CSI3025 Application Development and Deployment Architecture
LAB (L35+L36 slot)

Winter Semester 2023-24

LAB FAT

NAME: LAASYA OJASWINI BULUSU

REG. NO.: 20MIC0065

FACULTY: DR. MANOOV R.

Github repo: https://github.com/laasya-dev/ADDA-Lab-FAT.git

Question:

> Implement a CI/CD pipeline with the following real-world scenario:
>
> **Scenario:** You're building a Python web application.
>
> **Task:** Create a workflow that runs on push to the `main` branch, installs dependencies using `pip install`, and builds the application using a custom script (`build.sh`).

Steps:

Step 1: Create a Simple Python Web Application and name it ‘app.py’

app.py

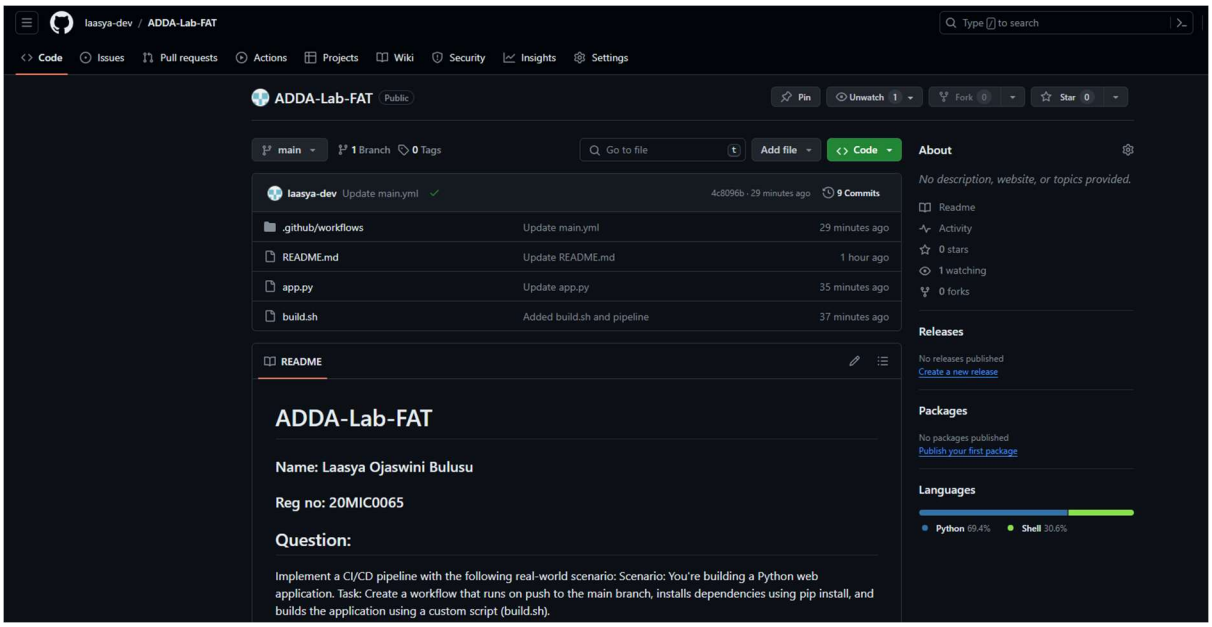
```python
from flask import Flask

app = Flask(__name__)

@app.route('/')
def hello():
    return 'Hello, World! Laasya'

if __name__ == '__main__':
    app.run(debug=True)
```

