### LAB 3





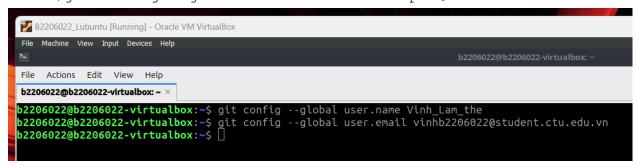
Full name: Lâm Thế Vinh Student ID: B2206022

- Note: screenshots need to be clear and good-looking; submissions must be in PDF format.

## 1. Setup and making commits

- Install and setup git on your computer (remember to set your name/email)

```
$sudo apt update ; sudo apt install git -y
$git config --global user.name "Firstname Lastname"
$git config --global user.email "example@.ctu.edu.vn"
```



- Create an account (or login) to GitHub at <a href="https://github.com">https://github.com</a>
- Fork ( )this repository <a href="https://github.com/TuanThai/git-exercises.git">https://github.com/TuanThai/git-exercises.git</a> to your Github account.
- Clone the forked repository to your computer

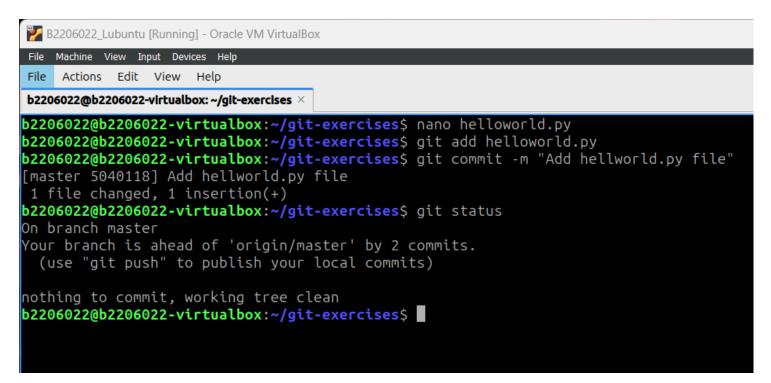
```
$git clone <url of your forked repository>
```

- Create and add a new file helloword.py

```
$cd ./git-exercises
$nano helloword.py
    #!/usr/bin/python3
    print("Hello world")
$git add helloworld.py
$git commit -m "Add hellworld.py file"
```

- Examine the state of your repo

```
$git status
```



- Edit and save your new file, then add it to the staging area. Finally make a new commit with the edited file. At all stages use git status to see how your repository changes

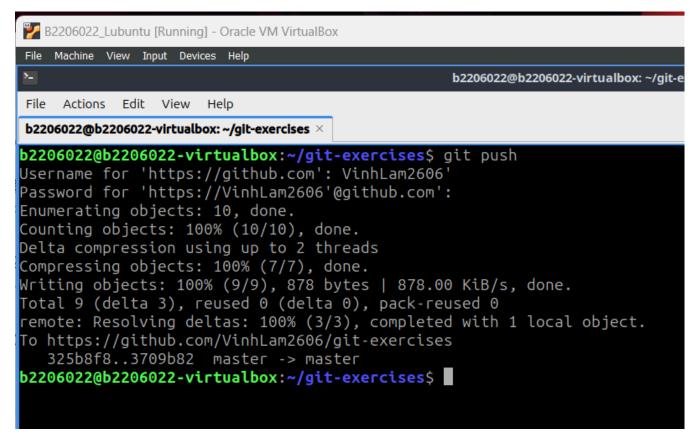
```
$nano helloworld.py
    #!/usr/bin/python3
    print("Hello world")
    print("Hello Git")
    $git add helloworld.py
    $git commit -m "Modify hellworld.py file"
- View the log
    $git log
```

