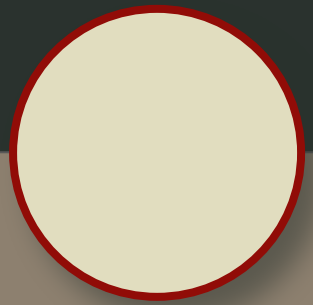
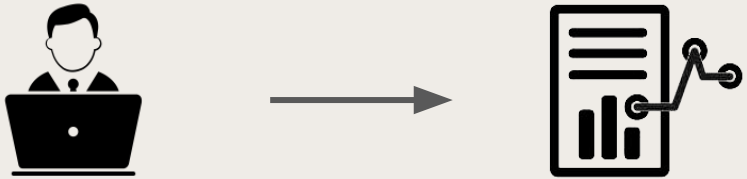
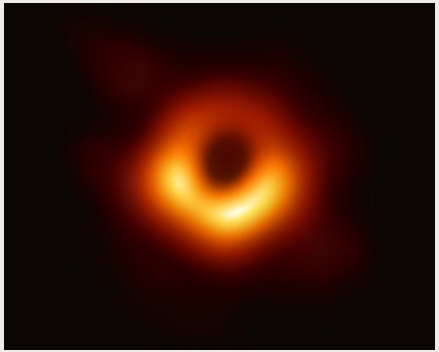
# Introduction to Github

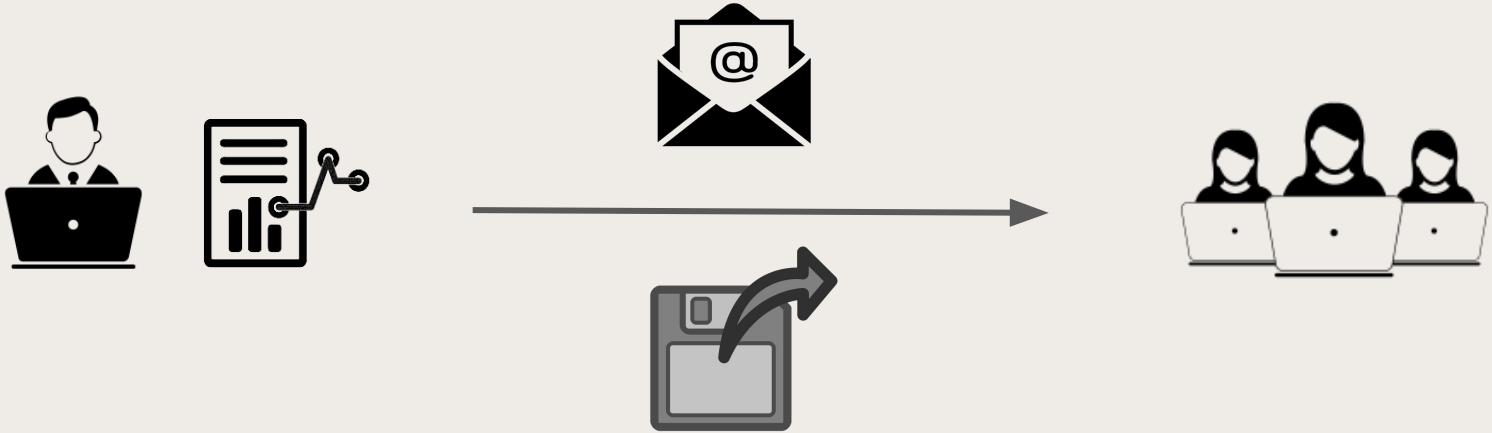


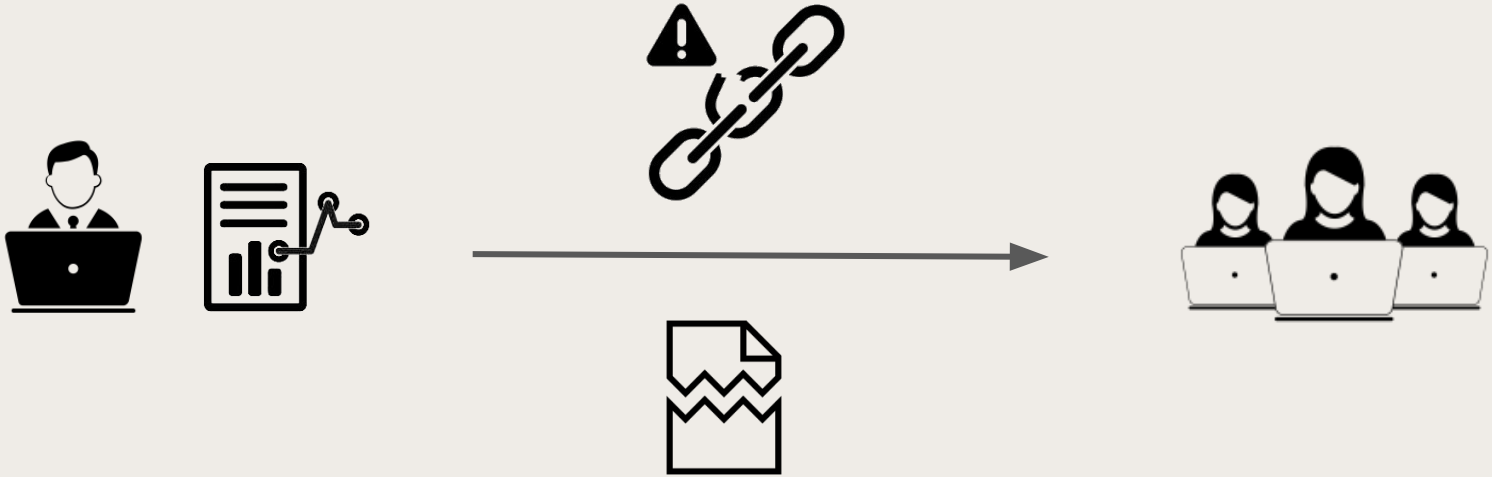
Javier Moldón & Manuel Parra
IAA-CSIC (Granada)

