

Assignment Date	1 st November 2022
Student Name	Abirami.CA
Student Roll Number	211519205004
Maximum Marks	2 Marks

Assignment -4

Docker and kubernetes

Question-1:

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

pull an image form docker hub

```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

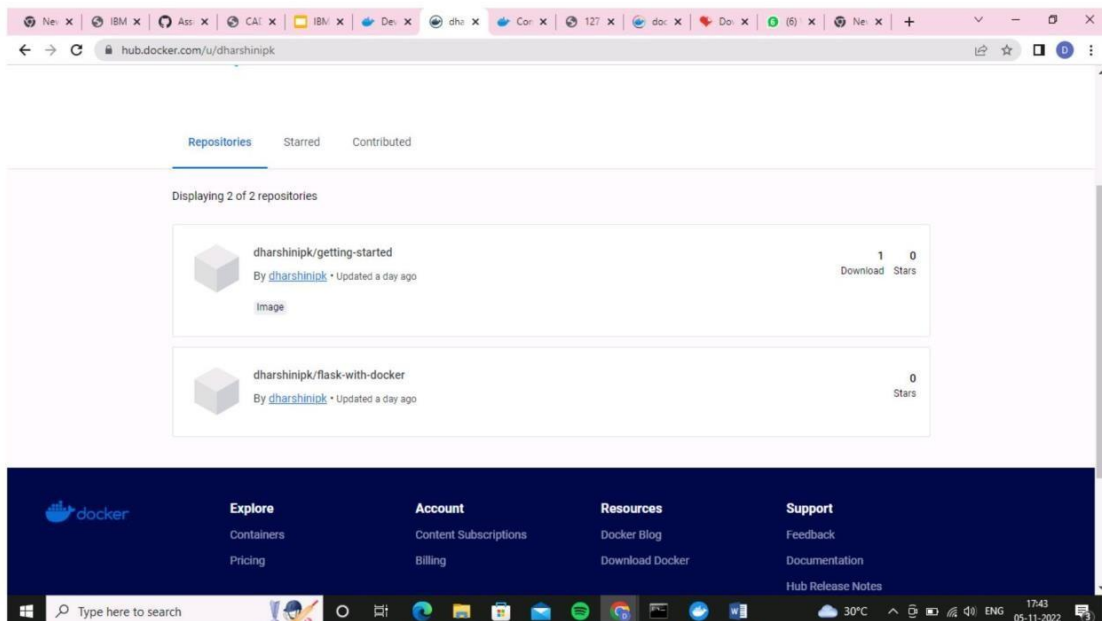
C:\Users\lenovo>docker pull dharshinipk/getting-started
Using default tag: latest
latest: Pulling from dharshinipk/getting-started
Digest: sha256:8dbe1d4d8c9fc72acca15d6dbe2734009adbb45a2a28a45336bcc0ca2b3ff5d7
Status: Image is up to date for dharshinipk/getting-started:latest
docker.io/dharshinipk/getting-started:latest

C:\Users\lenovo>docker pull dharshinipk/docker_flask_with_form
Using default tag: latest
Error response from daemon: manifest for dharshinipk/docker_flask_with_form:latest not found: manifest unknown: manifest unknown

C:\Users\lenovo>docker push dharshinipk/docker_flask_with_form
Using default tag: latest
The push refers to repository [docker.io/dharshinipk/docker_flask_with_form]
99633df762e2: Pushed
73ee95d8486b: Pushed
a79bf86c66cb: Pushed
583275d8d6c8: Pushed
bfc1deb8136e: Pushed
1f123186824c: Layer already exists
3d6eb1152931: Layer already exists
100796cdf3b1: Retrying in 1 second
54acb5a6fa0b: Pushing [----->] 71.27MB/528.7MB
8d51c618126f: Layer already exists
9ff6e4d46744: Pushing [----->] 8.333MB/18.95MB
a89d1d47b5a1: Layer already exists
655ed1b7a428: Layer already exists
net/http: TLS handshake timeout

C:\Users\lenovo>docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
dharshinipk/docker_flask_with_form   latest      94ac771be3b1  23 hours ago  932MB
dharshinipk/docker_flask_with_form   latest      94ac771be3b1  23 hours ago  932MB
dharshinipk/getting-started          latest      cb90f98fd791  6 months ago  28.8MB
dharshinipk/getting-started          latest      cb90f98fd791  6 months ago  28.8MB

C:\Users\lenovo>docker pull ubuntu:20.04
Error response from daemon: Head "https://registry-1.docker.io/v2/library/ubuntu/manifests/20.04": Get "https://auth.docker.io/token?account=dharshinipk&scope=repository%3Alibrary%2Fubuntu%3Apull&service=registry.docker.io": dialing auth.docker.io:443 no HTTPS proxy: connecting to 44.205.64.79:443: dial tcp 44.205.64.79:443: i/o timeout
```



