Assignment - IV

Docker & Kubernetes

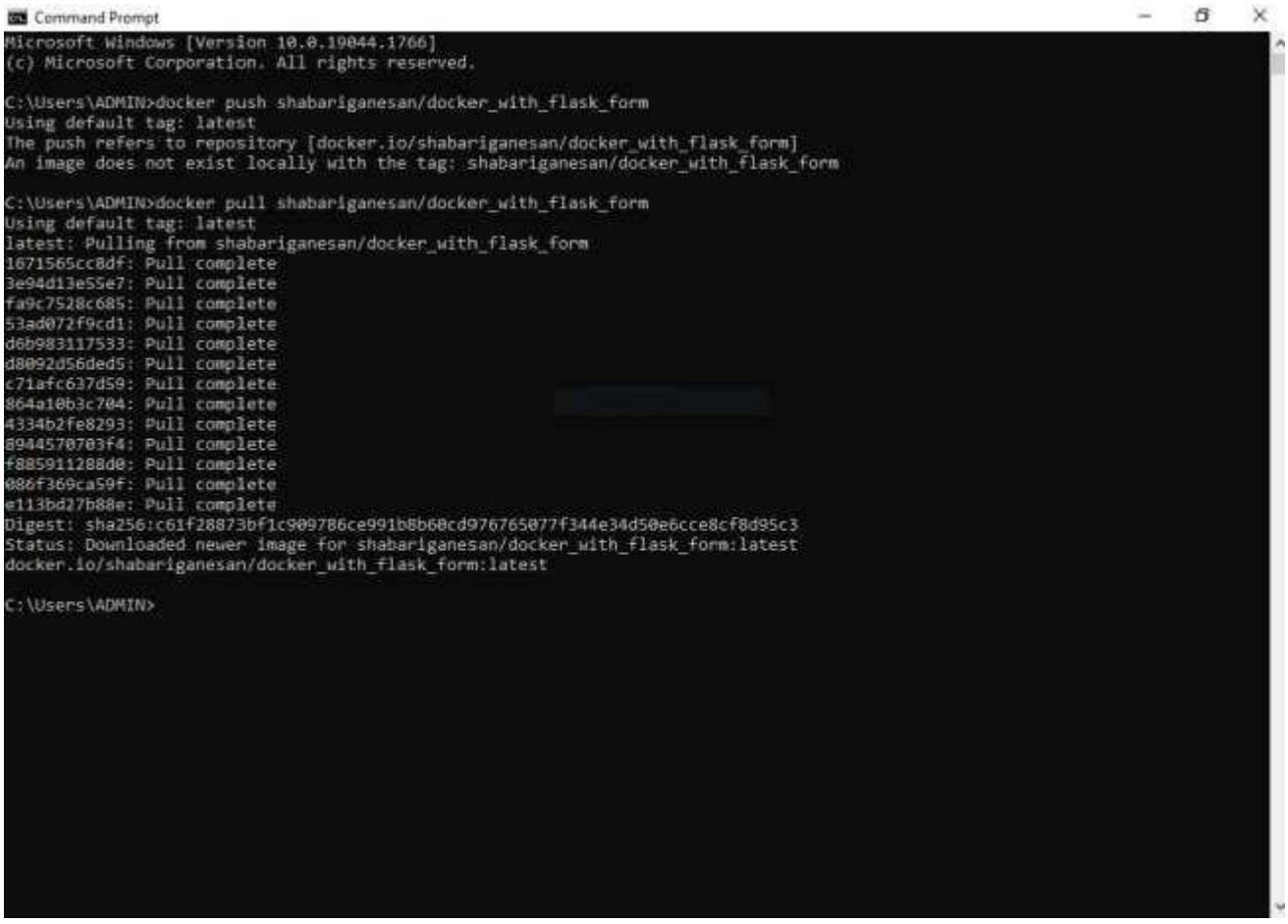
Cloud Application Development

Assignment Date	30th October 2022
Student Name	Ms.R.Kokila
Student Roll Number	61771921026
Maximum Marks	2 Marks