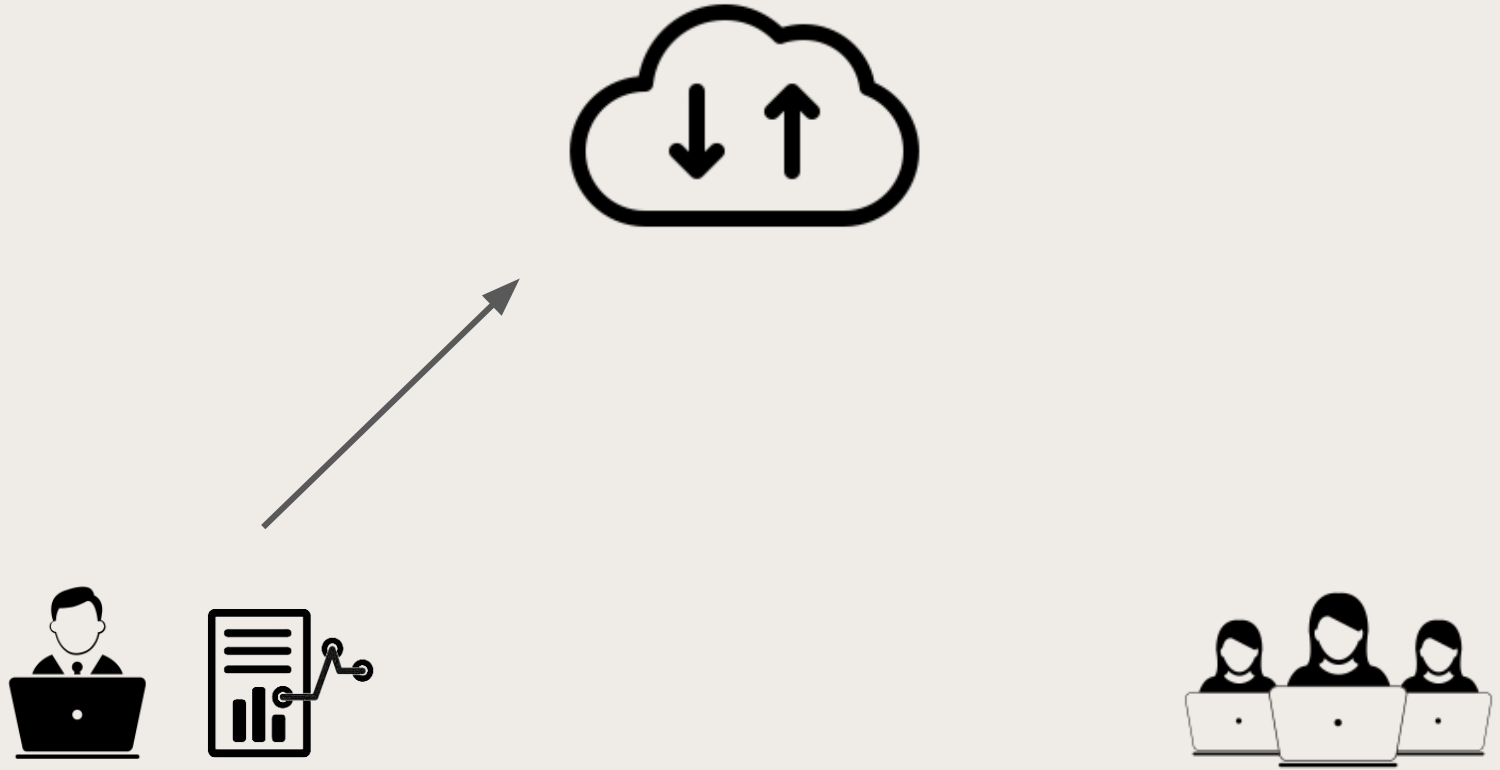
SO course Introduction to Github
November 25, 2024

