

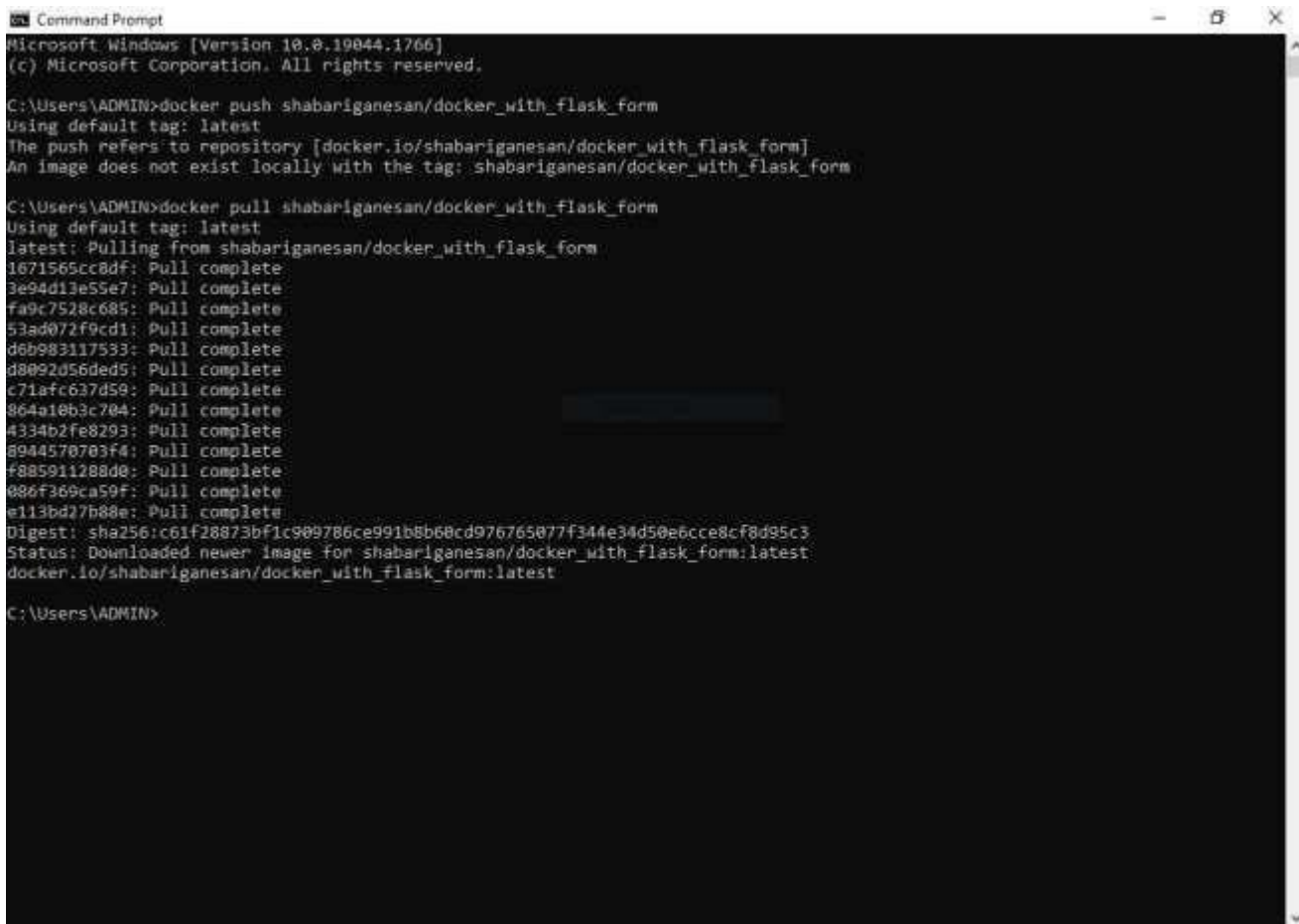
Assignment - IV
Docker & Kubernetes
Cloud Application Development

Assignment Date	30 th October 2022
Student Name	Devarajathirajan S
Student Roll Number	61771921009
Maximum Marks	2 Marks

Question-1:

pull an image from docker hub and run it in docker playground.