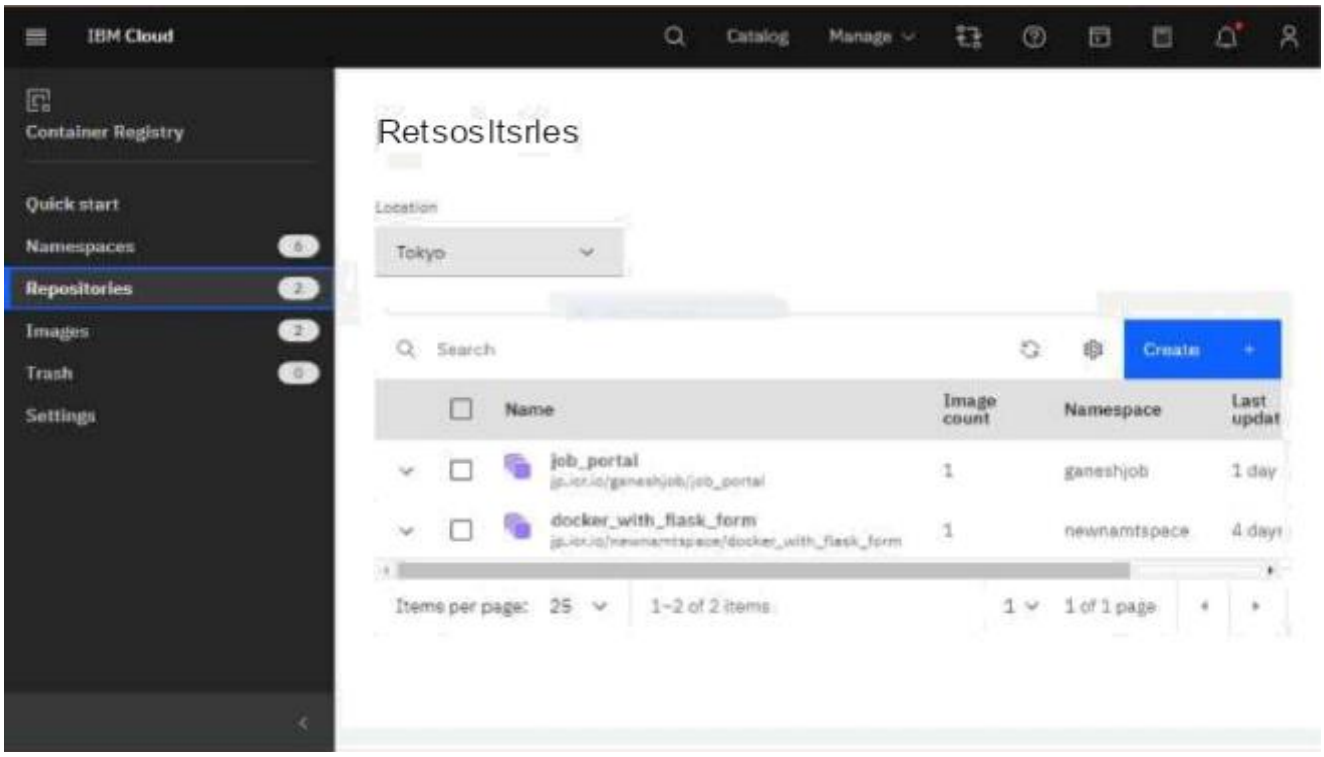
Question-1:

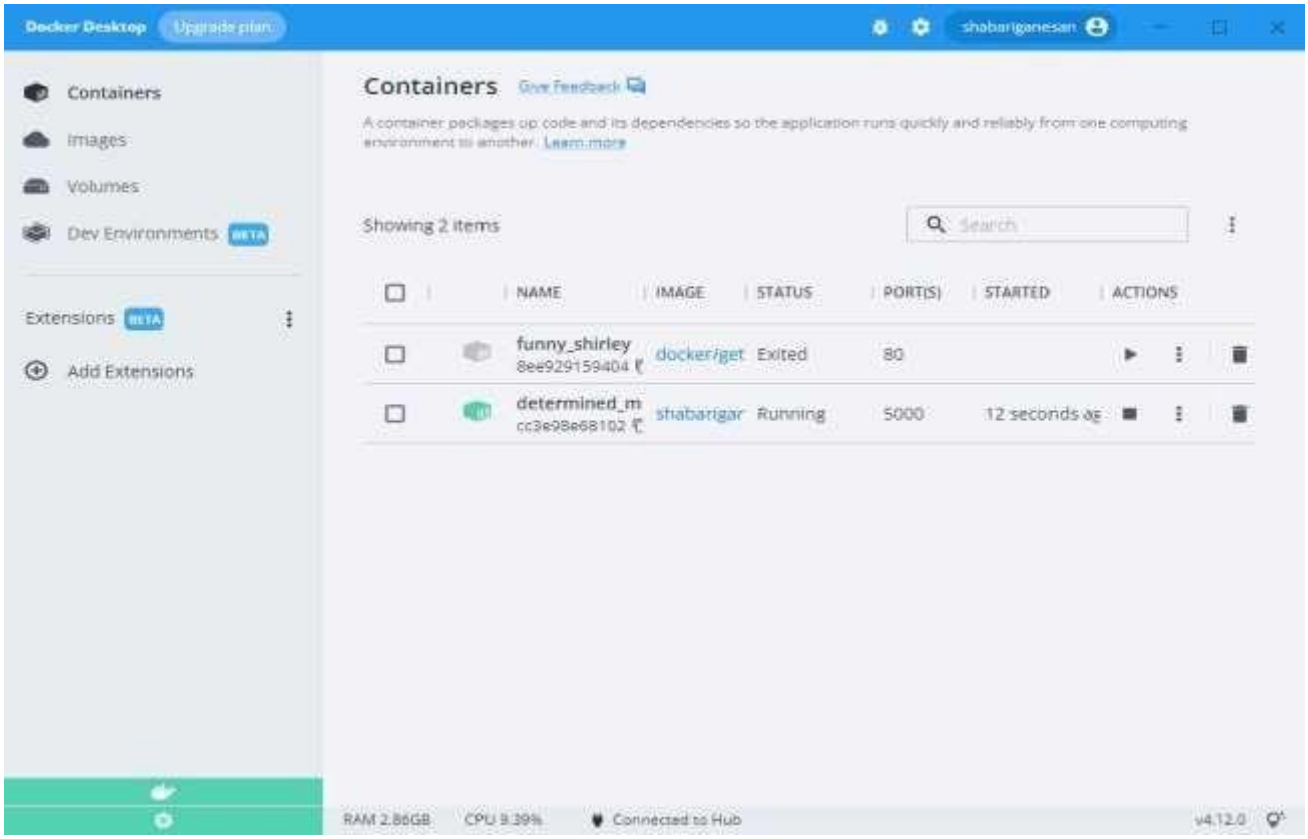
pull an image from docker hub and run it in docker playground.

