Master ReLAI **Outils informatiques pour la linguistique – M1NS5M2**
Université Bordeaux 3 **2013 – 2014**

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1 Getting started

1. Place yourself in the folder `/root/ReLAI`, create a directory called "`OI-LaTeX`" and enter it. (Useful commands : `pwd`, `cd ⟨dir⟩`, `mkdir ⟨newdir⟩`)
2. Using the `wget` command, download the compressed files found at `http://www.labri.fr/jkirman/Cours/2013-Bx3-OIL/TD2.tar.gz` (simply provide the full URL to `wget` as an argument).
3. Uncompress and unpack the file you just downloaded with the command :

   ```
   tar -xzf TD2.tar.gz
   ```
4. Open the resulting files and take a look at their contents. The `.tex` and `.bib` files are text files that contain the LaTeX source code, and can be opened with `geany`. The `.pdf` files are the result and can be displayed with `evince`.

   By adding a '`&`' symbol at the end of a command, you can keep your terminal available for use while the programs are running. The resulting commands are :

   ```
   geany document.tex TeXample.tex bib-example.bib &
   evince TeXample.pdf &
   ```

2 Compiling `.tex` files

The `document.tex` file is the one you are going to modify for the next exercises, while `TeXample.tex` contains examples that you can use as a model.

1. To produce the expected output from `document.tex`, you must compile it into a `.pdf` file using the command `pdflatex document.tex` (try it now). The program will output the results of the compilation, while writing the file `document.pdf` ; if the compilation is successful, you will see a line near the end saying "`Output written on document.pdf`". If not, TeX will display an error and wait for your corrections. The easiest way to fix it is by pressing '`x`' then ENTER, and correct your source file using the clues given in the error message.
2. Open the resulting `document.pdf` file with `evince` (don't forget to add an '`&`') and keep the resulting window open on your screen. Note that each time you recompile your file, `evince` will automatically update it so you can see the results.

From now on, you will find the answers of the next section in the `TeXample` files. If you don't know how to do something, try to find an occurence it in `TeXample.pdf` and look for the corresponding code in `TeXample.tex`.

3 Structuring a document

(Optional) You can choose to write your document in French rather than English. In this case, use the appropriate packages (look at the top of the example source file), and write all the contents in French.

1. Create two sections in your document, named respectively "TD2" and "Abstract".
2. Inside your section TD2, create a subsection for each of the remaining exercises (including this one). Once you've completed an exercise, add a sentence saying so in the appropriate subsection.
3. Write a paragraph with the title "Language" in the subsection for this exercise stating which language you have chosen to use for your document.

Don't forget to compile your document to ensure everything looks as expected.

4 Adding contents

1. In the subsection for this exercise, write a short (a few words) example sentence. Then make three copies of it : the first one written in bold, the second in slanted and the last one in small capitals.
2. Chose a single word in the original sentence and add emphasis to it.
3. Add another copy of your original sentence, written with in a smaller font.
4. Make an un-numbered list with all your previous sentences.
5. Start a new subsection (named "Counting questions") and add a table with three columns. Add one line for each exercise, so that the first column contains the number of the exercise, the second contains its title, and the third the number of questions it the exercise. Add a header at the beginning to explain what the columns contain. The resulting table could look like this :

N°	Title	Questions
1	Getting started	4
2	Compiling `.tex` files	2
3	Structuring a document	3 (+1)
4	Adding contents	9
5	Practicing with LaTeX	2
B	Typesetting typesetting instructions	2 (!)

6. Place your table in a `table` environment (you can just replace `figure` with `table`, both environments work the same).
7. Add a caption to the table with a sentence describing your table contents.
8. Outside of the `table` environment, add a sentence refering to it (using the `label` and `ref` commands, of course).
9. Add a footnote somewhere in your document.

5 Practicing with LaTeX

1. Select any interesting lecture that you have attended to recently, and write a short summary of what it was about in the "Abstract" section of your document. Try to use the

LaTeX commands that you've learned about appropriately. Some more documents may also be useful – bookmark them for later use ! – look at :

`http://en.wikibooks.org/wiki/LaTeX` - WikiBook on LaTeX.

`http://tobi.oetiker.ch/lshort/lshort.pdf` - A (not so) short introduction to LaTeX.

`http://en.wikibooks.org/wiki/LaTeX/Linguistics` - LaTeX packages for linguistics

2. Try to rassemble a few bibliographical entries for your previous abstract, and cite them appropriately. You may want to look into the `bib-texample.bib` file, and also use this document :

   `http://en.wikibooks.org/wiki/LaTeX/Bibliography_Management#BibTeX`

Bonus - Typesetting typesetting instructions

The LaTeX language can also be used to typeset source code (for example, for teaching purposes) and, being a general-purpose tool, it can of course be used to typeset the source code of a LaTeX document.

1. Do you think that it's possible to create a LaTeX document that typesets and outputs its own source code ?
2. The previous question is probably harder than you think. Taking into account the fact that the source must contain not only its own source code (that must be typeset), but also the instructions for typesetting this code ; then it must also typeset the typesetting instructions. (Which will, in turn, require more instructions inside the source code, which must also appear in the final output, and so on.)

   A program that is able to output exactly all of its source code is called a quine. (The name comes from a proper noun, so it's the same word in English and French.)

   Using a search engine, look for information about quines. Can you find one for the LaTeX language ?