

Introduction to LaTeX

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What is LaTeX (Lah-Tech or Lay-Tech)?

- TeX is a program developed in 1977 by Donald Knuth.
- LaTeX uses TeX formatter as its typesetting engine.
- Use of commands to tell it what to do -> WYSIWYM opposed to WYSIWYG approach
- Maintain by the LaTeX project: <https://www.latex-project.org>
- There are several LaTeX editors, some directly online.

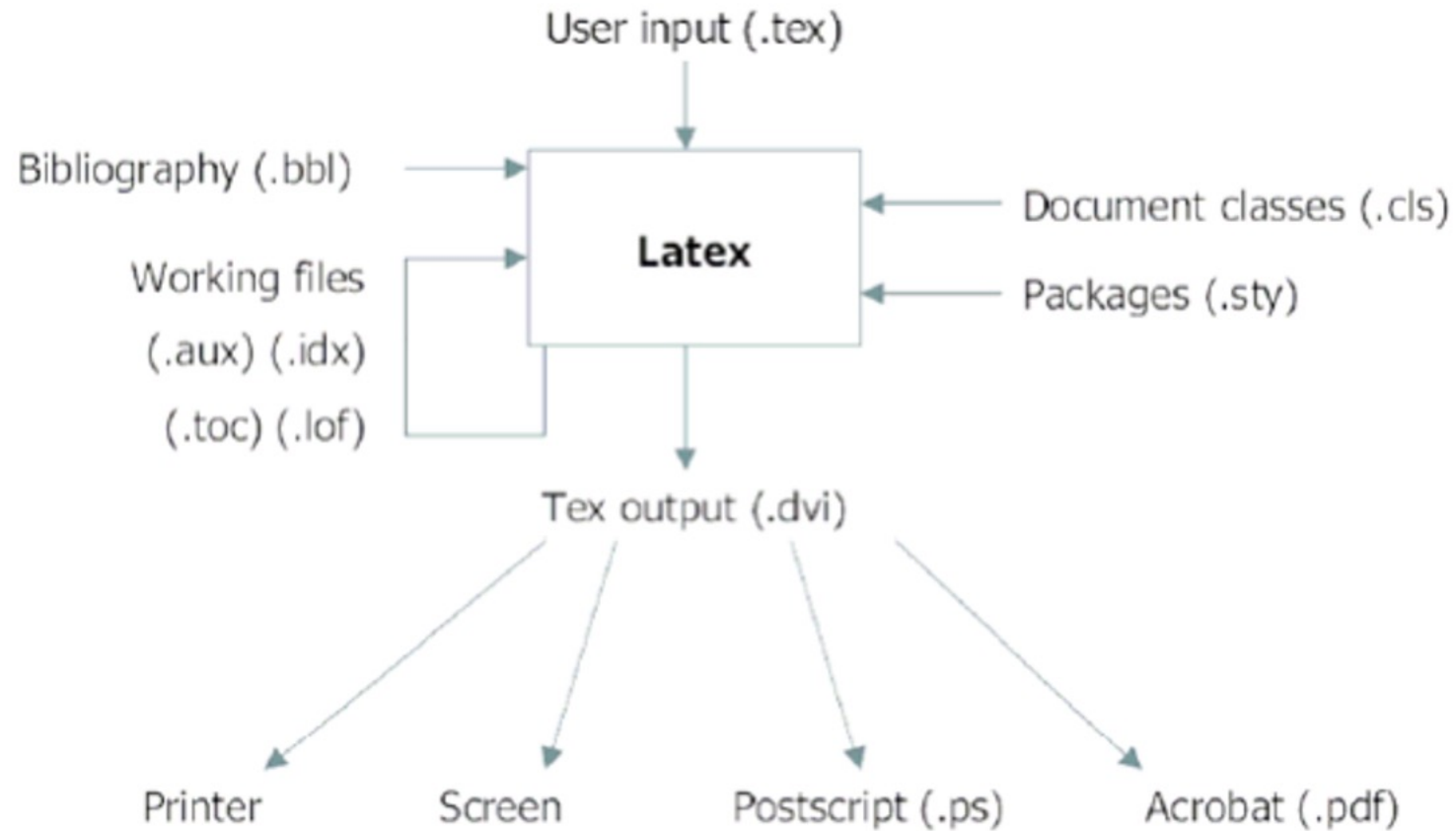


Why do we use LaTeX over word processors?

