

Roll no : 22ISR001

# Introduction

## Steps to Deploy

- Create deployment.yaml:

```

apiVersion: apps/v1
kind: Deployment
metadata:
  name: sample-app
spec:
  replicas: 2
  selector:
    matchLabels:
      app: sample-app
  template:
    metadata:
      labels:
        app: sample-app
    spec:
      containers:
        - name: sample-app
          image: abinayabalusamy/bookbarter
          ports:
            - containerPort: 80

```

## 2. Create Kubernetes Service

```
abinaya@ABINAYA:~$ vim service.yaml
```

```
abinaya@ABINAYA: ~  
apiVersion: v1  
kind: Service  
metadata:  
  name: sample-app-service  
spec:  
  selector:  
    app: sample-app  
  ports:  
    - protocol: TCP  
      port: 80  
      targetPort: 80  
  type: NodePort
```

```
"service.yaml" 13L, 187B
```

### 3. Deploy the Application in Kubernetes

```
abinaya@ABINAYA: ~  
abinaya@ABINAYA:~$ 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  
abinaya@ABINAYA:~$ minikube status  
minikube  
type: Control Plane  
host: Running  
kubelet: Running  
apiserver: Running  
kubeconfig: Configured
```

```
abinaya@ABINAYA:~$ kubectl apply -f deployment.yaml  
deployment.apps/sample-app configured
```

```
abinaya@ABINAYA:~$ kubectl apply -f service.yaml  
service/sample-app-service created
```

#### 4. Access the Application

```
abinaya@ABINAYA:~$ minikube service sample-app-service  
-----  
| NAMESPACE | NAME           | TARGET PORT | URL                     |  
-----  
| default   | sample-app-service | 80          | http://192.168.49.2:32541 |  
-----  
Starting tunnel for service sample-app-service.  
-----  
| NAMESPACE | NAME           | TARGET PORT | URL                     |  
-----  
| default   | sample-app-service |             | http://127.0.0.1:32817 |  
-----  
Opening service default/sample-app-service in default browser...  
http://127.0.0.1:32817  
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

#### 5.Output

