

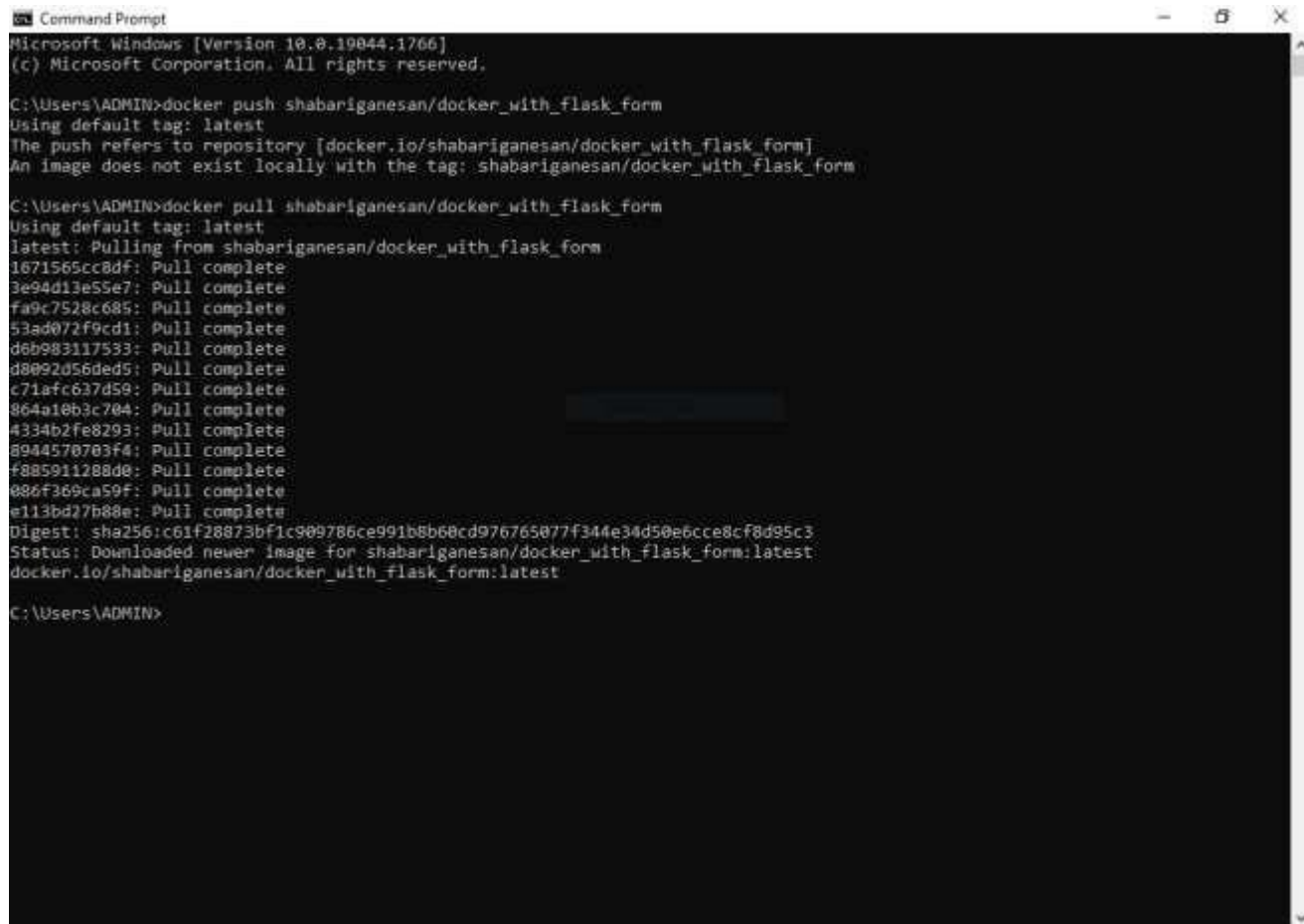
**Assignment -4 Docker
and Kubernetes**

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Maximum Marks	2 Marks

Question-1:

