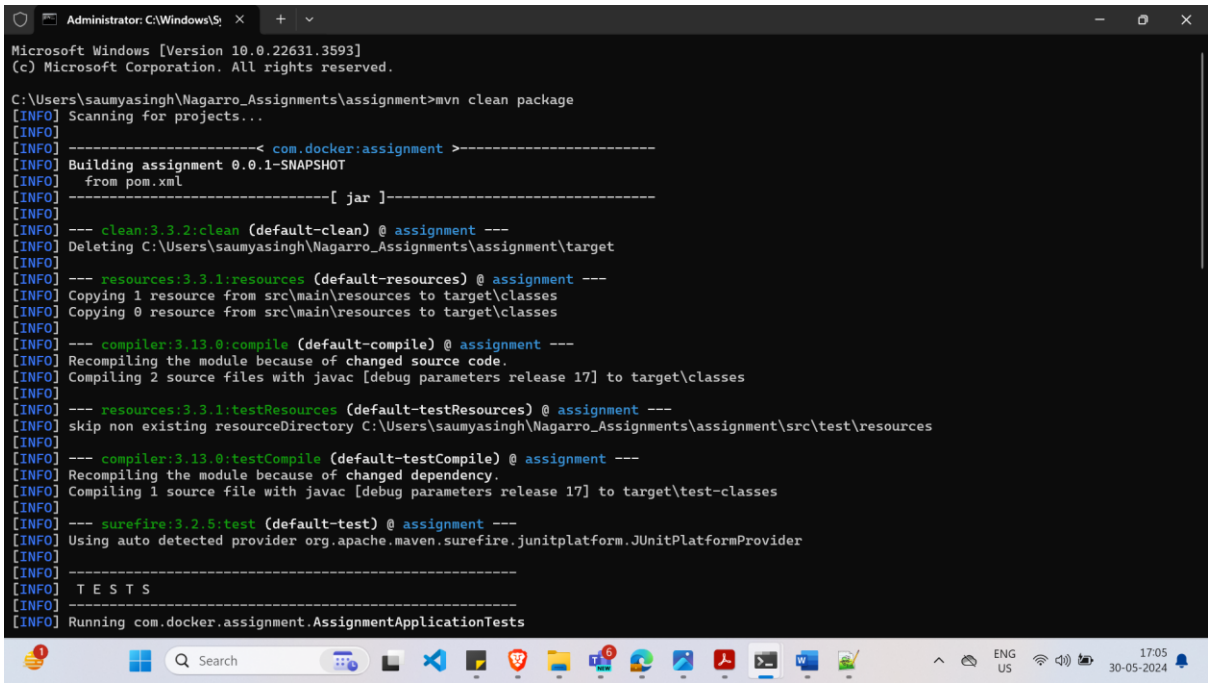
Build jar file

mvn clean package



Jar file created:

assignment-0.0.1-SNAPSHOT.jar	30-05-2024 17:05	Executable Jar File	19,792 KB
assignment-0.0.1-SNAPSHOT.jar.original	30-05-2024 17:05	ORIGINAL File	4 KB

Make docker image

docker build -t saumya11031998/assignment .

```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker build -t saumya11031998/assignment .
Sending build context to Docker daemon  20.36MB
Step 1/5 : FROM openjdk:17-jdk-alpine
17-jdk-alpine: Pulling from library/openjdk
5843afab3874: Pull complete
53c9466125e4: Pull complete
d8d715783b80: Pull complete
Digest: sha256:4b6abae565492dbe9e7a894137c966a7485154238902f2f25e9dbd9784383d81
Status: Downloaded newer image for openjdk:17-jdk-alpine
 ---> 264c9bdce361
Step 2/5 : WORKDIR /app
 ---> Running in f0288fb82a70
Removing intermediate container f0288fb82a70
 ---> ab256c66677e
Step 3/5 : COPY target/assignment-0.0.1-SNAPSHOT.jar /app/assignment-0.0.1-SNAPSHOT.jar
 ---> 8b256e3e9157
Step 4/5 : EXPOSE 9090
 ---> Running in d98803d6e9ea
Removing intermediate container d98803d6e9ea
 ---> 21301be505b6
Step 5/5 : ENTRYPOINT ["java", "-jar", "/app/assignment-0.0.1-SNAPSHOT.jar"]
 ---> Running in e3878830e0a2
Removing intermediate container e3878830e0a2
 ---> f5465533b07a
Successfully built f5465533b07a
Successfully tagged saumya11031998/assignment:latest
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$
```

docker login

give dockerhub username and it's password

```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker login
Authenticating with existing credentials...
WARNING! Your password will be stored unencrypted in /home/saumyasingh/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$
```

