Introduction to LaTeX

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Why LaTeX?

Single-slide elevator pitch

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- The document is saved as plain text, which lends itself well to version control systems such as git.
- The output is a PDF, so it looks the same everywhere.

Why LaTeX? (ctd.)

Cool stuff out of the box

Behold this formula:

$$f = \lambda x \lambda Y . \frac{1}{2} \left(\frac{\sqrt[3000]{\frac{4+\frac{x}{12}}{\sum_{i=1}^{k} y_i}} + e^{\pi}}{\tau \sin(x^2 + 0.5x + \epsilon)} \right)$$

Why LaTeX? (ctd.)

Third-party packages

LaTeX also comes with a massive collection of third-party packages for specific use cases (like numbered examples or glosses).

(1) a. Look, an example!

b. * Look, an second example!

(2)

Das	ist	ein	wunderschönes	Beispiel!
d̥ʌs	ʔɪs	ʔɛ	ˈʊʊ̹nd̥ɔ̹ˤˌʃe̯ɪnəs	ˈb̥æ͡ɪʃb̥iːl
this	is	a	beautiful	example

‘This is a beautiful example!’

(Look how nicely the star in (1b) lines up!)

Nothing is ever perfect

Downsides

- Not really suitable for tasks that require finegrained control over the graphical design (the slides are already pushing it).
- LaTeX's error messages can be a bit... opaque at times.
- Passing LaTeX documents around across different computers can sometimes be a bit janky.
- Documents that contain multiple languages/scripts is not as straight-forward as it could be (XeLaTeX tries to address this).

Little history lesson

TEX

- Pronounced [tɛk] (or [tɛx], [tɛç], etc.)
- Created in 1978 by Donald Knuth.
- Computerised type-setting system.
- Nowadays considered a bit too low-level for day-to-day use.

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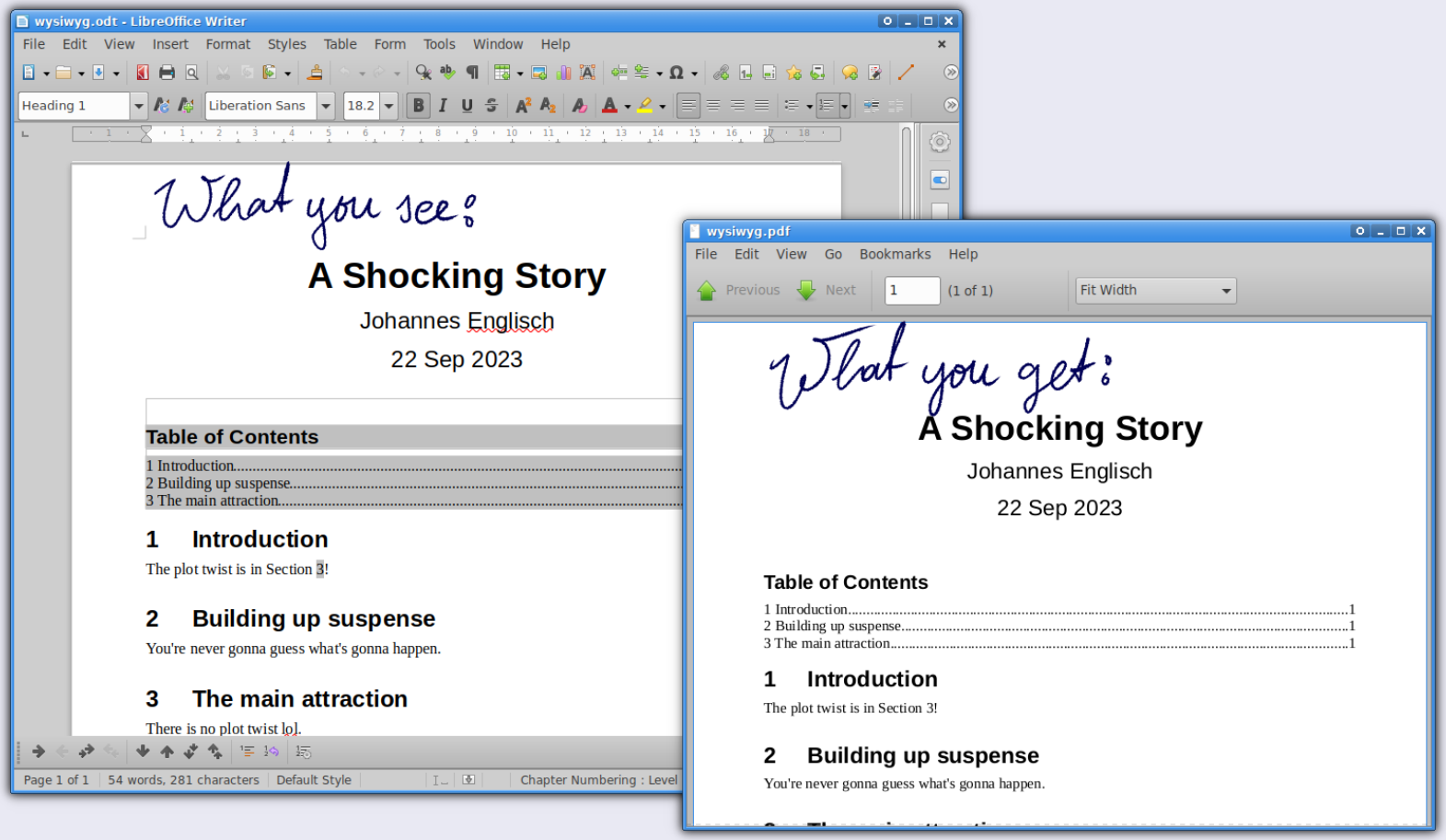
LATEX

