Git + GitHub

What is Git and GitHub?

- Git is the most popular version control system

- Developed by the creator of Linux

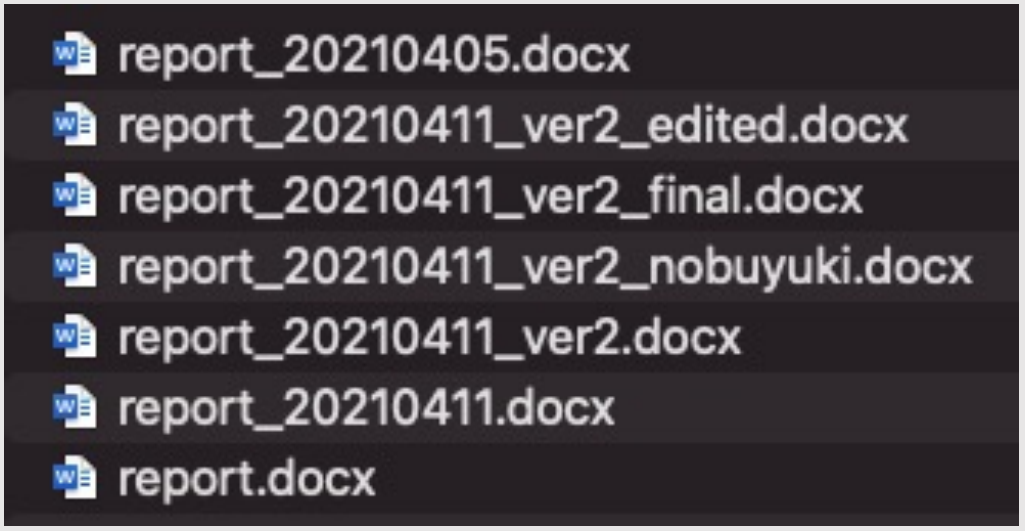
Linus Torvalds (Wikipedia)

- GitHub is an online service for git
  - Acquired by Microsoft

What is a Version Control System?

- Version control system manages the history of editing.

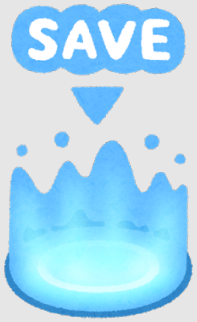
- Without version control system, its very difficult to tell the difference between the versions.



What is “Repository”?

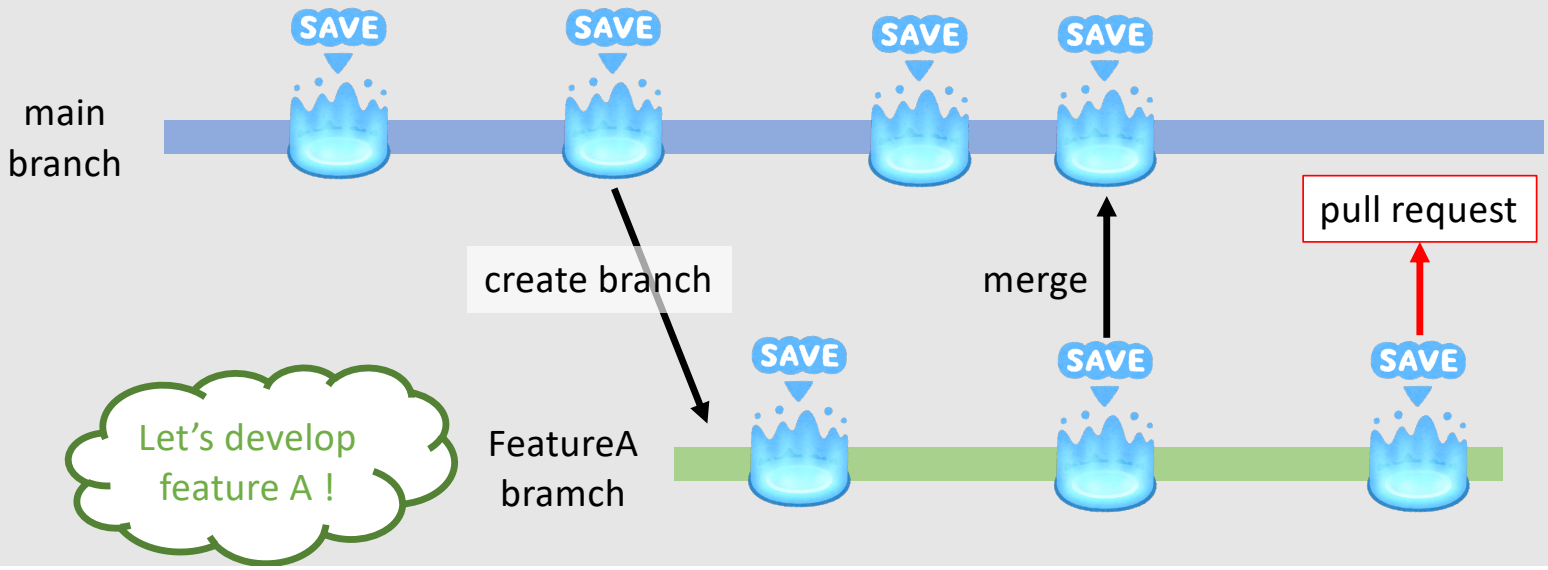
- Repository is a database storing document and its revision
  - Remote repository (GitHub)
  - Local repository

