

# L<sup>A</sup>T<sub>E</sub>X Tutorial

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# Installing a T<sub>E</sub>X system

TeX Live can be installed on Windows, Mac OS X and UNIX/Linux.  
<http://tug.org/texlive>.

- ▶ **Windows:** An alternative to TeXLive is to install proTeXt from <http://www.tug.org/protext>. This is a MikTeX based installation that includes the TeXStudio editor.
- ▶ **Mac OS X:** Download and install MacTeX from <http://www.tug.org/mactex>.
- ▶ **Linux:** Check documentation for your distribution. A T<sub>E</sub>X system might already be installed. In Ubuntu use the command: `sudo apt-get install texlive-full texstudio`

# Running L<sup>A</sup>T<sub>E</sub>X

Create your latex file with your favourite text editor and save the file with a `.tex` file extension. Here are the commands used for compiling the LaTeX source and viewing the final document. If you are using a GUI editors like TexWorks, TeXstudio, TeXniCenter, TeXShop, or Kile you will click on different buttons that will run these commands to compile the LaTeX source and view the final document.

## COMMANDS

## COMMENTS

**latex** *file.tex*

run latex to create a dvi file

**pdflatex** *file.tex*

run pdflatex to create a pdf file

**xdvi** *file.dvi*

view a dvi file

**yap** *file.dvi*

view a dvi file (dvi viewer for MikTeX only)

**dvips -o** *file.ps file.dvi*

convert a dvi file to a postscript file

**dvips** *file.dvi*

convert file.dvi to postscript and print

**dvipdf** *file.dvi*

convert file.dvi to a pdf file

**gv** *file.ps*

run ghostview to view a postscript file

**ps2pdf** *file.ps file.pdf*

convert a postscript file to a pdf file

**acroread** *file.pdf*

run Acrobat Reader to view a pdf file.

**xpdf** *file.pdf*

run xpdf to view a pdf file.

## Drawing programs with $\text{\LaTeX}$ support IPE and xfig

IPE <https://github.com/otfried/ipe-wiki/wiki>

OR

xfig <http://xfig.org>

are drawing programs which allows you to embed  $\text{\LaTeX}$  commands into your figure. xfig requires more work to install as you will need an X server and other software dependencies.

## WYSIWYM programs

Not recommended for your thesis but if you need to write up something real quick and you don't have time to do it using  $\LaTeX$ .

- ▶ **Lyx:** (free) <http://www.lyx.org>
- ▶ **TeXmacs:** (free) <http://www.texmacs.org>
- ▶ **Scientific Word:** (expensive) <http://www.mackichan.com>

## References

- ▶ *L<sup>A</sup>T<sub>E</sub>X A Document Preparation System, 2nd Edition*, Leslie Lamport.
- ▶ *The L<sup>A</sup>T<sub>E</sub>X Companion*, Michael Goossens, Frank Mittlebach, and Alexander Samarin.
- ▶ The T<sub>E</sub>X user group website [www.tug.org](http://www.tug.org) and in particular <http://www.tug.org/begin.html>.
- ▶ L<sup>A</sup>T<sub>E</sub>X A Document Preparation System website <http://www.latex-project.org/>.
- ▶ Learn L<sup>A</sup>T<sub>E</sub>X, by Edward R. Scheinerman <http://www.ams.jhu.edu/ers/teaching/learn-latex/>.
- ▶ The (Not So) Short Introduction to LaTeX2e <http://ctan.tug.org/tex-archive/info/lshort/english/lshort.pdf>.
- ▶ UVic's thesis template and instructions can be found at <http://www.uvic.ca/library/featured/collections/uvic/thesis/latex/latextemplates.php>.
- ▶ BibTeX <http://www.bibtex.org>