

Read Me First

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1 TeXShop

T_EX is a typesetting program, originally designed for mathematical and scientific documents, but increasingly used in other fields as well. The MacT_EX distribution contains the T_EX program and a large number of support files: fonts, style files, and so forth.

Most of these files remain hidden from the user, who interacts with T_EX via a front end. This front end contains an editor used to enter source text, and a preview window showing the typeset output. After installation of MacT_EX, your /Applications/TeX folder will contain the front end TeXShop. TeXShop has been available for OS X since the introduction of the operating system.

2 First Steps with T_EX

If you are new to T_EX, the following steps will get you started. Go to /Applications/TeX and find TeXShop. Drag its icon to your dock. Run the program. You will be presented with a blank window; at the top right of this window you'll find a pull down menu named "Templates". From this menu choose "LaTeX Template". The blank window will fill with some standard boilerplate required in each T_EX source file. The red lines are comments which T_EX ignores.

New material goes between the lines

```
\begin{document}
```

and

```
\end{document}
```

Type some sentences there now. T_EX will ignore most carriage returns because it knows how to format text, so insert them randomly if you wish. Use a blank line to indicate the start of a new paragraph.

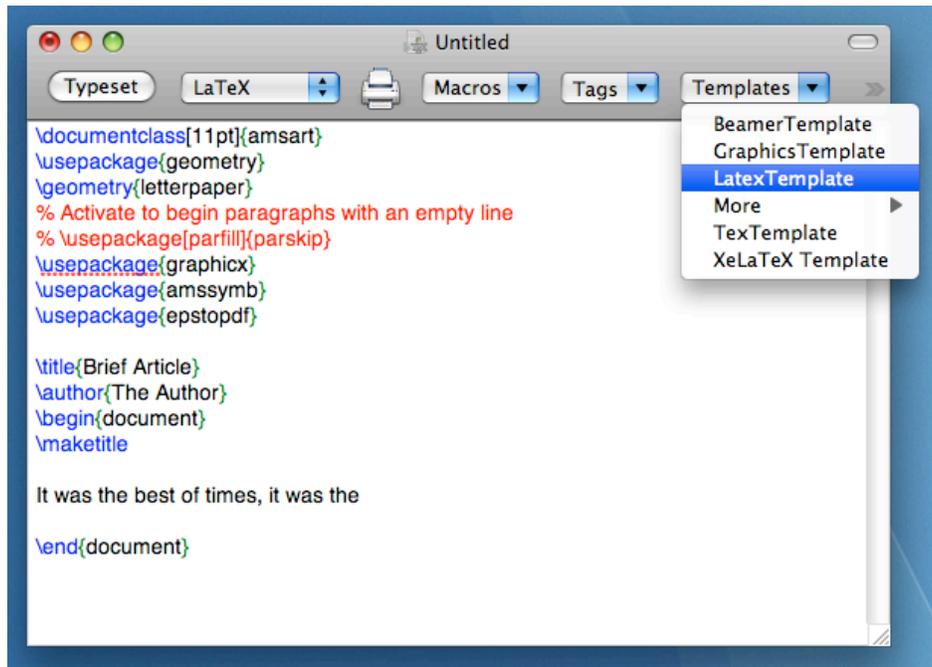


Figure 1: Edit Window

Uncomment the source line with the words “`usepackage[parfill]parskip`” if you prefer to separate paragraphs with an empty line instead of an indent.

When you have some material, hit the “Typeset” button at the top left of the window. A dialog will appear asking you to save the document. When \TeX typesets, it creates three or four additional files, so it is not a good idea to save directly to a location with many other files. Instead, put your source in a folder within such a location. To do that, navigate to a reasonable location, say `~/Documents`, and then click the “New Folder” button at the bottom of the dialog. Accept the default name or choose another and create the folder. Then name the document and save it. The default “Untitled” name will do.

As soon as you save, \TeX will typeset the document and open a second window showing the result.

