

# TASK 5 –Maven Creation

## Step 1: Creating folder

Create a folder and clone the repository

```
vishal@LAPTOP-U45BV05I:~$ mkdir task5
vishal@LAPTOP-U45BV05I:~$ cd task5
vishal@LAPTOP-U45BV05I:~/task5$ git clone https://github.com/AranganathanPrakash/spring-framework-petclinic.git
Cloning into 'spring-framework-petclinic'...
remote: Enumerating objects: 7351, done.
remote: Counting objects: 100% (1110/1110), done.
remote: Compressing objects: 100% (80/80), done.
remote: Total 7351 (delta 1059), reused 1030 (delta 1030), pack-reused 6241 (from 1)
Receiving objects: 100% (7351/7351), 3.12 MiB | 5.07 MiB/s, done.
Resolving deltas: 100% (3600/3600), done.
vishal@LAPTOP-U45BV05I:~/task5$ ls
spring-framework-petclinic
```

## Step 2: Installing maven

Installing maven using `-- sudo apt install maven`

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ sudo apt install maven
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
maven is already the newest version (3.8.7-2).
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
```

## Step 3: Checking

See if the maven is installed or not

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ mvn --version
Apache Maven 3.8.7
Maven home: /usr/share/maven
Java version: 17.0.14, vendor: Ubuntu, runtime: /usr/lib/jvm/java-17-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.15.167.4-microsoft-standard-WSL2", arch: "amd64", family: "unix"
```

## Step 4: Testing

Test the maven

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ mvn test
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-bom/2.16.1/jackson-bom-2.16.1.pom (18 kB at 24 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.16/jackson-parent-2.16.pom (6.5 kB at 31 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/56/oss-parent-56.pom (24 kB at 178 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/springframework/data/spring-data-bom/2023.1.1/spring-data-bom-2023.1.1.pom (5.5 kB at 47 kB/s)
[INFO]
[INFO] -----< org.springframework.samples:spring-framework-petclinic >-----
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] -----[ war ]-----
Downloading from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.pom (4.2 kB at 22 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/jacoco/org.jacoco.build/0.8.11/org.jacoco.build-0.8.11.pom (44 kB at 237 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-bom/9.6/asm-bom-9.6.pom (3.2 kB at 18 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/ow2-1.5.1/ow2-1.5.1.pom (11 kB at 86 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.jar (57 kB at 321 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-enforcer-plugin/3.4.1/maven-enforcer-plugin-3.4.1.pom (7.7 kB at 43 kB/s)
```

## Step 5: Clean

Clean the maven

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ mvn clean
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-framework-petclinic >-----
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] -----[ war ]-----
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (3.9 kB at 3.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom (13 kB at 40 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom (26 kB at 101 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom (15 kB at 71 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar (25 kB at 124 kB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ spring-framework-petclinic ---
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom (1.5 kB at 6.4 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/2.0.6/maven-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/2.0.6/maven-2.0.6.pom (9.0 kB at 49 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/5/maven-parent-5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/5/maven-parent-5.pom (15 kB at 45 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom (3.4 kB at 31 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.pom (4.1 kB at 14 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/sonatype/spice/spice-parent/16/spice-parent-16.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonatype/spice/spice-parent/16/spice-parent-16.pom (8.4 kB at 64 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.jar (13 kB at 31 kB/s)
Deleting /home/vishal/task5/spring-framework-petclinic/target
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 6.025 s
```

## Step 6: Login in docker

Login in the docker using the username

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ docker login -u vishal15276t

Info → A Personal Access Token (PAT) can be used instead.
To create a PAT, visit https://app.docker.com/settings

Password:

WARNING! Your credentials are stored unencrypted in '/home/vishal/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
```

## Step 7: Push

Push the image inside the docker

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ docker push vishal15276t/petclinic
Using default tag: latest
The push refers to repository [docker.io/vishal15276t/petclinic]
38ccc1c087b0: Pushed
5f70bf18a086: Layer already exists
6ffbdf02a6a33: Pushed
49cb1bc2daeb: Layer already exists
4e5b554b7345: Layer already exists
39cf0ac89a5a: Layer already exists
f844dcf94898: Pushed
3359bc3d7a6a: Pushed
4b7c01ed0534: Pushed
latest: digest: sha256:50a432cf884c30b2459a000ad02e664b7acf8bac4ed39762d0f2c86500c91948 size: 2413
```

## Step 8: Minikube

Start the minikube

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ minikube start
minikube v1.35.0 on Ubuntu 24.04 (amd64)
Using the docker driver based on existing profile

The requested memory allocation of 2200MiB does not leave room for system overhead (total system memory: 2901MiB). You may face stability issues.
Suggestion: Start minikube with less memory allocated: 'minikube start --memory=2200mb'

Starting "minikube" primary control-plane node in "minikube" cluster
Pulling base image v0.0.46 ...
Updating the running docker "minikube" container ...
Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
Verifying Kubernetes components...
  * Using image gcr.io/k8s-minikube/storage-provisioner:v5
Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

## Step 9: Deployment creation

Create a deployment named petclinic

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ kubectl create deployment petclinic --image=vishal15276t/petclinic
deployment.apps/petclinic created
```

## Step 10: Deployment exposure

Expose the deployment in the kubectl

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ kubectl expose deployment petclinic --port=8080
service/petclinic exposed
```

## Step 11: Service

Check the service of the petclinic webpage

```
vishal@LAPTOP-U45BV05I:~/task5/spring-framework-petclinic$ minikube service petclinic
```

NAMESPACE	NAME	TARGET PORT	URL
default	petclinic		No node port

```
service default/petclinic has no node port
Services [default/petclinic] have type "ClusterIP" not meant to be exposed, however for local development minikube allows you to access this !
Starting tunnel for service petclinic.
```

NAMESPACE	NAME	TARGET PORT	URL
default	petclinic		http://127.0.0.1:44929

```
Opening service default/petclinic in default browser...
http://127.0.0.1:44929
Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

## Step 12: Output

The output page is displayed in the localhost:44929