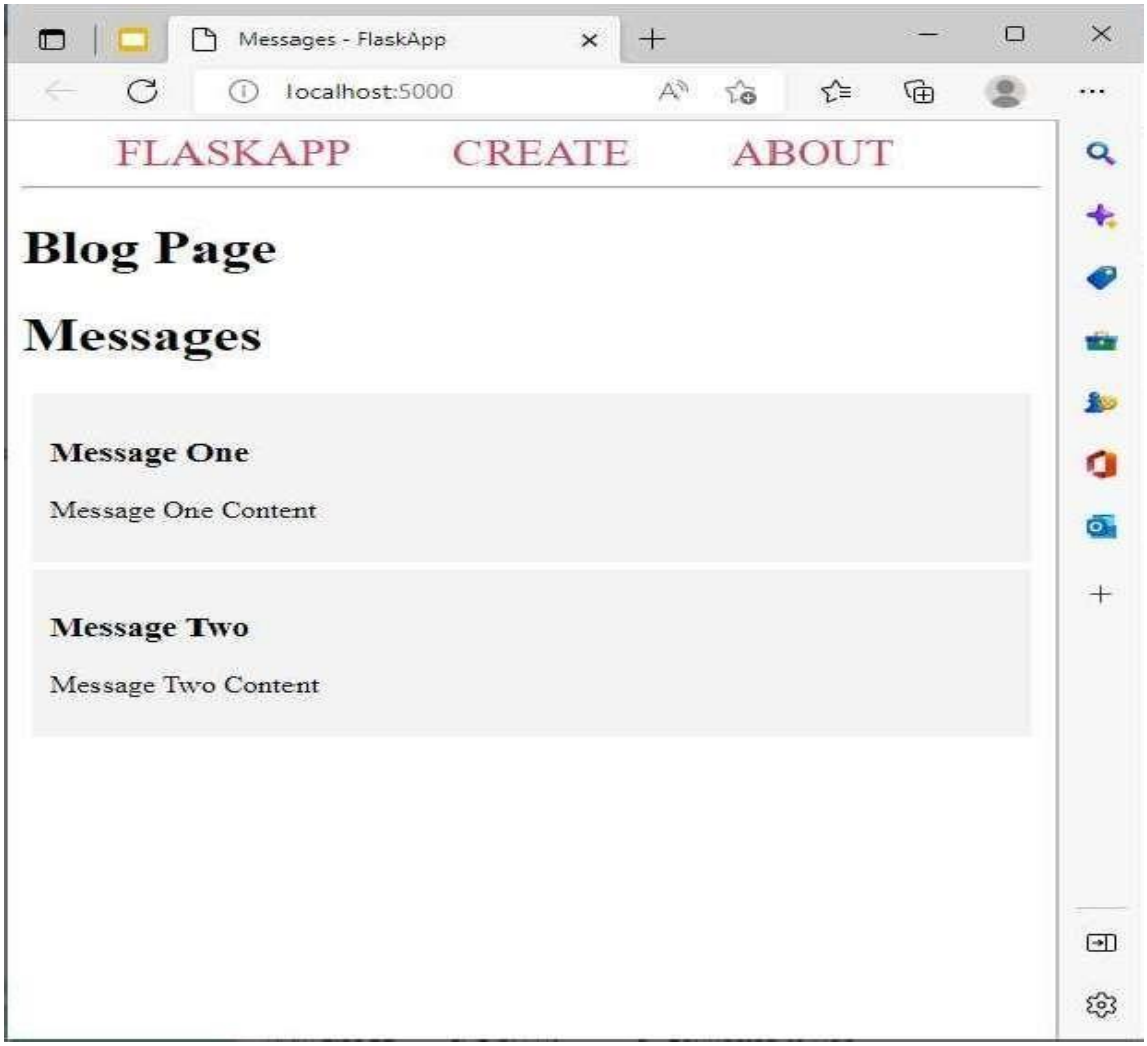
pull an image form docker hub



runt it in docker playground


IBM Cloud
Catalog
Manage
Container Registry
Quick start
Namespaces
Repositories
Images
Trash
Settings
RetsosItsrles
Location
Tokyo
Search
Create
Name
Image count
Namespace
Last updat
job_portal
1
ganeshjob
1 day
docker_with_flask_form
1
newnamtspace
4 days
Items per page: 25
1-2 of 2 items
1 of 1 page


Docker Desktop
Upgrade plan
shabariganesan
Containers
Images
Volumes