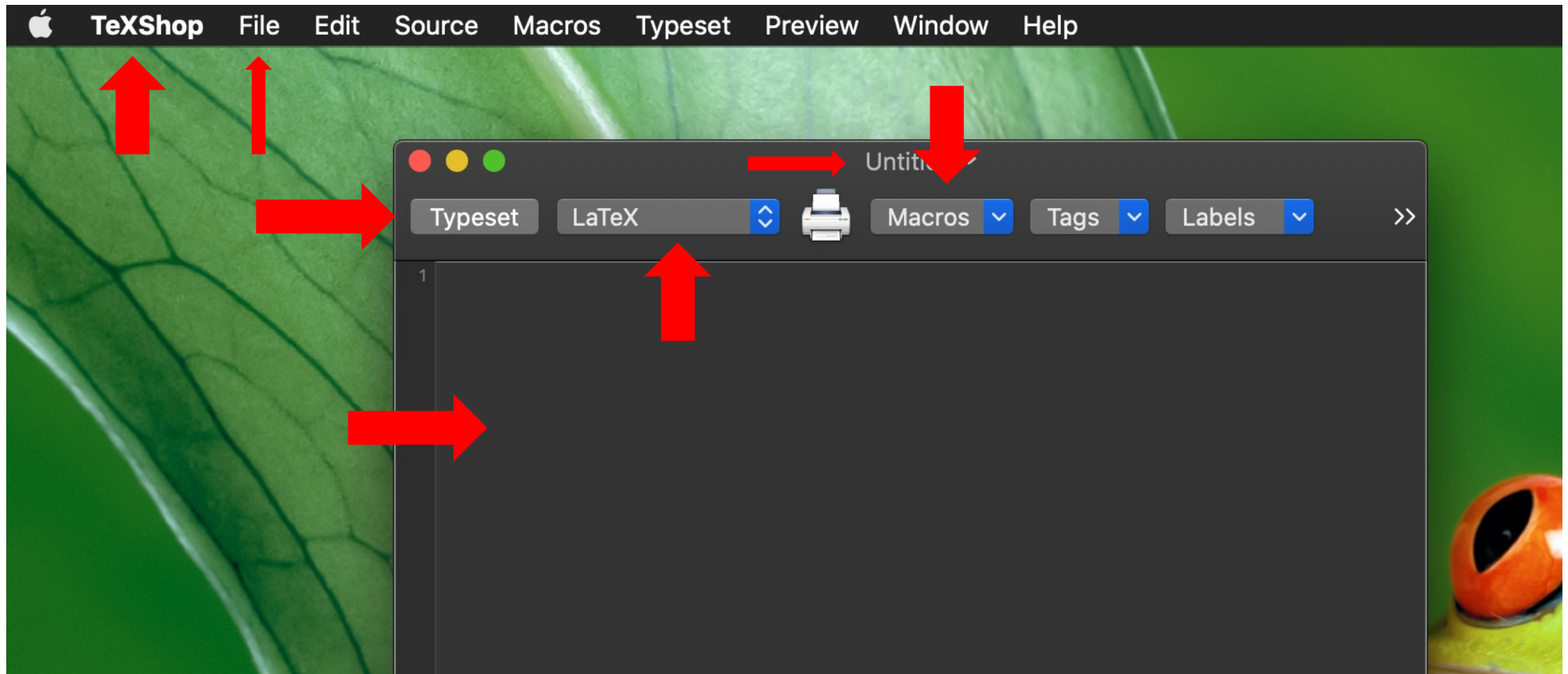
- Predefined professional layout -> authors can concentrate on the text.
- Maintains a logical structure in the document – Improves the reading experience.
- Highest typographical quality.
- Very suited to scientific writing.
- Very stable across machines and setups.
- You often only need a few command lines for high-quality results -> very little editing to do.
- Many add-on packages available (<https://ctan.org>) and possibility to create your own.



How does LaTeX works?



Overview of a text editor



How is a LaTeX document organized?

- First part is called the preamble.
- The preamble defines the type of document, its layout and the packages necessary.
- The body is where the core of the text is.



Structure

The Preamble

```
\documentclass[optional argument]{compulsory argument}
```

```
\title{}
```

```
\author{}
```

```
\date{}
```

```
\usepackage{}
```

...

