Open-Source Programming

#3: Open-source Management & Github Usage (2-1)

2025 Spring

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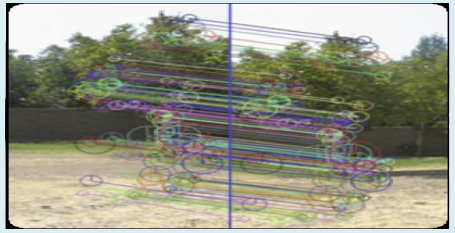
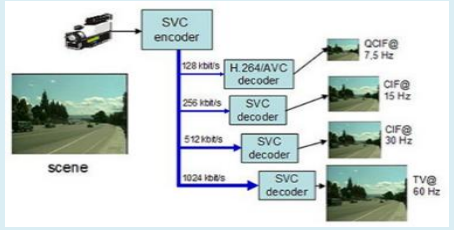
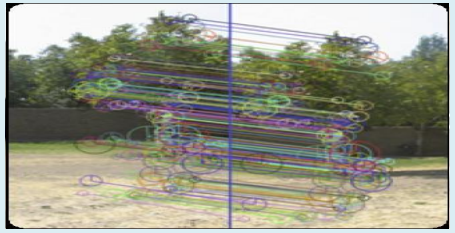
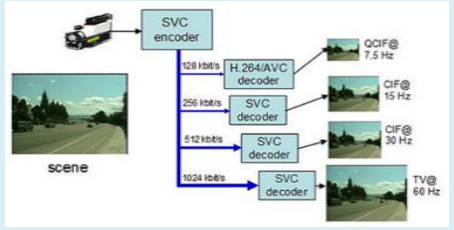




Contents

- How to use Git?
- Github + VS Code





Contents

- **How to use Git?**
- **Github + VS Code**

How to use Git? (1)

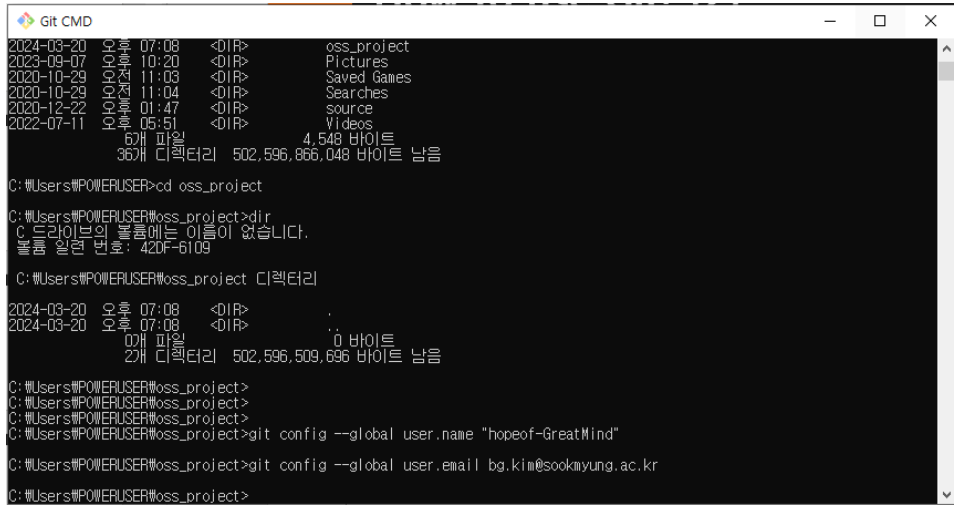
❖ Git Installation

- Git, Git Bash 쉬운 설치/ Git Bash 설치 쉽고 자세한 설명/ 윈도우 OS에서 리눅스 환경 구축하기/ Git Bash란 무엇인가 (tistory.com)
- Git Guides - install git (github.com)

❖ Github Account setup and activation

❖ Registration for Local User Infor.

```
$ git config --global user.name "Your Name"
$ git config --global user.email you@example.com
```

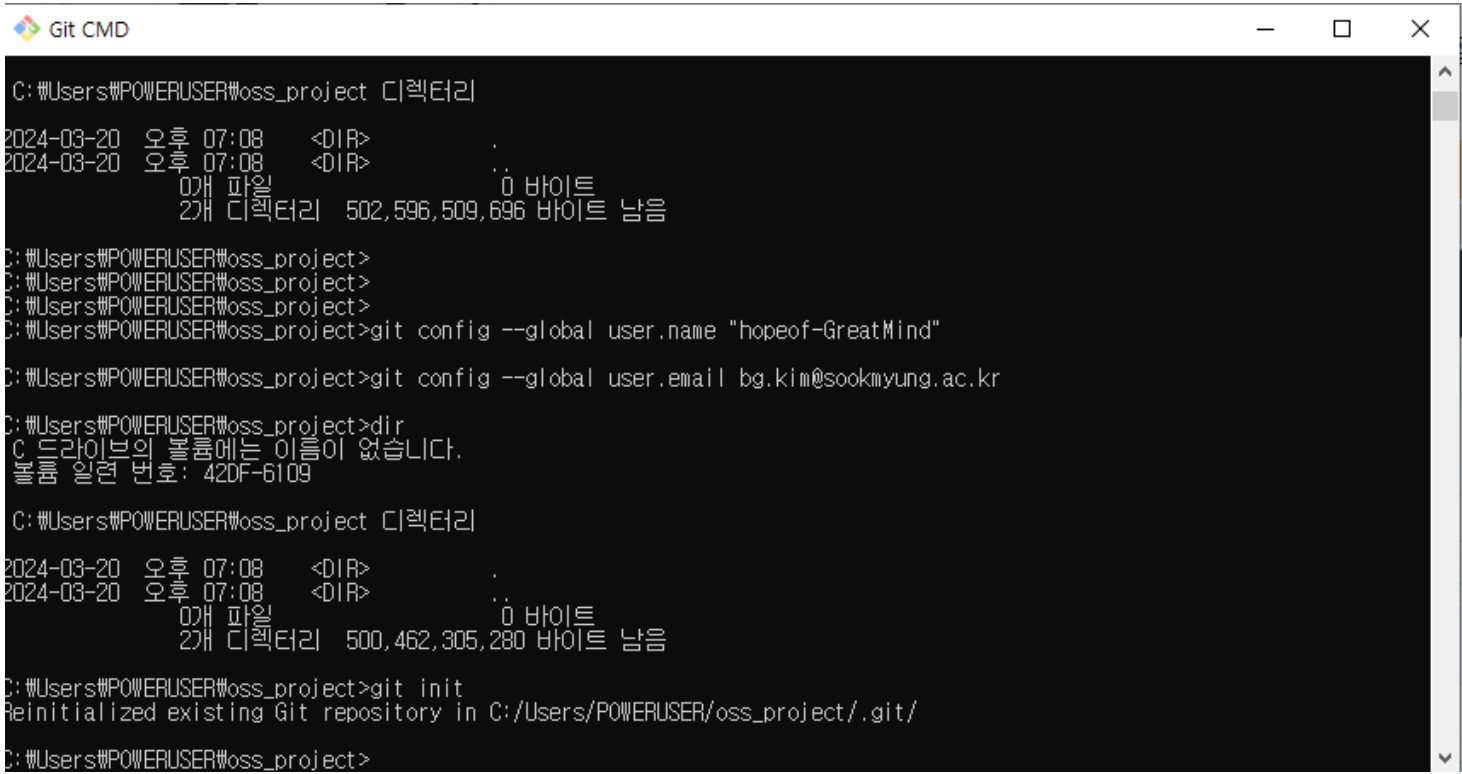


How to use Git? (2): “git init”

❖ The process of creating a repository on GitHub and linking it with a local Git repository

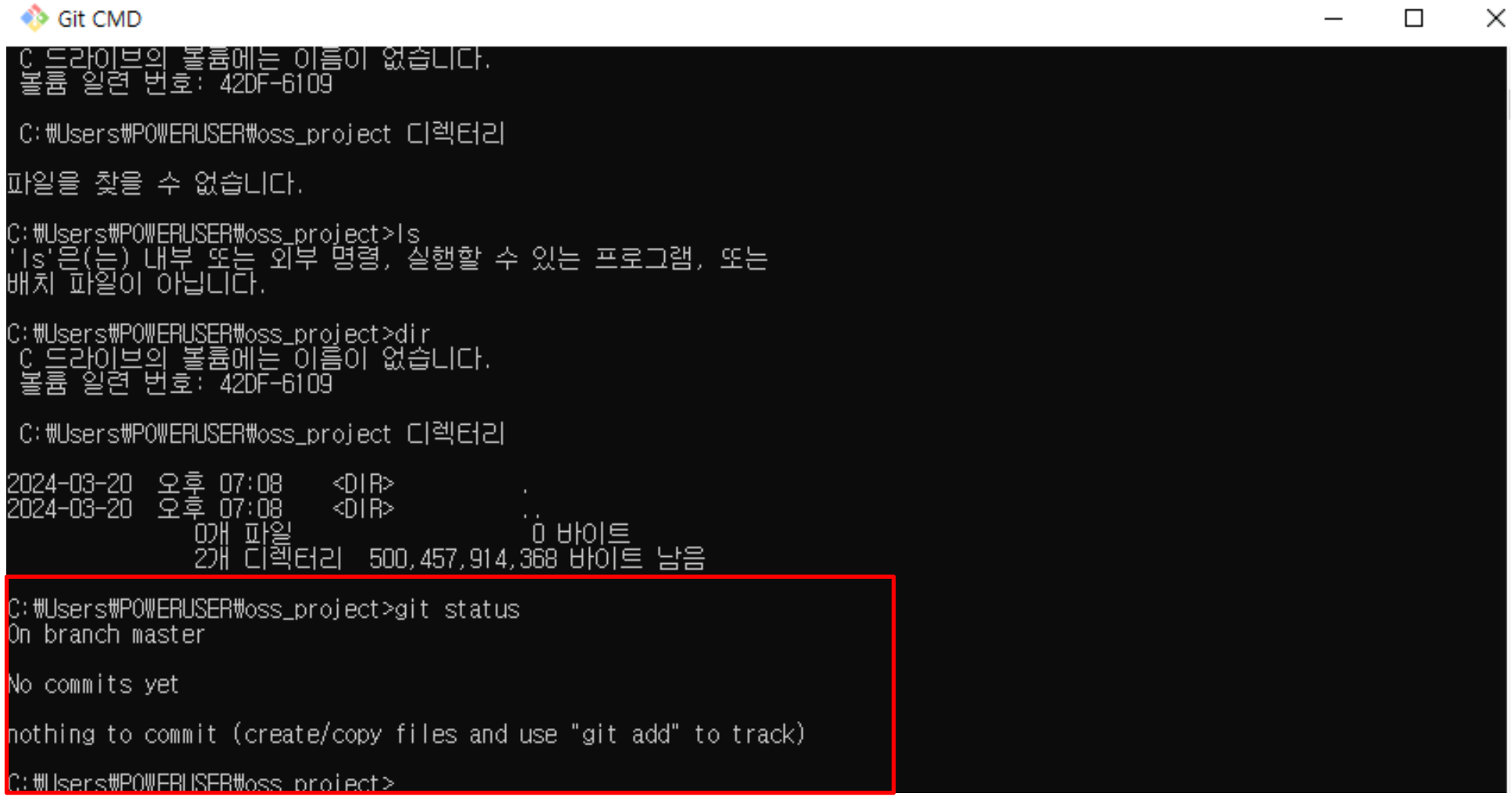
- **$git init** : Initialize your repository if you make the first repository.
- **$git clone**: Copy your own repository in Github.

- “$git init” commend:
  - 1] First, move to your work folder where you want.
  - 2] Type “git init” and click “enter”.



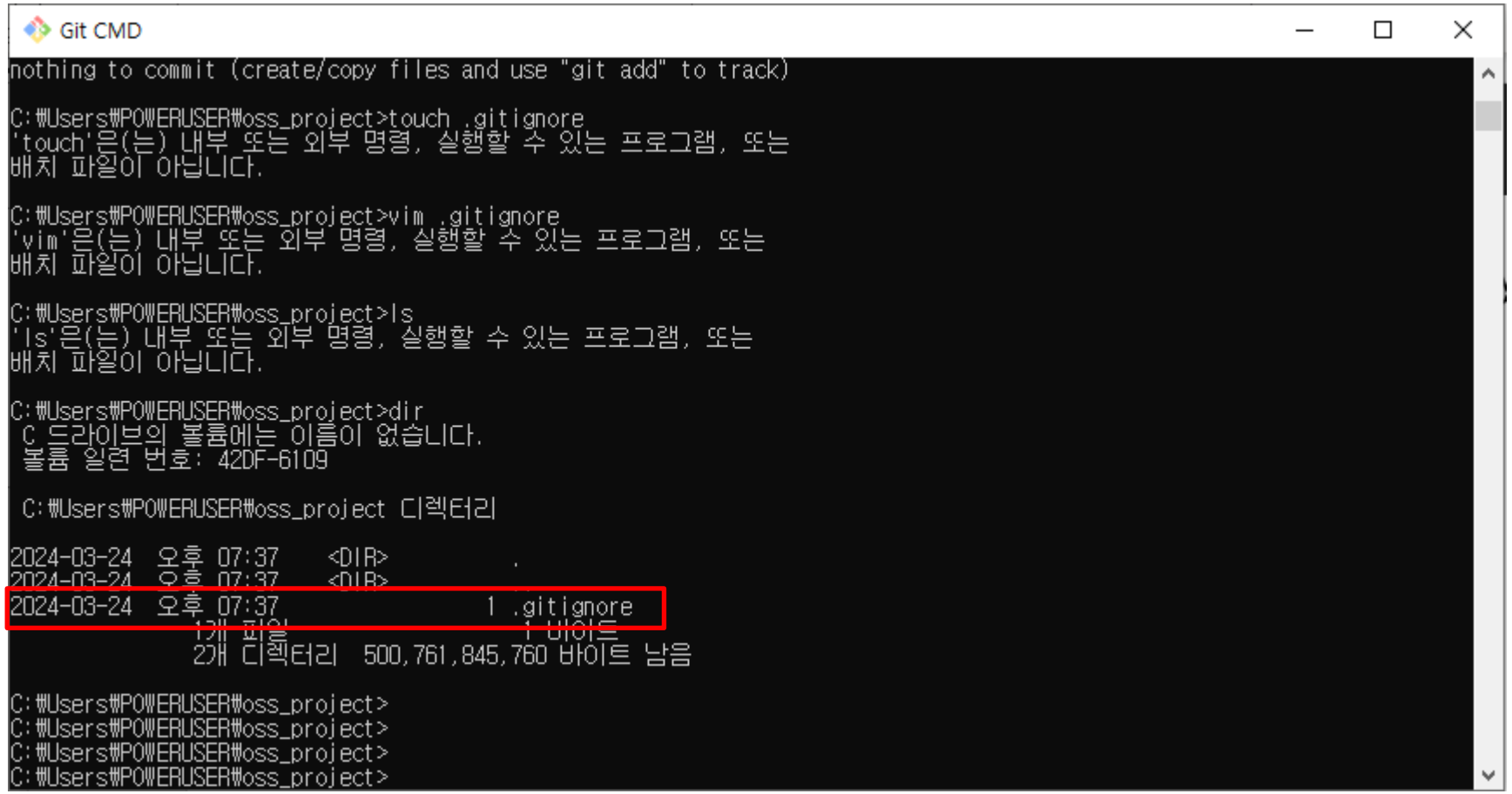
How to use Git? (3): “git init”

- 3] “git status” and check on the message!



How to use Git? (4): “git init”

- 4] Make one dummy file as “.gitiognore” in your folder, by using your editor.



How to use Git? (5): “git init”

- 5] Configure user name and **Primary e-mail** as:

```
$ git config --global user.email "you@example.com"
$ git config --global user.name "Your Name"
```

- 6 Execute the following commands:

```
$ git add .gitignore
$ git commit –m “by using git init method”
```

- 7] Move to the “main” branch:

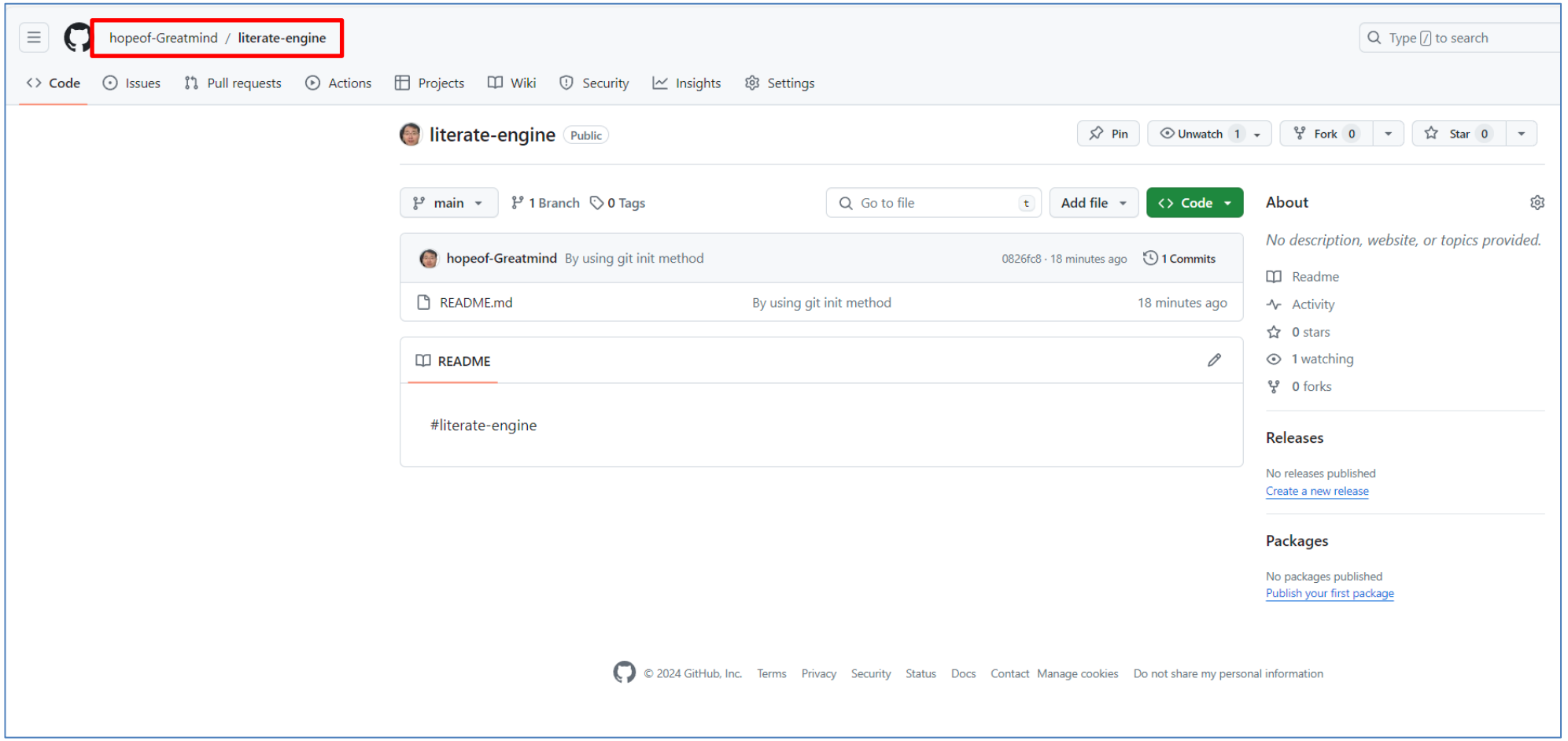
```
$ git branch -M main (예전: master)

$git branch    ←-- 현재 브랜치 확인
```

- 8] 수정 기록 확인

```
$ git log
```

How to use Git? (6): “git init”

- 9] Make your blank repository in Github site: Here, we use “literate-engine”.



How to use Git? (7): “git init”

- 10] Connect your local repository to your Github repository as:

```
$ git remote add origin https://github.com/hopeof-Greatmind/literate-engine.git
```

- 11] Verify the remote repository as:

```
$ git remote -v
```

- 12] Push your local source to your Github as:

```
$ git push -u origin main (예전: master)
```

```
POWERUSER@DESKTOP-PEEULI9 MINGW64 /tmp/literate-engine (main)
$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 245 bytes | 245.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/hopeof-Greatmind/literate-engine.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

POWERUSER@DESKTOP-PEEULI9 MINGW64 /tmp/literate-engine (main)
```

How to use Git? (7-1): “git init”

- 13] **If you get a problem of the following:**

! [rejected] master -> master (fetch first)
error: failed to push some refs to 'git@github.com:zapnaa/abcappp.git'

```
SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$ git push origin main
To https://github.com/hopeof-Greatmind/OpenSS.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/hopeof-Greatmind/OpenSS.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

then, follow the steps again:

2. $ **git pull –rebase origin main** ← Pull the remote original repository again!
3. $ git add .
4. $ git commit -m 'your commit message’
5. $ git push origin main

*git - ! [rejected] master -> master (fetch first) - Stack Overflow 27번 글 확인하면 됨

How to use Git? (7-2): “git init”

<재수행 결과>

Github 잘 push됨!!

