

VARSHINE T

22CSR230

TASK 5

```
sudo: image:: command not found
swathi_ubu@DESKTOP-65I62SV:~$ mkdir docker
swathi_ubu@DESKTOP-65I62SV:~$ cd docker
swathi_ubu@DESKTOP-65I62SV:~/docker$ git clone https://github.com/AranganathanPrakash/spring-framework-petclinic
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 | 86.00 KiB/s, done.
Resolving deltas: 100% (3600/3600), done.
swathi_ubu@DESKTOP-65I62SV:~/docker$ ls
spring-framework-petclinic
swathi_ubu@DESKTOP-65I62SV:~/docker$ cd spring-framework-petclinic
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ ls
Jenkinsfile LICENSE.txt dockerfile mvnw mvnw.cmd pom.xml readme.md src
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ sudo apt update
[sudo] password for swathi_ubu:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:5 https://download.docker.com/linux/ubuntu noble InRelease [48.8 kB]
Ign:6 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:7 https://pkg.jenkins.io/debian-stable binary/ Release
Err:5 https://download.docker.com/linux/ubuntu noble InRelease
  The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 7EA0A9C3F273FCD8
Reading package lists... Done
W: GPG error: https://download.docker.com/linux/ubuntu noble InRelease: The following signatures couldn't be verified because the public key is not
available: NO_PUBKEY 7EA0A9C3F273FCD8
E: The repository 'https://download.docker.com/linux/ubuntu noble InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ sudo apt update --allow-releaseinfo-change
sudo mkdir -p /etc/apt/kevrings
```

```
swathi_ubu@DESKTOP-65I62: X + v
Reading state information... Done
10 packages can be upgraded. Run 'apt list --upgradable' to see them.
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ sudo apt update
Hit:1 https://download.docker.com/linux/ubuntu noble InRelease
Ign:2 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:3 https://pkg.jenkins.io/debian-stable binary/ Release
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:7 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
10 packages can be upgraded. Run 'apt list --upgradable' to see them.
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ sudo apt install maven -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libdrm-intel1 libpciaccess0 libsensors-config libsensors5
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java libcommons-io-java libcommons-lang3-java
  libcommons-parent-java liberror-prone-java libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java libguava-java
  libguice-java libjansi-java libjsr305-java libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java
  libplexus-cipher-java libplexus-classworlds-java libplexus-component-annotations-java libplexus-interpolation-java libplexus-sec-dispatcher-java
  libplexus-utils2-java libsisu-inject-java libsisu-plexus-java libslf4j-java libwagon-file-java libwagon-http-shaded-java
  libwagon-provider-api-java
Suggested packages:
  libatinject-jsr330-api-java-doc libel-api-java libcommons-io-java-doc libasm-java libcglib-java libjsr305-java-doc
  libmaven-shared-utils-java-doc liblogback-java libplexus-utils2-java-doc junit4 testng libcommons-logging-java liblog4j1.2-java
The following NEW packages will be installed:
  libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java libcommons-io-java libcommons-lang3-java
  libcommons-parent-java liberror-prone-java libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java libguava-java
  libguice-java libjansi-java libjsr305-java libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java
```

```
update-alternatives: using /usr/share/maven/bin/mvn to provide /usr/bin/mvn (mvn) in auto mode
swathi_ubu@DESKTOP-65I62SV:~/docker/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
Downloaded 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 3.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.16/jackson-parent-2.16.pom
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.16/jackson-parent-2.16.pom (6.5 kB at 1.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/56/oss-parent-56.pom
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/56/oss-parent-56.pom (24 kB at 4.7 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
Downloaded 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 6.2 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
Downloaded 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 1.3 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
Downloaded 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 23 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-bom/9.6/asm-bom-9.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-bom/9.6/asm-bom-9.6.pom (3.2 kB at 1.0 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5.1/ow2-1.5.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5.1/ow2-1.5.1.pom (11 kB at 5.0 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
Downloaded 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 5.2 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
Downloaded 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 3.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/enforcer/enforcer/3.4.1/enforcer-3.4.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/enforcer/enforcer/3.4.1/enforcer-3.4.1.pom (9.1 kB at 8.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/40/maven-parent-40.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/40/maven-parent-40.pom (49 kB at 5.9 kB/s)
```


