Building using Maven Task5 by Archita V

Definition:
Maven is like a project manager for Java applications. Just like a manager organizes tasks, resources, and deadlines, Maven organizes dependencies, builds, tests, and deployments, ensuring everything runs smoothly and efficiently.

Step 1: Install Java and Maven on Ubuntu

Step 2: Fork the eKart Repository on GitHub

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 Maven_task5 → Click OK.
Configure the Job
• Set up Build Tools:
o Under Global Tool Configuration, add Java and Maven if not configured.
• Set GitHub Repository:
o Go to Source Code Management → Select Git.
o Paste the forked repository URL.
o Set the branch to main.
• Add Build Command:
o Go to Build → Add Build Step → Select Invoke top-level Maven targets.
o Enter: clean package -DskipTests
o Then Build Now.

Step 4: Navigate to Jenkins Workspace
cd /var/lib/jenkins/workspace
ls # List available projects
cd Maven_task5
cd target
ls # Verify generated artifacts (e.g., .jar file)

Step 5: Check Docker Image and Kubernetes Deployment
docker build -t test -f docker/Dockerfile
docker push subiksha17/password
kubectl create deployment maven --image=test –port 80
kubectl expose deployment maven --type=NodePort --port=80 --target-port=8070
docker images | grep subiksha17/mave # Verify Docker image is built
kubectl get pods # Check running pods
minikube service maven # Get the service URL

```
user@DESKTOP-U3693UJ MINGW64 ~/Downloads/infosys-petclinic-main/infosys-petclini
c-main (master)
$ git init
Reinitialized existing Git repository in C:/Users/user/Downloads/infosys-petclin
ic-main/infosys-petclinic-main/.git/
```

```
user@DESKTOP-U3693UJ MINGW64 ~/Downloads/infosys-petclinic-main/infosys-petclini
c-main (master)
$ git remote add origin https://github.com/Architaviswanathan/task5.git
```

```
user@DESKTOP-U3693UJ MINGW64 ~/Downloads/infosys-petclinic-main/infosys-petclini
c-main (master)
$ git add .
warning: in the working copy of '.classpath', LF will be replaced by CRLF the ne
xt time Git touches it
warning: in the working copy of '.project', LF will be replaced by CRLF the next
 time Git touches it
warning: in the working copy of '.settings/.jsdtscope', LF will be replaced by C
RLF the next time Git touches it
warning: in the working copy of '.settings/org.eclipse.core.resources.prefs', LF
 will be replaced by CRLF the next time Git touches it
warning: in the working copy of '.settings/org.eclipse.jdt.core.prefs', LF will
be replaced by CRLF the next time Git touches it
warning: in the working copy of '.settings/org.eclipse.wst.common.component', LF
 will be replaced by CRLF the next time Git touches it
warning: in the working copy of '.settings/org.eclipse.wst.common.project.facet.
core.xml', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of '.settings/org.eclipse.wst.validation.prefs', LF
 will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'Dockerfile', LF will be replaced by CRLF the ne
xt time Git touches it
warning: in the working copy of 'Jenkinsfile', LF will be replaced by CRLF the n
ext time Git touches it
warning: in the working copy of 'README.md', LF will be replaced by CRLF the nex
t time Git touches it
```

```
user@DESKTOP-U3693UJ MINGW64 ~/Downloads/infosys-petclinic-main/infosys-petclini
c-main (master)
$ git commit -m "committeed successfully"
[master (root-commit) 6aab8d7] committeed successfully
 700 files changed, 62927 insertions(+)
 create mode 100644 .classpath
 create mode 100644 .project
 create mode 100644 .settings/.jsdtscope
 create mode 100644 .settings/org.eclipse.core.resources.prefs
 create mode 100644 .settings/org.eclipse.jdt.core.prefs
 create mode 100644 .settings/org.eclipse.wst.common.component
 create mode 100644 .settings/org.eclipse.wst.common.project.facet.core.xml
 create mode 100644 .settings/org.eclipse.wst.jsdt.ui.superType.container
 create mode 100644 .settings/org.eclipse.wst.jsdt.ui.superType.name
 create mode 100644 .settings/org.eclipse.wst.validation.prefs
 create mode 100644 Dockerfile
 create mode 100644 Jenkinsfile
 create mode 100644 README.md
 create mode 100644 Steps.txt
 create mode 100644 bin/.project
 create mode 100644 bin/.settings/org.eclipse.core.resources.prefs
 create mode 100644 bin/Dockerfile
 create mode 100644 bin/Jenkinsfile
 create mode 100644 bin/Steps.txt
```

```
C:\Users\user>git clone https://github.com/AranganathanPrakash/ar-ekart
Cloning into 'ar-ekart'...
remote: Enumerating objects: 143, done.
remote: Total 143 (delta 0), reused 0 (delta 0), pack-reused 143 (from 1)
Receiving objects: 100% (143/143), 97.41 KiB | 145.00 KiB/s, done.
Resolving deltas: 100% (49/49), done.
```

```
C:\Users\user>cd ar-ekart

C:\Users\user\ar-ekart>git init
Reinitialized existing Git repository in C:/Users/user/ar-ekart/.git/
```