```
SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$ git pull origin main
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), 1.91 KiB | 140.00 KiB/s, done.
From https://github.com/hopeof-Greatmind/OpenSS
 * branch            main       -> FETCH_HEAD
   514d5ad..0c77cb2  main       -> origin/main
Merge made by the 'ort' strategy.
 README.md | 2 ++
 1 file changed, 2 insertions(+)
```

$ git pull origin main

```
SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$ git add .

SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$ git commit -m "By PRof. Kim on 24.04.17 6:35"
On branch main
nothing to commit, working tree clean
```

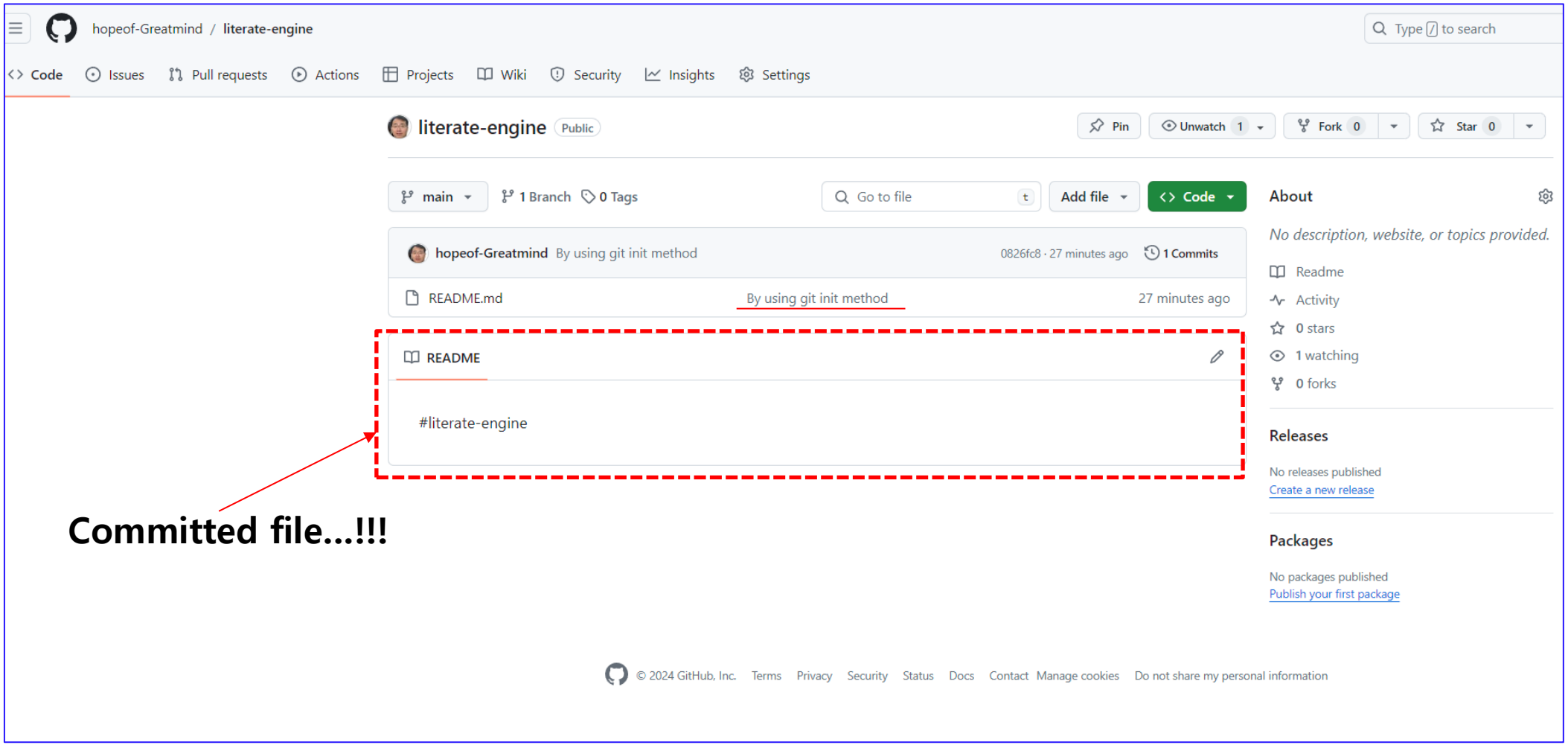
$ git add .
$ git commit -m “message’

```
SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$ git push origin main
Enumerating objects: 15, done.
Counting objects: 100% (15/15), done.
Delta compression using up to 16 threads
Compressing objects: 100% (13/13), done.
Writing objects: 100% (13/13), 14.53 MiB | 4.07 MiB/s, done.
Total 13 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), done.
To https://github.com/hopeof-Greatmind/OpenSS.git
   0c77cb2..c35bcae  main -> main

SM-PC@BOOK-RFF2T12ICU MINGW64 ~/Lectures/2024/openSS (main)
$
```

$ git push origin main

How to use Git? (8): “git init”

- 14] Check on your Github site for uploading your local sources (files or folders)….!!!



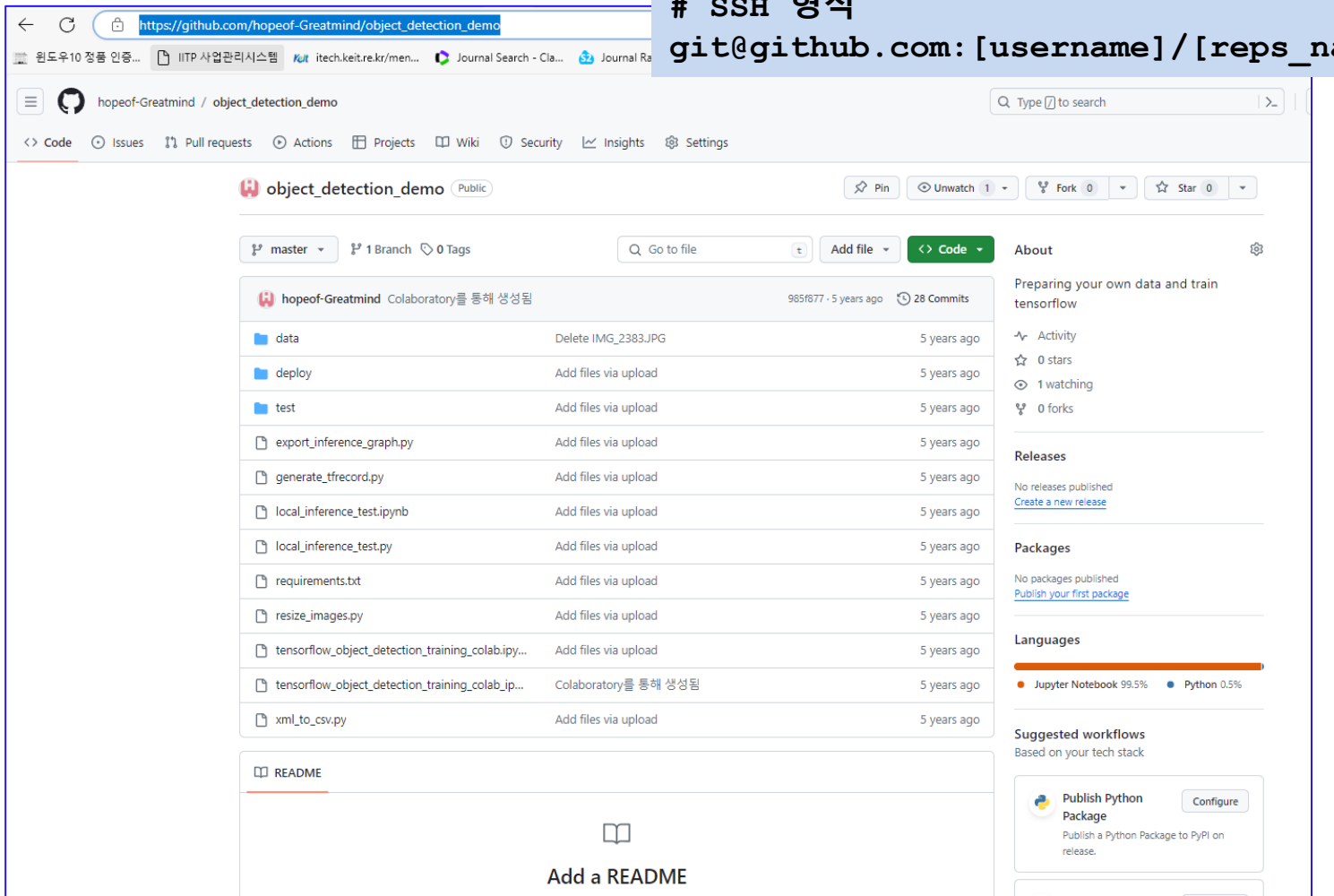
How to use Git? (6): “git clone”

- **“$git clone” Command**

```
git clone [REPO_URL] [DIR]
```

```
# HTTPS 형식
https://github.com/[USERNAME]/[reps_name].git
# SSH 형식
git@github.com:[username]/[reps_name].git
```

- **1] Check your Github URL in Github!**

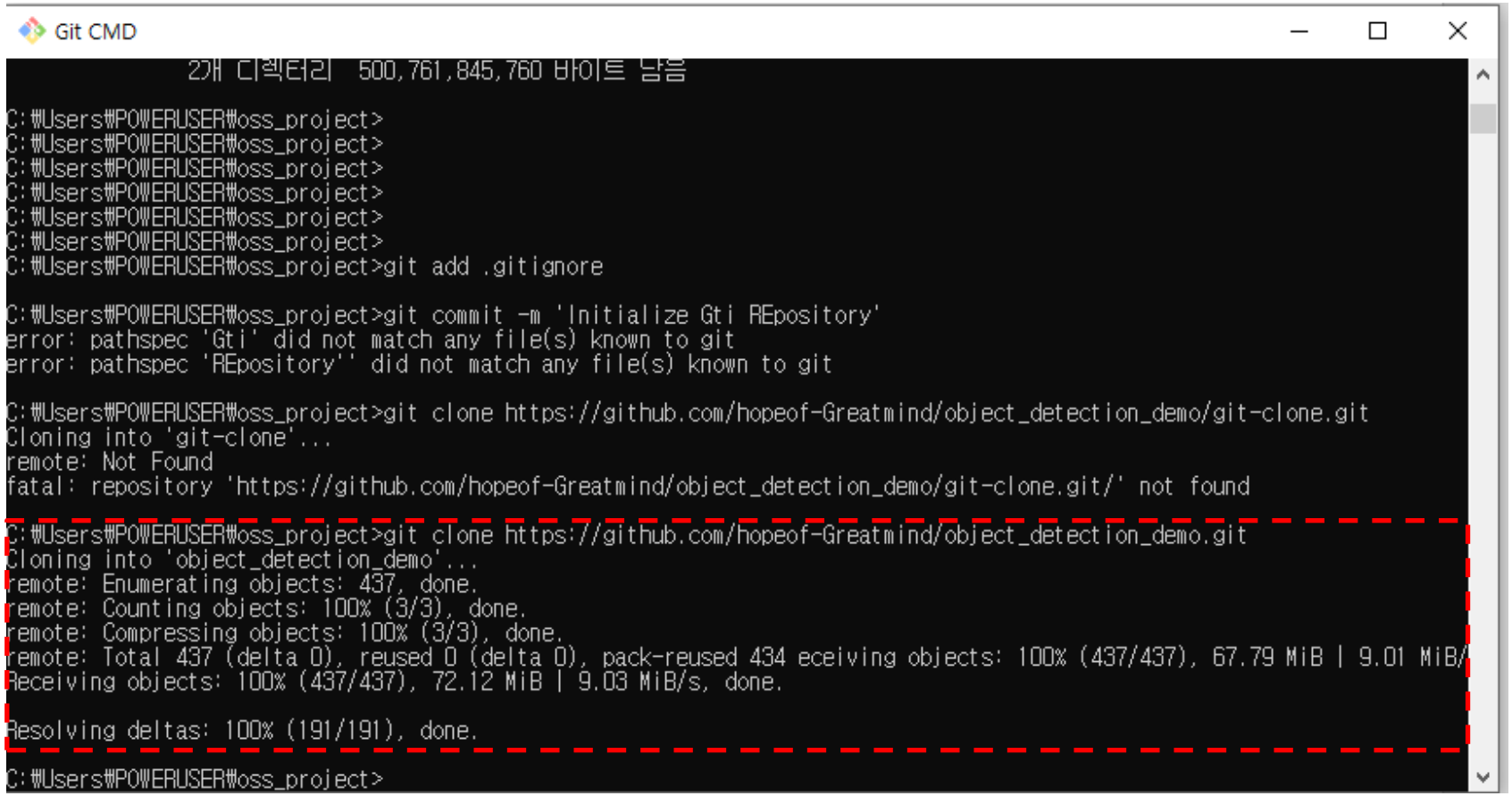


How to use Git? (7): “git clone”

- 2] Copy the source using the following command:

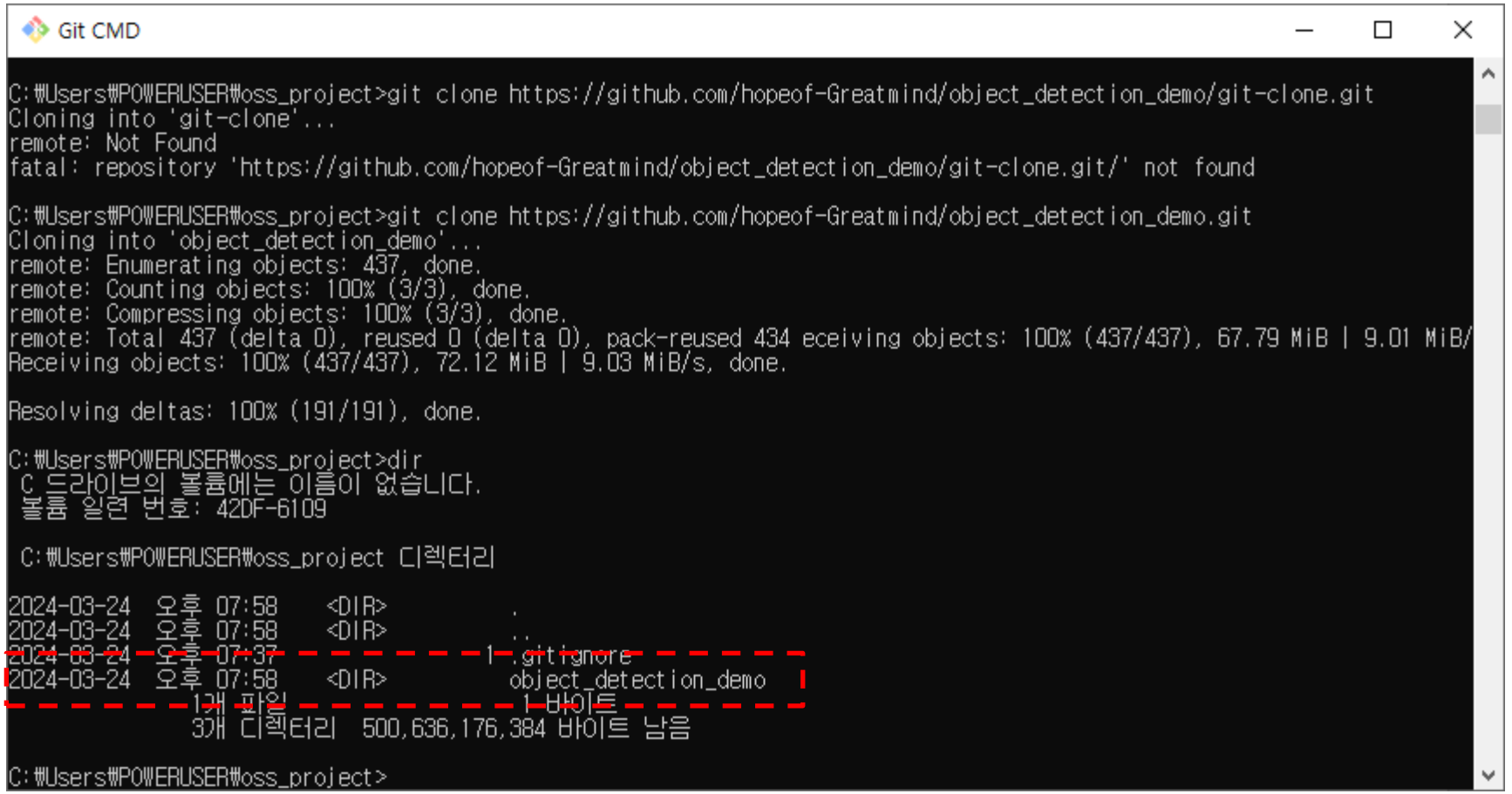
```
$ git clone https://github.com/hopeof-Greatmind/object_detection_demo.git
```

You can see cloning process as the following:



How to use Git? (8): “git clone”

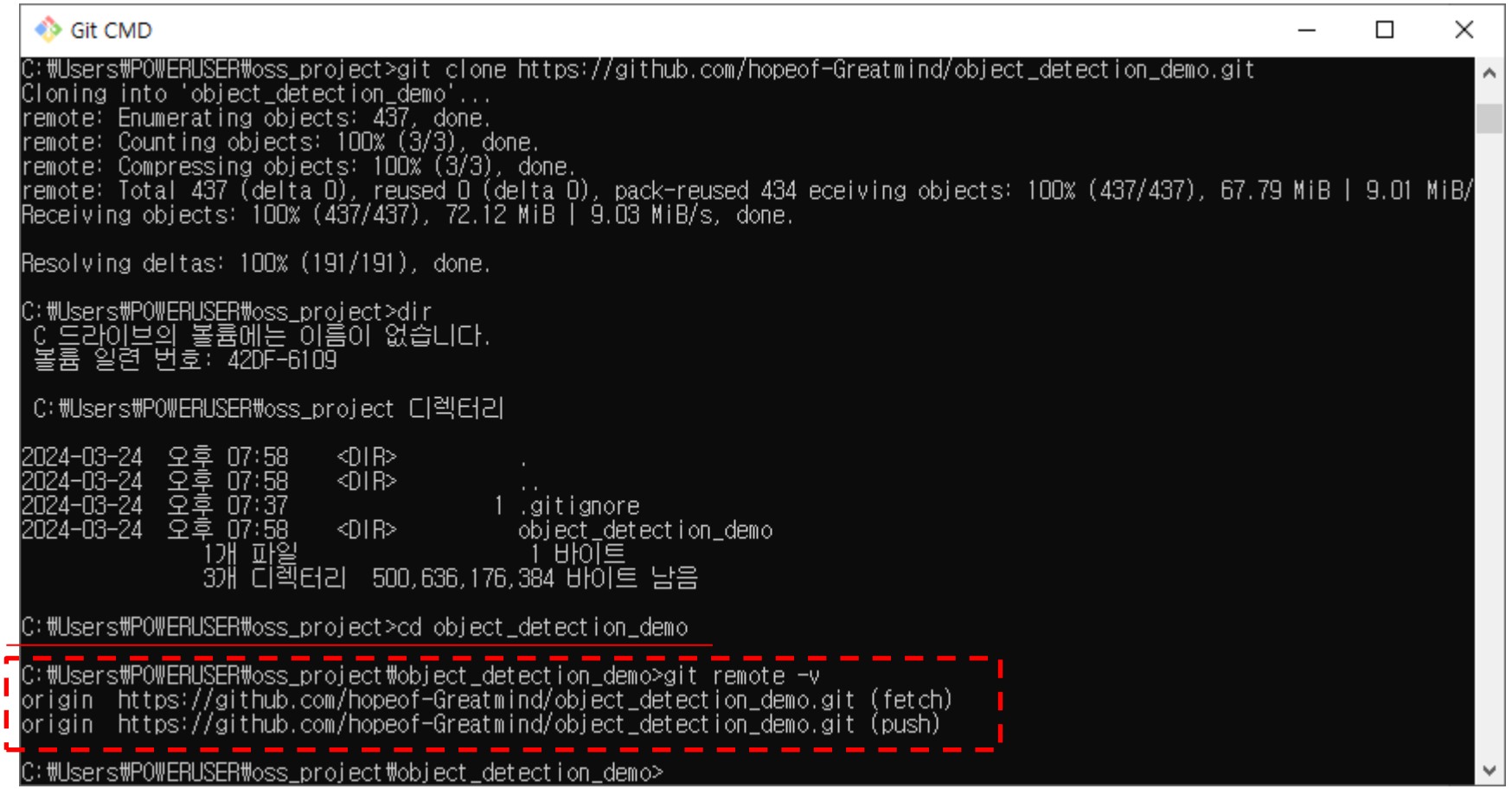
- 3] Check on your folder to verify the cloning!



How to use Git? (9): “git clone”

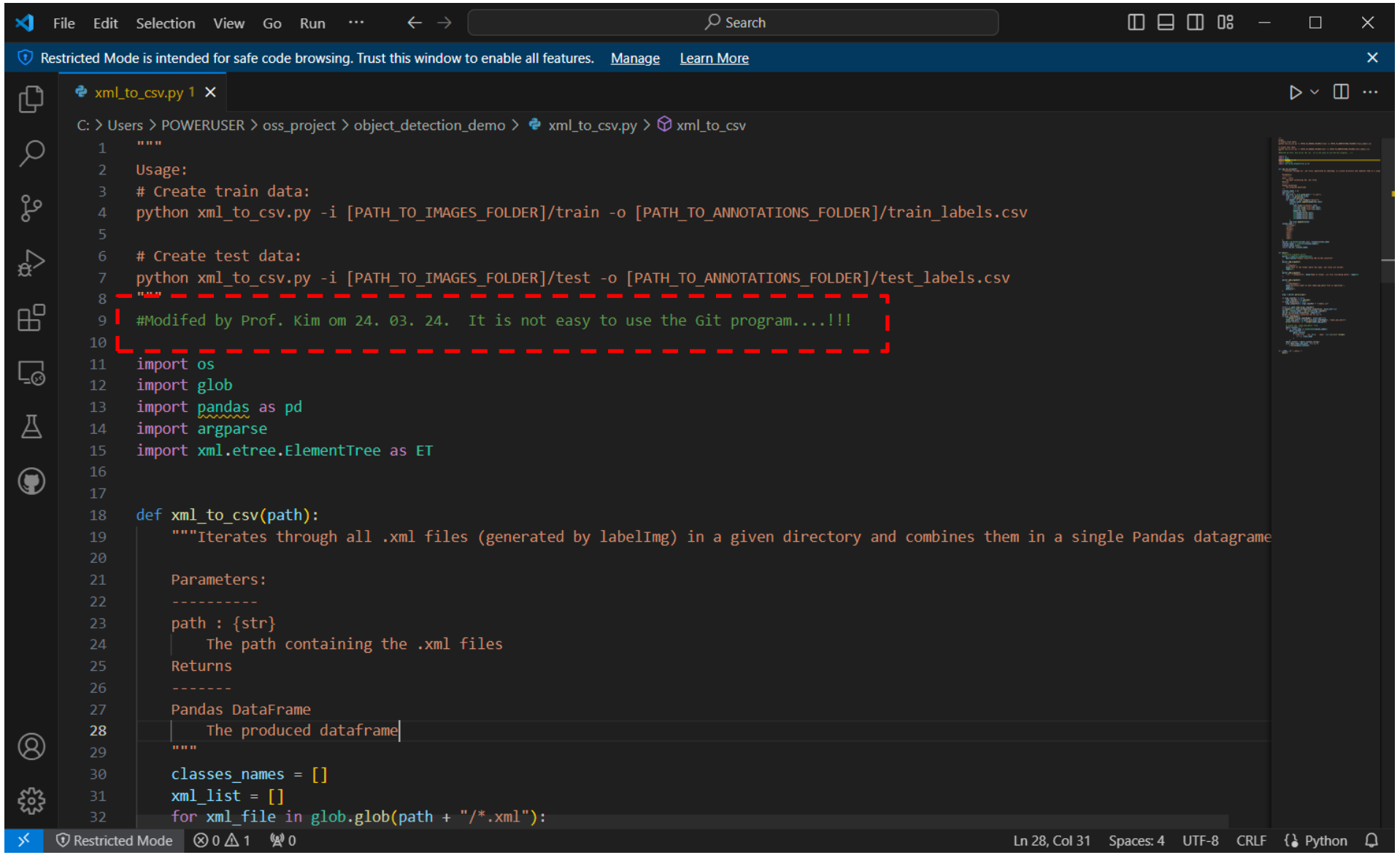
- 4] Verify the remote repository.