Dev Environments
BETA
Extensions
BETA
Add Extensions
Containers
Give Feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
Showing 2 items
Search
NAME
IMAGE
STATUS
PORT(S)
STARTED
ACTIONS
funny_shirley
8ee929159404
docker/get
Exited
80
determined_m
cc3e98e68102
shabarigar
Running
5000
12 seconds
RAM 2.86GB
CPU 9.39%
Connected to Hub
v4.12.0



Question-2:

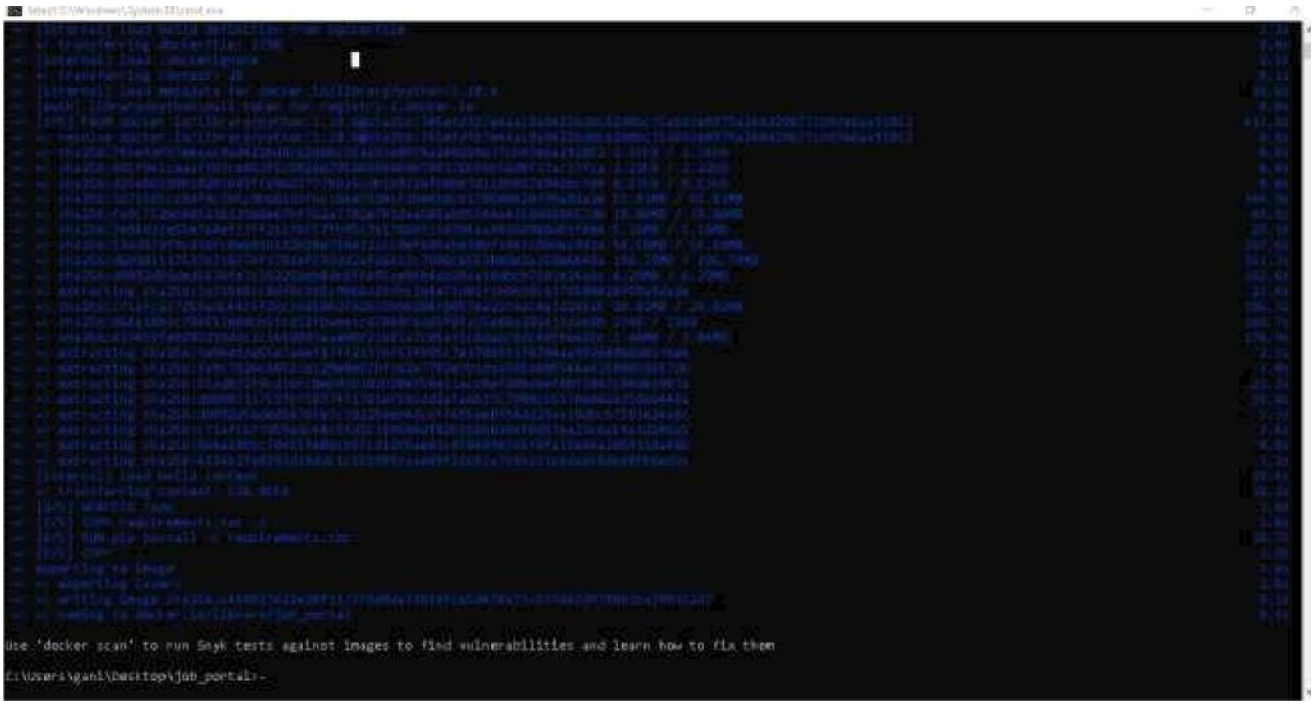
Create a docker file for the jobportal application and deploy it in docker application.

