



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.


 Rudra-0-9	Update maven.yml	✓ 5be83b8 20 hours ago	🕒 16 commits
📁 .github/workflows	Update maven.yml		20 hours ago
📁 src	changes		yesterday
📁 target	changes		yesterday
📄 Dockerfile	Update Dockerfile		20 hours ago
📄 Jenkinsfile	jenkinsfile added		yesterday
📄 pom.xml	first commit		2 days ago

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


```
Code Blame 2 lines (2 loc) · 78 Bytes  Code 55% faster with GitHub Copilot
```

```
1 FROM openjdk:11.0
2 COPY target/simple-1.0-SNAPSHOT.jar simple-1.0-SNAPSHOT.jar
```

3. Create Docker hub registry.

 rudra925 / lab4

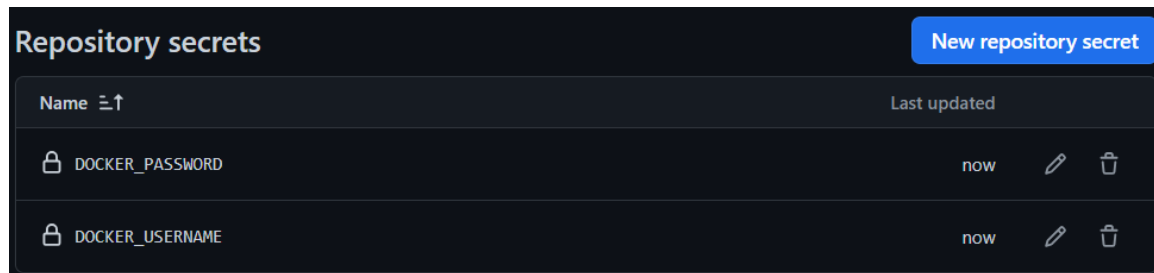
Description

This repository does not have a description 

🕒 Last pushed: a few seconds ago

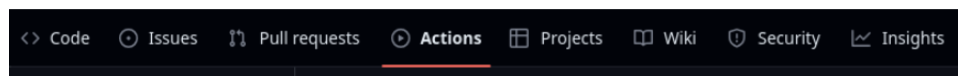
4. In GitHub Repository, setup the docker username and passwords as secrets.

-> set up username and password using GitHub secrets.

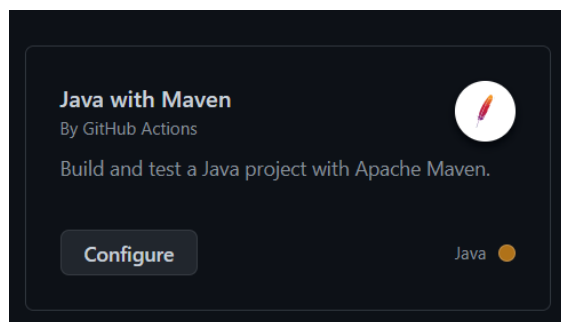


5. Set up GitHub Actions:

(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.

```
simplemaven / .github / workflows / maven.yml
Code Blame 38 lines (32 loc) · 1.1 KB Code 55% faster with GitHub Copilot
6 # separate terms of service, privacy policy, and support
7 # documentation.
8
9 name: Java CI with Maven
10
11 on:
12   push:
13     branches: [ "main" ]
14   pull_request:
15     branches: [ "main" ]
16
17 jobs:
18   build:
19
20     runs-on: ubuntu-latest
21
22     steps:
23     - uses: actions/checkout@v3
24     - name: Set up JDK 17
25       uses: actions/setup-java@v3
26       with:
27         java-version: '17'
28         distribution: 'temurin'
29         cache: maven
30     - name: Build with Maven
31       run: mvn -B package --file pom.xml
32     - name: Docker Build and Push
33       uses: mr-smithers-excellent/docker-build-push@v6
34       with:
35         image: rudra925/lab4
36         registry: docker.io
37         username: ${ secrets.DOCKER_USERNAME }}
38         password: ${ secrets.DOCKER_PASSWORD }}
```





7. This will trigger an automated build.

6 workflow runs				Event ▾	Status ▾	Branch ▾	Actor ▾
<div><div>✔</div>Update maven.yml</div> <div>Java CI with Maven #10: Commit 5be83b8 pushed by Rudra-0-9</div>						main	<div><div>📅 now</div><div>🕒 28s</div></div> <div>⋮</div>

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

Tags

This repository contains 2 tag(s).

Tag	OS	Type	Pulled	Pushed
 main-5be83b8		Image	---	in 5 hours
 main-96db201		Image	---	in 5 hours

[See all](#)

[Go to Advanced Image Management](#)