```
$ cd [your clone folder]
$ git remote -v
```



How to use Git? (10): “git clone”

- 5] Edit your code and modification. Here, we use “xml_2_csv.py” file.



How to use Git? (11): “git clone”

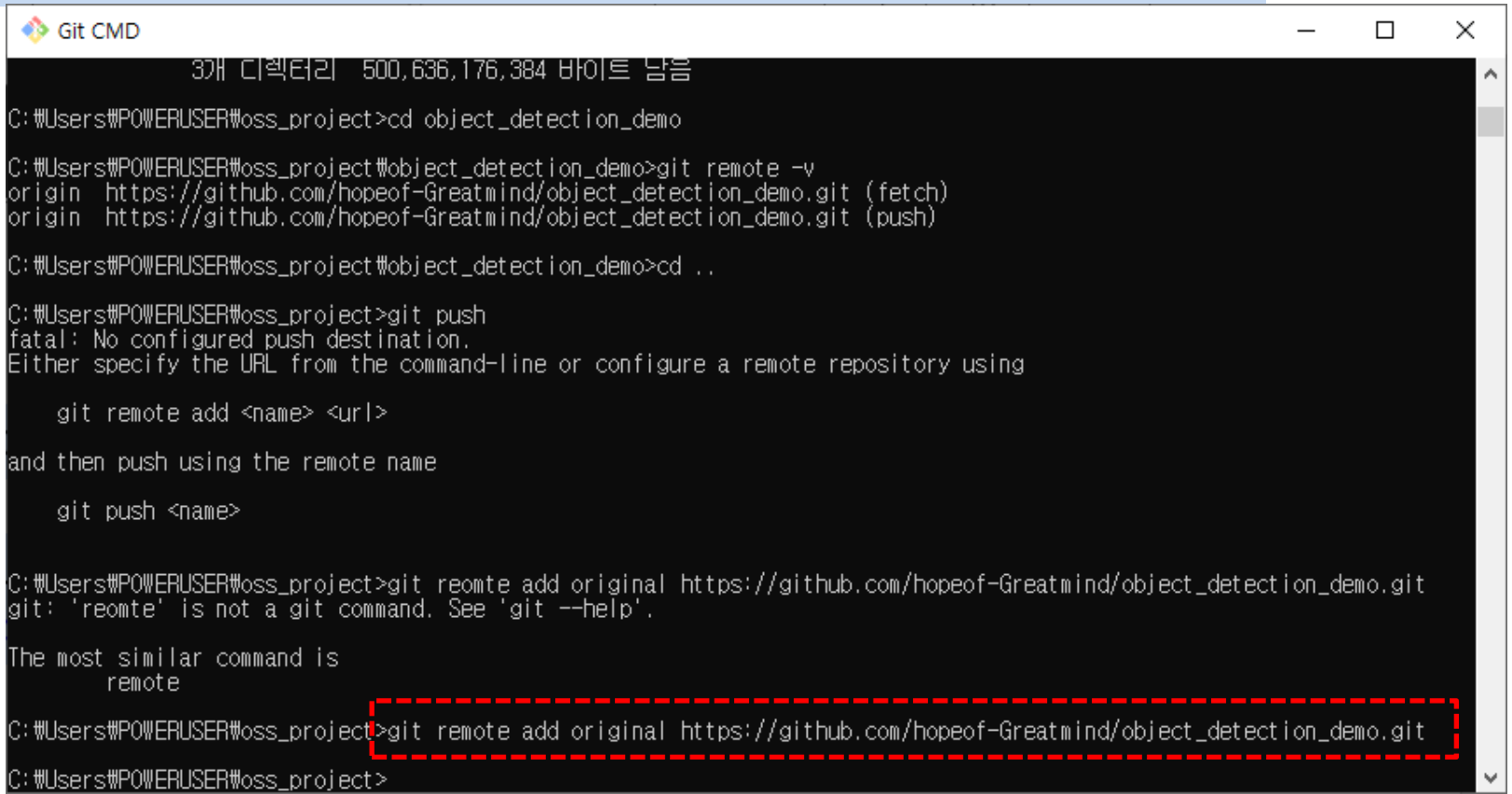
- 6] Before reflecting the change to the remote repository, **connect two repositories** based on “git remote” command.

원격 저장소의 이름으로 사용할 문자열

```
$ git remote add [REMOTE_NAME] [REMOTE_GIT_URL]
```

원격 Git 저장소 주소를 지정

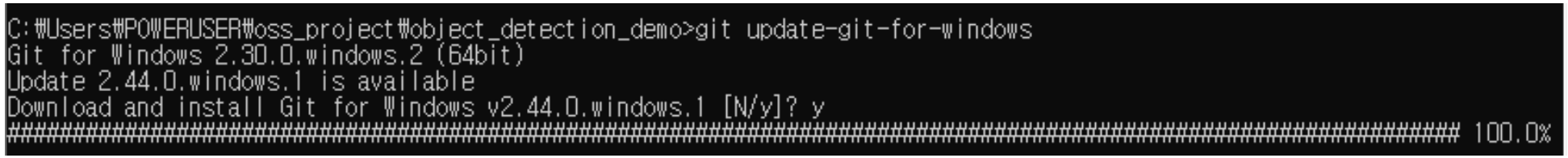
```
$ git remote add origin https://github.com/hopeof-Greatmind/object_detection_demo.git
```



How to use Git? (12): “git clone”

- 6] Update git program when you meet an error…!!!!

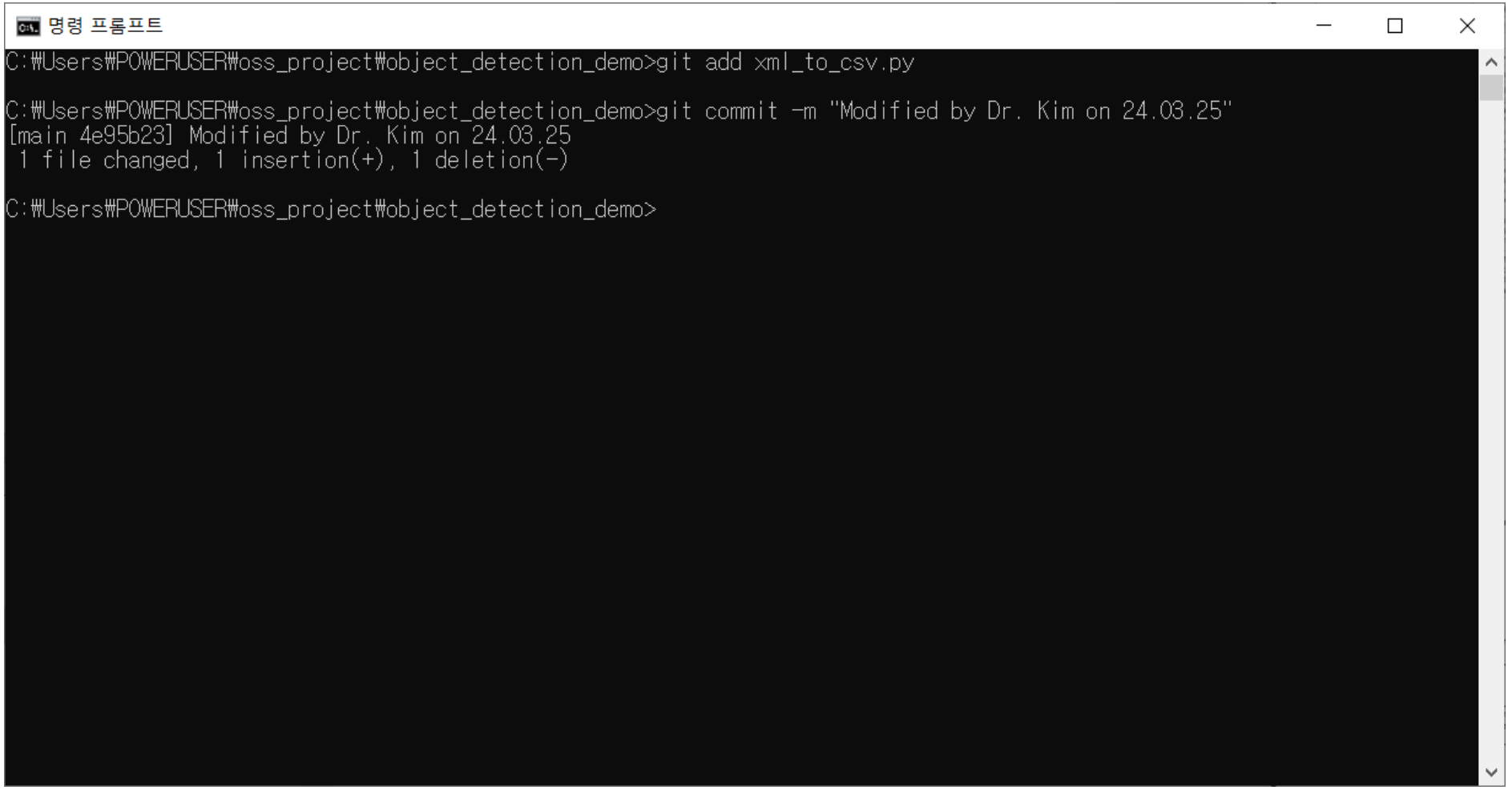
```
$ git update-git-for-windows
```



How to use Git? (13): “git clone”

- 7] Reflect your change based on “git add <edited file>” and “git Commit –m <message>”.

```
$ git add xml_2_csv.py
$ git commit -m "Modified by Dr. Kim on 24.03.25"
```



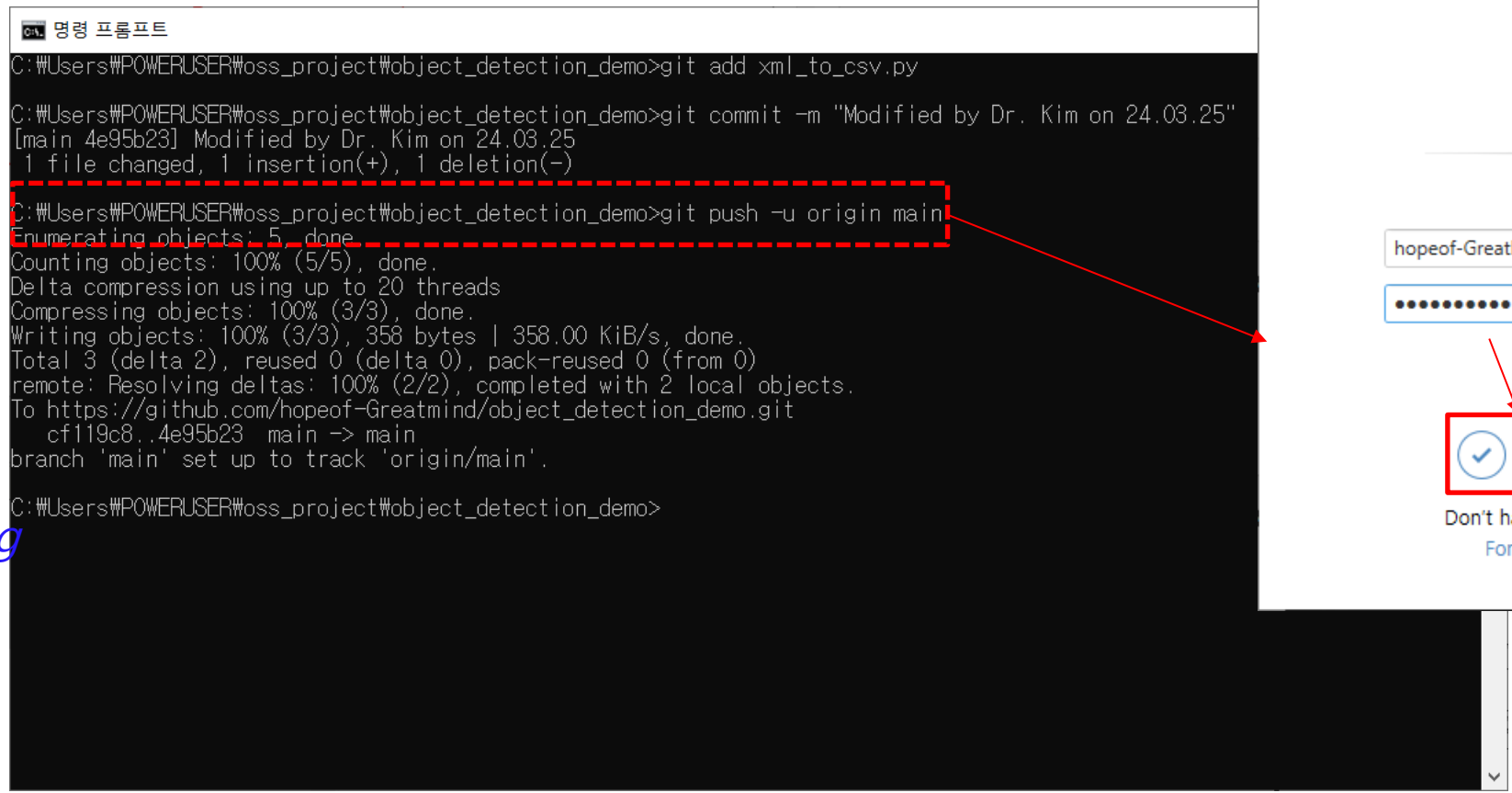
How to use Git? (14): “git clone”

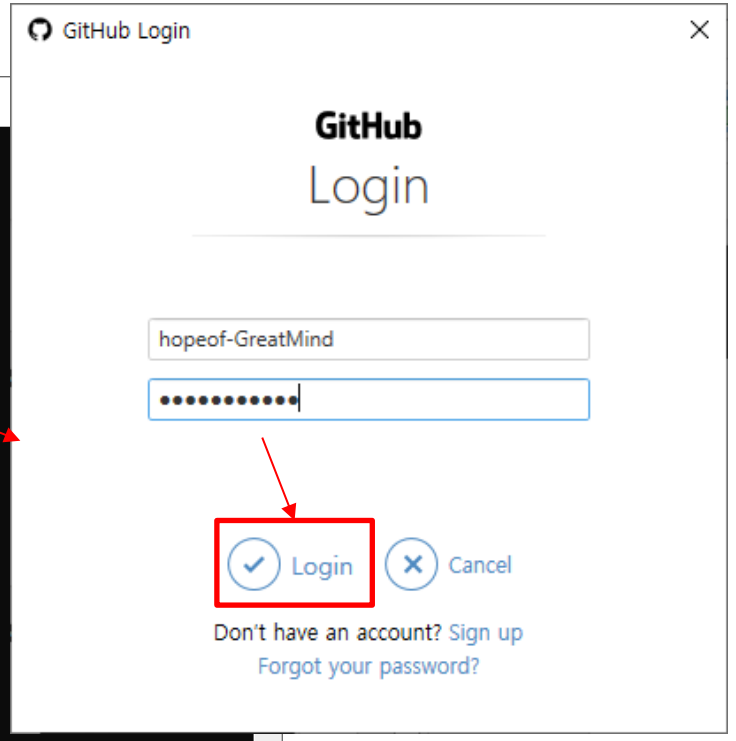
- 8] Reflect the change to the remote Github (your Github) using “**git push**~” command…!!

