# Sample PDF Document

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# Chapter 1

# **Template**

## 1.1 How to compile a .tex file to a .pdf file

#### **1.1.1** Tools

To process the files you (may) need:

- pdflatex (for example from tetex package  $\geq 0.9-6$ , which you can get from Red Hat 5.2);
- acroread (a PDF viewer, available from <a href="http://www.adobe.com/">http://www.adobe.com/</a>);
- ghostscript ≥ 5.10 (for example from Red Hat Contrib) and ghostview or gv (from RedHat Linux);
- efax package could be useful, if you plan to fax documents.

#### 1.1.2 How to use the tools

Follow these steps:

- 1. put all source . tex files in one directory, then chdir to the directory (or put some of them in the latex search path if you know how to do this);
- 2. run "pdflatex" file.tex" on the main file of the document three times (three to prepare valid table of contents);
- 3. to see or print the result use acroread (unfortunately some versions of acroread may produce PostScript which is too complex), or

- 4. run ghostscript: "gv file.pdf" to display or: "gs -dNOPAUSE -sDEVICE=pswrite -q -dBATCH -sOutputFile=file.ps file.pdf" to produce a PostScript file;
- 5. run "fax send phone-number file.ps" as root to send a fax, or if you know how to do this modify the fax script to be able to fax .pdf files directly (you have to insert "| %PDF\*" somewhere...).

## 1.2 How to write a document

### 1.2.1 The main document

Choose the name of the document, say document. Copy template. tex to document. tex, then edit it, change the title, the authors and set proper include(s) for all the chapters.

### 1.2.2 Chapters

Each chapter should be included in the main document as a separate file. You can choose any name for the file, but we suggest adding a suffix to the name of the main file. For our example we use the file name document chapter 1. tex.

First, copy template chapter tex to document chapter . tex and add the line

```
\include{document_chapter1}
```

in the document. tex, then edit document chapter l. tex, change the chapter title and edit the body of the chapter appropriately.

### 1.2.3 Spell-checking

Do use a spell-checker, please!

You may also want to check grammar, style and so on. Actually you should do it (if you have enough spare time). But you *must* check spelling!

You can use the ispell package for this, from within emacs, or from the command line:

```
ispell -t document chapter1.tex
```

## 1.3 MEX and pdfMEX capabilities

#### 1.3.1 Overview

First you edit your source .tex file. In **FIEX** you compile it using the latex command to a .dvi file (which stands for device-independent). The .dvi file can be converted to any device-dependent format you like using an appropriate driver, for example dvips.

When producing .pdf files you should use pdflatex, which produces directly .pdf files out of .tex sources. Note that in the .tex file you may need to use some PDF specific packages.

For viewing .tex files use your favourite text editor, for viewing .dvi files under X Window System use xdvi command, .ps files can be viewed with gv (or ghostview) and .pdf files with acroread, gv or xpdf.

## 1.3.2 IMEX

A lot of examples can be found in this document.
You should also print

- doc/latex/general/latex2e.dvi and
- doc/latex/general/lshort2e.dvi

from your tetex distribution (usually in

- /usr/share/texmf or
- /usr/lib/texmf/texmf).

## 1.3.3 pdf**I**4**TEX**

Consult doc/pdftex/manual.pdf from your tetex distribution for more details. Very useful informations can be found in the hyperref and graphics package manuals:

- doc/latex/hyperref/manual.pdf and
- doc/latex/graphics/grfguide.dvi.

### 1.3.4 Examples

#### References

**MIMUW** 

#### **Hyperlinks**

This is a target.

And this is a link.

#### Dashes, etc.

There are three kinds of horizontal dash:

- - (use inside words; for example "home-page", "X-rated")
- – (use this one between numbers; for example "pages 2–22")
- — (use this one as a sentence separator like here)

#### **National characters**

- ó, é, í, ...
- è, à, ì, ...
- ô, ê, ...
- $\tilde{0}$ ,  $\tilde{n}$ , ...
- ö, ë, ...
- ż
- ą, ę
- ł, ø, ß

There are other ways to do this, see the documentation for inputenc package.

#### **Reserved characters**

Some characters have some special meaning, thus cannot be entered in the usual way.

- \$ & % # \_ { }
- \
- ~ ^

#### Math

- $1^2, 1^{2n}, \dots$
- $i_1, i_{2n}, \dots$
- $\bullet \ \frac{1}{2}, \frac{2n}{2-3}, \dots$
- $\alpha, \beta, \gamma, \Omega, \dots$
- $\bullet \rightarrow, \Rightarrow, \geq, \neq, \in, \star, \dots$
- $\sqrt{2}$ ,...
- $\overline{2+2}, \ldots$

For more examples and symbols see chapter 3 of 1short2e.dvi.

#### **Fonts**

- Roman
- Emphasis
- Medium weight the default
- Boldface
- Upright
- Slanted
- Sans serif
- SMALL CAPS
- Typewriter
- and sizes:
  - tiny
  - scriptsize
  - footnotesize
  - small
  - normalsize

- large
- Large
- LARGE
- hugeHuge