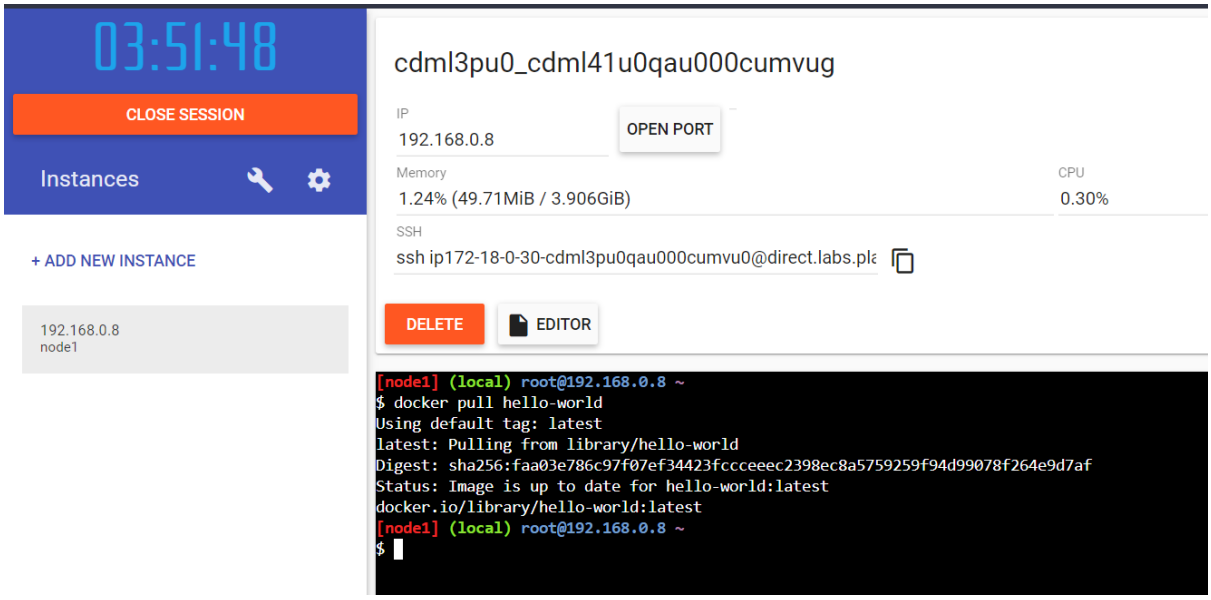
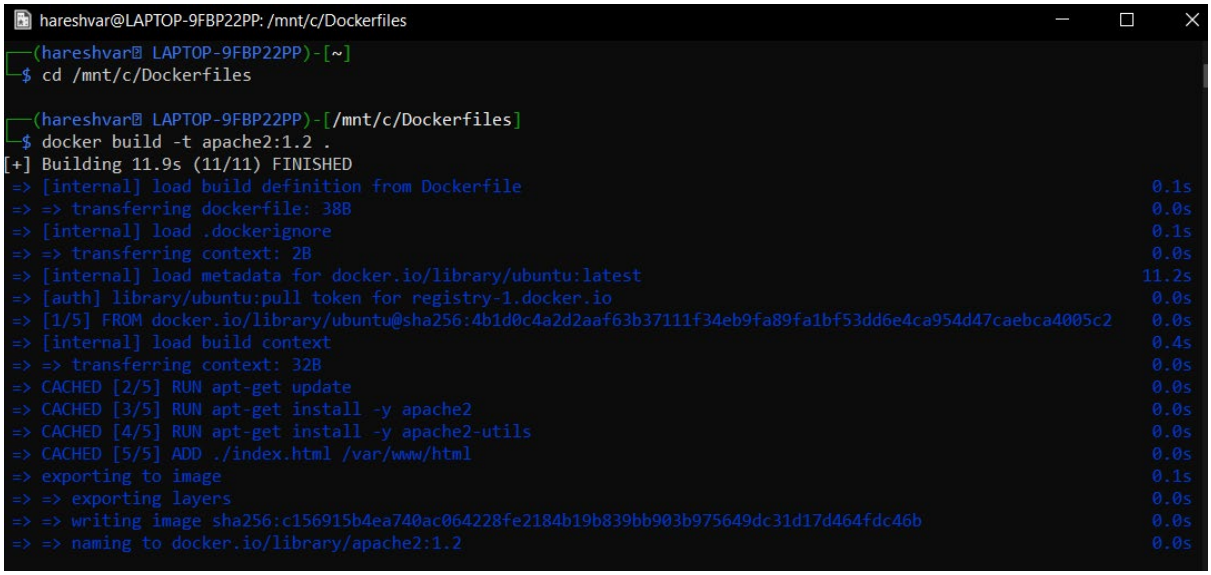
TEAM ID: PNT2022TMID02725