```
$ git push <remote> <branch name>

Example)) $ git push -u origin main
```

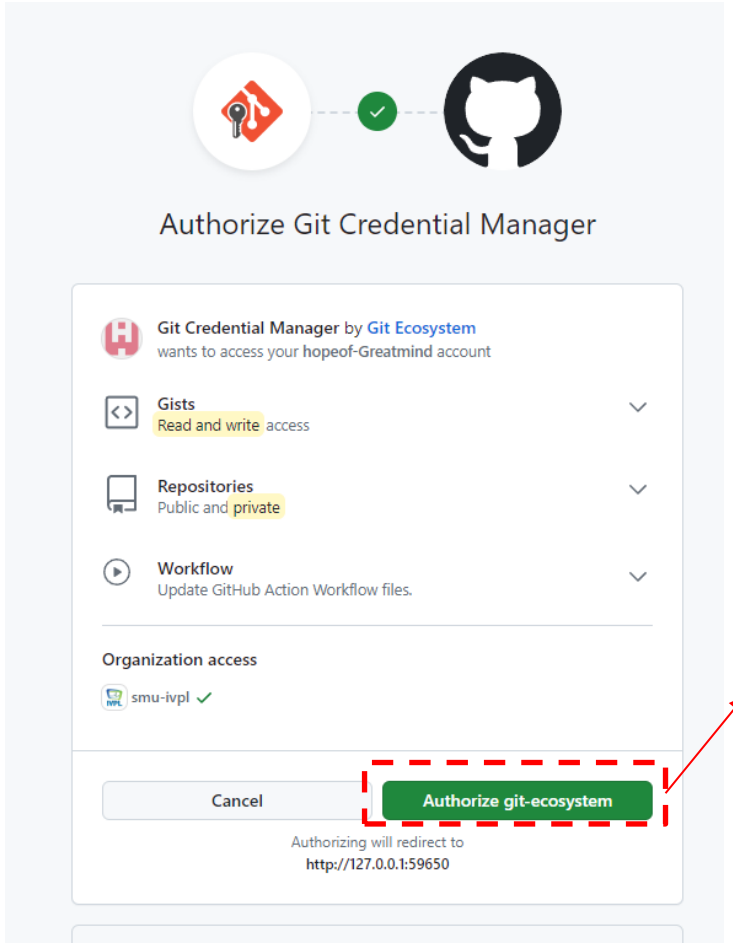
```
$ git push <options>
```

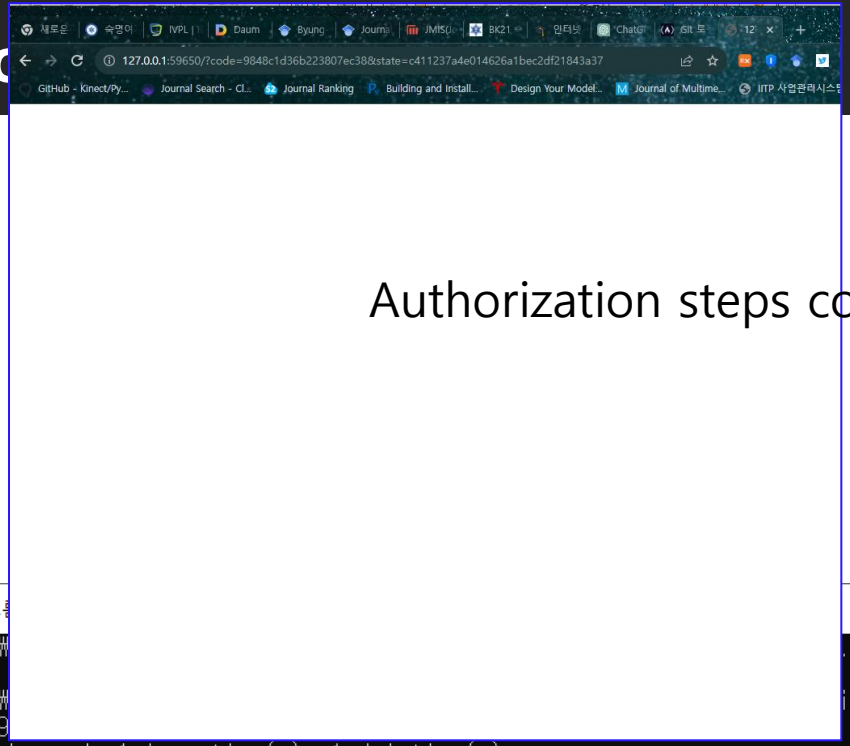
In your working Folder !



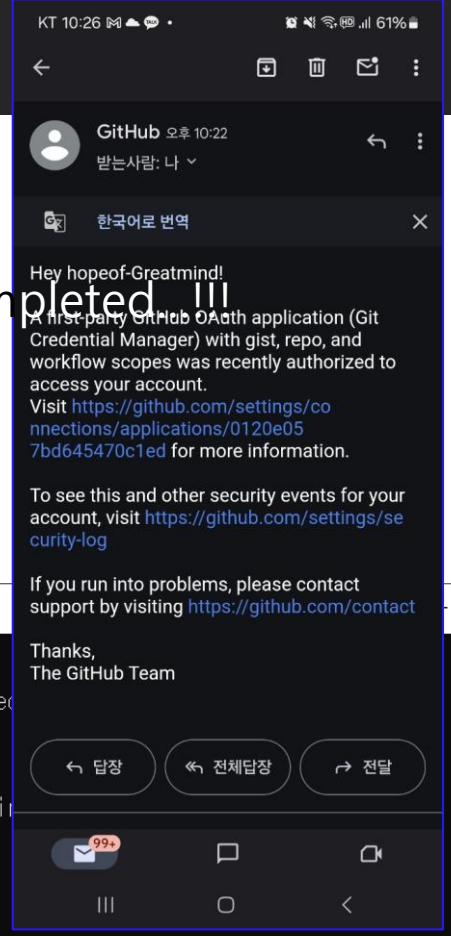


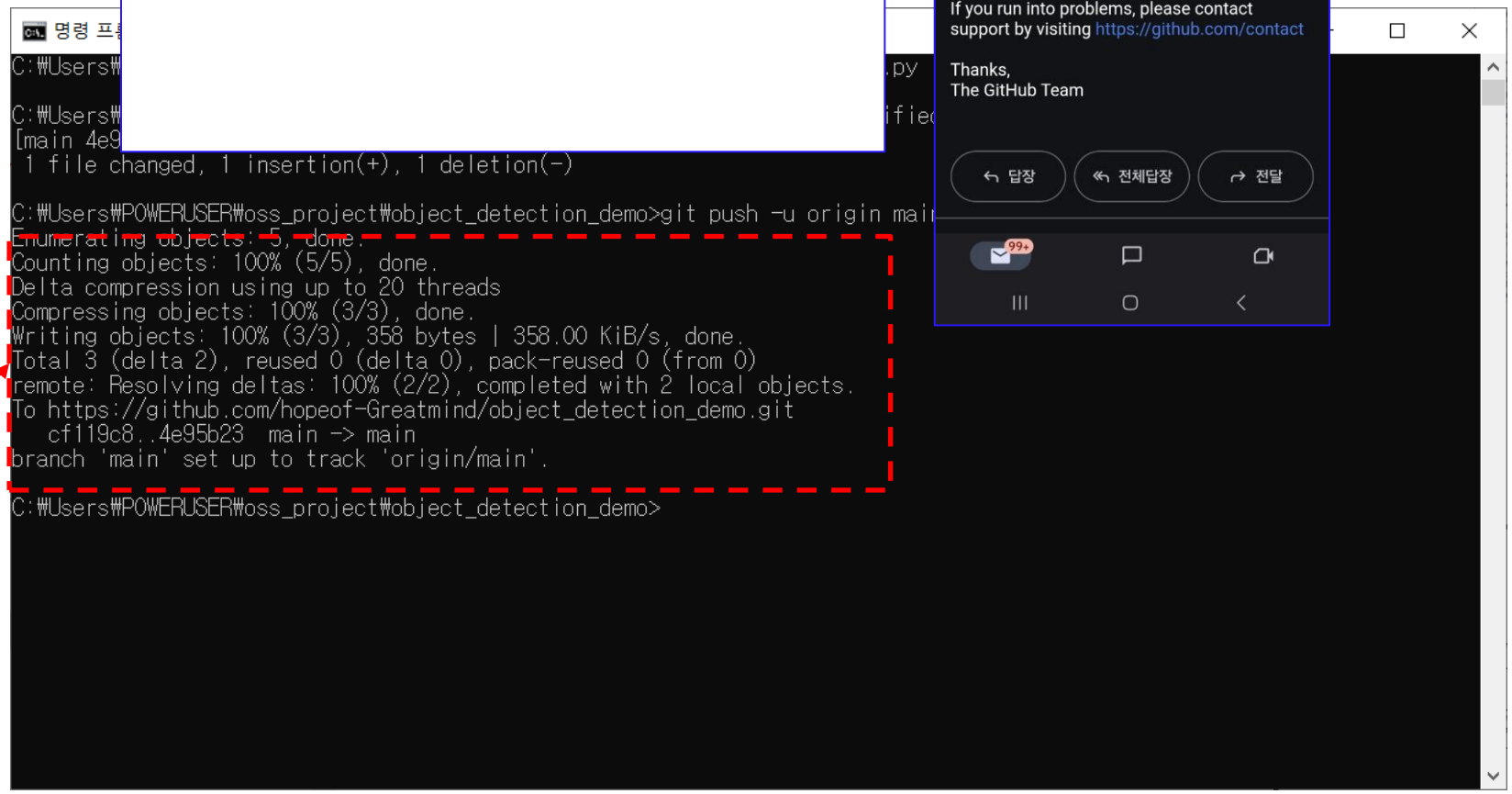
How to use Git? (15): “git cl





Authorization steps completed !!!





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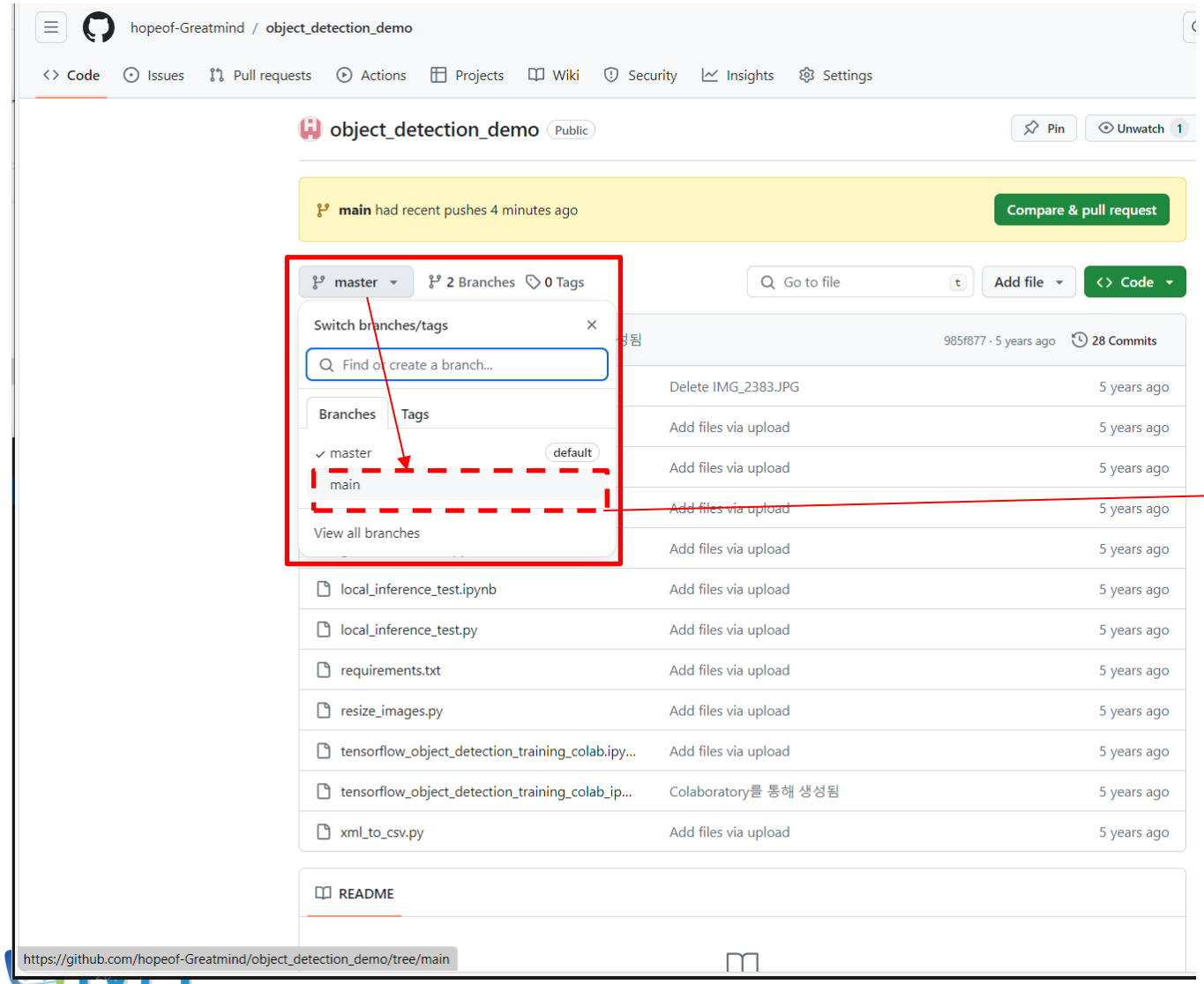
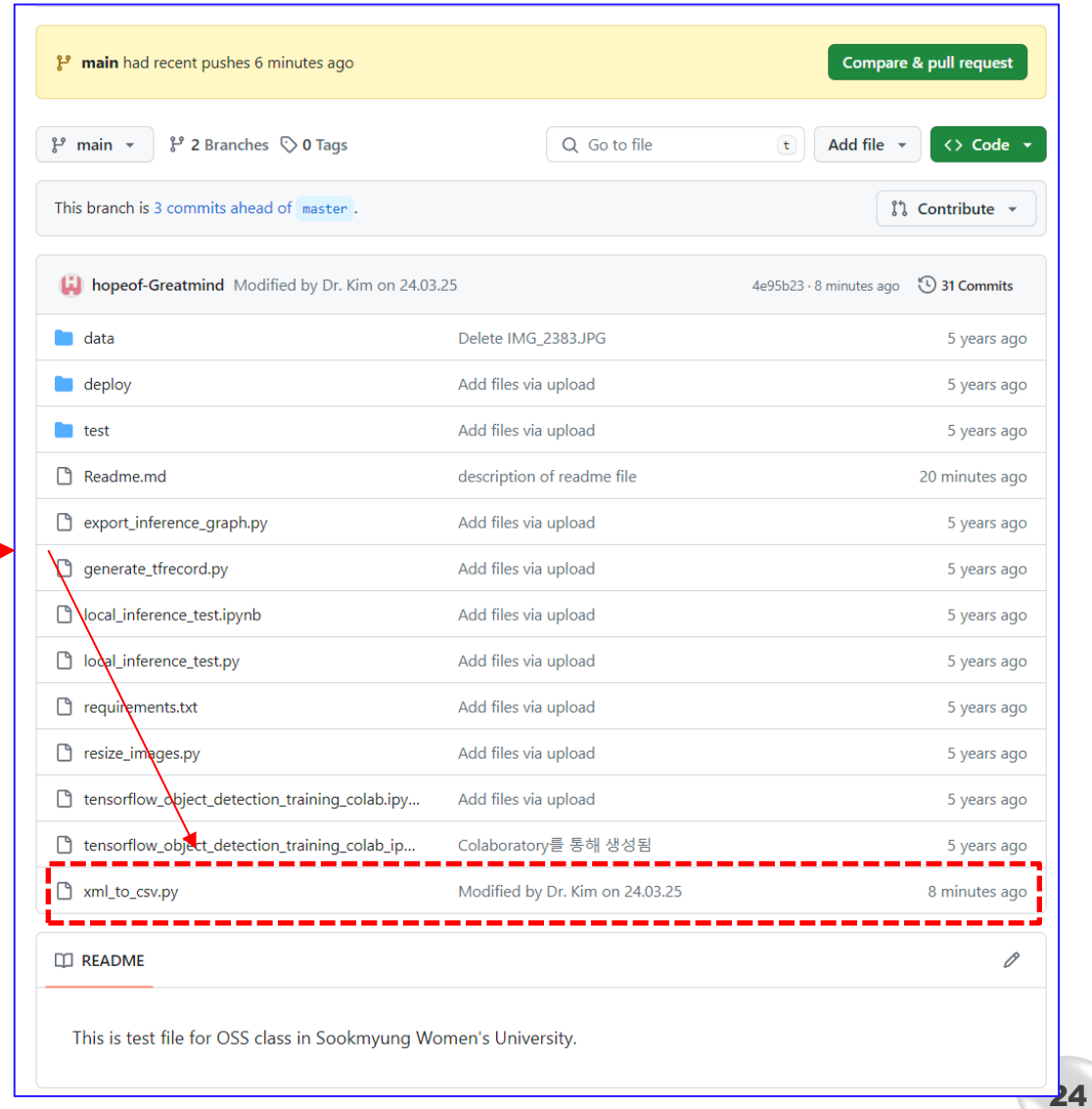
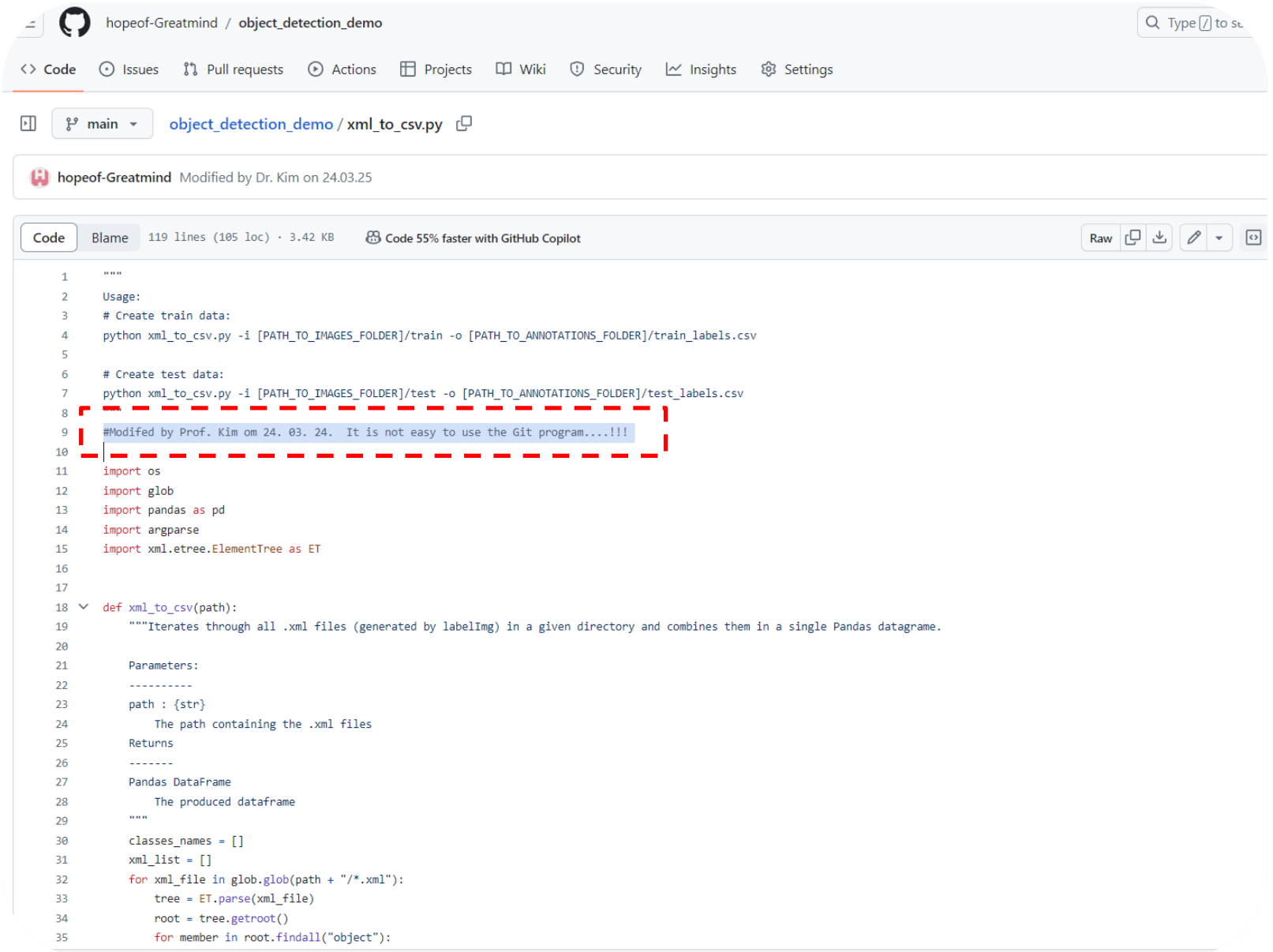
How to use Git? (16): “git clone”

- 9] See the changes in your remote Github…!!!





How to use Git? (17): “git clone”



How to use Git? (18): “git clone”

❖ Useful commands in **add & commit**

