

A-LaTeX-Beg : Exercises sheet of the 25/02/2021

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1 BibTeX

For these exercises, use your own `.bib` files extracted from Zotero, Mendelay, Google Scholar, etc. or use one of the files provided in folder <https://www.edpif.org/documents/latex/beg/bib>, where are also the `.bst` files mentioned below.

a) Try out the `unsrt`, `ieeetr` and `apalike` standard styles.

b) Try out the styles `natbib` : `unsrtnat` et `plainnat` (`\usepackage{natbib}` needed), with the commands `\citep{...}` and `\citet{...}` and their starred versions.

c) **Optionnal** Try out one or several RevTeX (v4.2e) styles to install with your package manager, or alternatively download from <https://www.edpif.org/documents/latex/beginners/bib/revtex4.2e-natbib-bst.zip>.

d) **Optionnal** Try out the styles `theseenat-href`, customized for `natbib` and `hyperref`.

e) **Optionnal** If you use `hyperref`, load the provided custom package `citebackref` just before it and look at the bibliography.

f) Retrieve the `.bst` style file of your favorite journal and use it !

2 Commands

a) Create commands `\kB` and `\NA` to typeset Boltzmann and Avogadro constants as k_B and N_A .

b) Create a command `\unit` to compose physical units as in 421 kg.mol^{-1} .

c) Create a command `\tenpo` to write the powers of ten as in 12.3×10^{-45} with `\tenpo{12.3}{-45}`. (\times is obtained with `\times`).

```
newcommand[1]macro parameter character
#1
```

d) Change the numbering, in the class `book`, to get the following format: `\chapter` \rightarrow `\Roman`, `\section` \rightarrow `\Alph`, and `\section` \rightarrow `\arabic` without the chapter or section number.

— In the questions e) and f) it is *essential* to disable the loading of `hyperref`. One can then reactivate it, provided it is done *after* the `\renewcommand` —

e) The command `\meaning` is a command from L^AT_EX that displays in the document the definition of the command passed as argument.

1 - Try `\meaning\section` (in `article` class).

2 - Create a command `\mymeaning` that displays the same result, but in teletype font style (`\ttfamily`), left aligned (`\flushleft`) and without indentation (`\noindent`). At the end we will add the command `\par` to finish the paragraph, and `\medskip` to create a vertical spacing.

3 - Add at the beginning the display of the command argument `\meaning` (use the command `\string`) in boldface.

f) Delete the call to `\maketitle` (required), then use this command to look at the definition of `\maketitle` and `\@maketitle` (remind to `\makeatletter... \makeatother`).

g) Rewrite (`\renewcommand`) the macros `\maketitle` et `\@maketitle`, by eliminating the superfluous code, in order to:

1 - reduce the vertical spaces around the title,

2 - format the title in bold and large,

3 - keep available the macros `\@title`, `\@author`, `\@date`, as well as `\title`, `\author`, `\date` and `\maketitle`, which are by default all deactivated after the initial call of `\maketitle`.