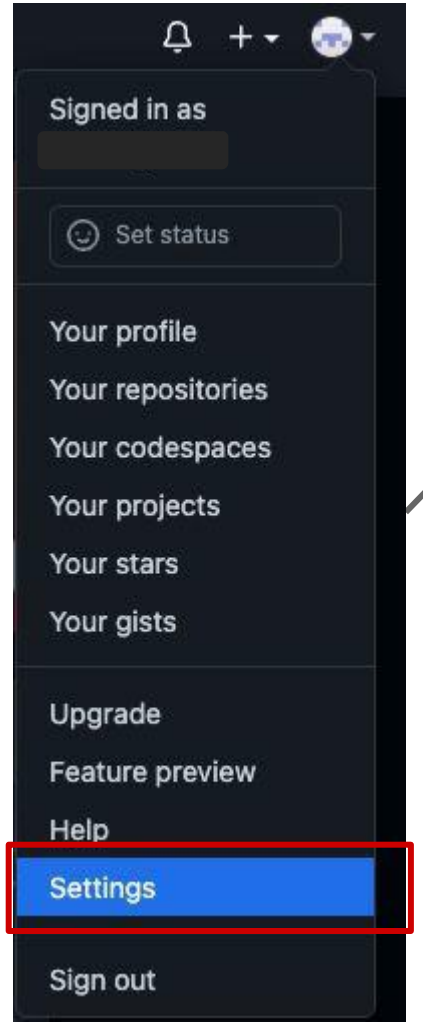
GitHub

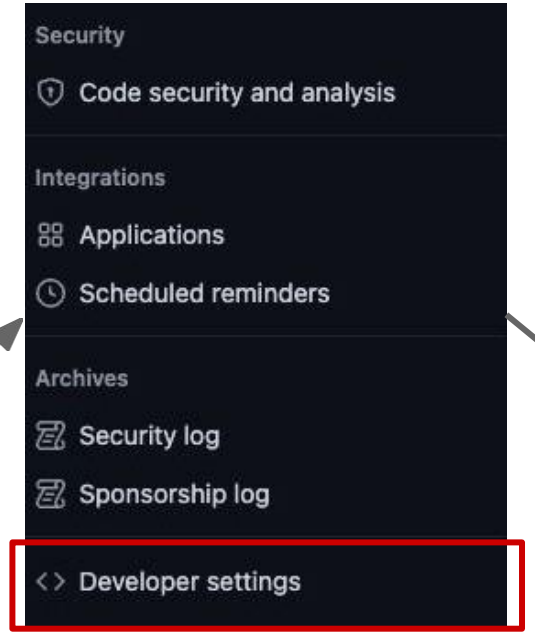
TA
劉亭妤 Joanne

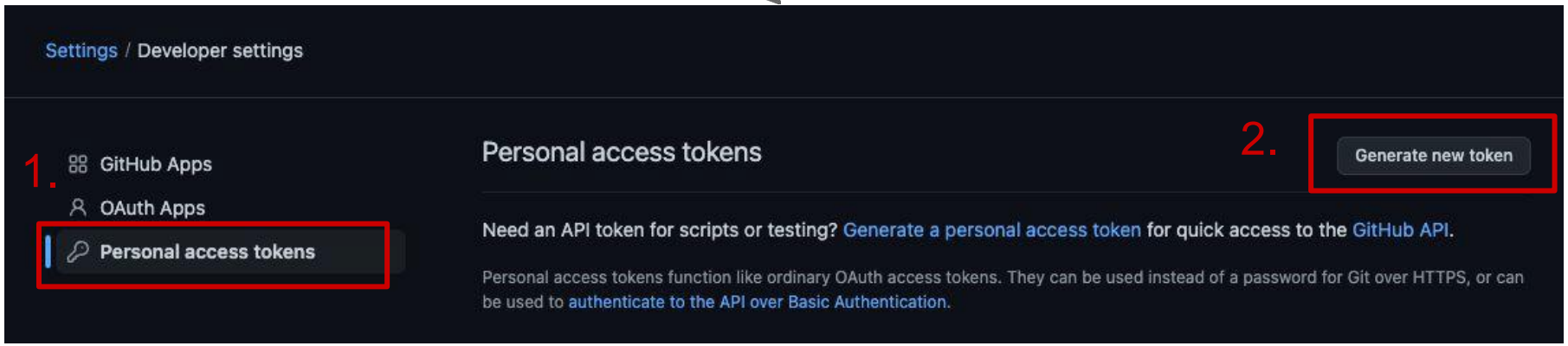
Notices!!

Before the course begins, please register a GitHub account.

