# Software Studio
# 軟體設計與實驗

# Git Basics

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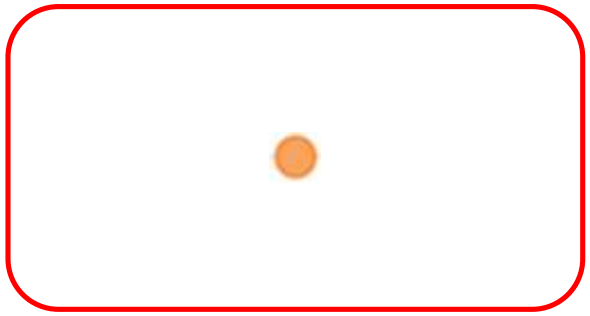
# What are we going to do?

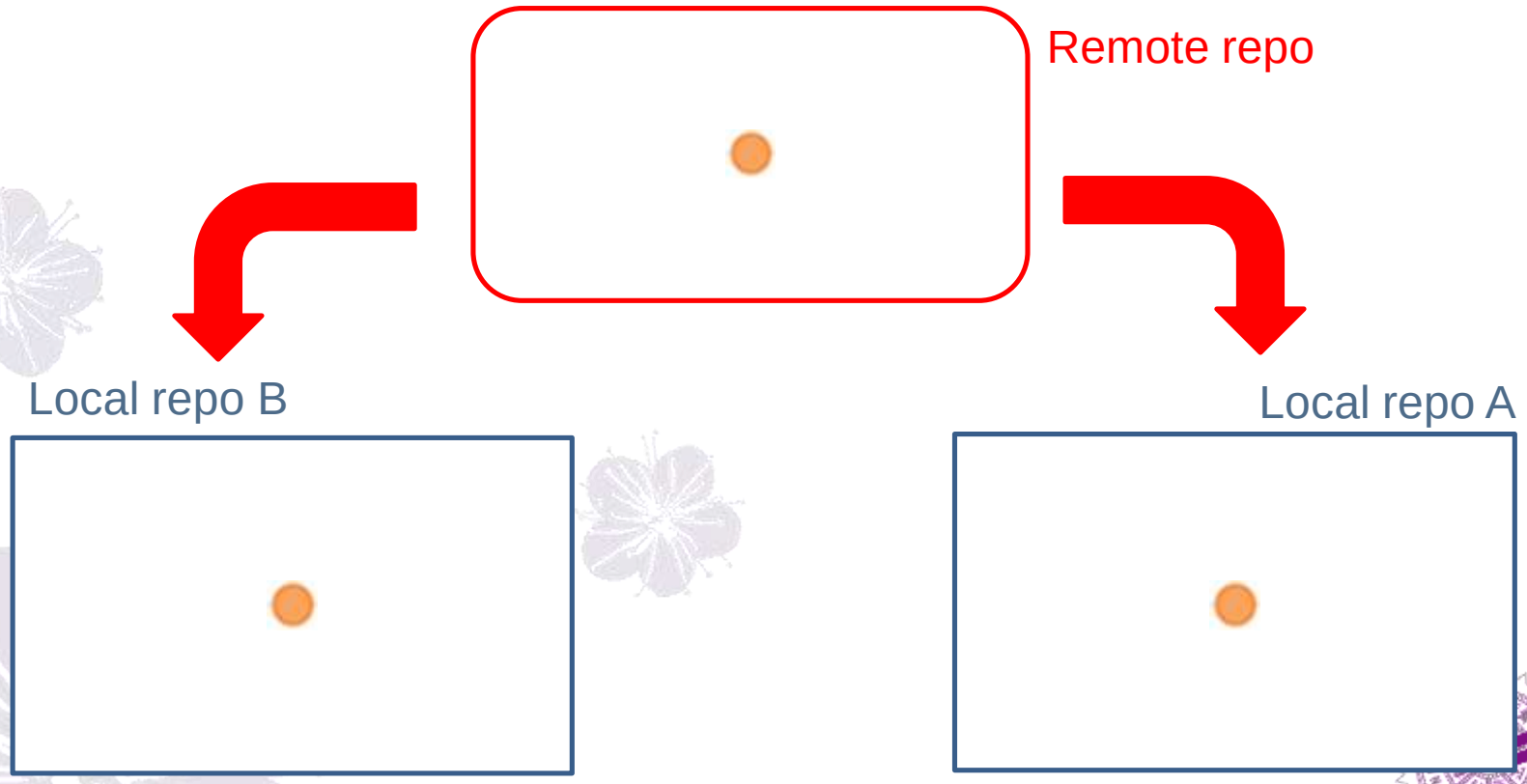
# Todo

- Init remote repo



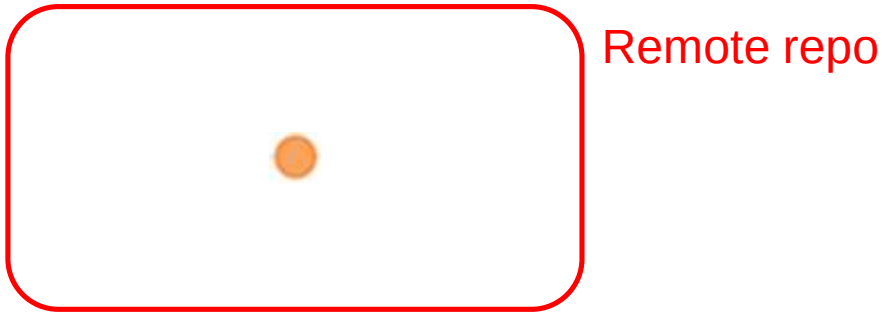
# Todo

- Clone into 2 local repo A and B

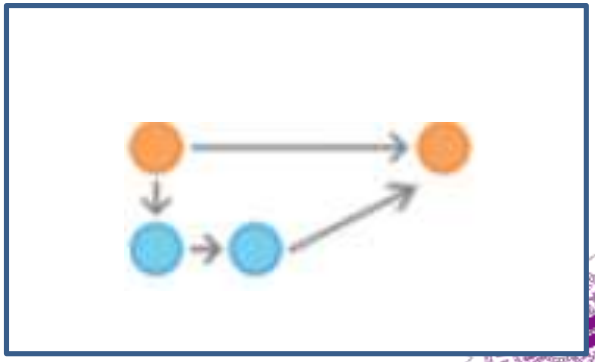


# Todo

- Modify repo A

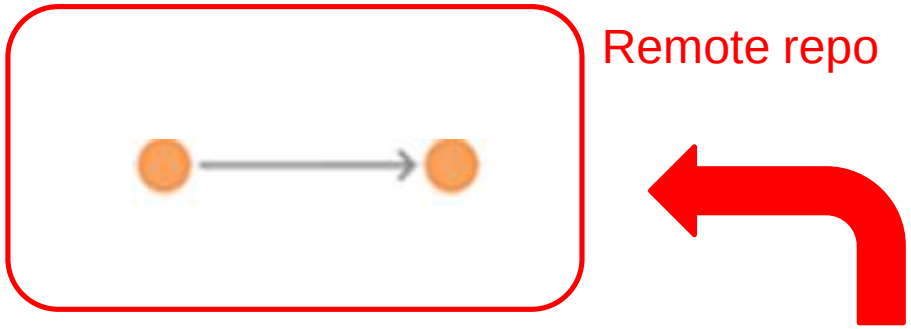




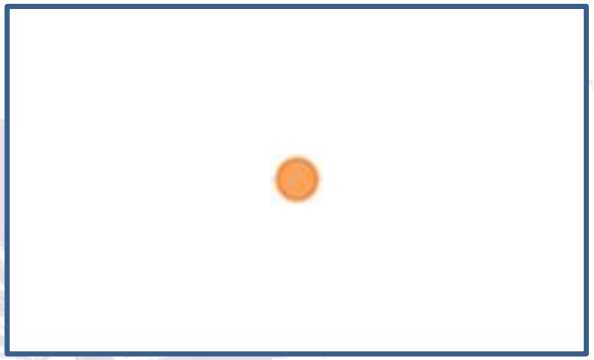


# Todo

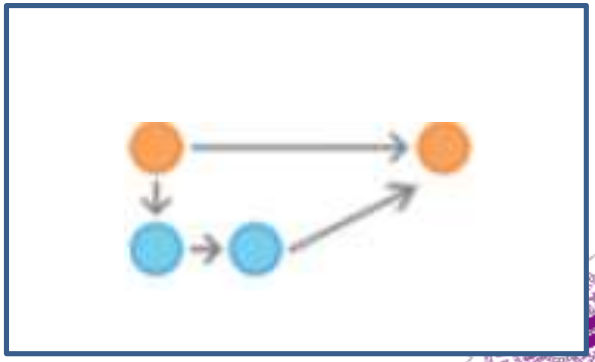
- Push repo A to remote repo.