- Commit is registration of the edit
  - You can always go back to the committed status of document
    (It’s similar to the save point of the RPG game)



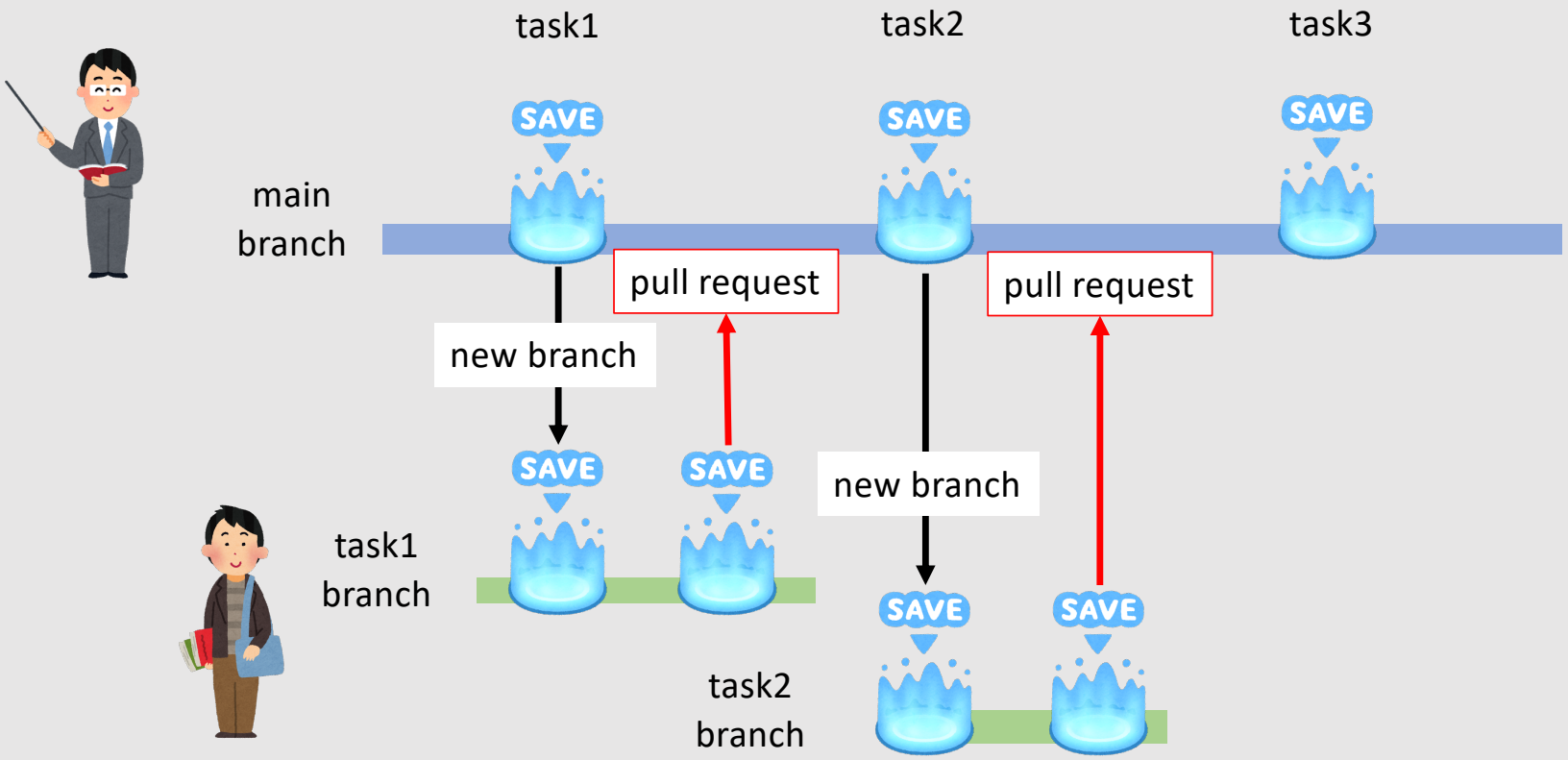
What is “Branch”?

