

## TASK:3

STEP 1: Start the minikube by using the command

`minikube start`

```
dhamayandhi@LAPTOP-MR2CDKC6:~$ minikube start
minikube v1.35.0 on Ubuntu 24.04 (amd64)
E0321 07:44:28.589078 637 start.go:812] api.Load failed for minikube: filestore "minikube": Docker machine "minikube" does not exist. Use "docker-machine ls" to list machines. Use "docker-machine create" to add a new one.
Using the docker driver based on existing profile
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: storage-provisioner, default-storageclass
kubectrl not found. If you need it, try: 'minikube kubectrl -- get pods -A'
Done! kubectrl is now configured to use "minikube" cluster and "default" namespace by default
```

STEP 2: Install Kubectl by using the command

`sudo snap install kubectl --classic`

```
21 you understand and want to proceed repeat the command including sudo
dhamayandhi@LAPTOP-MR2CDKC6:~$ sudo snap install kubectl --classic
2025-03-21T07:52:38Z INFO Waiting for automatic snapd restart...
kubectl 1.32.3 from Canonical✓ installed
```

STEP 3: Create a deployment and expose the deployment

```
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ kubectl create deployment r1 --image=dhamaya2004/task3 --port=80
deployment.apps/r1 created
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ kubectl expose deployment.apps/r1 --port=80 --type=NodePort
service/r1 exposed
```

STEP 4: Verify the nodes

```
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ kubectl get nodes
NAME          STATUS    ROLES          AGE    VERSION
minikube      Ready     control-plane   19m    v1.32.0
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ docker images
```

STEP 4: Push the image to docker Hub

```
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ docker login -u dhamaya2004

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/dhamayandhi/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ docker push dhamaya2004/task3
Using default tag: latest
The push refers to repository [docker.io/dhamaya2004/task3]
0d0071691210: Pushed
```

## STEP 5: Access the service

```
dhamayandhi@LAPTOP-MR2CDKC6:~/dhamaya$ minikube service r1
```

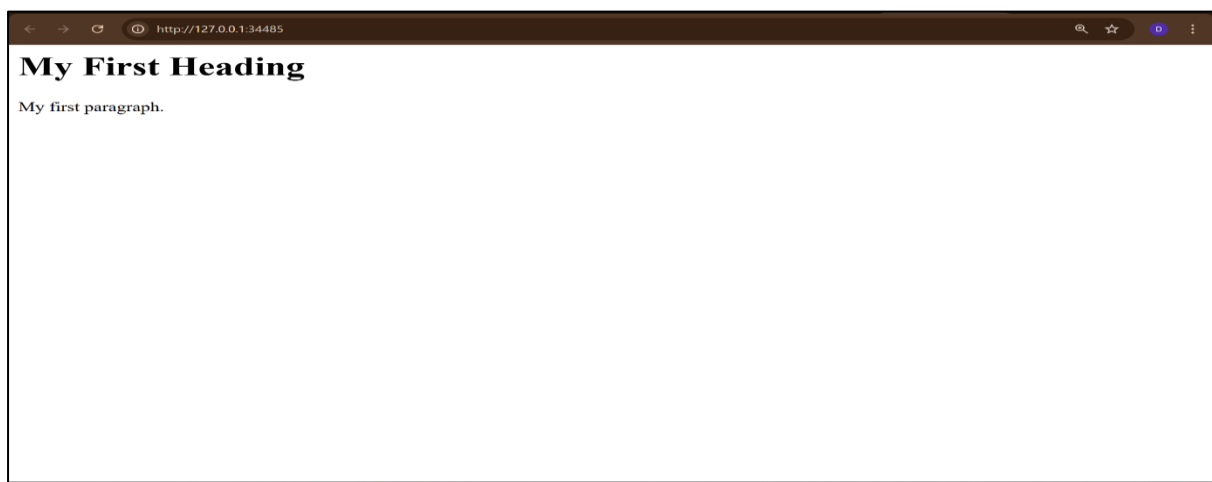
NAMESPACE	NAME	TARGET PORT	URL
default	r1	80	http://192.168.49.2:32695

🚀 Starting tunnel for service r1.

NAMESPACE	NAME	TARGET PORT	URL
default	r1		http://127.0.0.1:34485

🌐 Opening service default/r1 in default browser...  
👉 http://127.0.0.1:34485  
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.

## STEP 6: Output in the web browser



## STEP 7: Image in Docker Hub