pull an image form docker hub



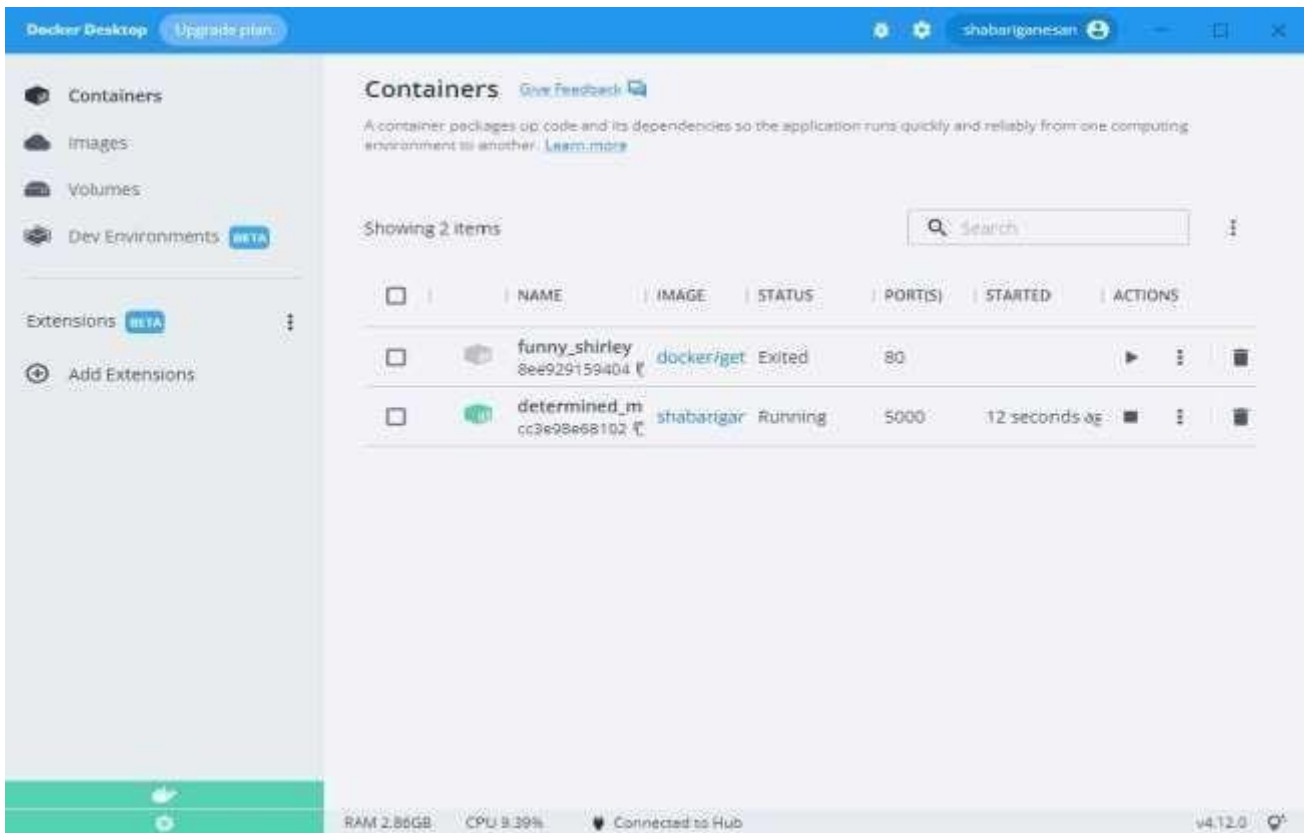
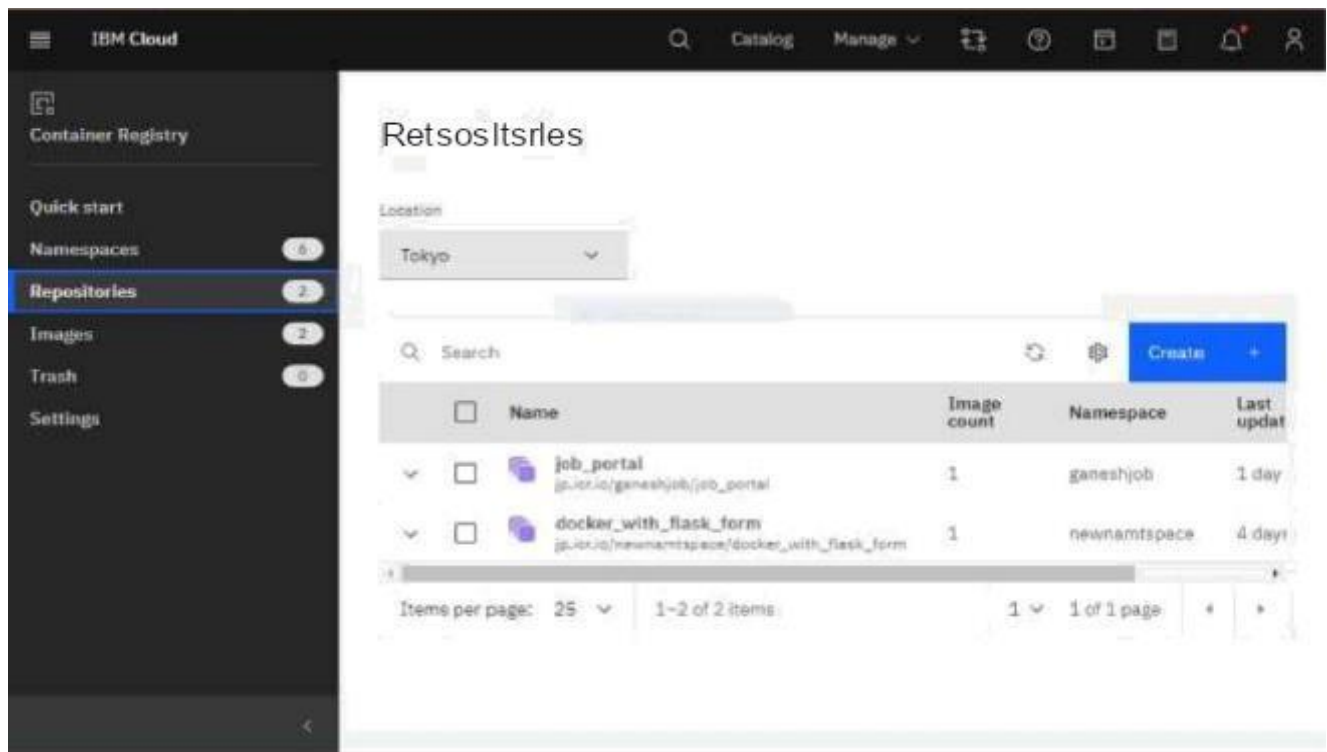
```
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

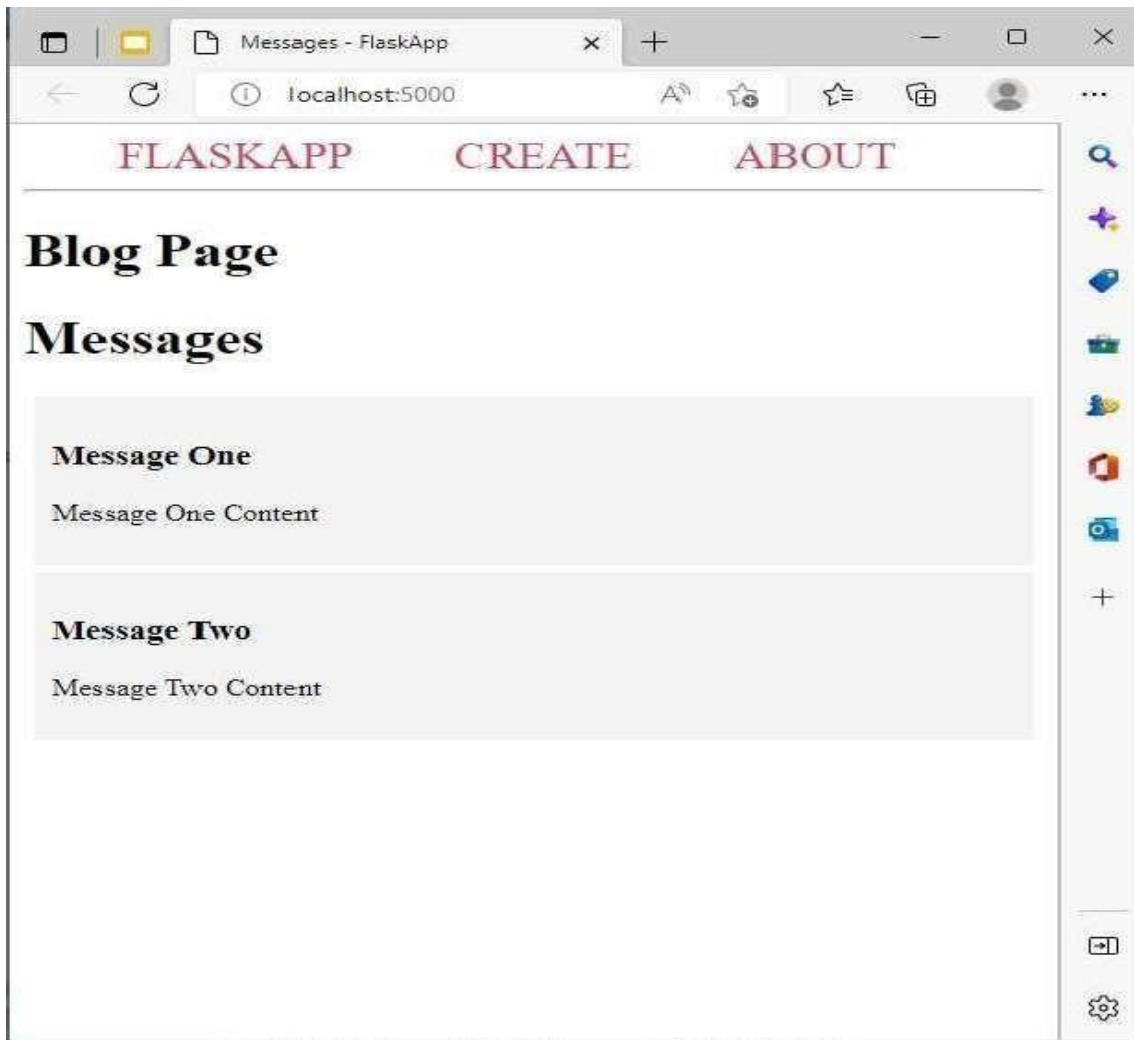
C:\Users\ADMIN>docker push shabariganesan/docker_with_flask_form
Using default tag: latest
The push refers to repository [docker.io/shabariganesan/docker_with_flask_form]
An image does not exist locally with the tag: shabariganesan/docker_with_flask_form

C:\Users\ADMIN>docker pull shabariganesan/docker_with_flask_form
Using default tag: latest
latest: Pulling from shabariganesan/docker_with_flask_form
1671565cc8df: Pull complete
3e94d13e55e7: Pull complete
fa9c7528c685: Pull complete
53ad072f9cd1: Pull complete
d6b983117533: Pull complete
d8092d56ded5: Pull complete
c71afc637d59: Pull complete
864a18b3c784: Pull complete
4334b2fe8293: Pull complete
8944570703f4: Pull complete
f885911288d0: Pull complete
086f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b8b60cd976765077f344e34d50e6cce8cf8d95c3
Status: Downloaded newer image for shabariganesan/docker_with_flask_form:latest
docker.io/shabariganesan/docker_with_flask_form:latest

C:\Users\ADMIN>
```

