

Setting Font, Language and Typography

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Accented letters and font encoding

For languages like French, for which accented letters are widely used, the \LaTeX user must be cautious:

- if **compiling with *latex* or *pdflatex***,
 - the `inputenc` package must be used to be able to typewrite directly accented letters from the keyboard,
 - with `inputenc` `é` and `à` are correct,
 - without the package the user must write `\{e}` and `\{a}`,
 - the encoding must be provided as an optional argument (`utf8` is encouraged),
 - the `fontenc` package to enable the correct hyphenation rules depending on font encoding
 - the font type must be provided as an optional argument,
 - `T1` is recommended for both English and French,
- if **compiling with *xelatex* or *lualatex***,

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- if compiling with *latex* or *pdflatex*,
- if **compiling with *xelatex* or *lualatex***,
 - the `fontspec` package must be used to enable the rich font management,
 - accented letters can be directly typewritten,
 - the font can be selected without using another package.

For clarity and readability, original or artistic fonts should be avoided. A common font was *Computer Modern*, modernised by the *Latin Modern* font. However, both have been extensively used, so that some people consider them boring.

Depending on the compiler:

- for *latex* and *pdflatex* compilation,
 - selection is made by calling the corresponding package,
 - *Latin Modern* is loaded by the `lmodern` package,
- for *xelatex* and *lualatex* compilation,
 - selection is performed through the `fontspec` package,
 - advanced options regarding the ligatures can be passed to the package.

Selecting the language

There are two efficient packages for selecting a language and load the typographical rules of the language:

- 1 `babel`, which works with LaTeX, LuaLaTeX and XeLaTeX;
- 2 `polyglossia`, which was especially made for XeLaTeX but also works for LuaLaTeX.

Both packages work with the compilers related to the LaTeX engine described above. Pay attention that `polyglossia` relies on the `fontspec` package, so it does not compile with *latex* nor *pdflatex*.

Multilingual documents

It is possible to create multilingual documents:

- with `babel`
 - languages are loaded with the package options,
 - the main language is specified with the `main=` identifiers in the options,
 - the user can locally change the language with the `selectlanguage` command or the `otherlanguage` environment,
- with `polyglossia`
 - languages are loaded with specific commands in the preamble,
 - the user can locally change the language with the `(lang)` environment (e.g. `french`),
 - `babel` commands are also available for compatibility.

Refer to the examples to see the use of commands and environments, depending on the compiler and the choice between `babel`/`polyglossia`.

Quotations

A powerful package for quoting text is `csquotes`. It provides:

- the `enquote` command to quote a text according to the defined language,
- the `foreignquote` command which combines `enquote` and `foreignlanguage` from `babel`/`polyglossia`,
- the `textquote` command for formal quoting (i.e. with reference citation),
- the `textcquote` for formal quoting interfaced with bibliography management packages¹.

The package is originally intended for working in conjunction with `babel`. However, it generally works with `polyglossia`, even though I faced strange behaviours with XeLaTeX in French.

1. Concerned packages are `natbib`, `jurabib` and `biblatex`.

Enhanced documents with micro-typography

Micro-typography is a set of techniques which allow to enhance the aspect of a text by reducing the potential sources of disturbance for the reader. It includes:

- character protrusion (a.k.a. margin kerning), which consists in adjusting the characters at the margins of a typeset text for optical alignment;
- font expansion which is the method to use a wider or narrower variant of a font to make interword spacing more even;
- tracking (letterspacing).

The effects of microtype are compiler-dependent. In summary, the compilers which make the highest benefits from it are PDFLaTeX and LuaLaTeX.

Packages order

Summary of the packages which must be loaded, observing the following order:

- for *latex* and *pdflatex* compilation,
 - 1 lmodern (or any other package relative to font selection),
 - 2 inputenc,
 - 3 fontenc,
 - 4 babel,
 - 5 csquotes,
 - 6 microtype,
- for *xelatex* and *lualatex* compilation,
 - 1 fontspec,
 - 2 polyglossia (or babel),
 - 3 csquotes,
 - 4 microtype.