Creating a docker file for the jobportal application

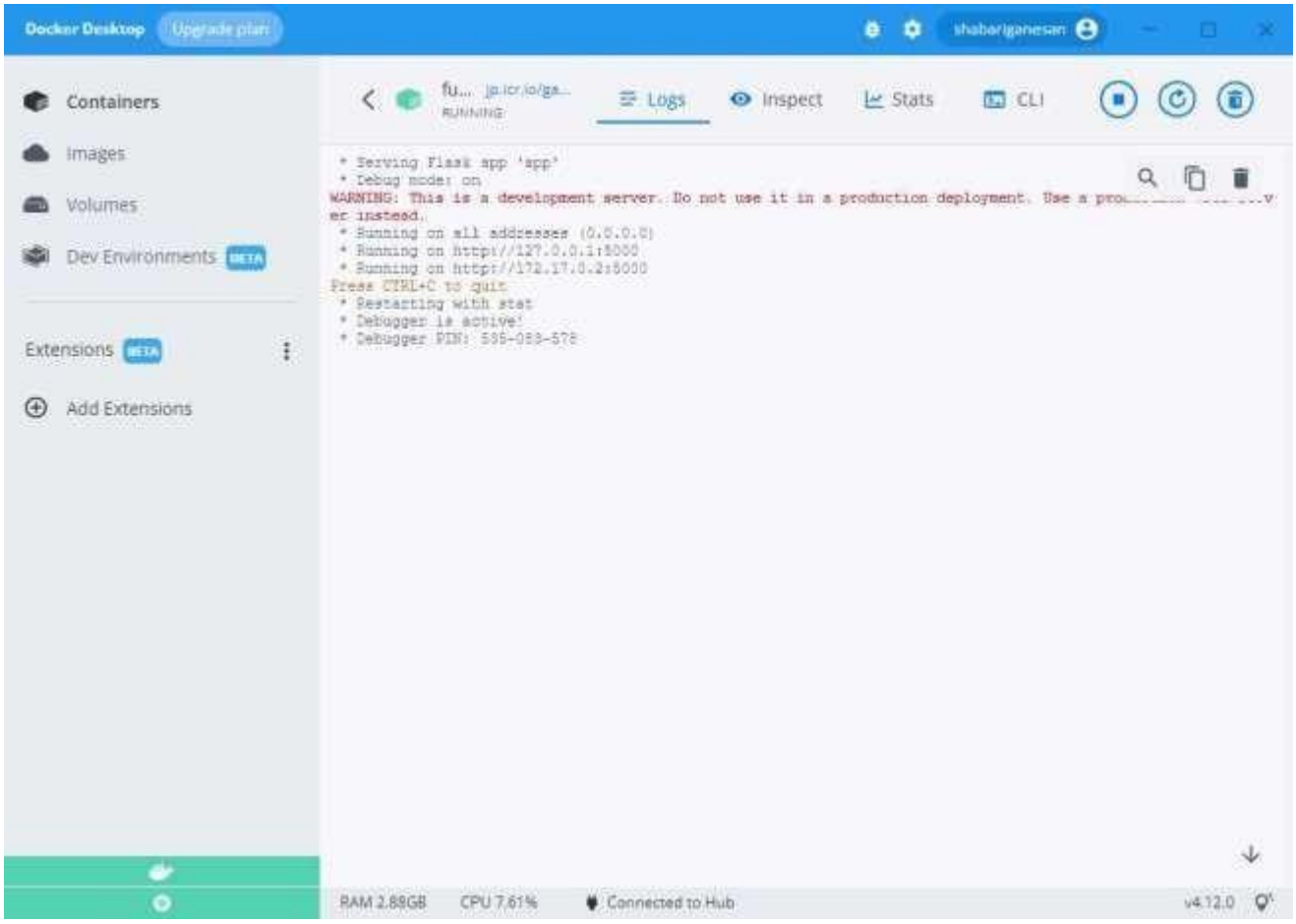
```
FROM python:3.10.6
WORKDIR /app
COPY requirements.txt ./
RUN pip install -r requirements.txt
COPY . .
EXPOSE 5000
CMD ["python","./app.py"]
```

deploy in in dokcer application

```
C:\Users\ganl\Desktop\job portal>cd ..

C:\Users\ganl\Desktop>cd job_portal

C:\Users\ganl\Desktop\job_portal>docker build -t job_portal
"docker build" requires exactly 1 argument.
See 'docker build --help'.

Usage:  docker build [OPTIONS] PATH | URL | -

Build an image from a Dockerfile

C:\Users\ganl\Desktop\job_portal>dir
 Volume in drive C has no label.
 Volume Serial Number is B643-1D88

 Directory of C:\Users\ganl\Desktop\job_portal

10/25/2022  04:53 PM    <DIR>          .
10/25/2022  04:53 PM    <DIR>          ..
10/25/2022  04:11 PM               320 app.py
10/22/2022  10:48 PM               148 Dockerfile
10/22/2022  10:48 PM                 6 requirements.txt
10/25/2022  04:53 PM    <DIR>          static
10/25/2022  04:53 PM    <DIR>          templates
10/25/2022  04:53 PM    <DIR>          __pycache__
               3 File(s)            474 bytes
               5 Dir(s)  77,847,934,976 bytes free

C:\Users\ganl\Desktop\job_portal>docker build -t job_portal.
invalid argument "job_portal." for "-t, --tag" flag: invalid reference format
See 'docker build --help'.

C:\Users\ganl\Desktop\job_portal>docker build -t job_portal .
[+] Building 443.6s (11/11) FINISHED
```



