Building using Maven Task5

7.02.2025

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

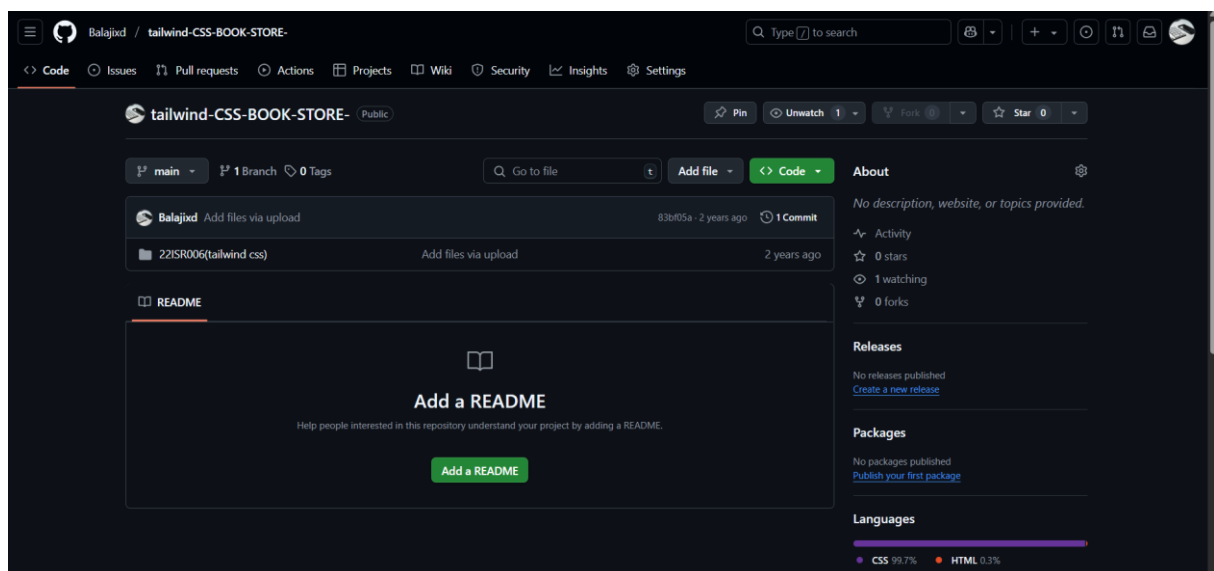docker push Balaji_xd/Balaji

kubectl create deployment maven --image=test –port 80

kubectl expose deployment maven --type=NodePort --port=80 --target-port=8070

docker images | grep Balaji_xd/mave # Verify Docker image is built

kubectl get pods # Check running pods

minikube service maven # Get the service URL

Output and screenshots

Jenkins Configration

Configure

- ⚙ General
- ⑂ Source Code Management
- ⏱ Build Triggers
- 🌐 Build Environment
- ☰ Build Steps
- ⬡ Post-build Actions

☑ With Ant ?

JDK

| java_home | ⌄ |

Build Steps

☰ **Invoke top-level Maven targets** ? ✕

Maven Version

| mvn | ⌄ |

Goals

| clean package -DskipTests | ⌄ |

Advanced ⌄

Add build step ⌄

Save Apply

🔴 **Jenkins**

Search (CTRL+K) 🔔1 🛡2

- 📄 Status
- </> Changes
- 📁 Workspace
- ▷ Build Now
- ⚙ Configure
- 🗑 Delete Project
- 📋 GitHub Hook Log
- ✏ Rename

✓ **Maven_task5**   ✏ Add description

Permalinks

- Last build (#7), 33 min ago
- Last stable build (#7), 33 min ago
- Last successful build (#7), 33 min ago
- Last failed build (#5), 16 hr ago
- Last unsuccessful build (#5), 16 hr ago
- Last completed build (#7), 33 min ago

Builds   ••• ⤢

🔍 Filter   /

Today

✓ #7 1:54 AM   ⌄

February 7, 2025

✓ #6 10:05 AM   ⌄

Output :

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.