Experiment 3

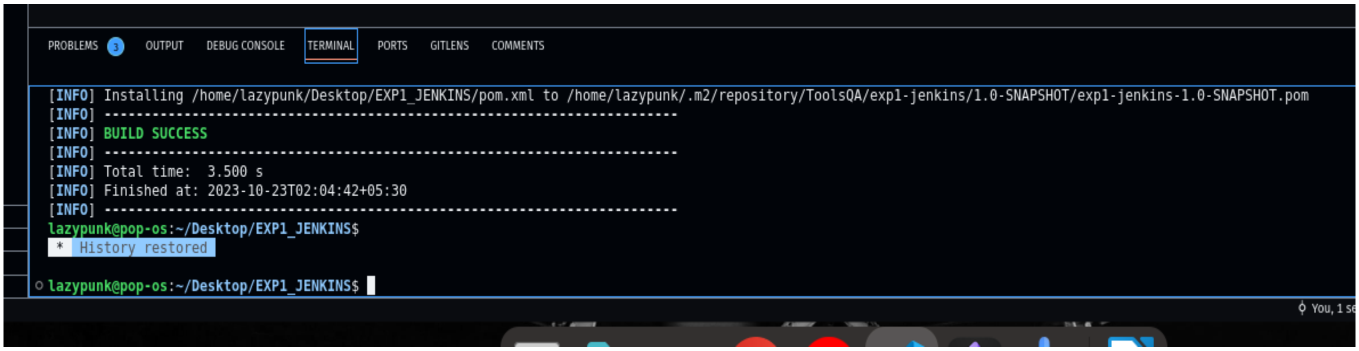
Maven Build using GitHub Actions

Aim

Set up a GitHub Actions workflow to automatically build a Maven project whenever changes are pushed to a GitHub repository.

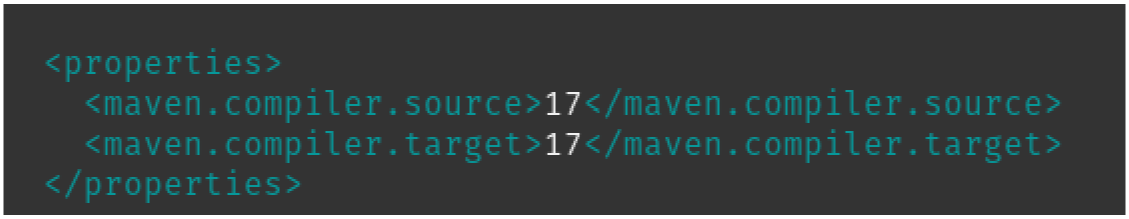
Steps

1. Create a maven project
   a. Create the project



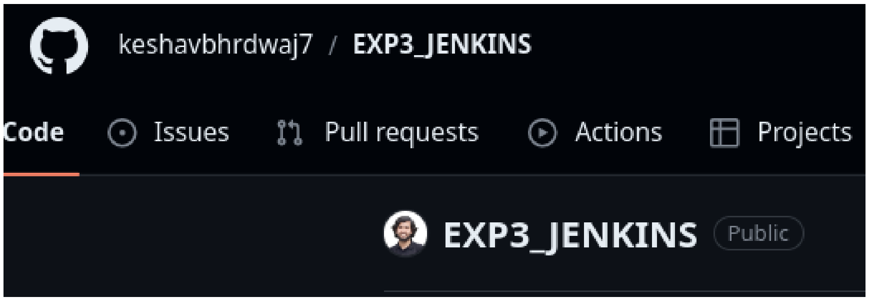
```
[INFO] Installing /home/lazypunk/Desktop/EXP1_JENKINS/pom.xml to /home/lazypunk/.m2/repository/ToolsQA/exp1-jenkins/1.0-SNAPSHOT/exp1-jenkins-1.0-SNAPSHOT.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.500 s
[INFO] Finished at: 2023-10-23T02:04:42+05:30
[INFO] ------------------------------------------------------------------------
lazypunk@pop-os:~/Desktop/EXP1_JENKINS$
 *  History restored

lazypunk@pop-os:~/Desktop/EXP1_JENKINS$
```

   b. Configure the pom.xml



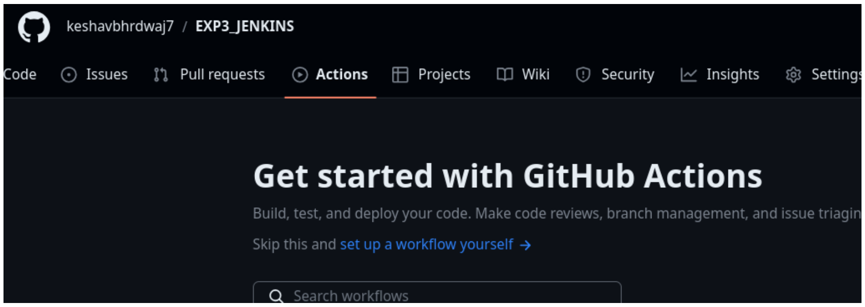
```
<properties>
  <maven.compiler.source>17</maven.compiler.source>
  <maven.compiler.target>17</maven.compiler.target>
</properties>
```