Local repo B

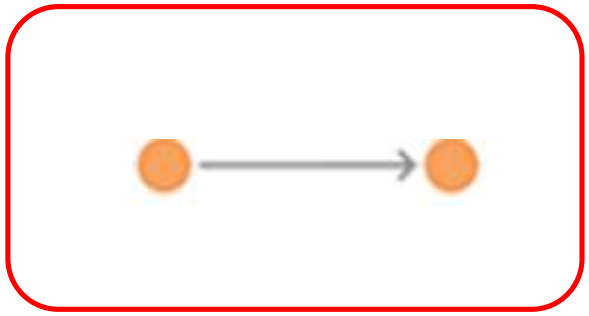


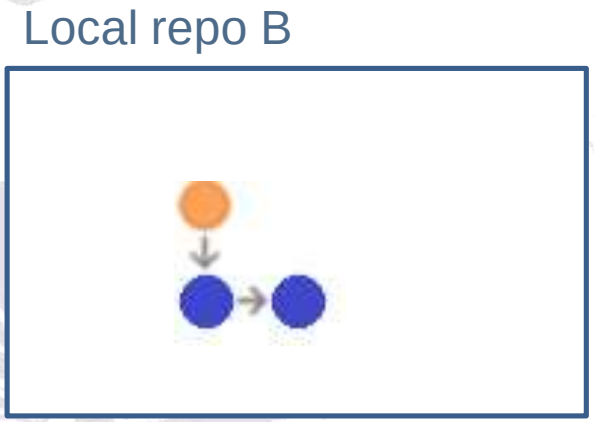
Local repo A

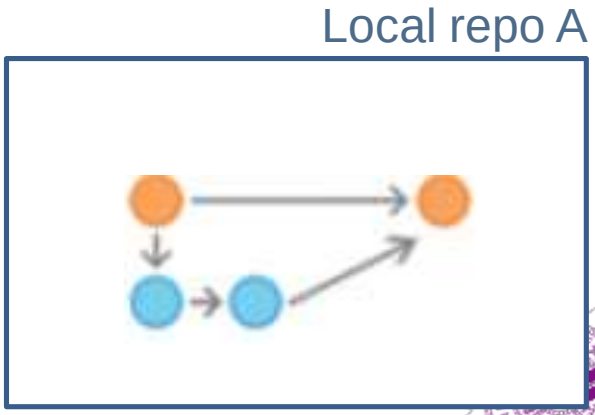


# Todo

- Modify repo B

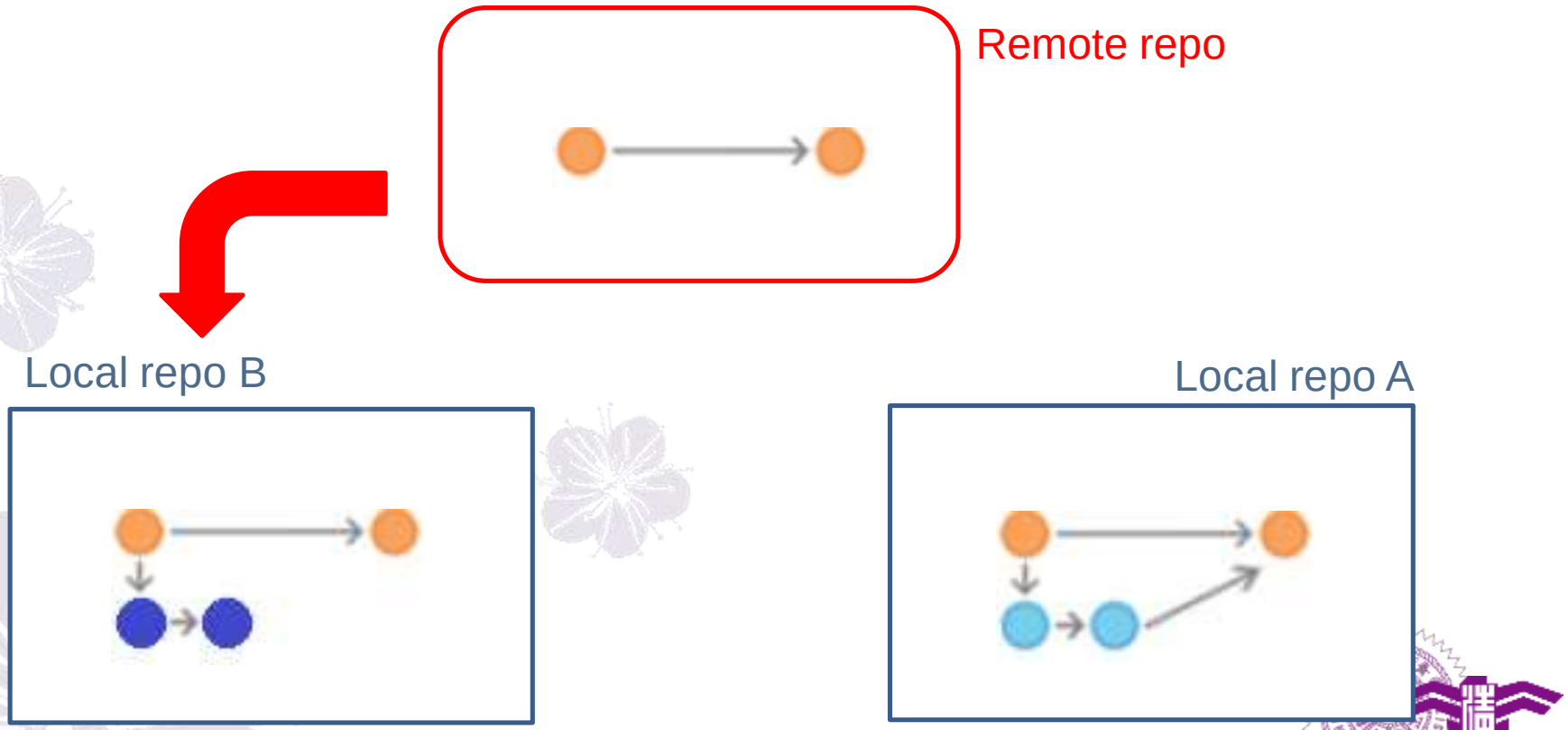


# Todo

- Repo B pull from remote



