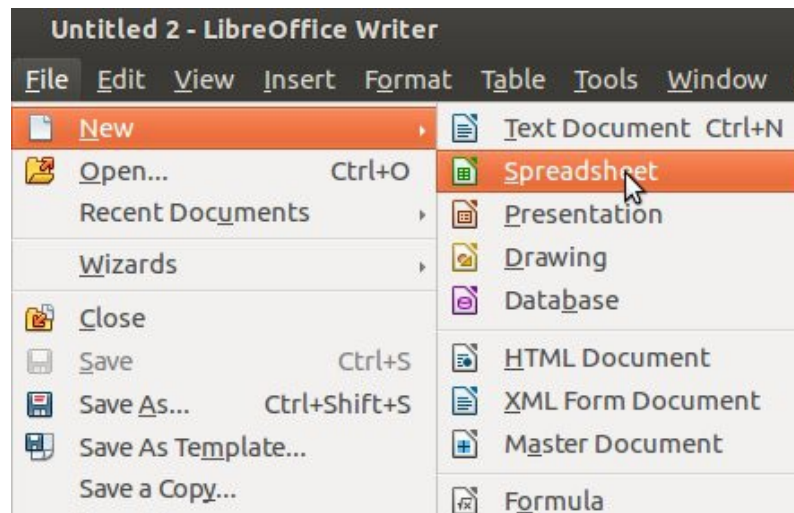


Figure 1: The Open New File menu

Formatting cells

The first thing you see when you open a new spreadsheet is an empty grid surrounded by the menu bars specific to Calc. Don't be fooled by the uniform size of all the boxes (or *cells*, as they're called); they can all be changed. So, for instance, you might prefer the second column from the left (known as column B) to be a bit wider. Simply move your mouse until it's hovering above the right wall of the title cell at the top of the column (the one with the letter B in it), click and, while you're still holding the mouse button down, drag to the right. You can increase the height of a row of cells by similarly dragging down on the bottom of a row in the far left column.

Tip

If you add more than a word or two of text to a cell, Calc will automatically extend the cell to include the space of the one to its right...and the one to *its* right if necessary. It's good to remember that editing the text spread through a number of cells in this way requires that you first click on the master cell: the one where the text begins.

You can also edit the color of a cell's background or text by clicking on a cell (or highlighting a group of cells by dragging the mouse across them) and then clicking on the small arrow to the right of either the **Background Color** or **Font Color** icons on the top menu bar.



Figure 2: Background and font color icons

In addition, you can edit the text contained within a cell much the same way you would in a word processor: highlight the text you'd like changed and apply style, size, and font attributes as you normally would via the **Format > Character** menu dialog.

For the kind of project we're creating, it's important to get our design all finished before we actually add any data. You will soon see why all these details are so important.

Tip

Now is a good time to give your document a name and save it. Click on **File > Save As** to display the save dialog, which will prompt you to enter a name and a save location and to choose a file type. We'll stick with the default file type (*ODF Spreadsheet*) which will append a *.ods* suffix to the filename.

Remember to regularly save any document you're working on because you really can never predict when a software or system crash might strike, destroying any work you might have done since the last backup. Saving by pressing *Ctrl+S* is a quick shortcut that needn't interrupt your workflow.

So let's see what we can do at the design stage to help make the spreadsheet data more readable.

Type the words **Household Budget Worksheet** in the top left column of the spreadsheet. You will notice that the text spills over into the adjoining cells to the right. Now, press *Ctrl+A* to select all the text in the current cell, and increase its size to 14 (you can use the pull-down font size menu towards the left of the top menu bar). While the text is still highlighted, click on the **Background Color** icon and select a new color. Red, perhaps. Click next on the **Font Color** icon to change the text color to something that will show up a bit better against a deep red background. Maybe white. You might now have to select the adjacent cells to change their background color to match the one to their left. When you're done, there is a clearly visible document title.