B2206022\_Lubuntu [Running] - Oracle VM VirtualBox File Machine View Input Devices Help File Actions Edit View Help b2206022@b2206022-virtualbox: ~/git-exercises × commit 3709b82d99cc350ee57160f6cfa9cb8a6de65406 (**HEAD** -> **master**)
Author: Vinh\_Lam\_the <vinhb2206022@student.ctu.edu.vn> Date: Sat Sep 14 16:42:23 2024 +0700 Modify helloworld.py file commit 504011857c2304d115642f3ec65af26ea1bb9fa4 Author: Vinh\_Lam\_the <vinhb2206022@student.ctu.edu.vn> Date: Sat Sep 14 16:37:12 2024 +0700 Add hellworld.py file commit 5dae161dc059b6548906780bd8919e2fdaa60212 Author: Vinh\_Lam\_the <vinhb2206022@student.ctu.edu.vn> Date: Sat Sep 14 16:31:13 2024 +0700 hellworld.py commit 325b8f80d4ca104e93e61a1952d53ef0260b6a96 (**origin/master, origin/HEAD**) Author: Tuan Thai <minhtuan@.ctu.edu.vn> Date: Sat Nov 13 08:56:48 2021 +0700 thay doi tap tin hello.txt commit 5bdd0add9eda25061de054e5fa75ae4ff5d272ac Author: Tuan Thai <minhtuanthaivn@gmail.com> Date: Tue Apr 20 15:08:24 2021 +0700 Delete hello.py commit 2c83ea3b3cdfd9b228ca9a366e2d1ddeb2d4b7eb Author: minhtuanthaivn@gmail.com <minhtuanthaivn@gmail.com> Date: Sun Apr 4 11:03:25 2021 +0700 Them tap tin hello.py ommit 262fce2be498ec10285b037c797d6e3bbc36a770

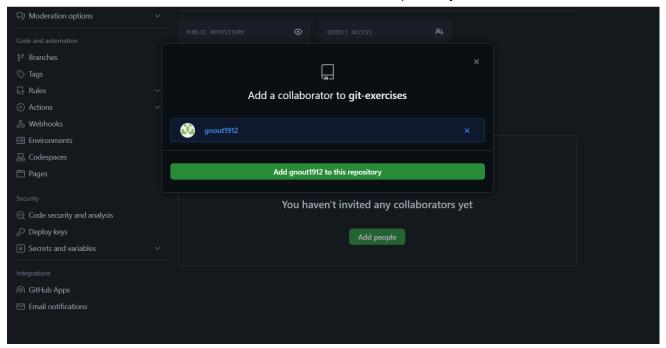
#### - Push the commits to the server

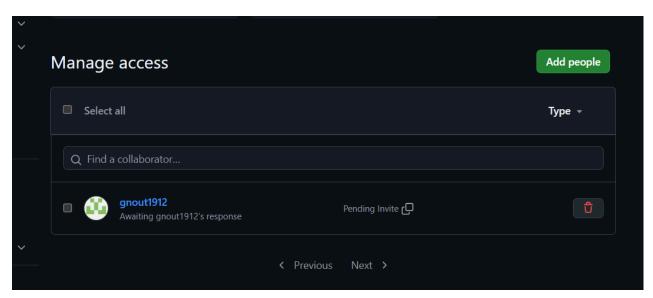
\$git push

(Note: You need to provide a personal access token as a password, please follow <a href="this article">this article</a> to create one)



- Invite someone to be a collaborator of Github repository



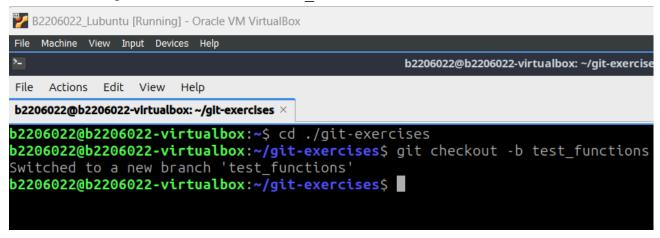


(take screenshots to show that you finish this exercise)

# 2. Branching and Merging

Create a new branch "test functions"

\$git checkout -b test functions



- Edit helloworld.py file and commit the result

```
$nano helloworld.py
    #!/usr/bin/python3
    print("Hello world")
    print("Hello OSS Development")
    $git add helloworld.py
    $git commit -m "Modify hellworld.py file"
- Display helloworld.py content
    $cat helloworld.py
```

```
B2206022_Lubuntu [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

File Actions Edit View Help

b2206022@b2206022-virtualbox:~/git-exercises ×

b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py

#!/usr/bin/python3
print("Hello world")
print("Hello OSS Development")
b2206022@b2206022-virtualbox:~/git-exercises$
```

- Swap back to the "master" branch

\$git checkout master

- Display helloworld.py content

\$cat helloworld.py

- Merge "test\_functions" branch to "master"

\$git merge test functions

- Display helloworld.py content. Are there any conflicts?