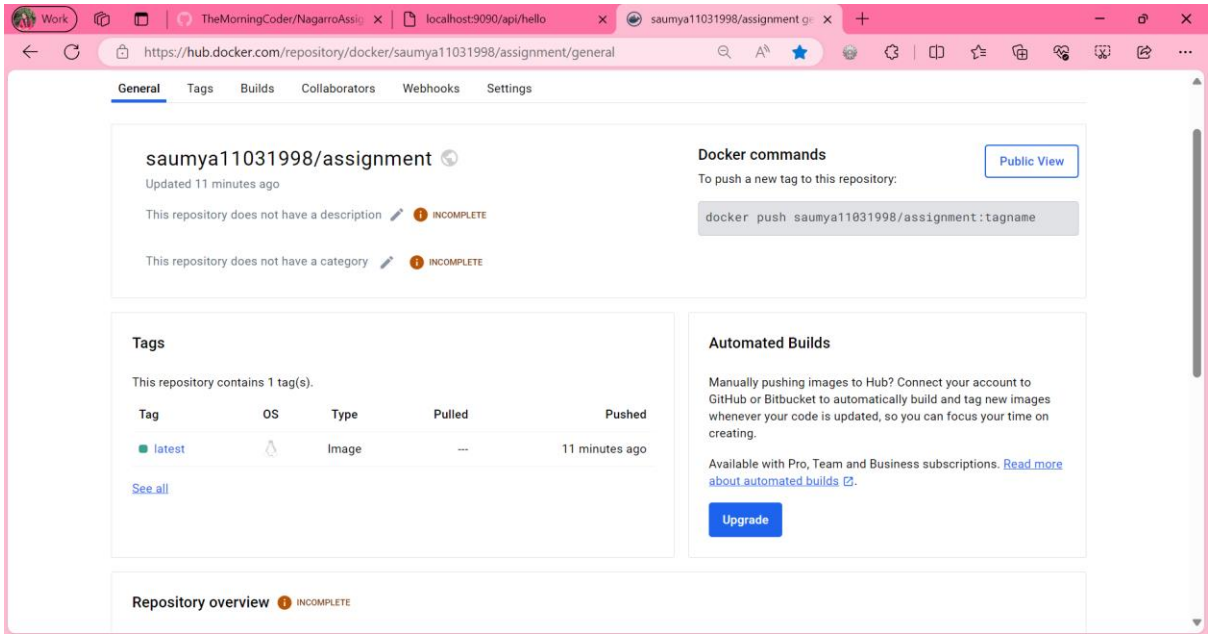
docker push saumya11031998/assignment

```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker push saumya11031998/assignment
Using default tag: latest
The push refers to repository [docker.io/saumya11031998/assignment]
37e2bea8f0ae: Pushing [==================================================>]  20.27MB/20.27MB
42d22eab50f8: Pushed
34f7184834b2: Mounted from library/openjdk
5836ece05bfd: Mounted from library/openjdk
72e830a4dff5: Mounted from library/openjdk
error parsing HTTP 400 response body: invalid character '<' looking for beginning of value: "<html><body><h1>400 Bad request</h1>\nYo
ur browser sent an invalid request.\n</body></html>\n\n"
```

```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker push saumya11031998/assignment
Using default tag: latest
The push refers to repository [docker.io/saumya11031998/assignment]
37e2bea8f0ae: Pushed
42d22eab50f8: Layer already exists
34f7184834b2: Layer already exists
5836ece05bfd: Layer already exists
72e830a4dff5: Layer already exists
latest: digest: sha256:f80d0363dd647cf81b6e3199f12100c56e195baea17e6cca969d9da1c6aa95ab size: 1369
```