2. Create a Git Repository



3. Setup GitHub workflow for the project

   a. On GitHub repository, Go to Actions tab

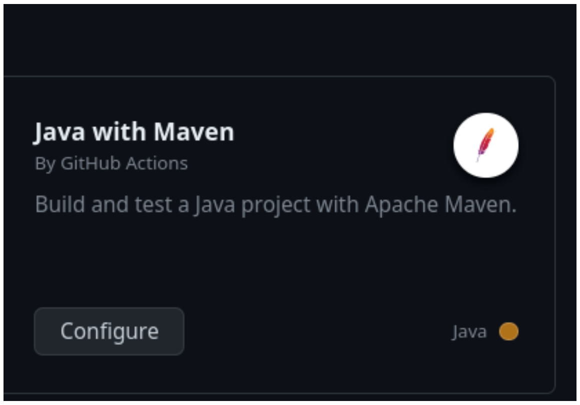


Get started with GitHub Actions

Build, test, and deploy your code. Make code reviews, branch management, and issue triagin

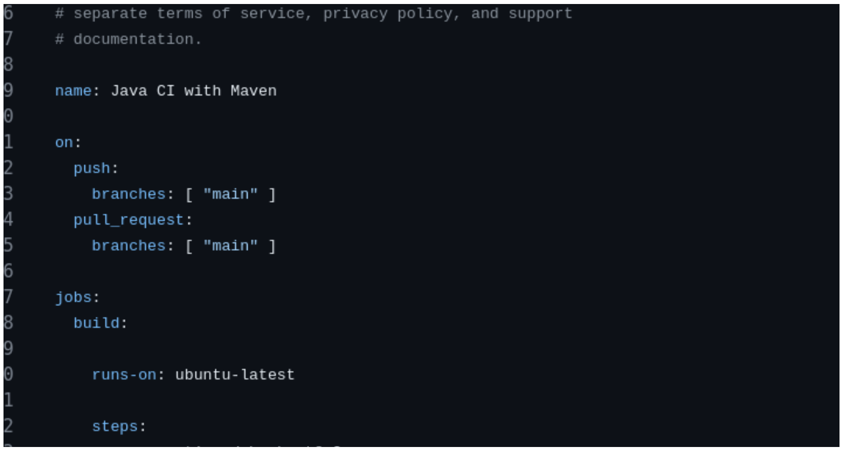
Skip this and set up a workflow yourself →

   b. Select Java with Maven and click on Configure



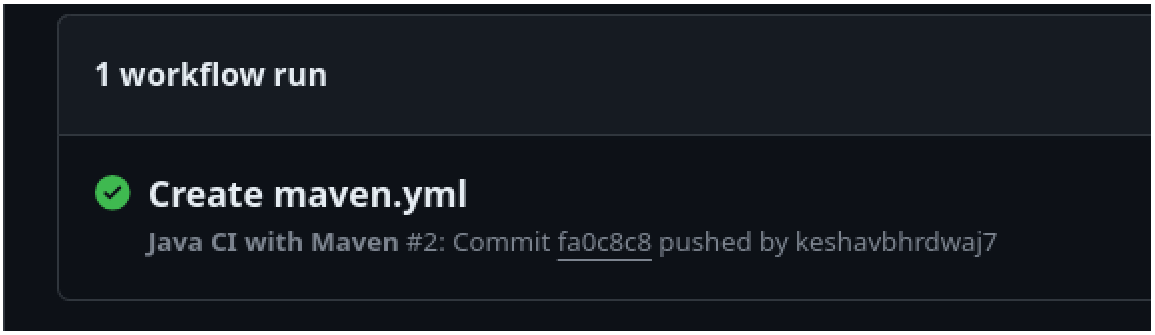
Build and test a Java project with Apache Maven.