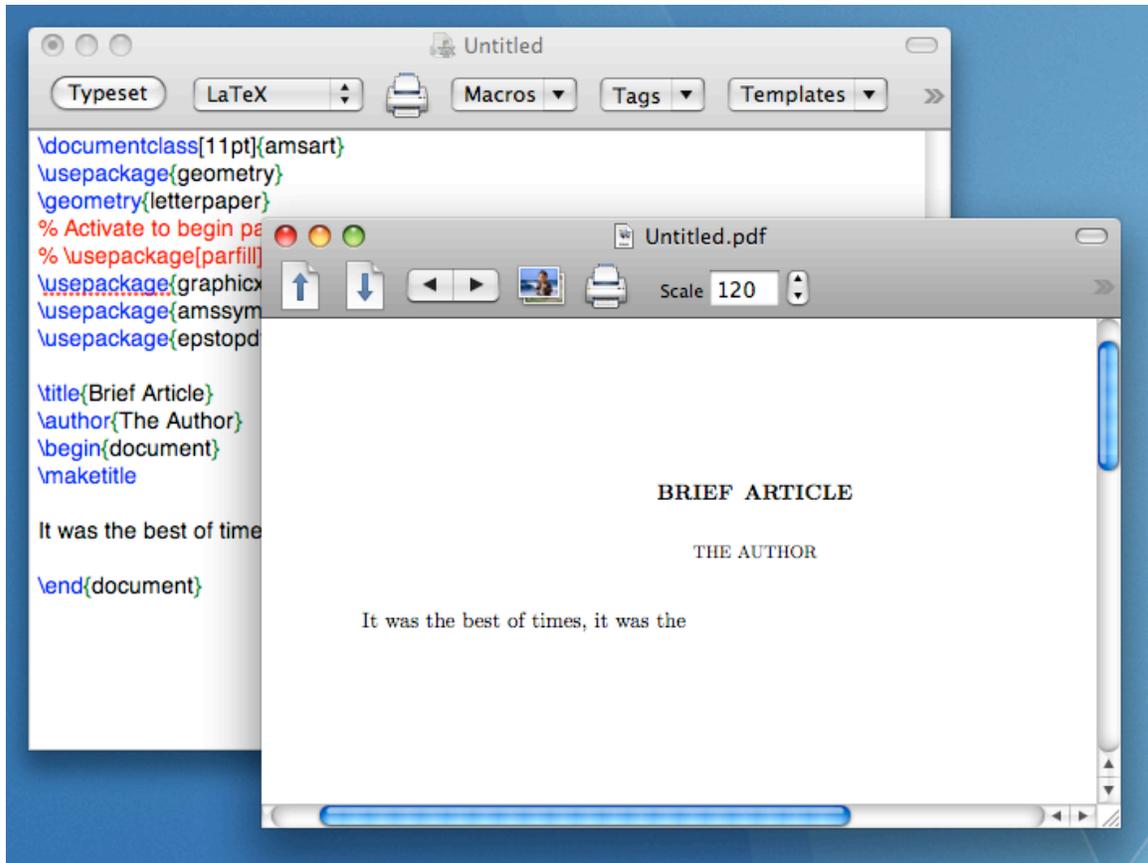


Figure 2: Typeset Window

Go back to the original window and add some additional text. Hit “Typeset” again. This time TeX immediately typesets the new material and updates the output window.

Now quit the program.

It is possible to reopen the project by double clicking on the Untitled file or by starting TeXShop and navigating to Untitled in the Open dialog, but there is a much easier way. Start TeXShop and under the File menu choose the item “Open Recent...” In the resulting list, choose “Untitled” and you will immediately return to the document.

Those are the basics. You will find further information in the TeXShop Help menu. The first short item, “First Steps With TeXShop”, should tell you everything you need to know to get started. Go to the Help menu now and select the submenu “TeXShop Demos” and then the item “Getting Started”. You’ll be shown a movie illustrating the steps you just performed.

You may be unhappy with TeXShop’s placement of the two crucial windows. This is easily fixed, as explained in the second movie “Initial Preferences”. Watch that movie and follow the suggestions in it to rationalize placement of the windows.

3 Second Steps with TeX

The next crucial step is to learn TeX. George Grätzer gave permission to put the first portion of his book *More Math Into L^AT_EX* in the TeXShop Help window, so begin by reading that document.

A vast amount of material is available over the internet. Below are links to good starting points. These links work if you are reading this pdf document in Apple’s Preview or in Safari. They also work in the latest Acrobat Reader, but Acrobat Reader first requires you to acknowledge security concerns when reading documents over the internet.

It is a good idea to read some of the material on the MacTeX web site: <http://www.tug.org/mactex>. The link “References” at the top of this page leads to a particularly useful page which has a lot of information about learning TeX. In particular, several useful online tutorials are available. If you are serious about TeX, you’ll probably want to buy some books. Visit <http://tug.org/books/> for an excellent list of classics, available at a discount with free shipping.

The following locations may prove useful:

- Information on joining the TeX on Mac OS X mailing list:
<https://email.esm.psu.edu/mailman/listinfo/macosex-tex>

For specialized versions of $\text{T}_{\text{E}}\text{X}$ and $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ see:

- Information on $\text{X}_{\text{Y}}\text{T}_{\text{E}}\text{X}$ and $\text{X}_{\text{Y}}\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$:
<http://scripts.sil.org/xetex>
- Information on $\text{ConT}_{\text{E}}\text{Xt}$:
http://wiki.contextgarden.net/Main_Page and
http://wiki.contextgarden.net/ConTeXt_Minimals

$\text{MacT}_{\text{E}}\text{X}$ is brought you by the TeX user groups across the world, including the one for English speakers:

