LaTeX Tutorial

Making your math look good
1. Quick Intro. slides
2. Setup + Demo
3. Group work in breakouts on “About Me” LaTeX assignment
4. Parting thoughts
LaTeX is a programming language

It enables you to create clear, organized, typeset documents!

**Pros**
- Don’t need to worry about design, LaTeX compiler takes of it!
- Math is displayed nicely and easy to edit!
- Nearly all CS research papers are written in LaTeX
- Required in upper division courses*

**Cons**
- There is a learning curve!
Okay, so what does it look like?

Input: myFile.tex

\documentclass{article}
\begin{document}
  The quadratic formula:

$$
  x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}
$$
\end{document}

Compiler does magic!

Output: myFile.pdf

The quadratic formula:

$$
  x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}
$$
Some helpful commands from day 1!

\texttt{\textbackslash land} makes the “logical and” symbol: $\wedge$

\texttt{\textbackslash lor} makes the “logical or” symbol: $\lor$

\texttt{\textbackslash neg} makes the “logical not” symbol: $\neg$

\texttt{\textbackslash rightarrow} makes the “implies” symbol: $\rightarrow$
How about a truth table?

\begin{tabular}{|c|c|}
\hline
$p$ & $\neg p$ \\
T & F \\
F & T \\
\hline
\end{tabular}
Making unordered lists

\begin{itemize}
\item This is item 1
\item This is item 2
\end{itemize}
Making numbered (ordered) lists

\begin{enumerate}
\item This is item 1
\item This is item 2
\end{enumerate}

1. This is item 1
2. This is item 2
Inserting images*

\usepackage{graphicx}
\begin{document}

\[ \includegraphics[scale=0.1]{beefy_rob_photo.JPG} \]
\end{document}

*This example assumes image is loaded in same working directory as .tex file
Inserting images with captions*

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{pic.png}
\caption{A screenshot of my home screen. Source: me}
\end{figure}

Figure 1: A screenshot of my home screen. Source: me

*This example assumes image is loaded in same working directory as .tex file
Inserting code*

```
\begin{verbatim}
    public static void main(String[] args) {
        System.out.println("Hello, World!");
    }
\end{verbatim}
```

*Much fancier code formatting packages exist, try searching around for some!
\begin{document}

\begin{align*}
(x + 1)(x - 1) &= x^2 + x - x - 1 \tag{Distributive property} \\
&= x^2 - 1 \tag{Simplify}
\end{align*}

\end{document}
Let's try it out!

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