   c. Configure the maven.yml file & commit the changes



```
# separate terms of service, privacy policy, and support
# documentation.

name: Java CI with Maven

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

jobs:
  build:

    runs-on: ubuntu-latest

    steps:
```

d. An automatic build will be triggered

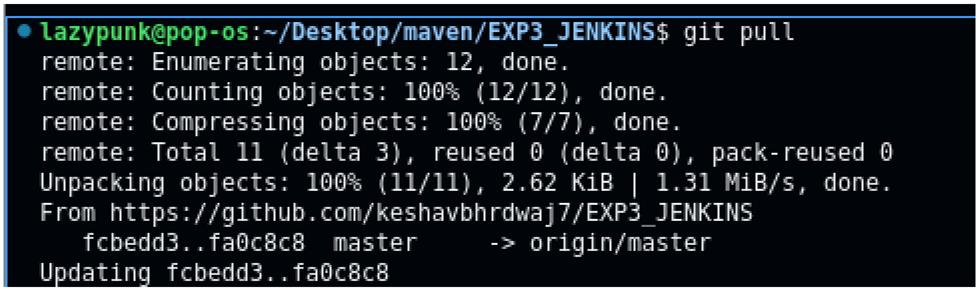


1 workflow run

Create maven.yml

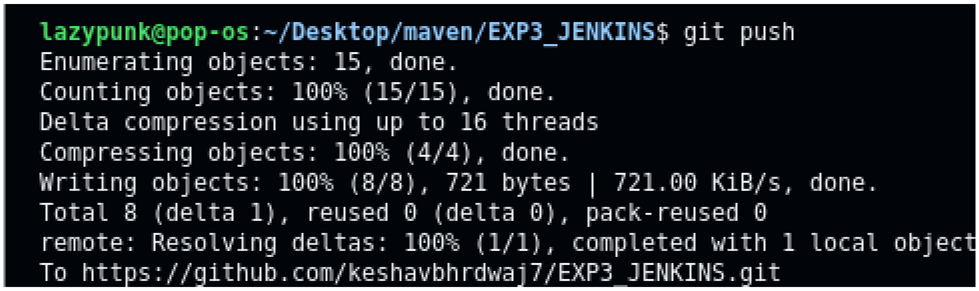
Java CI with Maven #2: Commit fa0c8c8 pushed by keshavbhrdwaj7

5. Pull the updated code on local machine



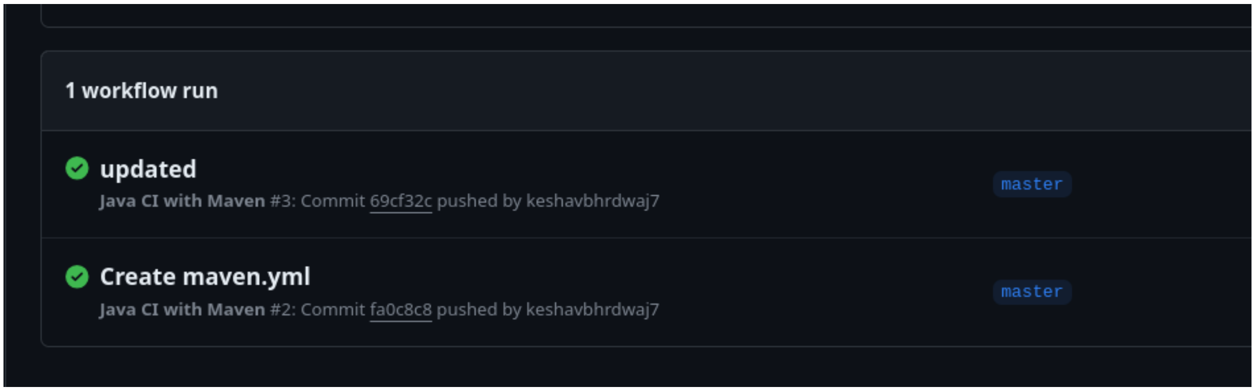
```
lazypunk@pop-os:~/Desktop/maven/EXP3_JENKINS$ git pull
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 11 (delta 3), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (11/11), 2.62 KiB | 1.31 MiB/s, done.
From https://github.com/keshavbhrdwaj7/EXP3_JENKINS
   fcbedd3..fa0c8c8  master     -> origin/master
Updating fcbedd3..fa0c8c8
```

6. Update the source code and push it on GitHub



```
lazypunk@pop-os:~/Desktop/maven/EXP3_JENKINS$ git push
Enumerating objects: 15, done.
Counting objects: 100% (15/15), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (8/8), 721 bytes | 721.00 KiB/s, done.
Total 8 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object
To https://github.com/keshavbhrdwaj7/EXP3_JENKINS.git
```

7. Another automatic build will be triggered



1 workflow run

updated

Java CI with Maven #3: Commit 69cf32c pushed by keshavbhrdwaj7

Create maven.yml

Java CI with Maven #2: Commit fa0c8c8 pushed by keshavbhrdwaj7