12 Basic Tutorial

Prerequisites

- ghc Haskell compiler;
- graphviz;
- spreadsheet processor with the possibility to export data as .csv file.

Installation

Simply copy the files into the working directory and then run there

```
ghc -O2 -dynamic 12.hs
```

and then

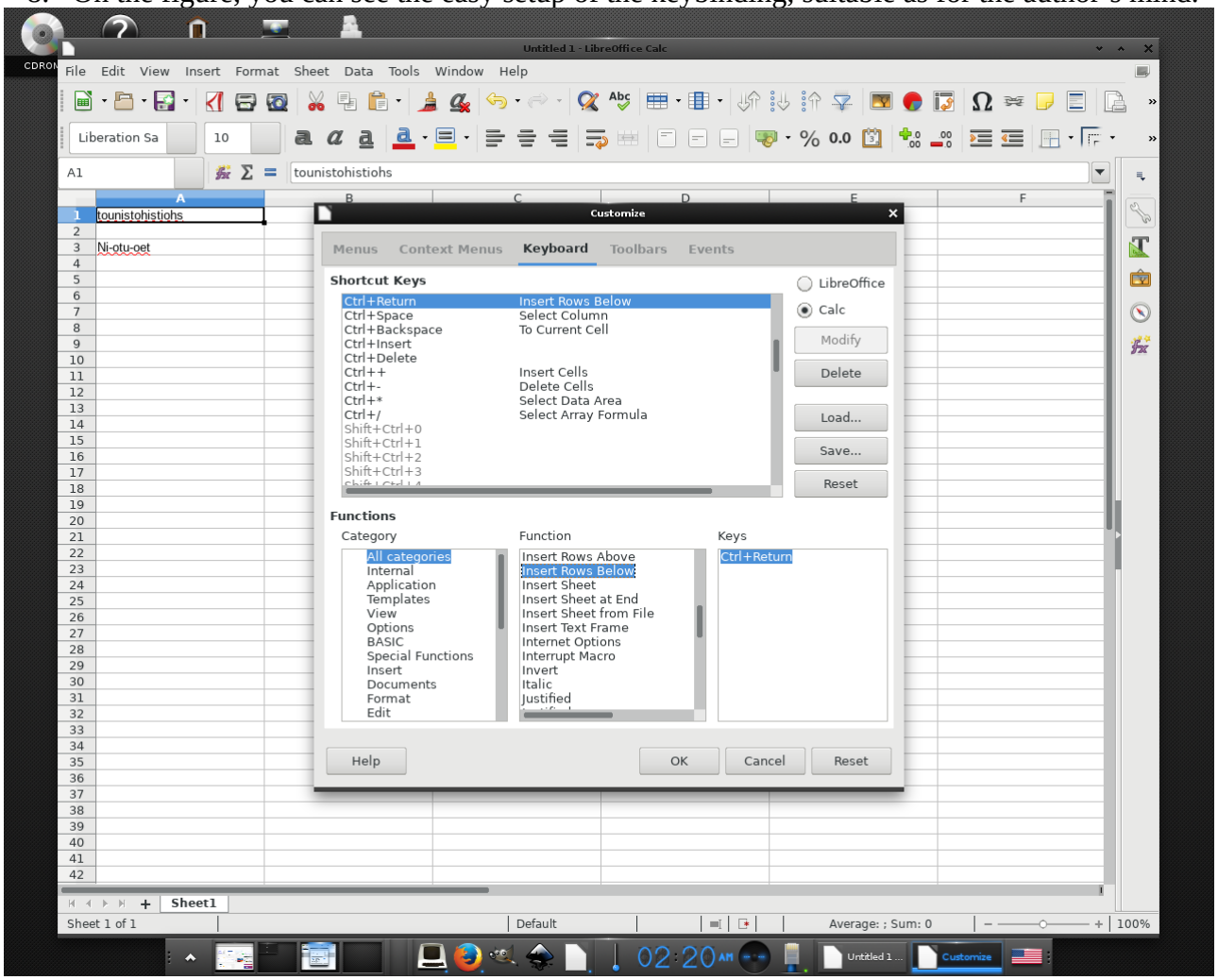
```
strip --strip-unneeded 12
```

(the last one is not necessary).

