National University
of computer and emerging sciences

CS4085 MLOps

Assignment #1

Name:

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Submitted to:

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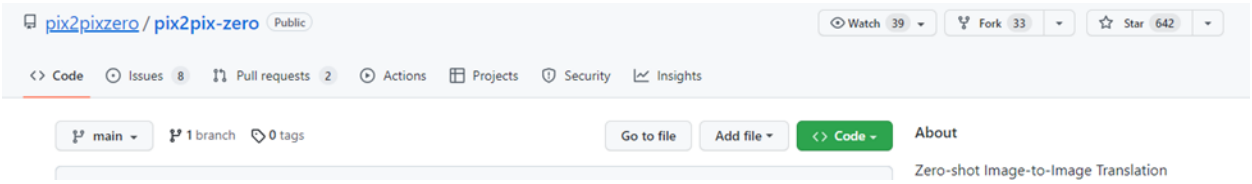
Introduction:

The repository chosen is called “pix2pix-zero” which is a "Zero-shot Image-to-Image Translation" using the diffusers library.

Procedure:

We began by forking this repository by selecting the fork option found in the top bar of the repository.



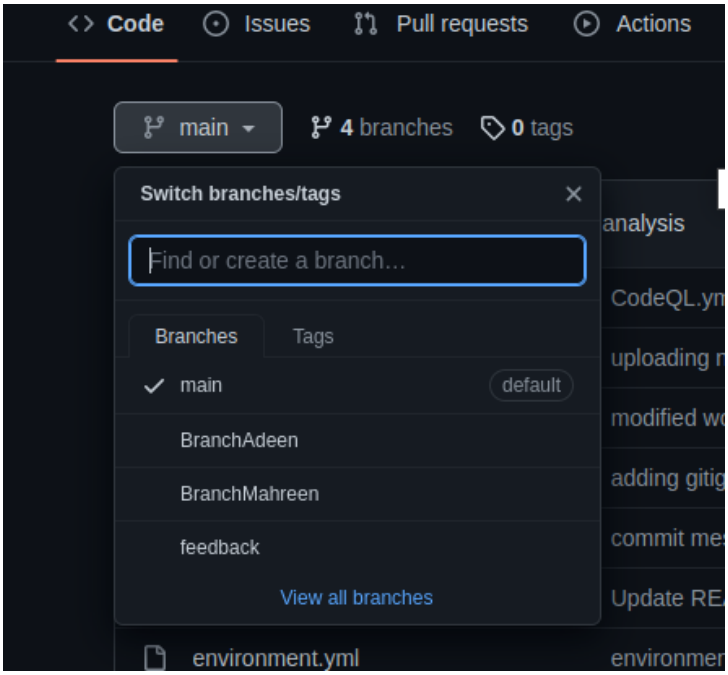
We then proceeded to clone this repository by using the following command in the Linux Terminal.

git clone https://github.com/pix2pixzero/pix2pix-zero.git

After cloning the selected repository, each member of our repository created a branch specific to them by entering the following command in the Linux Terminal.

git checkout -b BranchMahreen

git checkout -b BranchAdeen



Each member of the repository then created .github/workflows directory in their respective branches by inputing the following commands in the Linux Terminal.

