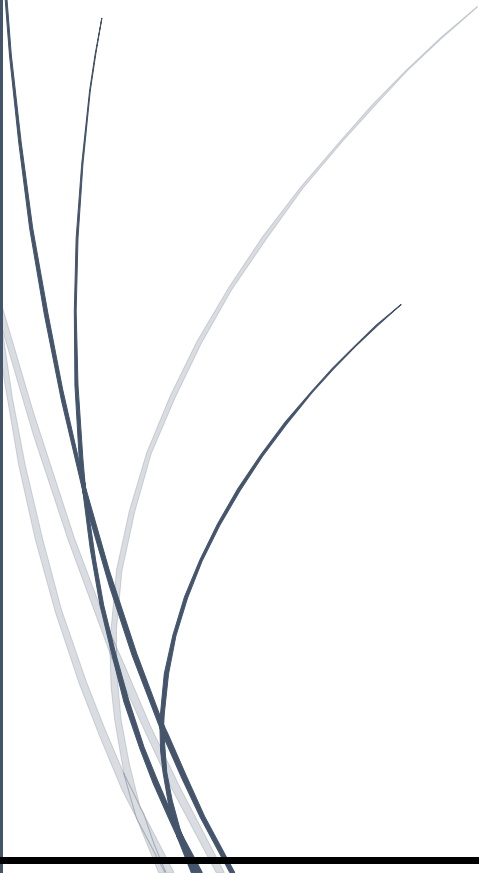


A dark blue vertical bar is on the left. A blue arrow points right from it, containing the date.

2/24/2023

MLops

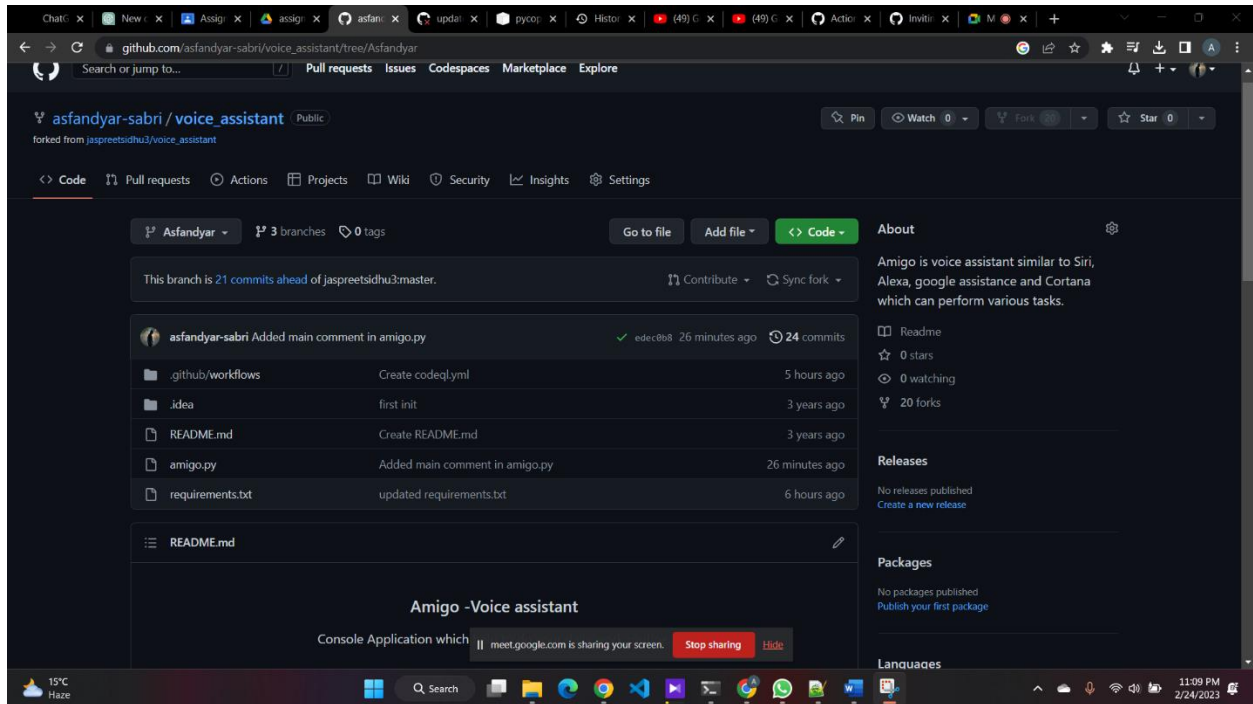
Assignment# 1

Several thin, curved lines in shades of blue and grey originate from the left side and curve upwards and to the right.