Step 2: Set up GitHub Repository and Push Code

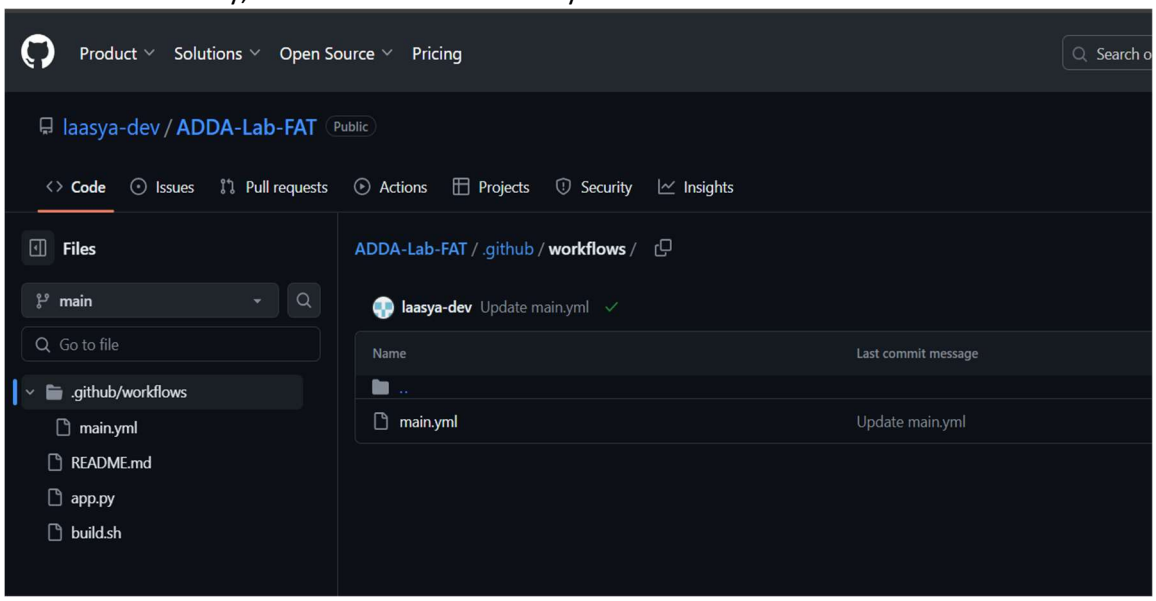


Step 3: Create a Custom Build Script and name it ‘build.sh’

