

LaTeX-Beginners : Exercise sheet for 19/10/2023

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1 Base document

a) Type on the keyboard the base document:

```
1 \documentclass[a4paper,11pt]{article}
2 \usepackage[utf8]{inputenc}
3 \usepackage[french,english]{babel}
4 \usepackage[margin=28mm]{geometry}
5 \usepackage[T1]{fontenc}
6 \usepackage{lmodern}
7 \begin{document}
8 some text...
9 \end{document}
```

b) Save it with the name `sandbox.tex` in a dedicated folder (without spaces in name).

c) Check that it compiles successfully with `pdf1latex`. If case of errors, keep in mind that only the first one is meaningful, as the following often a side effect of the first one.

d) Try the same with the `latex` command, and make sure that a `sandbox.dvi` file has been created, but no `sandbox.pdf`.

2 Options on the command line

If what follows, “LIN” means “Linux and similar”, including Mac OS X.

a) **Run from command line** For this, follox the following steps:

1. Open a terminal (aka console) on your system.
2. Move to the “working directory” ² containing your `sandbox.tex` :

```
LIN> cd_/pathto/working/folder/
WIN> cd_/D_/pathto\working\folder\
```

and delete all the generated files (or copy `sandbox.tex` to another empty directory).

3. Execute :

```
> pdflatex sandbox
```

b) To use `latex` (optionnal) and nevertheless get a `.pdf`, you can chain the compilation and the conversion by using :

```
> latex -interaction=nonstopmode sandbox
&& dvipdfmx sandbox
```

c) Use now the option `-jobname=...` which modifies the name of the output file:

```
> pdflatex -interaction=nonstopmode
-jobname=myFirstdoc sandbox
```

and look at `sandbox.log`.

¹Selecting this motor and click on the “compile” or “type-set” button in your IDE

²The slash / separator is used by Linux, MasOsX and (La)TeX, and work too in Windows in place of the default \.

d) Repeat **c)** by removing `-jobname=...` and adding the option `-recorder`, then look at the file `sandbox.fls`.

e) Adjust the command used by your editor to add the options `-interaction=nonstopmode`, `-synctex=1` and, if you dare, `-shell-escape`

3 Styles

a) Produce text using declarations:

```
\tiny \scriptsize \footnotesize \small
\normalsize \large \Large \LARGE \huge \Huge
```

b) Produce text using declarations:

```
\textrm (\rmfamily) \textsf (\sffamily)
\textit (\itshape) \textsl (\slshape)
\textmd (\mdseries) \textbf (\bfseries)
\textsc (\scshape) \texttt (\ttfamily)
\textup (\upshape) \textnormal
```

4 Structure and references

a) By editing `sandbox.tex` and saving it under another name, say `doc.tex`, add two `\section`, in each two `\subsection`, and in one of these `\subsection`, one `\subsection` containing a `\paragraph`. Observe.

b) Add the package `lipsum` and use it to complete the document (This package produces dummy text, `\lipsum[3-5]` gives paragraphs 3 to 5).

c) Add at the top of the document the command `\tableofcontents`. What’s going on?

d) Look at `.aux` and `.toc` files. Compile again.

e) Add after the declaration of the first section `\label{s:firstsec}`, and at the end of the second section `\ref{s:firstsec}`. See what happens after one, then two compilations.

f) Add in the preamble:

```
\title{<My document>}
\author{<name>}
\date{\today}
```

and at the beginning of the `<document>` the command `\maketitle`.

g) Add just before `\begin{document}` the command `\usepackage{hyperref}`. Observe the result.

h) Pass to `hyperref` the options:

```
[colorlinks,bookmarks,bookmarksnumbered=true].
```

Observe in AcroReader, Preview or an other PDF viewer.