```
git add scripts/app.js images/logo.png
```

```
git add *
```

```
git add .
```

```
git commit -a -m "MY MESSAGE HERE"
```

```
git push origin master<branch name>
```

```
git push origin HEAD:<branch>

Ex) $ git push origin HEAD:master
```

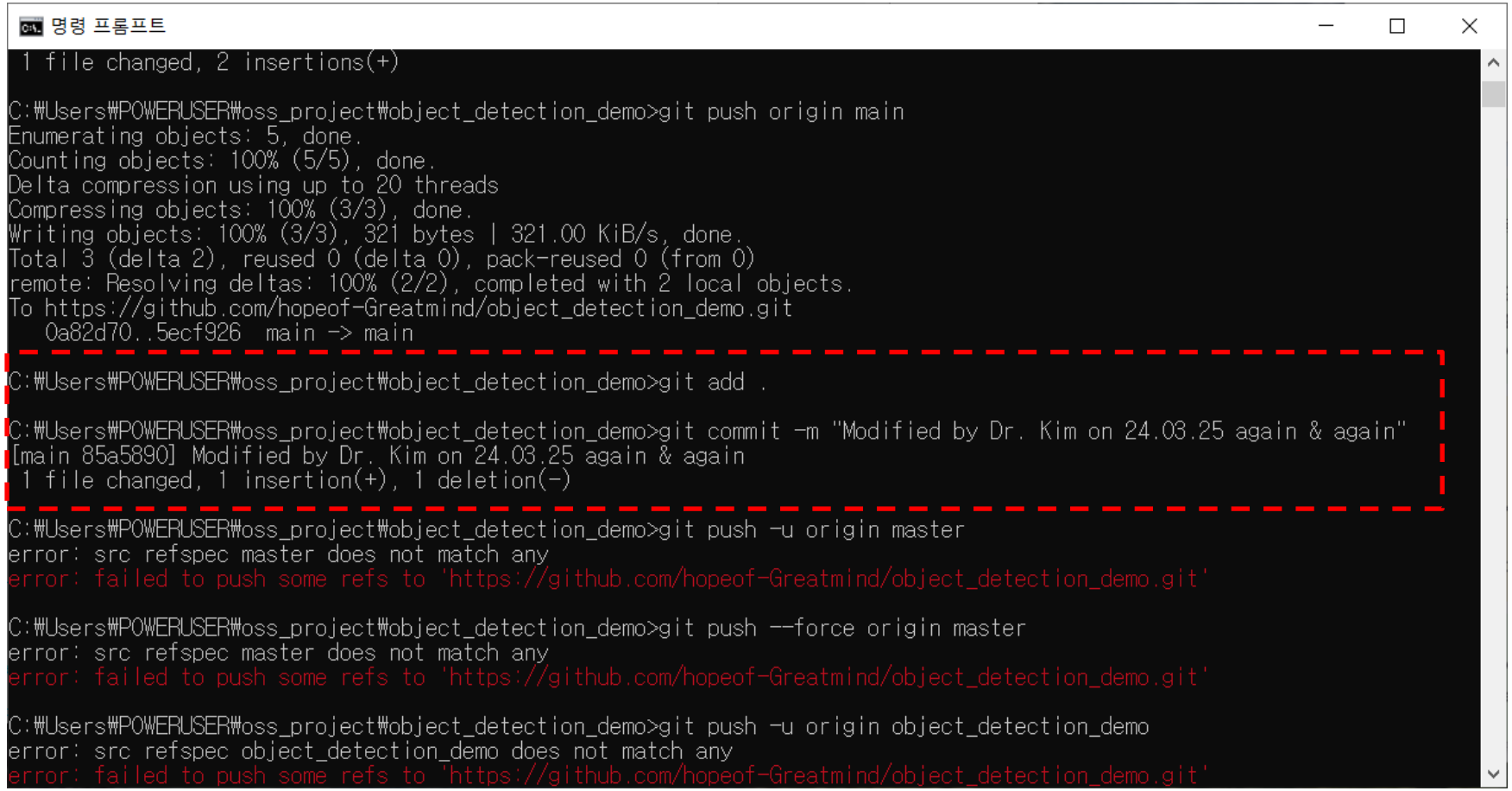
예전 버전: master

How to use Git? (19): “git clone”

- 9] change one source file and save…!!! Then using the following commands, we can push all changes to Github website.

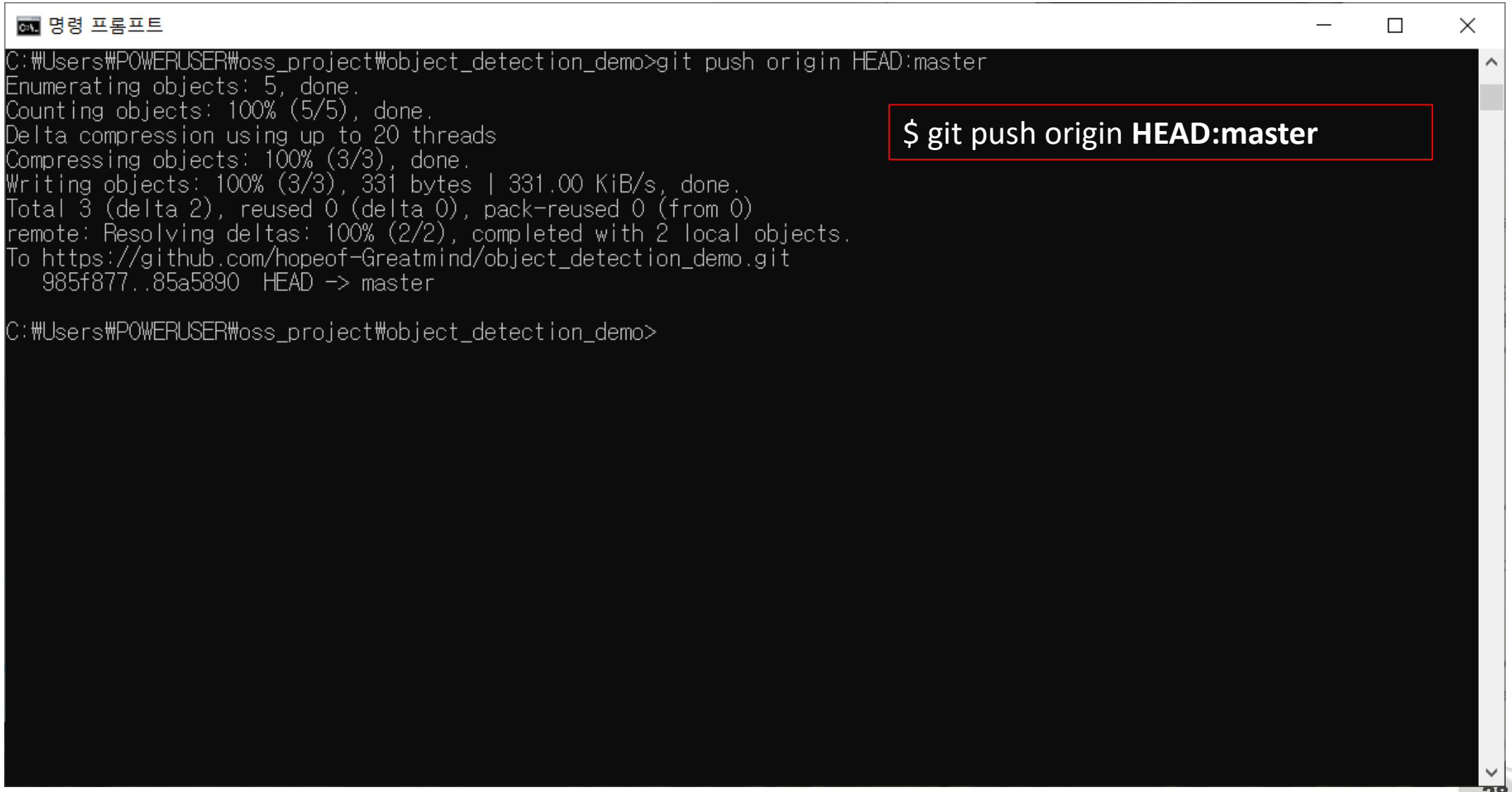
```
$ git add .
```