# Todo Layout

# Todo Layout

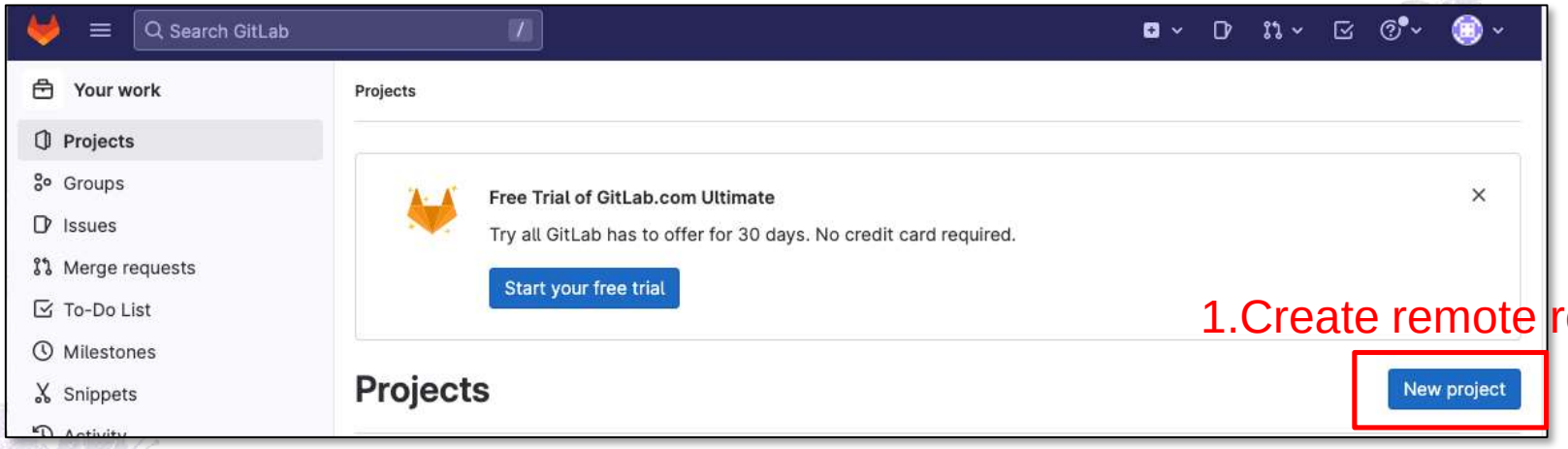
- Init a remote repo.
  - Create a local folder. Initialize Git in the folder.
  - Add ‘list.txt’ to the local folder.
  - Add & Commit the file to the local repo.
  - Link local repo to remote repo.
  - Push the content to remote repo.

