

Documentation Home

(/learn/Main_Page)

Learn LaTeX in 30 minutes

(/learn/Learn_LaTeX_in_30_minutes)

 Search help library....

[Suggest new doc](#)

ShareLaTeX guides

Creating a document in ShareLaTeX

(/learn/Creating_a_document_in_ShareLaTeX)

Uploading a project

(/learn/Uploading_a_project)

Copying a project

(/learn/Copying_a_project)

Creating a project from a template

(/learn/Creating_a_project_from_a_template)

Including images in ShareLaTeX

(/learn/Including_images_in_ShareLaTeX)

Exporting your work from

ShareLaTeX

(/learn/Exporting_your_work_from_ShareLaTeX)

Using bibliographies in ShareLaTeX

(/learn/Using_bibliographies_in_ShareLaTeX)

Sharing your work with others

(/learn/Sharing_your_work_with_others)

Debugging Compilation timeout

errors

(/learn/Debugging_Compilation_timeout_errors)

Knowledge Base

(/learn/Kb/Knowledge_Base)

LaTeX Basics

Creating your first LaTeX document

(/learn/Creating_a_document_in_LaTeX)

Choosing a LaTeX Compiler

(/learn/Choosing_a_LaTeX_Compiler)

Paragraphs and new lines

(/learn/Paragraphs_and_new_lines)

Bold, italics and underlining

(/learn/Bold_italics_and_underlining)

Lists (/learn/Lists)

Errors (/learn/Errors)

Mathematics

Mathematical expressions

(/learn/Mathematical_expressions)

Subscripts and superscripts

(/learn/Subscripts_and_superscripts)

Brackets and Parentheses

(/learn/Brackets_and_Parentheses)

Fractions and Binomials

(/learn/Fractions_and_Binomials)

Aligning Equations

(/learn/Aligning_equations)

Operators (/learn/Operators)

Spacing in math mode

(/learn/Spacing_in_math_mode)

Integrals, sums and limits

(/learn/Integrals_sums_and_limits)

Understanding packages and class files

The default formatting in \LaTeX documents is determined by the **class** used by that document. This default look can be changed and more functionalities can be added by means of a **package**. The class file names have the **.cls** extension, the package file names have the **.sty** extension.

Difference between classes and packages

Sometimes it's hard to make a decision when it comes to choose whether to write a package or a class. The basic rule is that if your file contains commands that control the look of the logical structure of a special type of document, then it's a class. Otherwise, if your file adds features that are independent of the document type, i.e. can be used in books, reports, articles and so on; then it's a package.

For instance, if a company needs branded reports that use a special font and have the logo of the company in the footer; you need a new class.

If the company needs a new command that makes easier to highlight important sentences within a document, a new package will work in this scenario.

Further reading

For more information see

- Writing your own package (/learn/Writing_your_own_package)
- Writing your own class (/learn/Writing_your_own_class)
- \LaTeX 2_ε for class and package writers (<http://www.latex-project.org/guides/clsguide.pdf>)

Display style in math mode

(/learn/Display_style_in_math_mode)

List of Greek letters and math symbols

(/learn/List_of_Greek_letters_and_math_symbols)

Mathematical fonts

(/learn/Mathematical_fonts)

Figures and tables

Inserting Images

(/learn/Inserting_Images)

Tables (/learn/Tables)

Positioning Images and Tables

(/learn/Positioning_images_and_tables)

Lists of Tables and Figures

(/learn/Lists_of_tables_and_figures)

Drawing Diagrams Directly in LaTeX

(/learn/Picture_environment)

TikZ package (/learn/TikZ_package)

References and Citations

Bibliography management in LaTeX

(/learn/Bibliography_management_in_LaTeX)

Bibliography management with biblatex

(/learn/Bibliography_management_in_LaTeX)

Biblatex bibliography styles

(/learn/Biblatex_bibliography_styles)

Biblatex citation styles

(/learn/Biblatex_citation_styles)

Bibliography management with natbib

(/learn/Bibliography_management_with_natbib)

Natbib bibliography styles

(/learn/Natbib_bibliography_styles)

Natbib citation styles

(/learn/Natbib_citation_styles)

Bibliography management with bibtex

(/learn/Bibliography_management_with_bibtex)

Bibtex bibliography styles

(/learn/Bibtex_bibliography_styles)

Languages

International language support

(/learn/International_language_support)

Quotations and quotation marks

(/learn/Typesetting_quotations)

Arabic (/learn/Arabic)

Chinese (/learn/Chinese)

French (/learn/French)