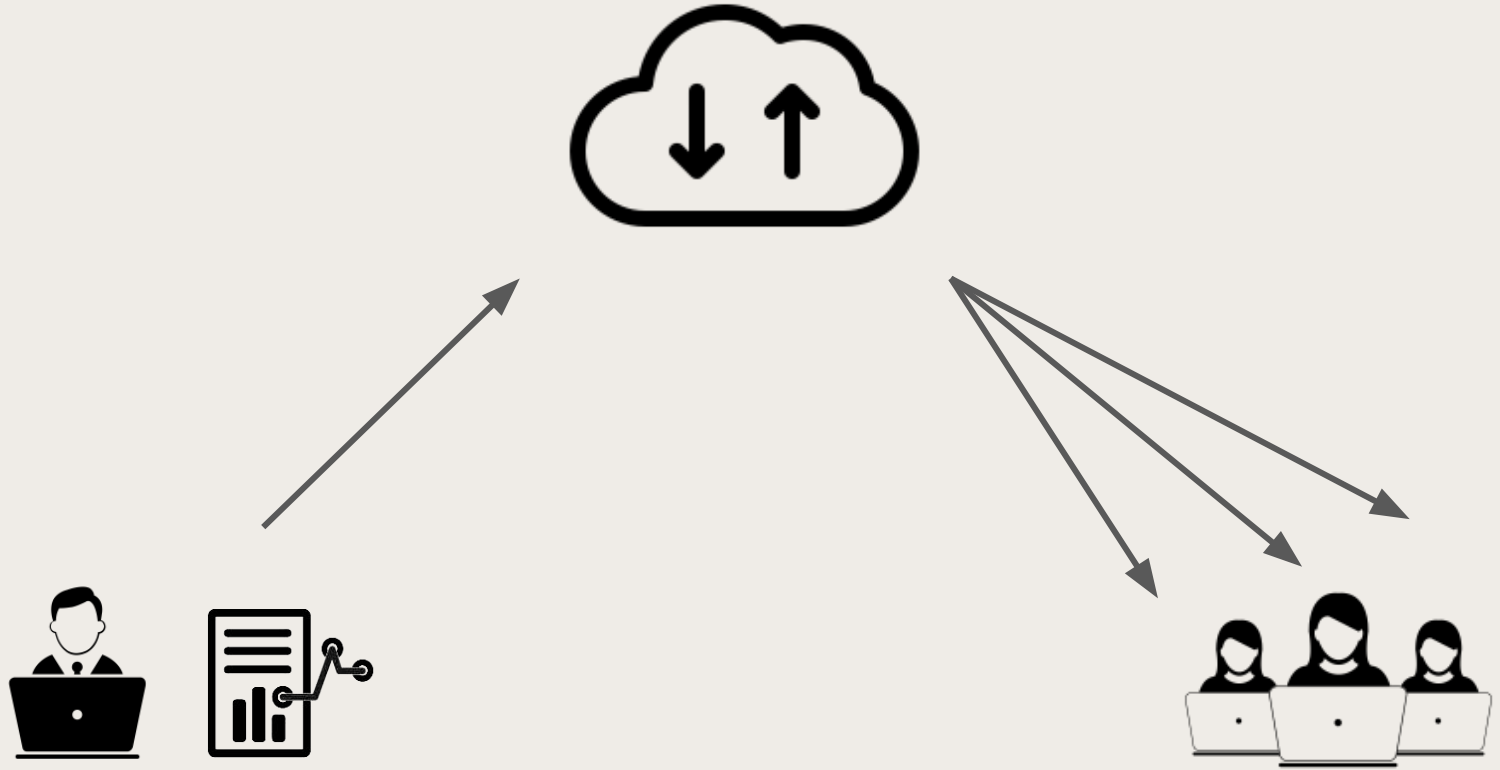


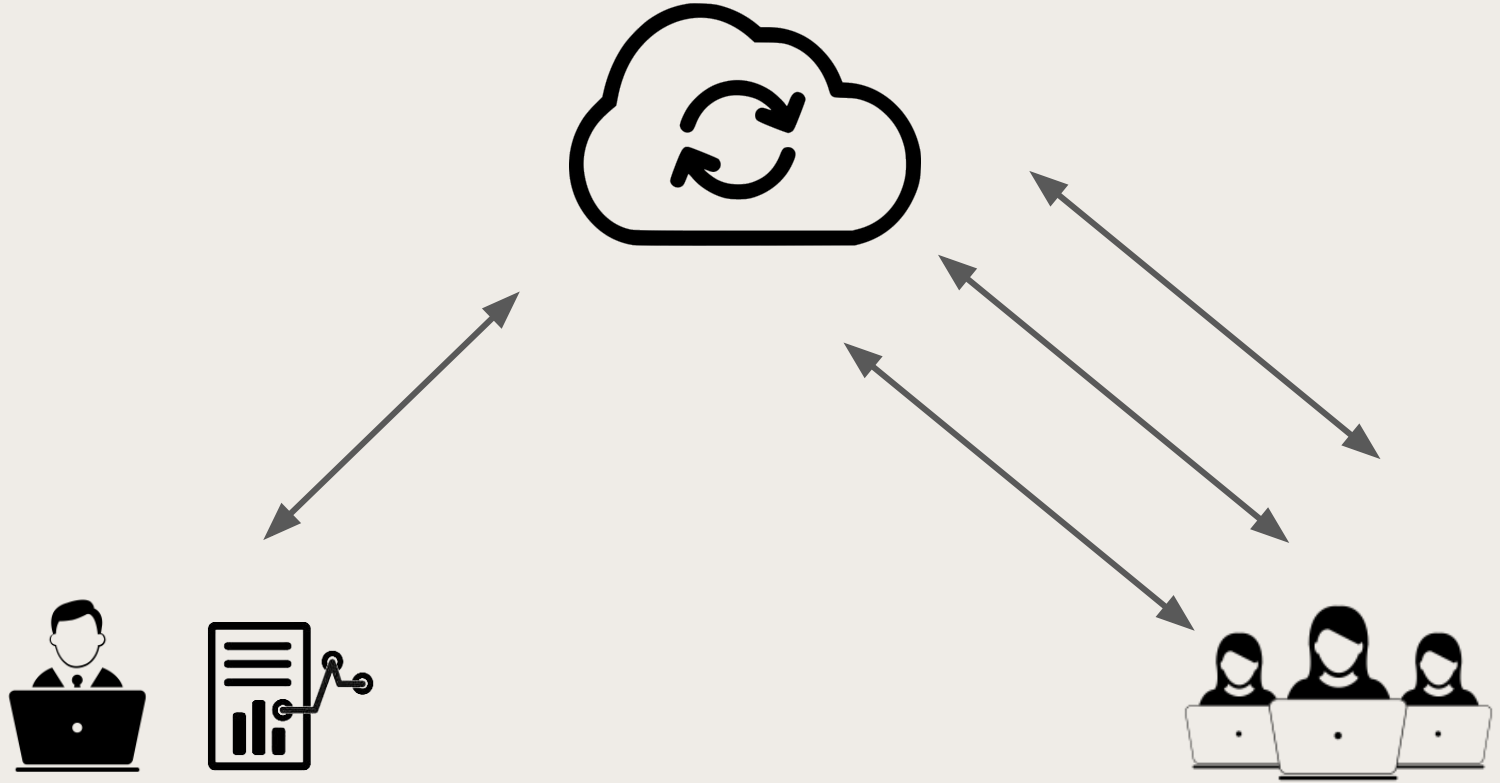










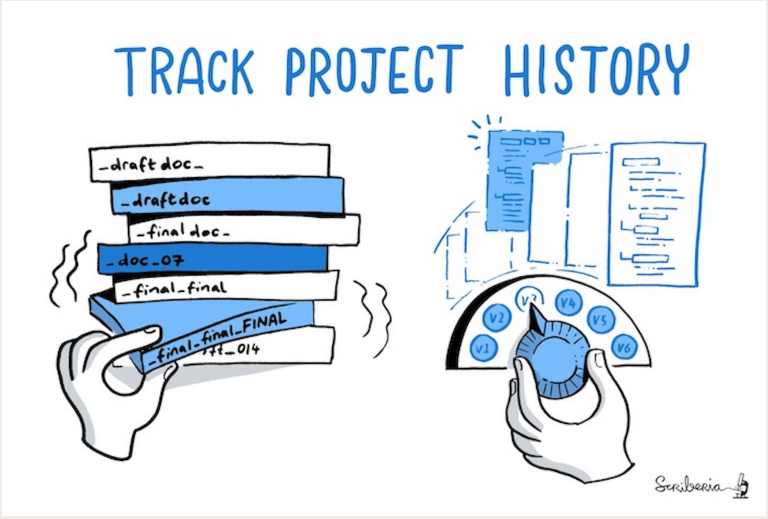


# Version control

A robust and rigorous log of changes to a file

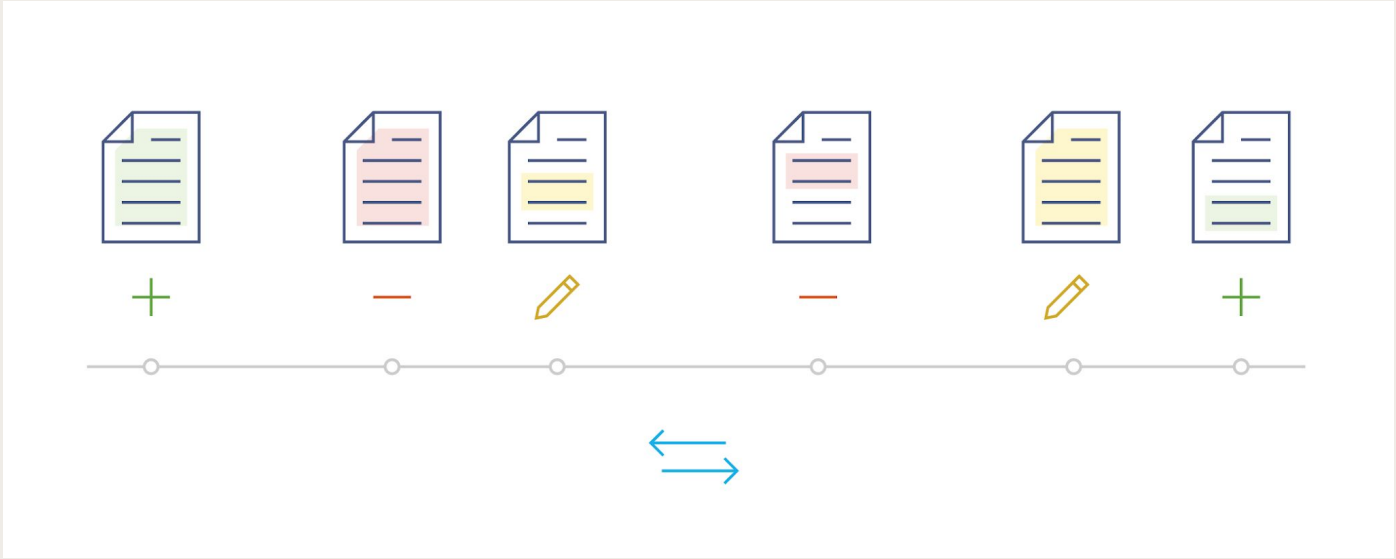
without renaming files (~~v1, v2, final_copy~~)

