Artik Consulting
Leverage the unseen

Learn Git in practice

IFP School / ENSG – September 2024

Kim NOEL
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YOUR TRAINING ASSISTANT

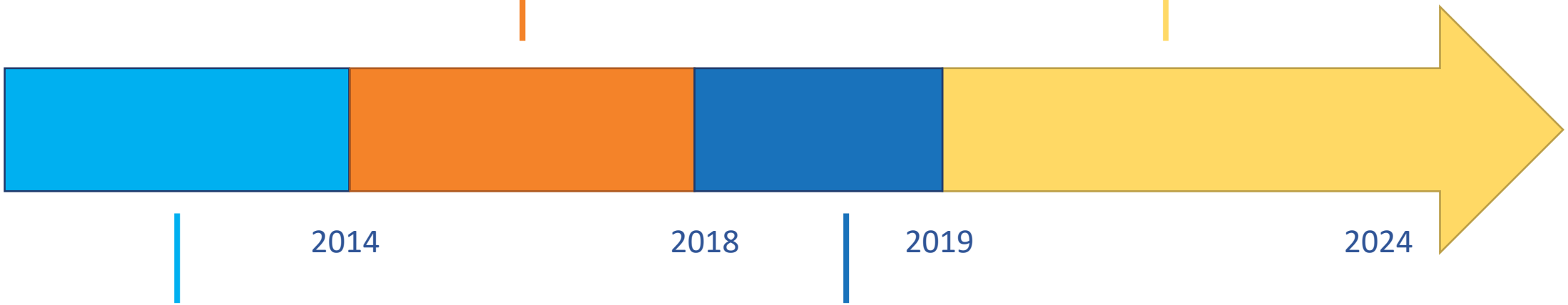
Artik Consulting
5 yrs 7 mos

- **Data Scientist (NLP, LLM)**
  Permanent
  Sep 2024 - Present · 1 mo
  Paris, Île-de-France, France · Hybrid
- **LLM Advocate**
  Permanent
  Mar 2023 - Present · 1 yr 7 mos
  Paris, Île-de-France, France · Hybrid

- **Lead Data Engineer**
  Permanent
  Apr 2022 - Present · 2 yrs 6 mos
- **Generative AI Practitioner**
  Sep 2023 - Mar 2024 · 7 mos
  Paris, Île-de-France, France · Hybrid
- **AI Engineer**
  Permanent
  Mar 2023 - Jul 2023 · 5 mos
  Paris, Île-de-France, France · Remote
- **Data Engineer**
  Permanent
  Mar 2019 - Mar 2022 · 3 yrs 1 mo
  Paris Area, France

CURISTEC
4 ans 6 mois

- **Product Owner of a simulation software**



Polytech Sorbonne
Engineer's degree · Geological and Earth Sciences/Geosciences ·
2011 - 2014

