Discussion comments by Andy Pepperdine

This document will cover the use of LibreOffice Calc to generate simple charts from data in the spreadsheet.

What Calc is not

First, some words on what Calc is typically used for, and what it is not really suitable for.

It is primarily a way of tabulating data to keep track of simple information for use in commercial environments, like sales and inventory data. It is not a suitable tool for detailed scientific or statistical analysis. It does not have an easy way of finding regression lines or creating models to emulate a situation.

You might do some things like rolling averages, that are feasible, but in general it can be used to display simple collections of data.

If you want a more powerful calculator, then most recommendations for free software point to ***R***, which is a suitable language with a lot of extra packages to handle different types of analysis.

Types of data

There are various types of data than can be accumulated in a spreadsheet and the way you may wish to display them will depend on how they relate to the job you are doing.

There is some information that is simply a collation of data into discrete categories, such as income of different departments, or inventory of different types of widget. In this case you may want to see a pie chart to see which departments are contributing most, or as a histogram to see the absolute fluctuations of a crucial stock item.

In other cases, if you are tracking a measurement of some variable, you may want to see whether there is a trend and show the behaviour over time. For instance the pollen levels during spring.

The type of data and your intended use of it will determine what sort of display would be useful.

Types of chart

Different charts show the data in different lights, and you may wish to check which gives a more intuitive idea of what the data means. Fortunately, in Calc you can easily change the type and see whether you would prefer it. But of course you have to be sure you are used to interpreting the spatial description sensibly.

How to create a chart ({ie chart)

If you have data in categories, then the basic principle is to select the data names and corresponding data, and then go to **Insert → Chart**. In the next dialog, you can select the type and some attributes of it. Suppose you select a simple Pie chart, and then hit Next.

The next part of the dialog allows you to modify the range of data being used to define the chart. For a pie chart, the number of categories must match the number of data entries. By default the data is interpreted in columns, but there is an option to treat it in rows instead. Also, you can ask it to treat the first entry as a heading, and not real data.

After hitting Next, you get the chance to modify details of the data series, such as where to pick the name from, and where to find the range of values.

Finally, the next part allows you to define a title, and subtitle, which it will place above the chart. Also, you can specify whether you want any explanatory legend incorporated, and where it should be placed.

When you have finished this, it is in fact also possible to select and then drag some of the elements of the chart to other places if you think that is appropriate.

Column or Bar charts

If you select a column or bar chart, then you can show several sets of data side by side as bars, by selecting more than one data range as well as the category names. If they are separated by extraneous columns, then select like this.

First, **click** in the cell that contains the names of categories (or first if no column headings). Then **SHFT-click** in the last cell of the column.

To add a column of data values, **CTL-click** on the first (or heading) cell of the data range. Then **CTL-SHFT-click** on the last cell of the data column.

Repeat for each set of data to collect all you need.

Then **Insert → Chart** and select Column for the type, and follow the dialog to get the first approximation. This may not be exactly what you want, so you will need to edit it afterwards.

When it has been created, select it and use **Right click → Edit** (or select by **double click** on the chart). The outer border will change to a grey thick line to show the chart elements can be edited. You can select any element in the chart to be edited separately and the context menu (right click) will give options depending on the type of element selected.

For instance, if you click on one of the columns, and then right click to select Format Data Series, you get options to say whether to plot against a secondary y-axis (that is one whose scale is positioned on the right of the chart). If you select the secondary scale, then also ensure you click on Show Bars Side by Side (or one will overlay the other and could obscure the display).

In other tabs, you can change the colour, or set various types of colour shading or patterning of the bars. You can also modify the transparency and other graphical attributes.

More on XY-plots

If the data set consists of pairs of values (for example, a pollen count against days from start of measurements), then a more suitable plot may be the XY-plot, which gives an opportunity to define whether to show a curve linking the points, or leave it as a scatter of points. In addition, you can also smooth it to show trends more readily. In the final part of he setup, you can place labels on the axes to say what they are.

After it has been created, editing it is just the same as described above for bar charts. Secondary axes can be set up, and labels defined, and colours changed as desired.

How to use the chart

Clicking on an unselected chart, will select it to allow you to drag it elsewhere. When the green markers appear, then you can also cut and paste it into some other document, like Writer for a report, or Draw to overlay it with other information or incorporate in some picture for printing.

If you double click on the chart, then you get a different context menu with right click to allow you to change and add some of the parts of the chart. When in this state, clicking on any individual part of the chart enables you to change the properties of that part. Most of the things you want to change are under the Right click → Format Data Series option or Format Data Point.

Note that for a Pie chart, clicking to select the pie will select all of the areas. To select a single segment, click again on the actual segment to be changed.

References

The official documentation for Calc is here:
https://wiki.documentfoundation.org/images/c/c2/CG62-CalcGuide.pdf

And you can find the latest on any of the LibreOffice suite here:
https://documentation.libreoffice.org/en/english-documentation/

To add secondary axes, I found this:
http://mindspill.net/computing/cross-platform-notes/libreoffice-chart-with-two-axes/

There are some useful hints here: http://mindspill.net/computing/cross-platform-notes/libreoffice-calc-oocalc/