- Branch is an independent line of development
- Branch can be merged later to the original branch
- “pull request” is to ask other people to merge



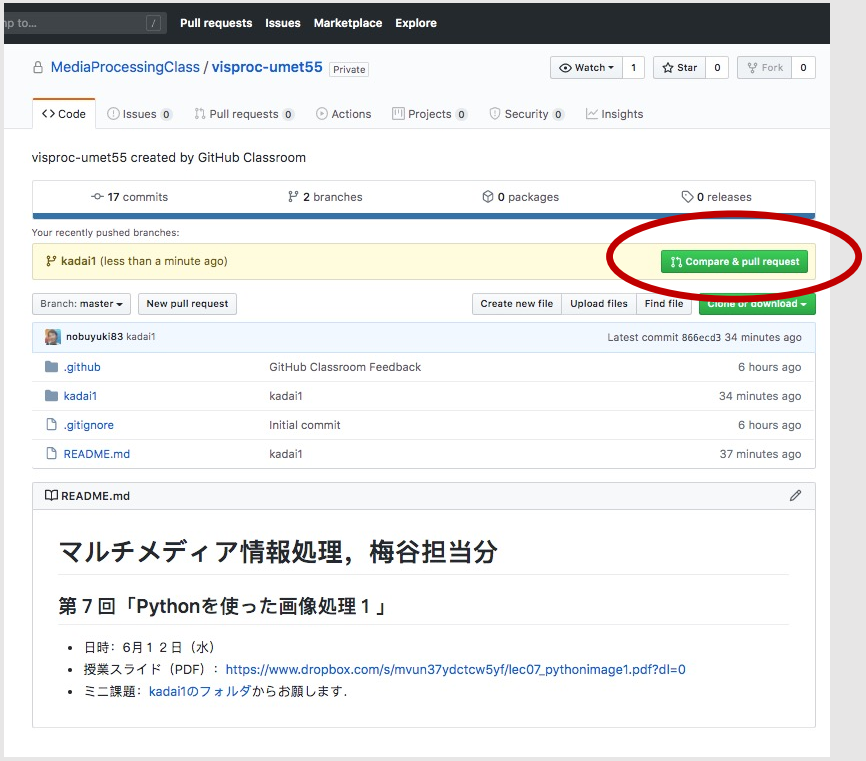
Branch Structure for the Repository

