Spring-test-project

Step-1 → Take the clone of that project

```
$ git clone https://github.com/mikee/spring-test-project.git
```

Step-2 → Run that cmd inside **/spring-test-project/complete/**

```
$ ./gradlew build
```

Step-3 → Create a **Dockerfile**

```
FROM ubuntu

WORKDIR /app

RUN apt-get update && apt-get install -y openjdk-17-jdk

# Copy the compiled JAR file from the local machine to the container
COPY complete/build/libs/rest-service-0.0.1-SNAPSHOT.jar .

# Expose the port on which the Spring Boot application will run
EXPOSE 8080

# Define the command to run the application when the container starts
CMD ["java", "-jar", "rest-service-0.0.1-SNAPSHOT.jar"]
```

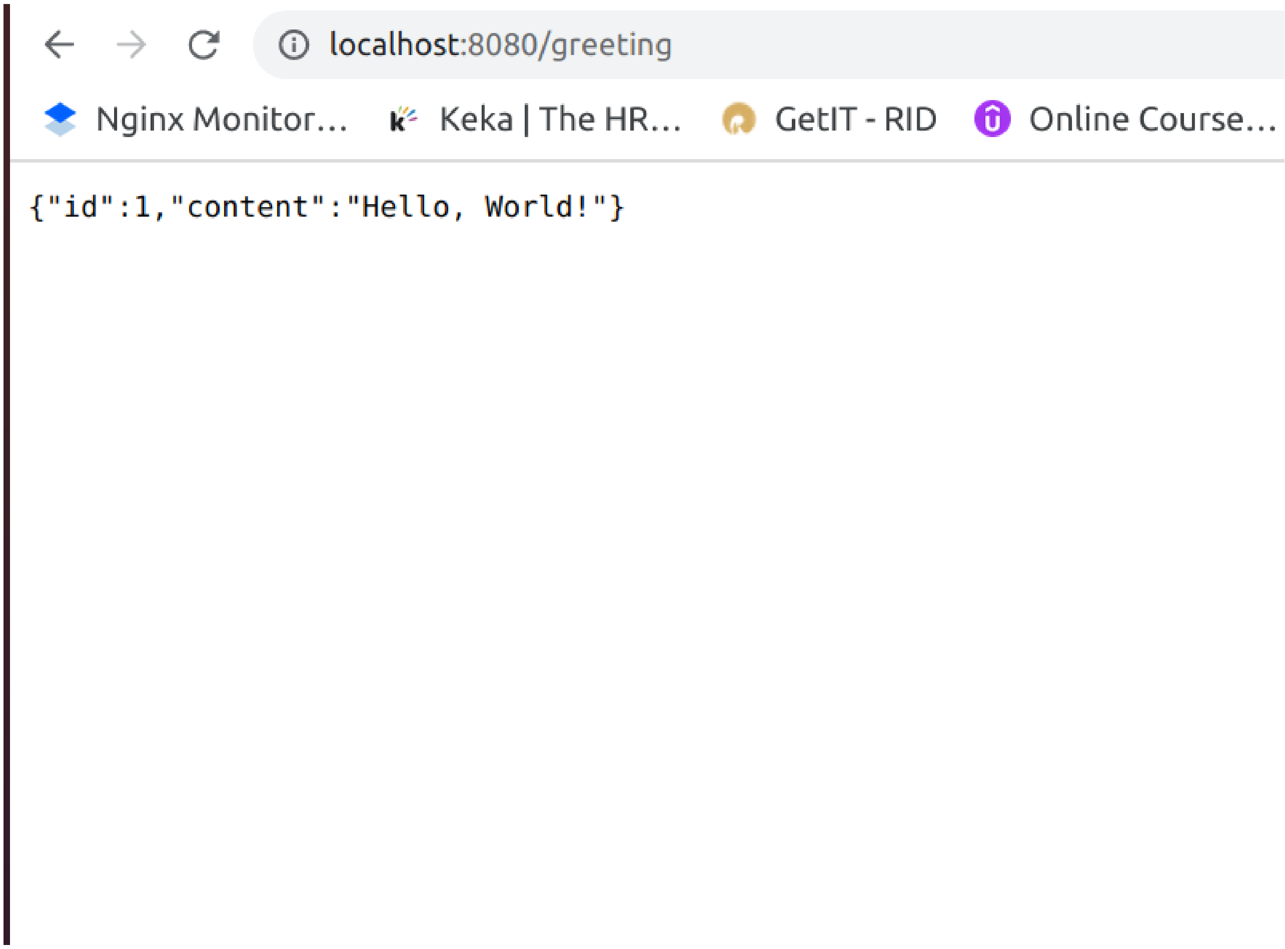
Step-4.a)→ Build and push the Docker img

```
$ docker build -t spring-test-image .
$ docker tag spring-test-image docker-hub-usr-name/spring-test-image:latest
$ docker push docker-hub-user-name/spring-test-image:latest
```

