

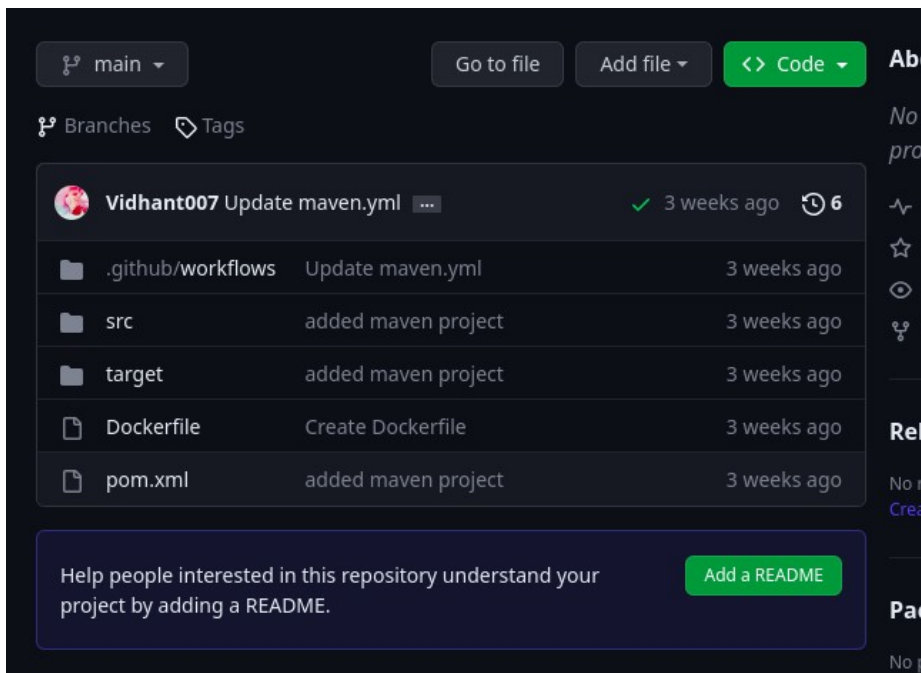
Experiment 4

Docker Build and Push using Github Actions

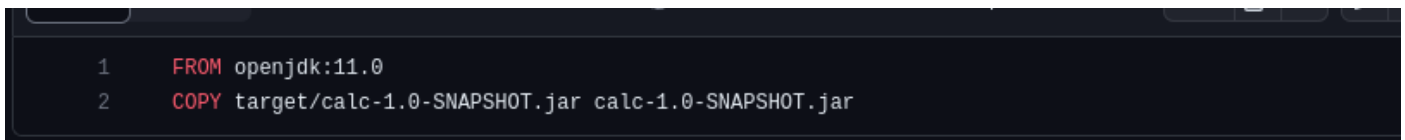
Objective : Setup a Github Actions workflow to automatically build a docker image from a dockerfile in your Github repository and push it to a container registry (eg. Docker hub)

Steps :