- Pronounced [lɑːtɛk] or [leɪtɛk]. (or [-tɛx], [-tɛç], etc.)
- Created in 1984 by Leslie Lamport.
- Built on top of TEX.
- Provides a way smoother experience when making documents.

WYSIWYG vs. WYSIWYM

‘What You See Is What You Get’



WYSIWYG vs. WYSIWYM (ctd.)

‘What You See Is What You *Mean*’

wysiwym.tex

```
1  \documentclass{scrartcl}
2
3  \title{A Shocking Story}
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24 There is no plot twist lol.
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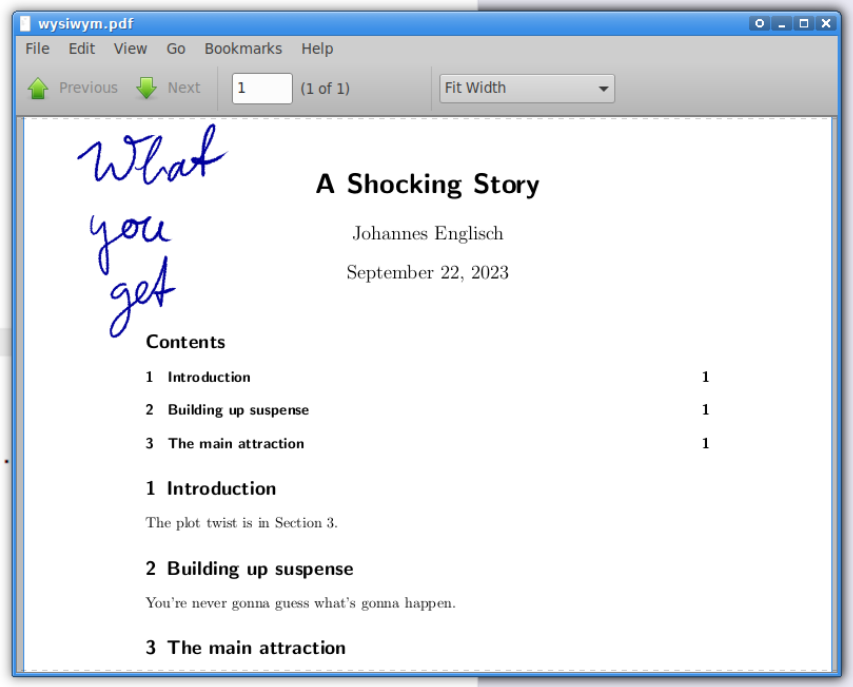
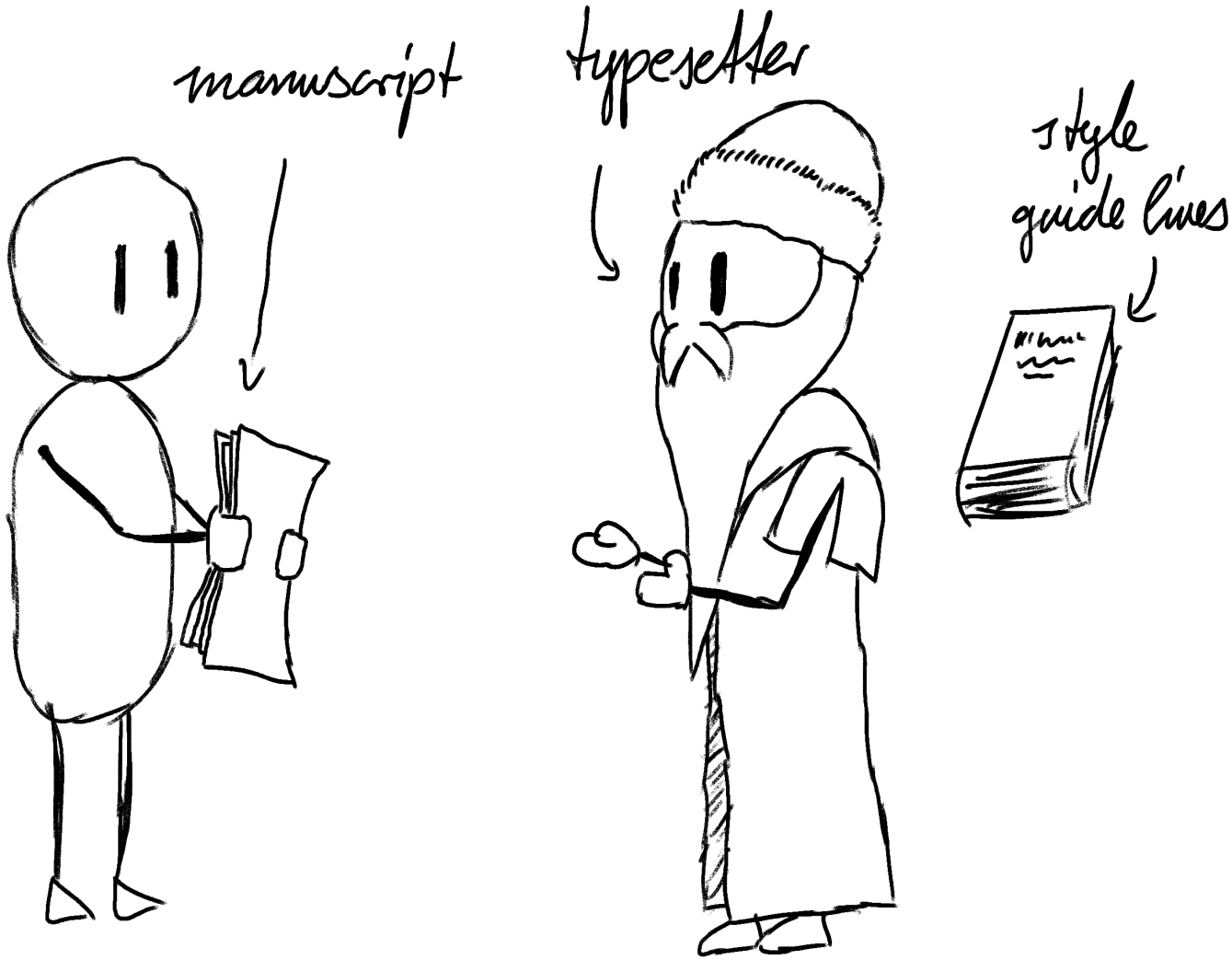
What you see

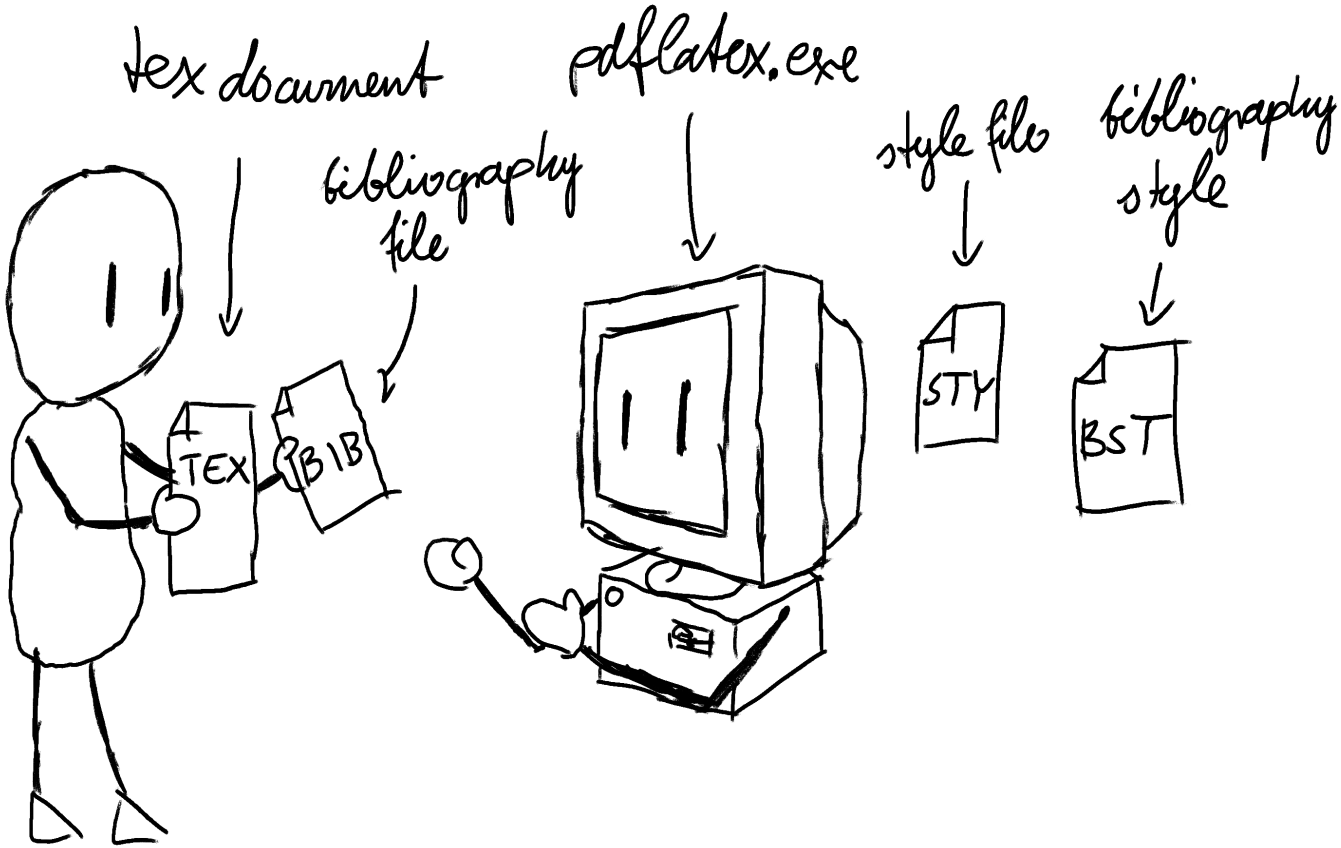


How it works



Type-setting then

How it works (ctd.)



Type-setting now

Where do the files come from?

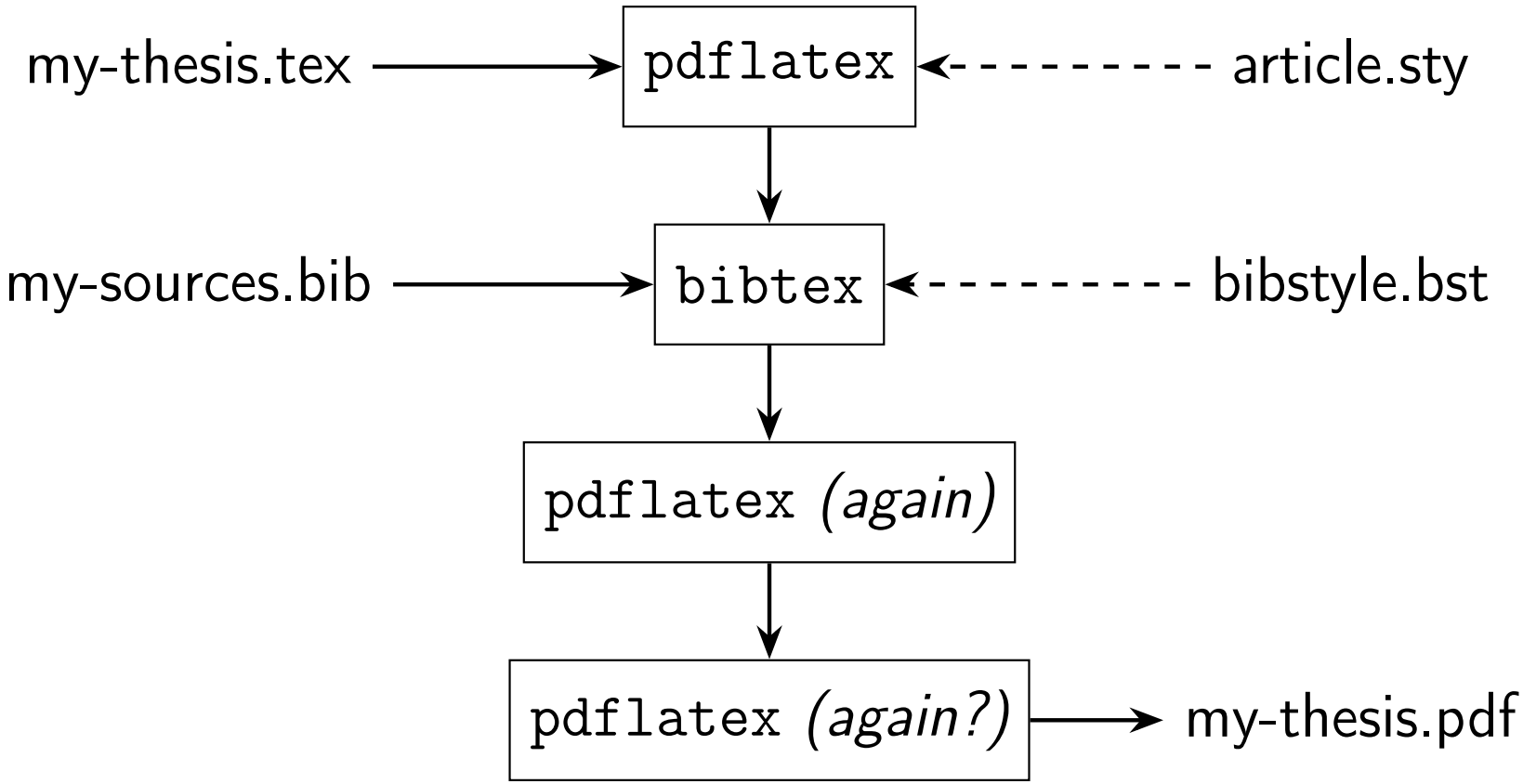
The manuscript

- *The TEX file:* Written by you.
- *The BIBTEX file:* Can be hand-written; in practice people export them from their favourite bibliography program.

The style guide