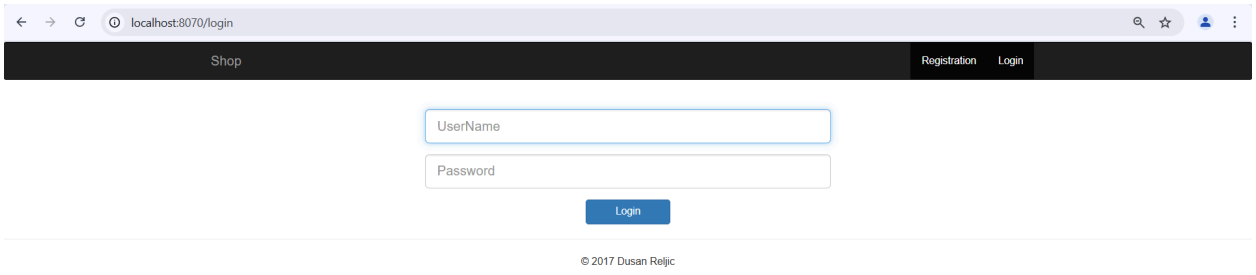
```
C:\Users\user\ar-ekart>git remote set-url origin https://github.com/Architaviswanathan/task5.git
```

```
C:\Users\user\ar-ekart>git add .
```

```
C:\Users\user\ar-ekart>git commit -m "success"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

```
C:\Users\user\ar-ekart>git push origin main --force
Enumerating objects: 143, done.
Counting objects: 100% (143/143), done.
Delta compression using up to 8 threads
Compressing objects: 100% (82/82), done.
Writing objects: 100% (143/143), 97.42 KiB | 13.92 MiB/s, done.
Total 143 (delta 49), reused 143 (delta 49), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (49/49), done.
To https://github.com/Architaviswanathan/task5.git
 + 01a4e42...c8318aa main -> main (forced update)
```




```
jenkins@DESKTOP-U3693UJ:~$ minikube service ekartdep2
|-----------|-----------|-------------|---------------------------|
| NAMESPACE |   NAME    | TARGET PORT |            URL            |
|-----------|-----------|-------------|---------------------------|
| default   | ekartdep2 |        8070 | http://192.168.49.2:32087 |
|-----------|-----------|-------------|---------------------------|
🎉  Opening service default/ekartdep2 in default browser...
👉  http://192.168.49.2:32087
jenkins@DESKTOP-U3693UJ:~$ kubectl port-forward svc/ekartdep2 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
```

```
jenkins@DESKTOP-U3693UJ:~$ kubectl get svc
NAME         TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
ekartdep2    NodePort    10.106.231.193   <none>        8070:32087/TCP   5m59s
kubernetes   ClusterIP   10.96.0.1        <none>        443/TCP          6m6s
jenkins@DESKTOP-U3693UJ:~$ minikube service ekartdep2
```

```
* 1 node stopped.
+ minikube delete
* Deleting "minikube" in docker ...
* Deleting container "minikube" ...
* Removing /var/lib/jenkins/.minikube/machines/minikube ...
* Removed all traces of the "minikube" cluster.
+ minikube start
* minikube v1.35.0 on Ubuntu 24.04 (amd64)
* Automatically selected the docker driver. Other choices: none, ssh
* Using Docker driver with root privileges
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.46 ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring bridge CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: default-storageclass, storage-provisioner
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
+ kubectl create deployment ekartdep2 --image=archita392/task_2:ekart --port=8070
deployment.apps/ekartdep2 created
+ kubectl expose deployment ekartdep2 --type=NodePort --port=8070
service/ekartdep2 exposed
+ kubectl get pods
NAME                         READY   STATUS              RESTARTS   AGE
ekartdep2-568bbd786-2h6gj   0/1     ContainerCreating   0          1s
Finished: SUCCESS
```