Full history



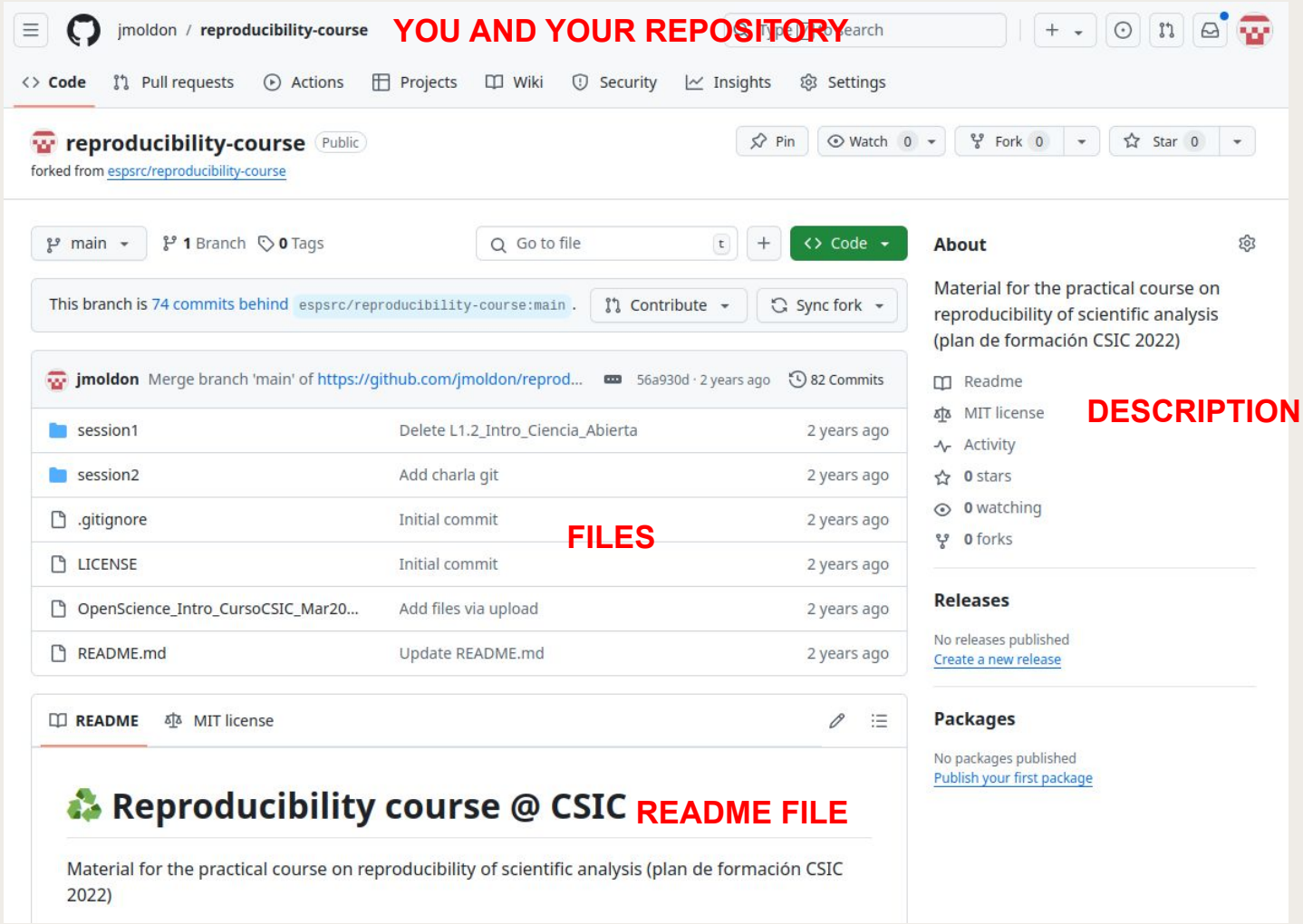

*The Turing Way* project illustration by Scriberia. Used under a CC-BY 4.0 licence. DOI: 10.5281/zenodo.3332807

You don’t save copies of your document,
you just save the the life story of the document, or its **timeline**



https://mozillascience.github.io/study-group-orientation/3.1-collab-vers-github.html

# Basic ingredients


jmoldon / reproducibility-course
YOU AND YOUR REPOSITORY
Type / to search
Code
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
reproducibility-course
Public
forked from espsrc/reproducibility-course
Pin
Watch 0
Fork 0
Star 0
main
1 Branch
0 Tags
Go to file
t
Code
This branch is 74 commits behind espsrc/reproducibility-course:main .
Contribute
Sync fork
jmoldon Merge branch 'main' of https://github.com/jmoldon/reprod...
56a930d · 2 years ago
82 Commits
session1 Delete L1.2_Intro_Ciencia_Abierta 2 years ago
session2 Add charla git 2 years ago
.gitignore Initial commit 2 years ago
LICENSE Initial commit 2 years ago
OpenScience_Intro_CursoCSIC_Mar20... Add files via upload 2 years ago
README.md Update README.md 2 years ago
FILES
README
MIT license
Reproducibility course @ CSIC
README FILE
Material for the practical course on reproducibility of scientific analysis (plan de formación CSIC 2022)
About
Material for the practical course on reproducibility of scientific analysis (plan de formación CSIC 2022)
Readme
MIT license
Activity
0 stars
0 watching
0 forks
DESCRIPTION
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package

# README file

Describe it

Instructions

Project info

Cite, contribute

README | Code of conduct | BSD-3-Clause license | Security

CI failing | CircleCI passing | codecov 92% | pypi v7.0.0 | Docs passing | pre-commit enabled | Ruff
DOI 10.5281/zenodo.4670728

The Astropy Project is a community effort to develop a single core package for astronomy in Python and foster interoperability between packages used in the field. This repository contains the core library.