mkdir .github

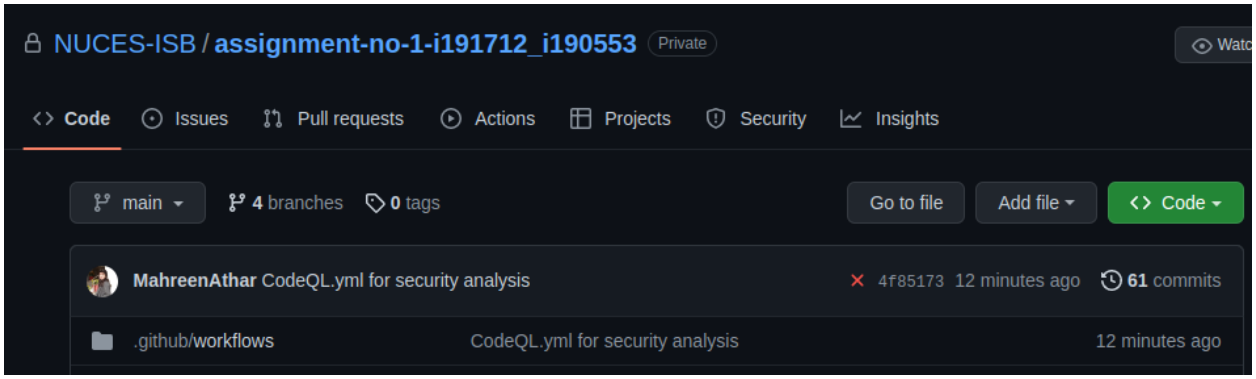
cd .github

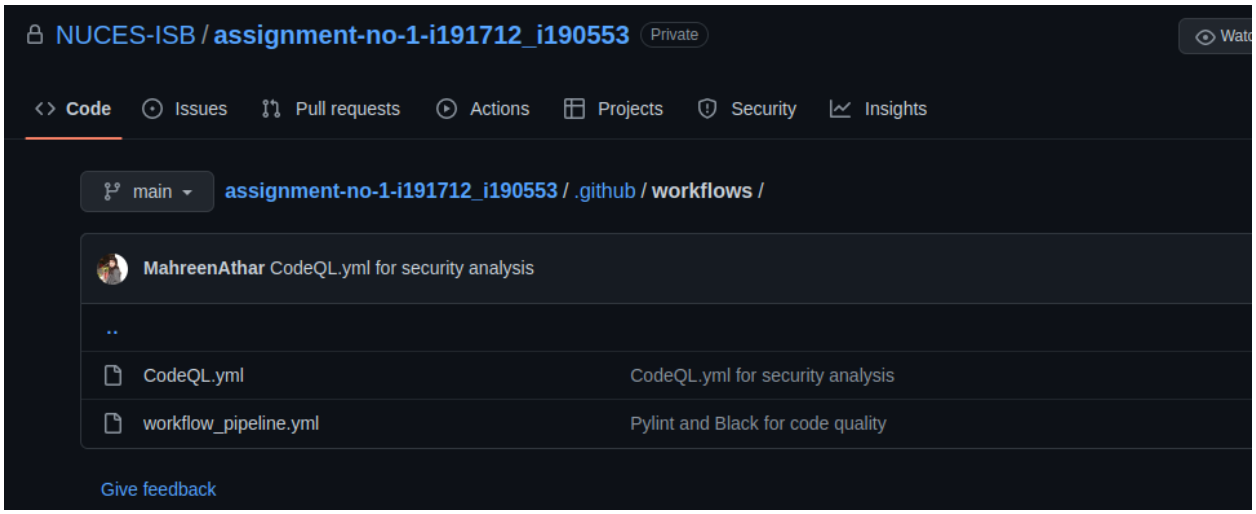
mkdir workflows

cd workdflows

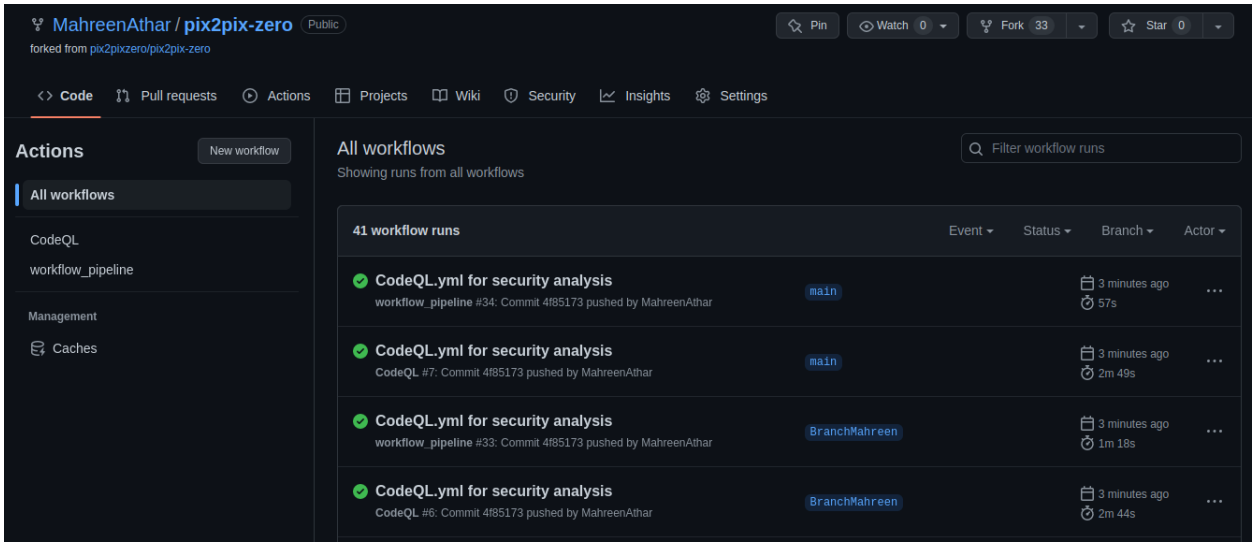
touch workflow_pipeline.yml

touch CodeQL.yml

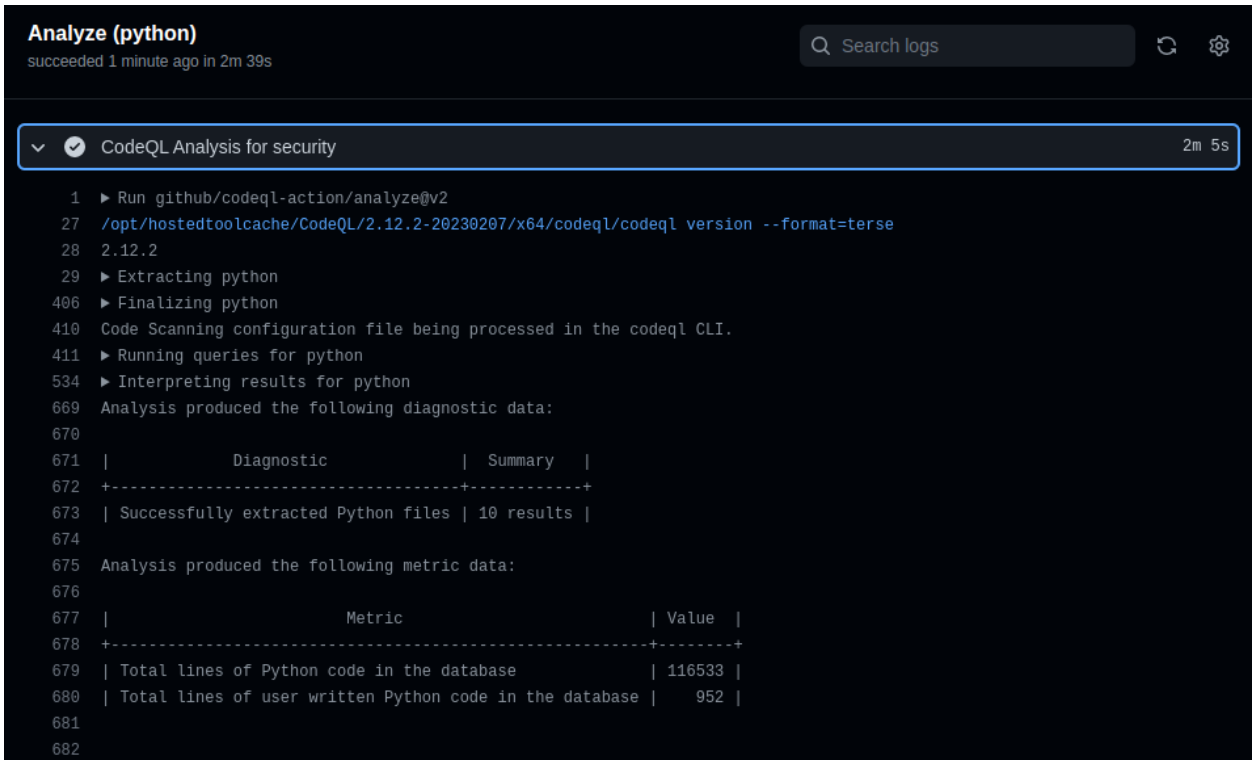




After the creation of these .yml files, we defined the workflow used for checking the quality of the code by using Pylint and Black in the file “workflow_pipeline.yml”. For security scanning and alerts related to our repository, we used CodeQL in the file “CodeQL.yml”. Both of these files can be found in our github repository. These workflows ran successfully in our repositories, as can be seen below.