```
$ git commit -a -m "MY MESSAGE HERE"
```



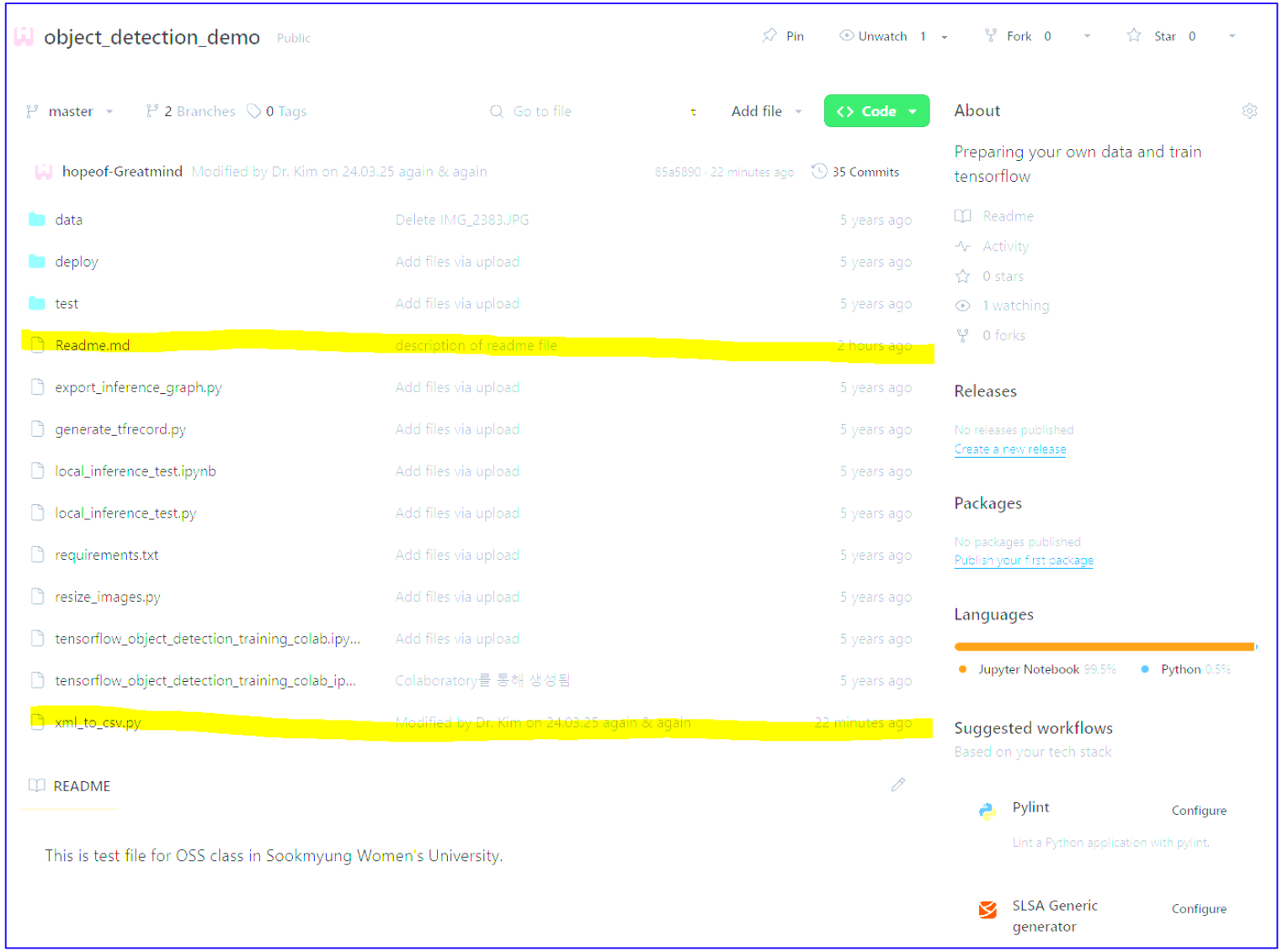
How to use Git? (20)

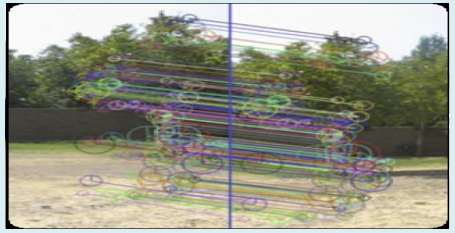
Then, you can push all changes to your Github site as:

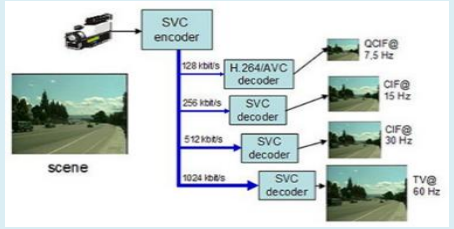


How to use Git? (21)

In your Github site and master branch, you can see the changed files and messages as:







Contents

- How to use Git?
- Github + VS Code

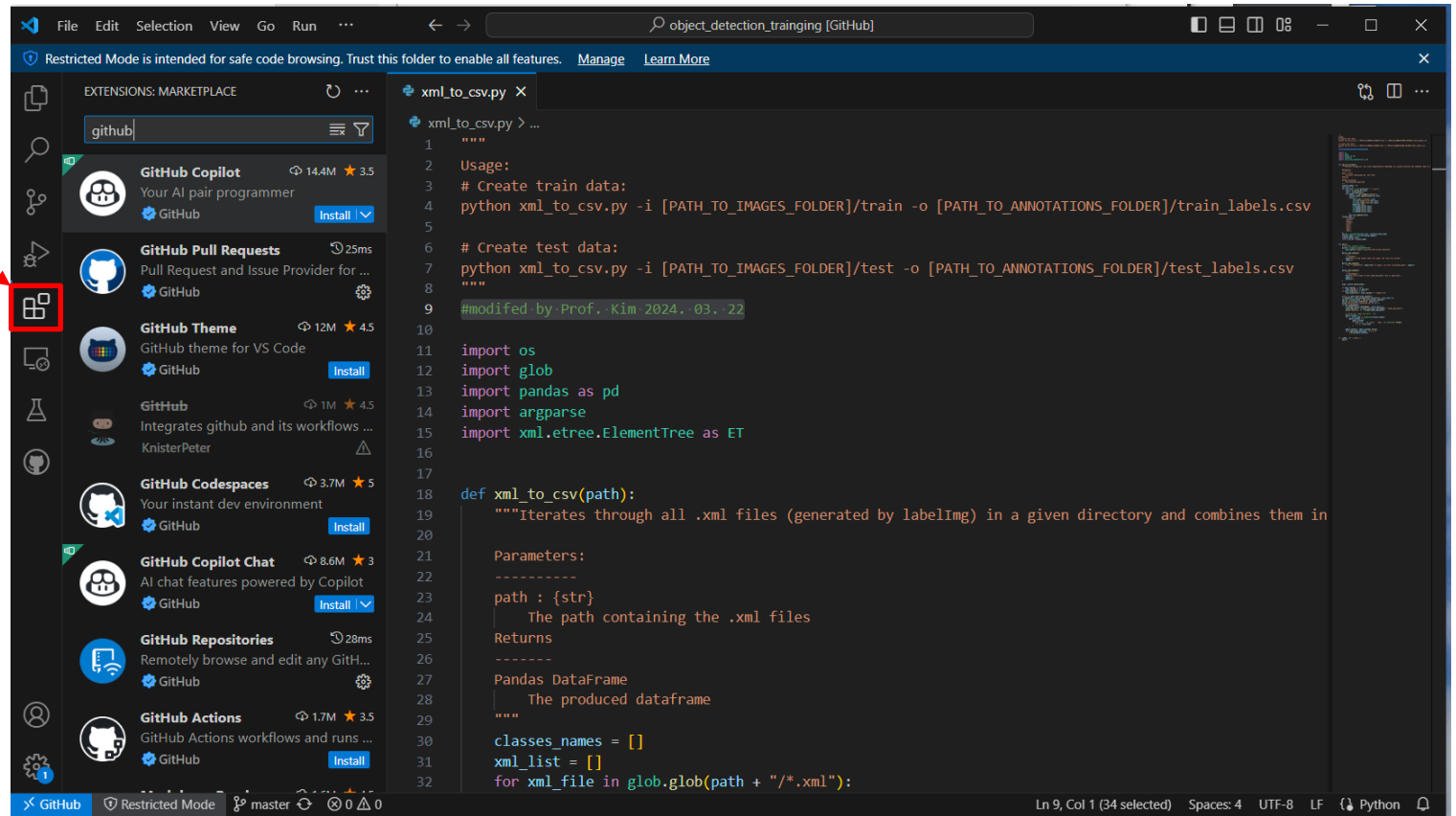
Github + VS Code (1)

❖ Requirements

- Install your VS code at Download Visual Studio Code - Mac, Linux, Windows.

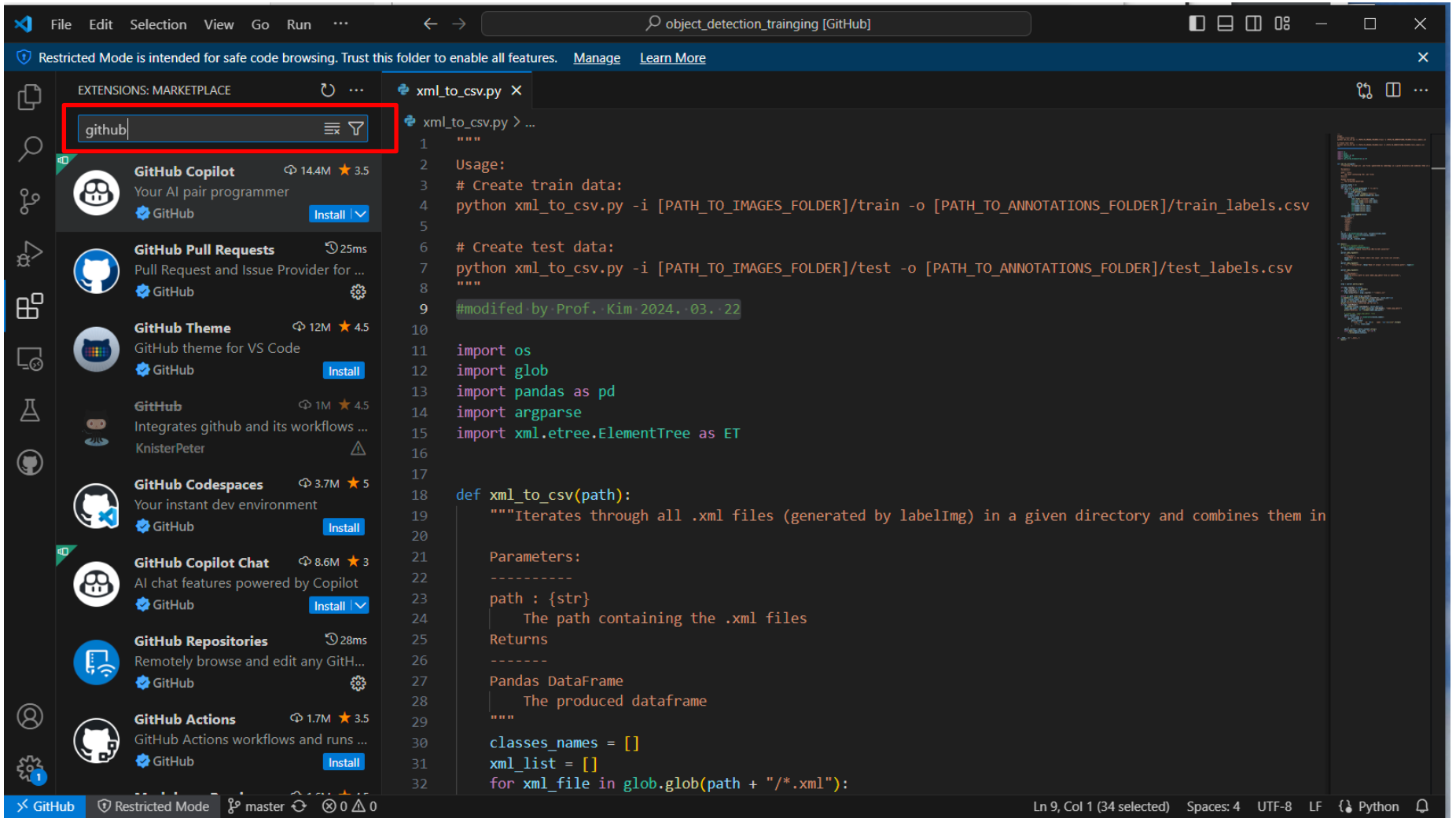
❖ Steps to Manage Your Github source in Your VS code

- 2] Open your VS code.
- 3] Click “Extension” tab on your VS code program!



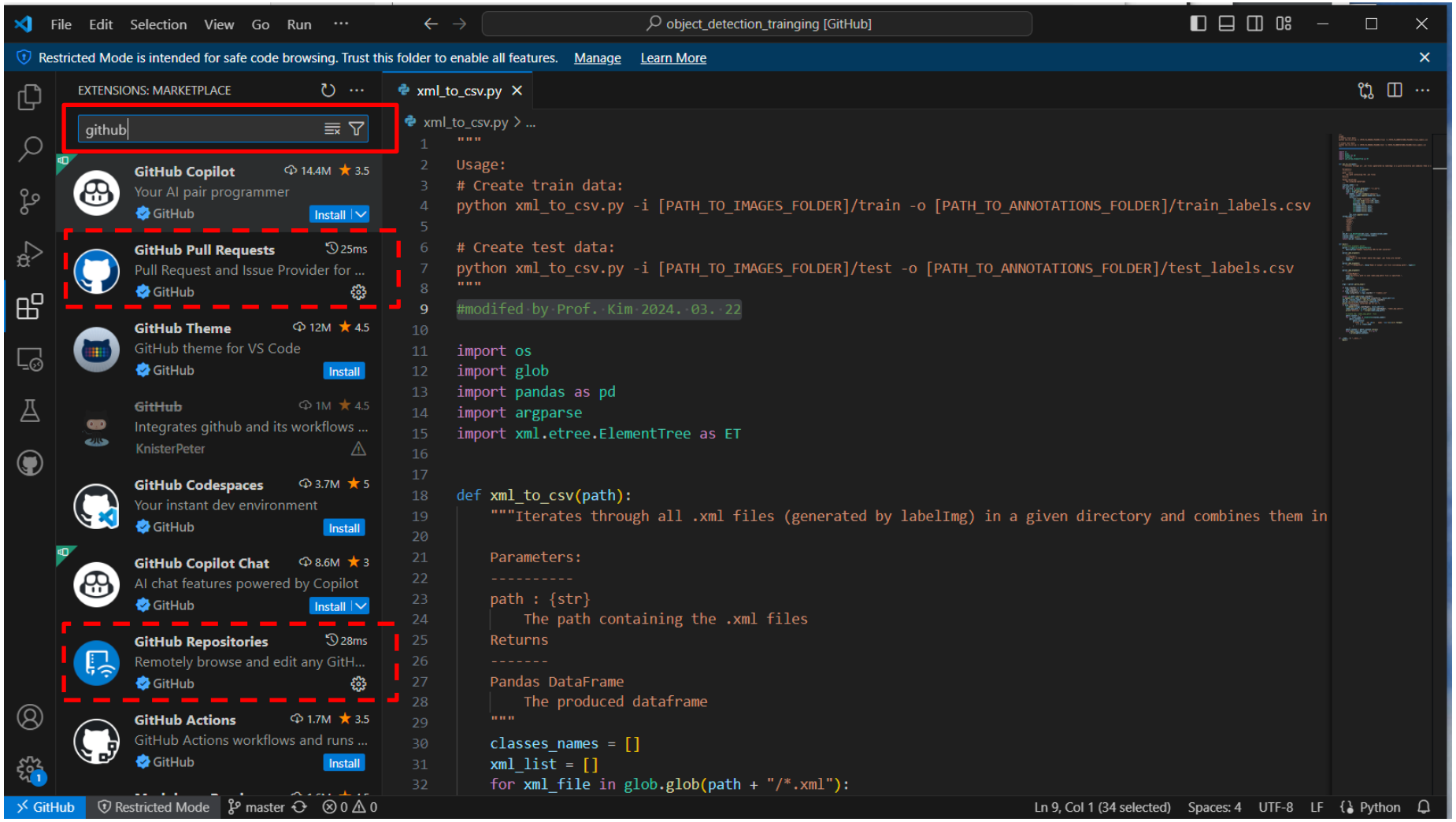
Github + VS Code (2)

- 4] Search Github extension in “search field”. You can see Github extension programs…!!!



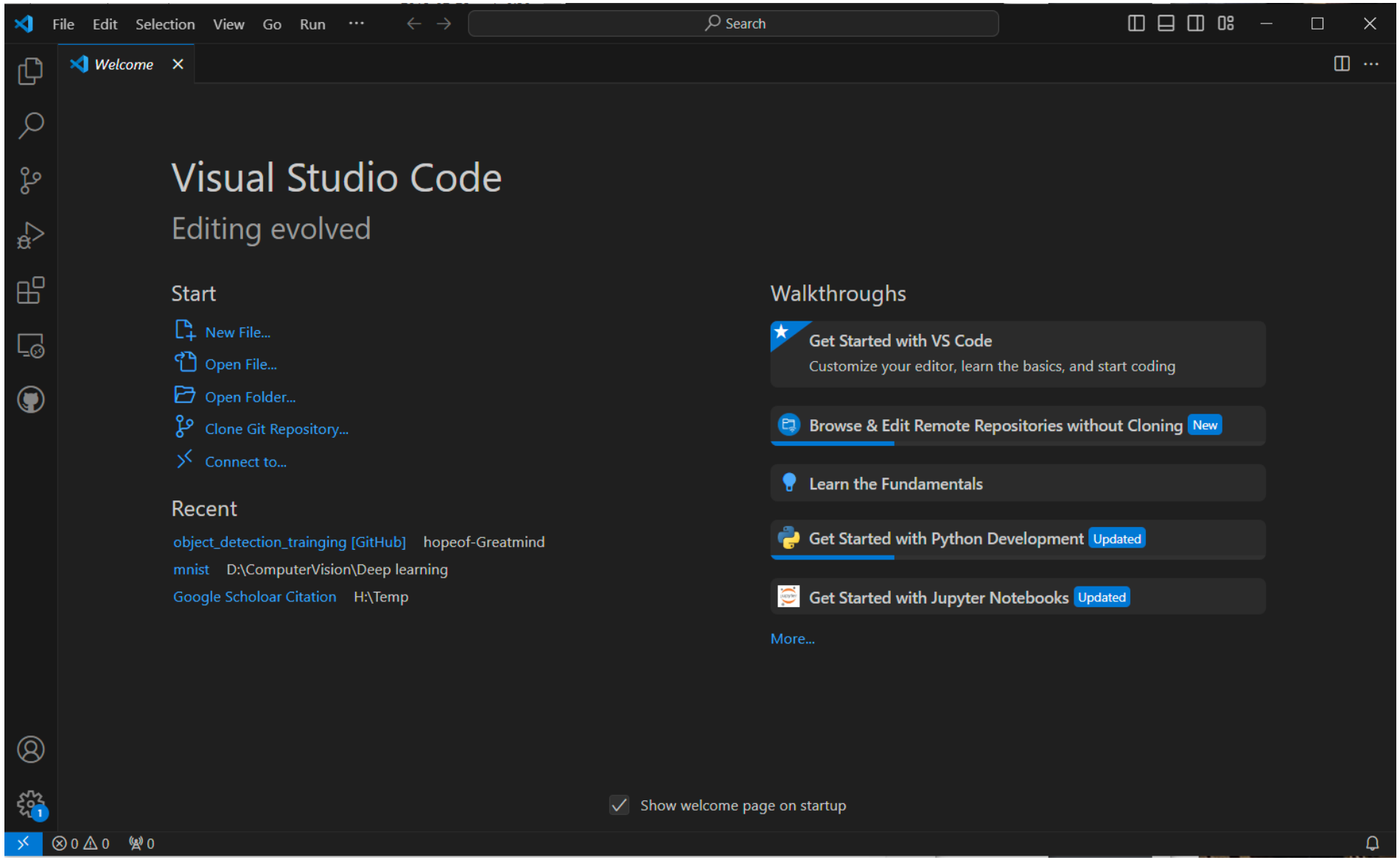
Github + VS Code (3)

- 5] Install the required packages by selecting them.



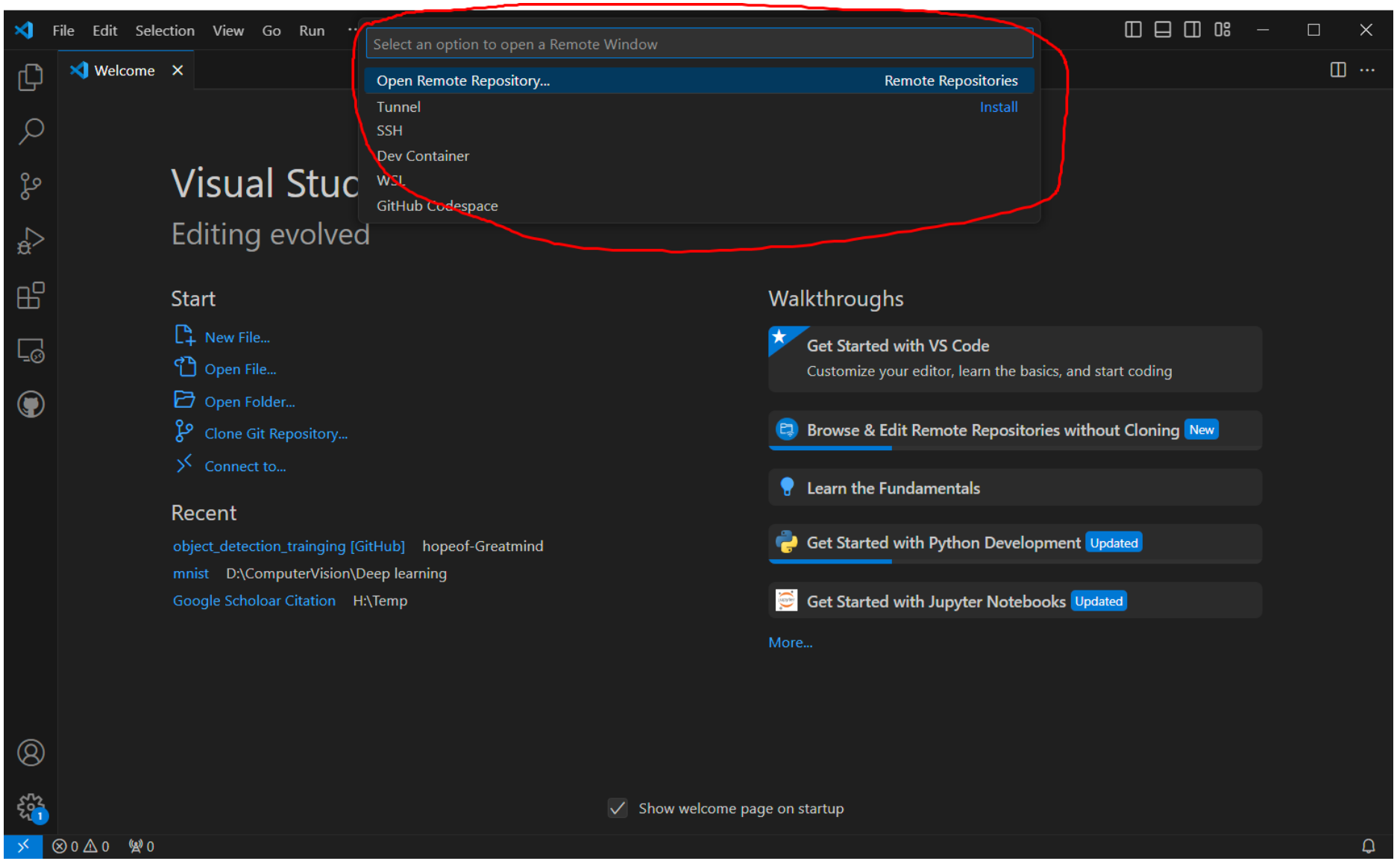
Github + VS Code (4)