IFP School
Petroleum Data Management · Petroleum data management
2018 - 2019

A LITTLE BIT OF CONTEXT

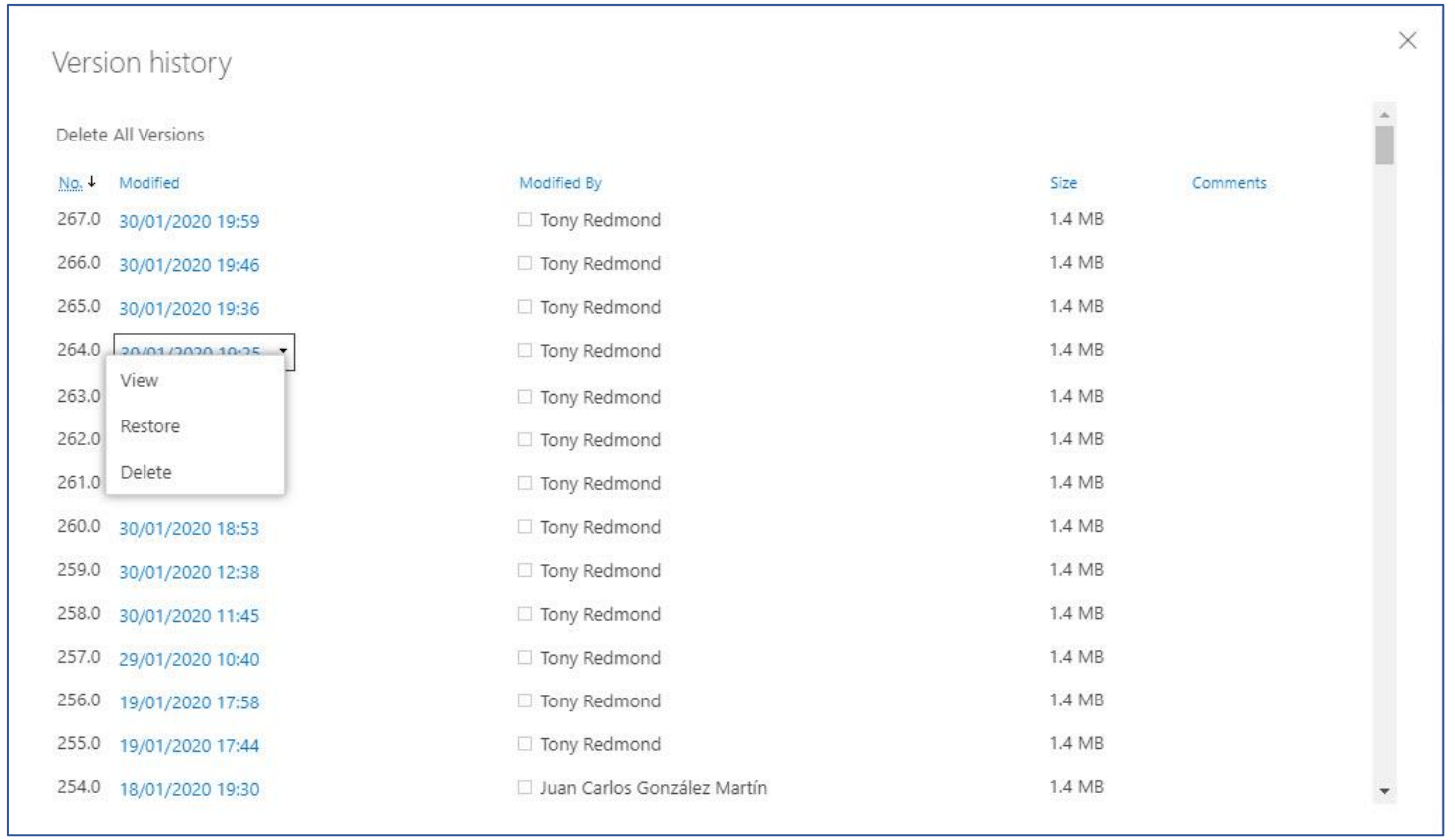
GIT FLOW

GIT IN PRACTICE

WHY DO WE NEED GIT?

In-house versioning

Probably your internship report 🙂



Pro versioning

But you still send yourself a copy by email 🙃

How to manage versioning when collaborating?

Git in short

Git is a distributed version control system, designed to handle everything from small to large projects with speed and efficiency. It has become the de facto standard for source code version control in many modern software projects.

The Birth of Git

The history of Git begins with Linus Torvalds, the same person behind the Linux kernel. In 2005, the Linux kernel project was using a proprietary distributed version control system called BitKeeper. Due to a series of events and disagreements between the Linux community and the commercial company behind BitKeeper, Torvalds sought a new tool to manage the kernel's source code.

Unable to find a tool that met his needs, Torvalds did what he does best: he built one from scratch. In just a few days, Torvalds had the prototype of what would become Git.

Why the name 'Git'?

Linus Torvalds jokingly named the tool "git", which is British slang for a silly or unpleasant person. He remarked that he named it after himself, "I'm an egotistical bastard, and I name all my projects after myself. First 'Linux', now 'git'."

Linus Torvalds

Created the Linux Kernel in 1991 (21 yo) and Git in 2005

GIT WORKFLOW

Getting updates

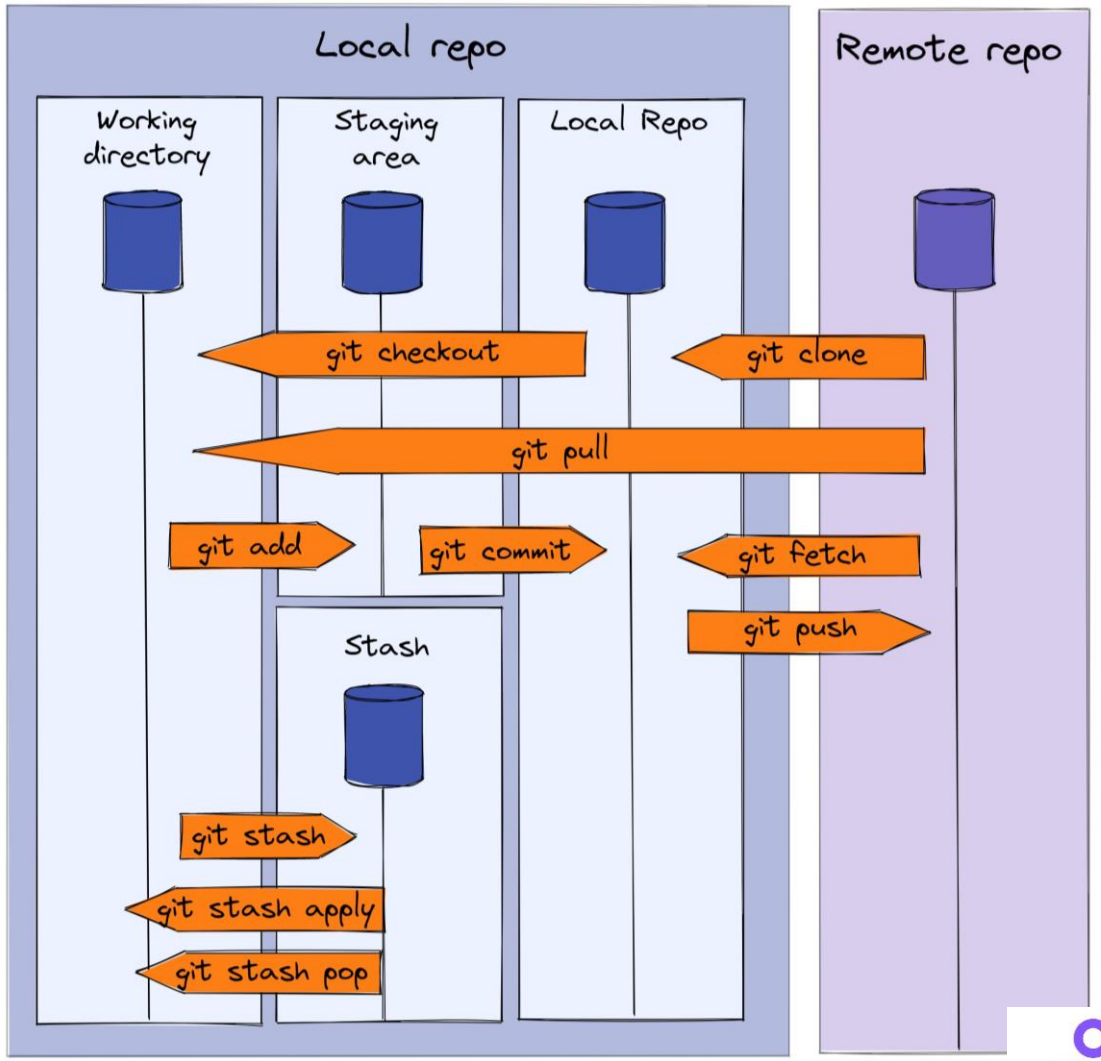
- **git clone**: I want a copy of the project
- **git pull**: I want to get all updates and apply it to my code
- **git fetch**: I want to get all updates
- **git checkout**: I want to change branch