\$cat helloworld.py

-> No, there are not any conflicts

```
🛂 B2206022_Lubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
  File Actions Edit View Help
  b2206022@b2206022-virtualbox: ~/git-exercises ×
 b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py
 #!/usr/bin/python3
 print("Hello world")
 print("Hello OSS Development")
 b2206022@b2206022-virtualbox:~/git-exercises$ git checkout master
 Switched to branch 'master'
 Your branch is up to date with 'origin/master'.
 b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py
 #!/usr/bin/python3
 print("Hello world")
 print("Hello Git")
 b2206022@b2206022-virtualbox:~/git-exercises$ git merge test_functions
 Updating 3709b82..cbf6aa4
 Fast-forward
  helloworld.py | 2 +-
  1 file changed, 1 insertion(+), 1 deletion(-)
 b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py
 #!/usr/bin/python3
 print("Hello world")
 print("Hello OSS Development")
```

- Edit helloworld.py file and commit the result

```
$nano helloworld.py
    #!/usr/bin/python3
    print("Hello world")
    print("Hello OSS Development")
    print("Hello CTU")
$git add helloworld.py
$git commit -m "Modify hellworld.py file"
```

```
B2206022_Lubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
                                                    b2206022@b2206022-virtualbox: ~/git-exercises
 File Actions Edit View Help
 b2206022@b2206022-virtualbox: ~/git-exercises ×
 b2206022@b2206022-virtualbox:~/git-exercises$ nano helloworld.py
 b2206022@b2206022-virtualbox:~/git-exercises$ git add helloworld.py
 b2206022@b2206022-virtualbox:~/git-exercises$ git commit -m "Modify helloworld.py file"
 On branch master
 Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)
 nothing to commit, working tree clean
 b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py
#!/usr/bin/python3
 print("Hello world")
 print("Hello OSS Development")
 print("Hello CTU")
 b2206022@b2206022-virtualbox:~/git-exercises$
```

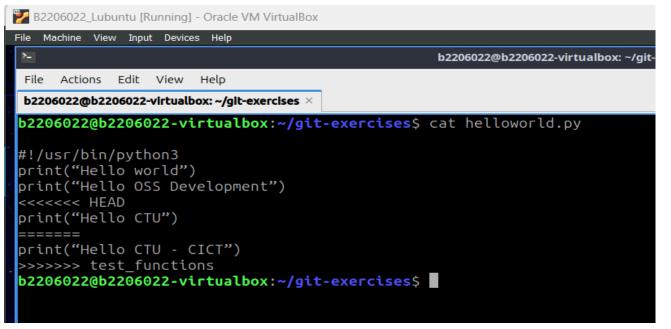
```
$nano helloworld.py
#!/usr/bin/python3
print("Hello world")
print("Hello OSS Development")
print("Hello CTU - CICT")
$git add helloworld.py
$git commit -m "Modify hellworld.py file"
```

