

Math 291: Lecture 1

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- 2 *The Basics of Document Preparation*
- 3 *Environments*
- 4 *A Cool Example*



Outline

- 1 *What is \LaTeX ?*
- 2 *The Basics of Document Preparation*
- 3 *Environments*
- 4 *A Cool Example*



Software Components

- MikTeX



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- MikTeX
- TeXnicCenter



Software Components

- MikTeX
- TeXnicCenter
- Ghostscript



Installation Instructions

See Handout

- Prepared in essence by Dr. James
- I'll try to help (tech support is not my strength, but I can usually muddle on through)
- Can also use the campus labs



The History and Development of \LaTeX

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- Also used in physics (widely), computer science, and other physical sciences.



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The “Preamble”

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`\begin{document}`.
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- This is where overall control of your document takes place. We'll use this area to add one package before the end of class today.



The “Body”

- The text between the statements
`\begin{document}` and `\end{document}`
is the body of your document. This will contain (for the most part) all of the text that you want to see once your document has been compiled.



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- In the body, type
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- View the file by using the preview icon.
- Open the Documents folder. What do you see?



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- Go back to your document file in TeXnicCenter and change the cap X on the end of `\LaTeX` to a lowercase x.



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- It should say “undefined control sequence”

`\LaTeX`

Notice the break.



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`\LaTeX`
Notice the break.
- Fix the mistake. (Remember that the \LaTeX command is case sensitive).



Reserved Symbols in \LaTeX

Some “Reserved Symbols” in \LaTeX are:
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We will discuss the specific function of most of the rest of these later.



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- Build, and see how the output has changed.



Making a Title Page

- Let's put our name before the title of this document.



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`<your name> \\ \today \\`



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- Let's put our name before the title of this document.
- Above the title type
`<your name> \\ \today \\`
- Next, since we want this text to be in the upper right hand corner, we highlight and click on the flushright icon.



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- Next, since we want this text to be in the upper right hand corner, we highlight and click on the flushright icon.
- Build and see how the output has been modified.



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A Polynomial

Let's type a polynomial. Use what you now know to add following polynomial to your document.

$$2x^{10} - x^8 + 5x^3$$



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Let's type a polynomial. Use what you now know to add following polynomial to your document.

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How many of you got:

$$2x^{10} - x^8 + 5x^3?$$



Using Curly Brackets

- When you want to apply a command to an object with more than one character within it, you need to use `{` and `}`.



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- To get the correct polynomial from the previous slide we type $2x^{10}-x^8+5x^3$



Using Curly Brackets

- When you want to apply a command to an object with more than one character within it, you need to use $\{$ and $\}$.
- To get the correct polynomial from the previous slide we type
$$2x^{\{10\}}-x^8+5x^3$$
- Try this and build your document.



Typesetting Fractions

- To create the fraction $\frac{1}{2}$, we type
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- Try it and build.



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- Now build your document, and see what happens.
- This is the power of \LaTeX .