Pushing updates

- **git add**: I select the changes I want to push
- **git commit**: I package the changes with a message
- **git push**: I push to the centralized repo

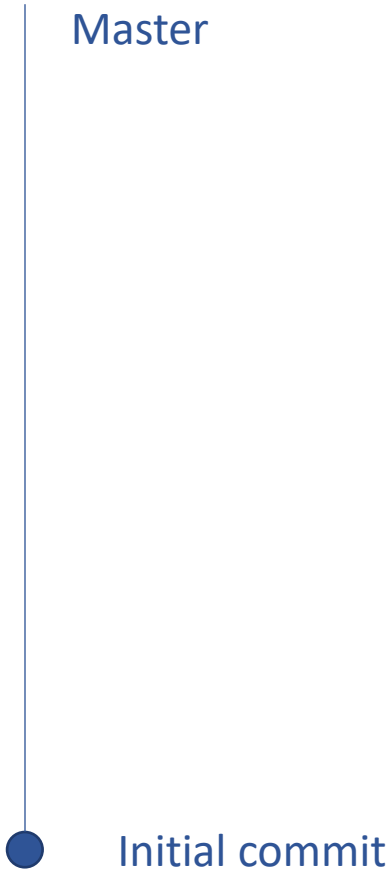
- **git commit --amend**: I would like to apply changes to my previous commit
- **git push -f**: I overwrite the previous push

