

Building using Maven

Task5

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22ISR041

Definition:

Maven is a tool that helps manage Java projects. It handles dependencies, builds, testing, and deployment, making development easier and more organized.

Step 1: Install Java and Maven on Ubuntu

Java and Maven are installation:

```
sudo apt update  
sudo apt install default-jdk maven -y
```

Verify the installation:

```
java -version  
mvn -version
```

Step 2: Clone the Project Repository:

```
git clone https://github.com/yourusername/ekart.git  
cd OnlineStore
```

Step 3: Configure Jenkins

Create a New Job in Jenkins

1. Open Jenkins in your browser.
2. Click on New Item → Select Freestyle Project → Name it Task5 → Click OK.

Set Up the Job

- **Add Java and Maven Tools:**
 - Go to Global Tool Configuration and add Java and Maven if not already configured.
- **Connect to GitHub Repository:**
 - Go to Source Code Management → Select Git.
 - Paste your forked repository URL.
 - Set the branch to main.
- **Add Build Command:**
 - Go to Build → Click Add Build Step → Select Invoke top-level Maven targets.
 - Enter the command:
- clean install -DskipTests
 - Click Build Now to start the process.

Step 4: Check Build Artifacts in Jenkins

Navigate to the Jenkins workspace directory:

```
cd /var/lib/jenkins/workspace
ls
cd Maven_Assignment5/target
ls
```

Step 5: Deploy Using Docker and Kubernetes

Build and Push Docker Image:

```
docker build -t task5 -f docker/Dockerfile .
docker tag task5 username/repository:latest
docker push username/repository:latest
```

Deploy on Kubernetes:

```
kubectl create deployment task5 --image=username/repository:latest
--port=8080
kubectl expose deployment task5 --type=NodePort --port=80
--target-port=8080
```

Verify Deployment:

```
minikube service task6
```

Task 5: ekart - Google Docs | assignment 5 guvi - Google Do | roshnipriyarameshkumar/task5 | DevOps tasks - Google Sheets | DevOps/task5.docx at main - S...

github.com/roshnipriyarameshkumar/task5

roshnipriyarameshkumar / task5

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

task5 (Public) Pin Unwatch 1 Fork 0 Star 0

main 1 Branch 0 Tags

Go to file Add file Code

jaiswaladi246 Delete 1.txt c8318aa · 11 months ago 26 Commits

.mvn/wrapper	Added source code	2 years ago
docker	Added source code	2 years ago
scripts	Added source code	2 years ago
src	Added source code	2 years ago
.gitignore	Added source code	2 years ago
LICENSE	Added source code	2 years ago
README.md	Added source code	2 years ago
deployment-service.yml	Update deployment-service.yml	11 months ago
pom.xml	Update pom.xml	last year

About

No description, website, or topics provided.

Readme

GPL-3.0 license

Activity

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

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Contributors 2

https://github.com/roshnipriyarameshkumar/task5/commits/main

Home | Dev | assign | (no s) | roshi | Intro | Minik | Aran | Tools | Java | Goo | R202 | t x | Wool | roshi | Pers | Shop | +

localhost:8080/job/task6/configure

Dashboard > task6 > Configuration

Configure

- General
- Source Code Management
- Triggers
- Environment
- Build Steps
- Post-build Actions

None

Git ?

Repositories ?

Repository URL ?

https://github.com/roshnipriyarameshkumar/task5.git

Credentials ?

- none -

+ Add

Advanced

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/main

Save Apply

PAK - NZ Starting soon

Search

ENG IN

14:34 08-02-2025

Dashboard > Manage Jenkins > Tools

JDK installations ^ Edited

Add JDK

JDK

Name

java_home

JAVA_HOME

/usr/lib/jvm/java-17-openjdk-amd64

! /usr/lib/jvm/java-17-openjdk-amd64 doesn't look like a JDK directory

☐ Install automatically ?