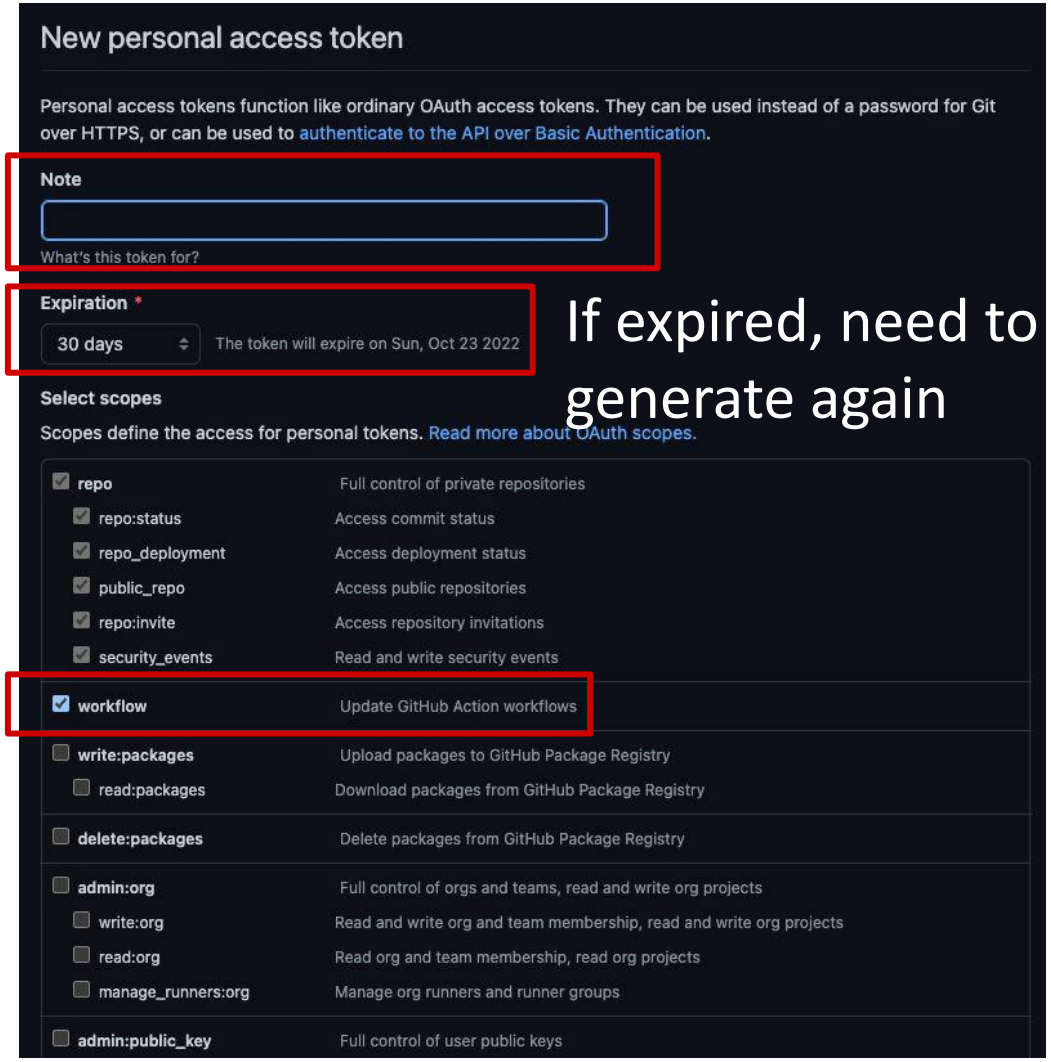
1. Get the access token : PAT key



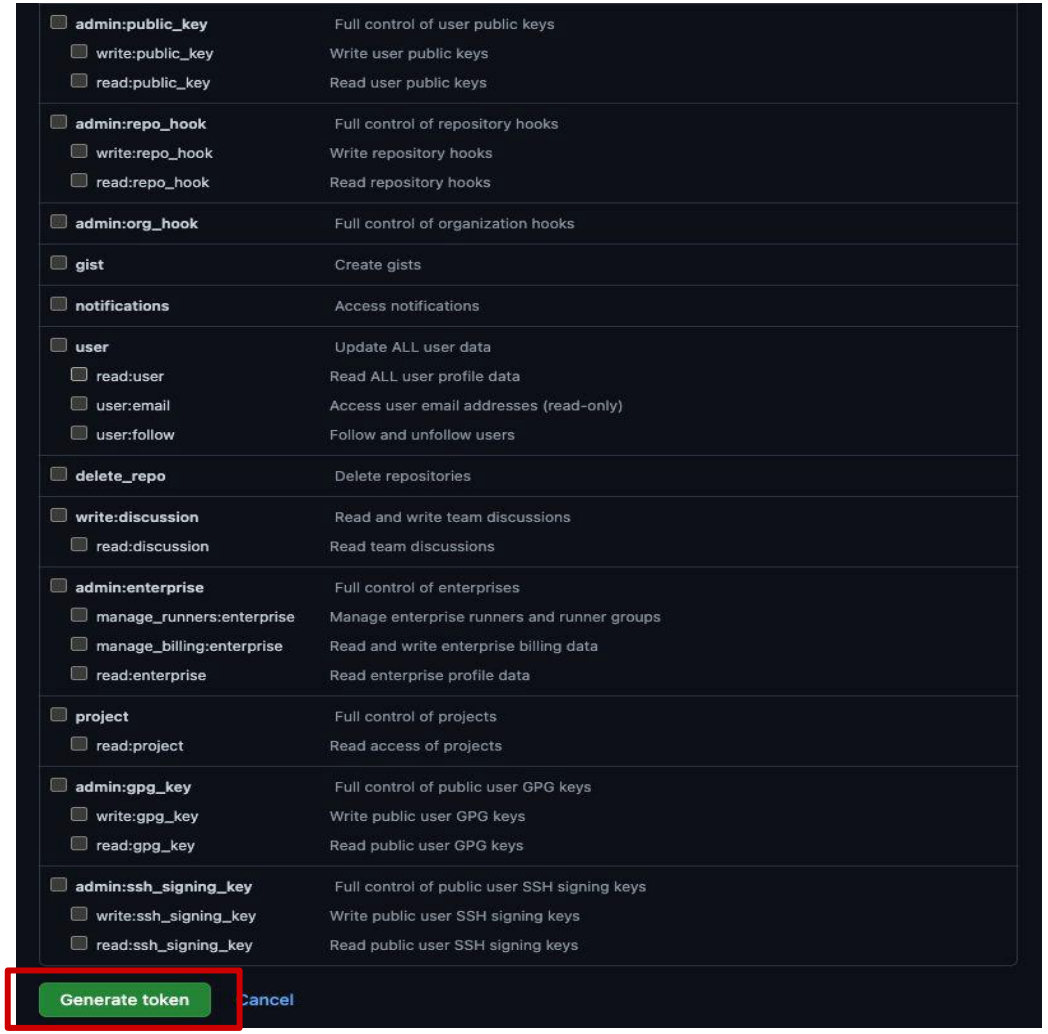




1. Get the access token : PAT key

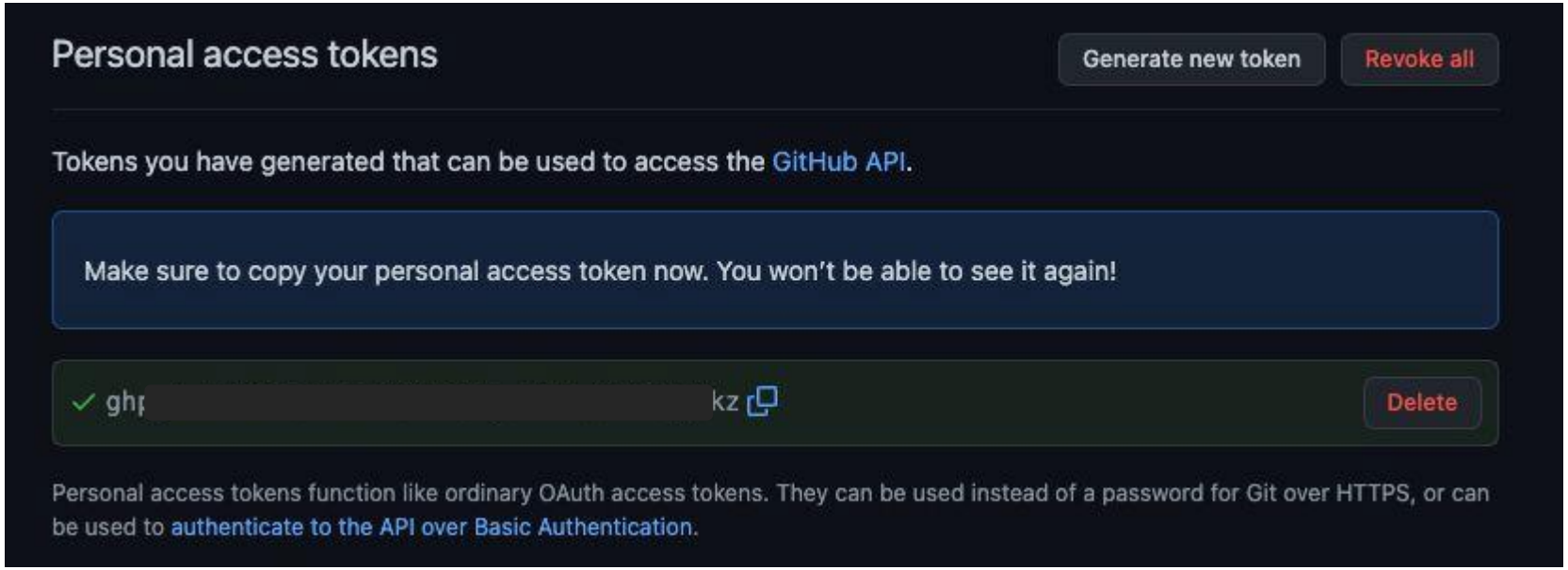


If expired, need to generate again



1. Get the access token : PAT key

- Make sure to copy your access token to your note!
- This will use when you want to push code to GitHub.
- (let environment remember your key) git config --global credential.helper manager