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

pull an image form docker hub

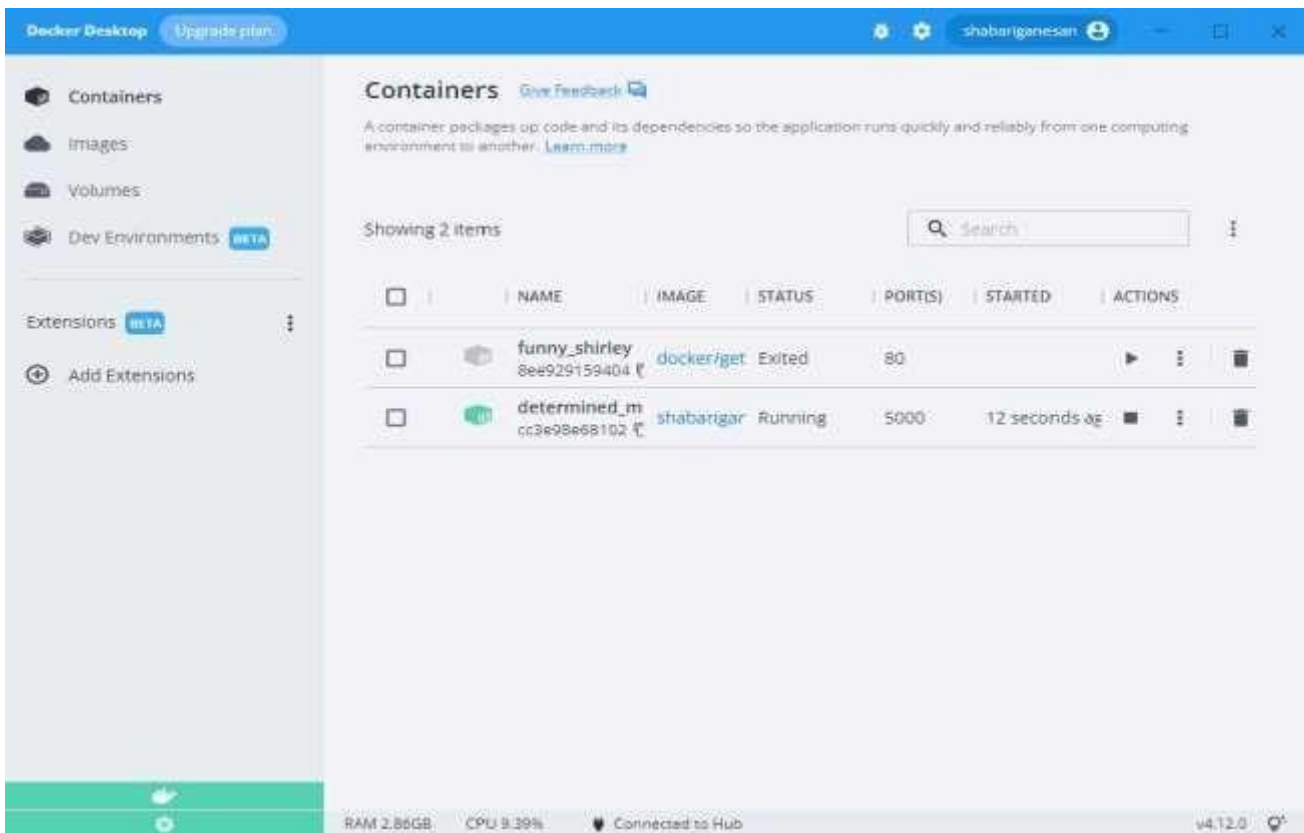
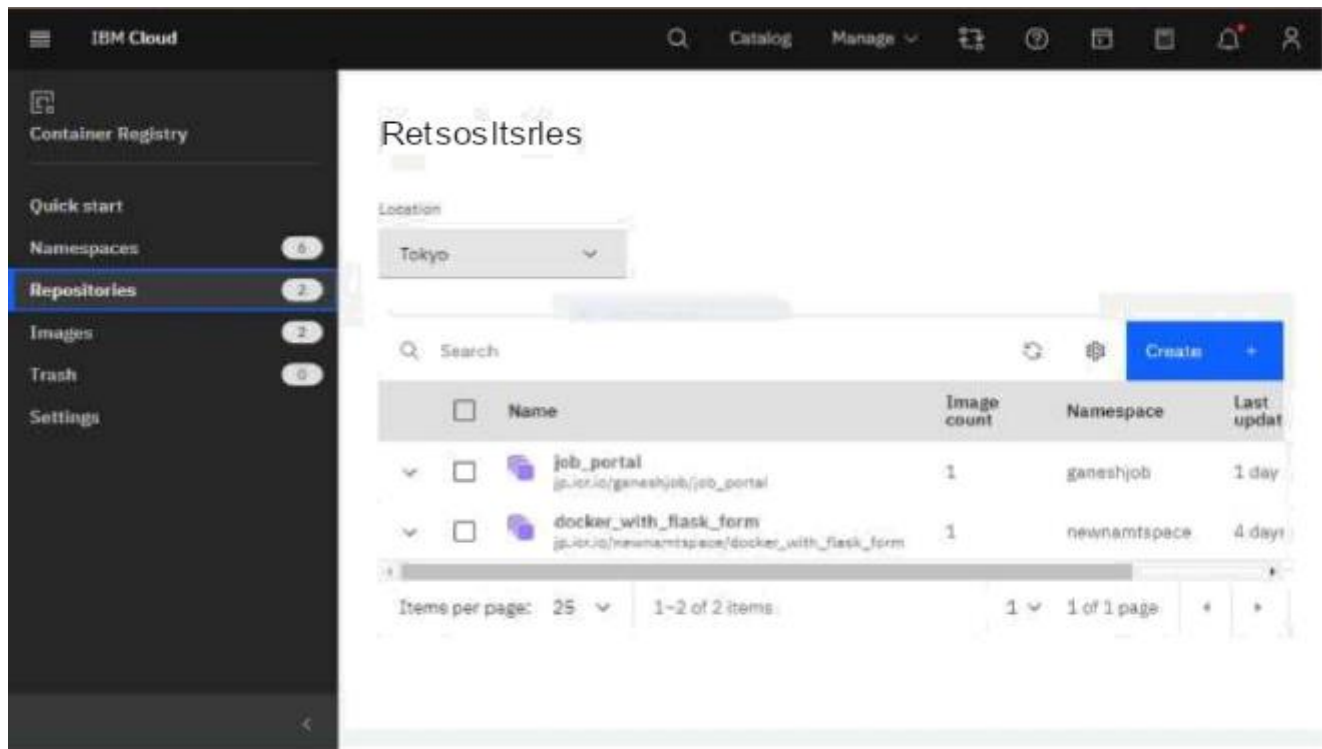
A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The text inside shows the following sequence of commands and outputs:
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

