

# Exercises - 0

## Setting up a Typesetting system

The current workflow uses:

- Pandoc (<https://pandoc.org/installing.html>, v. 3.1.11.1),
- L<sup>A</sup>T<sub>E</sub>X(or, actually, xelatex) (<https://www.latex-project.org/get/>),
- makefiles (that are native to Unix systems, but can be ported in windows using Cygwin)
- the Symbola font (you can find it at <https://web.archive.org/web/20180307013123/http://users.teilar.gr/~g1951d/Symbola.zip>)<sup>1</sup>

The typical file hierarchy is:

```
├── bib
│   └── bib.bib
├── img
├── info.md
├── main.md
├── makefile
└── templates
    ├── head.tex
    └── theoretical-computer-science.csl
```

Where

- `bib.bib` is a file containing references, using the `bibtex` formatting, often used with L<sup>A</sup>T<sub>E</sub>X.
- `img/` contains potential images loaded in the main document,
- `info.md` contains some meta-data and instructions for the formatting (they could be in `main.md` as well, it is just to keep that later file as small as possible, and to be able to re-use this templating easily),
- `makefile` gives instructions on how to generate `.tex` and `.pdf` files from `main.md`, using commands such as

```
pandoc --pdf-engine=xelatex --metadata-file=info.md \
  --citeproc -M date="+%B %e, %Y" \
  --include-in-header templates/head.tex $< -o $@
```

that means:

- Tell pandoc to process `main.md` (the `$<` parameter, which denotes in makefile the source we need to construct what we are constructing),
- using XeLaTeX as the pdf engine,
- using `info.md` for the metadatas,
- using `citeproc` (which is a filter that process the bibliographical references),
- setting the date to be the value returned by the command `date "+%B %e, %Y"` (so, the current date, formatted nicely),
- including in the header the file `templates/head.tex`

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<sup>1</sup>Starting with version 11, the licence is too restrictive for non-personal use. As a consequence, users are asked to make sure they do not use a version greater than v.10.24, which is “free for any use” and archived on-line (curious users can also refer to the related webpage). Note that installing this dependency using a unix-like package manager will result in installing a version of the font that is free to use in any context.

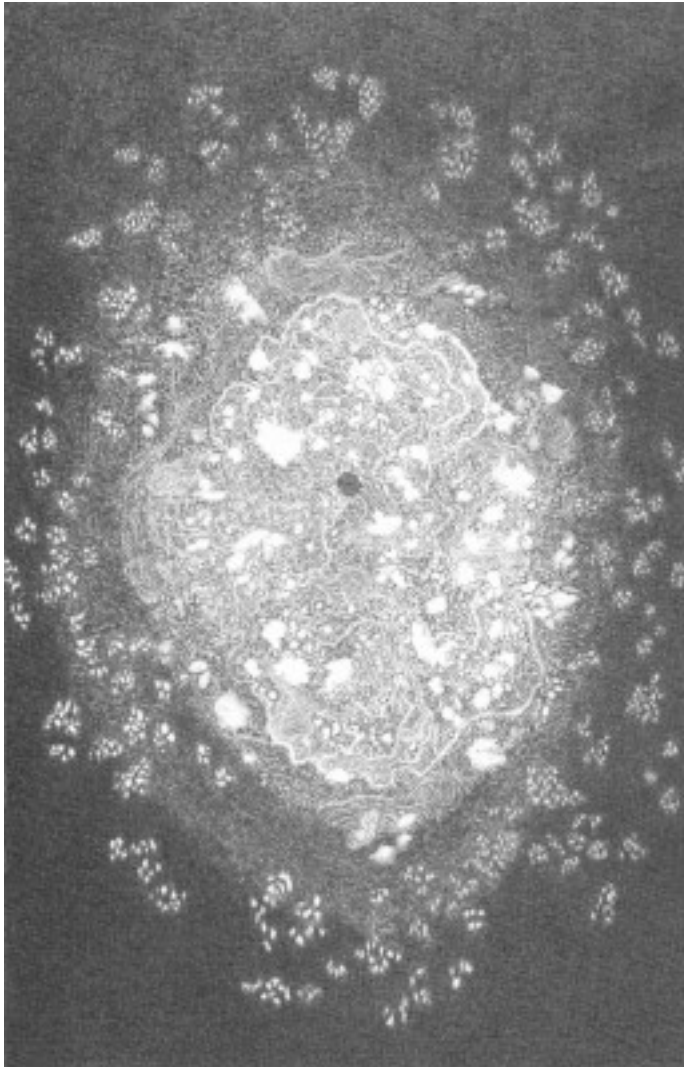
- and outputting into a file called `main.pdf` (the `$(` parameter, which denotes in makefile what we are constructing).
- `templates/head.tex` contains some  $\text{\LaTeX}$  tweaking (primarily about the sections, some unicode characters and the appearance of the links),
- `templates/theoretical-computer-science.csl` is the [Citation Style Language](#) file, that explains how references should be displayed. Since this is very field-sensitive, many different formatting exist, and we pick the one for theoretical computer science.

If you install [entr](#), you can also use `make watch` that will automatically re-compile `main.md` into `main.pdf` whenever `main.md` is modified (that is, edited and saved).

**Important:** Note that this details the organization of *the current folder* (`exercises_0`) but that the overall repository is organized a bit differently, to avoid duplicating the bib and template files.

## Examples

Here is a reference [1], and here is an image, courtesy of [Jérôme Minard](#):



## References

- [1] C. Aubert, Categories for Me, and You?, Augusta University, 2019. <https://hal.science/hal-02308858>.