1. Get the access token : SSH key

- terminal
  - ssh-keygen -t rsa -b 4096 -C "your_email@example.com"
  - Enter your passphrase twice

```
Generating public/private rsa key pair.
Enter a file in which to save the key (/Users/you/.ssh/id_r
sa): [Press enter]
Enter passphrase (empty for no passphrase): [Type a passphr
ase]
Enter same passphrase again: [Type passphrase again]
```

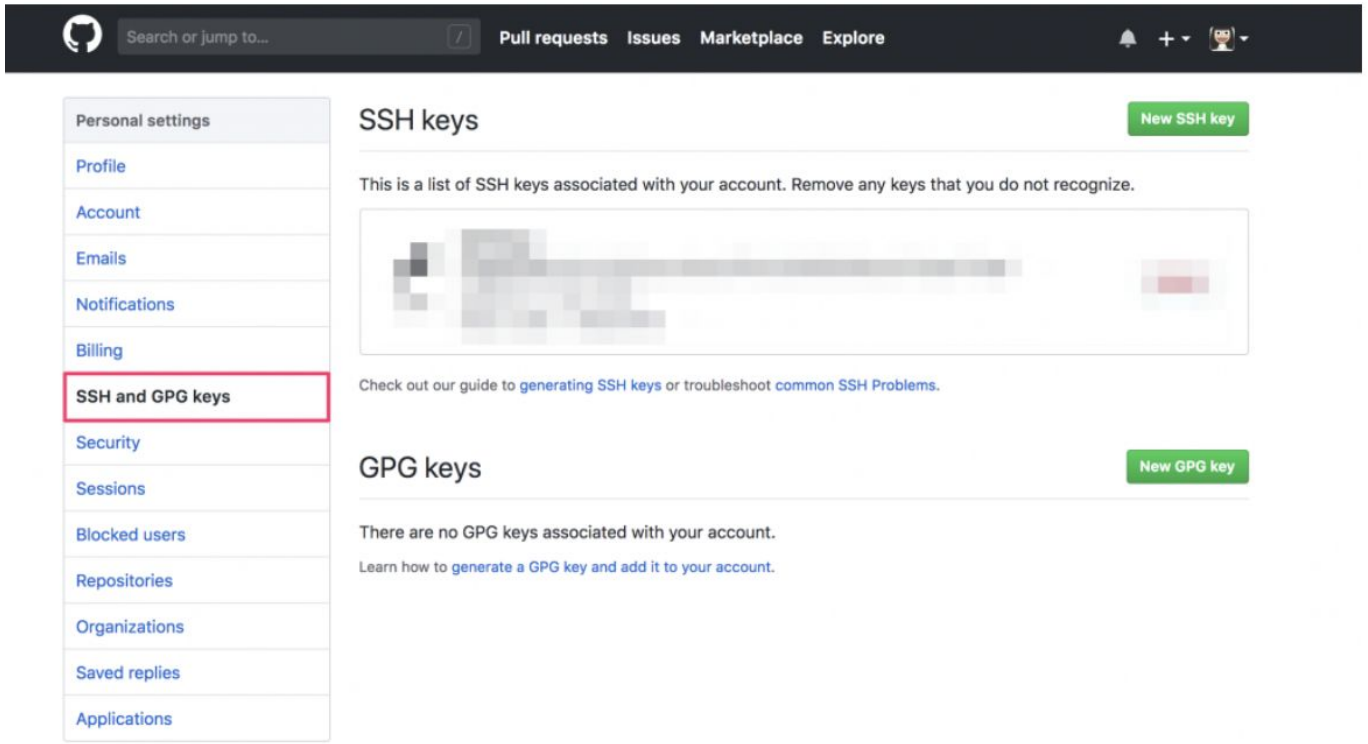
1. Get the access token : SSH key

- terminal
  - (generate ssh key) ssh-keygen -t rsa -b 4096 -C "your_email@example.com"
  - Enter your passphrase twice
  - (open ssh agent) eval "$(ssh-agent -s)"
  - (add key to agent) ssh-add -K ~/.ssh/id_rsa

```
Generating public/private rsa key pair.
Enter a file in which to save the key (/Users/you/.ssh/id_r
sa): [Press enter]
Enter passphrase (empty for no passphrase): [Type a passphr
ase]
Enter same passphrase again: [Type passphrase again]
```

