How to set up your computer to start using LaTeX

Ignas Anikevicius

July 13, 2011

1 Introduction

Thank you for your interest in LaTeXtypesetting system and this article will help you to get you ready for starting to use LaTeXon your computer.

Although I would like to write a continuous text on how to install everything on different kinds of OSes (Operating Systems), I believe, that it is not necessary to duplicate any content, if it can be found in a better shape elsewhere. Therefore, I suggest you reading chapters of the book called LaTeXhosted on the website called wikibooks.org. You can find an on-line version of the book or the PDF version of it, which I think is much more suitable for reading or printing.

The list of the needed software is already there and if somebody feels very comfortable with his system, no specific directions should be necessary for them.

2 Software from the Department of Chemistry

Computer Office is already providing images for deploying the whole OS and necessary software for Chemistry Department members. As far as I was informed, there are images for Linux and Windows systems. For Macs, there might be customized installers as well available on this page.

3 LaTeXdistribution installation

You need either of these:

- "TeXLive" LaTeXdistribution which is available for Linux/Mac/Windows, but should be preferred on Linux machines.
- "MacTeX" LaTeXdistribution which is available for Mac machines only and should be the preferred option on these machines.
- "MikTeX" LaTeXdistribution which is available for Windows machines only and should be the preferred option on these machines.

3.1 Notes for Linux users

Use your Linux Distribution package manager whenever you can and install "TeXLive" only from there. These are the terminal commands how to get everything necessary on various Linux distributions:

.deb based This applies for all distributions which have their packages as files with '.deb' extensions. These mainly include all Debian and Ubuntu variants and derivatives. Issue these commands in terminal as root and you are good to go.

```
# apt-get install texlive-most
```

.rpm based This applies for all distributions which have their packages as files with '.rpm' extensions. These mainly include OpenSuSe, Fedora, CentOS, RedHat and others. Issue these commands in terminal as root and you are good to go.

```
# yum install texlive-most
```

ArchLinux and derivatives This applies for ArchLinux and Chackra distributions. Both use pacman as their packages manager, so the following commands executed as root user will suffice.

```
# pacman -S texlive-most
```

Gentoo and derivatives This applies for Gentoo, Funtoo, Sabayon distributions. They all use portage as their packages manager, so the following commands executed as root user will suffice.

```
# emerge -av texlive
```

Others Go to the project Wikipedias and find what they suggest doing.

3.2 Notes for Mac users

For easier experience, just install the full MacTeX installation which can be found on the following website. [1]

3.3 Notes for Windows users

For easier experience, download MiKTeX installation files from their website. [2] There are mainly 2 wise options to select:

Install everything Although this might be very convenient as one will not have to worry about missing packages, but it takes space. On the other hand, slightly more than 1GB of occupied space on modern computers will not make a difference.

Install a base system This is the alternative, which would take less space. What is more, one can select an option where necessary packages could be installed on the fly without any user intervention.

[1] The URL for the website is `http://www.tug.org/mactex/`

[2] The URL for the website is `http://miktex.org/2.9/setup`

4 Editing a .tex file

Mainly there are two choices:

- IDE (Integrated Development Environment)
- a simple text editor

While IDEs [3] generally will provide a user with much more integrated environment, this does not necessarily mean, that producing LaTeXdocuments with an IDE is generally faster. There are many very powerful text editors, which might have a steep learning curve, but once mastered, they are very fast. What is more, some text editors might be better in some tasks than other, so there is no such thing as "the best" IDE or text editor for LaTeX.

4.1 Cross-platform software

The software which is most worth mentioning is listed bellow:

VIM & Emacs This editor is the best in my opinion. It is very fast, lightweight and it can be customized a lot. Although it has a steep learning curve, it is very rewarding afterwards and reading any of books on VIM would help a lot. Emacs is also good, and many argue that it is better than VIM. This has much to do with so-called editor wars. [4]

Whichever you choose, you will find that they both have extensible resources on the internet and very good plug-ins for LaTeXdocument production.

LyX DO NOT USE THIS WORD PROCESSOR!!! Although it might be very tempting to use something similar to Word or LibreOffice Writer and achieve LaTeXtypeset document quality, you will often get into trouble if you choose this option. LyX might be very good as a reference tool as one can search for LaTeXcommands how to do certain things, it is not useful in anything else if one wants to USE LaTeX.

4.2 Linux software

Kile This is an IDE for Linux.

4.3 Mac OS X software

TeXShop This is probably the best IDE after the aforementioned editors for processing LaTeXdocuments.

4.4 Windows software

TeXnicCenter This is probably the best tool for LaTeXin this OS after the aforementioned editors. Note, that this is an IDE and not a text editor.

[3] an example of an IDE for HTML would be Dreamweaver©. Note, that I am not affiliated with Adobe© or any of its partners and I do not have claims towards its trademarks or copyrighted IP.

[4] Editor wars on Wikipedia: `http://en.wikipedia.org/wiki/Editor_war`

5 Bibliography management software

- Jabref
- Bibdesk
- Vim and Emacs

6 PDF viewers

Good PDF viewers are different across different platforms. I believe, that you might say, that Adobe's PDF viewer is very good, but the truth is that it is very slow and not as stable as others.

A much better alternative might look **Foxit** PDF reader, which is available for both Linux and Windows operating systems. However, I found that this is not as good as others.

6.1 On Linux

Linux users have a huge variety of PDF viewers to select from.

6.2 on Mac

The best choices seem to be viewers **Preview** and **Skim** as both are relatively light and provide a good number of features.

6.3 on Windows

The best choice would be a **Sumatra** PDF viewer. Other alternatives need to be bought or they are half-baked.

7 Other useful software & links