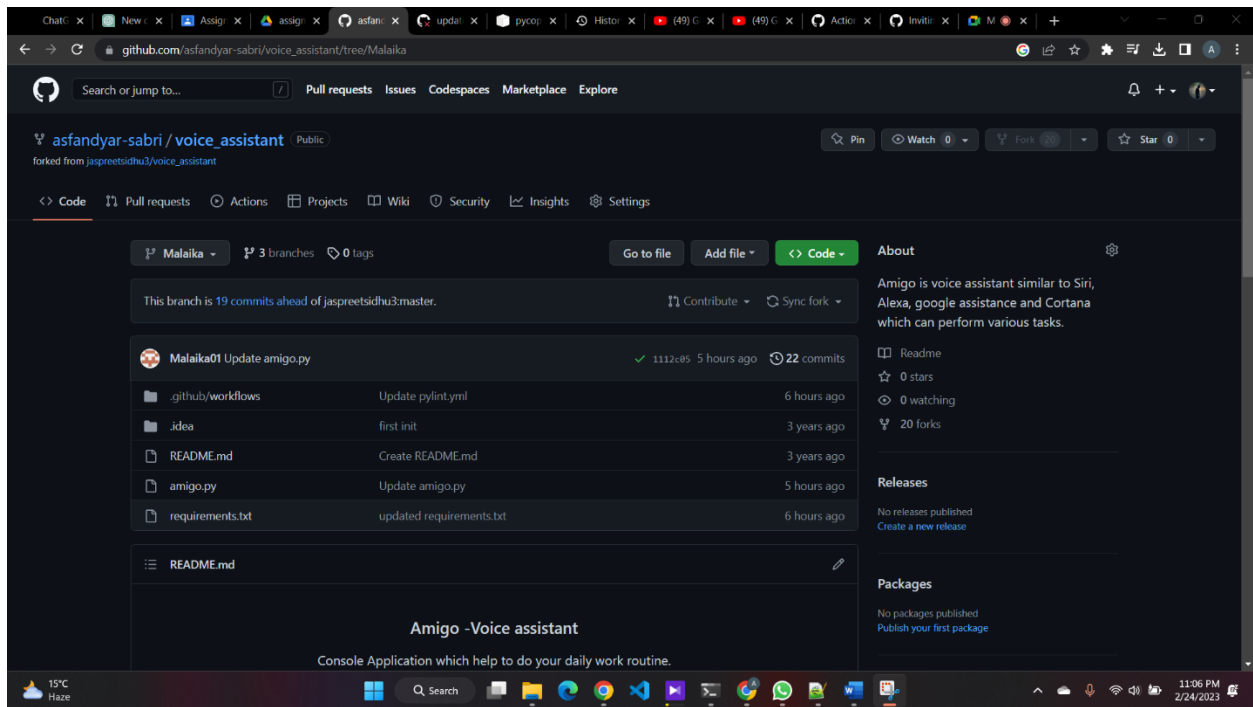
Asfandyar Sabri (19i-2187), Malaika Waheed (19i-0726)
CS, MLOPS-A

Repository Used: https://github.com/jaspreetsidhu3/voice_assistant

- **Create two branches, one for each member of the group. For each branch you have to do the following:**
 - *Asfandiyar Branch:*