Now add row headings to column A (starting with line 3 to allow for the column headings we'll soon add). You can, of course, choose some other method, but we've divided the row headings into major sections (*Income* and *Expenses*), leaving enough rows in between for sub-headings.

Tip

You can add or remove rows or columns at any time by right-clicking on the appropriate row or column heading and choosing **Insert** or **Delete**.

Since some of the text is longer than a single cell (especially once we've made it bold), you might want to expand column A by dragging the vertical line between the headers of column A and B.

We've also created column headers for each month, plus for your estimated monthly expenses and, at the far right, for year-to-date totals.

	A	B	C	D	E
1					
2		Estimate	January	February	March
3	Income:				
4	Employment income				
5	Rental income				
6	Tax credits				
7					
8	Expenses:				
9	Mortgage/Rent				
10	Groceries				
11	Line of Credit				
12	Credit Card #1				
13	Credit Card #2				
14	Car Payment				
15	Home Insurance				
16	Car Insurance				
17	Health Insurance				
18	Telephone/Internet				
19	Mobile Phone				
20	Daycare				
21	Utilities				
22	Travel				
23	Entertainment				
24					
25	Total Income:				
26					
27	Total Expenses:				
28					
29	Difference:				

Figure 3: Section of the spreadsheet's text fields

Now we can add some visual cues to make it easier to read our data. A simple left-click on the number **2** of row two will highlight the entire row. We can then click on the arrow to the right of the **Background Color** icon to select a color. We chose a light gray. Changing the color of other areas is only slightly more involved: left-click the heading of the first cell below *Income* (cell A4 in our case) and, without releasing the mouse button, drag your mouse to the December cell of the last of the income rows (N6). You can now choose a background color for these selected cells. Do the same for the rows of expenses. You might also want to emphasize the connection between the *Income* items and *Total Income* and between *Expenses* and *Total Expenses* by matching their colors.

Tip

When you change the background color of a group of cells, you may find that the cell border lines strangely disappear. To fix this, press **Ctrl+A** to select all the cells in the spreadsheet and, from the menu at the top of your screen, click on **Format > Cells** where you can choose the button that will set the outer border and all inner lines.

Figure 4 shows how our spreadsheet now looks.

	A	B	C	D	E
1	Household Budget Worksheet				
2		Estimate	January	February	March
3	Income:				
4	Employment income				
5	Rental income				
6	Tax credits				
7					
8	Expenses:				
9	Mortgage/Rent				
10	Groceries				
11	Line of Credit				
12	Credit Card #1				
13	Credit Card #2				
14	Car Payment				
15	Home Insurance				
16	Car Insurance				
17	Health Insurance				
18	Telephone/Internet				
19	Mobile Phone				
20	Daycare				
21	Utilities				
22	Travel				
23	Entertainment				
24					
25	Total Income:				
26					
27	Total Expenses:				
28					
29	Difference:				
30					
31					

Figure 4: Section of the spreadsheet's text fields with color added

Working with data

We're now ready to begin inputting our numbers. Cells C4 – E23 contain some sample figures we manually entered for the first three months of the year. The totals in rows 25, 27, and 29 on the other hand, were generated automatically by Calc: Row 25 is the sum of rows 4–6 (income), row 27 is the sum of the expenses of rows 9–23, and row 29 is row 25 minus row 27 (the monthly surplus or deficit).

	A	B	C	D	E
1	Household Budget Worksheet				
2		Estimate	January	February	March
3	Income:				
4	Employment Income		4500	4800	5100
5	Rental Income		750	750	500
6	Tax credits		245	245	245
7					
8	Expenses:				
9	Mortgage/Rent		1150	1150	1150
10	Groceries		975	1034	989
11	Line of Credit		290	200	250
12	Credit Card #1		890	987	800
13	Credit Card #2		355	232	259
14	Car Payment		410	410	410
15	Home Insurance		145	145	145
16	Car Insurance		187	187	187
17	Health Insurance		420	420	420
18	Telephone/Internet		90	90	90
19	Mobile Phone		94	94	94
20	Daycare		320	320	240
21	Utilities		210	202	218
22	Travel		450	100	85
23	Entertainment		190	110	105
24					
25	Total Income:		5495	5795	5845
26					
27	Total Expenses:		6176	5681	5442
28					
29	Difference:		-681	114	403

Figure 5: Data inputs with calculated totals

Let's see how those calculations were made. Choose a cell within which the result of a calculation should appear, click on that cell and click once on the formula icon on the menu bar above.