[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 62, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO]

[INFO] BUILD SUCCESS

[INFO]

[INFO] Total time: 25:58 min

[INFO] Finished at: 2025-03-21T09:27:36Z

[INFO]

swathi_ubu@DESKTOP-65I62SV:~/docker/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 875 B/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 14 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 6.9 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 14 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 10 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 3.5 kB/s)

Downloading from central: <https://repo.maven.apache.org/maven2/org/apache/maven/maven/2.0.6/maven-2.0.6.pom>

```
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.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 59 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.jar (226 kB at 110 kB/s)
[INFO] Deleting /home/swathi_ubu/docker/spring-framework-petclinic/target
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 20.172 s
[INFO] Finished at: 2025-03-21T09:28:38Z
[INFO] -----
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ mvn install
[INFO] Scanning for projects...
[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-war-plugin/3.4.0/maven-war-plugin-3.4.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-war-plugin/3.4.0/maven-war-plugin-3.4.0.pom (8.4 kB at 8.7 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-war-plugin/3.4.0/maven-war-plugin-3.4.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-war-plugin/3.4.0/maven-war-plugin-3.4.0.jar (83 kB at 335 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.pom (6.4 kB at 17 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/23/maven-plugins-23.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/23/maven-plugins-23.pom (9.2 kB at 74 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/22/maven-parent-22.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/22/maven-parent-22.pom (30 kB at 164 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11.pom (15 kB at 12 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.jar (27 kB at 24 kB/s)
```

```
swathi_ubu@DESKTOP-65I62: X + v
framework-petclinic/6.1.4/spring-framework-petclinic-6.1.4.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 02:54 min
[INFO] Finished at: 2025-03-21T09:34:55Z
[INFO] -----
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ mvn package
[INFO] Scanning for projects...
[INFO] -----< org.springframework.samples:spring-framework-petclinic >-----
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] -----[ war ]-----
[INFO] --- maven-enforcer-plugin:3.4.1:enforce (enforce-maven) @ spring-framework-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.version.RequireMavenVersion passed
[INFO] --- jacoco-maven-plugin:0.8.11:prepare-agent (prepare-agent) @ spring-framework-petclinic ---
[INFO] argLine set to -javaagent:/home/swathi_ubu/.m2/repository/org/jacoco/org.jacoco.agent/0.8.11/org.jacoco.agent-0.8.11-runtime.jar=destfile=/home/swathi_ubu/docker/spring-framework-petclinic/target/jacoco.exec
[INFO] --- maven-resources-plugin:3.3.1:resources (default-resources) @ spring-framework-petclinic ---
[INFO] Copying 21 resources from src/main/resources to target/classes
[INFO] --- maven-compiler-plugin:3.11.0:compile (default-compile) @ spring-framework-petclinic ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-resources-plugin:3.3.1:testResources (default-testResources) @ spring-framework-petclinic ---
[INFO] Copying 11 resources from src/test/java to target/test-classes
[INFO] Copying 1 resource from src/test/resources to target/test-classes
[INFO] --- maven-compiler-plugin:3.11.0:testCompile (default-testCompile) @ spring-framework-petclinic ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:3.2.3:test (default-test) @ spring-framework-petclinic ---
```

```
[INFO] Processing war project
[INFO] Copying webapp resources [/home/swathi_ubu/docker/spring-framework-petclinic/src/main/webapp]
[INFO] Building war: /home/swathi_ubu/docker/spring-framework-petclinic/target/petclinic.war
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 54.778 s
[INFO] Finished at: 2025-03-21T09:36:14Z
[INFO] -----
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ cd target
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic/target$ ls
classes                generated-test-sources  maven-archiver  petclinic          site                test-classes
generated-sources      jacoco.exec            maven-status    petclinic.war      surefire-reports
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic/target$ cd ..
```

