# A Hello, World! for LATEX (and reference)

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September 18, 2021

#### Abstract

A basic document highlighting key L<sup>A</sup>T<sub>E</sub>X features and walking through setup using VSCode (because it's simply better). The OS used is Ubuntu 20.04.

Most of this document is created from the following sources (can be used as reference)

1. Overleaf: Learn LaTeX in 30 minutes

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## 1 Installing everything

### 1.1 Prerequisites

You must have the following installed

- VSCode: The best editor for typing
- Ubuntu 20.04: Ubuntu (or any Debian based distro) makes it easy to install things (only commands).
- This has also been tested on Windows 10, but with a few modifications.

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## 1.2 System setup

#### TeX Live on Ubuntu

TeX Live is a software suite that bundles all LaTeX related work in a single package that can be installed. On *Ubuntu* (or any *Debian* distribution), you can check running sudo apt install texlive-full, which will install everything. If this doesn't work, you can try installing directly through CTAN (Comprehensive TeX Archive Network) and get installation instructions from here.

TEX Live is simply the best distribution that packages a lot of important things for LATFX. You can find others from here.

Another helpful package used for linting LaTeX is chktex. This comes bundled in TeX Live.

#### MiKTeX on Windows 10

On Windows, it's better to use MiKTeX to handle LATEX packages. Install it from here. After installing it for the local user, add the path to the PATH environment variable.

Post installing MiKTeX, since it is a minimal distribution, you have to install a few packages. First, install perl through strawberryperl for Windows. Second, install latexmk on MiKTeX (through MiKTeX Console). This will allow generation / making of Latexmk documents. You can also check if ChkTeX is installed (through powershell).

### VSCode

We'll be using the LaTeX Workshop VSCode extension to use LATeX with VSCode. You can also find this extension on GitHub.

#### 1.3 Alternatives

Instead of all this, some alternatives are presented here

• Use overleaf to store everything online and not bother installing a thing on local system

## 2 Basic LaT<sub>E</sub>X