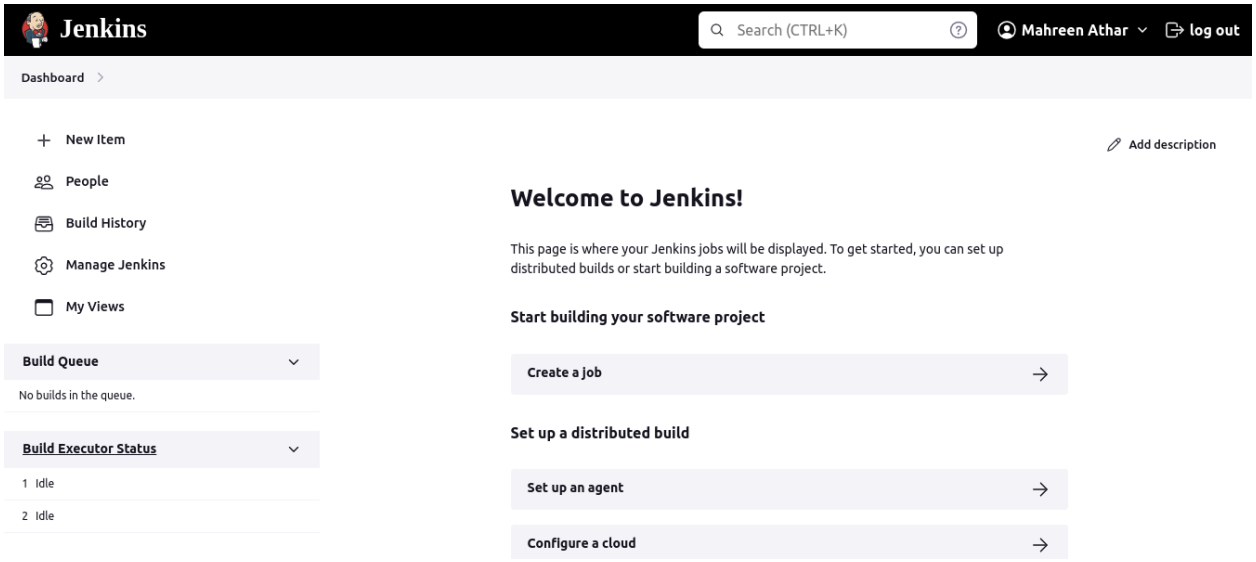


The CodeQL was used for the security analysis. The below screenshot shows the result from the code scanning and it shows that there are no security threats, alerts or leaks which means that we don't have to recode anything. The repository is fine.

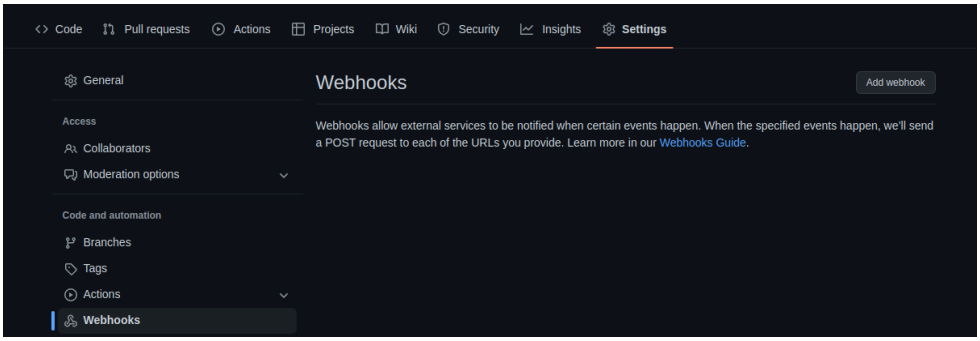


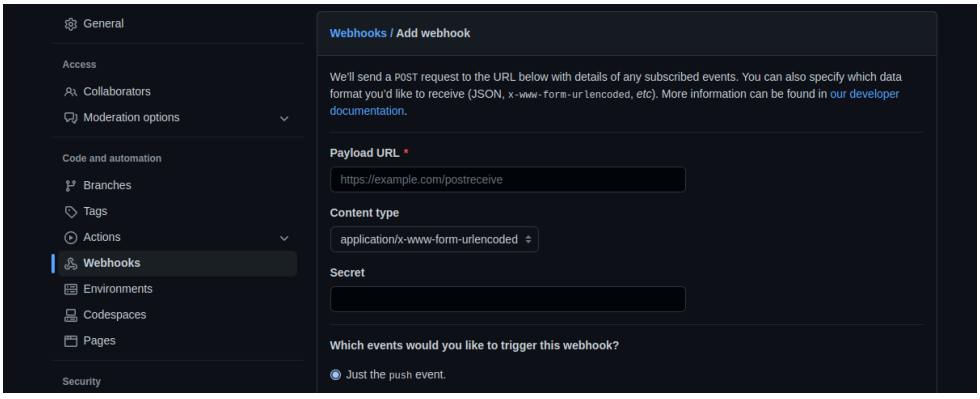
After the implementation of our above mentioned instructions, we were done with our github actions and we proceeded onto our work regarding Jenkins. The procedure to integrate Jenkins with Github can be found in the link below.

https://www.blazemeter.com/blog/how-to-integrate-your-github-repository-to-your-jenkins-project



First we go to 'Settings' on our main interface of the repository and then go into 'Webhooks' from where we create a webhook for our jenkins integration.





After these steps, we wil create a freestyle project and then use ‘push’ as teh trigger so anytime something is pushed onto the repository our job will be trigerred on Jenkins and it will automatically run.

Our Repository:
https://github.com/NUCES-ISB/assignment-no-1-i191712_i190553