- git stash: I package the changes temporarely



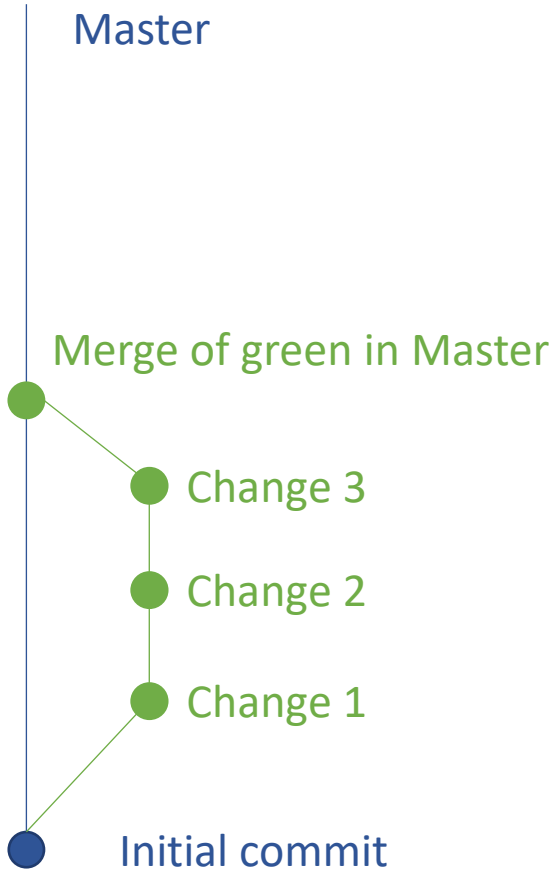
GIT GRAPH

Initial commit of a project



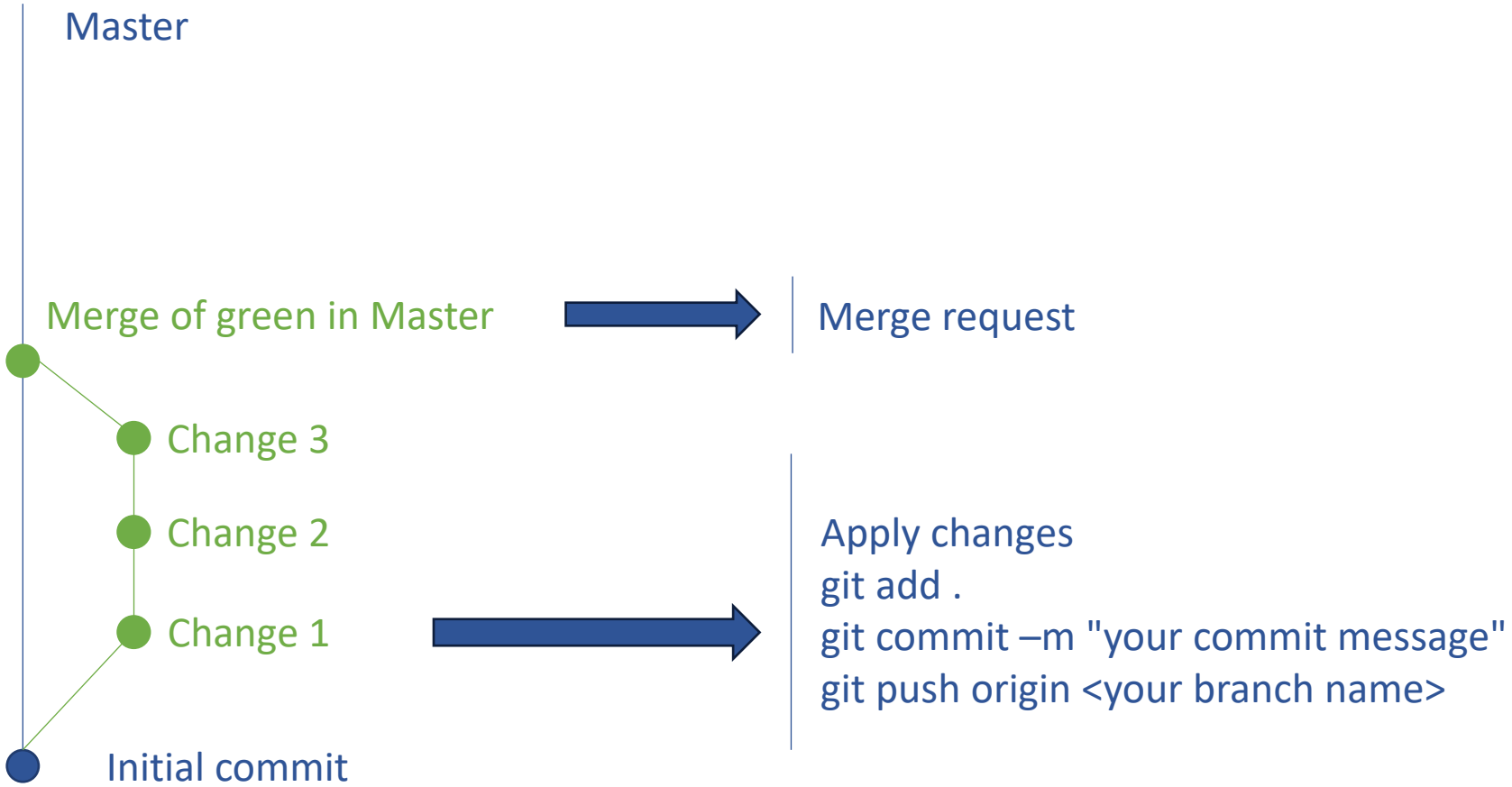