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ docker build -t petclinic .
failed to fetch metadata: fork/exec /usr/local/lib/docker/cli-plugins/docker-buildx: exec format error
```

```
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/
```

```
Sending build context to Docker daemon 101.5MB
Step 1/4 : FROM tomcat:latest
----> 1374a565d512
Step 2/4 : COPY target/*.war /usr/local/tomcat/webapps/ROOT.war
----> 7b5534739070
Step 3/4 : EXPOSE 8080
----> Running in 5618e7f4132c
----> Removed intermediate container 5618e7f4132c
----> 27b19ea2f4d3
Step 4/4 : CMD ["catalina.sh", "run"]
----> Running in f6a3f2d32c73
----> Removed intermediate container f6a3f2d32c73
----> 1387d3553a01
Successfully built 1387d3553a01
Successfully tagged petclinic:latest
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$
```



```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/
```

Username: swathie1701

Password:

Login Succeeded

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ docker tag petclinic:latest swathie1701/petclinic:latest
```

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ docker push swathie1701/petclinic:latest
```

The push refers to repository [docker.io/swathie1701/petclinic]

a10b6847b9f1: Mounted from library/tomcat

4f4fb700ef54: Mounted from library/tomcat

e231914ca483: Mounted from library/tomcat

5a7813e071bf: Mounted from library/tomcat

13c51899ca78: Pushed

8dbbbc6af9dc: Mounted from library/tomcat

dcc1c5ea3c7d: Mounted from library/tomcat

91e6cc55403a: Mounted from library/tomcat

5d4660d0a9e9: Mounted from library/tomcat

latest: digest: sha256:1387d3553a0157fb639e66ffe1ade0becd0b6571f4803fc736f83bed76444a73 size: 2485

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
petclinic	latest	1387d3553a01	9 minutes ago	872MB
swathie1701/petclinic	latest	1387d3553a01	9 minutes ago	872MB
swathie1701/devops	latest	f5a770b3ae21	2 hours ago	282MB
test1	latest	f5a770b3ae21	2 hours ago	282MB
ar8888/dev	latest	76bb6573eb45	5 hours ago	282MB
test	latest	76bb6573eb45	5 hours ago	282MB
tomcat	latest	1374a565d512	2 weeks ago	783MB
nginx	latest	124b44bfc9cc	6 weeks ago	279MB
swathie1701/dev	latest	124b44bfc9cc	6 weeks ago	279MB
<none>	<none>	cef9f3c2e399	2 months ago	1.86GB
kicbase/stable	v0.0.46	fd2d445ddcc3	2 months ago	1.86GB

^C

swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic\$ minikube start

😊 minikube v1.35.0 on Ubuntu 24.04 (amd64)

💡 Using the docker driver based on existing profile

👍 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

swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic\$ minikube status

minikube

type: Control Plane

host: Running

kubelet: Running

apiserver: Running

kubeconfig: Configured

swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic\$ kubectl create deployment r1 --image=swathie1701/petclinic --port=8080

deployment.apps/r1 created

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE
r1-6c8698c4b6-nhr8l	1/1	Running	0	2m50s
r1-5758bcdfb4-dlwfg	0/1	InvalidImageName	0	103m

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ kubectl expose deployment r1 --port=8080 --type=NodePort
service/r1 exposed
```

```
swathi_ubu@DESKTOP-65I62SV:~/docker/spring-framework-petclinic$ minikube service r1
```

NAMESPACE	NAME	TARGET PORT	URL
default	r1	8080	http://192.168.49.2:31484

🏃 Starting tunnel for service r1.

NAMESPACE	NAME	TARGET PORT	URL
default	r1		http://127.0.0.1:39883

🌐 Opening service default/r1 in default browser...

👉 http://127.0.0.1:39883

! Because you are using a Docker driver on linux, the terminal needs to be open to run it.