1. Create a Maven Project and Push the Project to Github Repository.

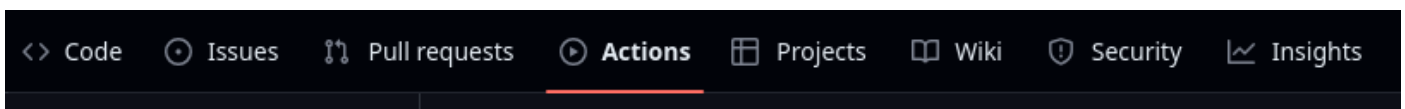


2. Create a dockerfile to build an image which contains the jar file of the maven build.

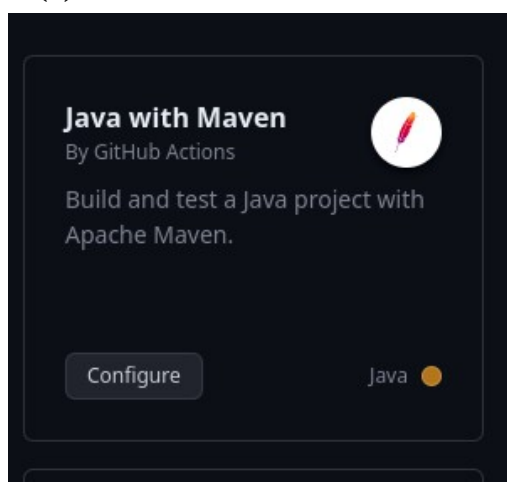


3. Set up Github Actions :

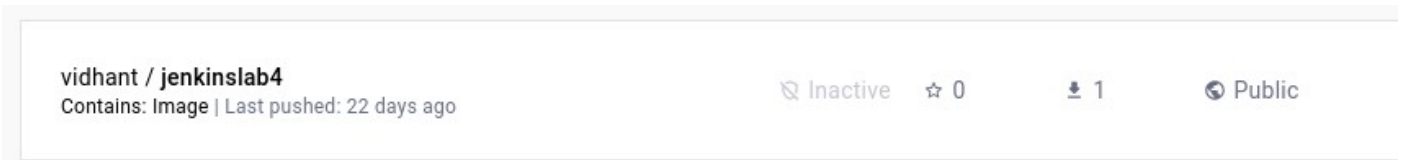
(a) Click on Actions tab



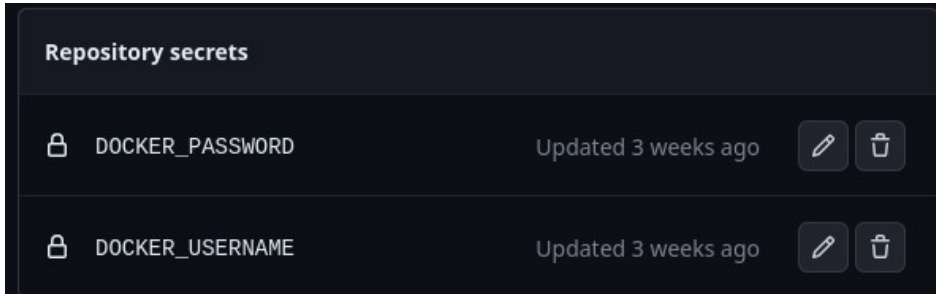
(b) Click on Java with Maven



4. Create Dockerhub registry.



5. In Github Repository, setup the docker username and passwords as secrets.



6. Configure maven.yaml file and commit changes.

Note : we will be using mr-smithers-excellent docker image that allows us to push our docker images from github actions to dockerhub repository.

-> set up username and password using github secrets.

```
name: Java CI with Maven

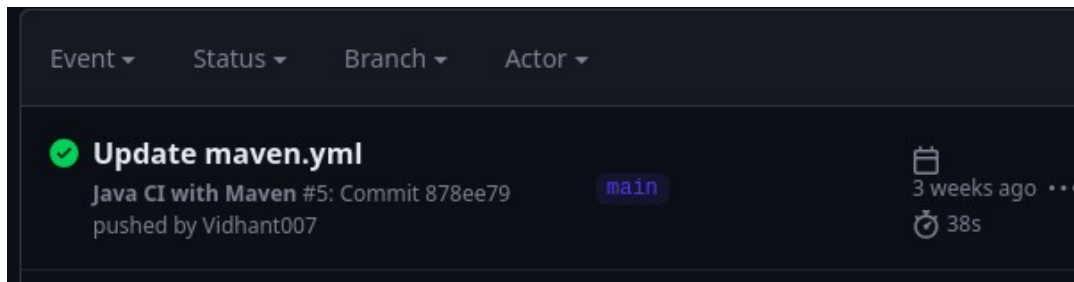
on:
  push:
    branches: [ "main" ]
  pull_request:
    branches: [ "main" ]

jobs:
  build:

    runs-on: ubuntu-latest

    steps:
      - uses: actions/checkout@v3
      - name: Set up JDK 17
        uses: actions/setup-java@v3
        with:
          java-version: '17'
          distribution: 'temurin'
          cache: maven
      - name: Build with Maven
        run: mvn -B package --file pom.xml
      - name: Docker Build and Push
        uses: mr-smithers-excellent/docker-build-push@v6
        with:
          image: vidhant/jenkinslab4
          registry: docker.io
          username: ${ secrets.DOCKER_USERNAME }}
          password: ${ secrets.DOCKER_PASSWORD }}
```

7. This will trigger an automated builds.



8. Now, the docker image is pushed to the dockerhub registry.



Docker commands

To push a new tag to this repository:

```
docker push vidhant/jenkinslab4:tagname
```

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
 main-878ee79		Image	22 days ago	22 days ago

[See all](#)

[Go to Advanced Image Management](#)