

# Chapter 1

## A Sample L<sup>A</sup>T<sub>E</sub>X File

This is a sample L<sup>A</sup>T<sub>E</sub>X input file. Comparing it with the output it generates can show you how to produce a simple document of your own.

### 1.1 Ordinary Text

The ends of words and sentences are marked by spaces. It doesn't matter how many spaces you type; one is as good as 100. The end of a line counts as a space.

One or more blank lines denote the end of a paragraph.

Since any number of consecutive spaces are treated like a single one, the formatting of the input file makes no difference to L<sup>A</sup>T<sub>E</sub>X, but it makes a difference to you. Making your input file as easy to read as possible will be a great help as you write your document and when you change it. This sample file shows how you can add comments to your own input file.

Because printing is different from typewriting, there are a number of things that you have to do differently when preparing an input file than if you were just typing the document directly. Quotation marks like “this” have to be handled specially.

Dashes come in three sizes: an intra-word dash, a medium dash for number ranges like 1–2, and a punctuation dash—like this.

A sentence-ending space should be larger than the space between words within a sentence. You sometimes have to type special commands in conjunction with punctuation characters to get this right, as in the following sentence. Gnats, gnus, etc. all begin with G. You should check the spaces after periods when reading your output to make sure you haven't forgotten any special cases. Generating an ellipsis ... with the right spacing around the periods requires a special command.

L<sup>A</sup>T<sub>E</sub>X interprets some common characters as commands, so you must type special commands to generate them. These characters include the following: \$ & % # { and }.

In printing, text is emphasized by using *italics*.

*A long segment of text can also be emphasized in this way. Text within such a segment given additional emphasis with Roman type. Italic type loses its ability to emphasize and become simply distracting when used excessively.*

It is sometimes necessary to prevent L<sup>A</sup>T<sub>E</sub>X from breaking a line where it might otherwise do so. This may be at a space, as between the “Mr.” and “Jones” in “Mr. Jones”, or within a word—especially when the word is a symbol such as *itemnum* that makes little sense when hyphenated across lines.

Footnotes<sup>1</sup> pose no problem.

## 1.2 Lists

A frequently-displayed structure is a list. The following is an example of an *itemized* list.

- This is the first item of an itemized list. Each item in the list is marked with a “tick”. The document style determines what kind of tick mark is used.
- This is the second item of the list. It contains another list nested inside it. The inner list is an *enumerated* list.
  - 1 This is the first item of an enumerated list that is nested within the itemized list.
  - 2 This is the second item of the inner list. L<sup>A</sup>T<sub>E</sub>X allows you to nest lists deeper than you really should.

This is the rest of the second item of the outer list. It is no more interesting than any other part of the item.

- This is the third item of the list.

Other list structures allow automatically numbered items and user-defined labels (instead of bullets or numbers).

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<sup>1</sup>This is an example of a footnote.