1) Pull an Image from docker hub and run it in docker playground.

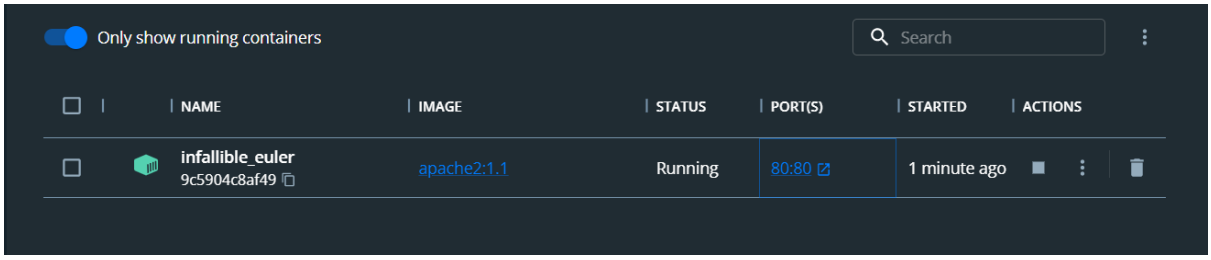


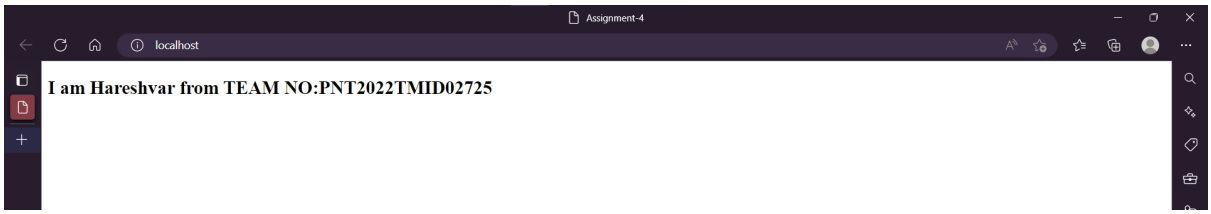
2) Create a docker file for the jobportal application and deploy it in Docker desktop application.



```
┌──(hareshvar㉿ LAPTOP-9FBP22PP)-[/mnt/c/Dockerfiles]
└─$ docker run -d -p 80:80 apache2:1.2
9c5904c8af49d6cb1b962f357269a6a2aaae565f6ac989824b31c8b4085b2d5a

┌──(hareshvar㉿ LAPTOP-9FBP22PP)-[/mnt/c/Dockerfiles]
└─$
```

