TASK 4 – KUBERNETES SHELLS SCRIPT

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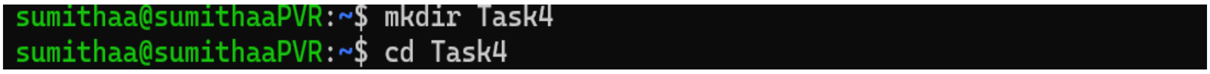
ROLL NO: 22CSR212

STEPS:

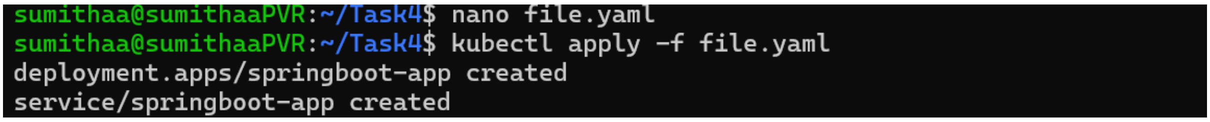
1. Create a folder and move into that folder.



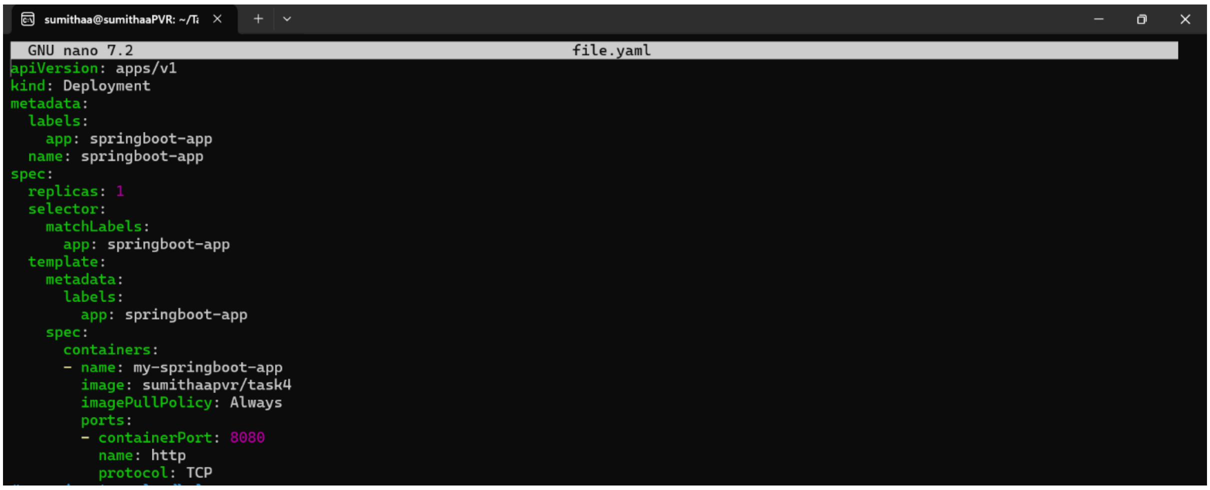
```
sumithaa@sumithaaPVR:~$ mkdir Task4
sumithaa@sumithaaPVR:~$ cd Task4
```

2. In that folder, create a file with a .yaml extension.
3. Copy the deployment script into the .yaml file. The script will deploy a Spring Boot application in Kubernetes and expose it externally via a NodePort service on port 80.
4. Apply the script using the following command:

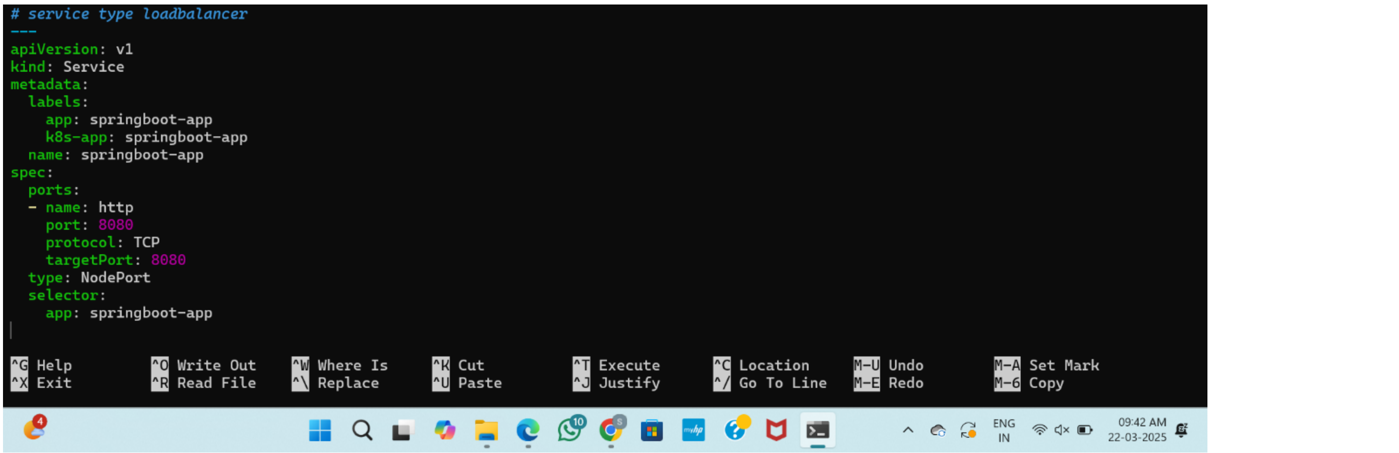
   kubectl apply -f file.yaml



```
sumithaa@sumithaaPVR:~/Task4$ nano file.yaml
sumithaa@sumithaaPVR:~/Task4$ kubectl apply -f file.yaml
deployment.apps/springboot-app created
service/springboot-app created
```