- Website
- Documentation
- Slack
- Open Astronomy Discourse
- Astropy users mailing list
- Astropy developers mailing list

## Installation

To install astropy from PyPI, use:

```
pip install astropy
```

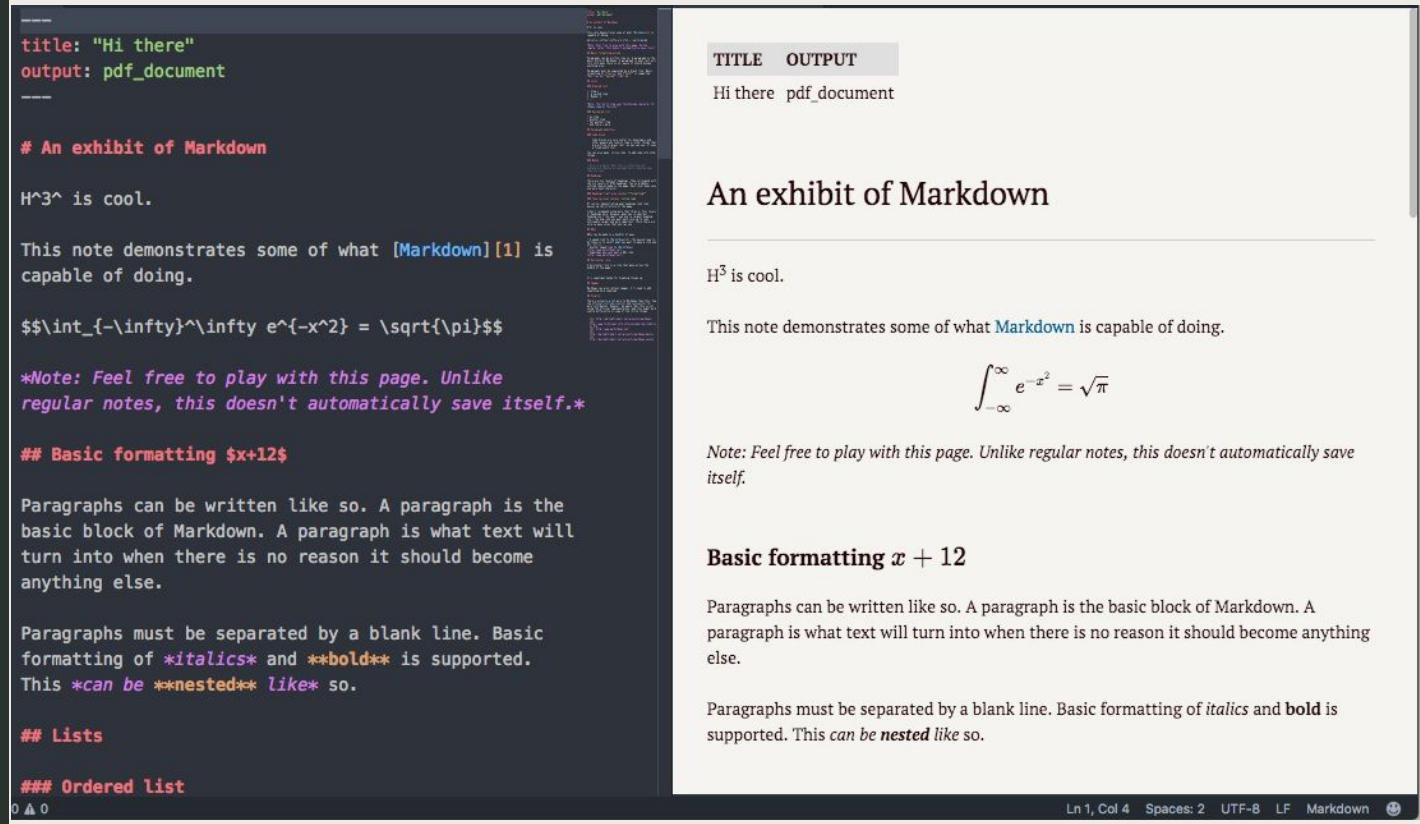
For more detailed instructions, see the install guide in the docs.

## Contributing

# Markdown language

Simple and efficient syntax

Github renders it in markdown files, issues, pull requests, etc.



# Some repository examples

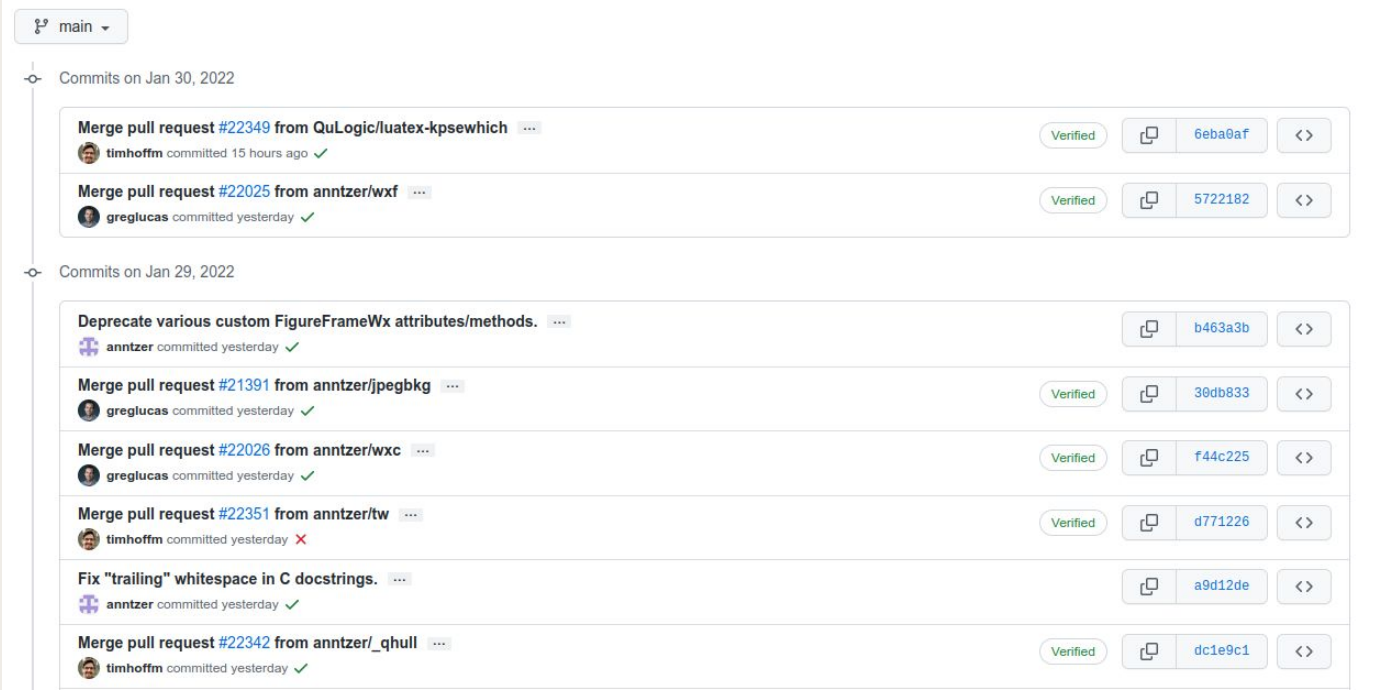
# Repository examples

- Software project: PyGaia
- Large software Astropy: Astropy
- Awesome Astronomy compilation
- Publication: Public data, code, and notebooks for paper analyzing inner bars and nuclear rings
- Publication: The viewing angle in AGN SED models, a data-driven analysis
- A Nature Astronomy paper: A tidal disruption event coincident with a high-energy neutrino
- Full course: Fundamentals of Radio Interferometry repository
- Example of a CV
- A whole book written in Github: Python Data Science Handbook is in this Github repository.
- You can also write papers on Github! Mutiband Lomb-Scargle Periodograms, repository. In this example, the author even received feedback from a world expert on the topic (Jeff Scargle!) in a Github issue while writing the paper. Check this talk explaining the experience In Defense of Extreme Openness
- To learn more: Github Guides
- You can also write and host your personal webpage in Github: examples

# Exercise 1

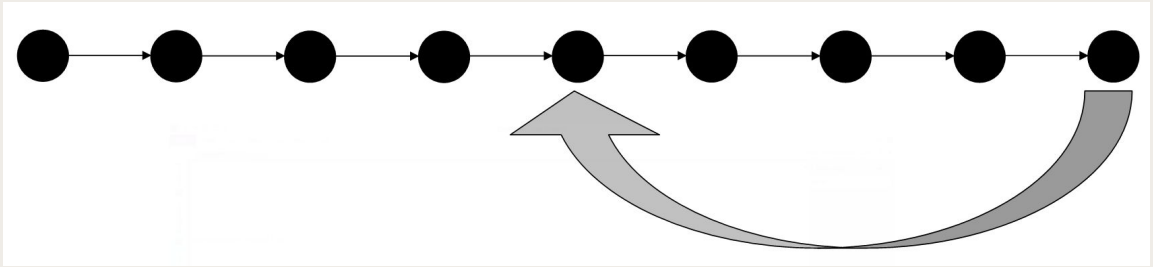
Create an initial repository.
Commits and history

# Commit history



# Linear progression of commits

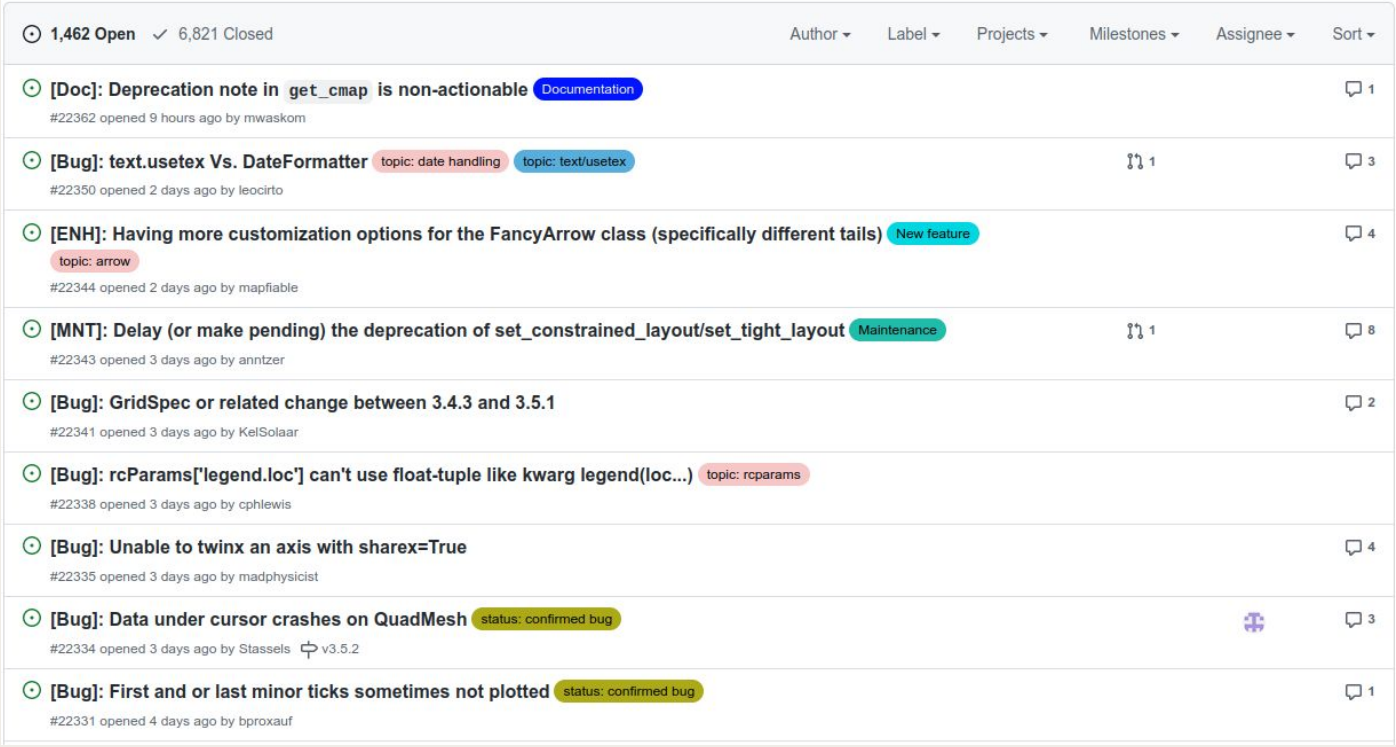
It is easy to navigate back in time to any point



# Exercise 2

# Plan your work: Issues

# Issues

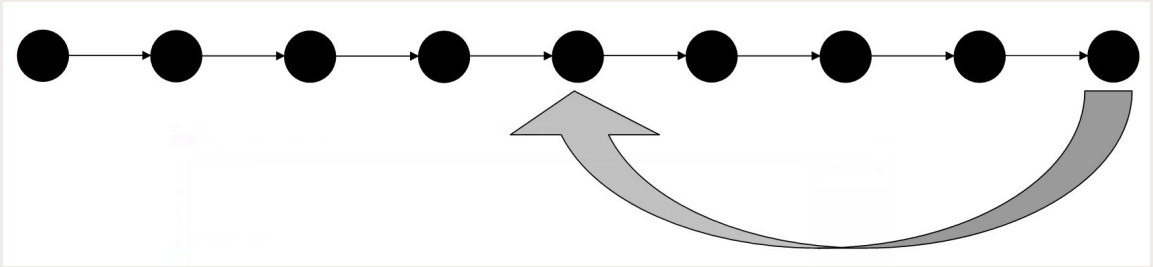

1,462 Open
6,821 Closed
Author
Label
Projects
Milestones
Assignee
Sort
[Doc]: Deprecation note in get_cmap is non-actionable
Documentation
#22362 opened 9 hours ago by mwaskom
1
[Bug]: text.usetex Vs. DateFormatter
topic: date handling
topic: text/usetex
#22350 opened 2 days ago by leocirto
1
3
[ENH]: Having more customization options for the FancyArrow class (specifically different tails)
New feature
topic: arrow
#22344 opened 2 days ago by mapfiable
4
[MNT]: Delay (or make pending) the deprecation of set_constrained_layout/set_tight_layout
Maintenance
#22343 opened 3 days ago by anntzer
1
8
[Bug]: GridSpec or related change between 3.4.3 and 3.5.1
#22341 opened 3 days ago by KelSolaar
2
[Bug]: rcParams['legend.loc'] can't use float-tuple like kwarg legend(loc...)
topic: rcparams
#22338 opened 3 days ago by cphlewis
[Bug]: Unable to twinx an axis with sharex=True
#22335 opened 3 days ago by madphysicist
4
[Bug]: Data under cursor crashes on QuadMesh
status: confirmed bug
#22334 opened 3 days ago by Stassels
v3.5.2
3
[Bug]: First and or last minor ticks sometimes not plotted
status: confirmed bug
#22331 opened 4 days ago by bproxauf
1