docker images

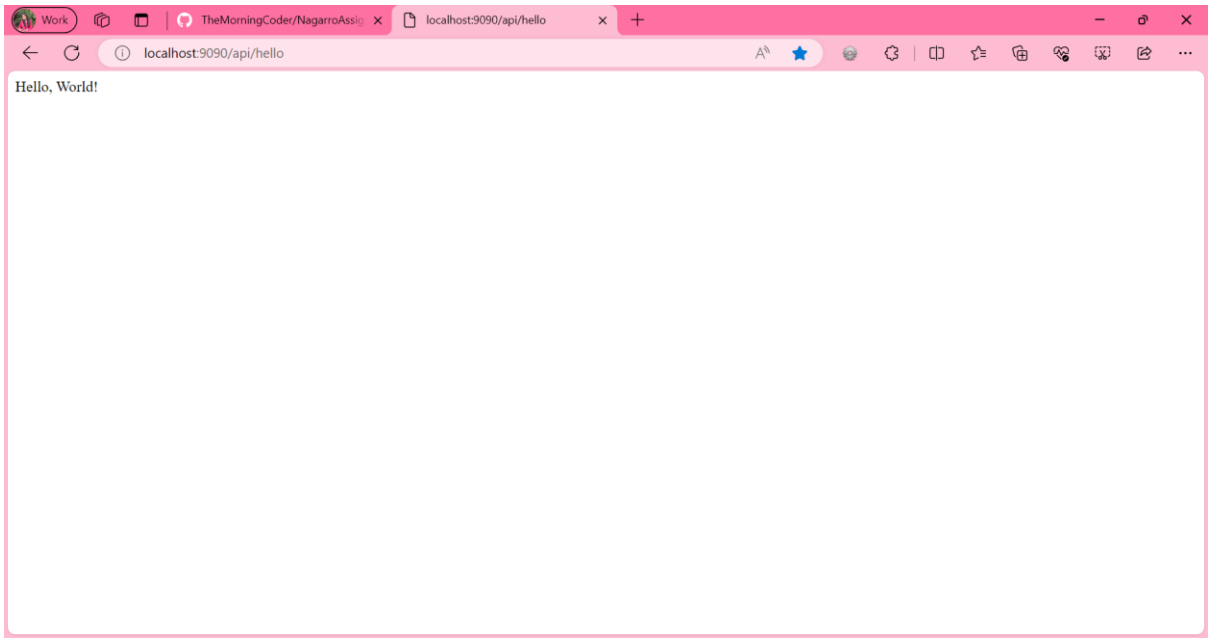
```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker images
REPOSITORY                   TAG             IMAGE ID       CREATED          SIZE
saumya11031998/assignment    latest          f5465533b07a   14 minutes ago   346MB
saumya11031998/assignment    <none>          7d74fd69c430   24 hours ago     244MB
ubuntu                       latest          bf3dc08bfed0   4 weeks ago      76.2MB
openjdk                      11-jre-slim     764a04af3eff   22 months ago    223MB
openjdk                      17-jdk-alpine   264c9bdce361   2 years ago      326MB
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$
```



docker run -p 9090:9090 saumya11031998/assignment

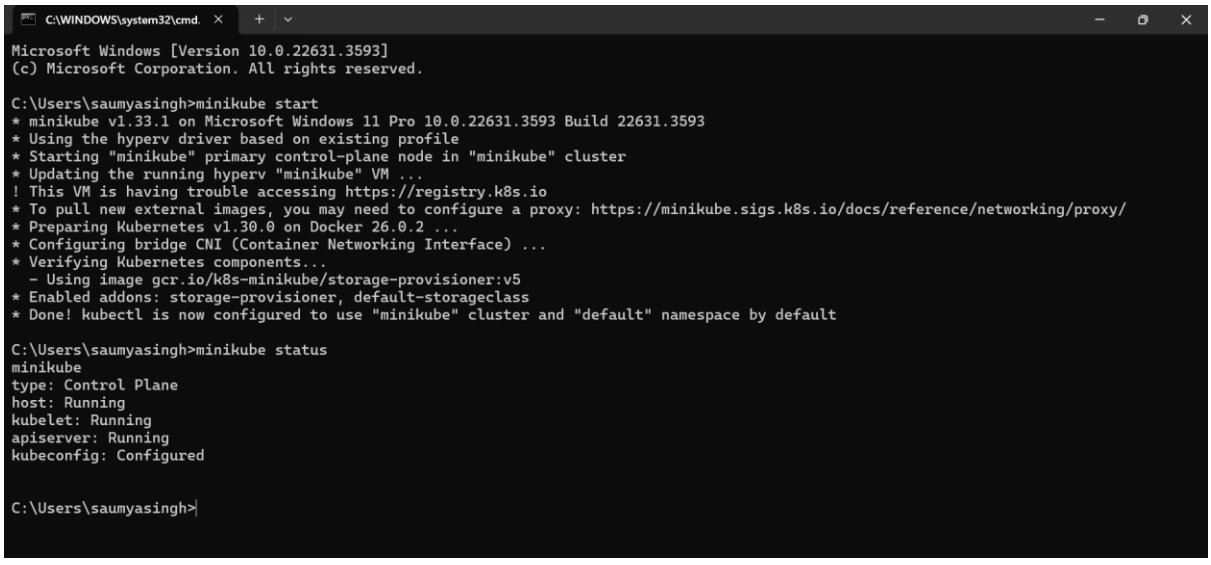
```
saumyasingh@IN-72MRXM3:/mnt/c/Users/saumyasingh/Nagarro_Assignments/assignment$ docker run -p 9090:9090 saumya11031998/assignment
  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/

 :: Spring Boot ::                (v3.3.0)

2024-05-30T11:59:17.782Z  INFO 1 --- [assignment] [           main] c.d.assignment.AssignmentApplication     : Starting AssignmentApplication v0
.0.1-SNAPSHOT using Java 17-ea with PID 1 (/app/assignment-0.0.1-SNAPSHOT.jar started by root in /app)
2024-05-30T11:59:17.787Z  INFO 1 --- [assignment] [           main] c.d.assignment.AssignmentApplication     : No active profile set, falling ba
ck to 1 default profile: "default"
2024-05-30T11:59:18.991Z  INFO 1 --- [assignment] [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port 9090
 (http)
2024-05-30T11:59:19.014Z  INFO 1 --- [assignment] [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2024-05-30T11:59:19.015Z  INFO 1 --- [assignment] [           main] o.apache.catalina.core.StandardEngine    : Starting Servlet engine: [Apache
Tomcat/10.1.24]
2024-05-30T11:59:19.070Z  INFO 1 --- [assignment] [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebA
pplicationContext
2024-05-30T11:59:19.073Z  INFO 1 --- [assignment] [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initi
alization completed in 1168 ms
2024-05-30T11:59:19.548Z  INFO 1 --- [assignment] [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port 9090 (http
) with context path '/'
2024-05-30T11:59:19.568Z  INFO 1 --- [assignment] [           main] c.d.assignment.AssignmentApplication     : Started AssignmentApplication in
2.367 seconds (process running for 2.906)
```

