TASK 4 – Kubernet Using Shell Script

Step 1: MiniKube

Start the minikube using minikube start command

```
sharan@Sharan:~/ta4$ 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 ...
🔄  Restarting existing docker container for "minikube" ...
🐳  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 2: Folder Creation

Create a folder named task4

```
sharan@Sharan:~$ mkdir ta4
```

Step 3: New Yaml File

Create a new vim file named devops.yaml

```
sharan@Sharan:~/ta4$ vim s1.yaml
```

Step 4: Yaml file

Enter the yaml file code using the insert

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  labels:
    app: springboot-app
  name: springboot-app
spec:
  replicas: 1
  selector:
    matchLabels:
      app: springboot-app
  template:
    metadata:
      labels:
        app: springboot-app
    spec:
      containers:
      - name: my-springboot-app
        image: sharanprasath/petclinic
        imagePullPolicy: Always
        ports:
        - containerPort: 80
          name: http
          protocol: TCP
# service type loadbalancer
---
apiVersion: v1
kind: Service
metadata:
  labels:
    app: springboot-app
    k8s-app: springboot-app
  name: springboot-app
spec:
  ports:
  - name: http
    port: 80
    protocol: TCP
    targetPort: 80
```

Step 5: Apply

Apply the changes made in the devops.yaml file

```
sharan@Sharan:~/ta4$ kubectl apply -f s1.yaml
deployment.apps/springboot-app unchanged
service/springboot-app unchanged
```

Step 6: Get Pods

Get the pods information to check if it is running or not.

```
sharan@Sharan:~/ta4$ kubectl get pods
NAME                              READY   STATUS             RESTARTS      AGE
p-7db547f989-7srbn                1/1     Running            5 (24m ago)   22h
pet-5665f85f6f-q8kvx              0/1     Error              0             18h
pet1-57cc774674-fq2bf             0/1     Error              0             18h
pet2-578f7f5647-4cmcj             0/1     ErrImagePull       0             18h
pt-74467d449d-8ncbp               0/1     Error              0             18h
sp-bbf5f7896-tvxn7                1/1     Running            4 (24m ago)   22h
springboot-app-78fc46b789-w47mz   0/1     Error              0             69m
springboot-app-d549b45f8-rjv8l    1/1     Running            0             75m
y-88c69d6c7-jqpk6                 0/1     ImagePullBackOff   0             19h
z-f7dfffd46-5d64j                 0/1     ImagePullBackOff   0             18h
```

Step 7: Service

Open the service springboot-app in the browser

```
sharan@Sharan:~/ta4$ minikube service springboot-app
|-----------|----------------|-------------|---------------------------|
| NAMESPACE |      NAME      | TARGET PORT |            URL            |
|-----------|----------------|-------------|---------------------------|
| default   | springboot-app | http/80     | http://192.168.49.2:32706 |
|-----------|----------------|-------------|---------------------------|
🏃  Starting tunnel for service springboot-app.
|-----------|----------------|-------------|------------------------|
| NAMESPACE |      NAME      | TARGET PORT |          URL           |
|-----------|----------------|-------------|------------------------|
| default   | springboot-app |             | http://127.0.0.1:38999 |
|-----------|----------------|-------------|------------------------|
🎉  Opening service default/springboot-app in default browser...
👉  http://127.0.0.1:38999
```

Step 8: Output

The output is shown in the browser in the localhost url present