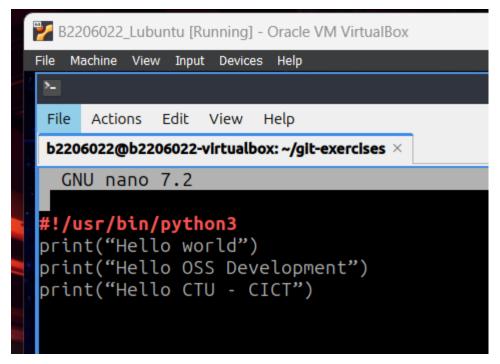
- Swap back to the "master" branch, merge "test\_functions" branch to "master"

```
$git checkout master
$git merge test functions
```

```
B2206022_Lubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
                                                   b2206022@b2206022-virtualbox: ~/git-exercises
 File Actions Edit View Help
 b2206022@b2206022-virtualbox: ~/git-exercises ×
 b2206022@b2206022-virtualbox:~/git-exercises$ nano helloworld.py
b2206022@b2206022-virtualbox:~/git-exercises$ cat helloworld.py
 #!/usr/bin/python3
print("Hello world")
print("Hello OSS Development")
print("Hello CTU - CICT")
b2206022@b2206022-virtualbox:~/git-exercises$ git add helloworld.py
b2206022@b2206022-virtualbox:~/git-exercises$ git commit -m "Modify helloworld.py file"
 [test functions d4393d8] Modify helloworld.py file
 1 file changed, 1 insertion(+)
b2206022@b2206022-virtualbox:~/git-exercises$ git checkout master
 Switched to branch 'master'
Your branch is ahead of 'origin/master' by 4 commits.
  (use "git push" to publish your local commits)
 b2206022@b2206022-virtualbox:~/git-exercises$    git merge test_functions
Auto-merging helloworld.py
 CONFLICT (content): Merge conflict in helloworld.py
Automatic merge failed; fix conflicts and then commit the result.
b2206022@b2206022-virtualbox:~/git-exercises$
```

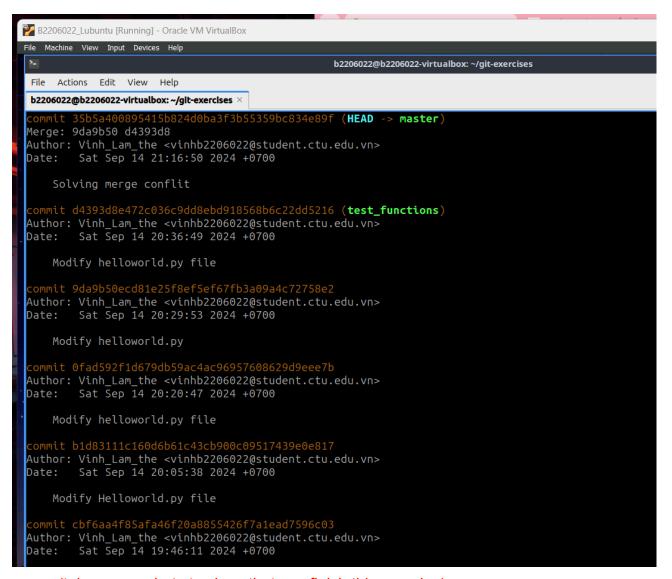
- Are there any conflicts? If YES, resolve the conflict (i.e. edit the conflict markers to match how you want the file to look - like) and commit the result. Use git log to see the resulting commits on the master branch.





- View the log to see the resulting commits on the master branch.

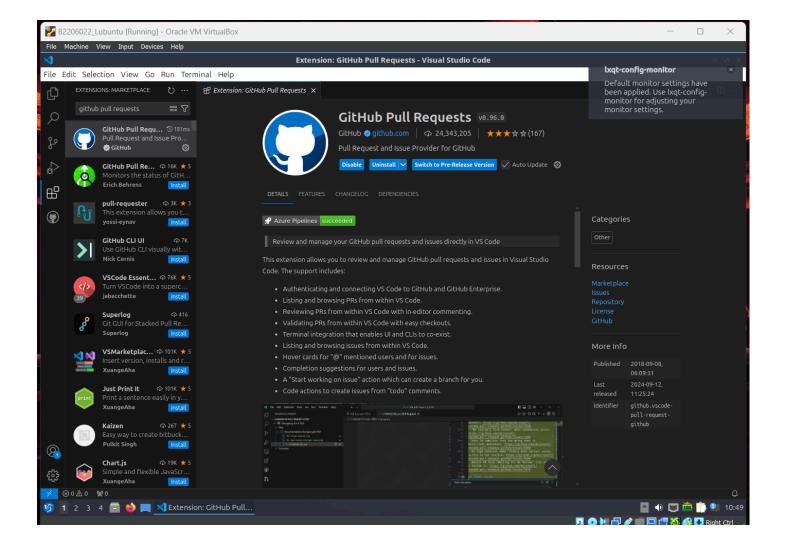
\$git log



(take screenshots to show that you finish this exercise)