# Todo Layout

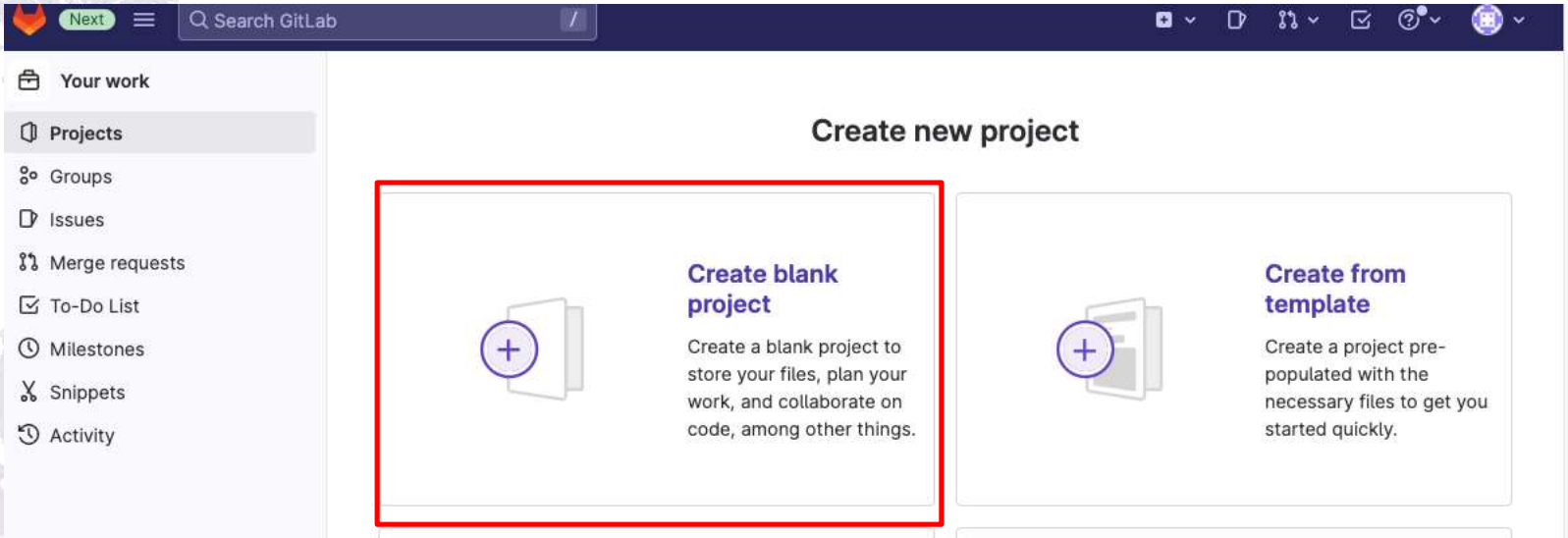
- Clone the remote repo to 2 local repos A and B.
  - Clone both local repos before moving on!
- A repo
  - Create a new branch ‘featA’
  - Modify the files and commit.
  - Merge ‘featA’ back to ‘master’
  - git push
- B repo
  - Create a new branch ‘featB’
  - Modify the files and commit.
  - Checkout ‘master’
  - git pull
  - Show git branch / git log to TAs

