

**NAME**

latex, pdflatex, xelatex, lualatex, dvilualatex, cslatex, pdfcslatex, platex, uplatex, lamed – structured text formatting and typesetting

**SYNOPSIS**

**latex** [*options*] [**&format**] [*file* [*more-input*] | [*\more-input*]

**DESCRIPTION**

L<sup>A</sup>T<sub>E</sub>X is a T<sub>E</sub>X macro package (format), not a modification to the compiled T<sub>E</sub>X programs, so see **tex**(1) for details of the command line invocation.

The L<sup>A</sup>T<sub>E</sub>X macros encourage writers to think about the content of their documents, rather than the form. The ideal, very difficult to realize, is to have no formatting commands (like “switch to italic” or “skip 2 picas”) in the document, but to use generic markup instructions: “emphasize”, “start a section”. The L<sup>A</sup>T<sub>E</sub>X language is described in the books and documents mentioned below, among others.

The primary source of documentation for L<sup>A</sup>T<sub>E</sub>X is the L<sup>A</sup>T<sub>E</sub>X manual referenced below.

**lualatex**, **pdfflatex**, **pdfcslatex**, **xelatex** are L<sup>A</sup>T<sub>E</sub>X formats based on the respective engines. These all output PDF by default. The lualatex format is built with the lua<sub>h</sub>btex engine, the LuaT<sub>E</sub>X variant with HarfBuzz (<https://en.wikipedia.org/wiki/HarfBuzz>) supported for glyph shaping.

**platex**, **uplatex** are Japanese L<sup>A</sup>T<sub>E</sub>X formats based on e-pT<sub>E</sub>X and e-upT<sub>E</sub>X (DVI output).

**lamed** is the Aleph-based L<sup>A</sup>T<sub>E</sub>X format (DVI output).

**dvilualatex** is LuaT<sub>E</sub>X-based and outputs DVI.

**cslatex** is csT<sub>E</sub>X-based (primitives integrated into pdfT<sub>E</sub>X) and outputs DVI.

On some systems, the commands **latex209** and **slitex** may still be available for compatibility with older versions of L<sup>A</sup>T<sub>E</sub>X. These should not be used for new documents.

**SEE ALSO**

**amstex**(1), **luatex**(1), **pdfptex**(1), **ptex**(1), **tex**(1), **xetex**(1).

Leslie Lamport, *L<sup>A</sup>T<sub>E</sub>X: A Document Preparation System*.

Frank Mittelbach with Ulrike Fischer, *The L<sup>A</sup>T<sub>E</sub>X Companion*, Addison-Wesley, 2024, ISBN 0-13-811578-8 (3rd edition). <https://tug.org/l/tlc3>

Package pages on CTAN: <https://ctan.org/pkg/latex>, <https://ctan.org/pkg/latex-base>

L<sup>A</sup>T<sub>E</sub>X tutorial topic on CTAN: <https://ctan.org/topic/tut-latex>

L<sup>A</sup>T<sub>E</sub>X reference topic on CTAN: <https://ctan.org/topic/ref-latex>

The L<sup>A</sup>T<sub>E</sub>X home page: <https://latex-project.org>

Online interactive tutorial: <https://learnlatex.org>

Getting started page: <https://tug.org/begin>

Please report bugs in L<sup>A</sup>T<sub>E</sub>X following the procedure at <https://www.latex-project.org/bugs>.

Public discussion list for all things T<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X: <https://lists.tug.org/texhax>