1. Get the access token : SSH key

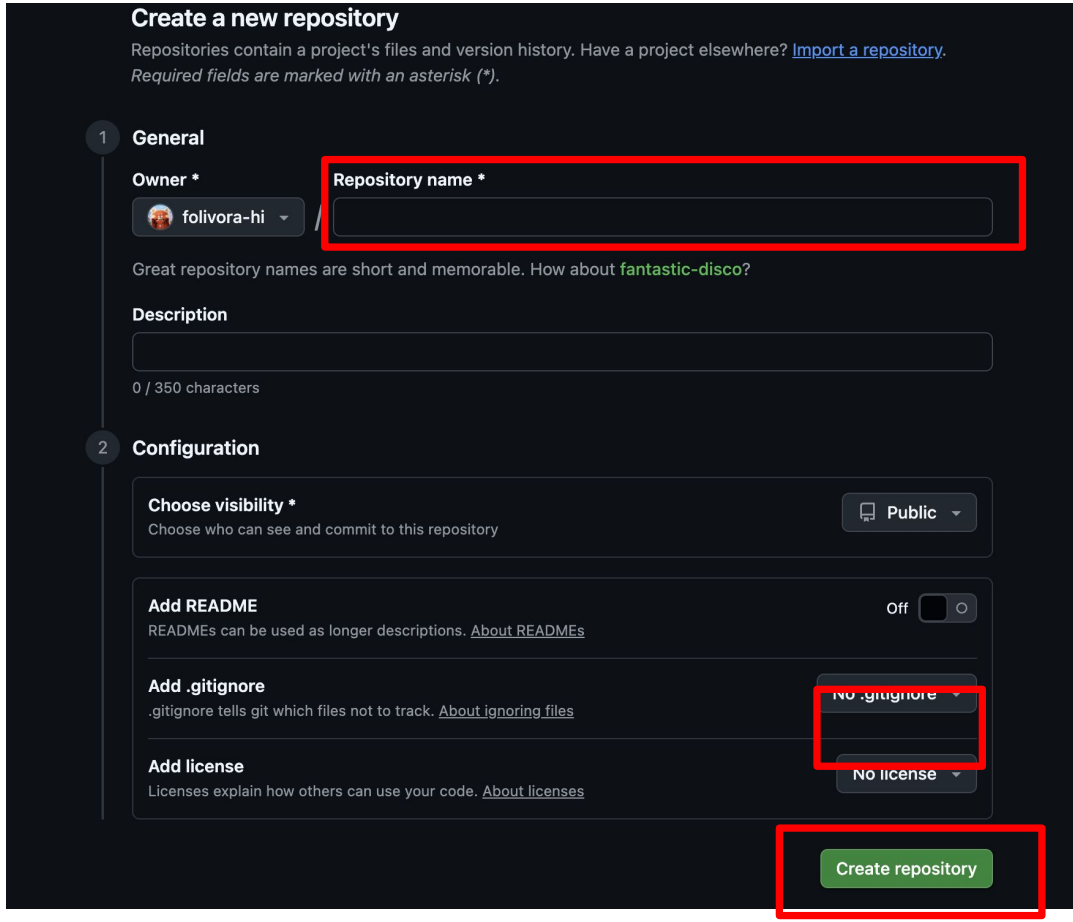
- terminal
  - (show ssh key) cat ~/.ssh/id_rsa.pub
  - copy the key
- GitHub
  - register key



2. Create a Project : from Remote

- Configure user information via VScode terminal
  - git config --global user.name "Your Name"
  - git config --global user.email "you@example.com"
  - (check configuration) git config --global --list
- Login GitHub (https://github.com/)
- New a Repository
  - SSH : git clone git@github.com:{user.name}/{repo.name}.git
  - HTTPS : git clone