- TeX Users Group Site:
<http://www.tug.org>

Searching this site will reveal a vast reservoir of information, including

- A Short History of $\text{T}_{\text{E}}\text{X}$:
<http://www.tug.org/whatis.html>
- A free online journal focused on practical use:
<http://www.tug.org/pracjournal/>
- Archived issues of the main journal about $\text{T}_{\text{E}}\text{X}$:
<http://www.tug.org/TUGboat/>
- Information on joining TUG, to get the latest issues and much more:
<http://www.tug.org/join.html>.
See also
<http://www.tug.org/usergroups.html>
for a list of other user groups; please join the one best for you!
- The Comprehensive $\text{T}_{\text{E}}\text{X}$ Archive Network (CTAN):
<http://www.ctan.org/>

TeXShop is just one of the many available editors and previewers for $\text{T}_{\text{E}}\text{X}$ on OS X. After you are comfortable with $\text{T}_{\text{E}}\text{X}$, you'll want to investigate other possibilities. A good starting point is the Gray-Slater site listed above.

4 $\text{MacT}_{\text{E}}\text{X}$ for Experts

$\text{MacT}_{\text{E}}\text{X}$ installs $\text{T}_{\text{E}}\text{X}$ Live 2019 in `/usr/local/texlive/2019`. The distribution it installs is exactly the same as the distribution that would be obtained by using $\text{T}_{\text{E}}\text{X}$ Live's standard

install script. \TeX Live runs on almost all architectures: OS X, Windows, GNU/Linux, and other Unix systems. The distribution is the same on all of these platforms; nothing has been added or removed to customize it for OS X.

The \MacTeX installer performs extra tasks which aren't done when you install with \TeX Live's standard script. \MacTeX extends `PATH` and `MANPATH` so \TeX binaries and man pages for the distribution are available within Unix shells.

If you were using an earlier \TeX distribution like \TeX Live 2018 before you installed \MacTeX -2019, that distribution remains unchanged on your machine after installing the new distribution. You can switch back and forth between \TeX Live 2019 and your old distribution by using the program `TeX Live Utility` in `/Applications/TeX`. Run this program and select the menu item "Reconfigure Distributions..." in the `Configure` menu. A panel will appear listing all \TeX distributions on your machine. Click the radio button attached to one of these items to activate that distribution.

When you click that button, `PATH` and `MANPATH` and all front ends and utilities are automatically reconfigured. A consequence of the mechanism used to make the command work is that all of the \TeX front ends and utilities provided by \MacTeX are automatically configured for \TeX ; this applies to most current programs available over the web, not just those we supply with \MacTeX .

On other Unix machines it is common to set environment variables like `TEXINPUTS`. While \TeX Live recognizes these variables, it is usually not necessary or desirable to set them.

\MacTeX tries to guess your paper size at installation time. If it makes a mistake, you can set the paper size by running the program `TeX Live Utility` in `/Applications/TeX`, and selecting the "Change Paper Size..." item in the `Action` menu.

Use `TeX Live Utility` to keep your distribution up to date. When the program starts, it lists packages in \TeX for which updates are available. Select the "Update All Packages" item in the `Action` menu to update these packages over the net.

For details about these features, read "What Is Installed" in `/Applications/TeX`.

5 \TeX Live Documentation

\TeX Live comes with extensive documentation. To browse through the full set, it is useful to read the Index to the documentation. The first two links below lead to this index. Curiously, the links work if you are reading this paper in Safari or Acrobat Reader, but not if you are reading with Apple's Preview.

First go to <file:///usr/local/texlive/k2019/index.html>. This leads to several deceptively simple README links in various languages. If you follow links within these files, you will soon reach extensive amounts of information, including some book length introductions to \TeX . An important link is <file:///usr/local/texlive/2019/doc.html> which has links pointing to all of the html and pdf package documentation, sorted by package name.

There are so many links that it is difficult to pick favorites; here are a few samples to show the variety of available information. The remaining links work when reading in Safari, Preview, or Adobe Reader:

- A 139 page book on \LaTeX , *The Not So Short Introduction to $\text{\LaTeX}2\epsilon$* , by Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl: <file:///usr/local/texlive/2019/texmf-dist/doc/latex/lshort-english/lshort.pdf>
- *The \TeX Live Guide* for 2019, edited by Karl Berry: <file:///usr/local/texlive/2019/texmf-dist/doc/texlive/texlive-en/texlive-en.pdf>
- The documentation for Beamer, a \LaTeX class to create presentations for a projector: <file:///usr/local/texlive/2019/texmf-dist/doc/latex/beamer/doc/beameruserguide.pdf>

6 Spell Checking

Apple's spell checker doesn't understand \TeX , so it marks most \TeX control words as misspelled. TeXShop can provide partial help for this problem; preference items tell the program to avoid marking TeX Command words and certain words in their parameters as misspelled. An even better solution is to install Anton Leuski's *cocoAspell*, a plugin for Apple's system which does recognize \TeX control words. The install package and instructions can be found in *Docs and Spell Utilities/Spelling/cocoAspell* inside `/Applications/TeX`.