

L^AT_EX WORKSHOP

AN INTRODUCTION TO L^AT_EX

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1. What is \LaTeX ?
2. First \LaTeX document
3. Text & Paragraph Format

WHAT IS L^AT_EX?

- Takes worry out of **typesetting** a document and allows you to just worry about **content**.
- Gives a good **Focus** on the contents.
- Professionally crafted **layouts** are available.
- Typesetting **mathematical** formulae is supported in a convenient way.
- Complex structure such as **footnotes**, **references**, **table of contents** and **bibliographies** can be generated easily.
- Add-on packages exist for many tasks not supported by basic L^AT_EX.
- L^AT_EX is highly portable and free. It can run on almost any hardware platform.

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- Add-on packages exist for many tasks not supported by basic \LaTeX .
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Disadvantages:

- It is not “What you see is what you get.”
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In this lecture we will explore more benefits of using Beamer for your presentation

FIRST L^AT_EX DOCUMENT

Let's start with the simplest working example:

Example

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```
\documentclass{article}

\begin{document}
This is my First document.
This is a simple example, with no
extra parameters or packages included.
\end{document}
```

Example

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```
\documentclass{article}
```

```
\begin{document}
```

```
This is my First document.
```

```
This is a simple example, with no  
extra parameters or packages included.
```

```
\end{document}
```

Your \LaTeX code must
consist with

```
\documentclass[...]{...}
```

```
\begin{document}
```

```
\end{document}
```

See `1-start.tex`

Document Structure

– Preamble of Document –

```
\begin{document}
```

– Body of Document –

```
\end{document}
```

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```
\begin{document}
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```

In the preamble you define the type of document you are writing, the language and several other elements.

The contents which you want to display have to write here.

documentclass Options

```
\documentclass[option1,option2,...]{document_class}
```

Table: Document Class

		10pt/11pt/12pt	Font size.
book	Default is two-sided.	letterpaper/a4paper	Paper size.
report	No \part divisions.	twocolumn	Use two columns.
article	No \part,\chapter divisions.	twoside	Set margins.
letter	Letter (?).	landscape	Landscape.
slides	Large sans-serif font.	draft	Double-spaced.
beamer	To make slide.		

Usage:

```
\documentclass[opt,opt]{class}.
```

Used at the very beginning of a document:

```
\documentclass{class}.
```

TEXT & PARAGRAPH FORMAT

How to write

Some of the **greatest** discoveries in science were made by students of *Indian* INSTITUTE of Techonlogy, Guwahati.

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Code:

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Code:

```
Some of the \textbf{greatest} discoveries in  
\underline{science} were made by students of \textit{Indian}  
\textsc{Institute} of Techonlogy, \textrm{Guwahati}.
```

Text Format

<i>Command</i>	<i>Declaration</i>	<i>Effect</i>
<code>\textrm{text}</code>	<code>{\rmfamily text}</code>	Roman family
<code>\textsf{text}</code>	<code>{\sffamily text}</code>	Sans serif family
<code>\texttt{text}</code>	<code>{\ttfamily text}</code>	Typewriter family
<code>\textmd{text}</code>	<code>{\mdseries text}</code>	Medium series
<code>\textbf{text}</code>	<code>{\bfseries text}</code>	Bold series
<code>\textup{text}</code>	<code>{\upshape text}</code>	Upright shape
<code>\textit{text}</code>	<code>{\itshape text}</code>	<i>Italic shape</i>
<code>\textsl{text}</code>	<code>{\slshape text}</code>	<i>Slanted shape</i>
<code>\textsc{text}</code>	<code>{\scshape text}</code>	SMALL CAPS SHAPE
<code>\emph{text}</code>	<code>{\em text}</code>	<i>Emphasized</i>
<code>\textnormal{text}</code>	<code>{\normalfont text}</code>	Document font
<code>\underline{text}</code>		<u>Underline</u>

RSF EEE
RSF EEE
RSF EEE
RSF EEE
RSF EEE

RSF EEE
RSF EEE
RSF EEE
RSF EEE
RSF EEE

<code>\tiny</code>	tiny
<code>\scriptsize</code>	scriptsize
<code>\footnotesize</code>	footnotesize
<code>\small</code>	small
<code>\normalsize</code>	normalsize
<code>\large</code>	large
<code>\Large</code>	Large
<code>\LARGE</code>	LARGE
<code>\huge</code>	huge
<code>\Huge</code>	Huge

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<code>\Large</code>	Large
<code>\LARGE</code>	LARGE
<code>\huge</code>	huge
<code>\Huge</code>	Huge

These are declarations and should be used in the form `{\small Some Text}`, or `\small{Some Text}`.

RSF EEE
RSF EEE
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RSF EEE

`\tiny`

tiny

`\scriptsize`

scriptsize

`\footnotesize`

footnotesize

`\small`

small

`\normalsize`

normalsize

`\large`

large

`\Large`

Large

`\LARGE`

LARGE

`\huge`

huge

`\Huge`

Huge

Text Size

RSF EEE
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<code>\huge</code>	huge
<code>\Huge</code>	Huge

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Paragraph Formatting

`\par`

To make a new paragraph

`\setlength{\parindent}{width}`

To specify paragraph indent

`\noindent`

To start a paragraph without indentation.

`\setlength{\parskip}{width}`

To specify gap between two consecutive paragraph

`\\` or `\newline`

To start new line

`\hfill`

Horizontally fill respective line

`\vfill`

vertically fill respective page

`\hspace{length}`

Specify horizontally fill length

`\vspace{length}`

Specify vertically fill length

Paragraph Formatting (Contd.)

<code>\smallskip</code>	Adds a small skip (3pt)
<code>\medskip</code>	Add a medium skip (6pt)
<code>\bigskip</code>	12pt skip.
<code>\break</code>	breaks the line without filling the current line.
<code>\linebreak[number]</code>	It breaks the line at that point. <code>number</code> ranges from 0 to 4. (0 means it will be easily ignored and 4 means do it anyway)
<code>\hspace*{length}</code>	vertically fill respective page Specify horizontally fill length with linebreak
<code>\vspace*{length}</code>	Specify vertically fill with linebreak

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Specify vertically fill length

Environment

`\begin{center}`

`\begin{flushleft}`

`\begin{flushright}`

Declaration

`\centering`

`\raggedright`

`\raggedleft`

Justify

center-justifies the paragraph

right-justifies the paragraph

left-justifies the paragraph

THANK
YOU