- *The style file:* Either from your LATEX installation or provided by publisher/journal.
- *The bibliography style:* Provided by publisher/journal; there's also a script you can use to make your own.

How the sausage PDF is made



(No worries, you don't have to do this manually.)

What do you need?

LaTeX itself

- Windows: MiKTeX
- macOS: MacTeX (via homebrew or using the installer).
- GNU/Linux: TeX Live (it's in the repos).

What do you need? (ctd.)

A text editor with LaTeX support

- Texmaker.
  (Good cross-platform pick; recommended for beginners.)
- TeXworks on Windows, TeXshop on macOS, Kile on GNU/Linux.
  (Haven't looked at those in like 12 yrs.)
- Power editors: Vim, Neovim, GNU Emacs.
  (That's what I use – not recommended for beginners.)

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PREAMBLE

DOCUMENT

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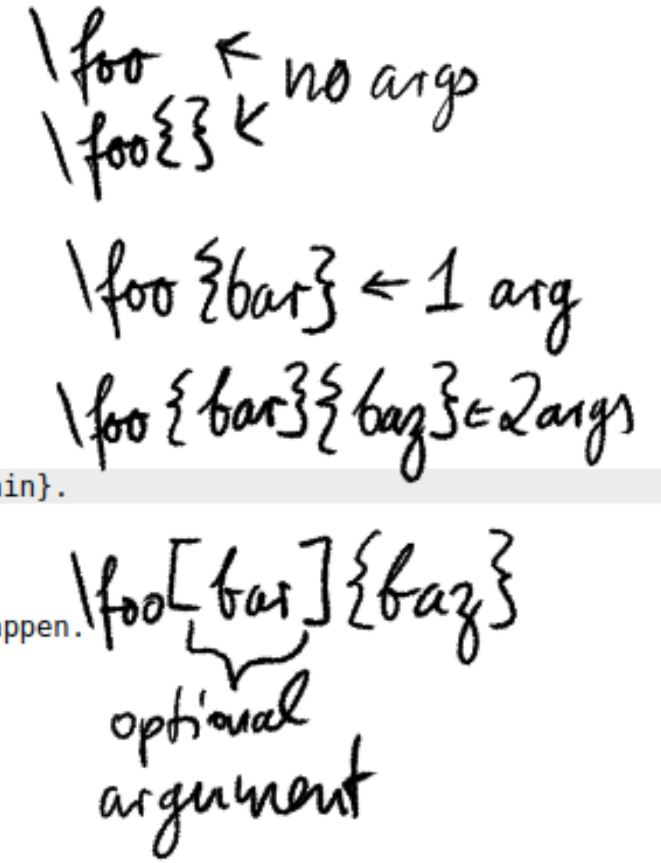

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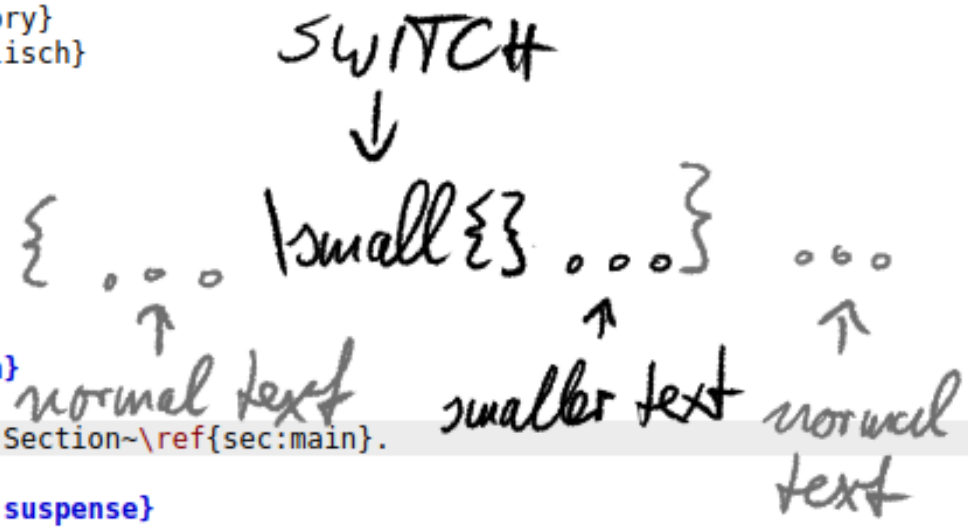