# Step by Step

# Todo – init remote repo

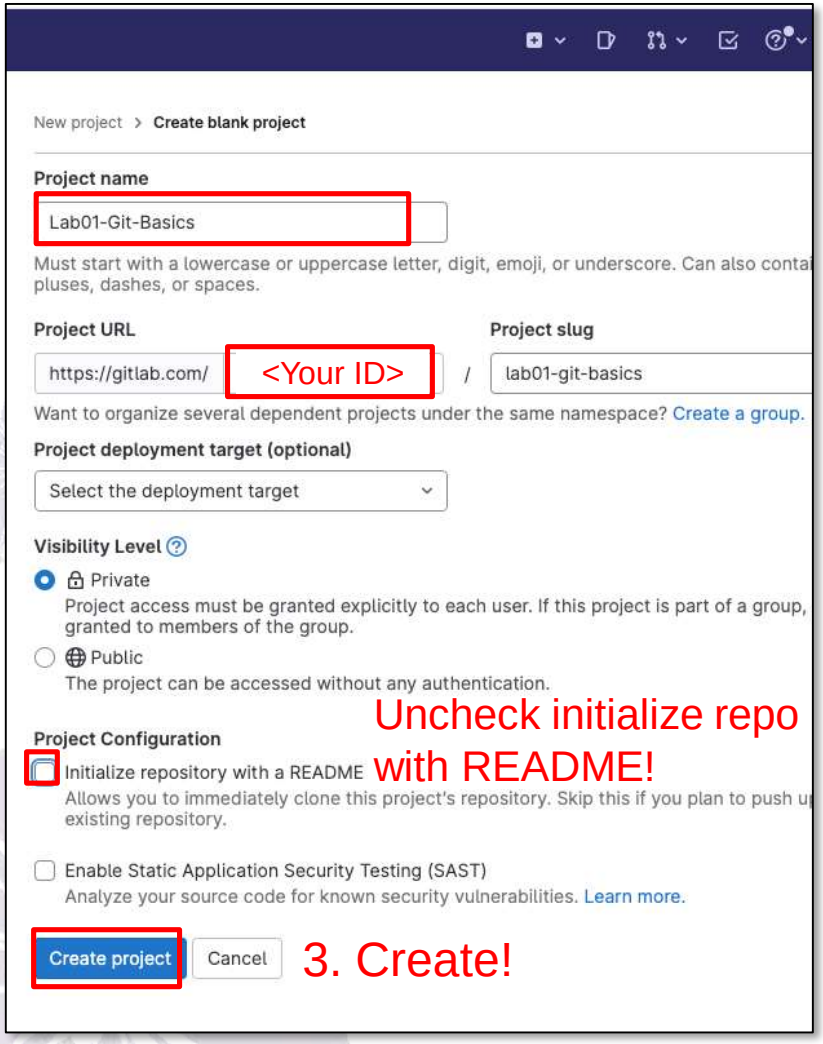


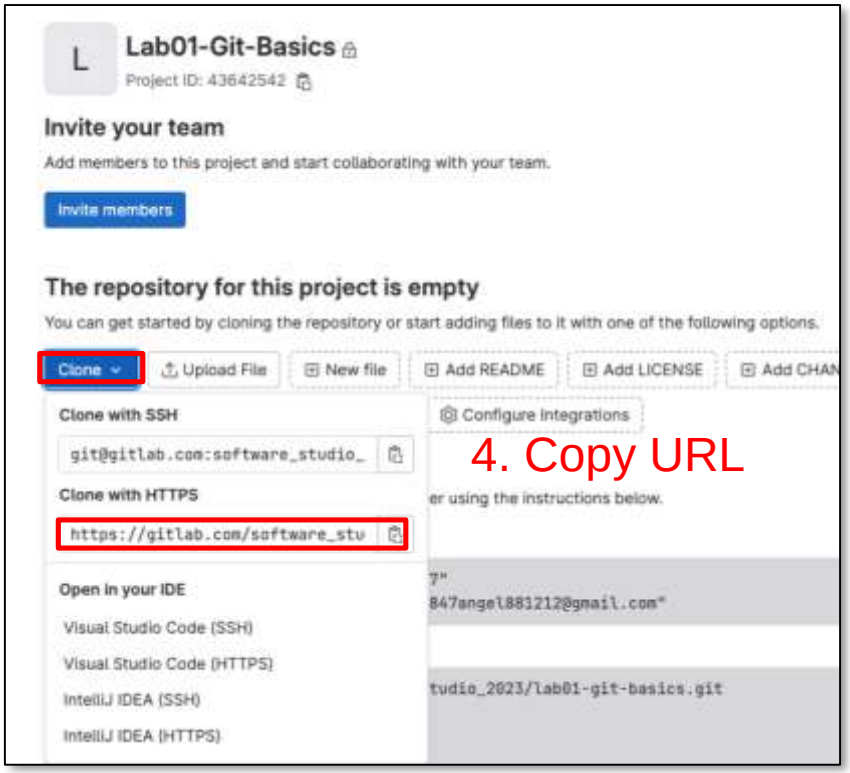

1.Create remote repo



# Todo – init remote repo

## 2. Setup project



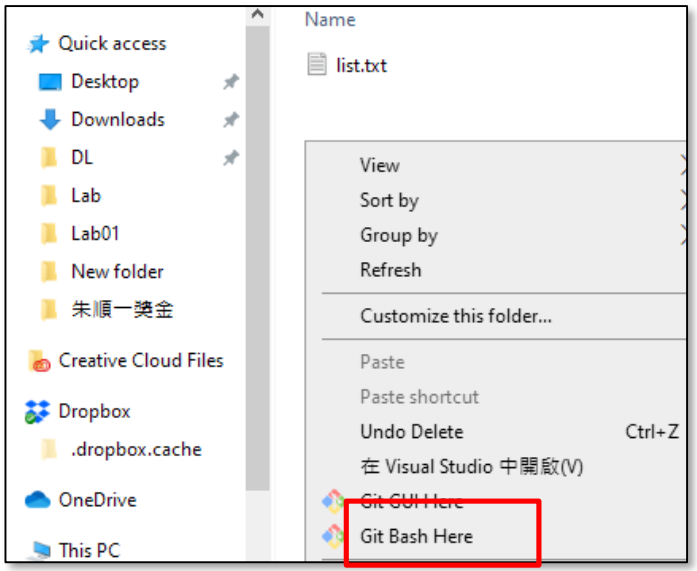



# Todo – init remote repo

5. Create a local folder


6. Create “list.txt” in that local folder


7. Add content to “list.txt”




8. Git Bash Here

# Todo – init remote repo

9. **`git init`**
   Init local repo in the folder

10. **`git remote add origin <URL>`**
    Link the local folder to the remote repo(URL)

