- large
- Large
- LARGE
- huge
- Huge

**Math**

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

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

### 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, . . .
- õ, ñ, . . .
- 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.

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

## 1.3 LaTeX and pdfLaTeX capabilities

### 1.3.1 Overview

First you edit your source `.tex` file. In 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 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 pdfLaTeX

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

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
```

# 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 LaTeXsearch 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

# Contents

# Sample PDF Document

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Grzegorz Grudziński

February 20, 1999