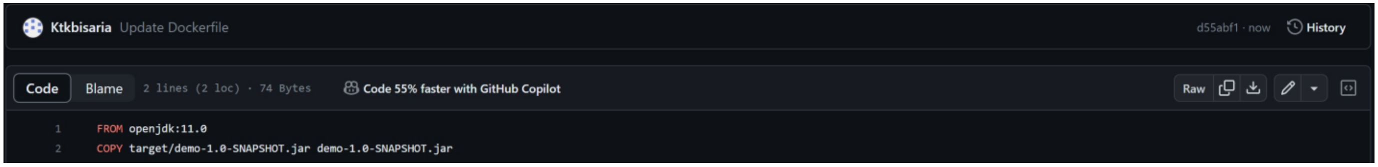
Experiment 4 Docker Build and Push using GitHub Actions

Objective: Setup a GitHub Actions workflow to automatically build a docker image from a docker file in your GitHub repository and push it to a container registry (e.g., Docker hub)

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

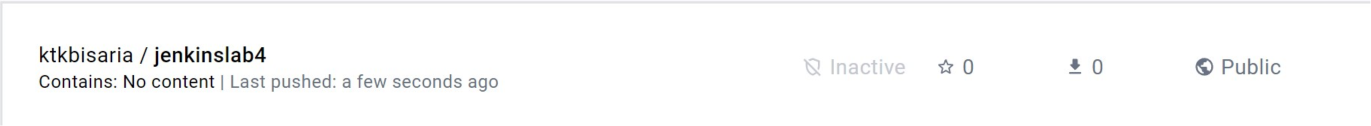
2. Create a docker file to build an image which contains the jar file of the maven build.



Ktkbisaria Update Dockerfile
d55abf1 · now
History
Code
Blame
2 lines (2 loc) · 74 Bytes
Code 55% faster with GitHub Copilot
Raw

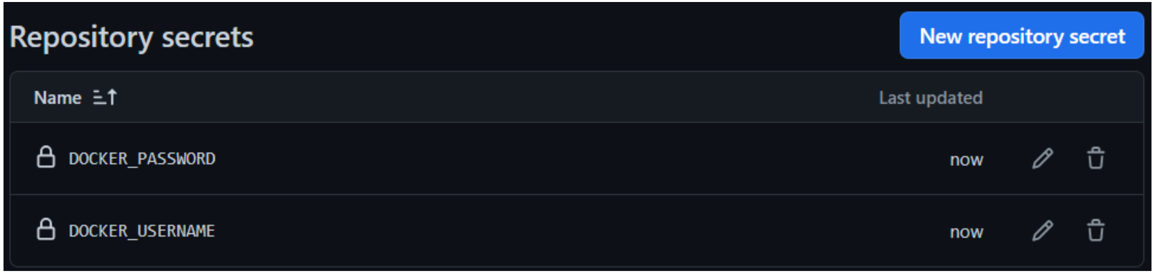
```
FROM openjdk:11.0
COPY target/demo-1.0-SNAPSHOT.jar demo-1.0-SNAPSHOT.jar
```

3. Create Docker hub registry.



4. In GitHub Repository, setup the docker username and passwords as secrets.

-> set up username and password using GitHub secrets.

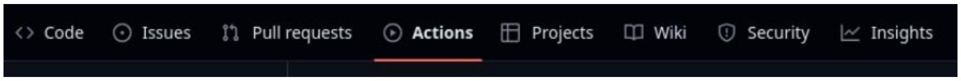


Repository secrets

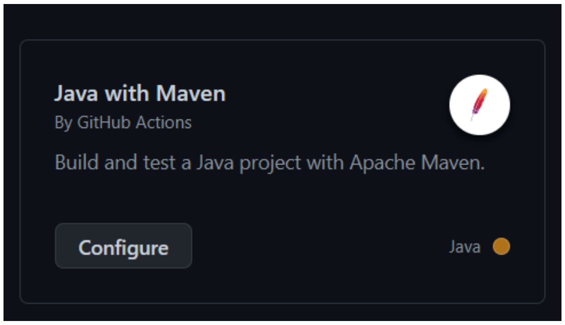
Name	Last updated
DOCKER_PASSWORD	now
DOCKER_USERNAME	now