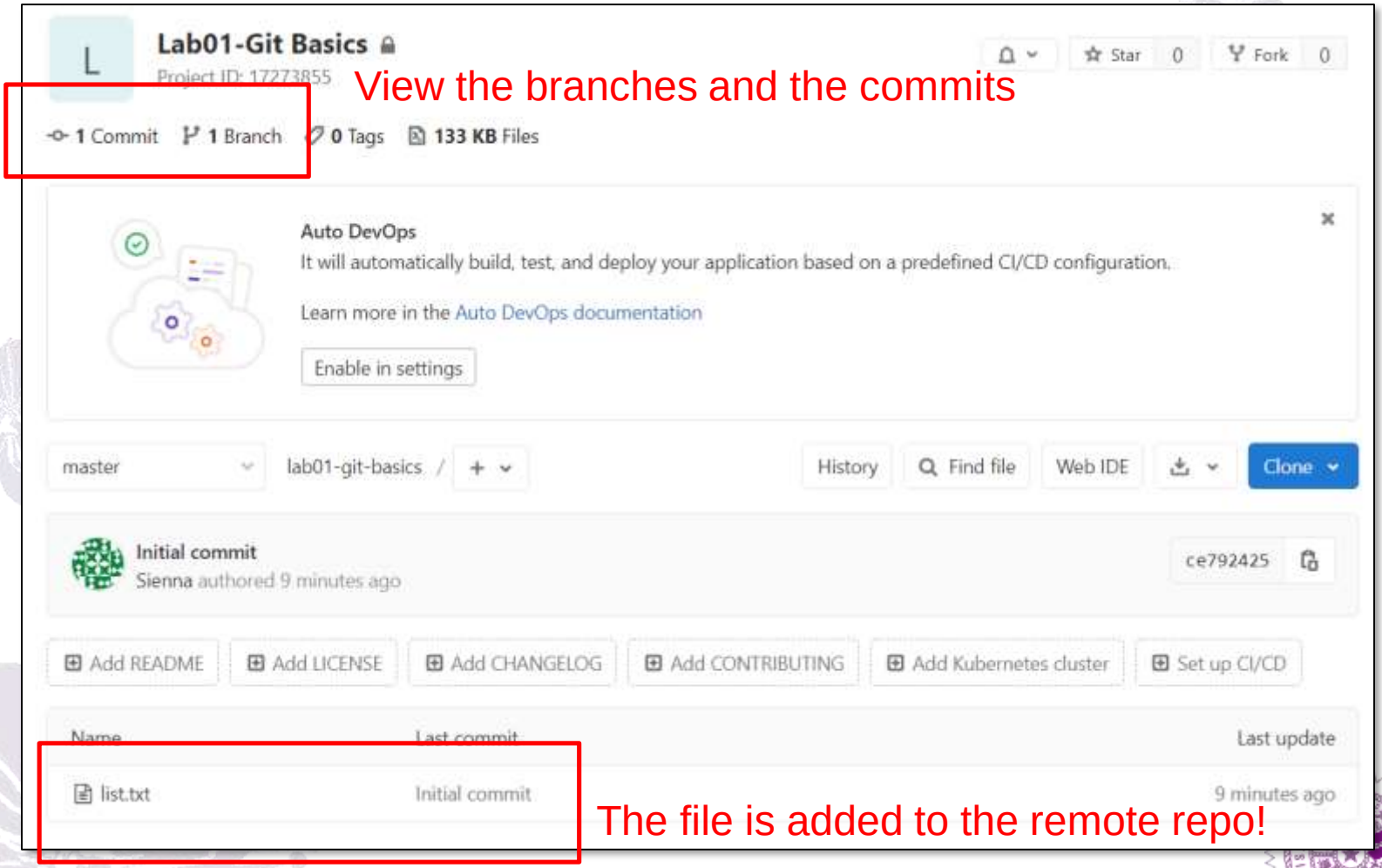
11. **`git add *`**
    Select the changes to be added to the git system. **`add *`** add all changes.

12. git config --global user.email <Your Email>
    git config –global user.name <Your Name>
    Tell git who you are!

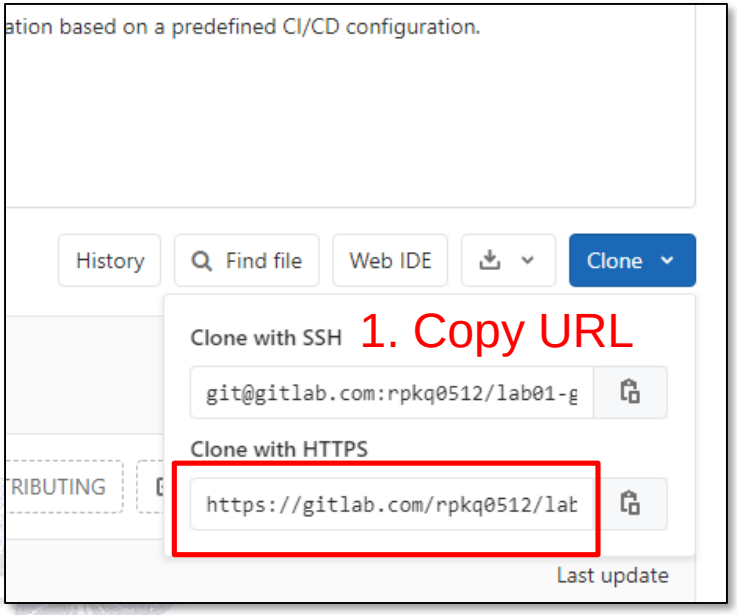
13. **`git commit –m “initial commit”`**
    Commit to form a “node” on current branch. With –m, we specify the commit message in “ ”.

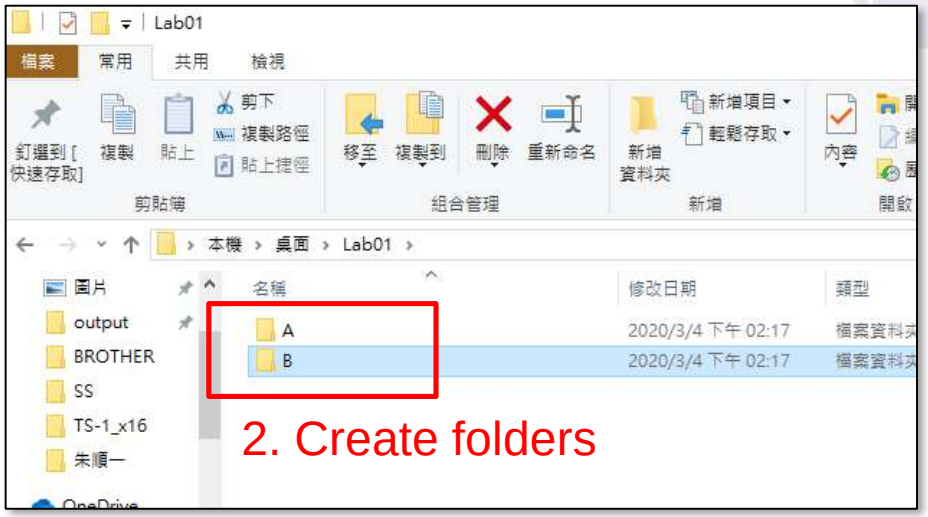
14. **`git push –u origin master`**
    Push local changes to remote repo (enter email and password)