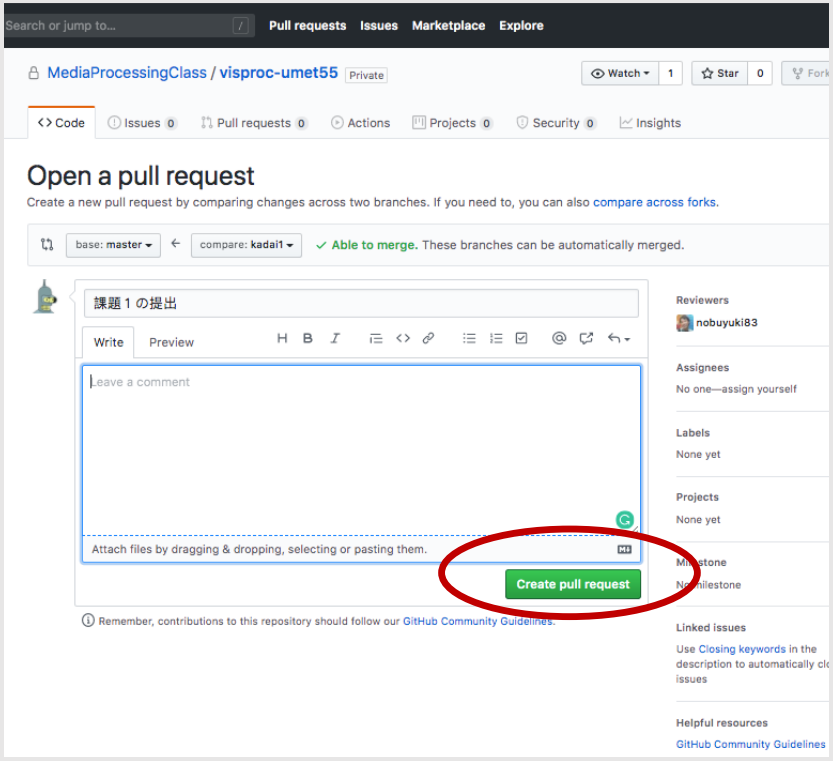
- Create brunch for each task



Make a Pull Request for Submission

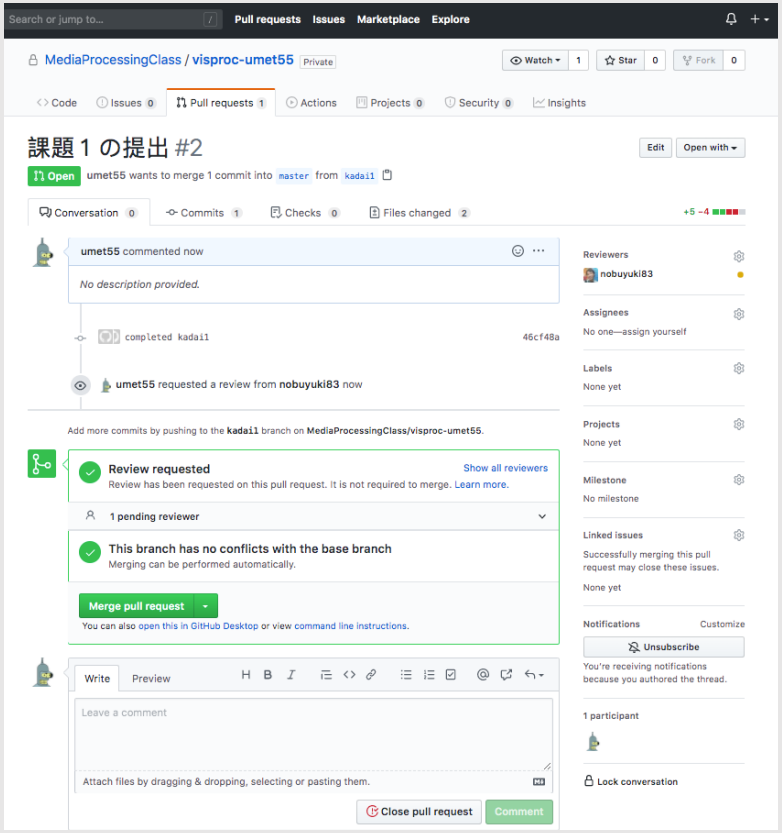
- Create branch for each task (e.g., “task1”)
- After creating branch, you can make a pull request