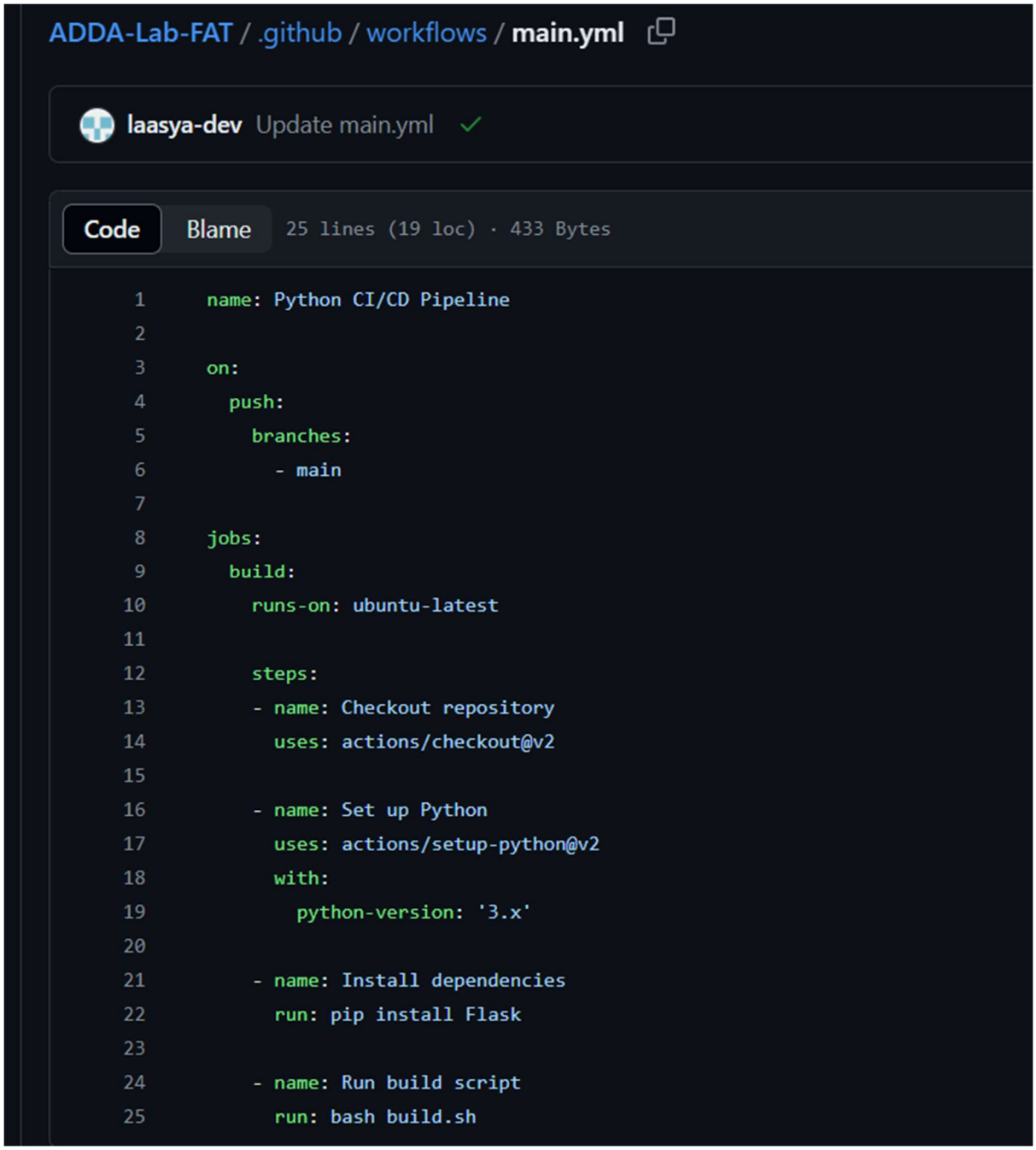
```
$ build.sh
1  #!/bin/bash
2
3  echo "Build script executed successfully"
4  chmod +x build.sh
```

Step 4: Set up CI/CD Pipeline with GitHub Actions

1. Create Workflow File: In the repository, create a directory named ‘.github/workflows’. Inside this directory, create a file named ‘main.yml’.