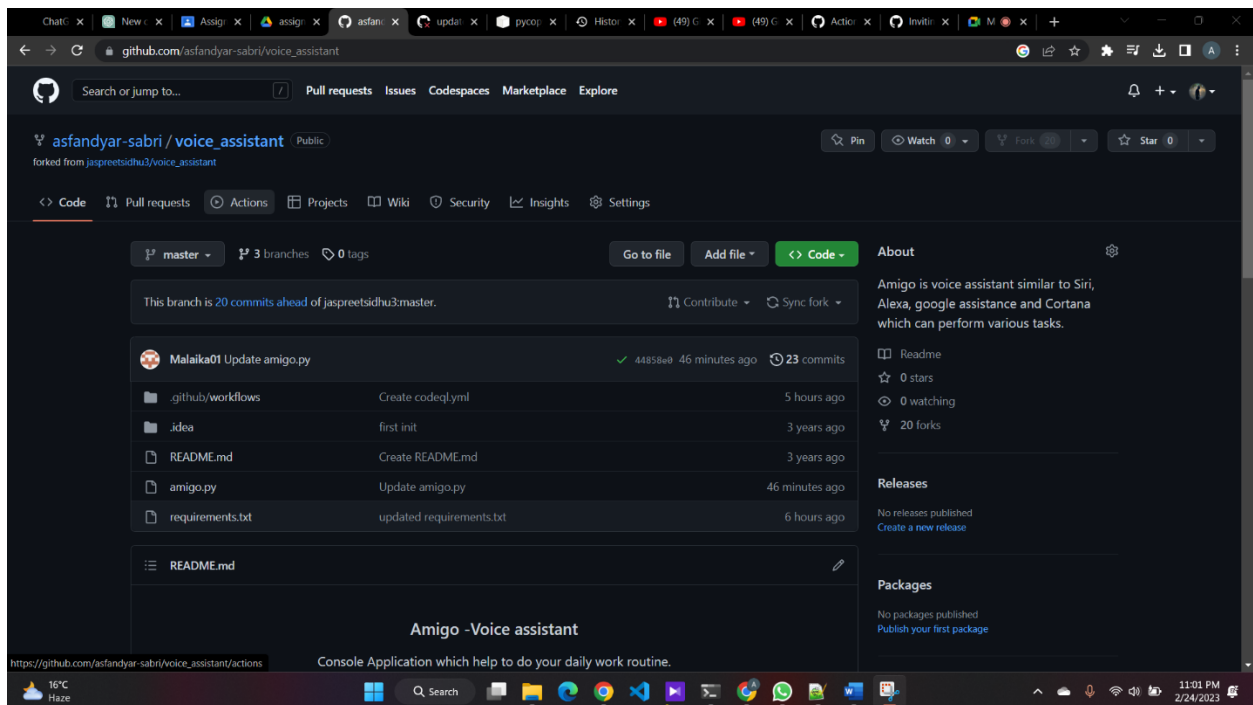


○ Malaika Branch:



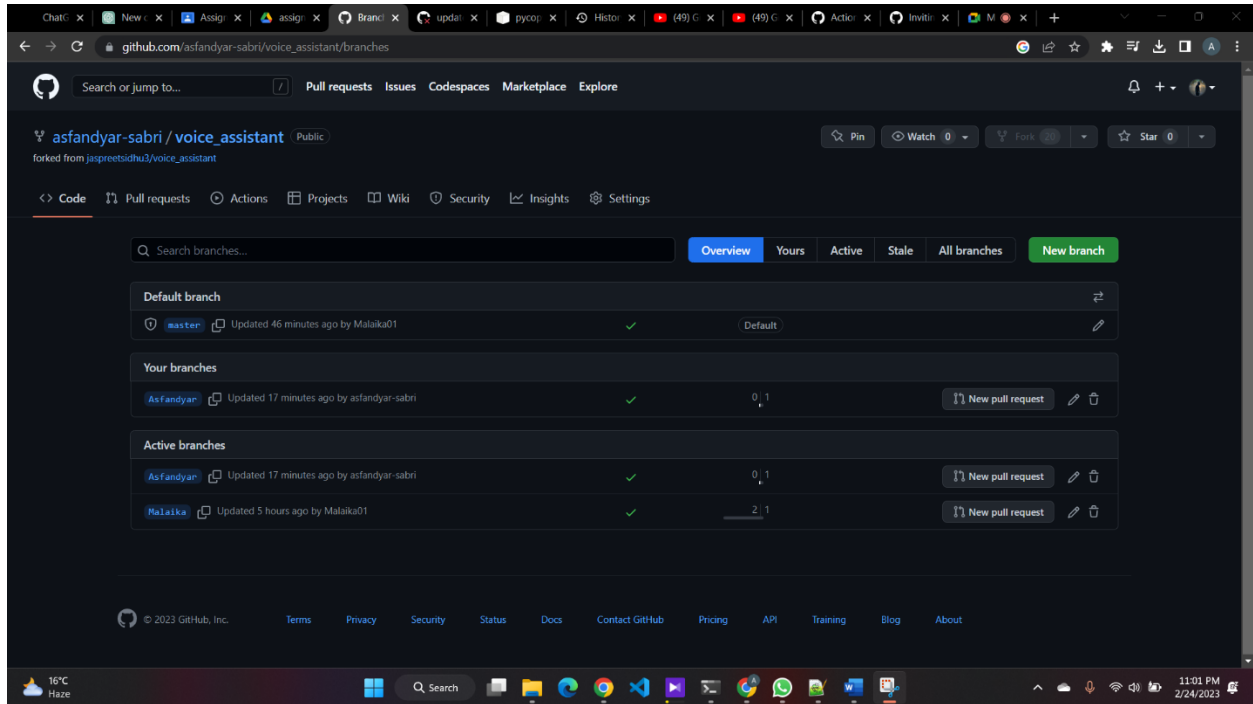
- Create a scaffolding for each branch. Note that the scaffolding of each branch can be different. It depends on the features you are planning to implement and the individual inspection of the source code of the repository.

