Computational Sciences
Projektseminar

Introduction • Github • Basic Python • Jupyter notebooks

What to expect?

- teaching goal: collaborative development of scientific software

- topics:

  - how to write/run Python code (as scripts or in Jupyter notebooks)
  - how to do unit testing and test-driven development
  - what are patterns and anti-patterns
  - how to apply the lecture's contents
  - how to use git, Github, and related services
  - plenty of opportunity to solve individual and group tasks

- final challenge: collaborative development of scientific software for a specific, hard problem from the lecture and presentation of your process and results

Installing Python-3.6 (or later) and other dependencies

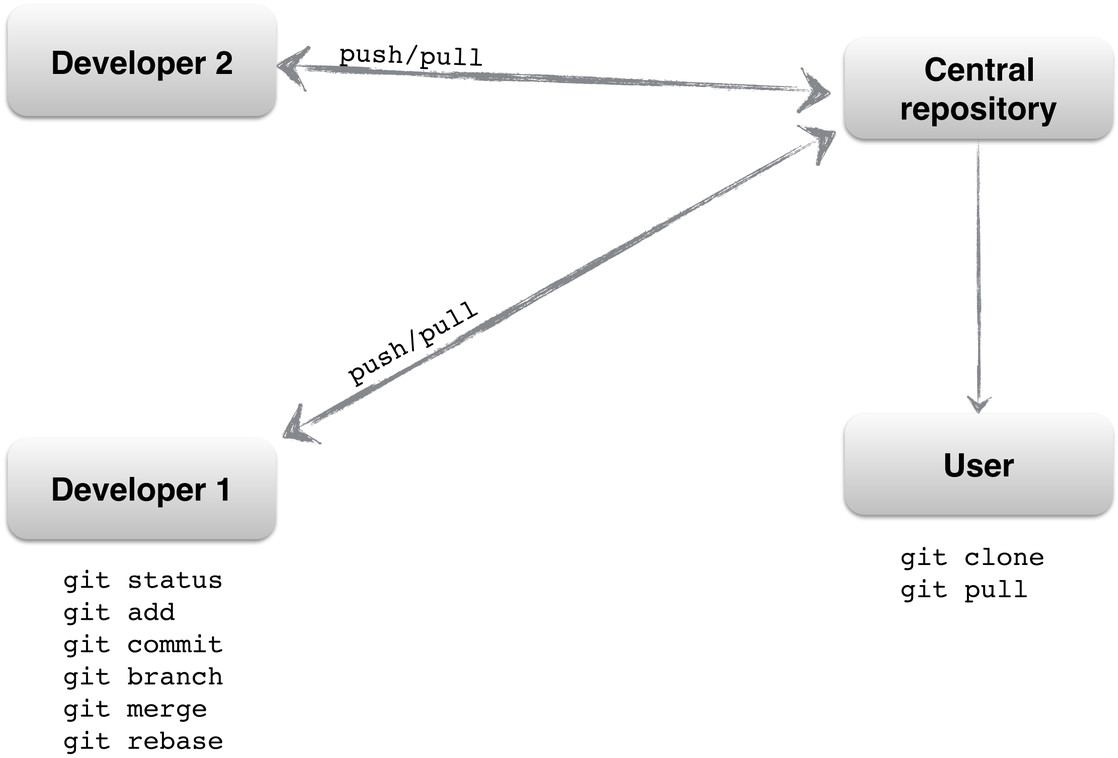
```
# download Miniconda3 and run, e.g., on OSX
bash Miniconda3-latest-MacOSX-x86_64.sh

# follow installation instructions...
```

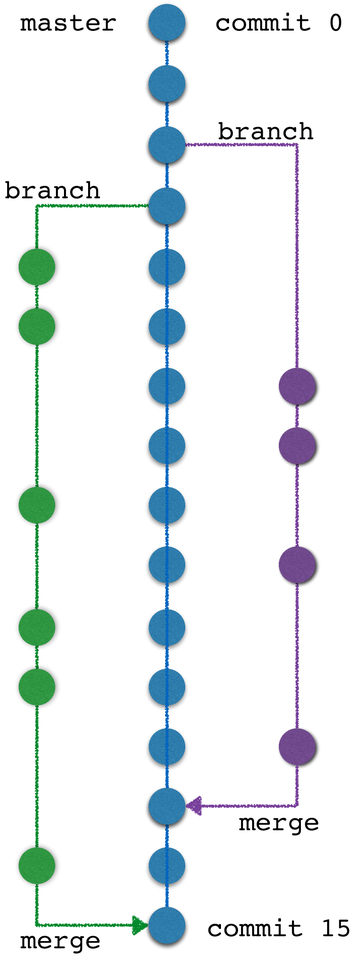
```
# activate the custom environment
conda activate compsci

# run a Jupyter session
jupyter notebook

# and, finally, deactivate it again
conda deactivate
```

```
# create a custom environment
conda create --name compsci conda jupyter notebook matplotlib numpy

# follow installation instructions...
```

git (version control) and Github (social coding)

https://github.com





https://github.com/markovmodel/compsci-2018