

Task 4:

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1. Create the Kubernetes Deployment and Service Definition File

- Open a terminal and navigate to the desired directory.
- Create a YAML file (t4.yaml) using a text editor: nano t4.yaml
- Add the following Kubernetes configuration:

```
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: elankumaran21/sample:latest

imagePullPolicy: Always

ports:

- containerPort: 80

name: http

protocol: TCP

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

type: NodePort

selector:

app: springboot-app

Save and exit the file.

2. Apply the Kubernetes Configuration

- Run the following command to deploy the application:

```
kubectl apply -f t4.yaml
```

- You should see the following output:

```
elankumaran:~/task4$ kubectl apply -f t4.yaml
deployment.apps/springboot-app configured
service/springboot-app configured
```

3. Expose the Service Using Minikube

- Run the command:

```
elankumaran:~/task4$ minikube service springboot-app
```

NAMESPACE	NAME	TARGET PORT	URL
default	springboot-app	http/8080	http://192.168.49.2:31995

🔗 Starting tunnel for service springboot-app.

NAMESPACE	NAME	TARGET PORT	URL
default	springboot-app		http://127.0.0.1:42275

🌐 Opening service default/springboot-app in default browser...
http://127.0.0.1:42275
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.

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

- Access the application in the browser using the displayed URL, e.g., <http://127.0.0.1:42275>.

This process successfully deploys the Spring Boot application on Minikube and makes it accessible via a browser.

Output:



