

Guide to LaTeX

Leah Dickstein

February 11, 2015

Note: Make sure you have LaTeX and a good TeX editor!

Desktop:

- TexMaker (what I personally use)
- LyX (a WYSIWYG, meaning it's basically Word for LaTeX. Lower learning curve, but I think it's slower in the long run because the whole point is NOT using your mouse.)

Browser:

- ShareLaTeX (comes with a ton of templates!)
- Overleaf (compiles real-time, but is slower)

Note 2: Don't pronounce it Latex like the plastic. It's either Law-Tech or Lay-Tech. I prefer the former.

1 Getting Started

We've already provided you with HW solution templates and self-grade templates, which should allow you to skip past this section. If you're starting from scratch, you start your blank document with:

```
\documentclass[11pt]{article}
\begin{document}
Body of text.
\end{document}
```

Anything between `\documentclass` and `\begin{document}` is called the **Preamble** of the article, and anything below is the **Body**. Anything below `\end{document}` won't be compiled, so you can put temporary text or text that contains compile errors for storage.

Alright, it's time to begin: with a title! In the preamble, put:

```
\title{Guide to LaTeX}  
\author{Your Name Here!}
```

LaTeX will automatically put the date it was last compiled. Now you're good to go, and you can just start typing. However, throwing a bunch of text on a page is pretty hard to read...two things:

- 1) LaTeX ignores whitespace. Start newlines with either `\\` or `\newline`.
- 2) Give your document more structure with sections! LaTeX has quite a few options:

Part I

An Example Part

The command: `\part{An Example Part}`

An Example Chapter

The command: `\chapter{An Example Chapter}`

Note that the other section headers besides Chapter have an auto-newline after, but if you want a newline after Chapter you need to do it yourself.

2 An Example Section

The command: `\section{An Example Section}`

2.1 You can have subsections

The command: `\subsection{You can have subsections}`

2.1.1 And subsubsections!

The command: `\subsubsection{And subsubsections!}`

That's the smallest you can go :(This isn't inception.

LaTeX auto-numbers everything, but if you don't want the numbering just add an asterisk.
`\section{Unicorns!} >> \section*{and Rainbows!}`

For the purposes of your homework, ignore parts and chapters. Just use sections.

2 Environments

- inline math
- outline math
- itemize
- enumerate
- verbatim

3 More Formatting Magic

3.1 Table of Contents

3.2 Margins

3.3 Minipage

Sometimes you want to have multiple columns, or to split your page up into sections. Enter the minipage command. If I want to have two columns, I would just

use the command

```
\begin{minipage}{0.5\textwidth}  
text here!  
\end{minipage}
```

4 Useful Packages

4.1 Links

4.2 Colors

Add to the header of the document `\usepackage{color}` to gain access to the default 8 colors. Alternatively, you can write `\usepackage[usenames,dvipsnames,svgnames,table]{xcolor}`, which will give you access to a BAJILLION colors.

4.3 Algorithms

4.4 Circuits

5 Appendices