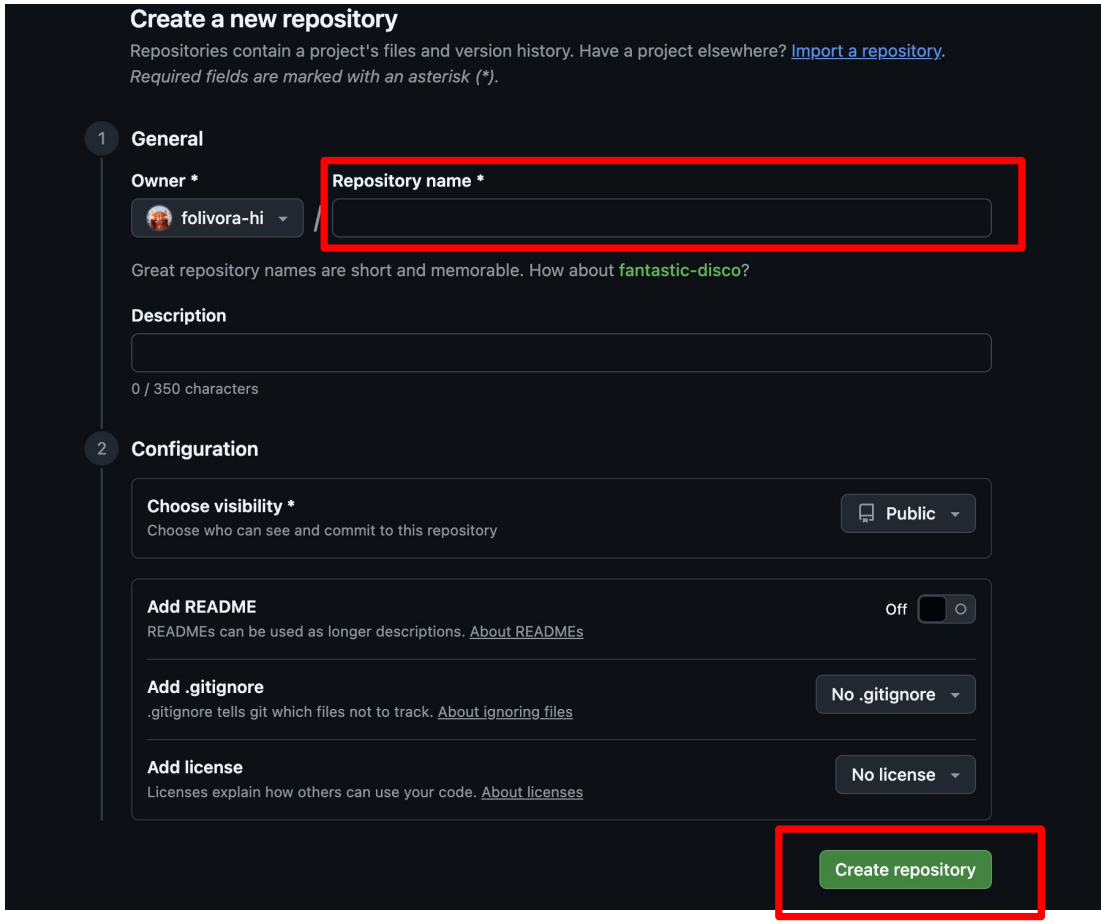
    https://github.com/{user.name}/{repo.name}.git



2. Create a Project : from Local

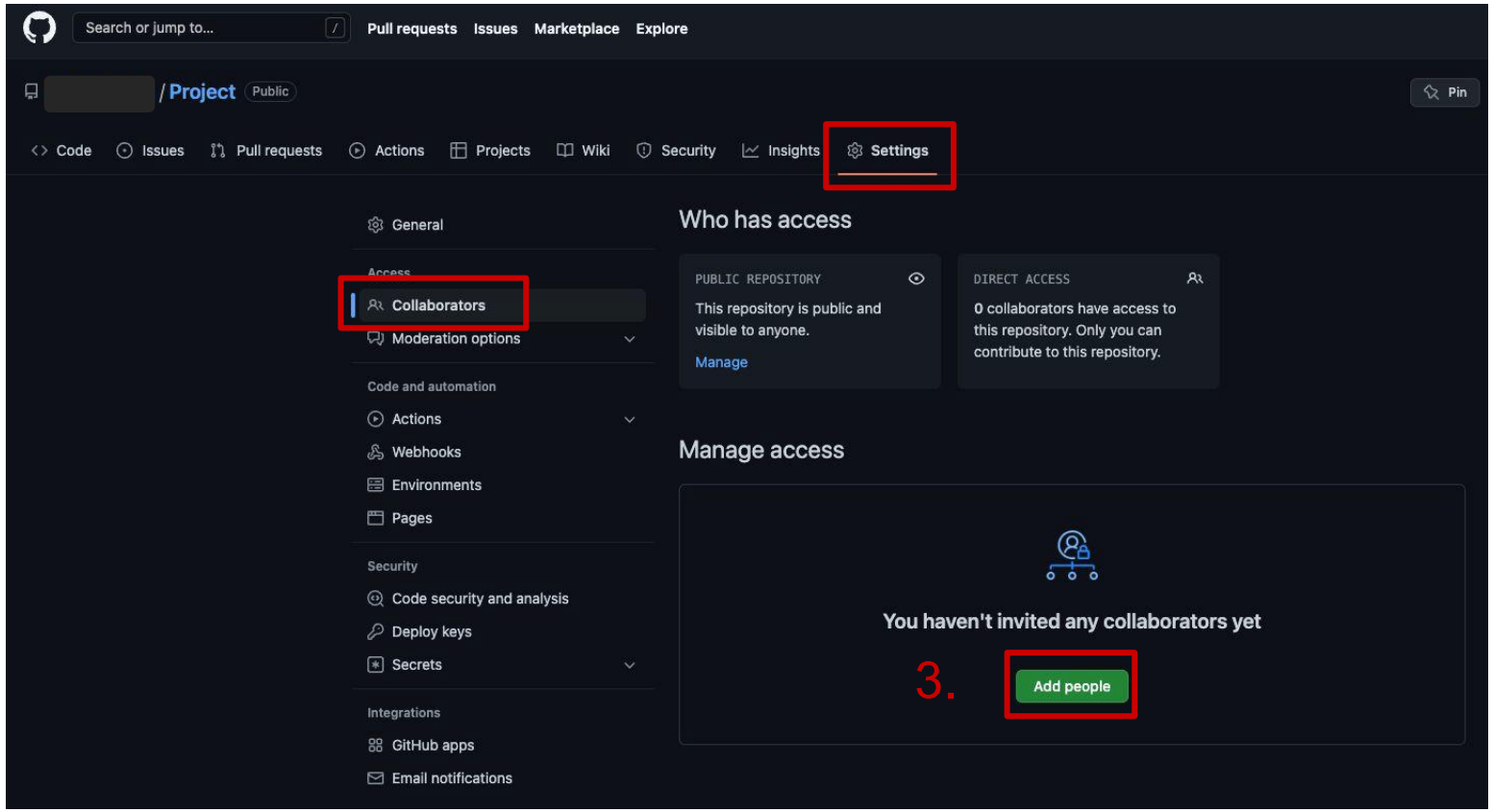
- Configure user information via VScode terminal
  - git config --global user.name "Your Name"
  - git config --global user.email "you@example.com"
  - (check configuration) git config --global --list
  - git init
- Login GitHub (https://github.com/)
- New a Repository
  - git remote add origin

