

Question:-

- 1). You need to write required yaml files for this service.
- 2). You need to create jar for this service first and then create dockerfile for it.
- 3). After that to deploy this service in kubernetes you need to install minikube in your local or if you have any cloud platform account then it is also fine.
- 4). You can access this application on any port you want to (it's your choice).
- 5). This application is deploying tomcat server in kubernetes.

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop$ cd k8s_project_new/
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ minikube start
minikube v1.34.0 on Ubuntu 20.04
Using the docker driver based on existing profile
Starting "minikube" primary control-plane node in "minikube" cluster
Pulling base image v0.0.45 ...
Updating the running docker "minikube" container ...
Preparing Kubernetes v1.31.0 on Docker 27.2.0 ...
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
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ docker build -t
20012024/docker-java-sample-webapp:1.0-SNAPSHOT .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 576.5kB
Step 1/4 : FROM tomcat:9.0
---> 363648a2b09f
Step 2/4 : COPY target/docker-java-sample-webapp-1.0-SNAPSHOT.war
/usr/local/tomcat/webapps/
---> aa2cfbdae492
Step 3/4 : EXPOSE 8080
---> Running in c5b77934f0d1
Removing intermediate container c5b77934f0d1
---> 4556ae083164
Step 4/4 : CMD ["catalina.sh", "run"]
---> Running in 1c0bbb6d111e
Removing intermediate container 1c0bbb6d111e
---> 74d4ebe5e669
Successfully built 74d4ebe5e669
Successfully tagged 20012024/docker-java-sample-webapp:1.0-SNAPSHOT
```

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ docker push 20012024/docker-java-sample-webapp:1.0-SNAPSHOT
```

The push refers to repository [docker.io/20012024/docker-java-sample-webapp]

d004076c9bbd: Pushed

5f70bf18a086: Layer already exists

1623cee902e6: Layer already exists

5a433f41592a: Layer already exists

fa2b783d3fa5: Layer already exists

c563ba6d77b2: Layer already exists

bbf97972c239: Layer already exists

5f62e0ab37f7: Layer already exists

fa0f10cc481e: Layer already exists

1.0-SNAPSHOT: digest:

sha256:1c0f8367065cab41749d5dc75cab9f6e7873b918b296f4c1051a0cd0851a1874 size: 2411

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ kubectl apply -f deployment.yaml
```

deployment.apps/docker-java-sample-webapp unchanged

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ kubectl apply -f service.yaml
```

service/docker-java-sample-webapp unchanged

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$ minikube service docker-java-sample-webapp --url
```

http://192.168.49.2:30001

```
sigmoid@ssigmoid-ThinkPad-T450:~/Desktop/k8s_project_new$
```