C c rat ¿z i n e r S

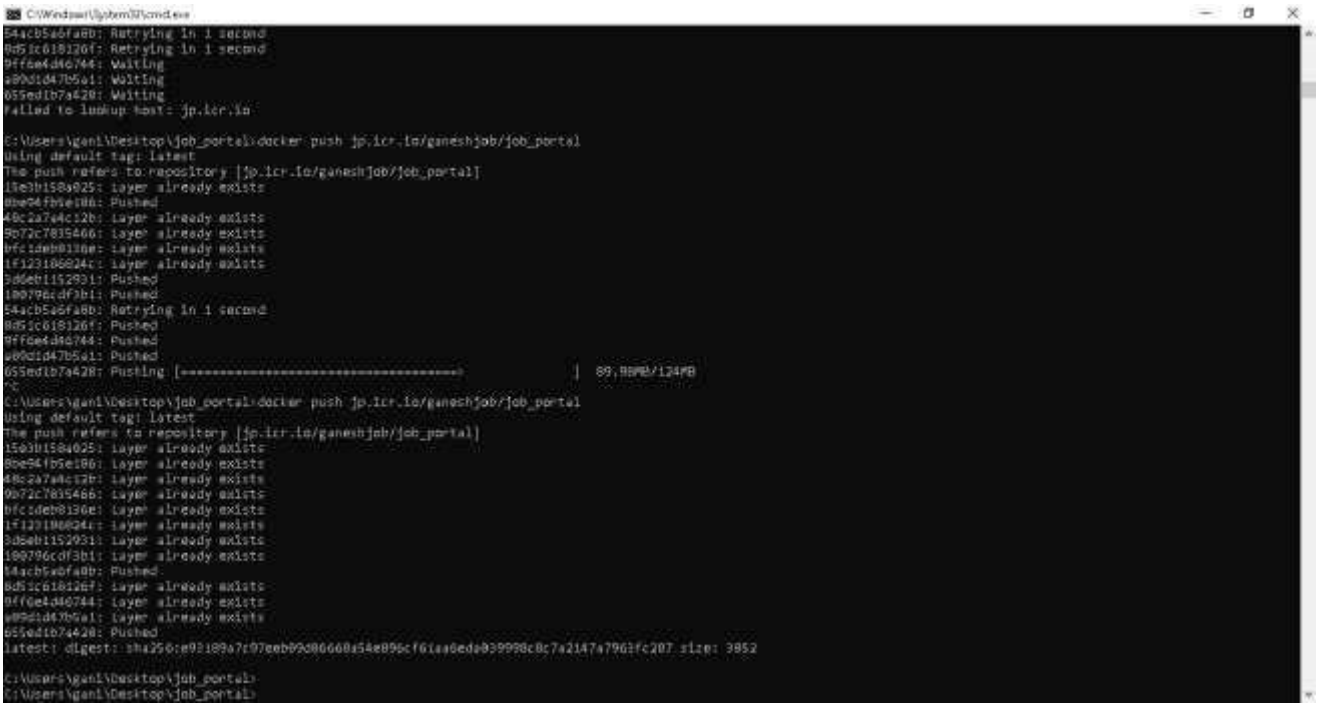


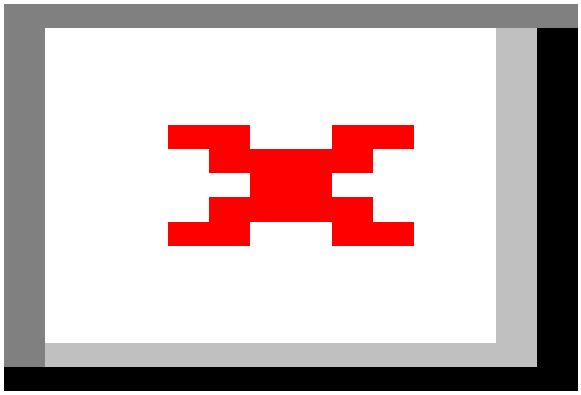
running in docker desktop 1

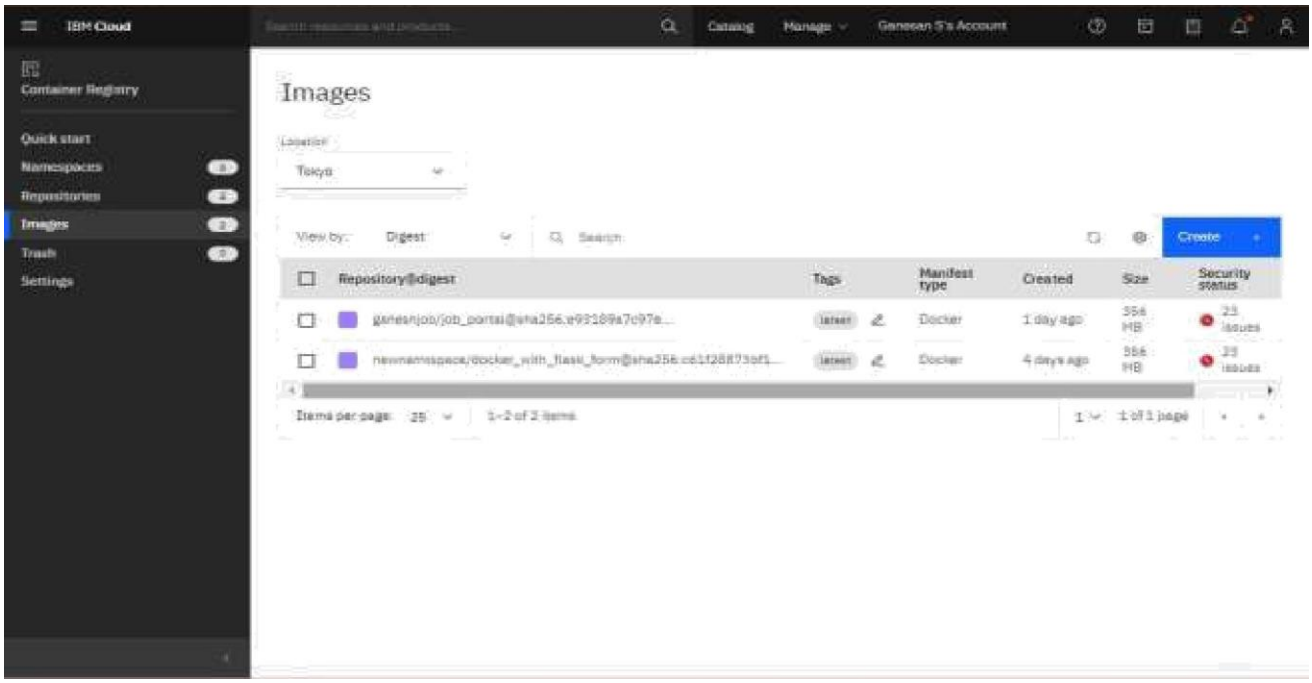
Question-3:Create aIbm container registry and deploy helloworld app or jobportalapp