4.b) Test the docker img

```
$ docker run -d -p 8080:8080 docker-hub-user-name/spring-test-image:latest
# goto browser and search that
$ localhost:8080/greeting
```

o/p:-



```
{"id":1,"content":"Hello, World!"}
```

Step-5→ Containerization of this app using K8s

a) Create **pod.yaml**

```
apiVersion: v1

kind: Pod

metadata:

  name: spring-test-app

spec:

  containers:

  - name: spring-test-app

    image: tubuoh/spring-test-image #change your user-name

    ports:

    - containerPort: 8080
```

b) Create **deploy.yaml**

```
apiVersion: apps/v1

kind: Deployment

metadata:

  name: spring-test-app
  labels:
    app: spring-test--app
spec:
  replicas: 1
  selector:
    matchLabels:
      app: spring-test-app
  template:
    metadata:
      labels:
        app: spring-test-app
    spec:
      containers:
      - name: spring-test-app
```

```
        image: tubuoh/spring-test-image # chnage your-user name


        ports:


        - containerPort: 8080
```

c) create **service.yaml**

```
apiVersion: v1
kind: Service
metadata:
  name: spring-test-app-service
spec:
  type: NodePort
  selector:
    app: spring-test-app
  ports:
    - protocol: TCP
      port: 8080
      targetPort: 8080
      nodePort: 31000
```

Run this cmd

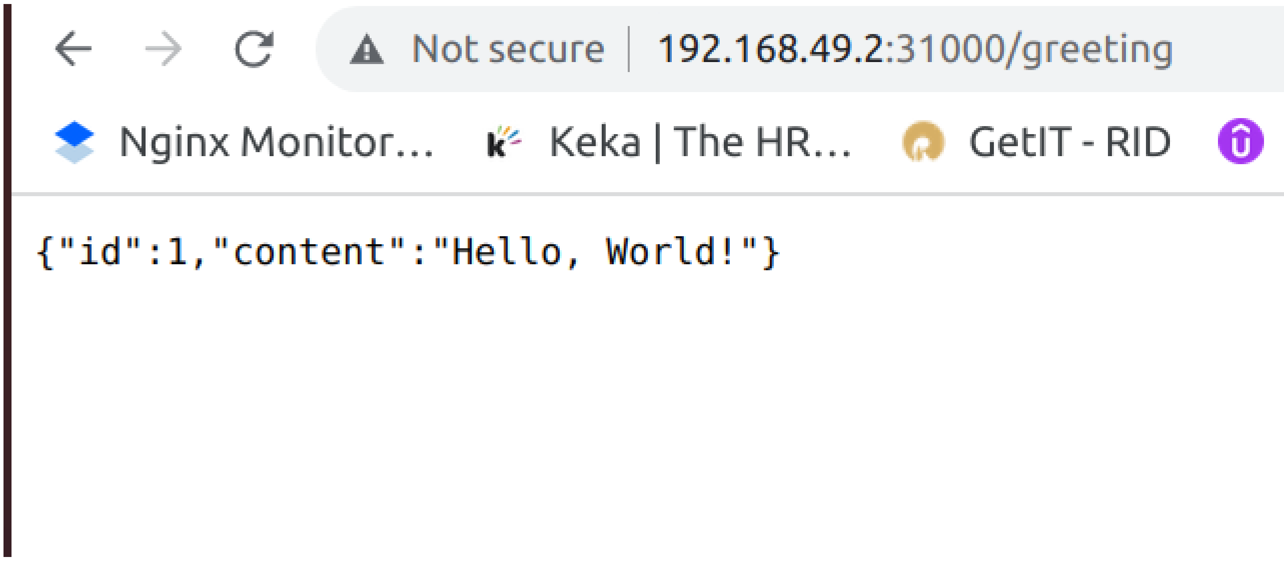
```
$ kubectl apply -f deploy.yaml -f service.yaml -f pod.yaml
```

setp→6 **Test the application**

```
# cmd
$ minikube ip
```

```
# copy that ip and goto brower
http://your_minikube_ip:31000/greeting
```

o/p:



```
{"id":1,"content":"Hello, World!"}
```