

DEVOPS

DAY – 3

```
Progress (1): 565/500 kB
Progress (1): 569/500 kB
Progress (1): 573/500 kB
Progress (1): 578/500 kB
Progress (1): 582/500 kB
Progress (1): 586/500 kB
Progress (1): 590 kB

Downloaded from central: https://repo.maven.apache.org/maven2/com/thoughtworks/xstream/xstream/1.4.10/xstream-1.4.10.jar (590 kB at 364 kB/s)
[INFO] Packaging webapp
[INFO] Assembling webapp [my-app] in [/var/lib/jenkins/workspace/maven/target/my-app]
[INFO] Processing war project
[INFO] Copying webapp resources [/var/lib/jenkins/workspace/maven/src/main/webapp]
[INFO] Webapp assembled in [16 msecs]
[INFO] Building war: /var/lib/jenkins/workspace/maven/target/my-app.war
[INFO] BUILD SUCCESS
[INFO] Total time: 29.304 s
[INFO] Finished at: 2025-03-19T09:16:37Z
[INFO] Finished: SUCCESS
```

REST API Jenkins 2.402.2

Mavenwebapp Jenkins Output

```
657776fb5419: Pushed
f844dcf94898: Mounted from library/tomcat
39cf0ac89a5a: Mounted from library/tomcat
3359bc3d7a6a: Mounted from library/tomcat
4b7c01ed08534: Mounted from library/tomcat
latest: digest: sha256:c9d8b5d3c236ee471054b4951521978e61dc1f399a07e4dc31a733ed210107c5 size: 2409
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

REST API Jenkins 2.402.2

Simpletomcatapplication Jenkins Output

Installation Commands in WSL:

1. Git installation:

- a. `sudo apt update`
- b. `sudo apt install git`
- c. `git --version`
- d. `git config --global user.name "Your Name"`
- e. `git config --global user.email your.email@example.com`

2. JDK installation:

- a. `sudo apt update`
- b. `sudo apt upgrade -y`
- c. `sudo apt install default-jdk -y`
- d. `java -version`

3. Maven installation:

- a. `sudo apt install maven -y`
- b. `mvn -version`

4. Jenkins installation:

- a. `sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \`
`https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key`
`echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \`
`https://pkg.jenkins.io/debian-stable binary/ | sudo tee \`
`/etc/apt/sources.list.d/jenkins.list > /dev/null`
`sudo apt-get update`
`sudo apt-get install Jenkins`
- b. `sudo service Jenkins restart`
- c. `sudo service Jenkins status`
- d. `4. sudo cat /var/lib/jenkins/secrets/initialAdminPassword`

5. Docker installation:

- a. `sudo apt install docker-compose -y`
- b. `sudo service docker restart`
- c. `sudo service docker status`
- d. `sudo usermod -aG docker $USER`
- e. `docker images`
- f. `docker ps`

g. `sudo chmod 666 /var/run/docker.sock`

6. Kubernetes installation:

- a. Go to <https://kubernetes.io/docs/tasks/tools/install-kubectl-linux/>
- b. `curl -LO https://dl.k8s.io/release/v1.32.0/bin/linux/amd64/kubectl`
- c. `sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl`
- d. `chmod +x kubectl`
- e. `mkdir -p ~/.local/bin`
- f. `mv ./kubectl ~/.local/bin/kubectl`
- g. `kubectl version --client`

7. Minikube installation:

- a. Go to
<https://minikube.sigs.k8s.io/docs/start/?arch=%2Fwindows%2Fx86-64%2Fstable%2F.exe+download>
- b. `curl -LO https://github.com/kubernetes/minikube/releases/latest/download/minikube-linux-amd64`
- c. `sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64`
- d. `minikube start`
- e. `minikube status`
- f. `kubectl get pod`
- g. `kubectl get deploy`
- h. `kubectl get replica or rs or replicaaset`
- i. `kubectl get pod -o wide`

Docker Compose:

1. `sudo apt install docker-compose -y`
2. `sudo nano docker-compose.yml`

```
{  
version: '3'
```

services:

web:

image: nginx:latest

ports:

- "80:80"

db:

image: mysql:latest

environment:

MYSQL_ROOT_PASSWORD: "1234"

}

3. docker-compose up -d

4. docker-compose images

5. docker-compose ps

6. sudo docker exec -it bavya_db_1 bash

7. mysql -u root -p

Maven Jenkins:

1. git clone <https://github.com/Bavyadharshini-Rajaganapathy/devops1.git>

2. cd devops1

3. Go to localhost:8080

4. Create an Item named Maven freestyle

5. Choose git

6. Select Execute shell

Shell:

```
mvn clean package
```

Simpletomcatapplication:

1. sudo nano JenkinsFile

```
{
```

```
  pipeline {
```

```
    agent any
```

```
    stages {
```

```
      stage('scm') {
```

```
        steps {
```

```
          git branch: 'main', url: 'https://github.com/Bavyadharshini-  
Rajaganapathy/devops1.git'
```

```
        }
```

```
      }
```

```
      stage('build') {
```

```
        steps {
```

```
          sh "mvn clean"
```

```
          sh "mvn install"
```

```
        }
```

```
      }
```

```
      stage('build to images') {
```

```
        steps {
```

2. `ls`
3. `cd devops1`
4. `git add .`
5. `git push origin main`
6. `sudo chmod 666 /var/run/docker.sock`
7. `ls -lrt /var/run/docker.sock`