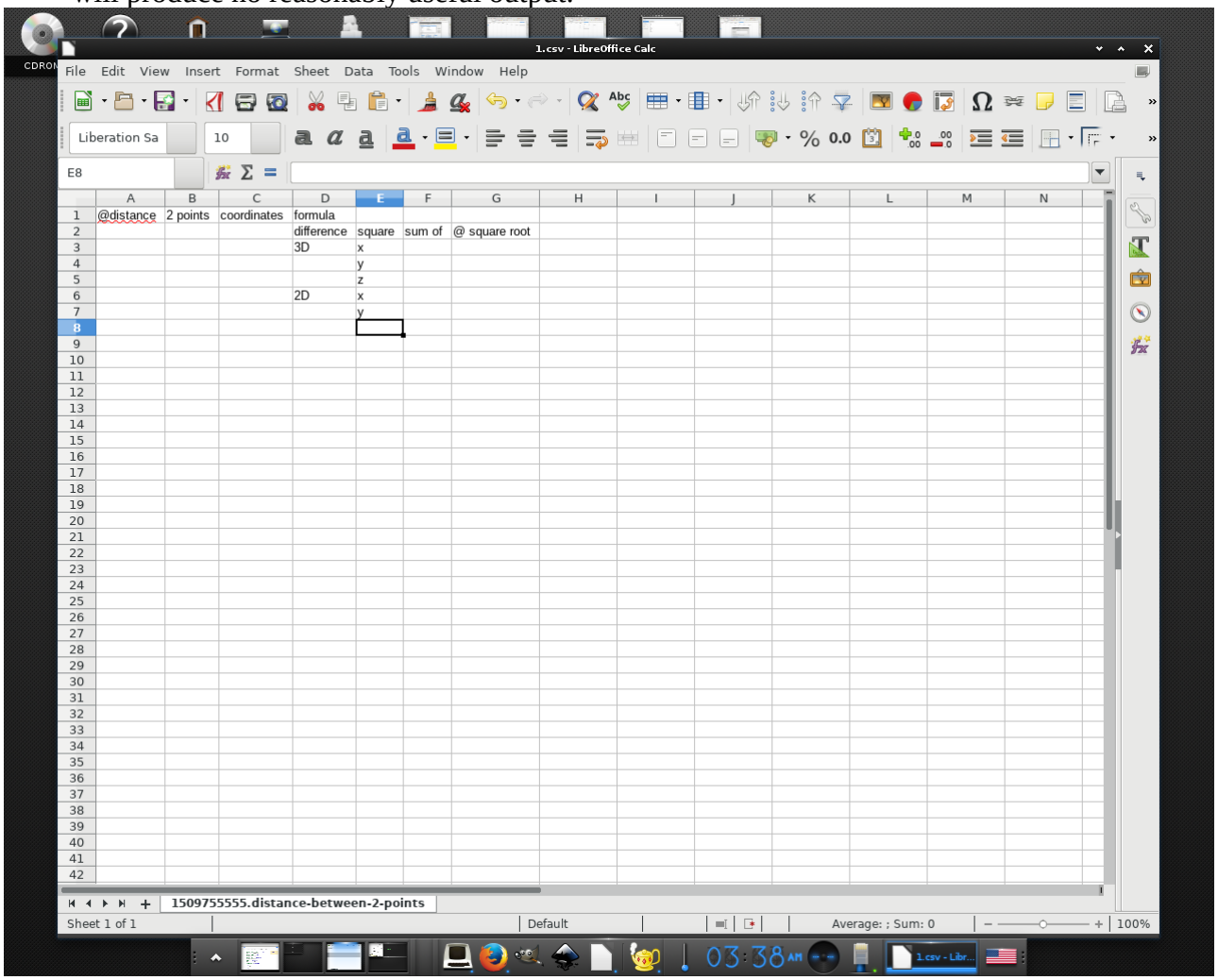
Check whether the 12.sh and 12 files have executing permissions and you can read, write and search the files in the directory and read and execute the 12.sh and 12 files.

Usage

1. Open an office spreadsheet program, e. g. LibreOffice Calc.
2. Begin to enter the text in the cells.
3. Do not use commas, instead when needed switch to the nearest cell to the right.
4. To make a text visually highlighted, add at the beginning of the cell an '@' sign.
5. Lines create different chains in the graph. To produce an arrow to the text in the cell, enter it in the next cell in the row to the right.
6. To make several arrows from the cell, switch to the next to the right cell, enter needed new texts there and in the located below cells.
7. Usually, you can search the needed text with `Ctrl+F` if needed.
8. On the figure, you can see the easy setup of the keybinding, suitable as for the author's mind.