# Todo – init remote repo

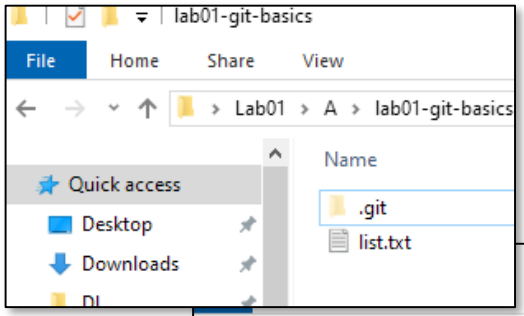


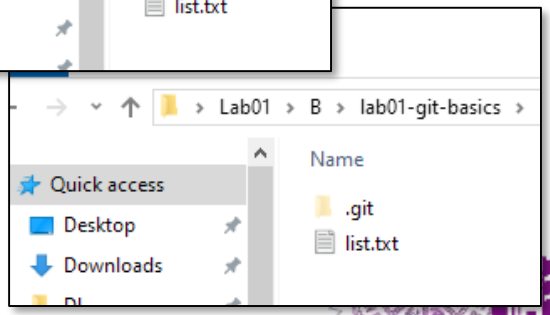
# Todo – clone to local repo







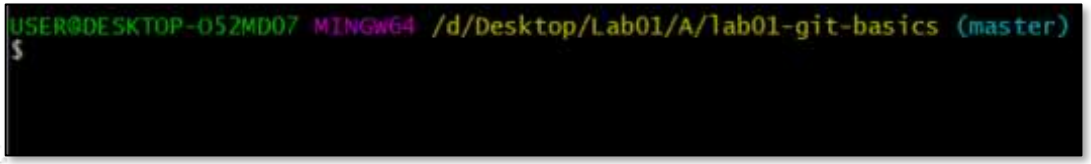

3. `git clone <URL>`

Clone into both A and B folders

**Clone both of them before moving on!!**

# Todo – A repo

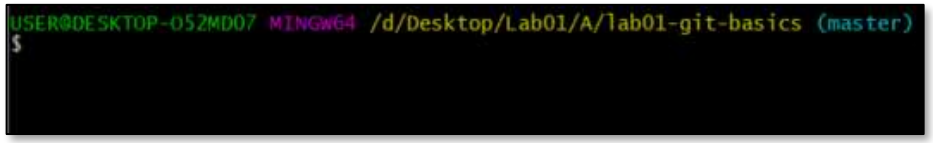
- Go to the folder inside folder A.
  - You cannot do git operations in folder A!

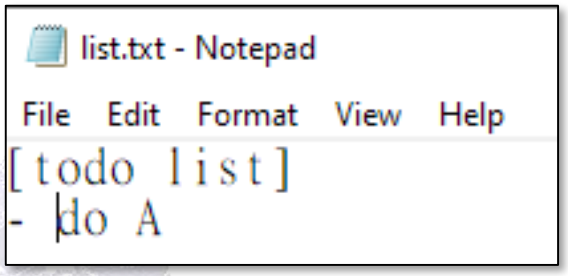



1. **`git checkout –b featA`**
   Create a new branch named “featA”.
   Use git checkout to switch to other branches.
   git checkout –b <branch name> to create a new branch and switch to it.

2. **`git branch`**
   View all local branches. The branch with * is the current branch.

# Todo – A repo




3. Add **do A** to the list.

4. `git add *`
   `git commit –m "featA commit"`

5. `git log`
   View all old versions on the current branch.

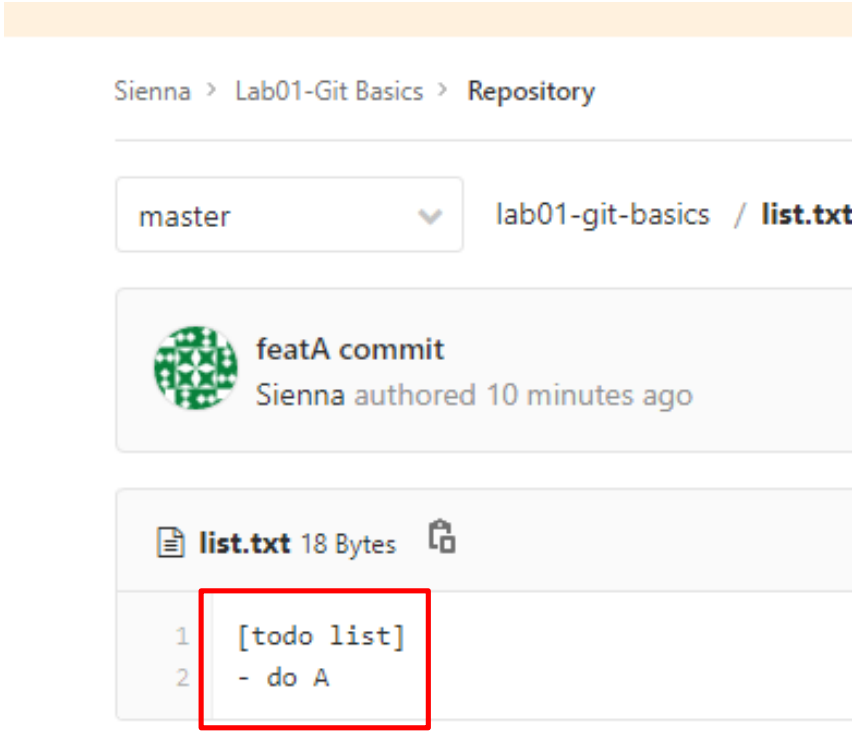
6. `git checkout master`
   Switch to branch “master”.

7. `git merge featA`
   Merge the specified branch to current branch.

8. `git push`
   Push the changes on master to remote repo.

# Todo – A repo

- Open the remote file. Now “do A” is added to the list!



# Todo – B repo

1. Now it’s your turn!
2. Go to the folder inside B folder.
3. Create a new branch “featB” and switch to it.
4. Add “do B” to list item.
5. Add and commit the changes with message “featB commit”.