- 6] In staring page of VS code, select start item as "Connect to…."



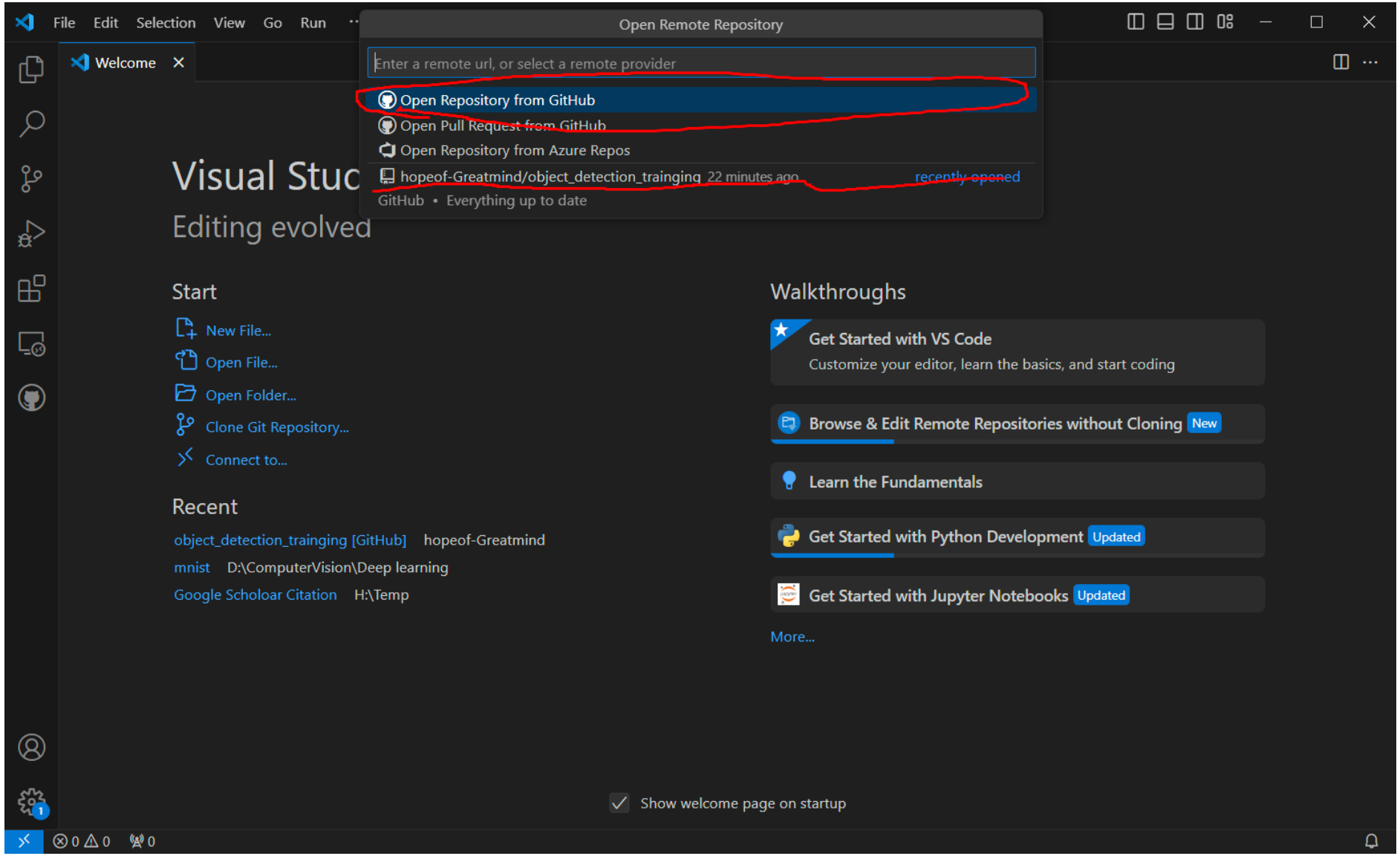
Github + VS Code (5)

- Select "Open Remote Repoistory"



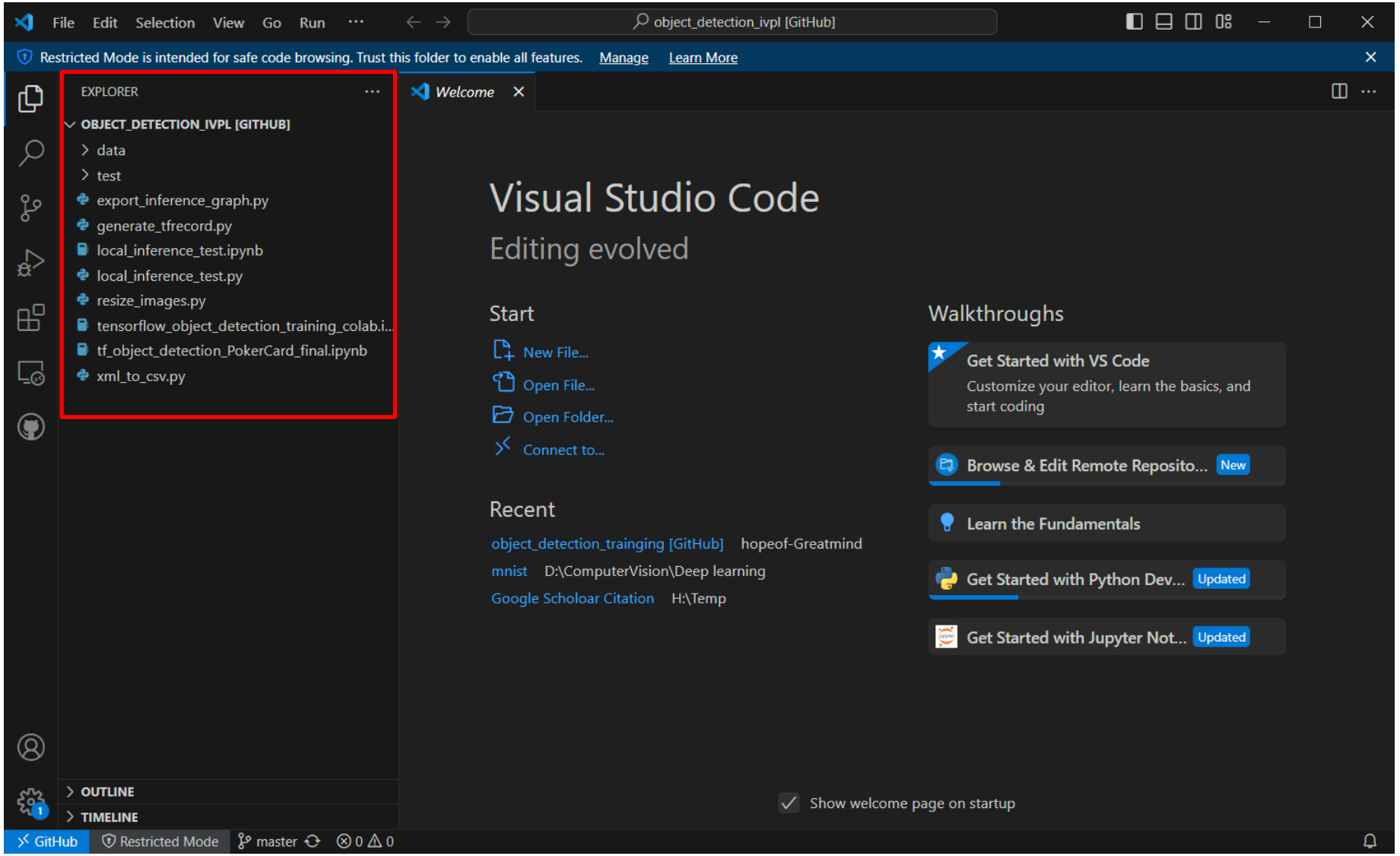
Github + VS Code (6)

- Select "Open Repository from Github."



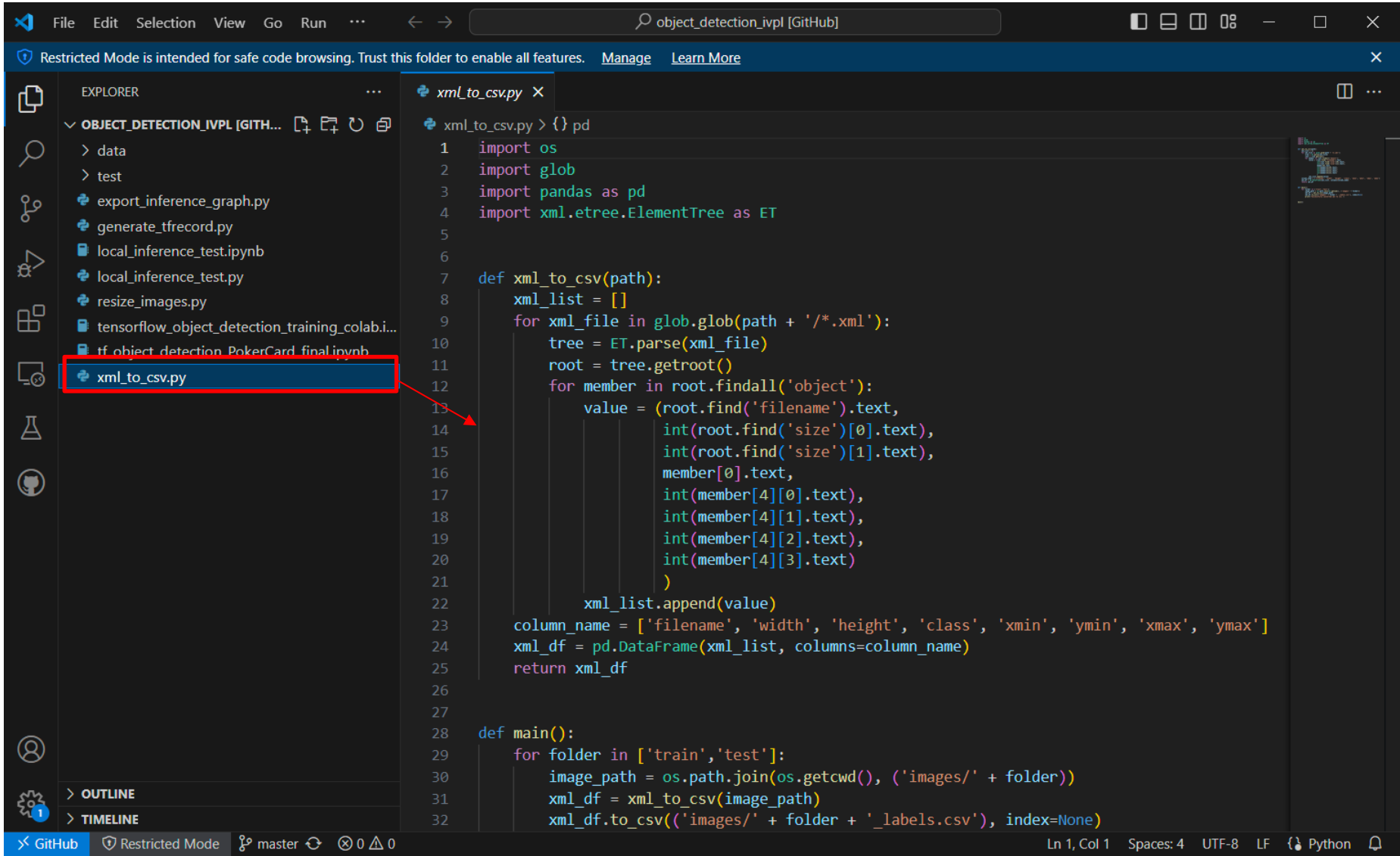
Github + VS Code (7)

- Then you can see the log-in page at Github. Just log-in (sign-in) on Github.
- Then, you see the work-folder selection for your job.



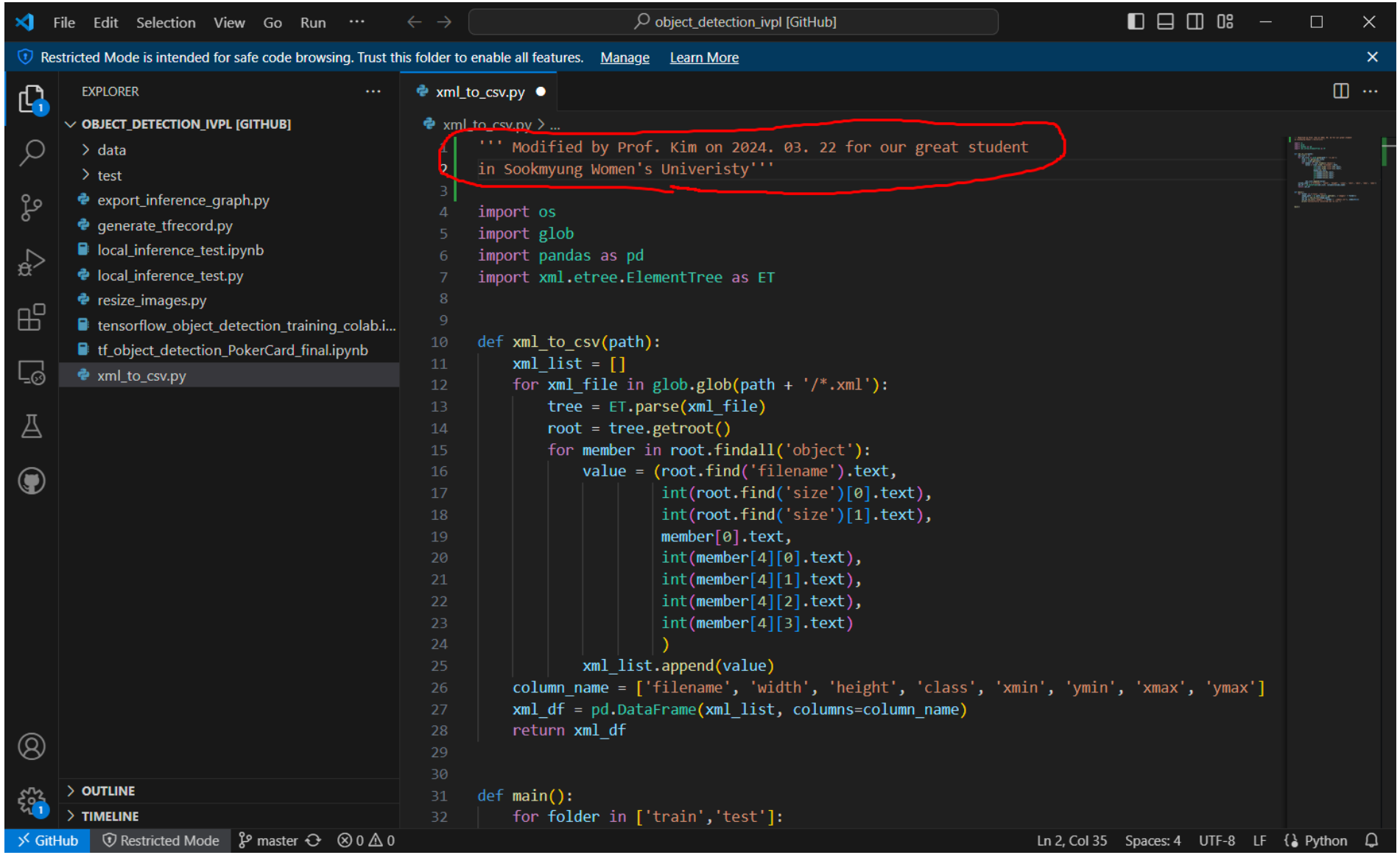
Github + VS Code (8)

- 7] Select one source file to modify the content (or program). In our example, I will select "xml_to_csv.py" file. Just click "xml_to_csv.py" file..!!!



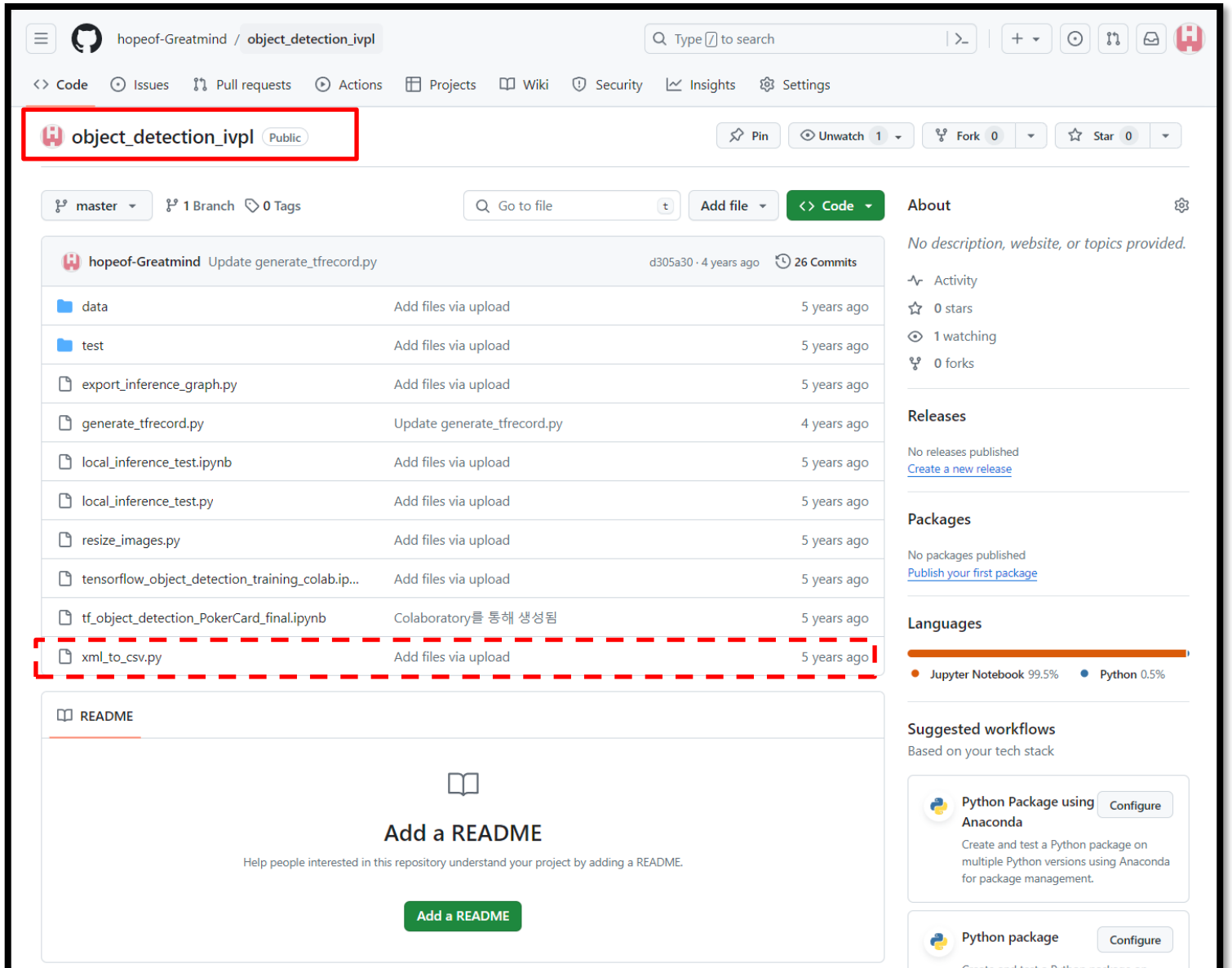
Github + VS Code (9)

- 8] Edit some part or add additional code (comment) line. And save it.



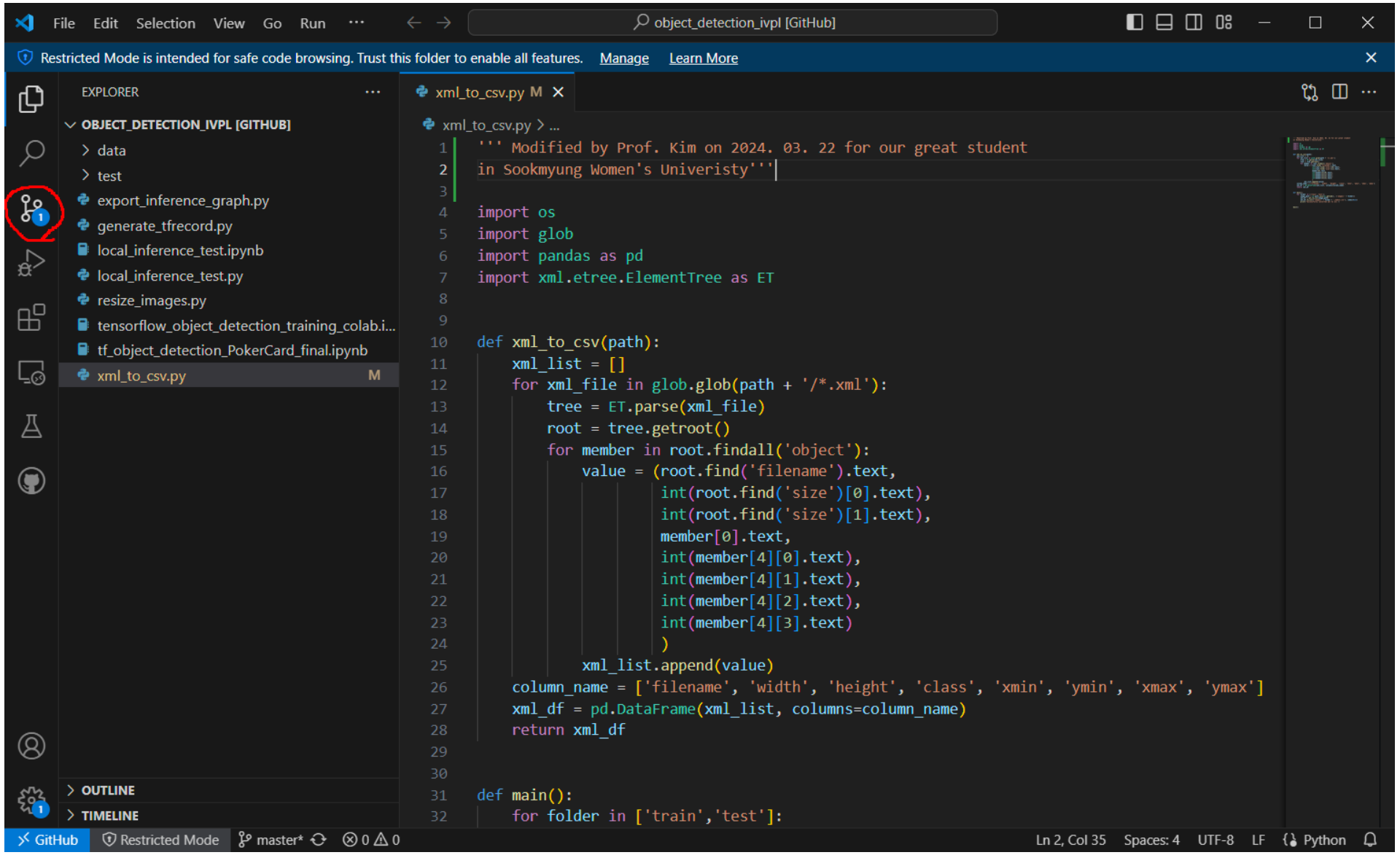
Github + VS Code (10)

- 9] Go to your Github (work-folder).



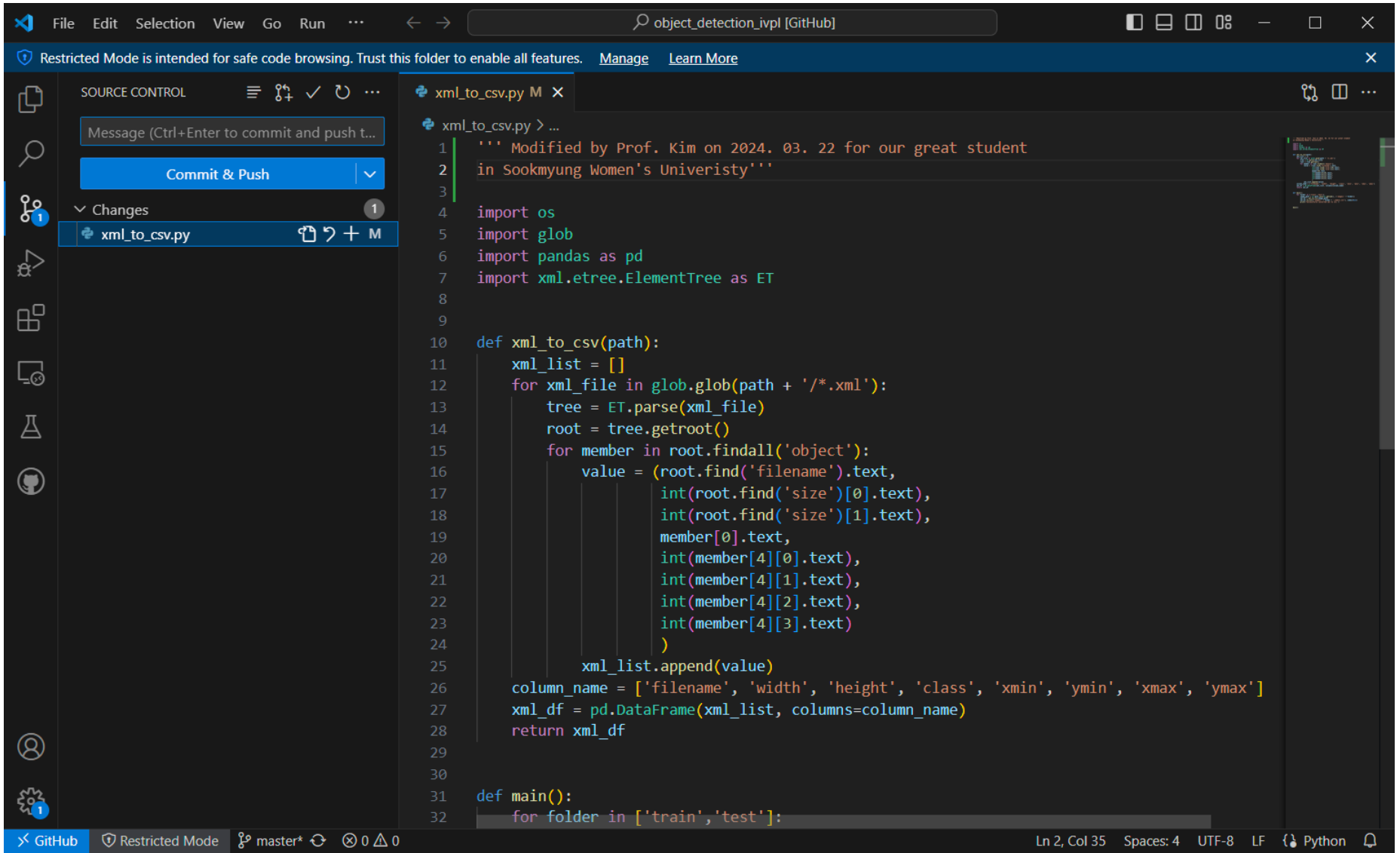
Github + VS Code (11)

- 10] Again go back to VS code and select “Source control” tab in left.



