Shell: Basics

What to do

1. Hand out Terminal cheat sheet
2. On Slides
3. Hands on

start terminal

- Mac: `cmd+space` type terminal
- linux: `ctrl+alt+t`
- Windows: start `Windows Terminal (Preview)`, open `Ubuntu` session

Who and Where am I?

1. whoami
2. pwd
3. ls -aF

How to get help

1. man `command`
2. `command` –help
3. `command` -h

The file system

relative and absolute paths:

- /: root
    - Windows:
    - Ubuntu root: pin home folder to explorer: `cd`, `explorer.exe ..`, pin `Username` folder to quick access
    - system root: /mnt/c/
- ~: user folder
- .: folder right now
- ..: parent folder

Explain how to escape space

- test\ test
- "test test"

What have we learned?

Getting help:

- **man COMMAND / COMMAND --help / COMMAND -h**

Commands:

- **pwd**: Where am I?
- **ls**: What is in a folder?
- **cd**: Change directory

Special places:

- **/**: The root (Windows: **/mnt/C**)
- ~: The home folder
- **.**: The current folder
- **..**: The parent folder

Exercise: Navigating the file system

1. Go to your root folder
2. Try to find the folder with the documents of the last semester

Make PP4RS and playground folder

- cd
- mkdir pp4rs
- ls
- cd pp4rs
- mkdir playground
- mkdir myNotes

download course material

- wget LINK-TO-TERMINAL-PLAYGROUND
- ls
- unzip terminal.zip
- ls
- rm terminal.zip
- cd terminal

Break?

Make Folders:

1. mkdir thesis

- don't use whitespace
- don't use ~
- don't start with -
- use -, _, ., numbers, letters

2. cd thesis
3. mkdir chapters/subchapters
4. mkdir -p chapters/subchapters

Making Files & Writing in them

1. nano draft ctrl+x & save
2. touch draft2.md
3. echo "This is the third test" > test3.md
4. echo ls -lha > test3.md
5. echo "This is the third test. Seriously now" >> test3.md
6. code draft4.md

Fileendings only convention - helps users and the system to know what is expected

code ../colors/yellow.mp3

Removing Files and Folders

rm is forever

1. rm draft2.md
2. ls
3. rm -i draft3.md
4. ls
5. rm chapters
6. rm -R chapters

Moving Files and Folders

Also for renaming

1. mv thesis/draft thesis/draft1.md
2. ls thesis
3. mv thesis/first-draft.md .
4. ls thesis
5. ls
6. ls first-*.md

Copy Files and Folders

1. cp blue.txt colors
2. cp blue.txt colors/bluee.txt
3. cp -R colors colors-again

What have we learned?

- **pwd, ls, cd**: Move around
- **mkdir (-p)**: Create a folder
- **touch** / **code** / **echo 'quote' >> file**: Create / overwrite file
- **mv**: Move stuff
- **cp (-R)**: copy stuff
- **rm (-R)**: Delete stuff (forever!)

Exercise: Make changes in the file system

1. Go to `pp4rs/playground/terminal` (the main folder)
2. delete colors/bluee.txt
3. Guinea pigs and hamsters are rather pets
   - make a new folder called `pets` in the main folder
   - move `guinea-pig.md` & `hamster.md` there from the `animals` folder
4. `colors/yellow.mp3` is a markdown file. Rename it into `yellow.md`
5. `subfolder3` and `subfolder4` belong into `folders`
   - one of them is missing from `folders`. Find out which
   - copy the missing one from the main folder into `folders`
   - remove both `subfolder3` and `subfolder4` from the main folder
6. Write `I'm done` into a file called`done.md` in the main folder without opening VS Code
7. Add into an extra line `Now, I'm really done` without opening VS Code
8. Open `done.md` in VS Code and make sure the last two steps worked

End of Basics