Added requirements.txt in project



- Create a CI pipeline/workflow for the project you forked using GitHub Actions and Jenkins.

Created multiple branches and followed CI/CD flow



- The CI pipeline/workflow will include anything that is relevant to the project you forked. For example:
 - If it's a Python project, you will run pylint, black and so on

Yaml file

The screenshot shows a GitHub Actions workflow file named 'pylint.yml' in a dark-themed editor. The workflow is triggered on a 'push' event. It defines a job named 'build' that runs on 'ubuntu-latest'. The job includes a 'strategy' section with a 'matrix' for 'python-version' with values '3.8', '3.9', and '3.10'. The 'steps' section contains several actions: 'actions/checkout@v3', 'actions/setup-python@v3' (with a matrix-based python-version), 'actions/install-pythonaudio@v1', 'actions/install-dependencies@v1', and 'actions/analyze-code-with-pylint@v1'. The 'run' steps include updating apt, installing portaudio19-dev, pip install wheel, pip wheel PyAudio, pip install --upgrade pip, pip install -r requirements.txt, pip install pylint, and finally running 'pylint amigo.py' with various flags to disable specific rules.

```

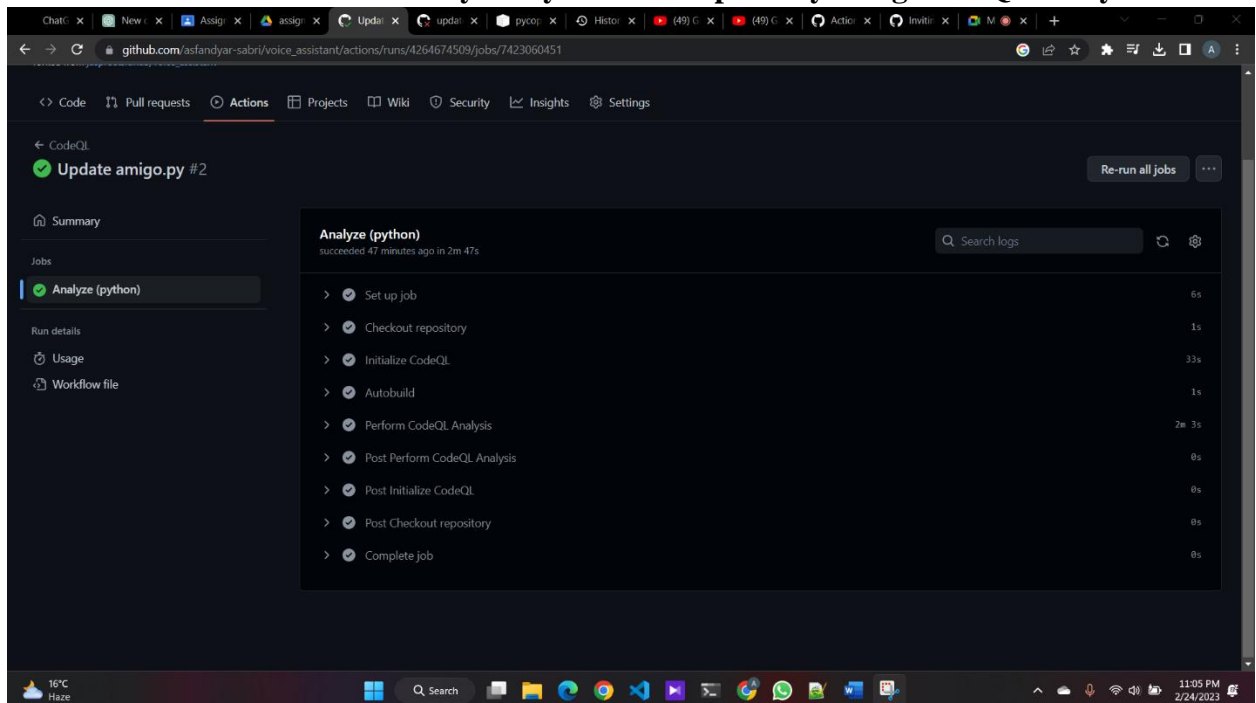
1 name: Pylint
2
3 on: [push]
4
5 jobs:
6   build:
7     runs-on: ubuntu-latest
8     strategy:
9       matrix:
10        python-version: ["3.8", "3.9", "3.10"]
11    steps:
12      - uses: actions/checkout@v3
13      - name: Set up Python ${{ matrix.python-version }}
14        uses: actions/setup-python@v3
15        with:
16          python-version: ${{ matrix.python-version }}
17      - name: Install PyAudio
18        run: |
19          sudo apt-get update
20          sudo apt-get install -y portaudio19-dev
21          pip install wheel
22          pip wheel PyAudio --wheel
23      - name: Install dependencies
24        run: |
25          pip install --upgrade pip
26          pip install -r requirements.txt
27          pip install pylint
28      - name: Analysing the code with pylint
29        run: |
30          pylint amigo.py --disable=C0301,C0303,C0103,C0114,C0116,C0411,M0621,W0718,M0104
  