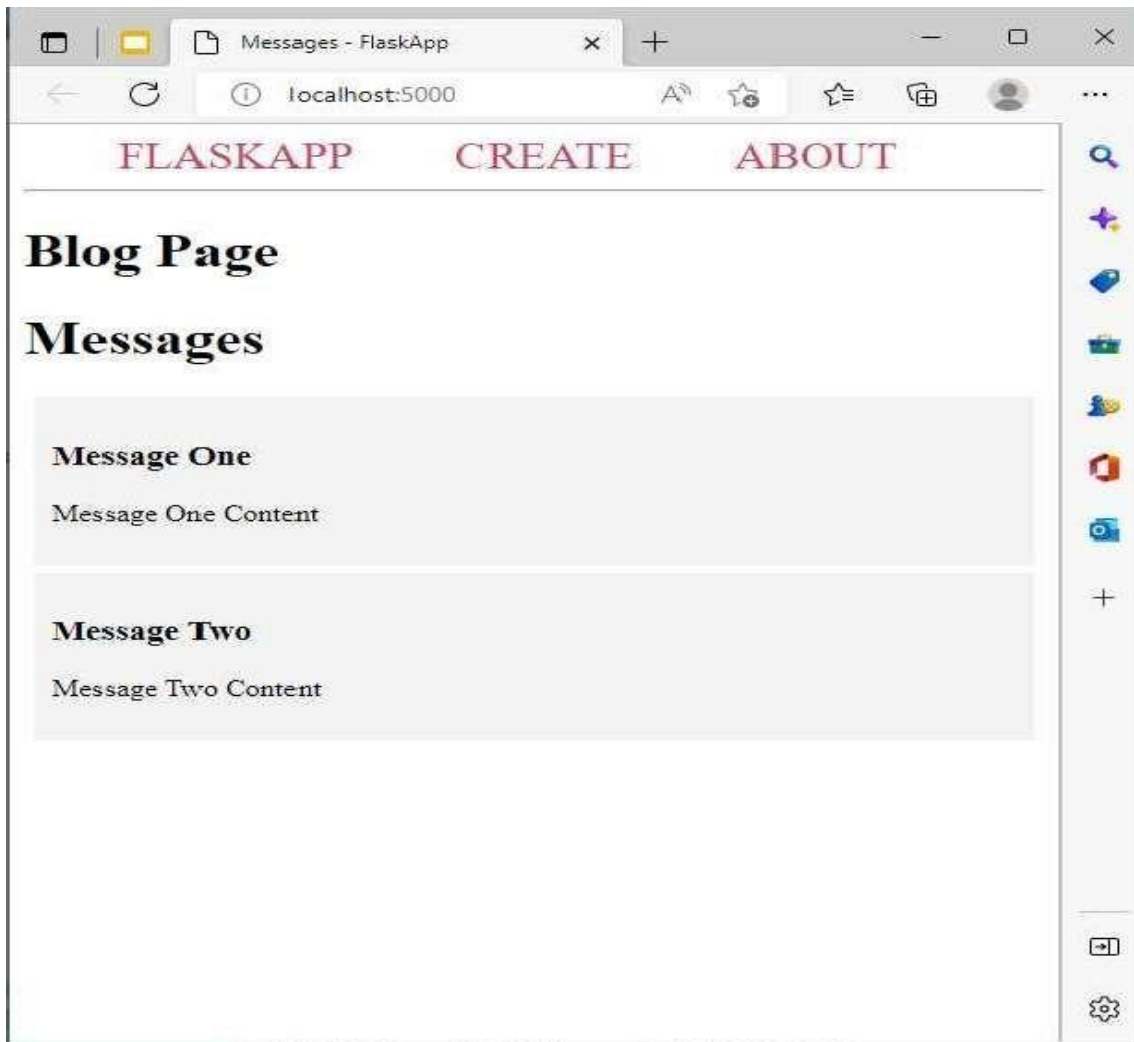
C:\Users\ADMIN>docker push shabariganesan/docker_with_flask_form
Using default tag: latest
The push refers to repository [docker.io/shabariganesan/docker_with_flask_form]
An image does not exist locally with the tag: shabariganesan/docker_with_flask_form

