

# Introduction to $\text{\LaTeX}$

Tejas Sanap

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# A few words about myself

- ▶ I mainly work in IDAM.
- ▶ I work at Wipro.
- ▶ I am an organizer at (and, member of ) PLUG.
- ▶ I do a lot of open-source stuff.

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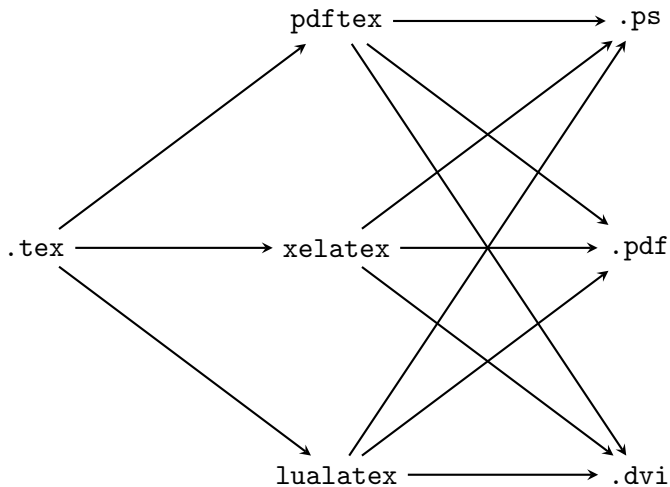
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# What is $\text{\LaTeX}$ ?

- ▶ A type-setting system.
- ▶ An improvement over  $\text{\TeX}$ .
- ▶ Not a WYSIWYG editor.
- ▶ Uses simple plaintext.
- ▶  $\text{\LaTeX}$  provides the user with a set of pre-defined templates.

# How do I use L<sup>A</sup>T<sub>E</sub>X?



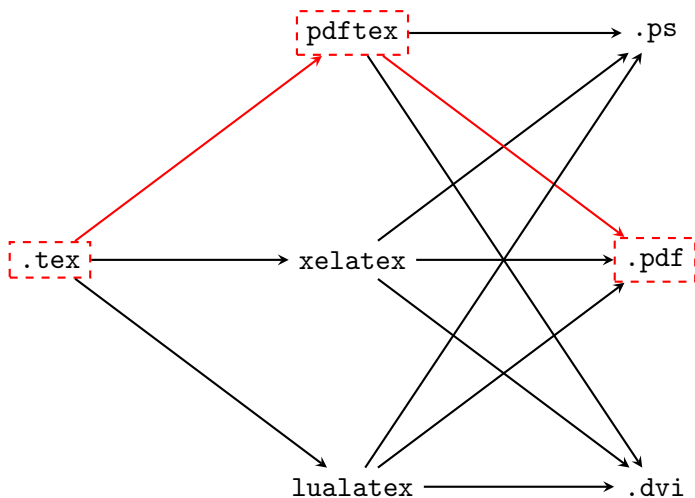
**Source Code**

**L<sup>A</sup>T<sub>E</sub>X engine**

**Final Output**



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# How do I use $\text{\LaTeX}$ ?

There are multiple  $\text{\TeX}$ engines:

- ▶ **Knuth's  $\text{\TeX}$ :**

This is original  $\text{\TeX}$ engine which serves as the lowest layer of  $\text{\LaTeX}$ 's software architecture.

- ▶  **$\text{\pdfTeX}$ :**

This engine adds a bunch of primitives related to the PDF and DVI extension.

- ▶  **$\text{\xetex}$ :**

This engine provides better font support.

- ▶  **$\text{\luatex}$ :**

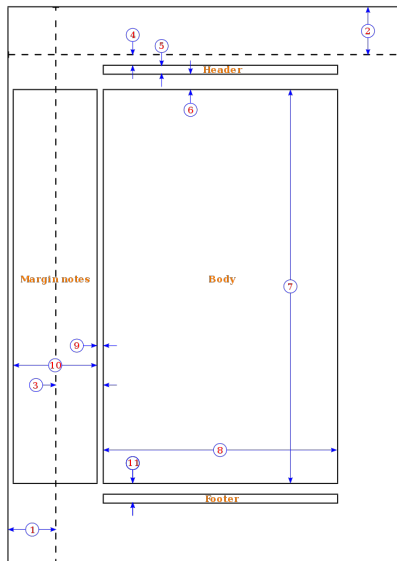
Originally, meant to replace  $\text{\pdfTeX}$ , but, now moving in a very different direction. This engine also better font support (like,  $\text{\xelatex}$ ) through Lua code.

# Structure of $\text{\LaTeX}$ source file.

```
1  \documentclass{article}
2
3  \usepackage{hyperref}
4
5  \title{A critical analysis of Naruto: the Manga}
6  \author{Tejas Sanap}
7
8  \begin{document}
9      \maketitle
10
11 \end{document}
```

# Page Geometry

- 4. `\topmargin`
- 7. `\textheight`
- 8. `\textwidth`
- 11. `\footskip`



# Environments

*Environments* are used to format a bunch of text in  $\text{\LaTeX}$  documents instead of doing it in only one place.

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A few of the most common environments we see are:

- ▶ align.
- ▶ figure.
- ▶ equation.
- ▶ document.