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

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	<div>funny_shirley</div> <div>8ee929159404</div>	<div> docker/get</div>	Exited	80		<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<div>determined_m</div> <div>cc3e28e68102</div>	<div> shabarigan</div>	Running	5000	12 seconds ago	<div><div></div><div></div><div></div></div>

RAM 2.86GB

CPU 9.39%

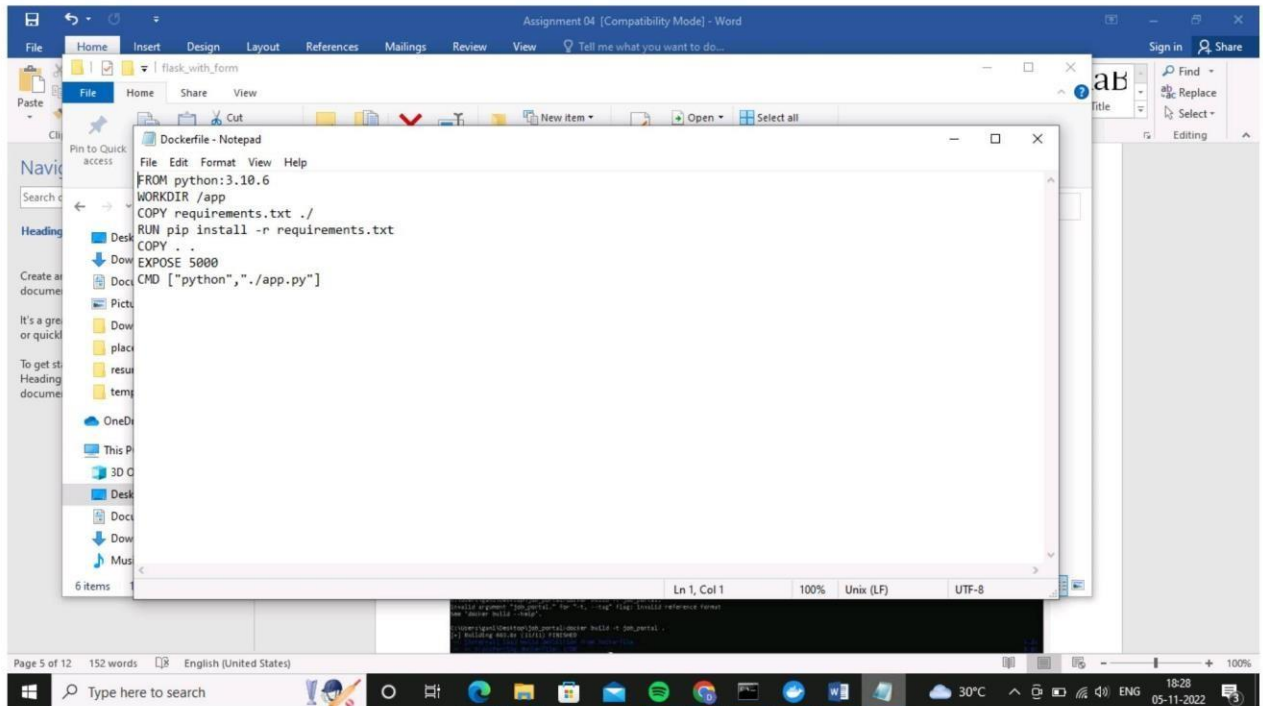
Connected to Hub

v4.12.0

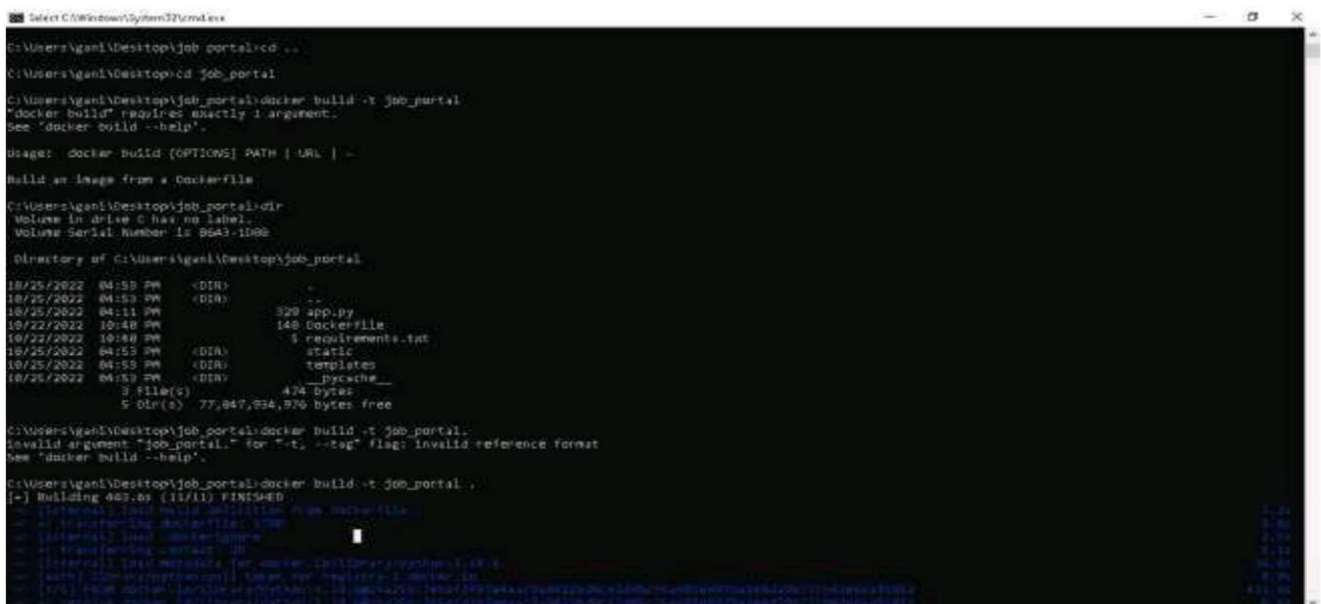
Question-2:

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

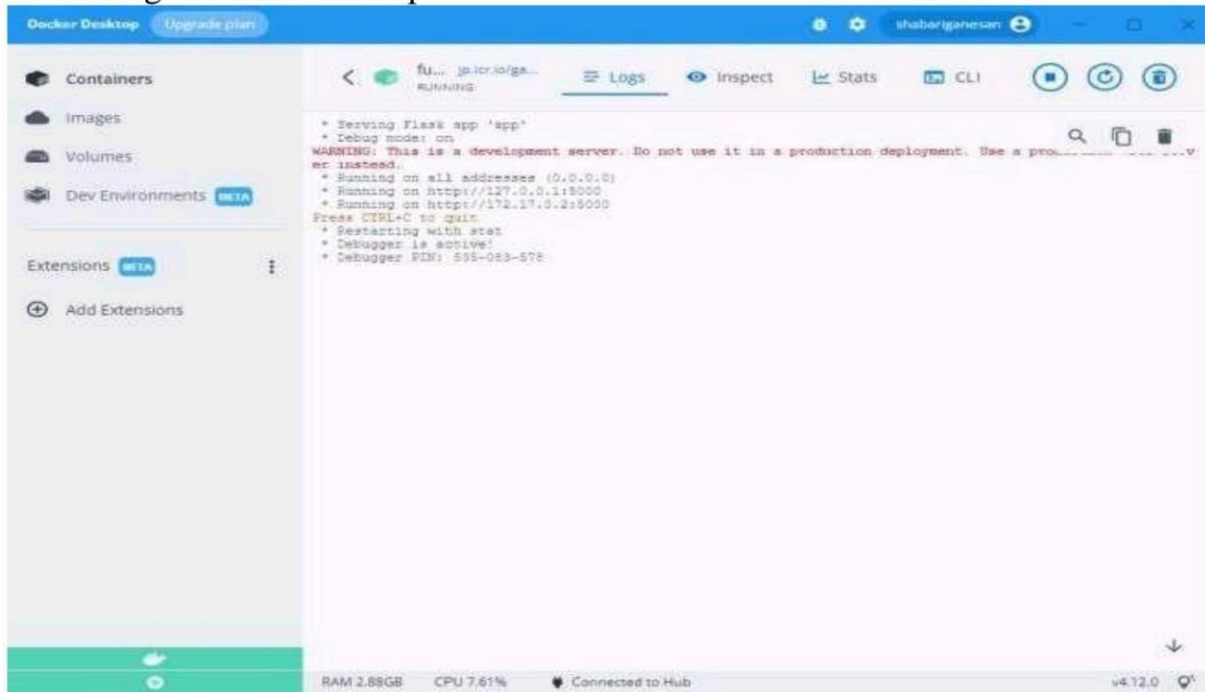
Creating a docker file for the jobportal application