Changes in **Green branch**

Changes in **Green branch**

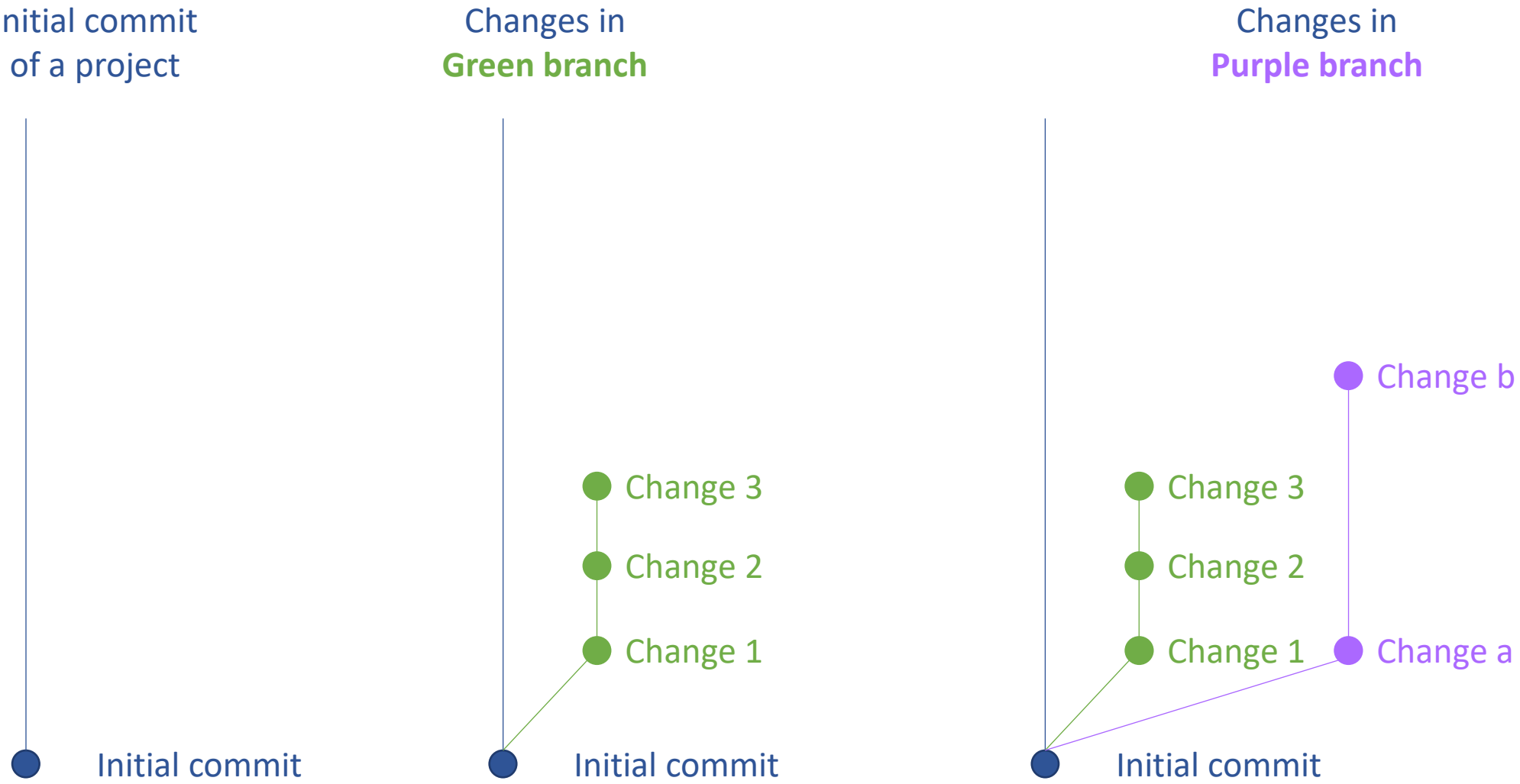


GIT GRAPH

Changes in
Green branch

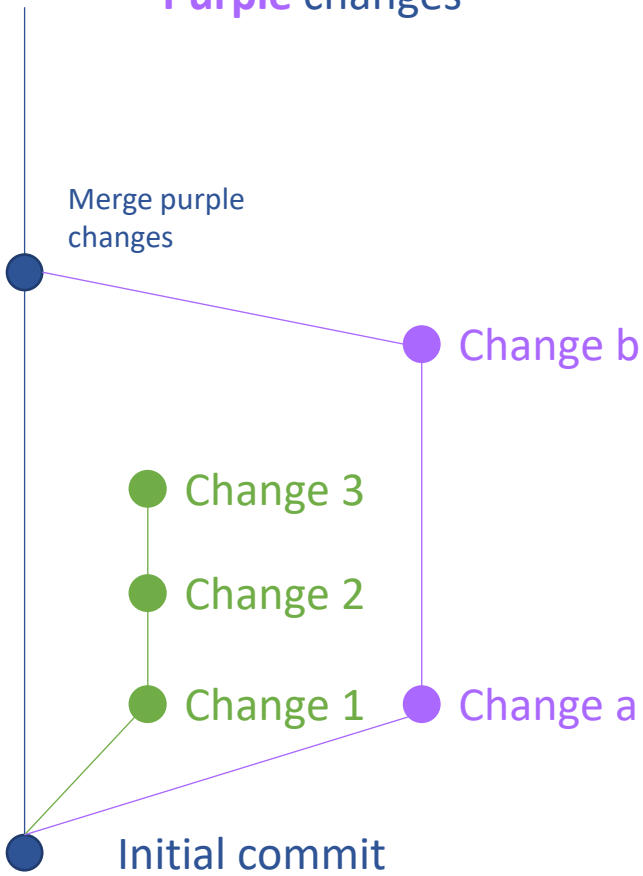


When there are multiple branches