Figure 6: Formula icon

Calc will try to anticipate what you would like calculated and insert its best guess into the input field to the right of the formula icon. If you're after something different, simply edit what appears in the input field (the characters you enter will also temporarily appear in the highlighted cell).

In our case, the formula for cell C25 (the sum of all income items) should be:

=SUM(C4:C6)

Let's translate that:

- = The value that will be displayed in cell C25 should equal
- SUM the sum of the values
- (C4:C6) between cell C4 and cell C6

	A	B	C
1	Household Budget Worksheet		
2		Estimate	January
3	Income:		
4	Employment Income		4500
5	Rental Income		750
6	Tax credits		245
7			
8	Expenses:		
9	Mortgage/Rent		1150
10	Groceries		975
11	Line of Credit		290
12	Credit Card #1		890
13	Credit Card #2		355
14	Car Payment		410
15	Home Insurance		145
16	Car Insurance		187
17	Health Insurance		420
18	Telephone/Internet		90
19	Mobile Phone		94
20	Daycare		320
21	Utilities		210
22	Travel		450
23	Entertainment		190
24			
25	Total Income:		5495

Figure 7: Entering a formula

Similarly, the formula for cell C27 would, in our case, be:

=SUM(C9:C23)

Finally, the formula for cell C29 (C25 minus C27) would be:

=C25-C27

Copying a formula to other cells

Now at this point, in order to complete our spreadsheet we seem to be faced with a rather unpleasant task. We would like the same formulas used for each of the twelve months included in our chart. But that would require typing in variations of each formula (there were three, remember) twelve different times [=SUM(D9:D24), =SUM(E9:E24) and so on]! There must be an easier way.

There is.

Click on one of your formula cells, say C25. You will notice a small black square at the bottom-right corner. When you hover your mouse over that square, the cursor turns into a cross hairs. Click on that and drag it over as many cells as you'd like the formula to be copied. In our case that would be eleven more cells. Now click on one of the new cells and take a look at the formula displayed in the input field next to the Formula icon. It won't be =SUM(C4:C6), but =SUM(D4:D6) (or whatever the correct value would be for the cell you clicked on). Calc automatically applied the correct values to each cell. Smart, no?

Better yet, the moment you finish entering a new numeric value into any cell (and tab or click your way out of that cell), any associated cell that contains a formula will automatically update itself. Try it yourself: add some numbers to any of the Income or Expense cells and watch to see what happens to the numbers in rows 25, 27, and 29.

It gets better. Our sample spreadsheet has more calculated cells at the far right after the last month (December). You could have Calc calculate a year-to-date total for each sub-item in your income and expenses. In our example however, we've simply inserted formulas in cells O25, O27, and O29 to keep track of the total income, total expenses and difference as they build through the year.

Now try changing the value in any of the value cells and watch as many as six formula cells update instantly!

The screenshot shows a spreadsheet interface. The formula bar at the top displays the formula `=SUM(C25:N25)`. The spreadsheet grid has columns K through O. Column K is labeled 'September', L is 'October', M is 'November', N is 'December', and O is 'Year to Date'. The grid contains several rows of data. The bottom three rows (rows 25, 27, and 29) are highlighted in yellow, orange, and blue respectively. The values in these rows are as follows:

Row	September	October	November	December	Year to Date
25	0	0	0	0	17135
27	0	0	0	0	17299
29	0	0	0	0	-164

Figure 8: Secondary calculations