run it in docker playground

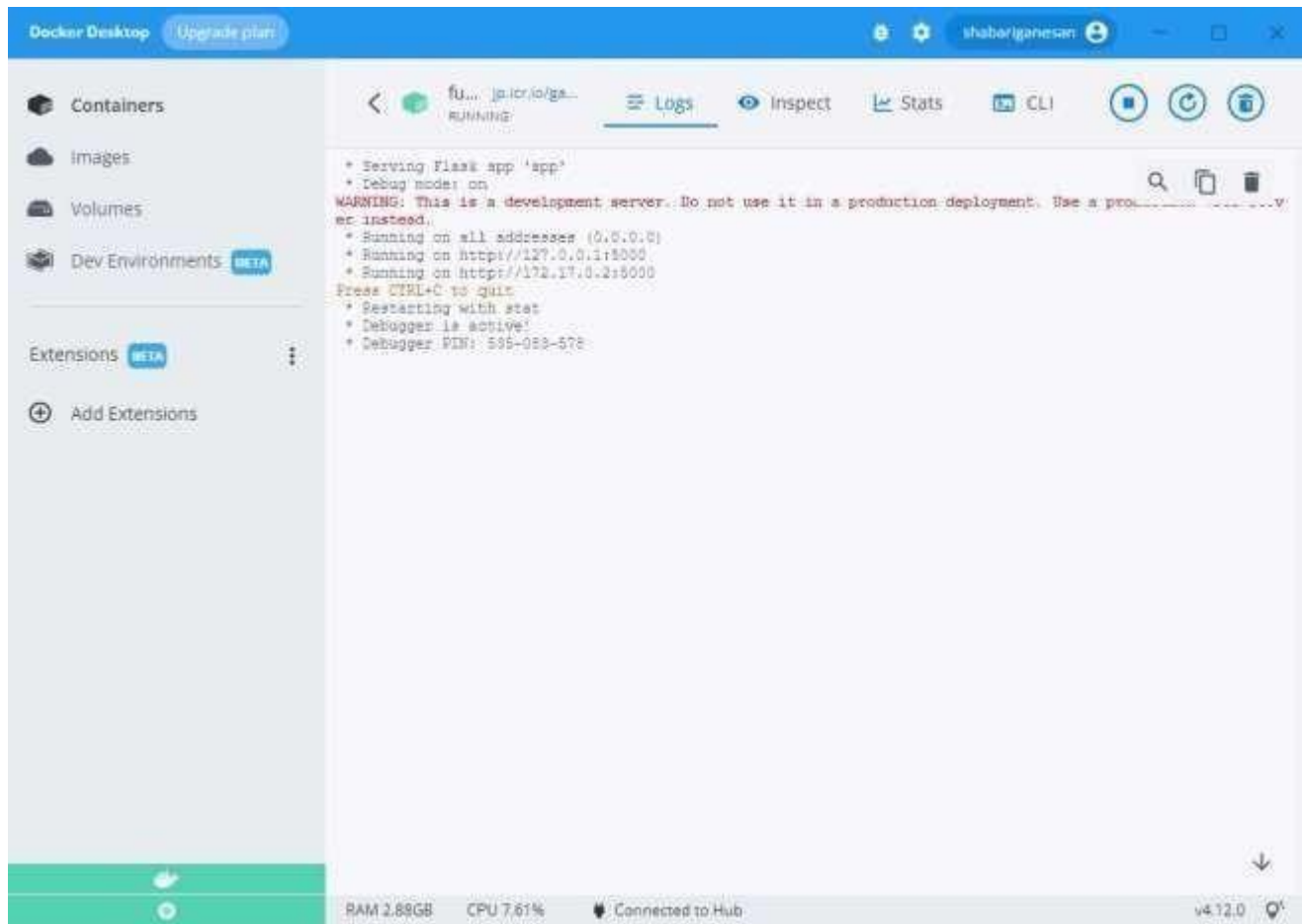




Question-2:

Create a docker file for the jobportal application and deploy it in docker application.

Creating a docker file for the jobportal application



running in docker desktop 1

Question-3: Create albm container registry and deploy helloworld app or jobportalapp