create a ibm container registry

deployhelloworld or jobportal

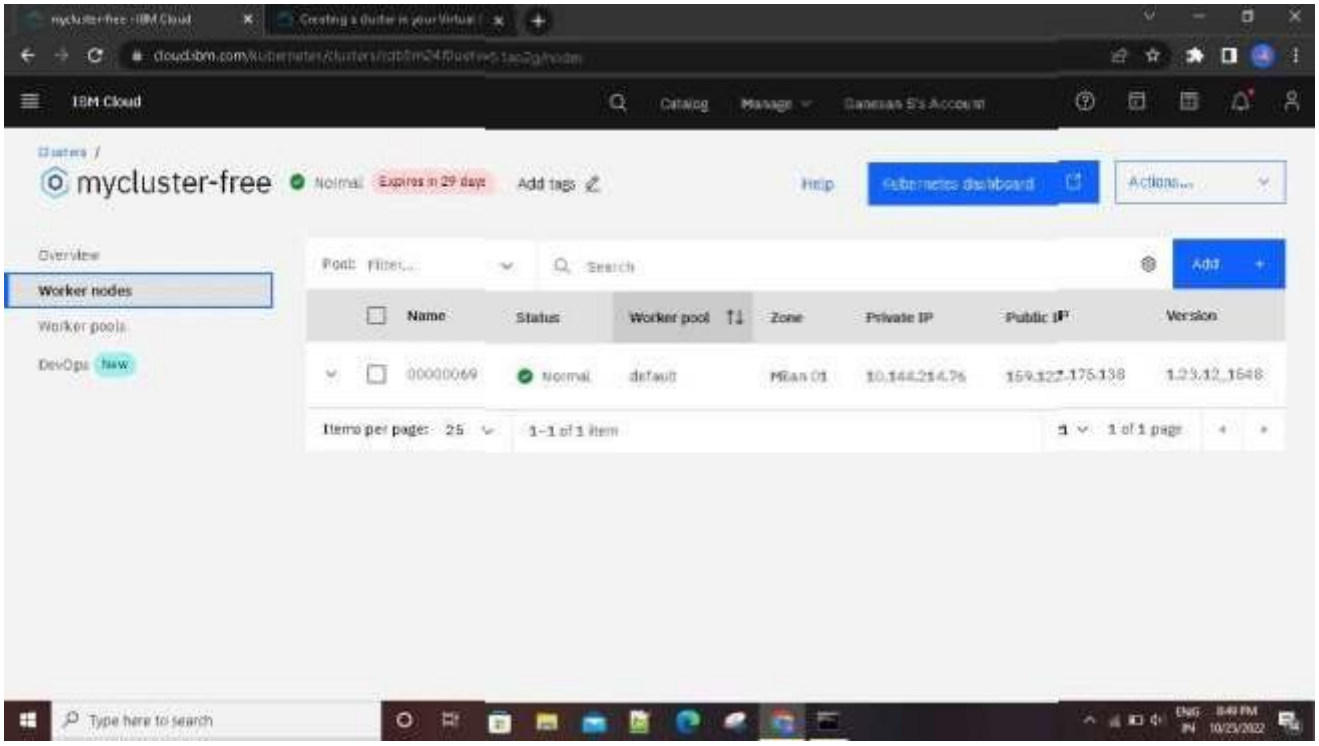




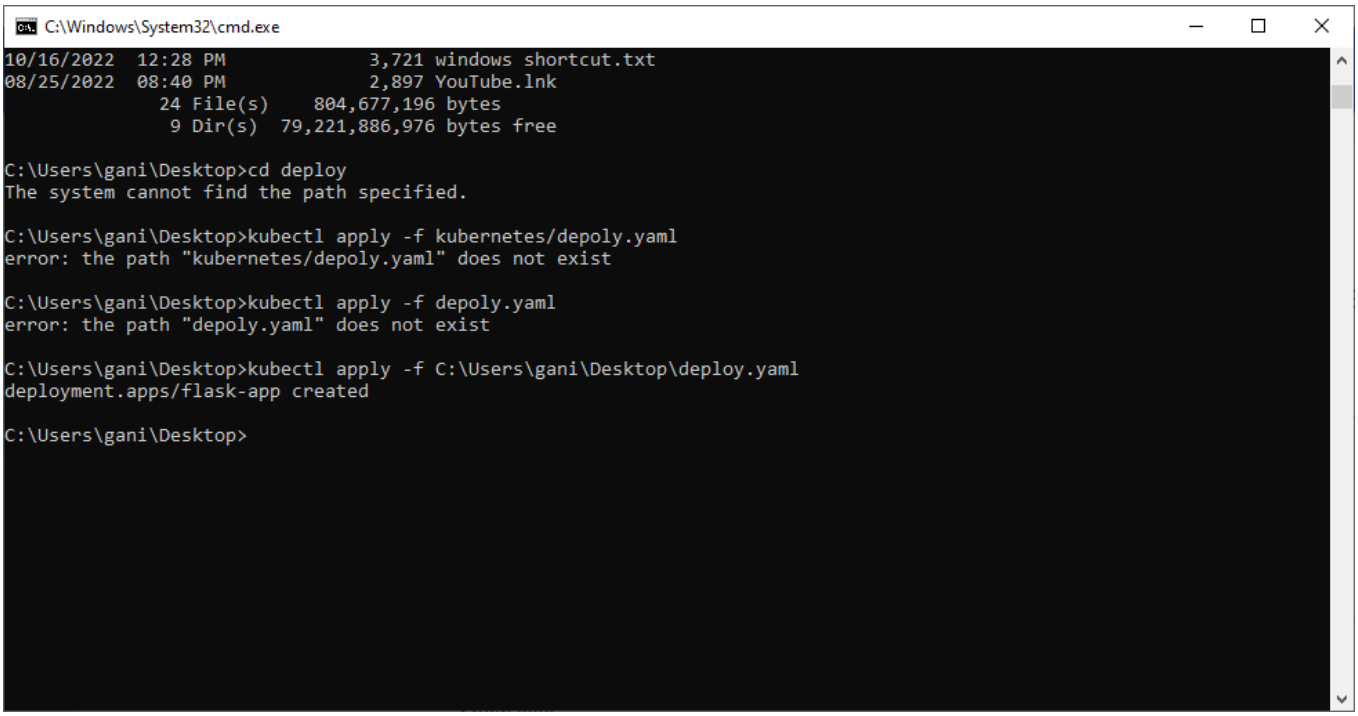


Question-4: Create a kubernetes cluster in ibm cloud and deploy helloworld image or jobportal image and also expose the same app to run in noteport

Creating a kubernetes cluster in ibm cloud



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



Search

Workloads > Pods

Deployment

Daemon Sets

Wa1lin-g for more da la a display c har l... Wa li ng for more data a di splay chart...

Services

Running

Services

```
ving Flask app 'app'
ug mode: on
m[1mWARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.0[0m
ning on all addresses (0.0.0.0)
ning on http://127.0.0.1:5000
ning on http://172.30.23.11:5000
Press CTRL+C to quit0[0m
tarting with stat
ugger is active!
ugger PIN: 310-487-149
```

Workloads > Pods > flask-app-79447b5c8c-4d8ww > 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 depploy
^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 deplou
^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
```