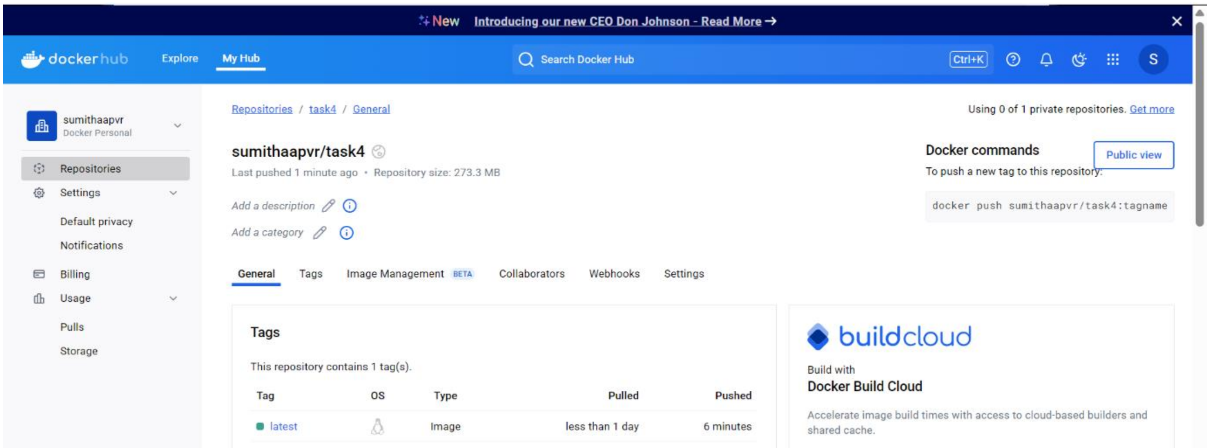


```
  GNU nano 7.2                         file.yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  labels:
    app: springboot-app
  name: springboot-app
spec:
  replicas: 1
  selector:
    matchLabels:
      app: springboot-app
  template:
    metadata:
      labels:
        app: springboot-app
    spec:
      containers:
      - name: my-springboot-app
        image: sumithaapvr/task4
        imagePullPolicy: Always
        ports:
        - containerPort: 8080
          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: 8080
    protocol: TCP
    targetPort: 8080
  type: NodePort
  selector:
    app: springboot-app

^G Help         ^O Write Out    ^W Where Is     ^K Cut          ^T Execute      ^C Location     M-U Undo        M-A Set Mark
^X Exit         ^R Read File    ^\ Replace      ^U Paste        ^J Justify      ^/ Go To Line   M-E Redo        M-6 Copy
```



sumithaapvr/task4

Last pushed 1 minute ago • Repository size: 273.3 MB

Docker commands

To push a new tag to this repository:

```
docker push sumithaapvr/task4:tagname
```

Tags

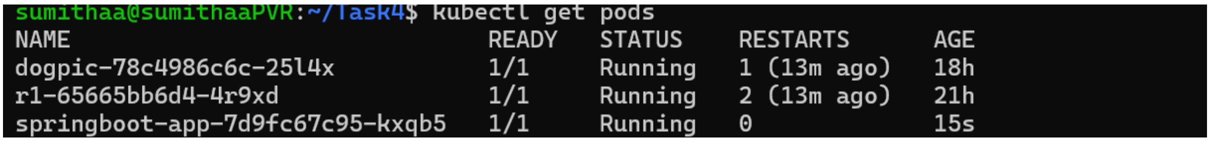
This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest	🐧	Image	less than 1 day	6 minutes

Accelerate image build times with access to cloud-based builders and shared cache.