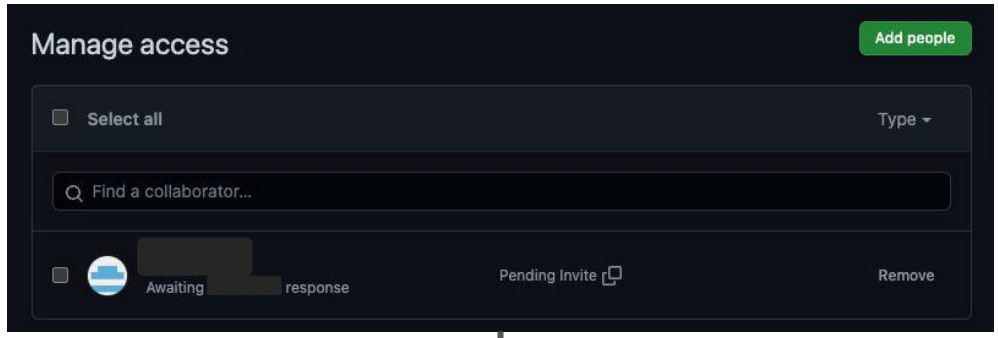
    git@github.com:{user.name}/{repo.name}.git
  - git branch -M main
  - git push -u origin main