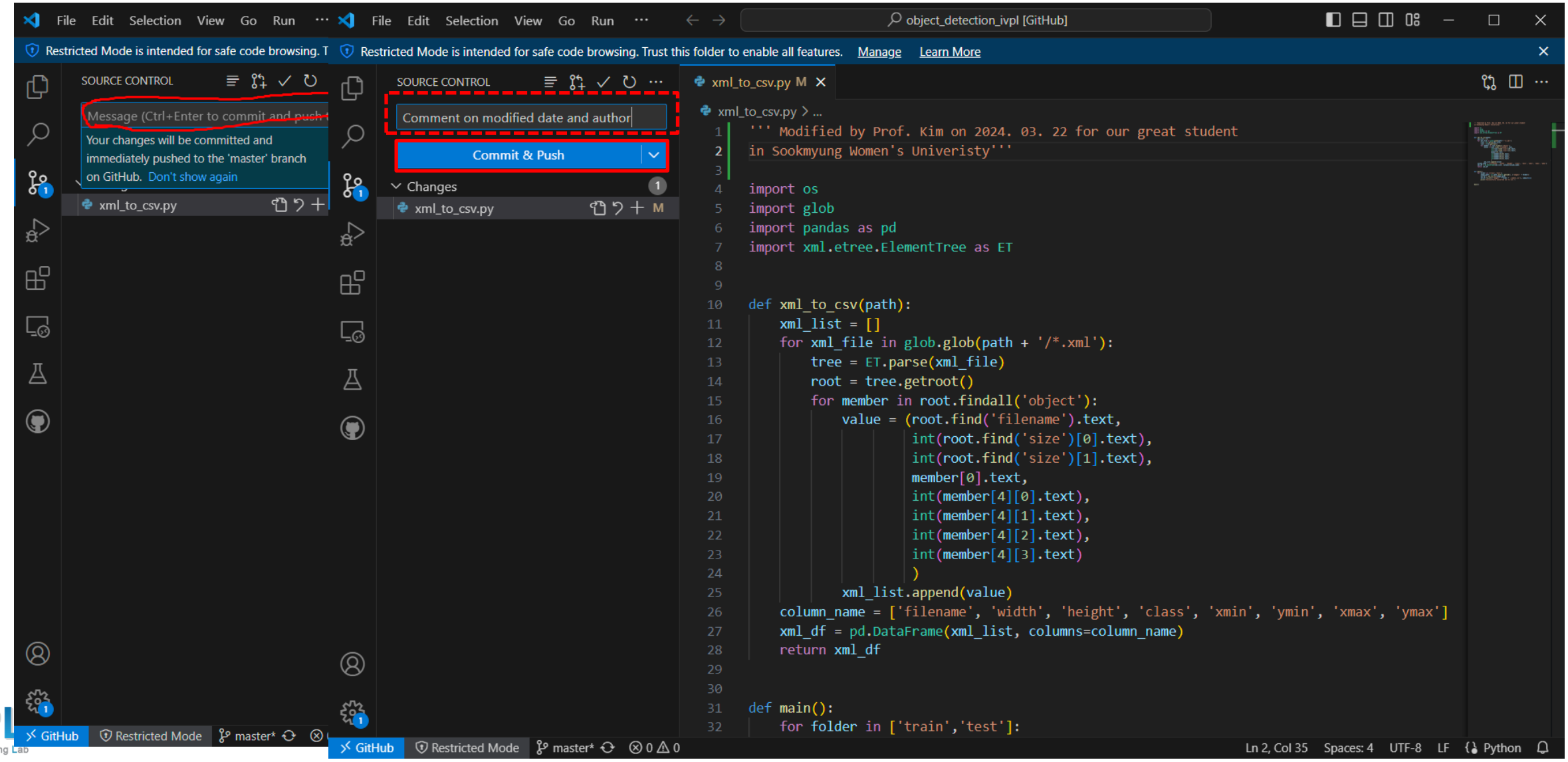
Github + VS Code (12)

- 11] Again go back to VS code and select “Source control” tab in left. You can see “message field’ and “Commit & Push” button!



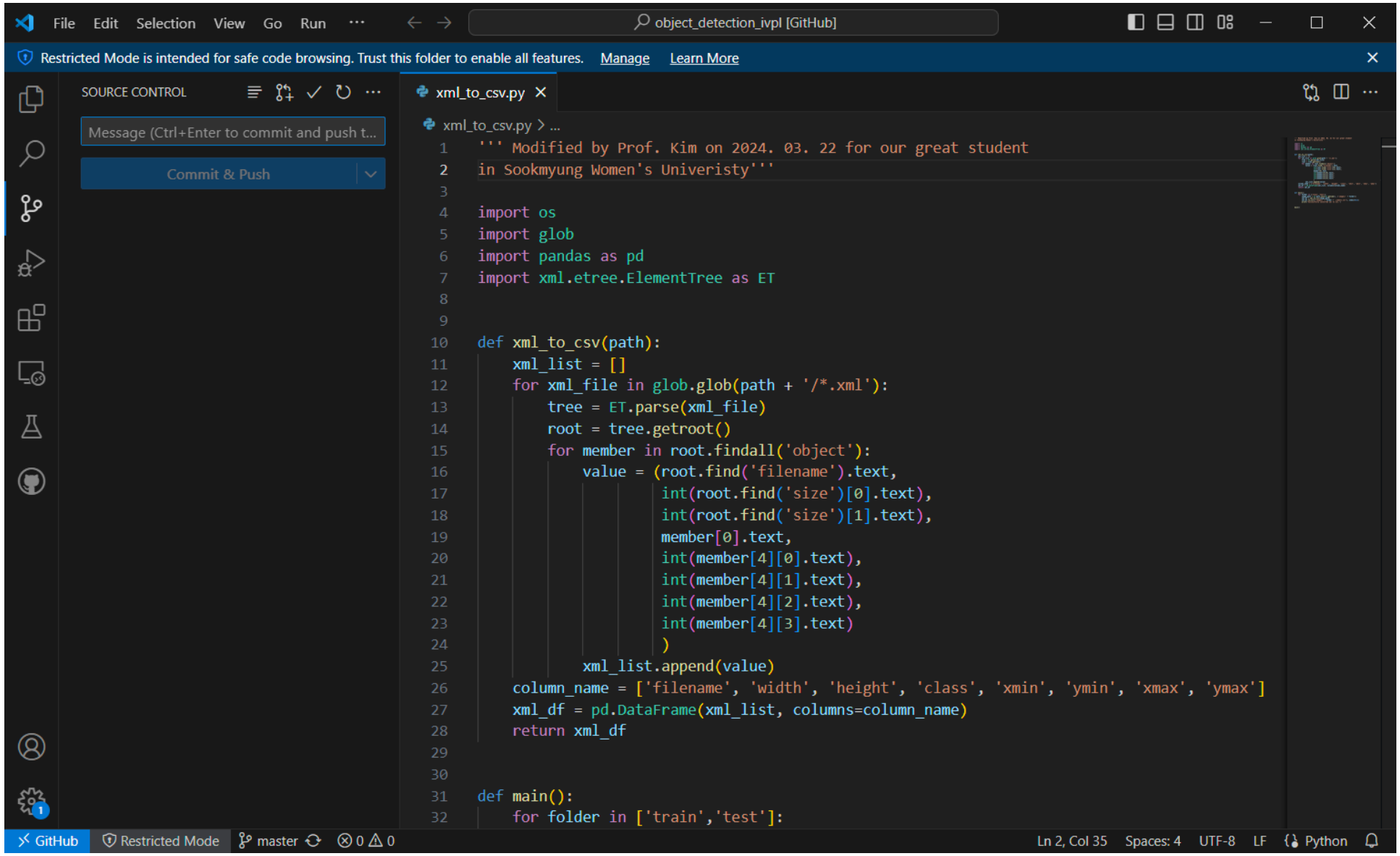
Github + VS Code (13)

- 12] First, give the message for commit and click “Commit & Push” button!



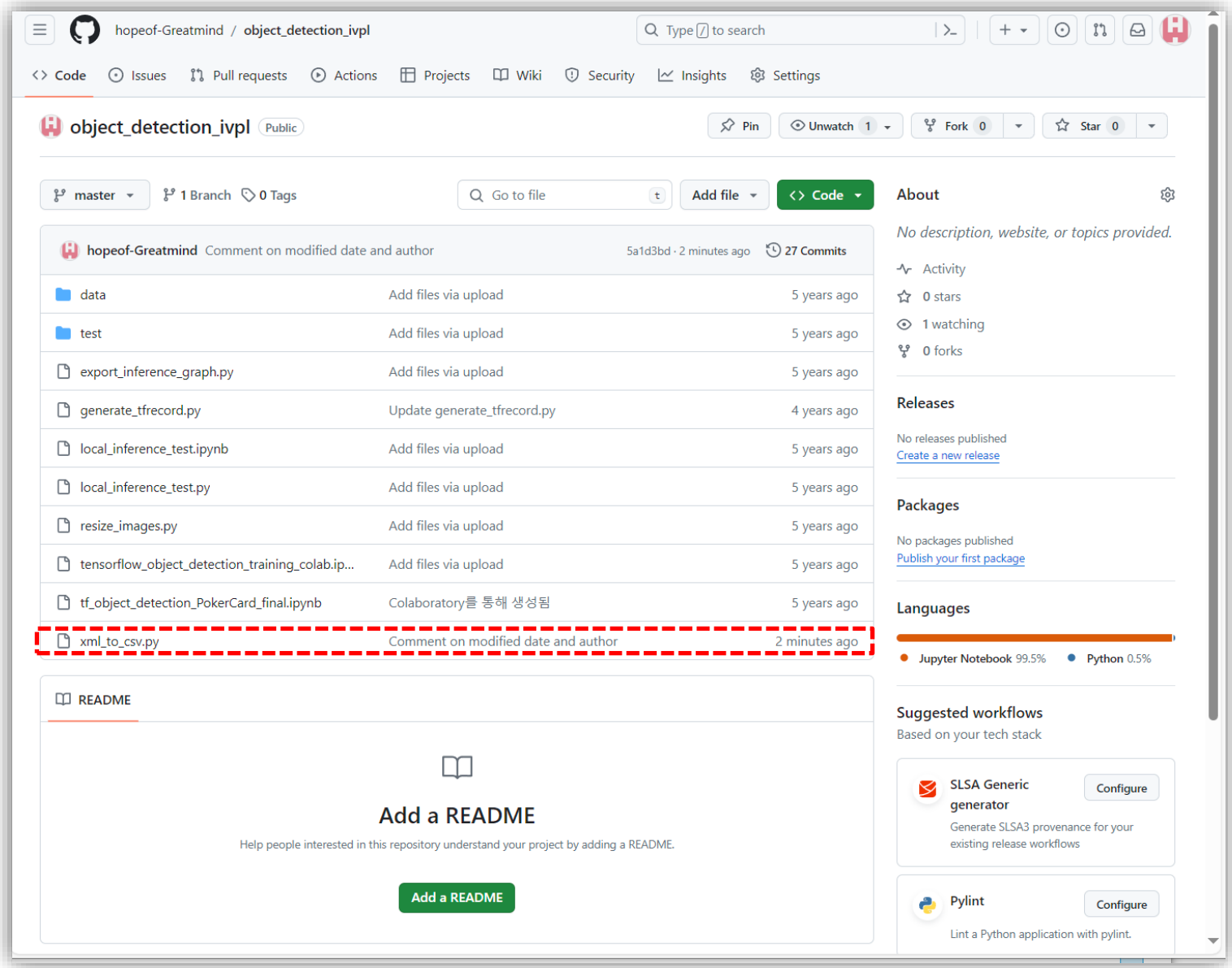
Github + VS Code (14)

- You can see the change file was disappeared.



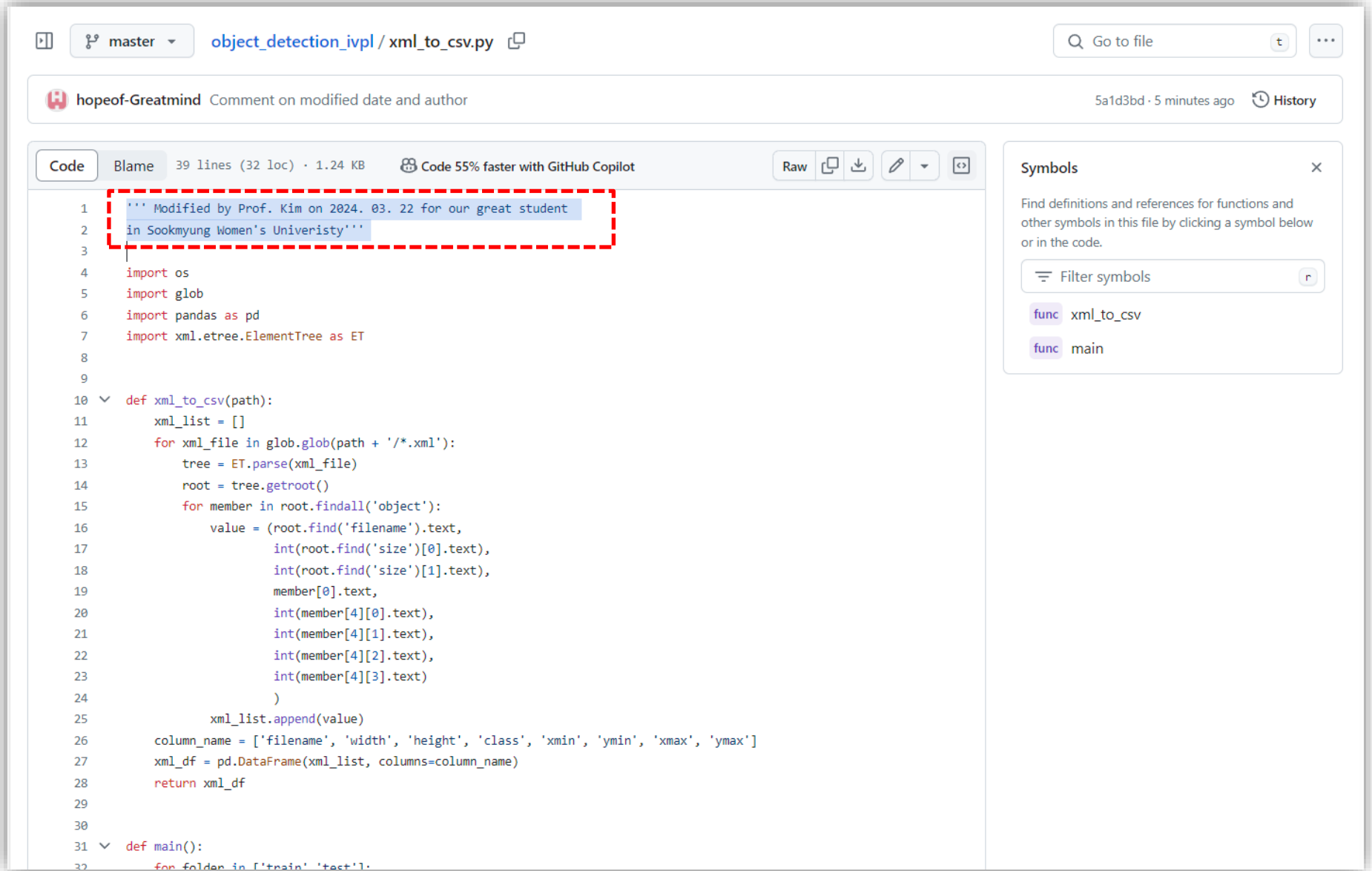
Github + VS Code (15)

- 13] Then let's go to Github site and check the change of yours…!



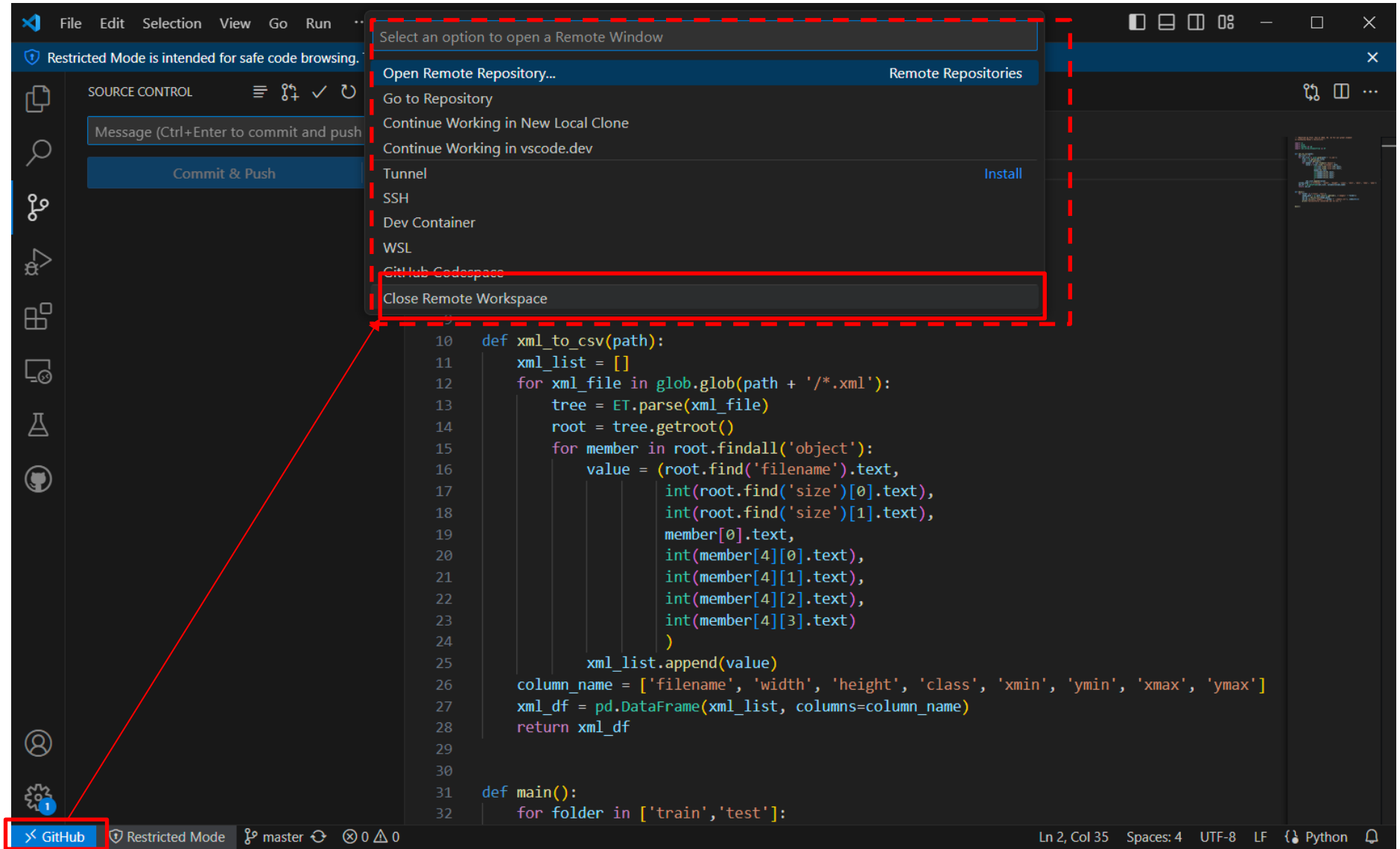
Github + VS Code (16)

- Just click “xml_to_csv.py” to see the change which was reflected.



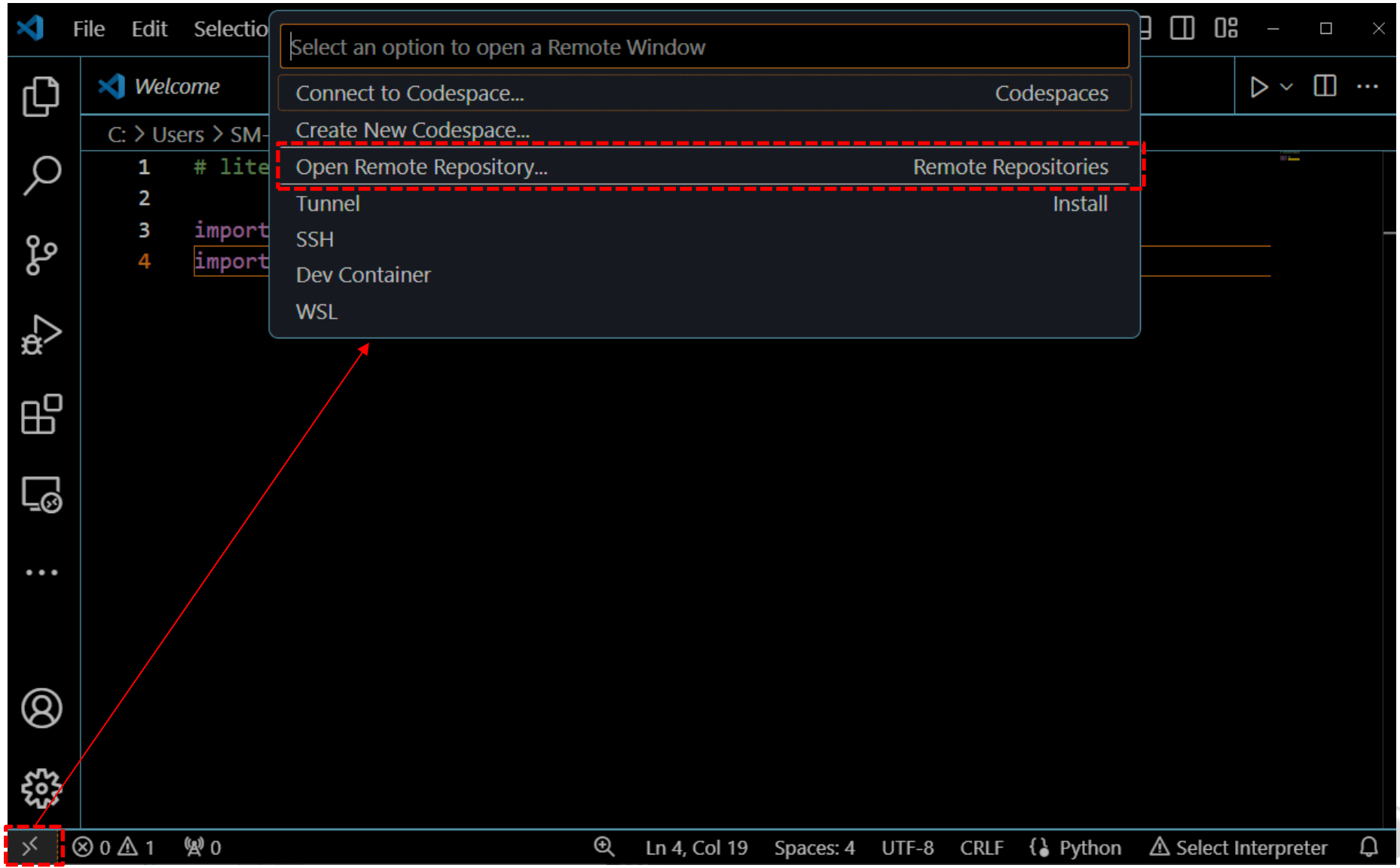
Github + VS Code (17)

- 14] **In VS Code**, finish the Remote workspace: Just click GitHub on left-bottom. Then you can see the pop-down items to close it.



Github + VS Code (18)

❖ When VS code has some files at beginning, you can click the “github” icon at bottom-left.



Thank you for your attention.!!!
QnA

http://ivpl.sookmyung.ac.kr