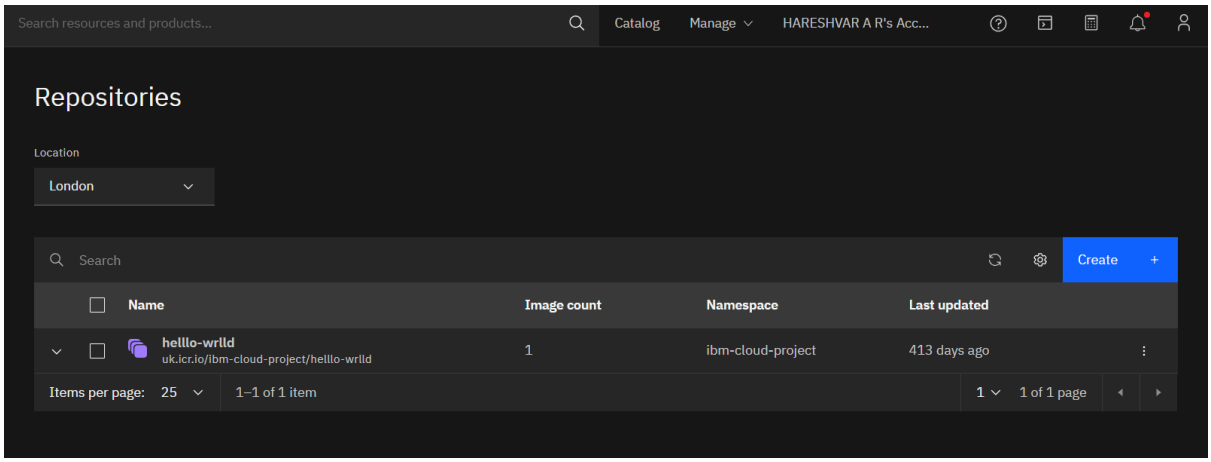
```
┌──(hareshvar㉿ LAPTOP-9FBP22PP)-[/mnt/c/Dockerfiles]
└─$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS          PORTS                NAMES
9c5904c8af49   apache2:1.2    "/bin/sh -c 'apache2…"   48 seconds ago   Up 24 seconds   0.0.0.0:80->80/tcp   infallible_e
uler

┌──(hareshvar㉿ LAPTOP-9FBP22PP)-[/mnt/c/Dockerfiles]
```



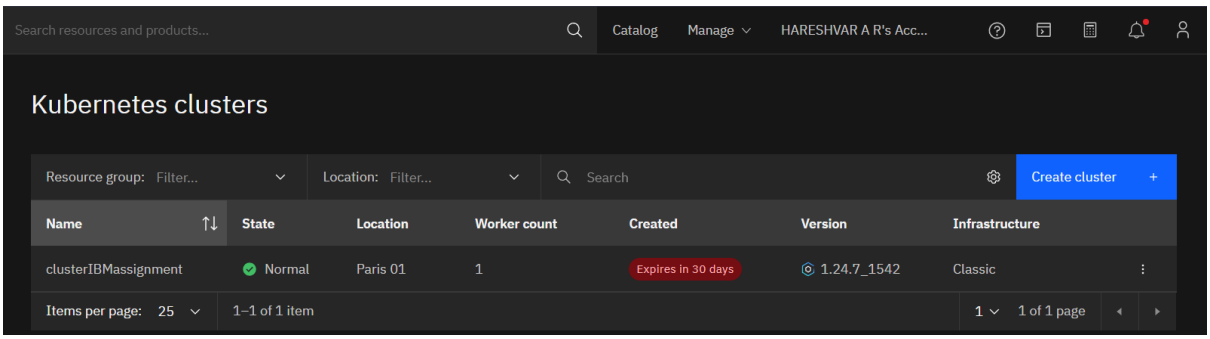
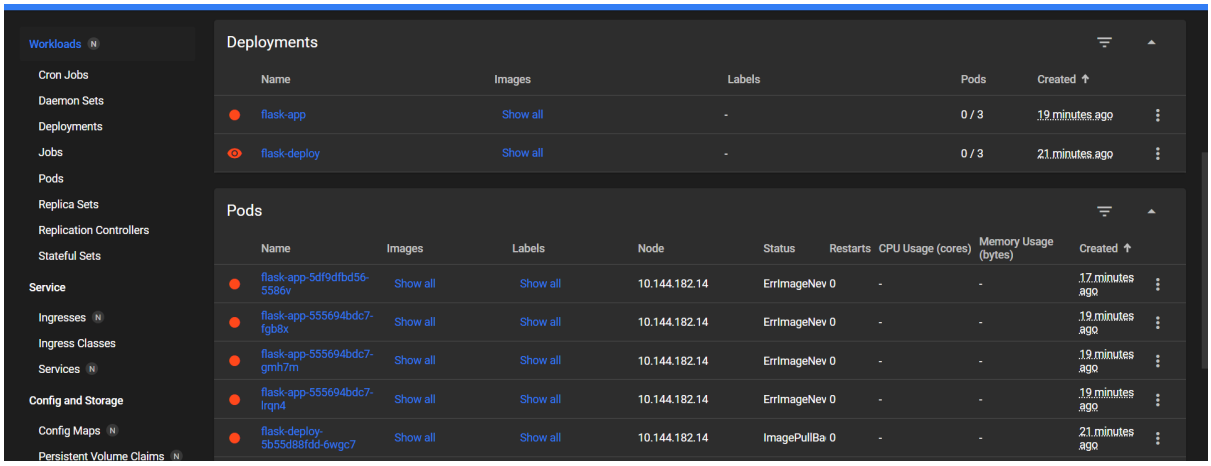


