**Building using Maven Task5**

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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

Output and screenshots