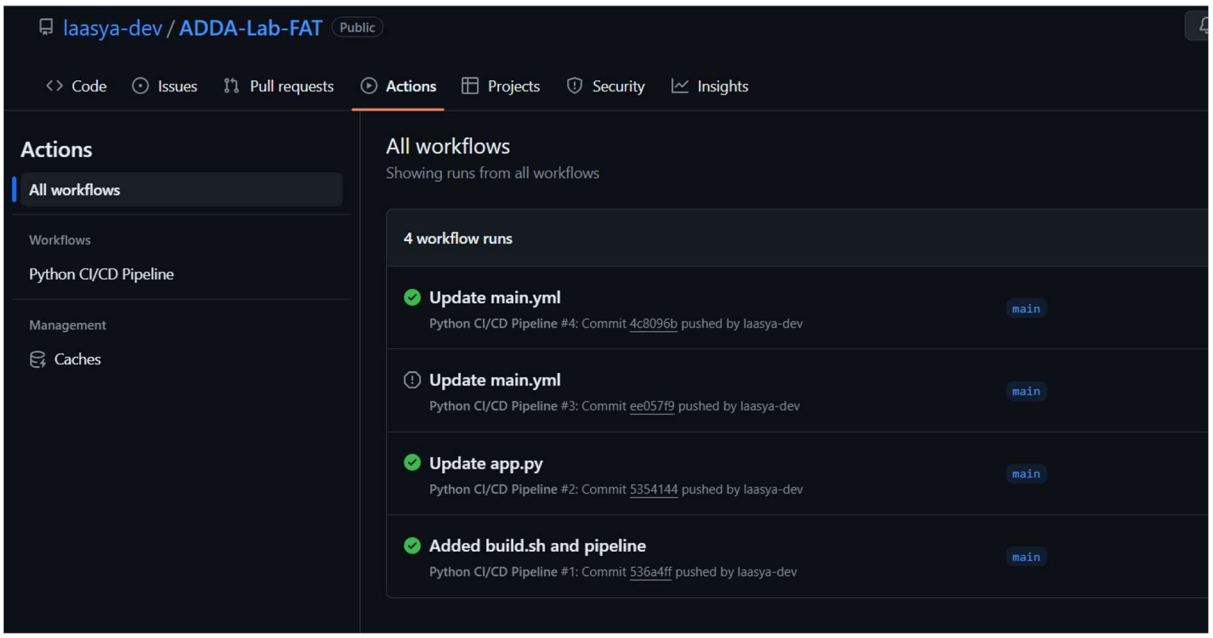


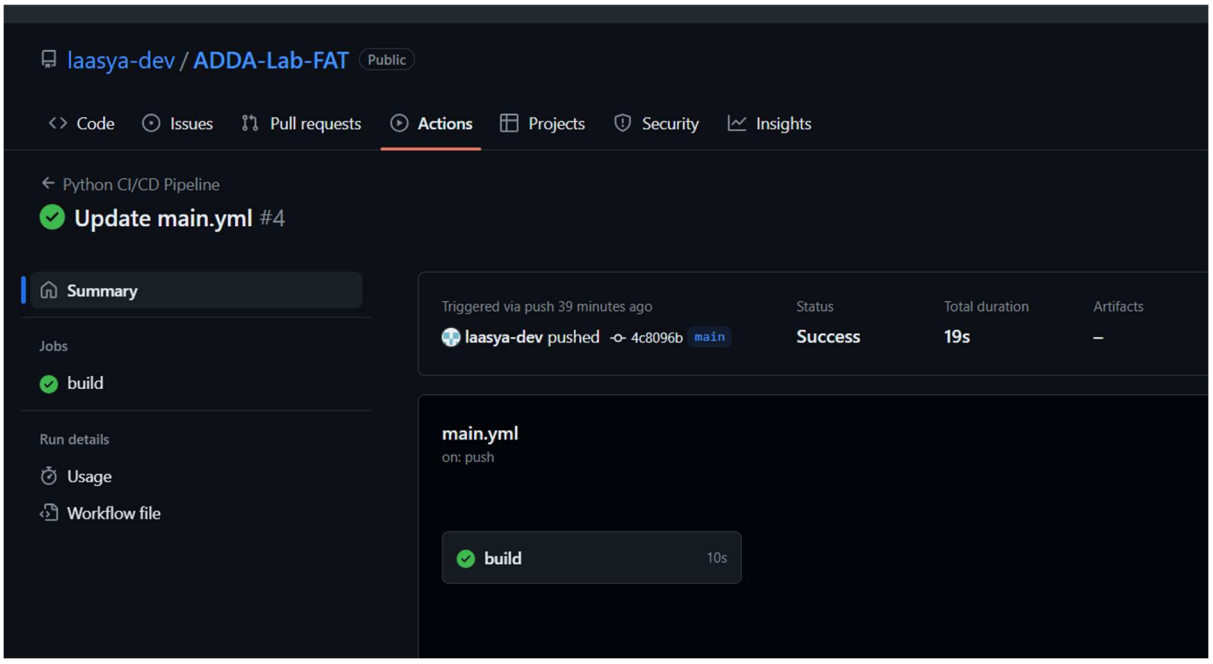
2. Define the workflow in ‘main.yml’ as follows:

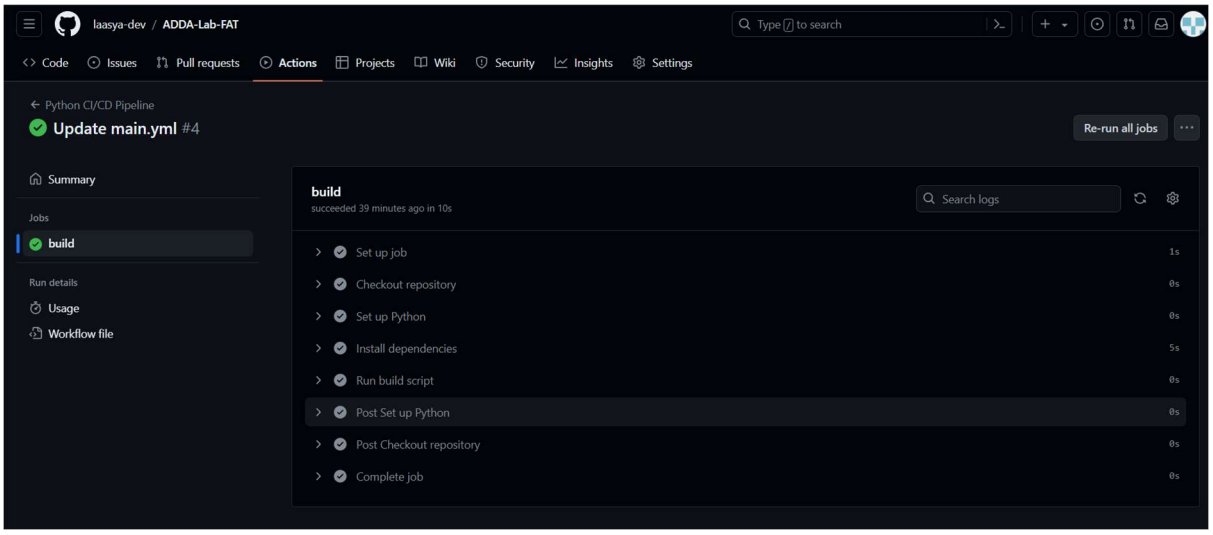


Step 5: Test the Workflow

1. Push Changes: Make any changes to your code and push them to the main branch on GitHub.
2. Check Workflow Status: Go to the "Actions" tab in your GitHub repository to view the status of the workflow.


laasya-dev / ADDA-Lab-FAT
Public
Code
Issues
Pull requests
Actions
Projects
Security
Insights
Actions
All workflows
Workflows
Python CI/CD Pipeline
Management
Caches
All workflows
Showing runs from all workflows
4 workflow runs
Update main.yml
Python CI/CD Pipeline #4: Commit 4c8096b pushed by laasya-dev
main
Update main.yml
Python CI/CD Pipeline #3: Commit ee057f9 pushed by laasya-dev
main
Update app.py
Python CI/CD Pipeline #2: Commit 5354144 pushed by laasya-dev
main
Added build.sh and pipeline
Python CI/CD Pipeline #1: Commit 536a4ff pushed by laasya-dev
main


laasya-dev / ADDA-Lab-FAT
Public
Code
Issues
Pull requests
Actions
Projects
Security
Insights
Python CI/CD Pipeline
Update main.yml #4
Summary
Jobs
build
Run details
Usage
Workflow file
Triggered via push 39 minutes ago
laasya-dev pushed 4c8096b main
Status
Success
Total duration
19s
Artifacts
–
main.yml
on: push
build
10s


laasya-dev / ADDA-Lab-FAT
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Python CI/CD Pipeline
Update main.yml #4
Re-run all jobs
Summary
Jobs
build
Run details
Usage
Workflow file
build
succeeded 39 minutes ago in 10s
Search logs
Set up job
1s
Checkout repository
0s
Set up Python
0s
Install dependencies
5s
Run build script
0s
Post Set up Python
0s
Post Checkout repository
0s
Complete job
0s