# 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] project created from Old (1.x) Archetype in dir: /home/ayroid/Documents/Work/College/SEM5/Subjects/cicd/lab/Hite
shSir/exp2/exp2
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.820 s
[INFO] Finished at: 2023-09-12T10:53:39+05:30
[INFO] ------------------------------------------------------------------------
→ exp2 
```

    b. Create a package DevOps inside src/main/java/ and add App.java file

```
→ CICD-EXP3 git:(master) cd src/main/java/DevOps
→ DevOps git:(master) cat App.java
package DevOps;

public class App {
    public void greetings() {
        System.out.println("Hello World!");
    }

    public static void main(String[] args) {
        App app = new App();
        app.greetings();
    }
}
→ DevOps git:(master) 
```
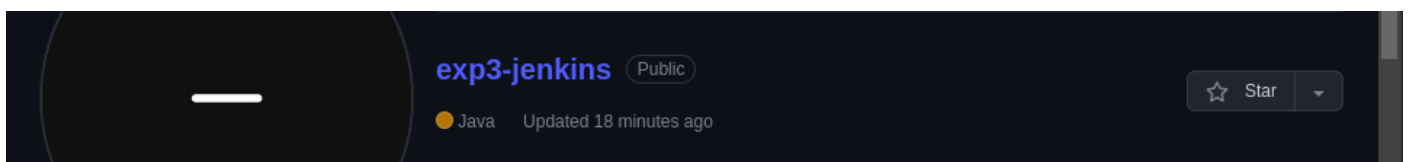
    c. Configure the pom.xml

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

2. Create a Git Repository

**exp3-jenkins** (Public)

● Java   Updated 18 minutes ago

☆ Star  ▼

## 3. Commit and Push the changes on GitHub