The Body

- Starts with `\begin{document}`
- Ends with `\end{document}`

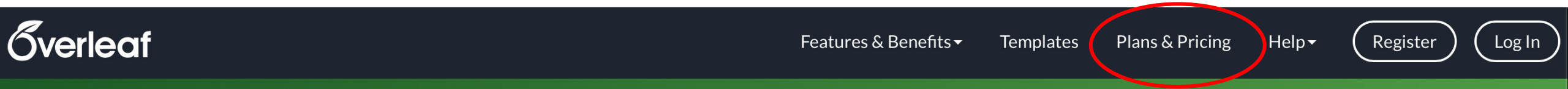


Common mistakes

- When a mistake is made it can usually be tracked in the log.
- Some classic mistakes:
 - Calling packages that you don't have.
 - Wrong typo in the command line.
 - Forgetting `end{}` and opening an environment (starting with `begin{}`).
 - Forgetting “`\`” before a command line.

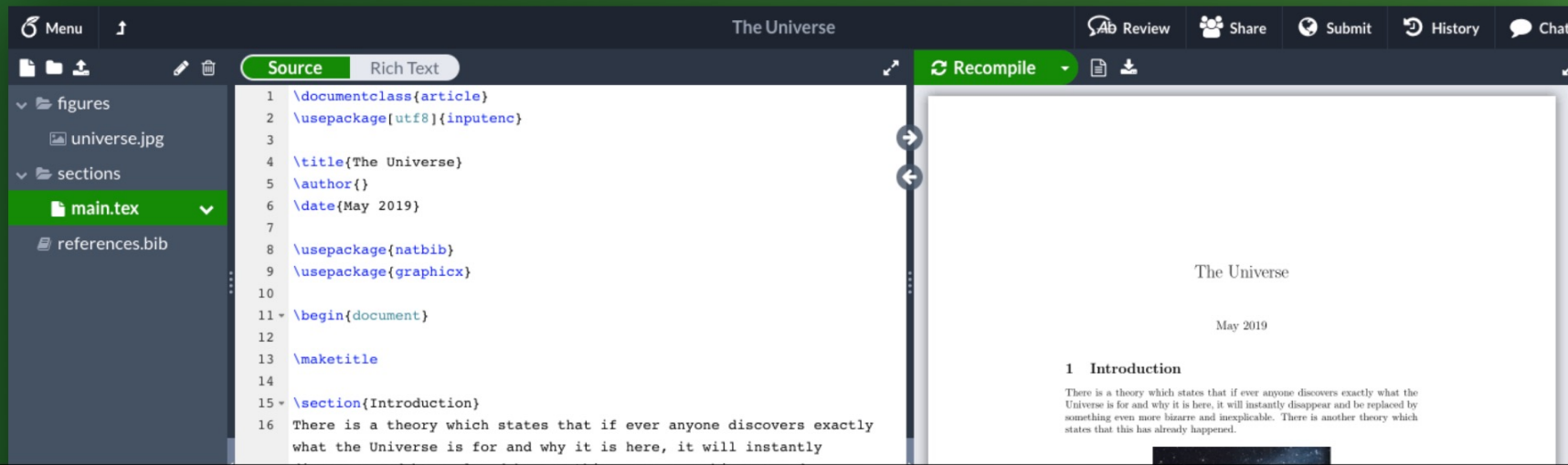


Collaborative LaTeX work



LaTeX, Evolved

The easy to use, online, collaborative LaTeX editor



What to do now?

- Create a folder for the latex practical on your computer.
- Go on OLAT and download the image folder as well as the 2 practical text files
- Create a new project in Overleaf and explore the two TeX scripts. It is strongly encouraged to play around with the different tools to see what they do.
- Don't forget to use Google! LaTeX is a free software, if you have a problem, someone else had it before you.



Other resources

- Frank Mittelbach et al. 2004. The LaTeX Companion
- [https://www.overleaf.com/learn/latex/Learn LaTeX in 30 minutes](https://www.overleaf.com/learn/latex/Learn_LaTeX_in_30_minutes)
- <https://tobi.oetiker.ch/lshort/lshort.pdf>
- <http://en.wikibooks.org/wiki/LaTeX>
- <http://www.newthinktank.com/2019/01/latex-tutorial/>

