LaTeX

LaTeX is the most popular macro package for TeX. (A macro package is a set of commands that an author typically uses to write documents.)

This page does not try to answer all questions about LaTeX; rather we suggest some documentation, add-on components, and resources that a LaTeX user can start with. We limit our recommendations to freely-available materials, and you can click on the text to see the documentation on the Internet. (In case the Internet is not convenient, when the documentation is also available in a typical TeX installation we provide its name in a footnote; to view it locally using *texdoc*,[1] run "`texdoc` *name*" at a command prompt.)

Starting out

The article Getting something out of LaTeX walks a beginner through writing a sample document. In particular, to use LaTeX, users must install a TeX distribution, such as MiKTeX on Windows, or TeX Live on a Unix system such as GNU/Linux or on Windows, or MacTeX on Macintosh OS X.

Documentation

Essentials The most widely-recommended introduction is *The Not-So Short Guide to LaTeX 2ε*.[2] Another good one is from the *TUGIndia user group*. For typesetting mathematics, use the the American Mathematical Society's AMS-LaTeX package, introduced in the primer, *Getting up and running with AMS-LaTeX*.[3]

References The official LaTeX documentation from the development team is *LaTeX 2ε for Authors*;[4] this focuses on changes made in recent versions of LaTeX. The nearest thing to a general reference manual for LaTeX is the unofficial *LaTeX: Structured documents for TeX*.[5] Look for symbols in the *Comprehensive List of Symbols*.[6] A two-page *LaTeX Cheat Sheet*[7] is available. The document *l2tabu*[8] can help you to acquire sound habits by suggesting what you should consider taboo.

FAQ's Many web pages offer help with TeX and LaTeX. Particularly useful is the *English FAQ*[9] and the *TUG web resources page*. The *PracTeX Journal* is an online magazine aimed at beginning and intermediate users, and *TUGboat* has published many articles at all levels nearly since the inception of TeX.

Books There are many books about LaTeX; visit the *TeX Users Group Bookstore* for discounts.

Selected LaTeX packages

Page size and shape Adjust the page dimensions and orientation with *geometry*.[10] Control headers and footers with *fancyhdr*.[11]

Graphics Import graphics into a LaTeX document with the LaTeX team's *graphicx* package, and the related *graphics*. The official documentation is *Packages in the 'graphics' bundle*.[12] Another package in the same bundle is *color*.[13] For even more color capability use *xcolor*.[14] An excellent introduction to using these is the article *Strategies for including graphics in LaTeX documents*.

Index and bibliography Make an index with *makeidx*.[15] For bibliographies, people use *BibTeX*.[16] Two powerful tools based on it are: produce your bibliography in a natural science styles with *natbib*,[17] and generate your own style by answering a sequence of questions with *custom-bib*.[18]

[1] `texdoc` [2] `lshort` [3] `amshelp` [4] `usrguide` [5] `latex2e` [6] `comprehensive` [7] `latexcheat` [8] `l2tabuen` [9] `faq` [10] `geometry` [11] `fancyhdr` [12] `grfguide` [13] `color` [14] `xcolor` [15] `makeindex` [16] `bibtex` [17] `natbib` [18] `custom-bib`

COMPUTER CODE AND COMMENTING OUT For computer code, look at *listings*.[19] The *verbatim*[20] package is also useful for computer code, and includes a `comment` environment to suppress parts of the document.

HYPERTEXT The *hyperref*[21] package gives you hyper-document features, such as making table of contents entries link to the corresponding document part. If you don't need active links, typeset web addresses with *url*,[22] which also does computer file names.

PRESENTATIONS You can get presentation slides by adjusting the page geometry and writing a regular document. For more sophisticated effects use *beamer*.[23] The article *Beamer by example* will get you started.

Output and fonts

OUTPUT The *pdfTeX*[24] program extends TeX: it can directly produce web-friendly PDF files, as well as the traditional DVI format. For instance, this document was generated under TeX Live with `pdflatex latex_doc_ptr.tex`. A further extension to that, *XeTeX*,[25] can use fonts from your underlying computer platform, in addition to the fonts from your TeX distribution. (Mathematics requires much special tuning, though, so most system fonts cannot be used for math.)

FONTS The font system documentation from the LaTeX developers is *LaTeX 2ε font selection*.[26] To move beyond TeX's default fonts, these two documents describe some reasonable and free alternatives: *A Survey of Free Math Fonts for TeX and LaTeX* and *The LaTeX Font Catalogue*. More is on the TeX Users Group's font page.

Tools for composing LaTeX

There are many environments to make writing LaTeX source easier. For instance, many people use a text editor of some sort, such as Emacs with the add-on mode *AUC-TeX*. A new environment that is free, runs on all major computer platforms, and combines the best ideas from available environments while retaining simplicity, is TeXworks.

Community

There are many user groups for TeX. The Comprehensive TeX Archive Network contains many more packages than any distribution. In addition, if you are stuck on an issue, the Usenet group `comp.text.tex` and `texhax@tug.org` are the most popular mailing lists. You can search more than a decade of LaTeX discussions, or post a question yourself.

Miscellaneous

HISTORY LaTeX was first written in 1985 by Leslie Lamport, building on Donald Knuth's TeX. It is now maintained and developed by the LaTeX3 Project[27] group.

PRONUNCIATION LaTeX can be pronounced as "la-tech" or "lay-tech," with emphasis on either syllable. (We prefer the first, with emphasis on the first syllable.)

[19] `listings` [20] `verbatim` [21] `hyperref` [22] `url` [23] `beamer` [24] `pdftex` [25] `xetex` [26] `fntguide` [27] `latex3`