create a ibm container registry

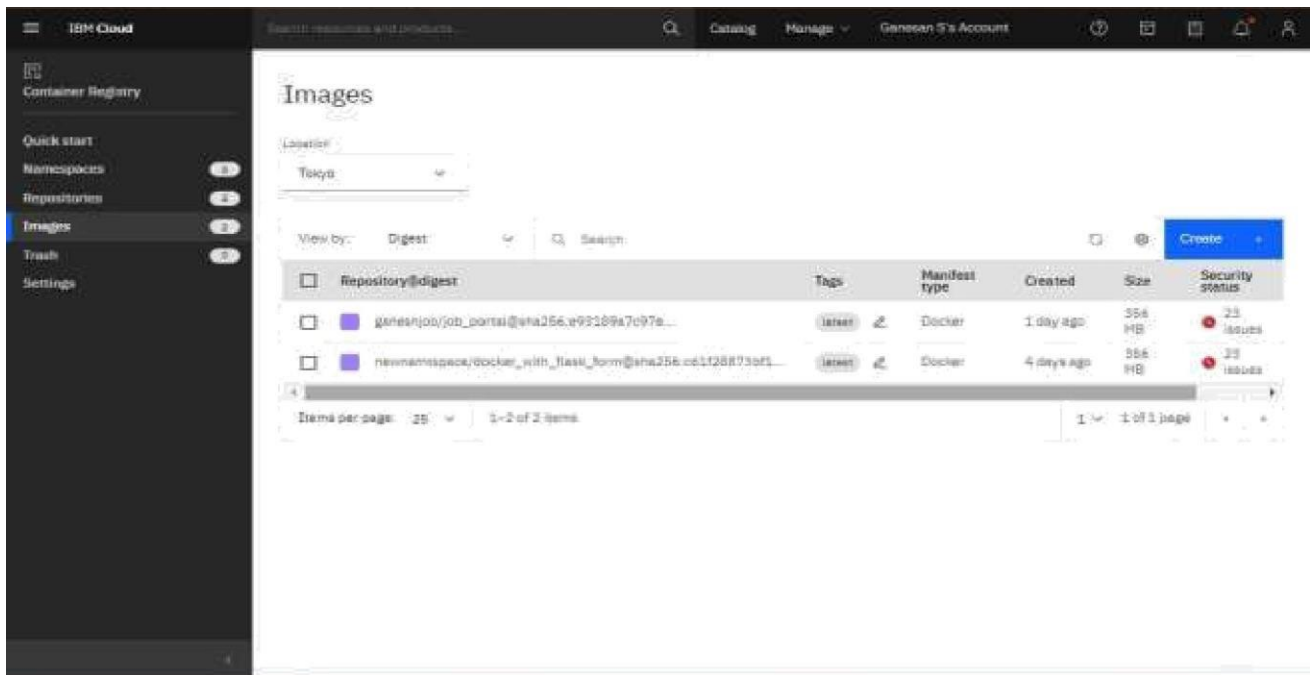


deployhelloworld or jobportal

```
C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
e90d1d47b5a1: Waiting
655ed1b7a428: Waiting
failed to lookup host: jp.lcr.io

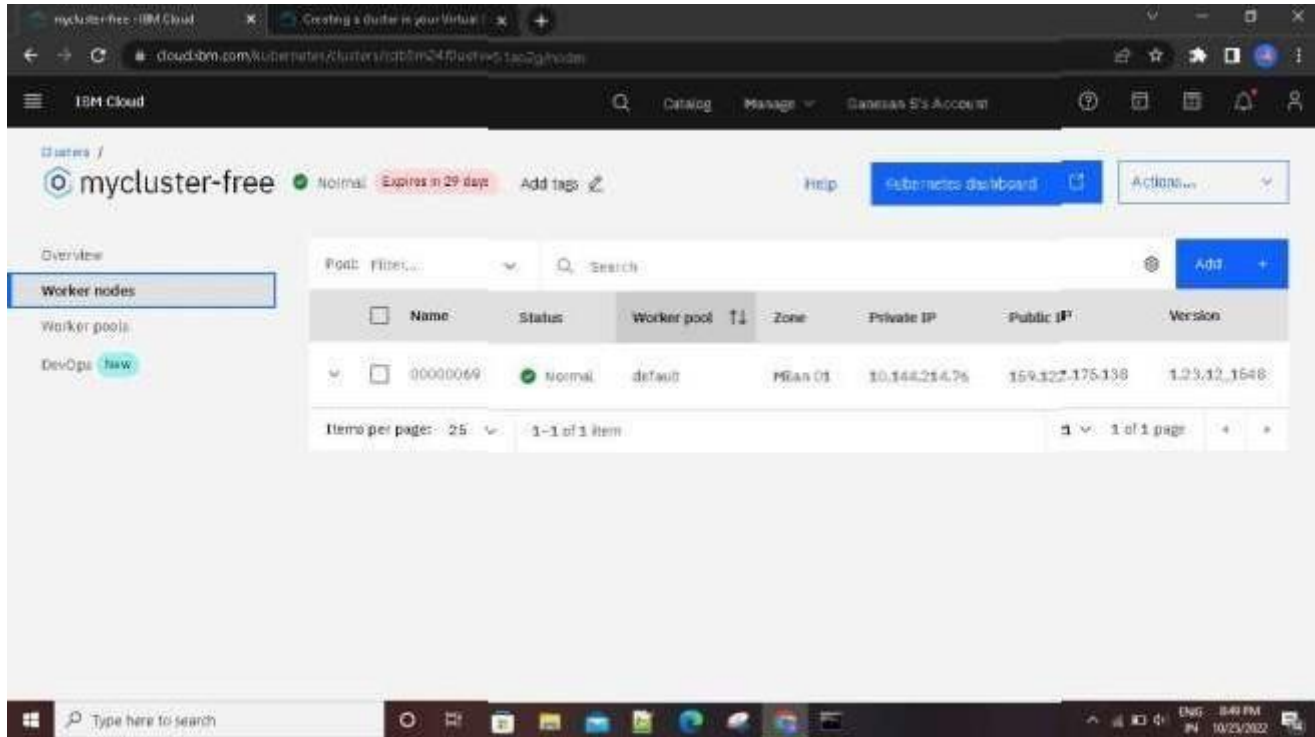
C:\Users\ganl\Desktop\job_portal>docker push jp.lcr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganeshjob/job_portal]
1503b1584025: layer already exists
80e94f5e106: Pushed
48c2a74c12b: layer already exists
8c72c7835466: layer already exists
bfc1deb0136e: layer already exists
1f123106024: layer already exists
3d5eb1152931: Pushed
100796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
e90d1d47b5a1: Pushed
655ed1b7a428: Pushing [=====] 89.89MB/124PB
^C
C:\Users\ganl\Desktop\job_portal>docker push jp.lcr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganeshjob/job_portal]
1503b1584025: layer already exists
80e94f5e106: layer already exists
48c2a74c12b: layer already exists
8c72c7835466: layer already exists
bfc1deb0136e: layer already exists
1f123106024: layer already exists
3d5eb1152931: layer already exists
100796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
e90d1d47b5a1: layer already exists
655ed1b7a428: Pushed
latest: digest: sha256:e93109a7c07eeb93086668a54e895cf61aa6eda939998c8c7a2147a7961fc207 size: 3952

C:\Users\ganl\Desktop\job_portal>
C:\Users\ganl\Desktop\job_portal>
```