```
→ DevOps git:(master) git add .
→ DevOps git:(master) x git commit -m "Initial Commit"
[master 5c76713] Initial Commit
 1 file changed, 1 insertion(+), 5 deletions(-)
→ DevOps git:(master) x git push
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
```

## 4. Setup GitHub workflow for the project
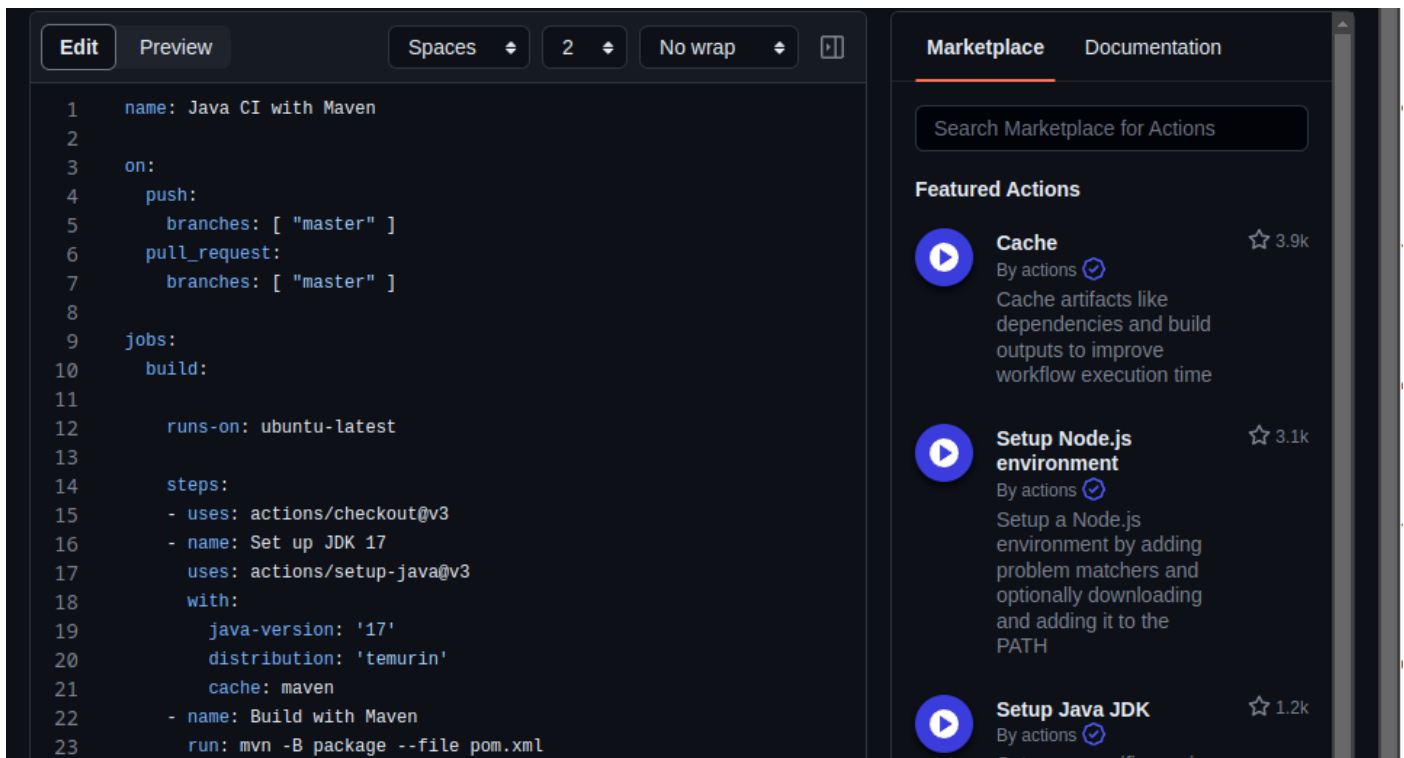
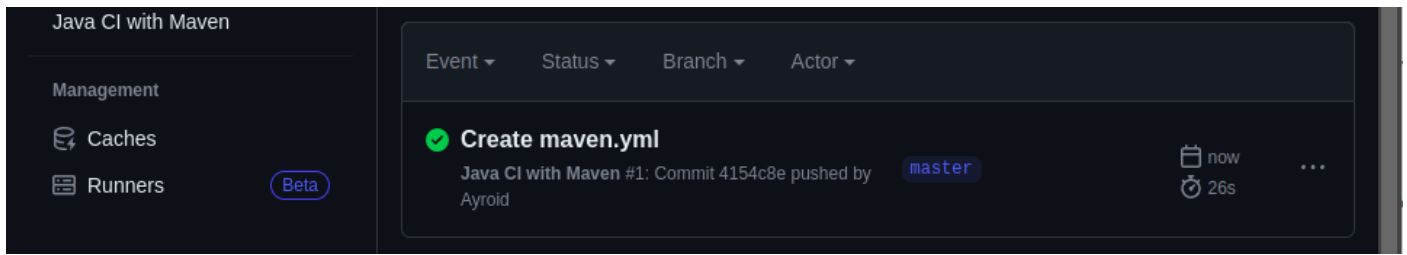   a.  On GitHub repository, Go to Actions tab
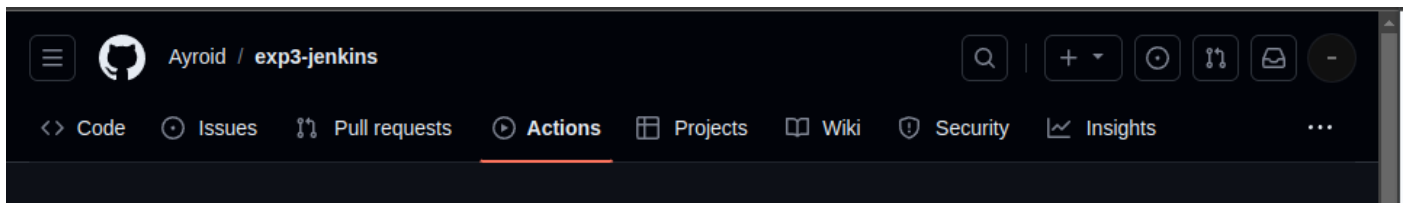


   b.  Select Java with Maven and click on Configure



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

d. An automatic build will be triggered



## 5. Pull the updated code on local machine

```
→ CICD-EXP3 git:(master) ✗ git pull
Updating 5c76713..4154c8e
Fast-forward
 .github/workflows/maven.yml | 23 ++++++++++++++++++++++++
 1 file changed, 23 insertions(+)
 create mode 100644 .github/workflows/maven.yml
→ CICD-EXP3 git:(master) ✗ 
```

## 6. Update the source code and push it on GitHub

```
→ CICD-EXP3 git:(master) ✗ git add .
→ CICD-EXP3 git:(master) ✗ git commit -m "Updated Source Code"
[master 24e3edf] Updated Source Code
 3 files changed, 10 insertions(+), 2 deletions(-)
→ CICD-EXP3 git:(master) git push
Enumerating objects: 23, done.
Counting objects: 100% (23/23), done.
```

## 7. Another automatic build will be triggered