



Emacs gimp
xfig

```
%-----
% Comments start with a % sign
%
% The first bit of a document sets up the
% style for the rest of it...
%-----
\documentclass[12pt]{article} % 12pt, article style
\pagestyle{empty}           % Don't put page numbers in
\newcommand{\BigBold}[1]{\large \bf #1}
%-----
\begin{document}
This is where the actual text of the document goes.
\BigBold{Commands} are introduced with a backslash, and curly
braces for bracketing.
\end{document}
```

Key thought: worry about content over appearance! L^AT_EX is not a word processor! Instead, L^AT_EX encourages authors not to worry too much about the appearance of their documents, but to concentrate on getting the right content. So its a mark-up language akin, in some ways, to HTML.

Document Structure

At the top level, documents are structured into chapters and sections (`\section{Section title}`). L^AT_EX will take care of numbering these if you want it to — and you can cross-reference to section names, so adding or removing something doesn't muck up the references to section or page numbers! (This text is on page 1)

Things like enumerated or itemized lists, tables, diagrams, etc are usually “bracketed” inside an *environment*. For example:

<pre> \begin{itemize} \item {\large First} item \item This is item has some sub-parts \begin{enumerate} \item sub-part 1 \item {\bf bold} sub-part 2 \end{enumerate} \end{itemize} </pre>	<ul style="list-style-type: none"> • First item • This is item has some sub-parts <ol style="list-style-type: none"> 1. sub-part 1 2. bold sub-part 2
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Advantages

- Source file format is text-based, so you can edit it with any editor;
- Following on from the text file format, one important implication is that you gain access to powerful version control (RCS/CVS/subversion/etc)
- Large documents are trivial — you can sub-divide the document into multiple files, and then just `\include{file.tex}`, the sub-parts. This also allows common text to be re-used.
- Style changes can affect the whole document in one go
- Since it is “compiled”, you get easy repeatability
- With the `dvi` to `ps` to `pdf` chain you get PDF document portability
- Nothing else will do complicated maths like it (I’ve never used it for this, though!)

Disadvantages

- Precise page-layout is tricky
- Can’t get text to flow round an image or table!
- Error handling is less than perfect!!

Resources

<http://www.maths.tcd.ie/~dwilkins/LaTeXPrimer/>

<http://www.cs.cornell.edu/Info/Misc/LaTeX-Tutorial/LaTeX-Home.html>

<http://www.latex-project.org/> and <http://www.tug.org/>

<http://it.metru.edu/latex/> (See especially the “Bundled LaTeX examples” section)