Question-4: Create a kubernetes cluster in ibm cloud and deploy helloworld image or jobportal image and also expose the same app to run in noteport

Creating a kubernetes cluster in ibm cloud



deploy helloworld image or jobportal image and also expose the same app to run in noteport

```
C:\Windows\System32\cmd.exe
10/16/2022 12:28 PM 3,721 windows shortcut.txt
08/25/2022 08:40 PM 2,897 YouTube.lnk
24 File(s) 804,677,196 bytes
9 Dir(s) 79,221,886,976 bytes free

C:\Users\gani\Desktop>cd deploy
The system cannot find the path specified.

C:\Users\gani\Desktop>kubectl apply -f kubernetes/depoly.yaml
error: the path "kubernetes/depoly.yaml" does not exist

C:\Users\gani\Desktop>kubectl apply -f depoly.yaml
error: the path "depoly.yaml" does not exist

C:\Users\gani\Desktop>kubectl apply -f C:\Users\gani\Desktop\deploy.yaml
deployment.apps/flask-app created

C:\Users\gani\Desktop>
```



Search

Workloads > Pods

Deployment

Deployment name

Waiting for more data to display chart... Waiting for more data to display chart...

Running

Running

Running

Services

```
~/ing flask app 'app'
log mode: on
[flask@80100: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.]
ming on all addresses (0.0.0.0)
ming on http://127.0.0.1:5000
ming on http://172.30.22.11:5000
Press CTRL-C to quit[0m
Starting with stat
sagger is active!
sagger PIN: 110-487-149
```



Workloads > Pods > flask-app-79447b5c8c-4df9w > Logs

C:\Windows\system32\cmd.exe

```
C:\Windows\system32>kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")

C:\Windows\system32>kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")

C:\Windows\system32>kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")

C:\Windows\system32>kubectl expose deployment flask-app --type=NodePort --name=flask-service
Error from server (AlreadyExists): services "flask-service" already exists

C:\Windows\system32>
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.

C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.

C:\Windows\system32>kubectl proxy
Starting to serve on 127.0.0.1:8001
^C
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32>kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.

C:\Windows\system32>kubectl -n kubernetes-dashboard get pods
No resources found in kubernetes-dashboard namespace.

C:\Windows\system32>kubectl expose deployment flask-app --type=NodePort --name=flask-service
Error from server (AlreadyExists): services "flask-service" already exists

C:\Windows\system32>kubectl get ing
NAME          CLASS    HOSTS      ADDRESS      PORTS      AGE
flask-app-ingress  <none>   *          *            80         27m

C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE
```