

# Introduction to LaTeX

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- Text formatting
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- Working with lists
- Working with math
- Working with tables
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- Working with columns, themes and fonts

# Why LaTeX?

- Create professional documents with very little effort
- 'The' typesetting system for scientific writing
- Adding mathematical equations
  - Extremely powerful language for equations regardless of the complexity
- Create tables, add figures, include code listings, add algorithms with little effort
- Create professional-looking bibliographies with many different styles automatically
- Split a document into multiple subfiles
  - extremely useful for even moderately large documents

# An example

An example for typesetting integral function in Libre word writer and LaTeX

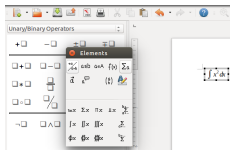


Figure : Integral using Libre



Figure : Integral using LaTeX

# Preamble

- document class
  - **article** - for articles in scientific journals, short reports
  - **report** - for longer reports containing several chapters, thesis
  - **beamer** - for presentations
- title
- author
- date

# Text formatting

- **This is a bold text**
- *This is an italicized text*
- This is underlined text
- This is *emphasized* text
- Comments

# Working with images

- Package - graphics



Figure : dog

# Working with lists

## **This is an ordered list**

- ① apple
- ② banana
- ③ mango

## **This is an unordered list**

- cricket
- football
- table tennis



# Working with math

- Modes

- Inline mode - Writing math as part of text like  $E = mc^2$
- Display mode - Writing math which is not part of text like

$$E = mc^2$$

This prints the expression in a separate line.

- Subscripts like  $x_1, y_1$
- Superscripts like  $x^2, y^2$
- Equations
  - package - `amsmath`
  - Sample equation

$$(x + y)^2 = x^2 + 2xy + y^2 \tag{1}$$

# Working with tables

- Simple table

alphabets	numbers
a	1
b	2

- Table with borders

alphabets	numbers
a	1
b	2

- Adding frames

# Working with Beamer

- Adding frames
- Adding effects to presentation

# Working with Beamer

- Adding frames
- Adding effects to presentation
- Highlighting important data

This is a block

This is an alert block

Examples

This is an example block

# Working with Beamer

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Examples

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# Working with columns, themes and fonts

## Different Themes

- Berkeley
- Copenhagen
- Madrid

## Different colorthemes

- beaver
- beetle
- seahorse

## Working with fonts

- `structurebold`
- `structuresmallcapsserif`