German (/learn/German)

Greek (/learn/Greek)

Italian (/learn/Italian)

Japanese (/learn/Japanese)

Korean (/learn/Korean)

Portuguese (/learn/Portuguese)

Russian (/learn/Russian)

Spanish (/learn/Spanish)

Document structure

Sections and chapters

(/learn/Sections_and_chapters)

Table of contents

(/learn/Table_of_contents)

Cross referencing sections and equations

(/learn/Cross_referencing_sections_and_equations)

Indices (/learn/Indices)

Glossaries (/learn/Glossaries)

Nomenclatures

(/learn/Nomenclatures)

Management in a large project

(/learn/Management_in_a_large_project)

Multi-file LaTeX projects (/learn/Multi-file_LaTeX_projects)

Hyperlinks (/learn/Hyperlinks)

Formatting

Lengths in L^AT_EX

(/learn/Lengths_in_LaTeX)

Headers and footers

(/learn/Headers_and_footers)

Page numbering

(/learn/Page_numbering)

Paragraph formatting

(/learn/Paragraph_formatting)

Line breaks and blank spaces

(/learn/Line_breaks_and_blank_spaces)

Text alignment

(/learn/Text_alignment)

Page size and margins

(/learn/Page_size_and_margins)

Single sided and double sided documents

(/learn/Single_sided_and_double_sided_documents)

Multiple columns

(/learn/Multiple_columns)

Counters (/learn/Counters)

Code listing (/learn/Code_listing)

Code Highlighting with minted

(/learn/Code_Highlighting_with_minted)

Using colours in LaTeX

(/learn/Using_colours_in_LaTeX)

Footnotes (/learn/Footnotes)

Margin notes (/learn/Margin_notes)

Fonts

Font sizes, families, and styles

(/learn/Font_sizes,_families,_and_styles)

Font typefaces

(/learn/Font_typefaces)

Supporting modern fonts with

X_YL^AT_EX (/learn/XeLaTeX)

Presentations

Beamer (/learn/Beamer)

Powerdot (/learn/Powerdot)

Posters (/learn/Posters)

Commands

[Commands \(/learn/Commands\)](/learn/Commands)

[Environments \(/learn/Environments\)](/learn/Environments)

Field specific

[Theorems and proofs](/learn/Theorems_and_proofs)

[\(/learn/Theorems_and_proofs\)](/learn/Theorems_and_proofs)

[Chemistry formulae](/learn/Chemistry_formulae)

[\(/learn/Chemistry_formulae\)](/learn/Chemistry_formulae)

[Feynman diagrams](/learn/Feynman_diagrams)

[\(/learn/Feynman_diagrams\)](/learn/Feynman_diagrams)

[Molecular orbital diagrams](/learn/Molecular_orbital_diagrams)

[\(/learn/Molecular_orbital_diagrams\)](/learn/Molecular_orbital_diagrams)

[Chess notation](/learn/Chess_notation)

[\(/learn/Chess_notation\)](/learn/Chess_notation)

[Knitting patterns](/learn/Knitting_patterns)

[\(/learn/Knitting_patterns\)](/learn/Knitting_patterns)

[Circuitikz package](/learn/Circuitikz_package)

[\(/learn/Circuitikz_package\)](/learn/Circuitikz_package)

[Pgfplots package](/learn/Pgfplots_package)

[\(/learn/Pgfplots_package\)](/learn/Pgfplots_package)

[Typing exams in LaTeX](/learn/Typing_exams_in_LaTeX)

[\(/learn/Typing_exams_in_LaTeX\)](/learn/Typing_exams_in_LaTeX)

[Knitr \(/learn/Knitr\)](/learn/Knitr)

[Attribute Value Matrices](/learn/Attribute_Value_Matrices)

[\(/learn/Attribute_Value_Matrices\)](/learn/Attribute_Value_Matrices)

Class files

[Understanding packages and class files](/learn/Understanding_packages_and_class_files)

[\(/learn/Understanding_packages_and_class_files\)](/learn/Understanding_packages_and_class_files)

[List of packages and class files](/learn/List_of_packages_and_class_files)

[\(/learn/List_of_packages_and_class_files\)](/learn/List_of_packages_and_class_files)

[Writing your own package](/learn/Writing_your_own_package)

[\(/learn/Writing_your_own_package\)](/learn/Writing_your_own_package)

[Writing your own class](/learn/Writing_your_own_class)

[\(/learn/Writing_your_own_class\)](/learn/Writing_your_own_class)

[Tips \(/learn/Tips\)](/learn/Tips)