Open Source: Tools for Physics

Seminar 4

Introduction to LaTeX and GNU Emacs

About Me
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. . . and GNU/Linux enthusiast!

The next step

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We have used bash scripting and Python for performing a simulation for verifying the law of large numbers and the central limit theorem. Now it is time to write a report.
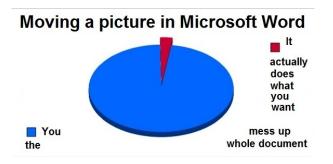
Why LaTeX?

- Simple to learn and to use
- Plain text files: can be easily shared, versioned with git and there won't be any compatibility issue (ever!)
- WYSIWYM (What You See Is What You Mean), not WYSIWYG (What You See Is What You Get): LaTeX takes care of typesetting, not you.
- The quality is professional
- It is Open Source: it will be supported forever

Appetizer

- Excellent referencing system
- Simple sectioning system
- Consistency of the layout
- Logical structure of the document (eg: one file per chapter)
- Easily produce PDFs with hyperlinks, table of contents, indices, etc
- Painless formulas

Forget wandering images!

A workflow nobody actually uses

- Write the `.tex` document with an editor
- Compile via command line with `pdflatex`
- Check out the output with a PDF reader

What people actually do

- Write the `.tex` document in a LaTeX editor
- Press the magic button to compile the document
- Check the output with a side by side view with the source code
- Ignore the existence of the command line

Suggested editors

- OverLeaf (Beginners, collaborative)
- TeXStudio (Visual, beginners)
- GNU Emacs (Master race)

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