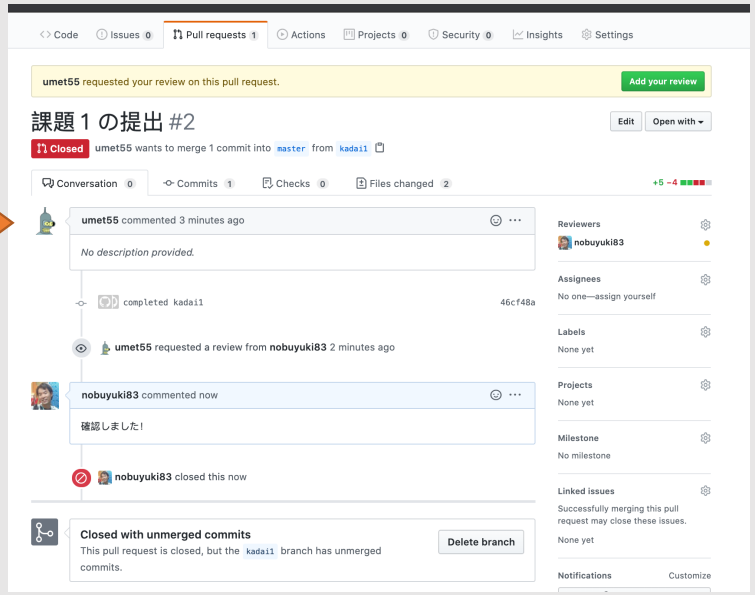




Instructor Closes Your Pull Request

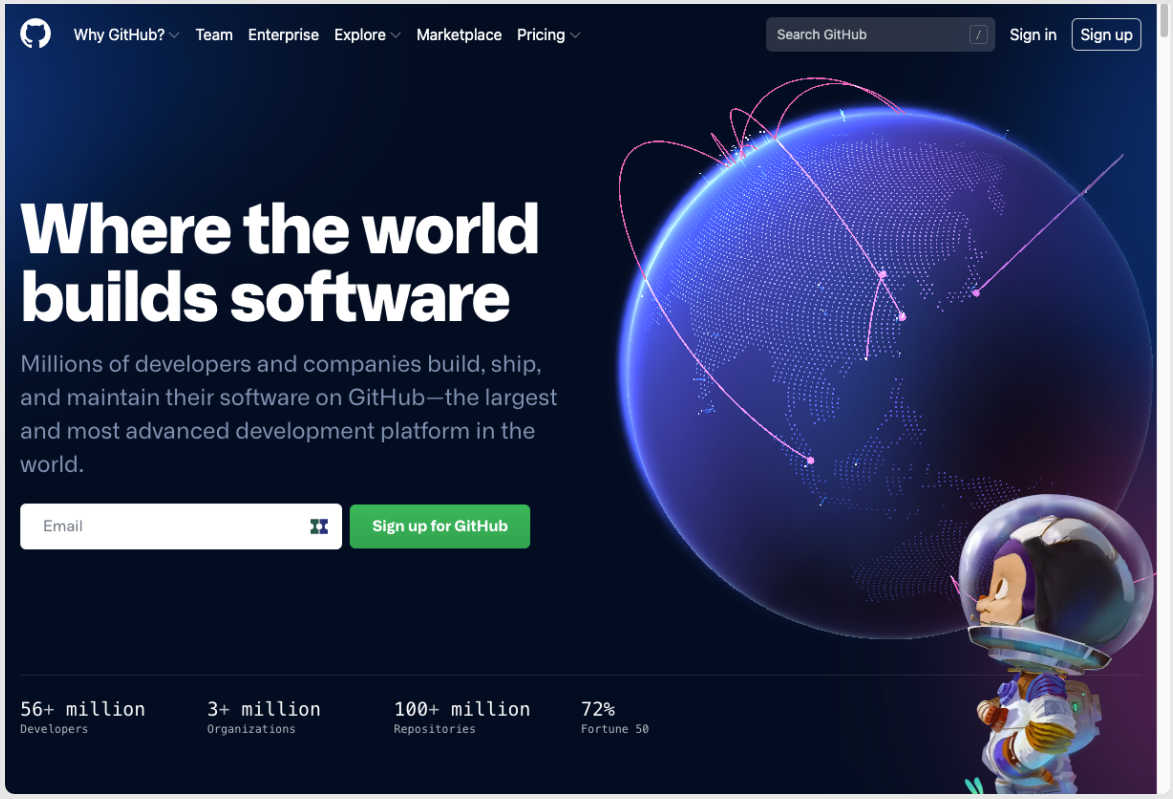
- There might be comment from the instructor…