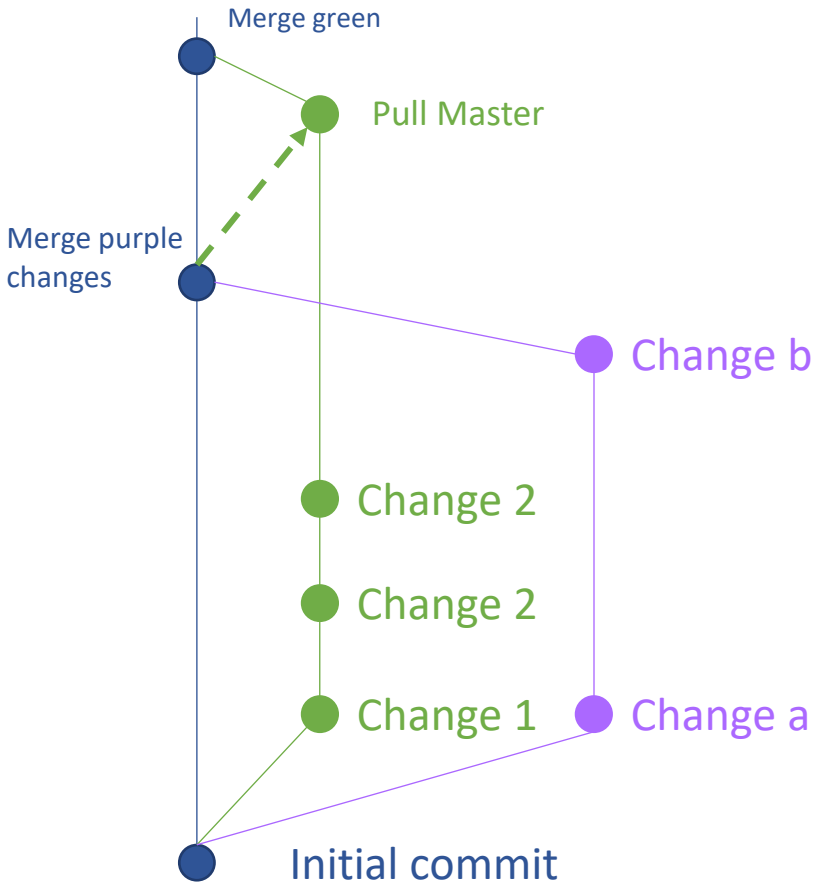


GIT GRAPH

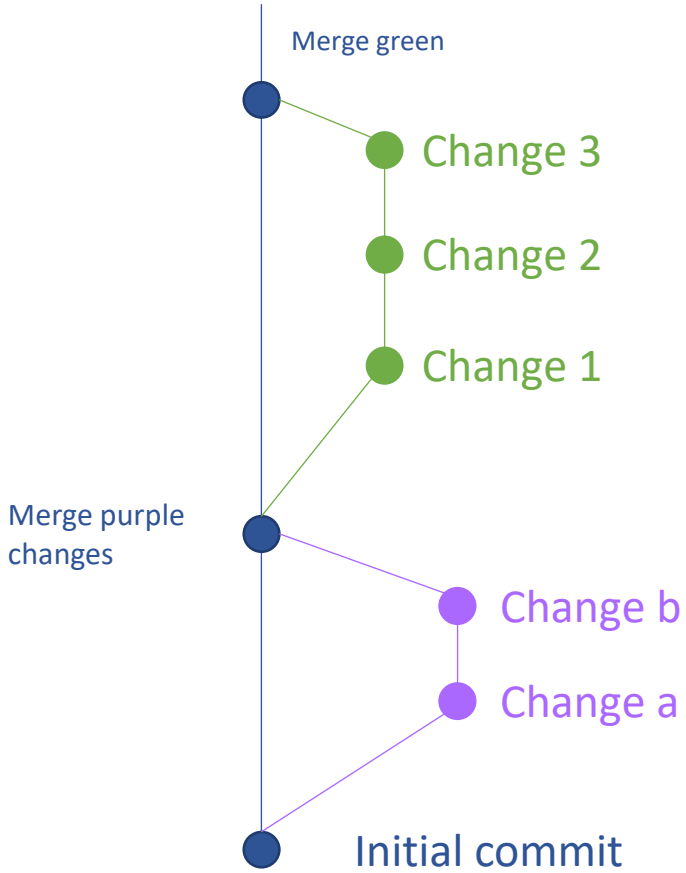
Before merging in Master, **Green** must pull Master with **Purple** changes



