Version control & Automation

[git & make]

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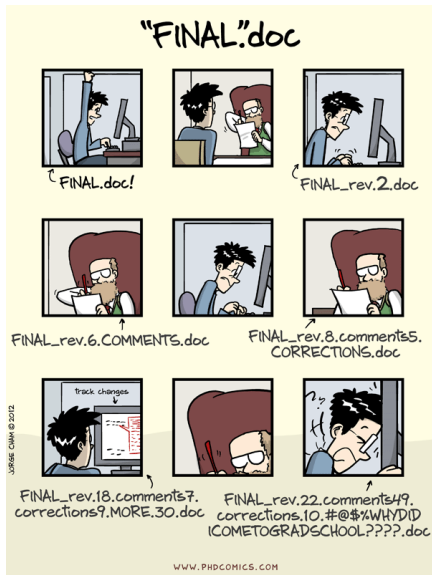
Outline

Version control

- What
- Why
- How (`git`)

Task automation

- What
- Why
- How (`make`)

Version control - *What* (not)

Version control

What

The modern scientist's lab notebook

- ▶ Keep track of changes in a project *as the occur*
- ▶ Document the changes
- ▶ Archive the history in a way that allows to easily roll back
- ▶ Tell differences with other versions (collaboration) and be able to merge them

Why

- ▶ **Sanity**: nothing "committed" is lost
- ▶ **Archival**: keep record on when what changed how
- ▶ **Collaboration**: work simultaneously with colleagues, properly merge and manage conflicts

Very neat video exemplifying the concept

git

Today:

- ▶ Set up a new project
- ▶ Track changes as you work
- ▶ Examine the change history
- ▶ Compare different versions
- ▶ Restore old versions of a file
- ▶ Other tricks to better manage your git project

Not today (but you should check it out):

- ▶ Collaboration with git
- ▶ Conflicts in git

git - Requirements & Setup

Assuming you have `git` installed: