Introduction to LaTeX

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- *NOTE: these slides will be made available to download*

Introduction

Overview of LaTeX

Setting up a basic document

Using Math in LaTeX

Using Graphics in LaTeX
- graphicx class
- Creating Figures

References in LaTeX

More info

LaTeX workflow

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- A program like TeXnicCenter helps you with all three steps

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- Body
  - Actual text mixed with LaTeX commands.

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- Title and Author information (these are like global variables)

Let's do an example!

- Download and open files
- www.prism.gatech.edu/~gte449i/latex/files.zip

Setup document

- `\documentclass[twocolumn,10pt]{article}`
- `\begin{document}`
- `\end{document}`

Add title page

- To preamble:
  - `\title{George P. Burdell: Tech's Mystery Man}`
  - `\author{David R. Reid \thanks{Thank sponsors}}`
  - `\date{\today}`
- To body:
  - `\maketitle`

Add body

- Copy and paste text from burdell.txt into body

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- Note:
  - paragraphs (need blank line between each paragraph)
  - quotation marks (use tick mark for leading quote marks)
  - percent sign - a reserved character (replace with \%)

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- You can use AMS-MATH LaTeX package to for more symbols
  - `\usepackage{amsmath}`

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- ftp://ftp.ams.org/pub/tex/doc/amsmath/short-math-guide.pdf

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- `$ \frac{pi}{2} \approx 1.57 $`

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- ```
  \begin{equation} \label{eqn:rho_n}
  \rho_{n} = \sqrt{\left(\frac{n\lambda}{P}\right)^2
  + \frac{2 n F \lambda }{P}} \end{equation}
  ```
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- and use `\eqref{eqn:rho_n}` to get (1)

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- File types:
  - LaTeX: .eps
  - PDFLaTeX: .pdf, .png, .jpg

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- Center Buzz: add the command `\centering` to the environment

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- We can make the figure span two columns by changing `\begin{figure}` and `\end{figure}` to `\begin{figure*}` and `\end{figure*}`

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- Try it: `\caption{This is buzz. Unlike Hairy Dawg, he knows $\pi \neq 3$.}`

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- And you can create a list of figures with `\listoffigures` !

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- Convert vector graphics to pdf with Acrobat

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- BibTeX requires two things to work:
  - Commands in the source file
  - Bibliography (*.bib*) file

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  - `\bibliography{mybib}`
    - *mybib.bib* is the bibliography file

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- Open *mybib.bib* for examples
- Open *bibtextemplates.txt* for examples

Citing a reference

- Similar to referencing a label
- `\cite{Clough:2004}`

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- Many good books available
  - Kopka and Daly, "A Guide to LaTeX"