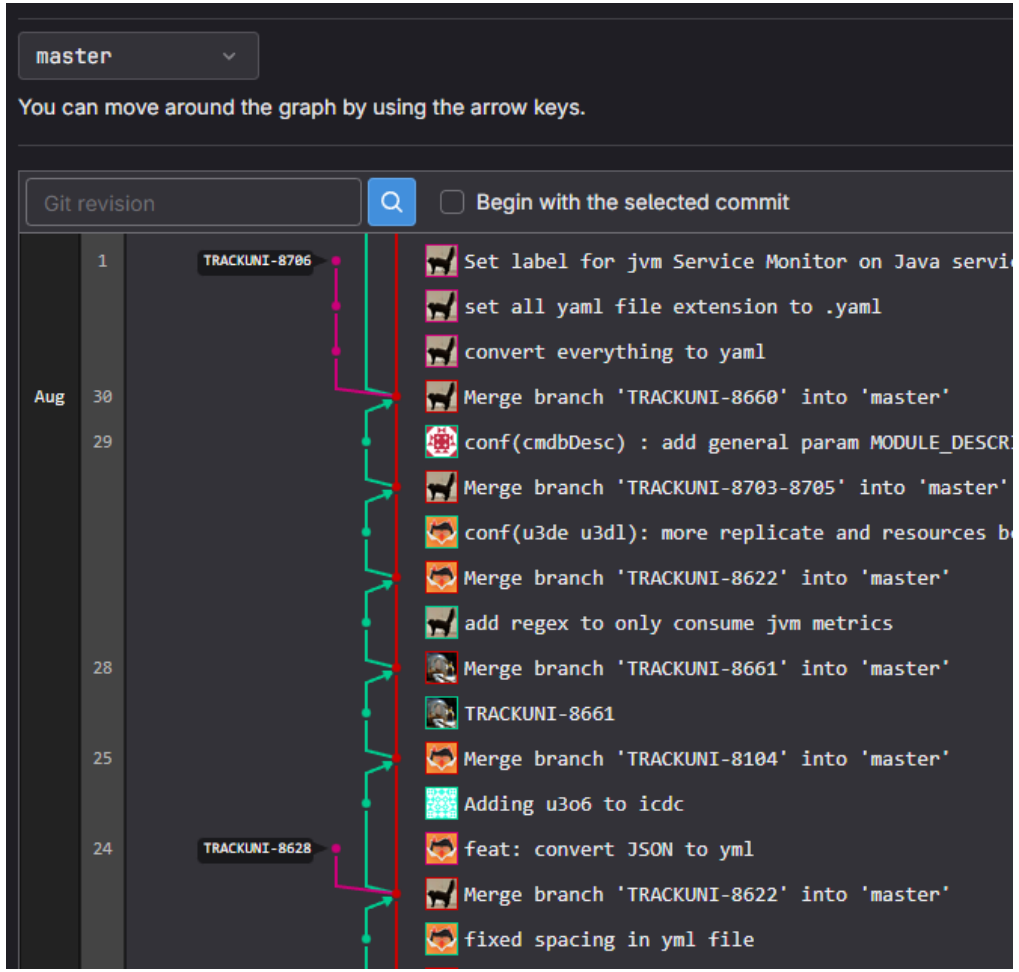
Option 1: Pull from master



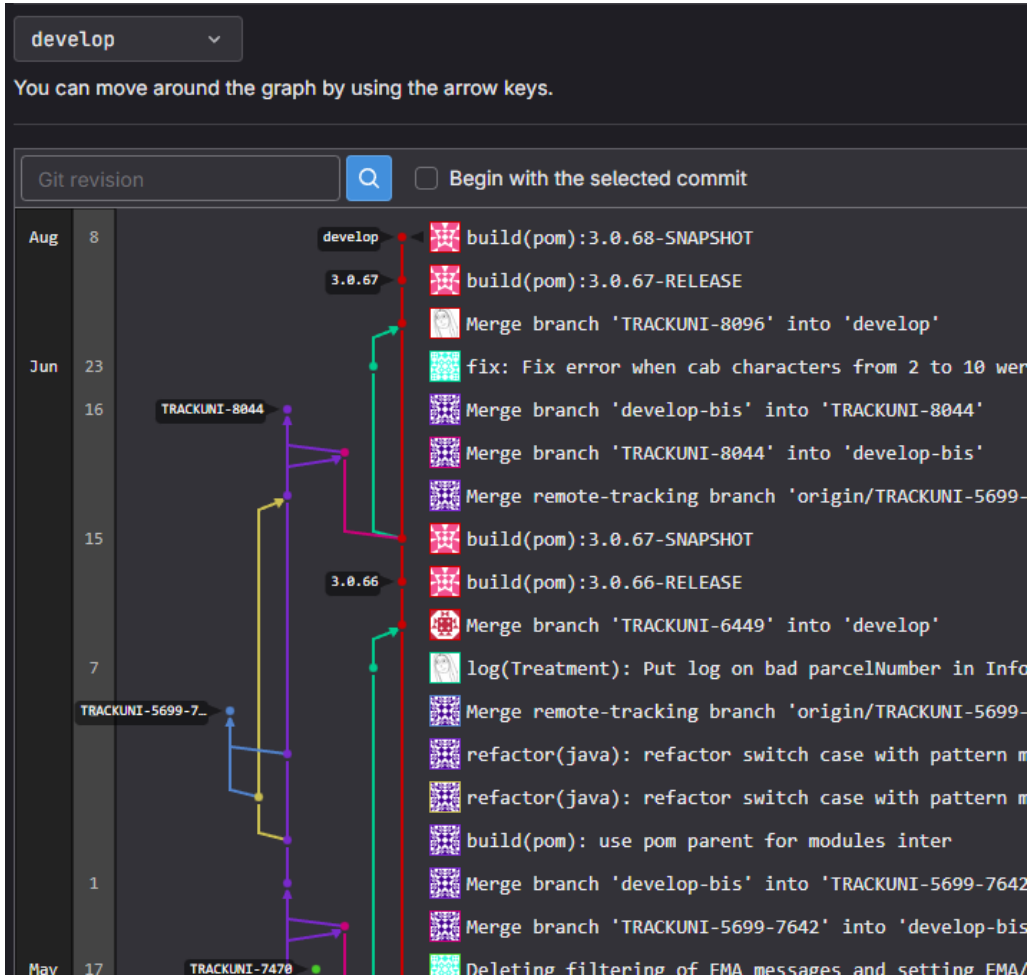
Option 2: Rebase from master



PREVIEW OF GITLAB AT WORK

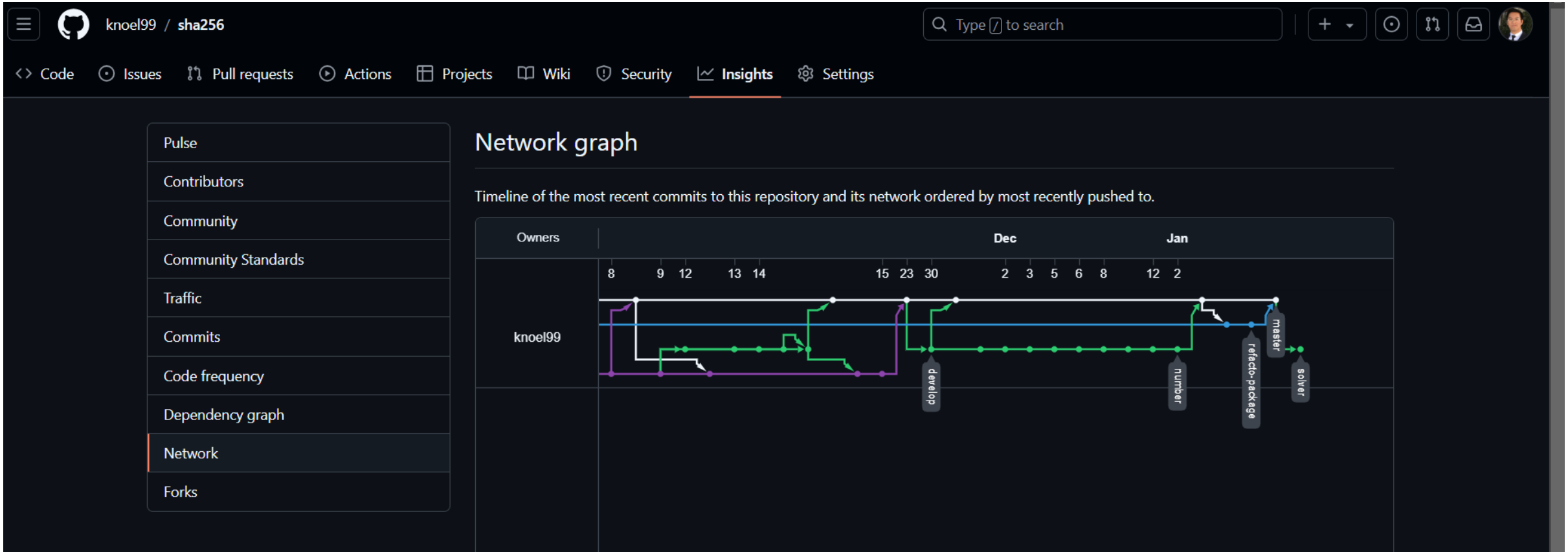


Normal graph



Messy graph

PREVIEW IN GITHUB

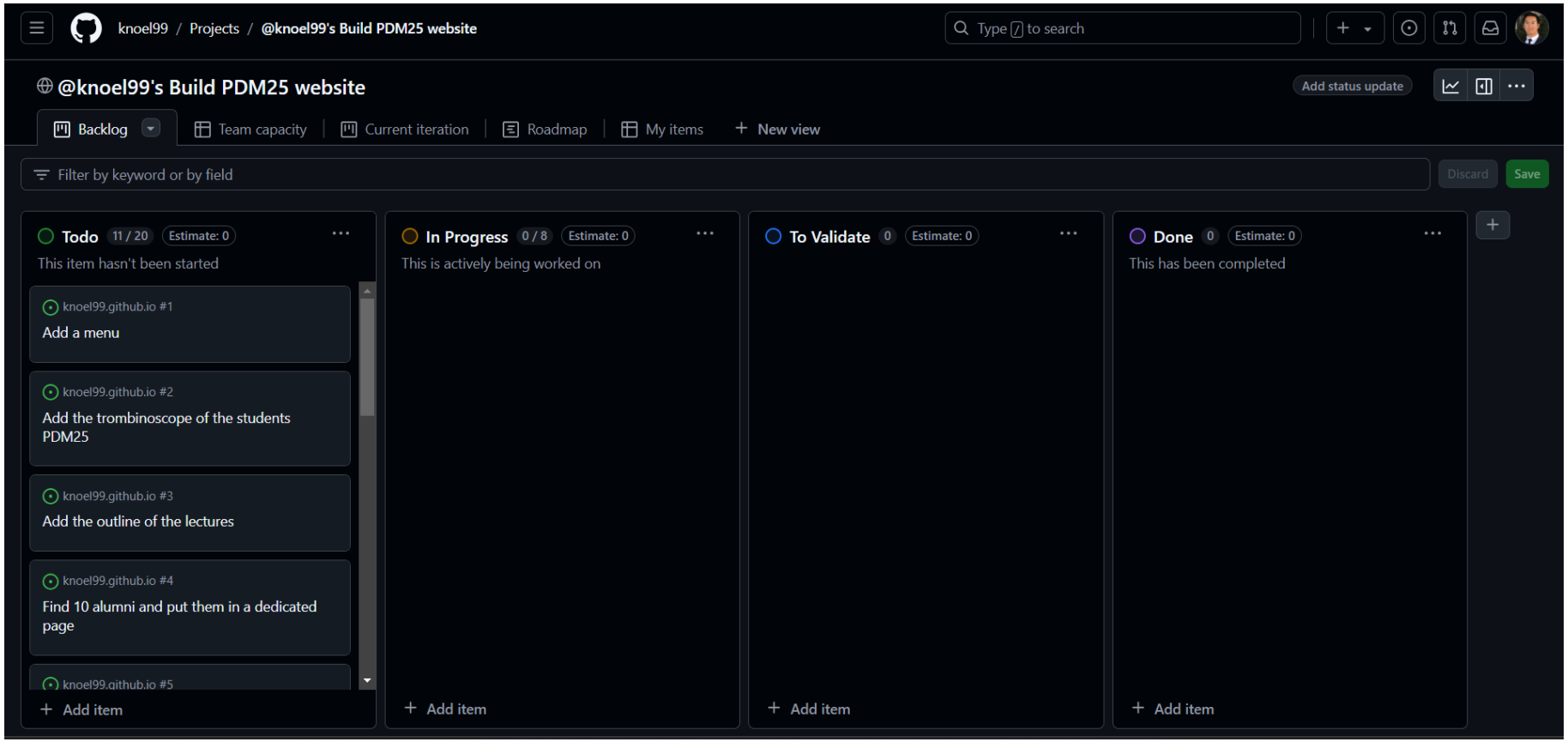


HANDS-ON GIT: BUILD YOUR OWN WEBSITE

- You will use GitHub to easily build your own website portfolio, and host it for free.
- Create a repository on github.com: https://pages.github.com/
- See on username.github.io your website.
- Use GitHub desktop to clone your repository locally.
- Open the file index.html locally in your browser. Compare with the version online
- Copy the index.html file and edit to your preferences.
  https://github.com/knoel99/knoel99.github.io/blob/master/index.html
- Commit the changes and push to your remote repository. Wait for the deployment and see the changes.
- Check the network (git graph of your repository)
  https://github.com/knoel99/knoel99.github.io/network

COLLABORATIVE PROJECT: BUILD THE WEBSITE OF PDM25

- Got to the project page: https://github.com/users/knoel99/projects/2
- Choose an issue and create a branch.
  - Develop the feature locally with the help of Google and ChatGPT.
  - Push your work and open a merge request / pull request.
  - Help other students if you are ahead.
  - Validate other's pull request



Merci pour votre attention

Retrouvez ARTIK CONSULTING
sur le stand n° C32

Contacts :

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