5. Verify that the pods are running using the command:

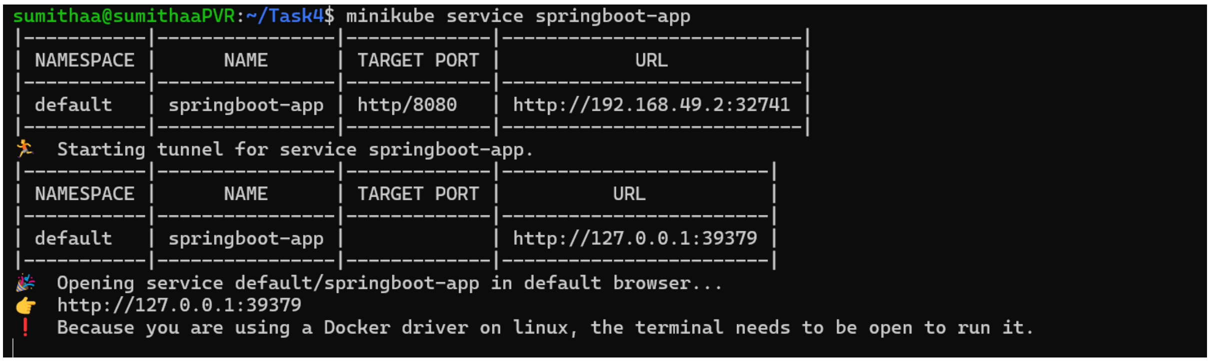
   kubectl get pods



```
sumithaa@sumithaaPVR:~/Task4$ kubectl get pods
NAME                               READY   STATUS    RESTARTS      AGE
dogpic-78c4986c6c-25l4x            1/1     Running   1 (13m ago)   18h
r1-65665bb6d4-4r9xd                1/1     Running   2 (13m ago)   21h
springboot-app-7d9fc67c95-kxqb5    1/1     Running   0             15s
```

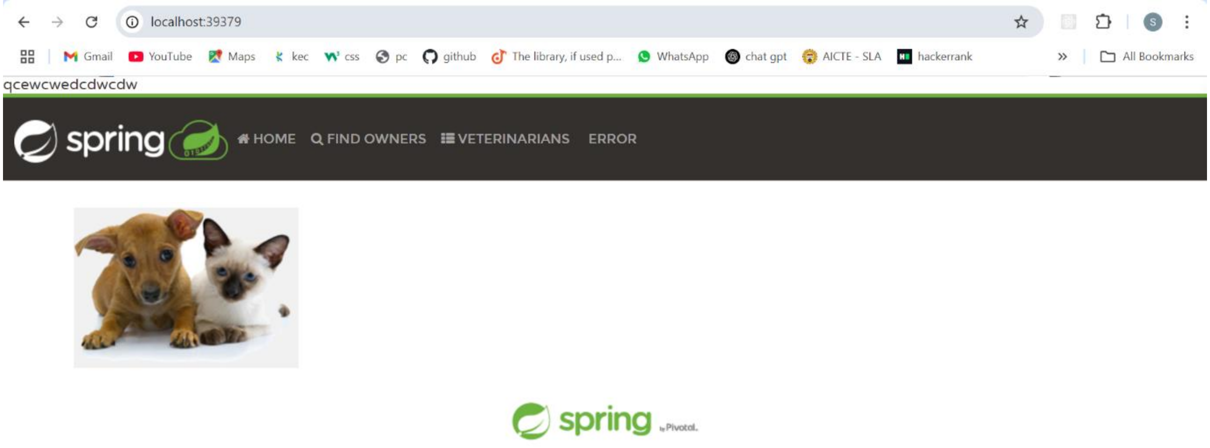
6. Expose the service using Minikube and obtain the URL:

   minikube service <service-name>



```
sumithaa@sumithaaPVR:~/Task4$ minikube service springboot-app
|-----------|----------------|-------------|---------------------------|
| NAMESPACE |      NAME      | TARGET PORT |            URL            |
|-----------|----------------|-------------|---------------------------|
| default   | springboot-app | http/8080   | http://192.168.49.2:32741 |
|-----------|----------------|-------------|---------------------------|
🏃  Starting tunnel for service springboot-app.
|-----------|----------------|-------------|------------------------|
| NAMESPACE |      NAME      | TARGET PORT |          URL           |
|-----------|----------------|-------------|------------------------|
| default   | springboot-app |             | http://127.0.0.1:39379 |
|-----------|----------------|-------------|------------------------|
🎉  Opening service default/springboot-app in default browser...
👉  http://127.0.0.1:39379
❗  Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

7. Use the obtained URL to view the output in the browser.



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