Create a GitHub Account (if you don’t have)

- GitHub will be your “facebook” as a software engineer

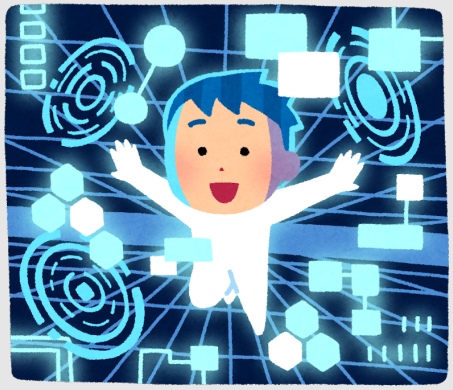


sign up here!

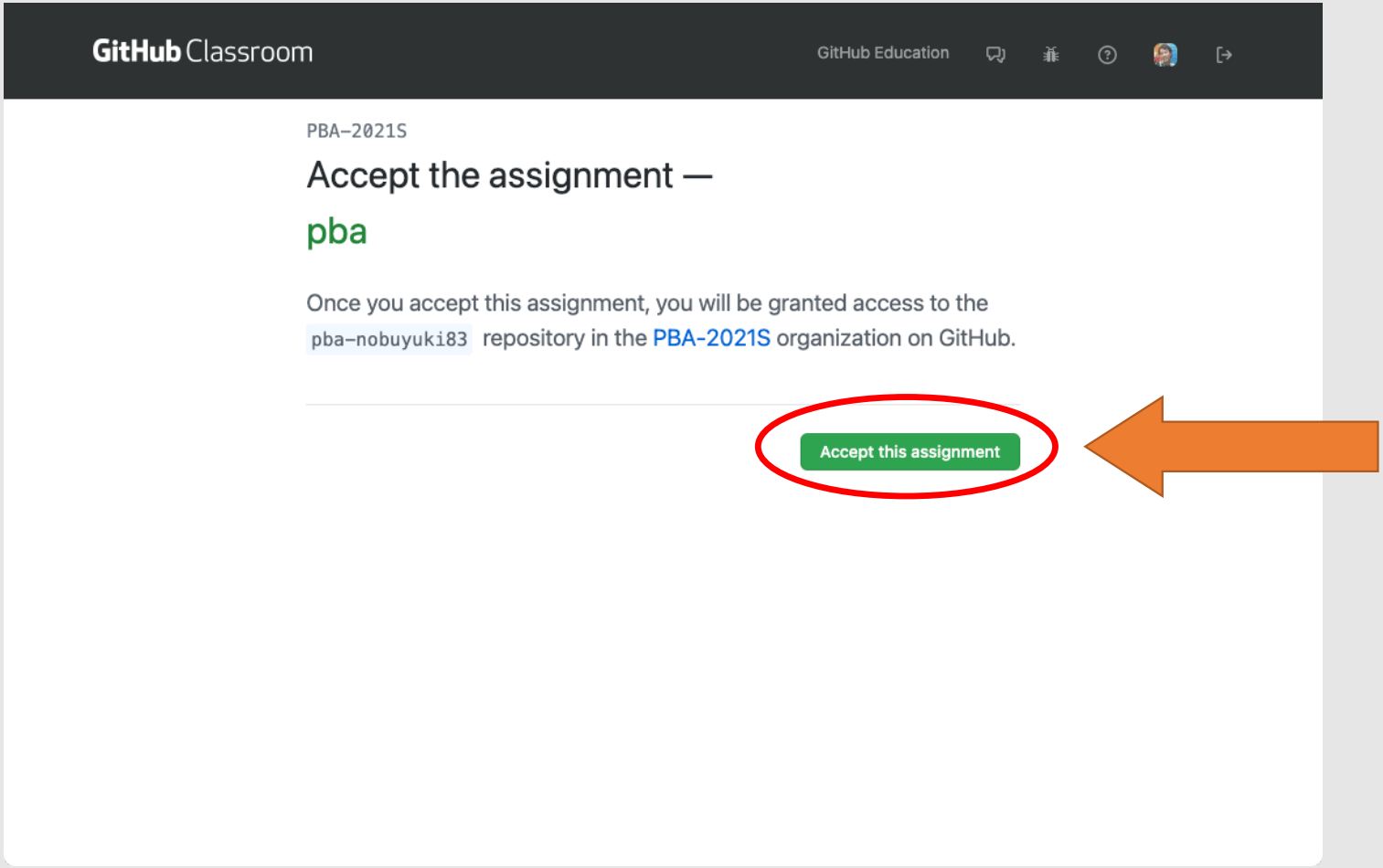
Let’s Make the Class’s GitHub Repository

- Each student create their own private repository using GitHub classroom.

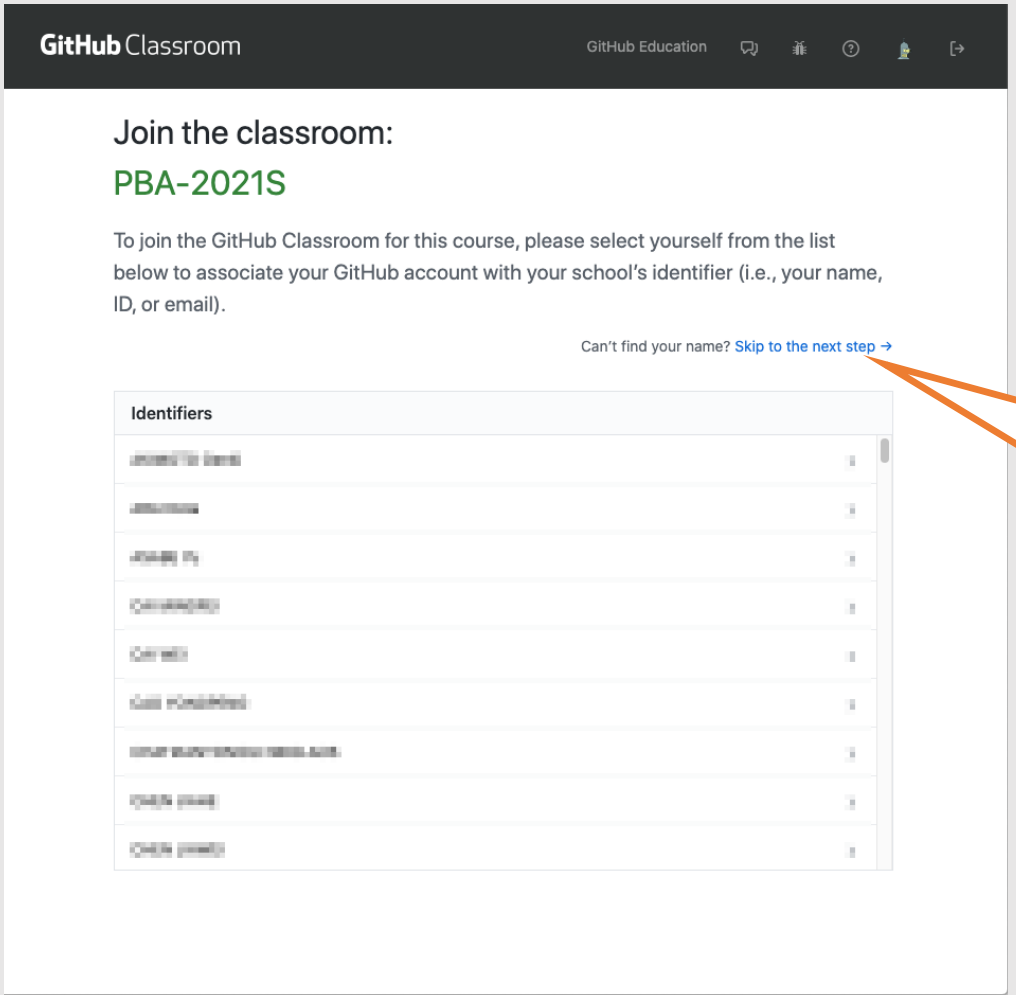
https://classroom.github.com/a/********



Press the green button “Accept this assignment”



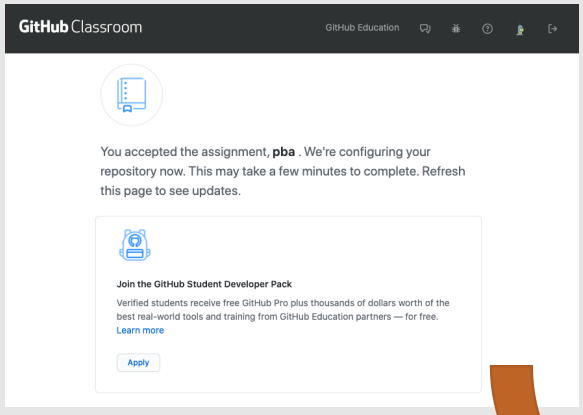
Choose Your Name from the List

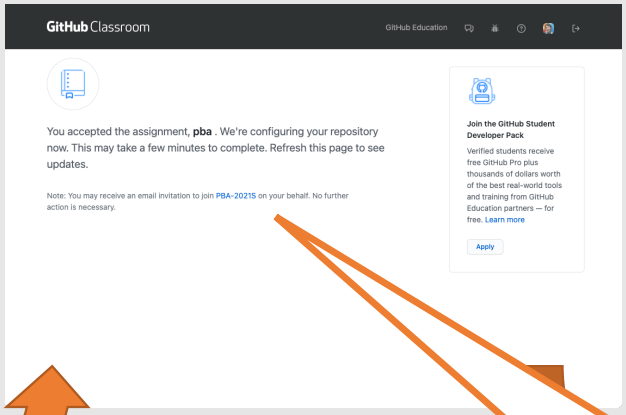


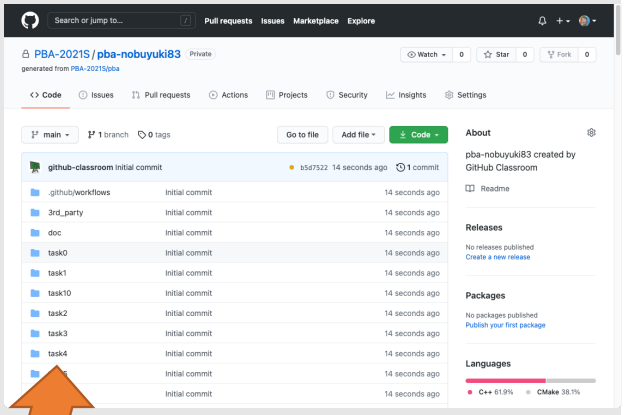
If you cannot find your name in the list, go to this link and contact the instructor on Slack

Your New Repository will be Created

- The name of the repo will be “pba-<username>”







Refresh this page after a while

go to the link here

Git Best Practice

- Avoid Platform Dependency
  - Use Cmake for C++

- Don’t put intermediate files (automatically generated files)
  - E.g., *.obj, *.proj, *.sln. *.so, *.lib
  - Use Out-of-source build
  - Use “.gitignore” file to ignore specific type of files

- Use CI (continuous integration)