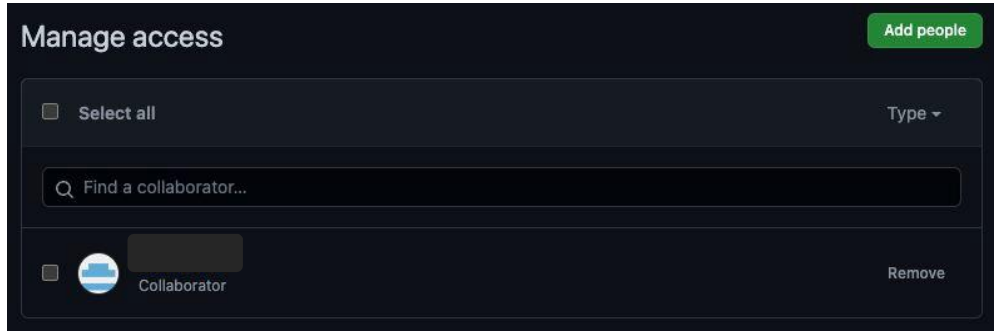
2. Create a Project

- Add your members to repository

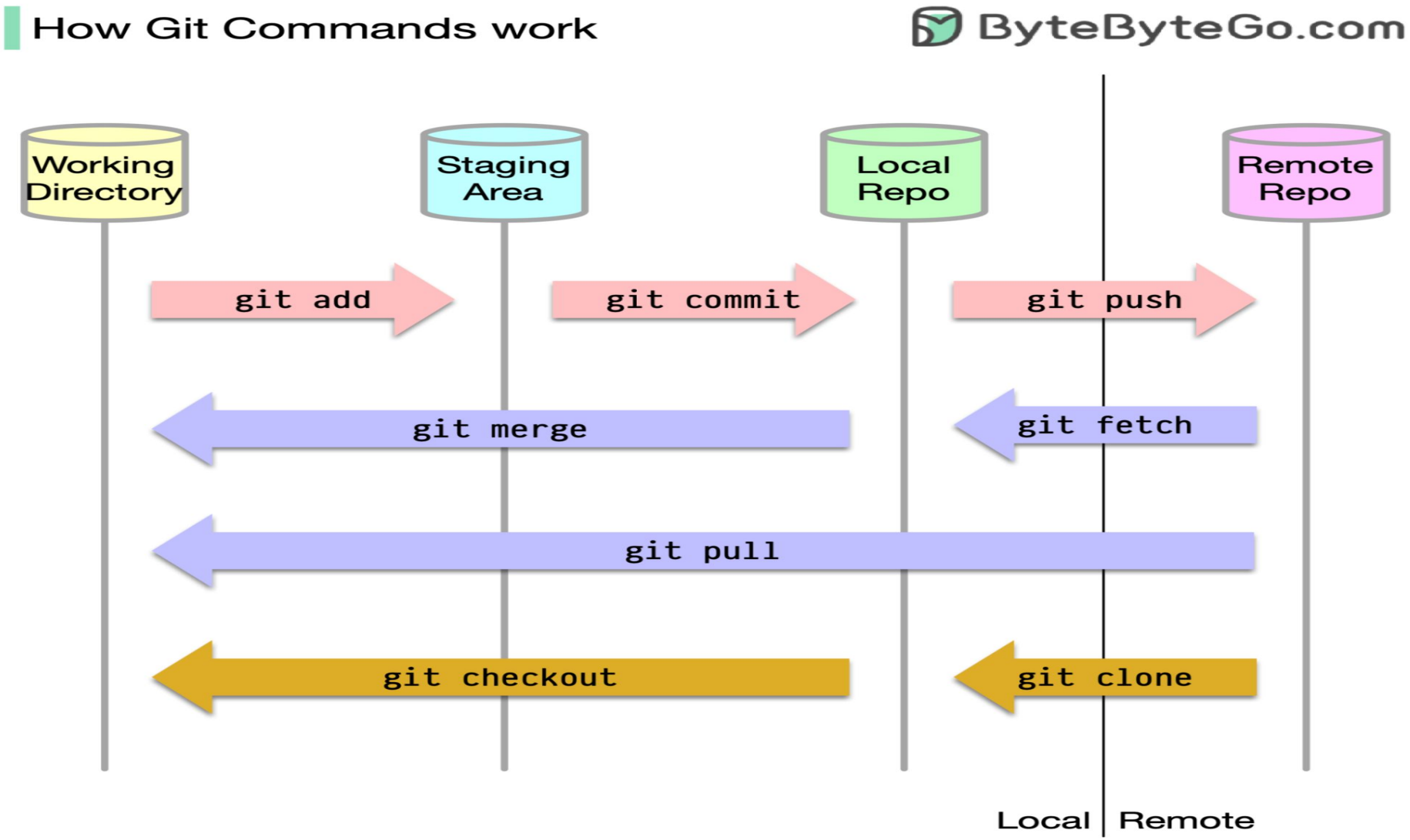




After your members join



3. Git Command : Basic



3. Git Collaboration

- Always work on a branch.
- Keep main synced with remote.
  - Always git pull origin main before creating a new branch to ensure it is based on the latest code.
- Clear Commit Messages.
  - Avoid vague messages like "fix bug." Be descriptive, e.g., fix: resolve header alignment issue on mobile.
- Don’t Upload Unnecessary Files.
  - Use .gitignore to exclude compiled files, temp files, and environment configs.
- Merge via Pull Requests (with reviews).

3. Git Collaboration : Branch

Never develop directly on main. Always create a new branch for features or fixes, e.g., feature/login or bugfix/header.

Command	Description
`git branch`	List all local branches (`*` marks the current branch).
`git branch -r`	List all remote branches.
`git branch -a`	List all local and remote branches.
`git branch <name>`	Create a new branch (but stay on the current one).
`git checkout <name>`	Switch to the branch `<name>`.
`git switch <name>`	Newer alternative to switch to branch `<name>`.
`git checkout -b <name>`	Create and switch to a new branch in one step.
`git switch -c <name>`	Newer alternative to create and switch to a new branch.
`git checkout main` `git merge <name>`	Merge branch `<name>` into `main`.
`git branch -d <name>`	Delete a local branch (only if merged).
`git branch -D <name>`	Force delete a local branch (even if not merged).
`git push -u origin <name>`	Push local branch `<name>` to remote and set upstream tracking.
`git push origin --delete <name>`	Delete a remote branch `<name>`.

3. Git Collaboration : Merge & Conflict

Don’t merge directly. Use Pull Requests, get code reviewed, and then merge into main.

[Link] https://ithelp.ithome.com.tw/articles/10339487

When merge conflicts occur, don’t force push. Resolve locally, test, then push again.

[Link] https://heidiliu2020.github.io/git-github/

Notice

- Send your GitHub link and contact information via Google Sheets!

  [Link]

Supplement

- Basic Git & GitHub Concept : https://www.youtube.com/watch?v=FKXRiAiQFiY
- Git Stash (暫存): https://www.maxlist.xyz/2018/11/02/git_tutorial/
- https://www.youtube.com/watch?v=VShhhq_5sMc&list=PLBd8JGCAcUAF2_im__kZTfEAKnlmfPJy