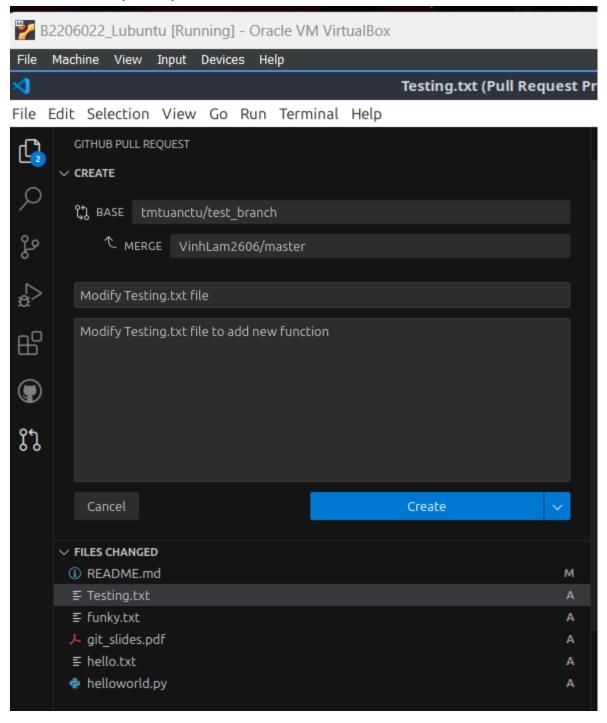
### 3. Working with GitHub in VS Code

- Install VS Code and its GitHub Pull Requests-Issues extension to your computer.

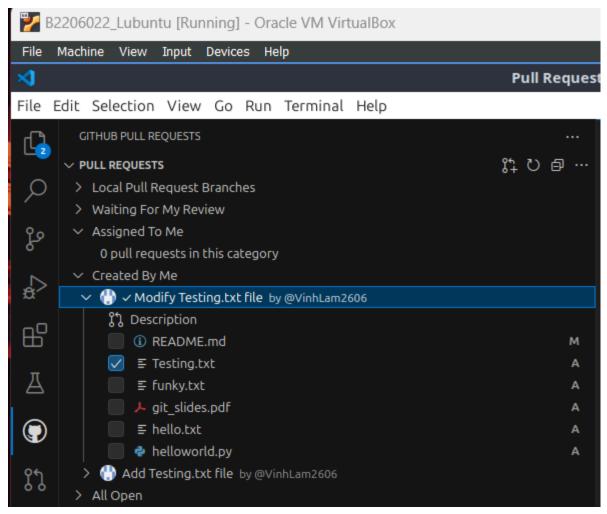


- Sign in GitHub using GitHub Pull Requests and Issues extension.

