



Creating professional looking documents and presentations

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What is T_EX?

pronounced tek

- a typesetting markup language
- created by Donald Knuth
 - A print of one of the volumes of The Art of Computer Programming was awful
 - because of the change from hot metal typesetting to photographic techniques losing the "good classic style"
 - intended to be compatible on all computers
- great for typesetting complex mathematical formula

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

$$\lim_{x \rightarrow \infty} \exp(-x) = 0$$

What is \LaTeX

pronounced Lay-tek or Lah-tek

- a collection of \TeX macros
- allows the writer to focus on the content and not the appearance
- can be extended by packages
- used widely by academia for creating documents and presentations

Getting L^AT_EX

- Linux
 - T_EXLive <http://www.tug.org/texlive/>
 - Check your distro for a texlive package or install from source
- Windows
 - MiK_TE_X <http://www.miktex.org/>
- Mac OS
 - MacT_EX <http://tug.org/mactex/>
- Online editors
 - L^AT_EX Lab <http://docs.latexlab.org/>
 - ShareL^AT_EX <https://www.sharelatex.com/>

Basics of L^AT_EX

Simple document

```
% firstDocument.tex
\documentclass{article}

\begin{document} % Start actual document
Hello World!
\end{document} % finish document
```

To compile to a pdf just type `pdflatex firstDocument.tex`

The documentclass

```
\documentclass{article}
```

- documentclass determines what kind of document
 - article - most general document type
 - book - for writing real books
 - letter - for writing letters
 - beamer - for creating presentations
 - many, many more

The document body

```
\begin{document}  
\end{document}
```

- enclosed within begin and end
- the main content of your document goes here

Title pages

example title mark up

```
\title{{\LaTeX}}  
\subtitle{Creating professional looking  
documents and presentations}  
\author{Erik Edrosa}  
\institute [PLUG]{Panther Linux User Group}  
\subject{Presentation}  
\date{}
```

- just use `\titlepage` in the document

itemize

creating lists

```
\begin{itemize}
  \item article – most general document type
  \item book – for writing real books
  \item letter – for writing letters
  \item beamer – for creating presentations
  \item many, many more
\end{itemize}
```

- create lists with itemize and each bullet will be an item
- can even nest lists inside other lists

creating sections

```
\section{main header}  
% section content here  
\subsection{subheader}  
% subsection content here  
\subsubsection{subsubheader}  
% subsubsection content here
```

- define sections in your document
- can even include automatic numbering
- `\tableofcontents` generates a table of contents with all sections

Creating a presentation with beamer

presentation template

```
\documentclass{beamer}
% theme
\usetheme{Berlin}

\title{My presentation}
\author{Erik Edrosa}
\institute [PLUG]{Panther Linux User Group}
\date{} % turns off date

\begin{document}
\frame{\maketitle}
\begin{frame}
  \frametitle{First frame}
  \framesubtitle{subtitle}
  % Content goes here
\end{frame}
\end{document}
```

Useful resources

- \LaTeX project website
- CTAN (Comprehensive \TeX Archive Network)
- \LaTeX wikibook
- ShareLaTeX templates

Thank you

- Questions or comments?
- Contact me at eedro001@fiu.edu
- visit the club's website
 - <http://plug.cs.fiu.edu>
- Join our irc channel
 - plug.cs.fiu.edu
 - room #chat