5. Set up GitHub Actions:

(a) Click on Actions tab

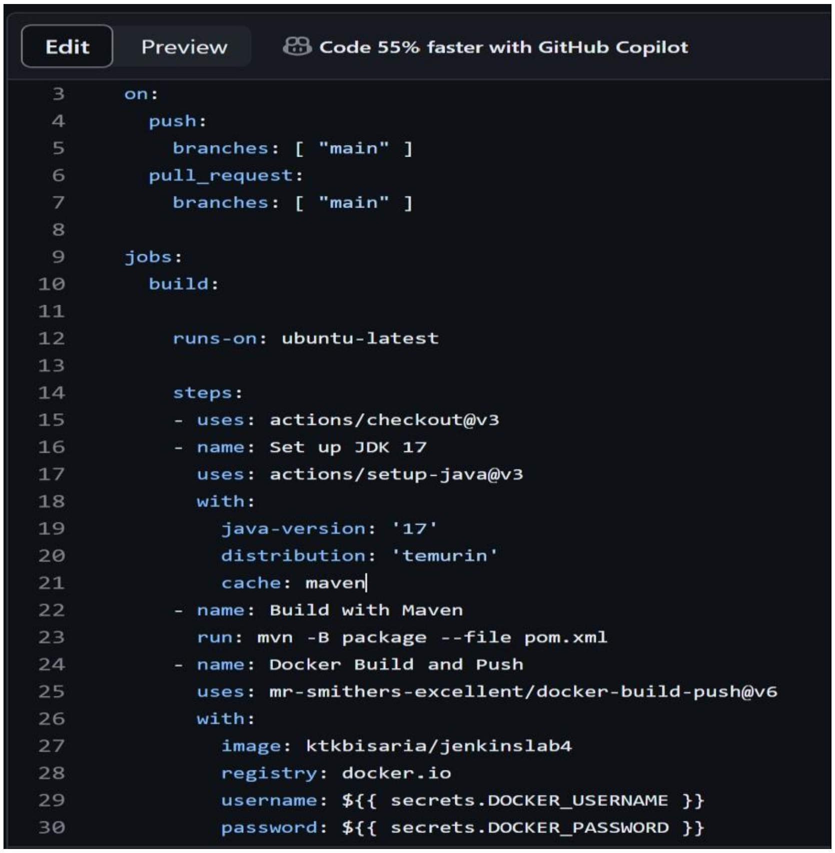


(b) Click on Java with Maven



6. Configure maven.yml 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 docker hub repository.



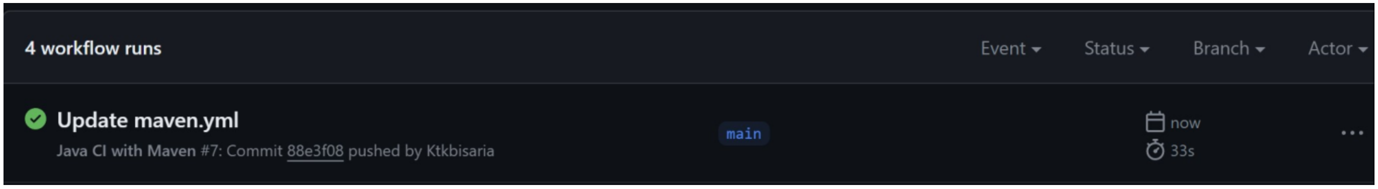
```yaml
on:
  push:
    branches: [ "main" ]
  pull_request:
    branches: [ "main" ]

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: ktkbisaria/jenkinslab4
        registry: docker.io
        username: ${{ secrets.DOCKER_USERNAME }}
        password: ${{ secrets.DOCKER_PASSWORD }}
```

7. This will trigger an automated build.

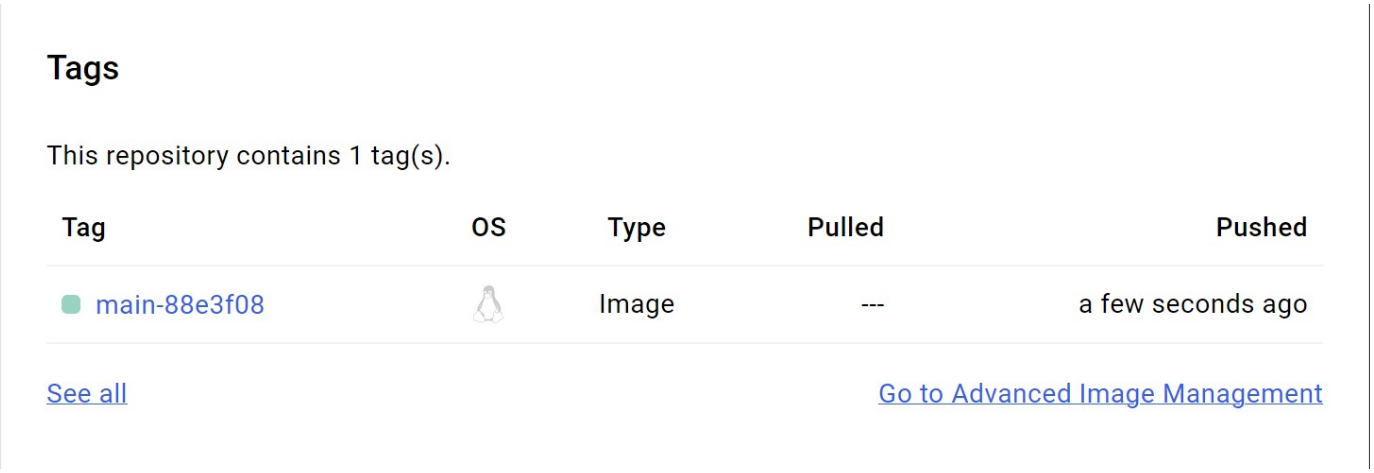


4 workflow runs

✓ Update maven.yml

Java CI with Maven #7: Commit 88e3f08 pushed by Ktkbisaria

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



Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
main-88e3f08	🐧	Image	---	a few seconds ago

See all

Go to Advanced Image Management