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# 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 <http://www.adobe.com/>);
- `ghostscript`  $\geq 5.10$  (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 `TEXsearch` 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_chapter1.tex`.

First, copy `template_chapter.tex` to `document_chapter1.tex` and add the line

```
\include{document_chapter1}
```

in the `document.tex`, then edit `document_chapter1.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 $\text{\LaTeX}$ and $\text{pdf}\text{\LaTeX}$ capabilities

### 1.3.1 Overview

First you edit your source `.tex` file. In  $\text{\LaTeX}$  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 $\text{\LaTeX}$

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 $\text{pdf}\text{\LaTeX}$

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, ...
- ã, ñ, ...
- ö, ë, ...
- ž
- å, ç
- 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**

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

For more examples and symbols see chapter 3 of `lshort2e.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
- huge
- Huge

# A Simple PDF File

This is a small demonstration .pdf file -

just for use in the Virtual Mechanics tutorials. More text. And more text. And more text. And more text. And more text.

And more text. And more text. And more text. And more text. And more text. And more text. Boring, zzzzz. And more text. And more text. And more text. And more text. And more text. And more text. And more text.

And more text. And more text. And more text. And more text. And more  
text. And more text. And more text. Even more. Continued on page 2 ...

# Simple PDF File 2

...continued from page 1. Yet more text. And more text. And more text.  
And more text. And more text. And more text. And more text. And more  
text. Oh, how boring typing this stuff. But not as boring as watching  
paint dry. And more text. And more text. And more text. And more text.  
Boring. More, a little more text. The end, and just as well.