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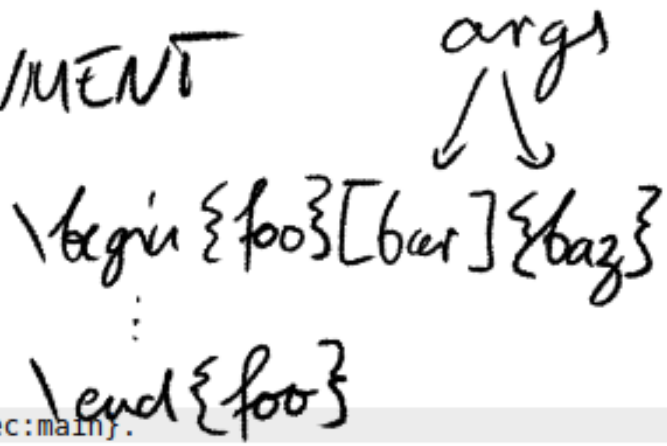

Let's get our hands dirty!

What now?

Some links

- The LaTeX book on Wiki Books.
- . . . which has a chapter on linguistics.
- https://tex.stackexchange.com/
- Detexify: If you don't know the LaTeX command for a special symbol, just draw it into the field.
- I don't think Overleaf is a good idea but their documentation section is pretty rad.
- These slides:
  https://github.com/johenglisch/latex-intro-2023-10