

Latex & Lyx

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Abstract

“LATEX is a typesetting system that is very suitable for producing scientific and mathematical documents of high quality.”

Follow the following instructions in order to get familiar with latex and lyx.

1 Latex document is like html

- Open a terminal
- Create a file 'myfirstlatex.tex' containing the following five lines:

```
\documentclass{article}  
\begin{document}  
Small is beautiful.  
\end{document}
```

- Type `latex myfirstlatex.tex` on the terminal
- Type `ls` on the terminal, and you will see three generated files.
- Type `xdvi myfirstlatex.dvi &` on the terminal, and you will see a document that you have just created.
- Type `dvips myfirstlatex.dvi -o myfirstlatex.ps` on the terminal. This command will generate a postscript file named `myfirstlatex.ps`. To see a postscript file, use `gv myfirstlatex.ps` command.
- Type `dvipdf myfirstlatex.dvi myfirstlatex.pdf` on the terminal. A PDF file will be generated. Either `gv` or `acroread` will show a pdf file.

2 Add a Title to the Latex file

- Add a line to `myfirstlatex.tex`

```
\documentclass{article}
\title{Some Title}
\begin{document}
Small is beautiful.
\end{document}
```

- Repeat the generation starting `latex` command in the previous example.

3 Add bibliography to the Latex file

1. Create a database file `'mybib.bib'` for bibliography.

```
@book{cs475textbook,
  author = {Michael J. Quinn},
  title = {Parallel Programming in C with MPI and OpenMP},
  year = {2003},
  isbn = {0071232656},
  publisher = {McGraw-Hill Education Group},
}
```

2. Include the database file to the latex document with a bibliographic style.

```
\documentclass{article}
\begin{document}
Small is beautiful.
\bibliographystyle{abbrv}
\bibliography{mybib}
\end{document}
```

3. Process the latex file. You need to do: `latex myfirstlatex.tex`, `bibtex myfirstlatex`, `latex myfirstlatex.tex` and `latex myfirstlatex.tex`.
4. Now, use the bibtex entry in the document. See the difference.

```
\documentclass{article}
\begin{document}
Small is beautiful. CS 475 textbook \cite{cs475textbook}
is written by Michael J. Quinn.
\bibliographystyle{abbrv}
\bibliography{mybib}
\end{document}
```

For more information on bibtex entry format, see <http://nwalsh.com/tex/texhelp/bibtex-7.html>

4 Lyx - <http://www.lyx.org/>

- Type `lyx` (or `/usr/bin/lyx`) on your terminal