Api running



minikube start

minikube status



kubectl apply -f deployment.yaml

kubectl apply -f service.yaml

```
C:\Users\saumyasingh\Nagarro_Assignments>kubectl apply -f deployment.yaml
deployment.apps/assignment created

C:\Users\saumyasingh\Nagarro_Assignments>kubectl apply -f service.yaml
service/assignment-service created
```

kubectl get deployments

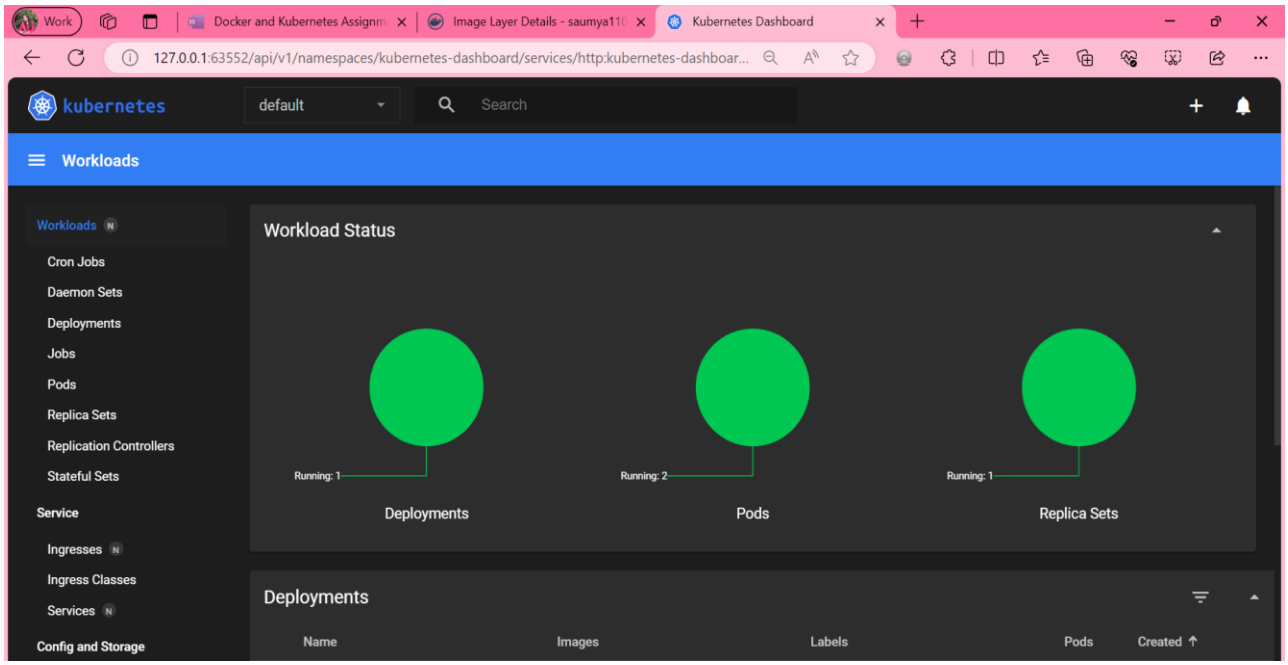
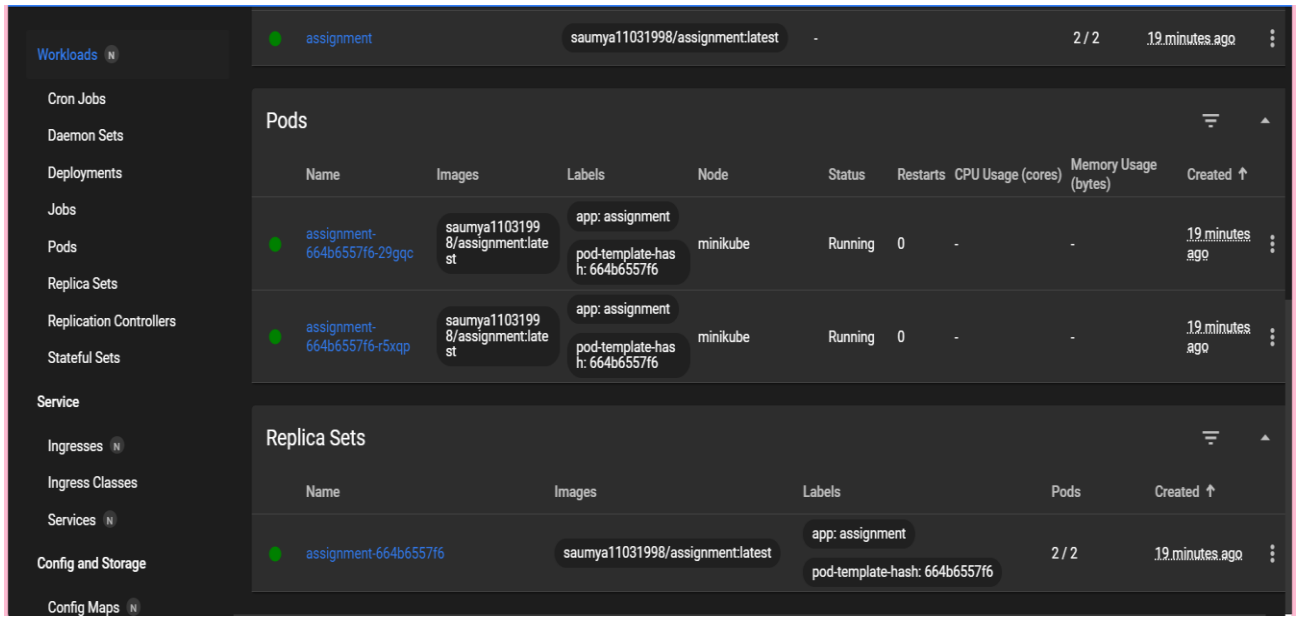
```
C:\Users\saumyasingh\Nagarro_Assignments>kubectl get deployments
NAME         READY   UP-TO-DATE   AVAILABLE   AGE
assignment   2/2     2            2           87s
```

kubectl get services

```
C:\Users\saumyasingh\Nagarro_Assignments>kubectl get services
NAME                 TYPE           CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
assignment-service   LoadBalancer   10.102.119.40   <pending>     80:31153/TCP   7m2s
kubernetes           ClusterIP      10.96.0.1       <none>        443/TCP        22h
```

minikube service assignment-service --url

```
C:\Users\saumyasingh\Nagarro_Assignments>minikube service assignment-service --url
http://172.29.171.129:31153

C:\Users\saumyasingh\Nagarro_Assignments>
```

minikube dashboard

```
C:\Users\saumyasingh\Nagarro_Assignments>minikube dashboard
* Enabling dashboard ...
  - Using image docker.io/kubernetesui/dashboard:v2.7.0
  - Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
* Some dashboard features require the metrics-server addon. To enable all features please run:

        minikube addons enable metrics-server

* Verifying dashboard health ...
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:63552/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default br
owser...
```