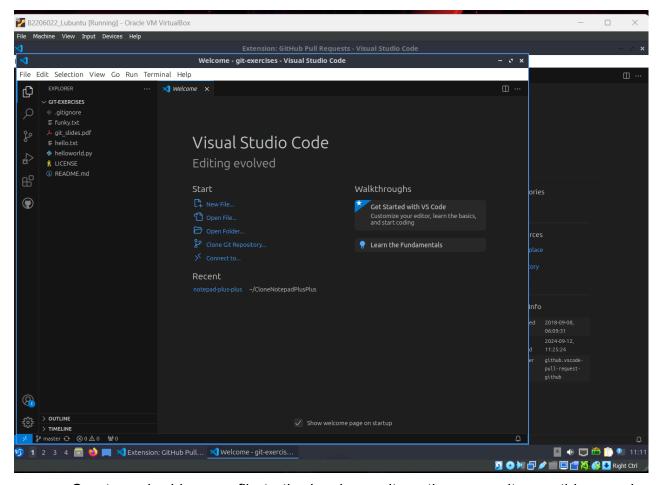
+ Create a pull request



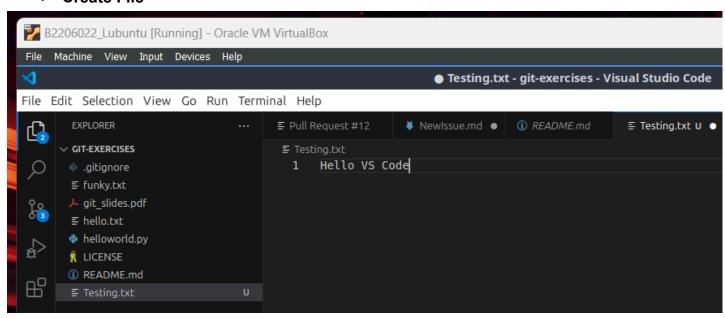
The Pull-request has been accepted



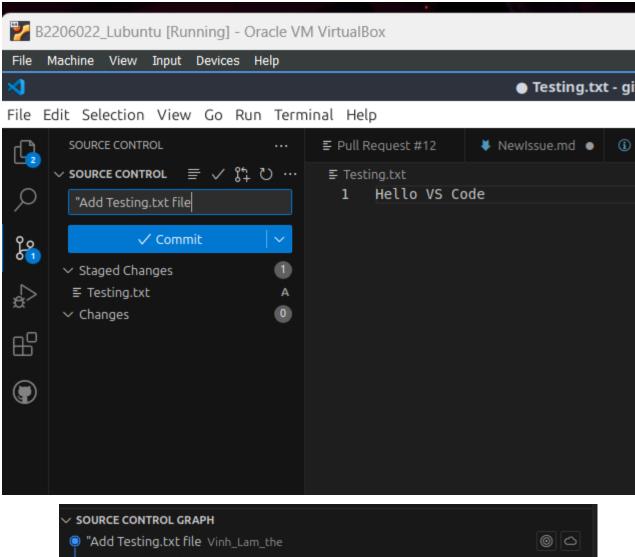
- Clone a remote repository to your computer.



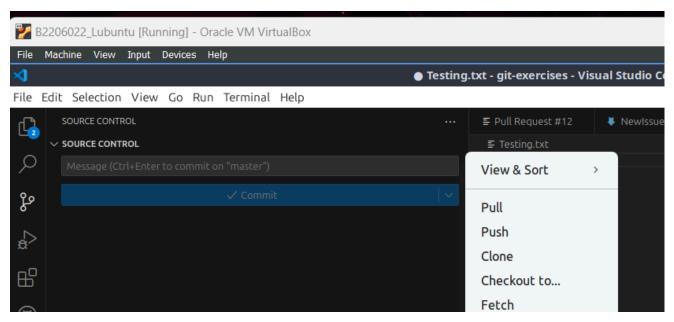
- Create and add a new file to the local repository, then commit everything you have done so far.
- + Create File



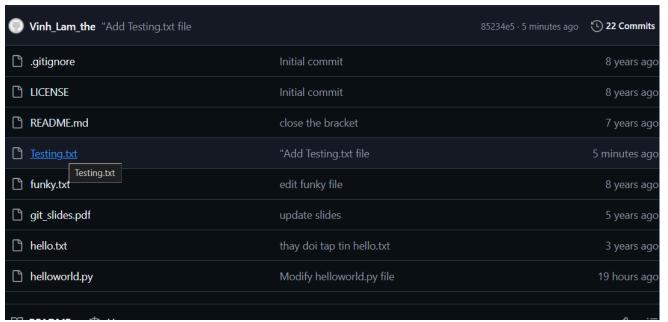
## + Add & commit the change



- ➤ SOURCE CONTROL GRAPH
   "Add Testing.txt file Vinh\_Lam\_the
   Modify helloworld.py file Vinh\_Lam\_the
   Add hellworld.py file Vinh\_Lam\_the
   hellworld.py Vinh\_Lam\_the
   thay doi tap tin hello.txt Tuan Thai
   Delete hello.py Tuan Thai
   Them tap tin hello.py minhtuanthaivn@gmail.com
   update slides Martin Robinson
- Push the commits to the remote repository.
  - + Push the commit



+ After Push The Testing.txt has appeared on the remote repository



(take screenshots to show that you finish this exercise)

---END---