# Todo – B repo(Cont'd)

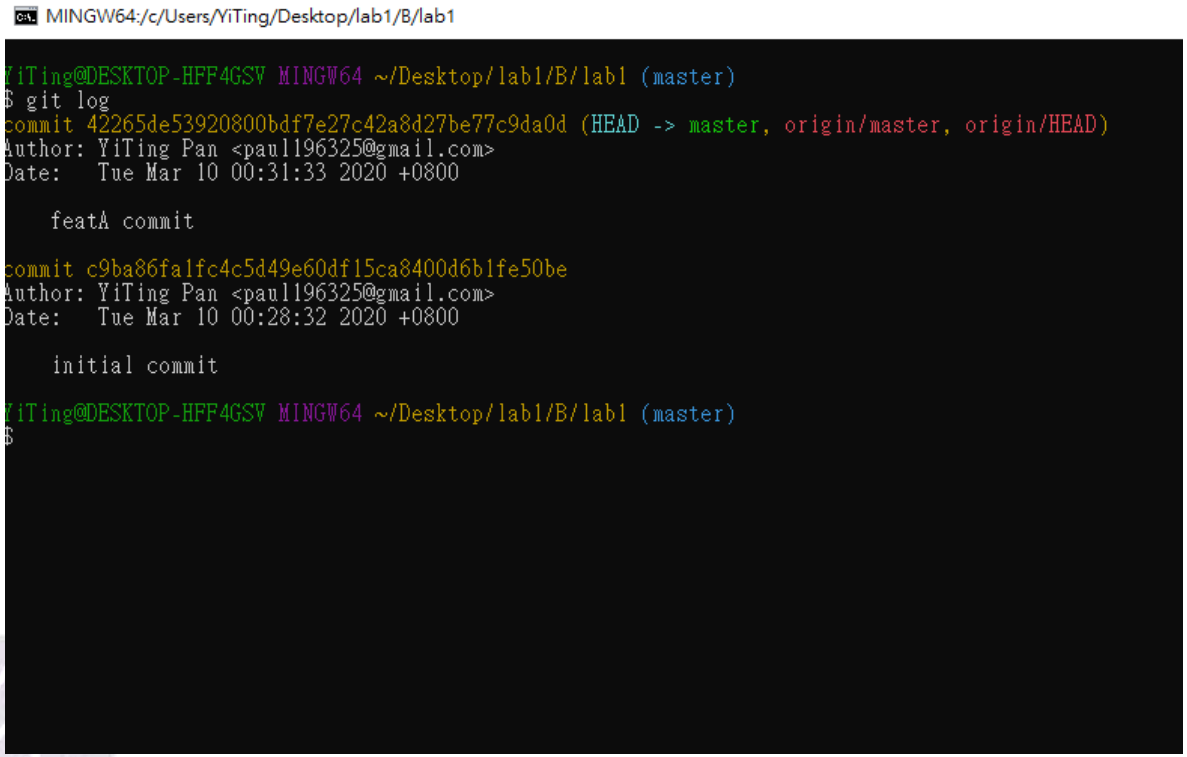
6. Switch to "master"
7. git pull

```
git pull
```

Update changes from remote repo.

# Results

- master branch



# Results

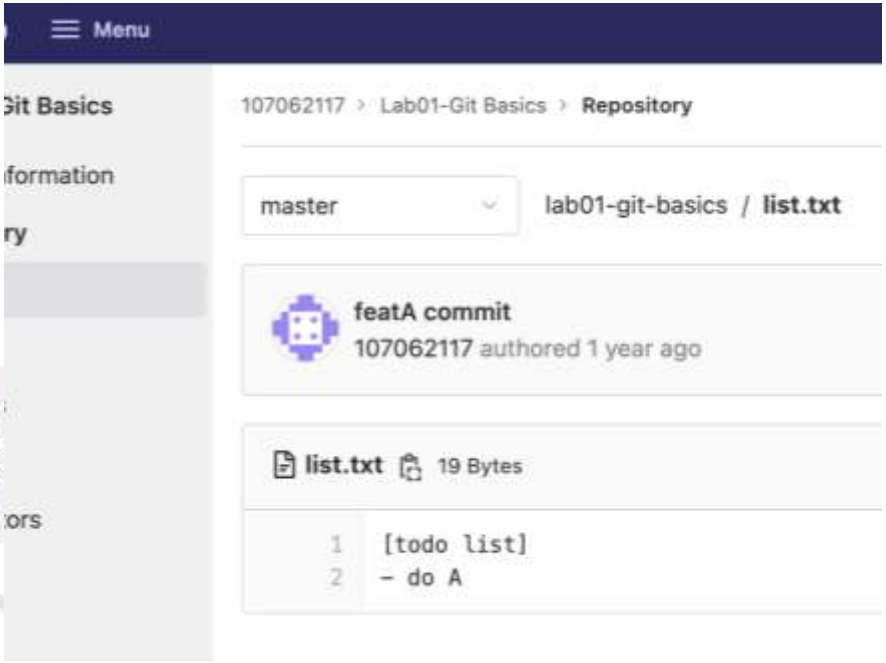
- featB branch

MINGW64:/c/Users/YiTing/Desktop/lab1/B/lab1

```
YiTing@DESKTOP-HFF4GSV MINGW64 ~/Desktop/lab1/B/lab1 (featB)
$ git log
commit d3363cb541dd969aeb163b1a81a23860fdafff3c (HEAD -> featB)
Author: YiTing Pan <paul196325@gmail.com>
Date:   Tue Mar 10 00:35:21 2020 +0800

    featB commit

commit c9ba86fa1fc4c5d49e60df15ca8400d6b1fe50be
Author: YiTing Pan <paul196325@gmail.com>
Date:   Tue Mar 10 00:28:32 2020 +0800

    initial commit

YiTing@DESKTOP-HFF4GSV MINGW64 ~/Desktop/lab1/B/lab1 (featB)
$
```

# Results

- The list item of “master” should be “do_A”
- Show your branches and git log of “master” & “featB” to TAs!




thank you!
Question