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
864a10b3c704: Pull complete
4334b2fe8293: Pull complete
8944570703f4: Pull complete
f885911288d0: Pull complete
080f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b5b60cd976765077f344e34d50e6cce8cf8d95c3
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



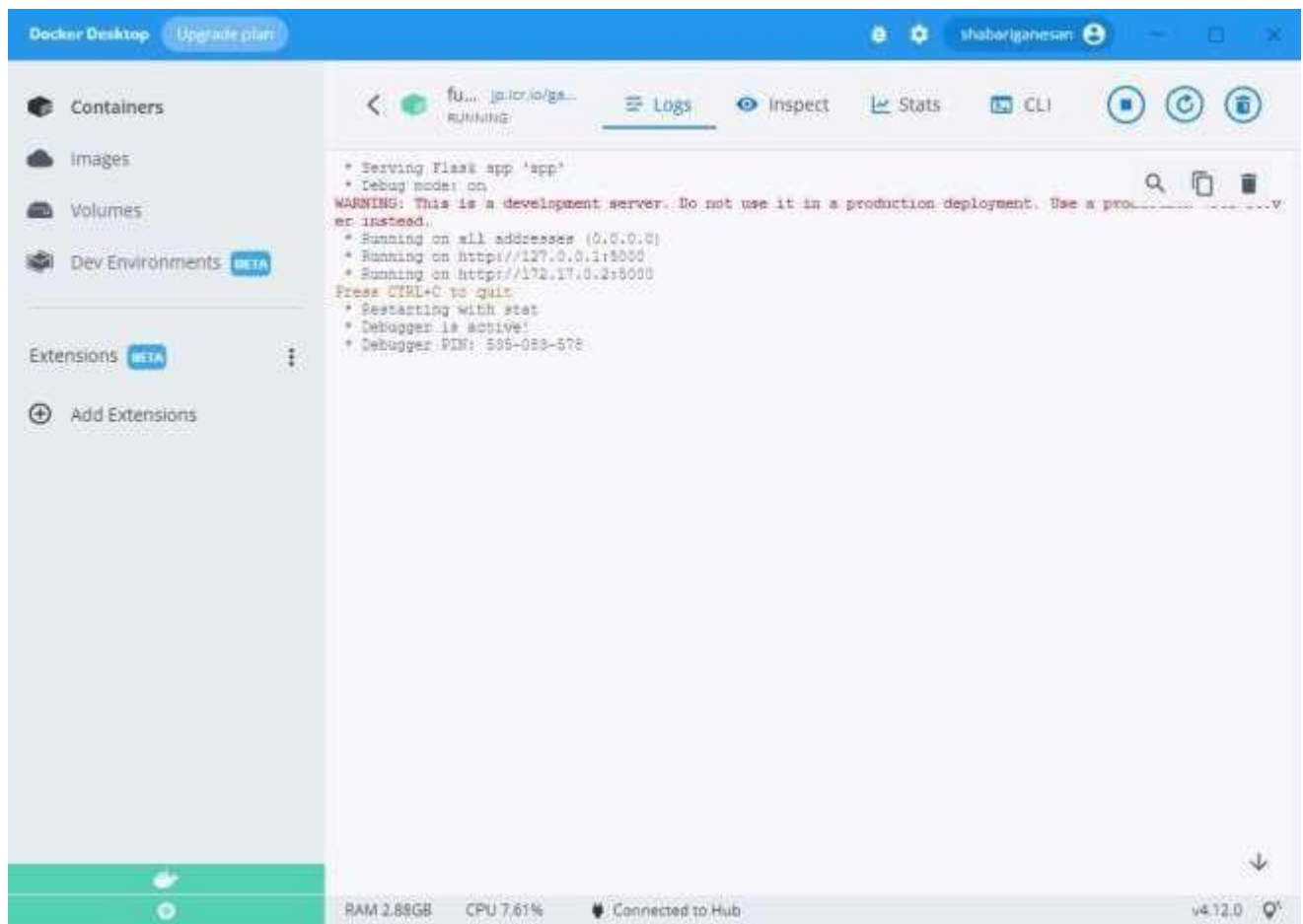
The screenshot shows a Notepad++ window with the title bar "C:\Users\gaia\Desktop\job_gaia\dockerfile - Notepad++". The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Tools, Macro, Run, Plugins, Window, and Help. The toolbar contains various icons for file operations and editing. The text area displays the following Dockerfile content:

```
1 FROM python:3.10.6
2 WORKDIR /app
3 COPY requirements.txt ./
4 RUN pip install -r requirements.txt
5 COPY . .
6 EXPOSE 5000
7 CMD ["python", "./app.py"]
8
```

The bottom of the image shows a Windows taskbar with several application icons and a search bar on the left.

deploy in in dokcer application

[illegible]



running in docker desktop 1

Question-3: Create a IBM container registry and deploy helloworld app or jobportalapp create a ibm container registry