# Exercise 3

# How to manage branches and Pull Requests

# Linear progression of commits

It is easy to navigate back in time to any point

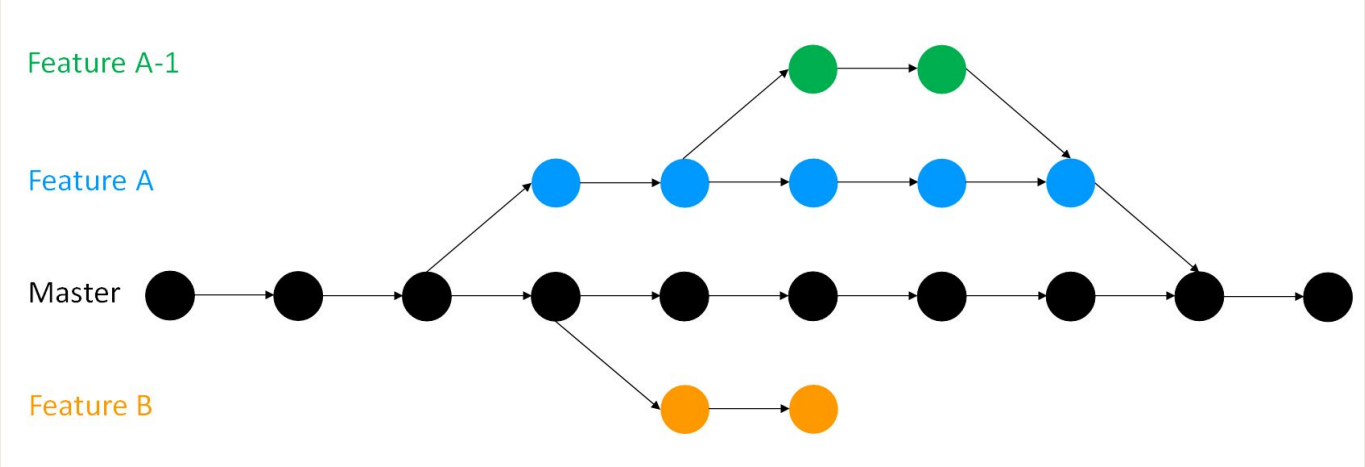


# Git branches

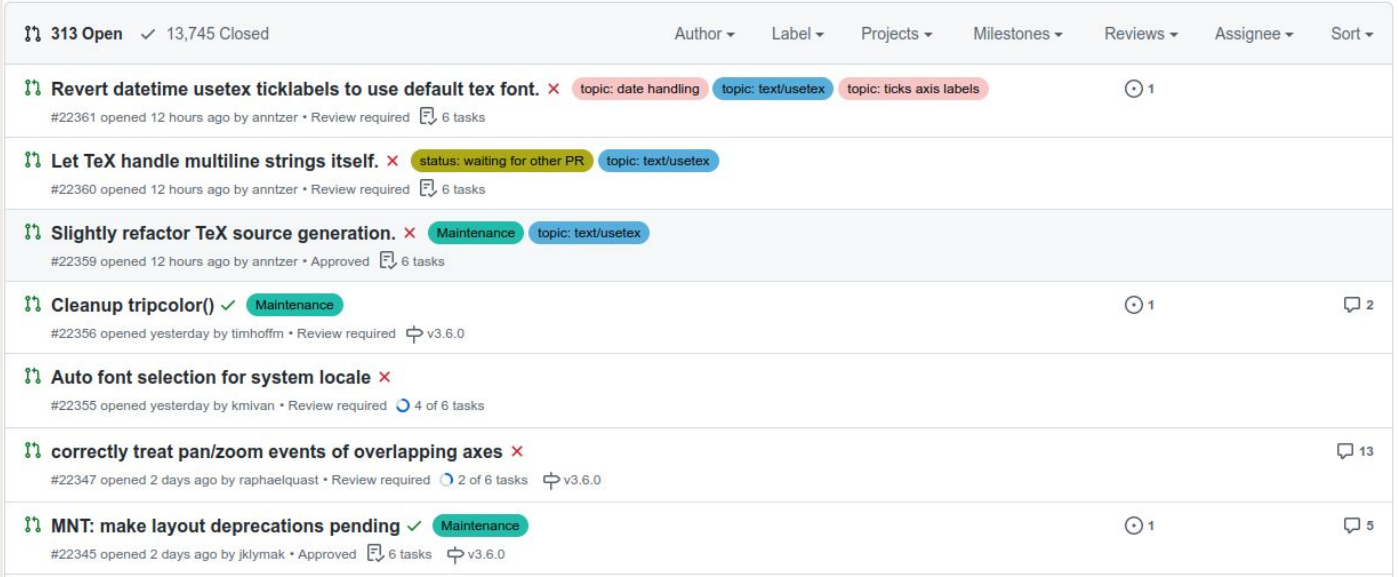
Easy to collaborate

Check and verify new content

Requires pull/merge requests



# Pull/Merge requests



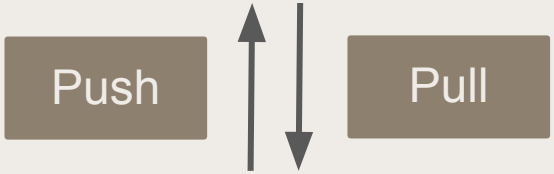
# Exercise 4

Collaborate in a repository.