3) Create IBM Cloud Registry

```
C:\Users\HARESHVAR A R>docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
Digest: sha256:faa03e786c97f07ef34423fccceeec2398ec8a5759259f94d99078f264e9d7af
Status: Image is up to date for hello-world:latest
docker.io/library/hello-world:latest

C:\Users\HARESHVAR A R>docker tag hello-world uk.icr.io/ibm-cloud-project/helllo-wrlld

C:\Users\HARESHVAR A R>docker push uk.icr.io/ibm-cloud-project/helllo-wrlld
Using default tag: latest
The push refers to repository [uk.icr.io/ibm-cloud-project/helllo-wrlld]
e07ee1baac5f: Pushed
latest: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525

C:\Users\HARESHVAR A R>
```



4) Create Kubernates cluster in IBM cloud and deploy app and also expose the same in nodeport



```
C:\Users\HARESHVAR A R>ibmcloud ks cluster config --cluster cdmphupf0h8pv4c1i530
OK
The configuration for cdmphupf0h8pv4c1i530 was downloaded successfully.

Added context for cdmphupf0h8pv4c1i530 to the current kubeconfig file.
You can now execute 'kubectl' commands against your cluster. For example, run 'kubectl get nodes'.
If you are accessing the cluster for the first time, 'kubectl' commands might fail for a few seconds whi
le RBAC synchronizes.

C:\Users\HARESHVAR A R>kubectl config current-context
clusterIBMassignment/cdmphupf0h8pv4c1i530

C:\Users\HARESHVAR A R>kubectl create -f deployment.yaml
error: the path "deployment.yaml" does not exist

C:\Users\HARESHVAR A R>kubectl get pods
No resources found in default namespace.

C:\Users\HARESHVAR A R>kubectl get nodes
NAME            STATUS   ROLES    AGE     VERSION
10.144.182.14   Ready    <none>   3h18m   v1.24.7+IKS

C:\Users\HARESHVAR A R>cd C:/Dockerfiles/kubernets

C:\Dockerfiles\Kubernets>kubectl create -f ibm_deployment.yaml
deployment.apps/flask-deploy created

C:\Dockerfiles\Kubernets>kubectl create -f flask_service.yaml
service/flask-app-service created

C:\Dockerfiles\Kubernets>kubectl create -f flask_ingress.yaml
ingress.networking.k8s.io/flask-app-ingress created

C:\Dockerfiles\Kubernets>kubectl create -f flask_deployment.yaml
deployment.apps/flask-app created

C:\Dockerfiles\Kubernets>kubectl create -f dashboard_adminuser.yaml
clusterrolebinding.rbac.authorization.k8s.io/admin-user created
```