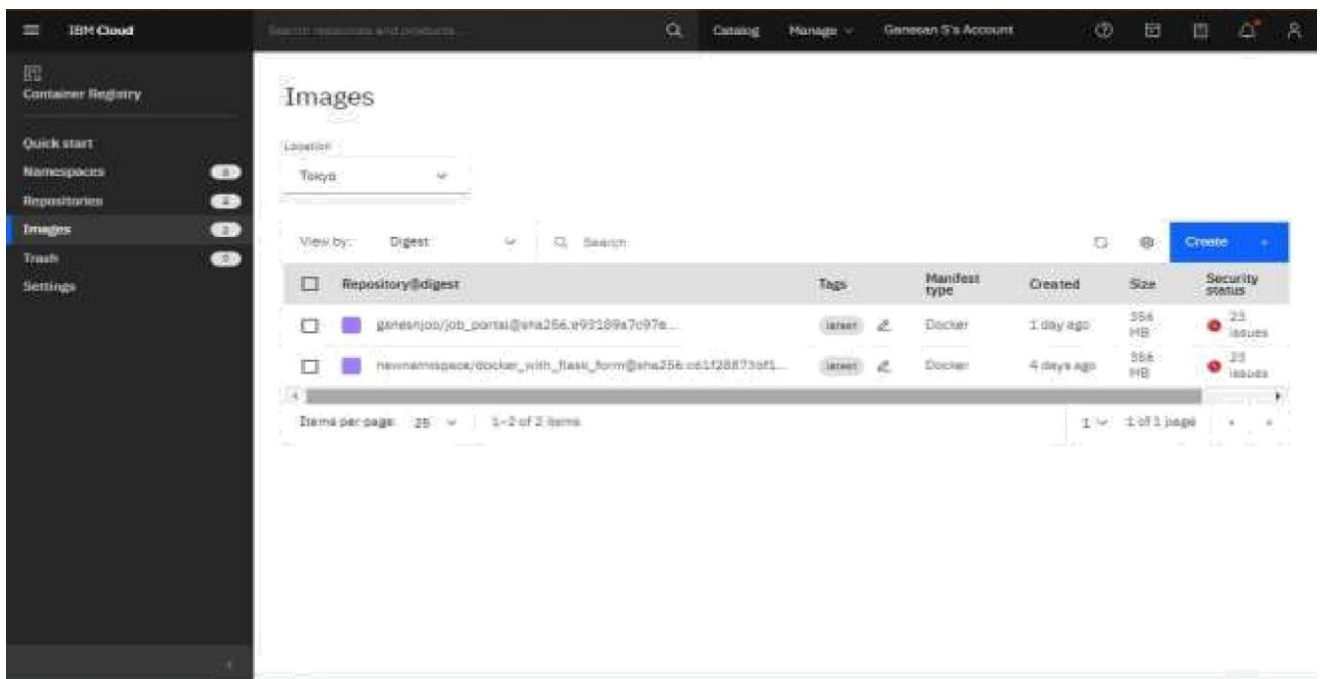
deployhelloworld or jobportal

```
C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d67444: Waiting
a80c1d47b5a1: Waiting
655ed1b74428: Waiting
failed to lookup host: jp.icr.io

C:\Users\ganli\Desktop\job_portal>docker push jp.icr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.icr.io/ganeshjob/job_portal]
13eb1584925: layer already exists
80ec4fb1e186: Pushed
48c2a7e4c12b: layer already exists
9b72c7835466: layer already exists
bfc1deb0138e: layer already exists
1f123106024c: layer already exists
3d6eb1152931: Pushed
180796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d67444: Pushed
a80c1d47b5a1: Pushed
655ed1b74428: Pushing [-----] 89.85MB/124PB
^C

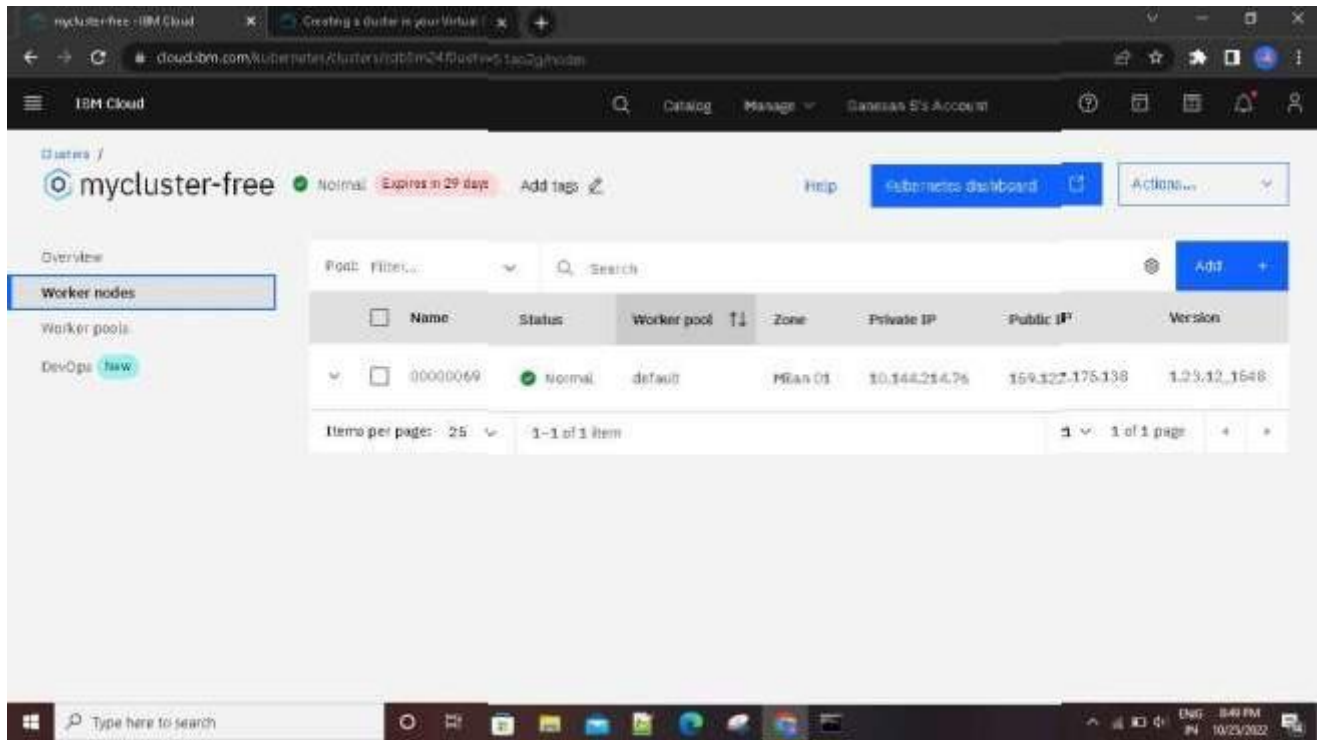
C:\Users\ganli\Desktop\job_portal>docker push jp.icr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.icr.io/ganeshjob/job_portal]
13eb1584925: layer already exists
80ec4fb1e186: layer already exists
48c2a7e4c12b: layer already exists
9b72c7835466: layer already exists
bfc1deb0138e: layer already exists
1f123106024c: layer already exists
3d6eb1152931: layer already exists
180796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d67444: layer already exists
a80c1d47b5a1: layer already exists
655ed1b74428: Pushed
latest: digest: sha256:e93189a7c97eeb9306668a54e896cf61aa6eda939998c8c7a2147a7963fc207 size: 3952

C:\Users\ganli\Desktop\job_portal>
C:\Users\ganli\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

Daemon Sets

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

Running

Services

Services

```
'ving Flask app 'app'
log mode! on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
Running on all addresses (0.0.0.0)
Running on http://127.0.0.1:5000
Running on http://172.30.23.11:5000
Press CTRL-C to quit
Starting with stat
Debugger is active!
Debugger PIN: 110-487-349
```

Workloads > Pods > flask-app-79447b5c8c-4d89w > 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 deployment
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:\Windows\system32\kubectl -n kubernetes-dashboard get deployment
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    AGENTS    ADDRESS    PORTS    AGE
flask-app-ingress  cnone>    *          80         27h
C:\Windows\system32\kubectl get svc
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE

```