```

Build/run/test results:

The screenshot shows the 'All workflows' page on GitHub Actions. The page displays a list of 19 workflow runs. The runs are filtered by 'All workflows'. The table shows the following runs:

Event	Status	Branch	Actor	Time
Added main comment in amigo.py	Success	Asfandyan	Asfandyan	18 minutes ago
Update amigo.py	Success	Asfandyan	Asfandyan	22 minutes ago
Update amigo.py	Success	master	Malaika01	47 minutes ago
Update amigo.py	Success	master	Malaika01	47 minutes ago
Create codeql.yml	Success	master	Malaika01	5 hours ago
Update amigo.py	Success	Malaika	Malaika01	5 hours ago
Update pylint.yml	Success	Malaika	Malaika01	5 hours ago
Update pylint.yml	Success	Asfandyan	Asfandyan	6 hours ago

- Create a workflow for the security analysis of the repository using CodeQL analysis



- Publish your findings of the code scan in one paragraph

Run `github/codeql-action/analyze@v2`

`27/opt/hostedtoolcache/CodeQL/2.12.2-20230207/x64/codeql/codeql
version --format=terse`

`282.12.2`

`29Extracting python`

`395Finalizing python`

`399Code Scanning configuration file being processed in the codeql
CLI.`

`400Running queries for python`

`523Interpreting results for python`

`658Analysis produced the following diagnostic data:`

`659`

`660| Diagnostic | Summary |`

`661+-----+-----+`

`662| Successfully extracted Python files | 1 result |`

[663](#)

[664](#)Analysis produced the following metric data:

[665](#)

[666](#)| Metric | Value |

[667](#)+-----+
-----+

[668](#)| Total lines of Python code in the database | 115657 |

[669](#)| Total lines of user written Python code in the database | 76
|

[670](#)

[671](#)

[672](#)/opt/hostedtoolcache/CodeQL/2.12.2-20230207/x64/codeql/codeql
database print-baseline
/home/runner/work/_temp/codeql_databases/python

[673](#)Counted a baseline of 76 lines of code for python.

[674](#)Counted a baseline of 76 lines of code for python.

[675](#)

[676](#)Cleaning up databases

[682](#)Uploading results

[686](#)/opt/hostedtoolcache/CodeQL/2.12.2-20230207/x64/codeql/codeql
database bundle /home/runner/work/_temp/codeql_databases/python -
-output=/home/runner/work/_temp/codeql_databases/python.zip --
name=python

[687](#)Creating bundle metadata for
/home/runner/work/_temp/codeql_databases/python...

[688](#)Creating zip file at
/home/runner/work/_temp/codeql_databases/python.zip.

[689](#)Waiting for processing to finish

Post Perform CodeQL Analysis

0s

Post Initialize CodeQL

0s

Post Checkout repository

0s

Complete job

0s

For Jenkins:

We tried attempting Jenkins too. There were a lot of installation issues. We also had plugin installation problems and then GitHub configuration issues. Lastly, we managed to do something and were not successful. Below, I'm attaching screenshot for your reference. Kindly have a look at it.

The screenshot shows the Jenkins Pipeline configuration interface. On the left is a sidebar with navigation options: Status (selected), Changes, Build Now, Configure, Delete Pipeline, Full Stage View, GitHub, Rename, and Pipeline Syntax. The main area is titled 'Pipeline Voice assistant'. It includes an 'Add description' link and a 'Disable Project' button. Below this is the 'Stage View' section, which contains a yellow message box stating: 'This Pipeline has run successfully, but does not define any stages. Please use the `stage` step to define some stages in this Pipeline.' At the bottom of the main area is the 'Permalinks' section.