Fork a repository

**A/myrepo**

**A**

A/myrepo



A

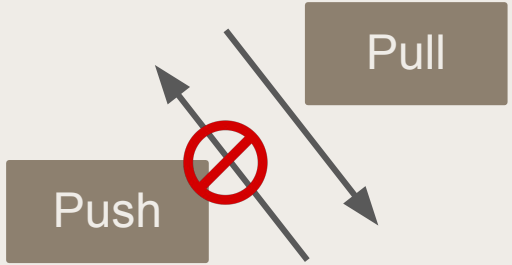
A/myrepo

Clone

A

B

A/myrepo



A

B

A/myrepo

Fork

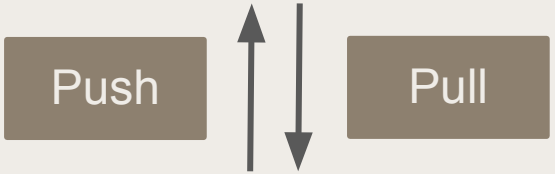
B/myrepo

A

B

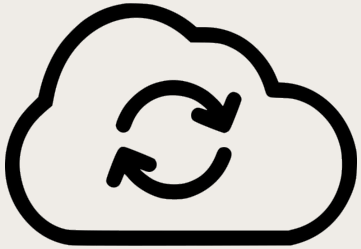
A/myrepo

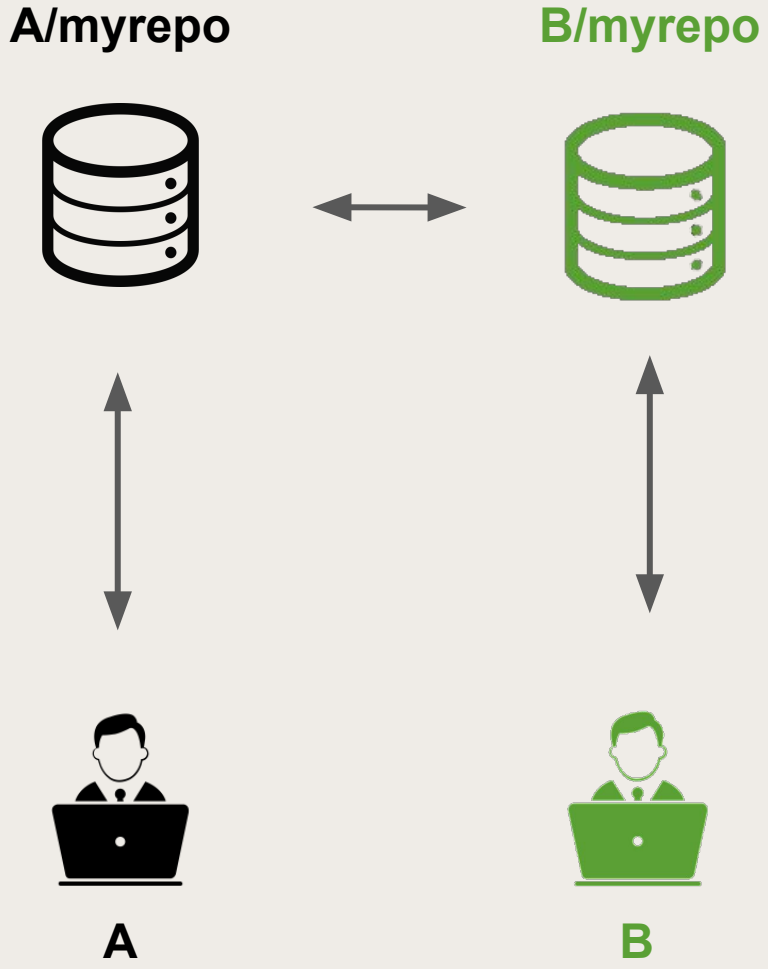
B/myrepo

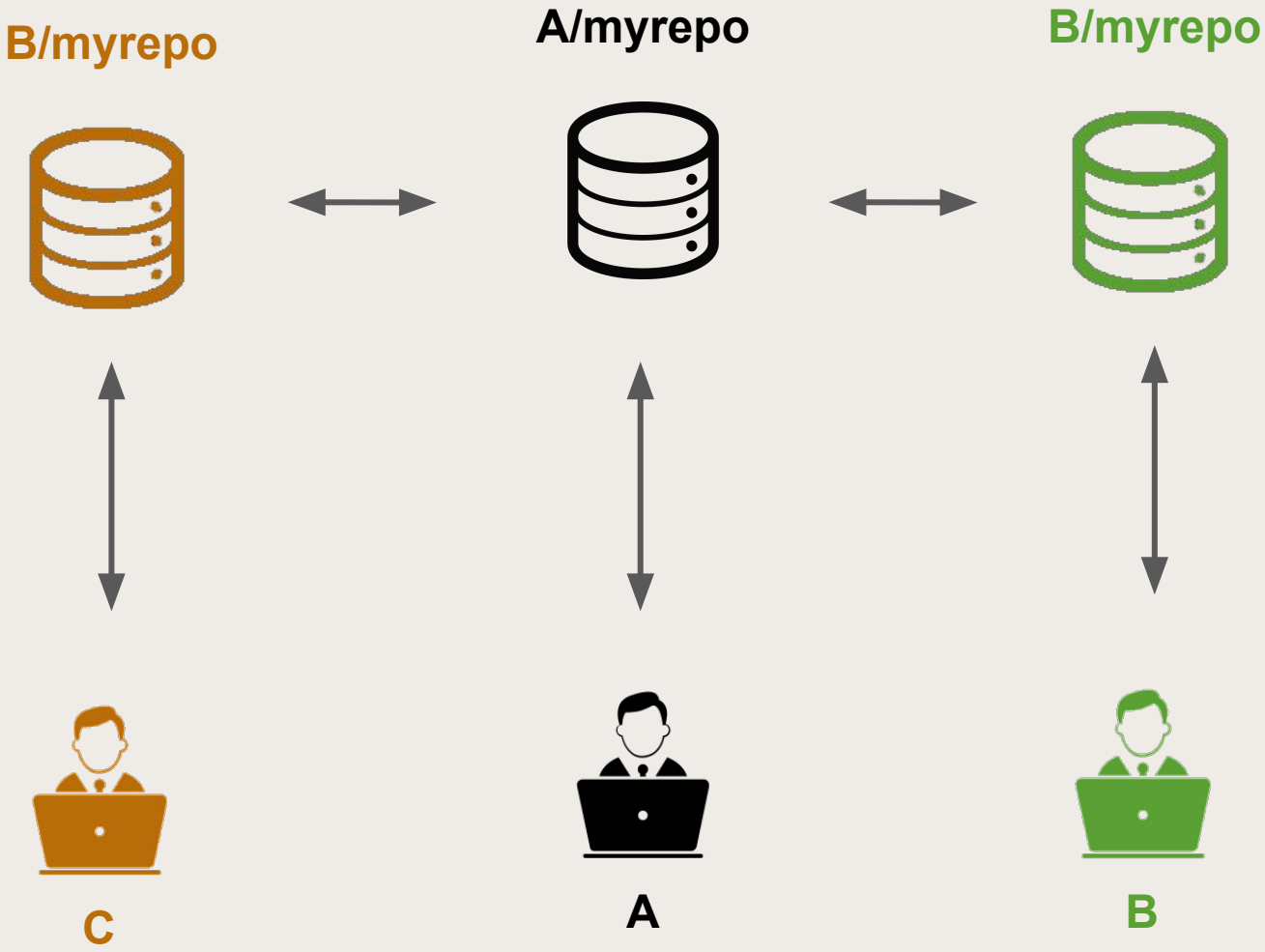


A

B




A/myrepo
B/myrepo
A
B


B/myrepo
A/myrepo
B/myrepo
C
A
B