

TASK 5

Clone the Git Repository

```
git clone https://github.com/Jervinjeno/spring-framework
cd spring-framework
git remote set-url origin https://github.com/avi11204/spring-framework.git
git push origin main
```

Install Maven

```
sudo apt update
sudo apt install maven -y
mvn -version

If outdated, install the latest version:
sudo apt remove maven -y
cd /opt
sudo wget https://downloads.apache.org/maven/maven-3/3.9.6/binaries/apache-maven-3.9.6-bin.tar.gz
sudo tar -xvzf apache-maven-3.9.6-bin.tar.gz
sudo mv apache-maven-3.9.6 /opt/maven
echo 'export M2_HOME=/opt/maven' | sudo tee -a /etc/profile.d/maven.sh
echo 'export PATH=$M2_HOME/bin:$PATH' | sudo tee -a /etc/profile.d/maven.sh
source /etc/profile.d/maven.sh
mvn -version

Ensure the correct symlink:
sudo ln -s /opt/maven/bin/mvn /usr/bin/mvn
```

Build the Project with Maven

```
cd /var/lib/jenkins/workspace/Spring-framework
mvn clean package -DskipTests
```

Set Up Jenkins Pipeline

```
Jenkinsfile:
pipeline {
    agent any
```

```
environment {  
    IMAGE_NAME = "avanthikha/my-app"  
    REGISTRY = "docker.io"  
    DOCKER_USER = "avanthikha"  
    DOCKER_PASS = docker-hub-password  
}
```

```
stages {  
    stage('Checkout Code') {  
        steps {  
            git url: 'https://github.com/avi11204/spring-framework.git', branch: 'main'  
        }  
    }  
  
    stage('Build Docker Image') {  
        steps {  
            sh "docker build -t $IMAGE_NAME:latest ."  
        }  
    }  
  
    stage('Login to Docker Registry') {  
        steps {  
            sh 'echo $DOCKER_PASS | docker login -u $DOCKER_USER --password-stdin'  
        }  
    }  
  
    stage('Push Image to Docker Registry') {  
        steps {  
            sh "docker push $IMAGE_NAME:latest"  
        }  
    }  
}
```

```

    }

    post {
        success { echo 'Pipeline executed successfully!' }
        failure { echo 'Pipeline failed! Check the logs for errors.' }
    }
}

```

Fix Permissions for Jenkins

```

sudo chown -R jenkins:jenkins /var/lib/jenkins/workspace/Spring-framework
sudo chmod -R 775 /var/lib/jenkins/workspace/Spring-framework
sudo systemctl restart jenkins

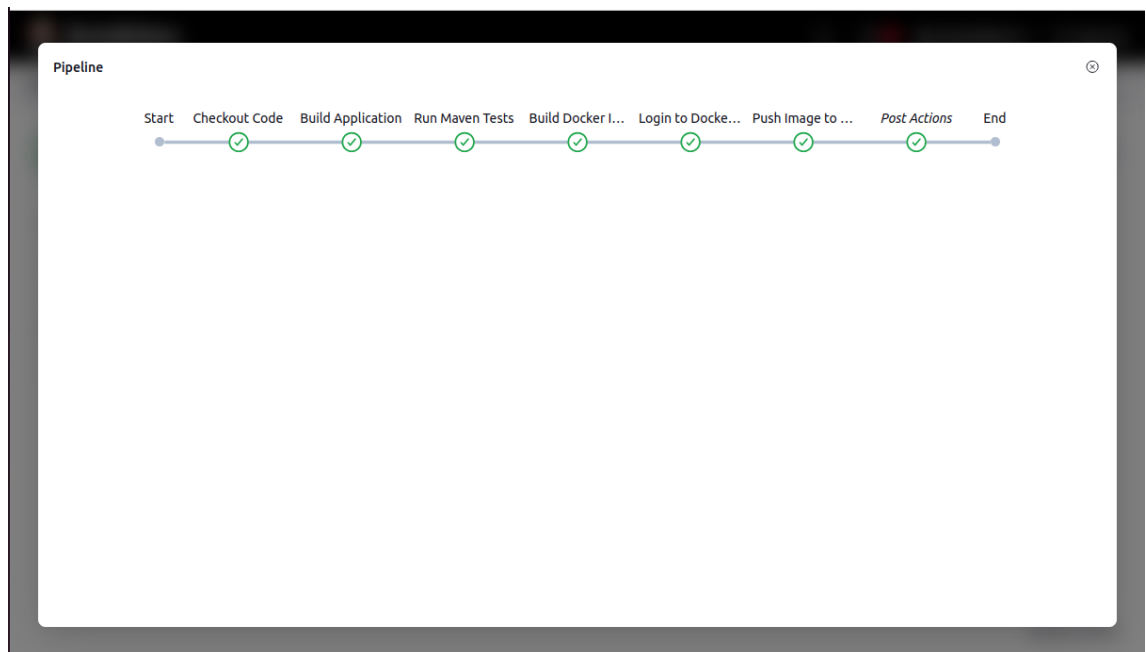
```

Run and Debug the Pipeline

```

docker images    # Check if the image exists
docker ps -a     # Check running containers
docker logs      # View container logs

```



✓ Build #9 >

▶ Rebuild

🔗 Overview

⚙️ Configure

⋮

Success 17 hr ago in 5 min 9 sec

- ✓ Checkout Code
- ✓ Build Application
- ✓ Run Maven Tests
- ✓ Build Docker Image
- ✓ Login to Docker Registry
- ✓ Push Image to Docker Registry

✓ Post Actions

Stage 'Post Actions'

- 🕒 Started 17 hr ago
- ⌚ Queued 0 ms
- ⌚ Took 0.19 sec
- 🟢 Success
- 🖥️ Running on [Jenkins](#)
- 🔗 [View as plain text](#)

✓ Pipeline executed successfully!

Print Message

74 ms

🔗

🔗

^

0 Pipeline executed successfully!

Jenkins 2.492.2

```
4b7c01ed0534: Mounted from library/tomcat
c8f1420285c9: Pushed
latest: digest: sha256:7e0874e4cb739bddb0642787c136a6dfceaab1740e6974766f39d46c8f22372
size: 2413
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Deployment Successful!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```