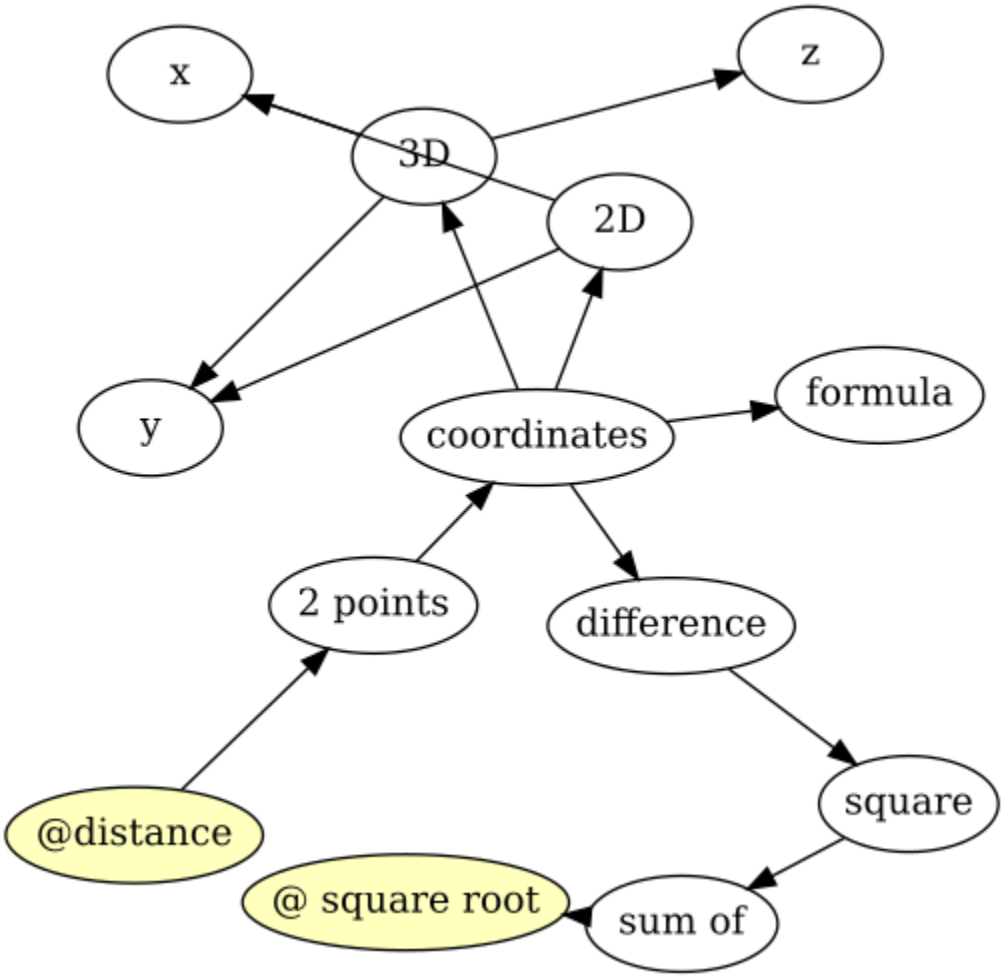


9. Above each line, except the first one, there must be at least one filled cell. It must be located just above the text on the new line or even further to the right above. Otherwise, the program will produce no reasonably useful output.



	A	B	C	D	E	F	G
1	@distance	2 points	coordinates	formula			
2				difference	square	sum of	@ square root
3				3D	x		
4					y		
5					z		
6				2D	x		
7					y		

10. After entering all the text, save the sheet as a 1.csv file in the working directory. Otherwise, the program won't work.
11. Run a 12.sh script in a terminal. If your default shell is sh, then just run `./12.sh` in it, else run `sh ./12.sh` in it. Enter a word name of the file to be saved. DO use alphanumeric symbols and dashes if needed. Press `Enter` and then `Ctrl+D`.
12. Your first visualization is then automatically created.



13. Create a new sheet in the spreadsheet document and switch to it. Repeat all the steps to produce the needed amount of visualizations.
14. Save the spreadsheet document as a spreadsheet file.
15. Press `Ctrl+C` in the working terminal to terminate the 12.sh.
16. Afterwards, you have a sorted by the creation time list of svg files, an x.mmmmm file with the last date time in seconds after beginning of the Unix's era, x12.gv file as a last source file for Graphviz, and a list of csv files, and a saved spreadsheet file. Together they all forms something like a little database.

    Then you can use the produced visualizations for some other documents.