Add JDK

Git installations

Save Apply

PAK - NZ Starting soon

Search

ENG IN 14:35 08-02-2025

Dashboard > Manage Jenkins > Tools

Maven installations

Maven installations ^ Edited

Add Maven

Maven

Name

mvn

MAVEN_HOME

/mnt/c/Program Files/apache-maven-3.9.9

☐ Install automatically ?

Add Maven

Save Apply

Jenkins 2.402.1

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Dashboard > task6 > #9 > Console Output

Status

Changes

Console Output

Edit Build Information

Delete build '#9'

Timings

Git Build Data

Previous Build

Console Output

Download Copy View as plain text

```
Started by user Roshnipriya G R
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/task6
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/task6/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/roshnipriyarameshkumar/task5.git # timeout=10
Fetching upstream changes from https://github.com/roshnipriyarameshkumar/task5.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/roshnipriyarameshkumar/task5.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision c8318aa375b44364808f0017e9d61a75bef38f25 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f c8318aa375b44364808f0017e9d61a75bef38f25 # timeout=10
Commit message: "Delete 1.txt"
> git rev-list --no-walk c8318aa375b44364808f0017e9d61a75bef38f25 # timeout=10
[task6] $ "/mnt/c/Program Files/apache-maven-3.9.9/bin/mvn" clean package -DskipTests
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.reljicd:shopping-cart >-----
[INFO] Building shopping-cart 0.0.1-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
WARNING! A problem was encountered while building the effective model for org.javacsi:task5:jar:2.21.0-6A during dependency collection
```

Dashboard > task6 > #9 > Console Output

```
## naming image sha256:ed144543f7342881ca0630116c58666a8f42117a6b4c1ba42457bdccc8b5b26a size: 1365
#9 naming to docker.io/library/ekartimg 0.0s done
#9 DONE 0.3s
+ docker login -u roshni178 -p dckr_pat_RUTK18SPRAKJP0H0vpIrhJ3Z4
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
WARNING! Your password will be stored unencrypted in /var/lib/jenkins/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
+ docker tag ekartimg roshni178/task5:ekart
+ docker push roshni178/task5:ekart
The push refers to repository [docker.io/roshni178/task5]
5f70bf18a086: Preparing
0df26ded1c62: Preparing
01bca7cb4826: Preparing
a8cc3712c14a: Preparing
cd7100a72410: Preparing
01bca7cb4826: Layer already exists
a8cc3712c14a: Layer already exists
cd7100a72410: Layer already exists
5f70bf18a086: Layer already exists
0df26ded1c62: Pushed
ekart: digest: sha256:ed144543f7342881ca0630116c58666a8f42117a6b4c1ba42457bdccc8b5b26a size: 1365
+ kubectl create deployment task6 --image=roshni178/task5:ekart --port=8070
deployment.apps/task6 created
+ kubectl expose deployment task6 --type=NodePort --port=8070
service/task6 exposed
Finished: SUCCESS
```

Dashboard > task6 >

Status task6 Add description

Changes

Workspace

Build Now

Configure

Delete Project

Rename

Permalinks

- Last build (#9), 9 min 19 sec ago
- Last stable build (#9), 9 min 19 sec ago
- Last successful build (#9), 9 min 19 sec ago
- Last failed build (#8), 1 hr 18 min ago
- Last unsuccessful build (#8), 1 hr 18 min ago
- Last completed build (#9), 9 min 19 sec ago

Builds

Filter

Today

- #9 8:55 AM
- #8 7:46 AM
- #7 7:45 AM
- #6 6:48 AM
- #5 6:48 AM
- #4 6:43 AM

PAK - NZ Starting soon

Search

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14:34 08-02-2025

```
jenkins@Abhinavkrishna:~$ minikube version
minikube version: v1.35.0
commit: dd5d920e41b5451cdf3c01891bc4e13d189586ed-dirty
jenkins@Abhinavkrishna:~$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

jenkins@Abhinavkrishna:~$ kubectrl port-forward svc/task6 8070:8070
Forwarding from 127.0.0.1:8070 -> 8070
Forwarding from [::1]:8070 -> 8070
Handling connection for 8070
Handling connection for 8070
Handling connection for 8070
Handling connection for 8070
```

Login