

\LaTeX Basics & Advanced

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Introduction

\$ whoami



¹Adapted from *Spider-Man (2002)*

Introduction

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$ whoami
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$ ashwinabraham
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Who am I? You sure you want to know? The story of my life is not for the faint of heart. If somebody said it was a happy little tale... if somebody told you I was just your average ordinary guy, not a care in the world... somebody lied.¹



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Ayy! I can redirect to stuff :D



Introduction to \LaTeX

What \LaTeX is²:

\LaTeX is a software system for document preparation. When writing, the writer uses **plain text**



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Introduction to L^AT_EX

What L^AT_EX is²:

L^AT_EX is a software system for document preparation. When writing, the writer uses **plain text** as opposed to the *formatted text* found in WYSIWYG word processors like *Microsoft Word*, *LibreOffice Writer* and *Apple Pages*. The writer uses markup tagging conventions to define the general structure of a document to **stylise text throughout a document** (such as **bold** and *italics*), and to add citations and cross-references. A TeX distribution such as TeX Live or MiKTeX is used to produce an output file (such as PDF or DVI) suitable for printing or digital distribution.



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Equations

We can also write equations in \LaTeX !!

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$$F = \frac{1}{4\pi\epsilon_0} \frac{q_1 q_2}{r^2}$$



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There exist many sorting algorithms.



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Matrices and Indented Equations

We can also write matrices in \LaTeX !

For example the (3x3) Identity Matrix can be written as:

$$I_3 = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$



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I can also indent equations, like so:

$$\begin{aligned} (\mathbf{a} \cdot \mathbf{b})^2 &= \left(\sum a_i b_i \right)^2 \\ &\leq \left(\sum a_i \right)^2 \left(\sum b_i \right)^2 \end{aligned}$$

