Recap

- Seminar goals
- Meta cognition
    - Fail fast
    - PS: We also make mistakes
- Mu installation
- Terminal
    - Compatibility problems
    - Files and folders

Windows vs. Mac vs. Linux vs. ...

- The real world is very very messy in terms of software
    - Operating systems
    - Programming languages
    - Hardware differences
    - Etc...

- We tried to shield you from most of it, but there was an error in the last assignment
    - Moving subfolders (**) in Windows
- We apologise for the inconvenience, but it's still an important lesson:
    - Be careful when you work with software

- Good news: Python is operating system independent!

Recap on file structure

- Entering `books`
  - Mac: `$ cd books`
  - Windows: `$ cd books`
- Going back to `data`:
  - Mac: `$ cd ..`
  - Windows: `$ cd ..`
- Entering `images` and `beaver`
  - Mac: `$ cd images/beaver`
  - Windows: `$ cd images\beaver`
- Going back to `data`:
  - Mac: `$ cd ../..`
  - Windows: `$ cd ..\..`

```
22:01:03    jens@jens-06    ~/data    tree
.
├── 1861_OriginNY_F382.pdf
├── books
│   ├── a_study_in_scarlet.txt
│   ├── his_last_bow.txt
│   └── moby_dick.txt
├── images
│   ├── adult-attractive-beautiful-871495.png
│   ├── architecture-building-clouds-374624-2.png
│   ├── beautiful-brunette-cute-774909.png
│   ├── beaver
│   │   ├── image_0001.jpg
│   │   ├── image_0002.jpg
│   │   ├── image_0003.jpg
│   │   ├── image_0004.jpg
│   │   ├── image_0005.jpg
│   │   ├── image_0006.jpg
│   │   ├── image_0007.jpg
```

Absolute versus relative paths

- Absolute paths does not require context
  - You are currently at `80.8265,-66.4529`
  - I live at Rued Langgaardsvej 7, in Copenhagen Denmark
  - His phone number is +44 8138182732
- Relative paths requires context
  - You are in front of me
  - I live down the street and to the right
  - His phone number is the same as hers

`pwd` gives *absolute* paths, but you can describe paths both with *absolute* or *relative paths*

```
21:59:27  jens@jens-06    ~     pwd
/home/jens
21:59:28  jens@jens-06    ~     cd data
21:59:29  jens@jens-06    ~/data    pwd
/home/jens/data
21:59:31  jens@jens-06    ~/data    cd ..
21:59:33  jens@jens-06    ~     pwd
/home/jens
21:59:34  jens@jens-06    ~     cd /home/jens/data
21:59:37  jens@jens-06    ~/data    pwd
/home/jens/data
21:59:38  jens@jens-06    ~/data    cd data
cd: datei oder Verzeichnis nicht gefunden: data
21:59:45  x  jens@jens-06    ~/data    cd /home/jens
21:59:53  jens@jens-06    ~     pwd
/home/jens
21:59:54  jens@jens-06    ~
```

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│   ├── beaver
│   │   ├── image_0001.jpg
│   │   ├── image_0002.jpg
│   │   ├── image_0003.jpg
│   │   ├── image_0004.jpg
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