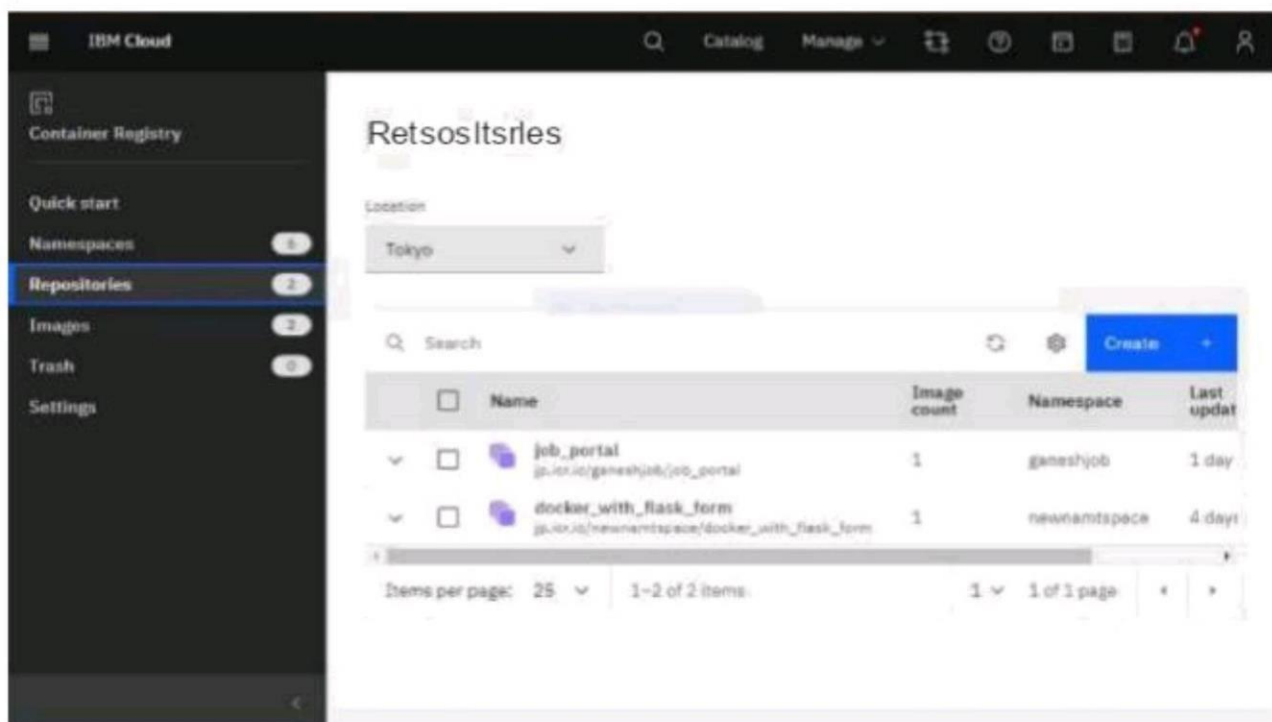
deploy in dokcer application

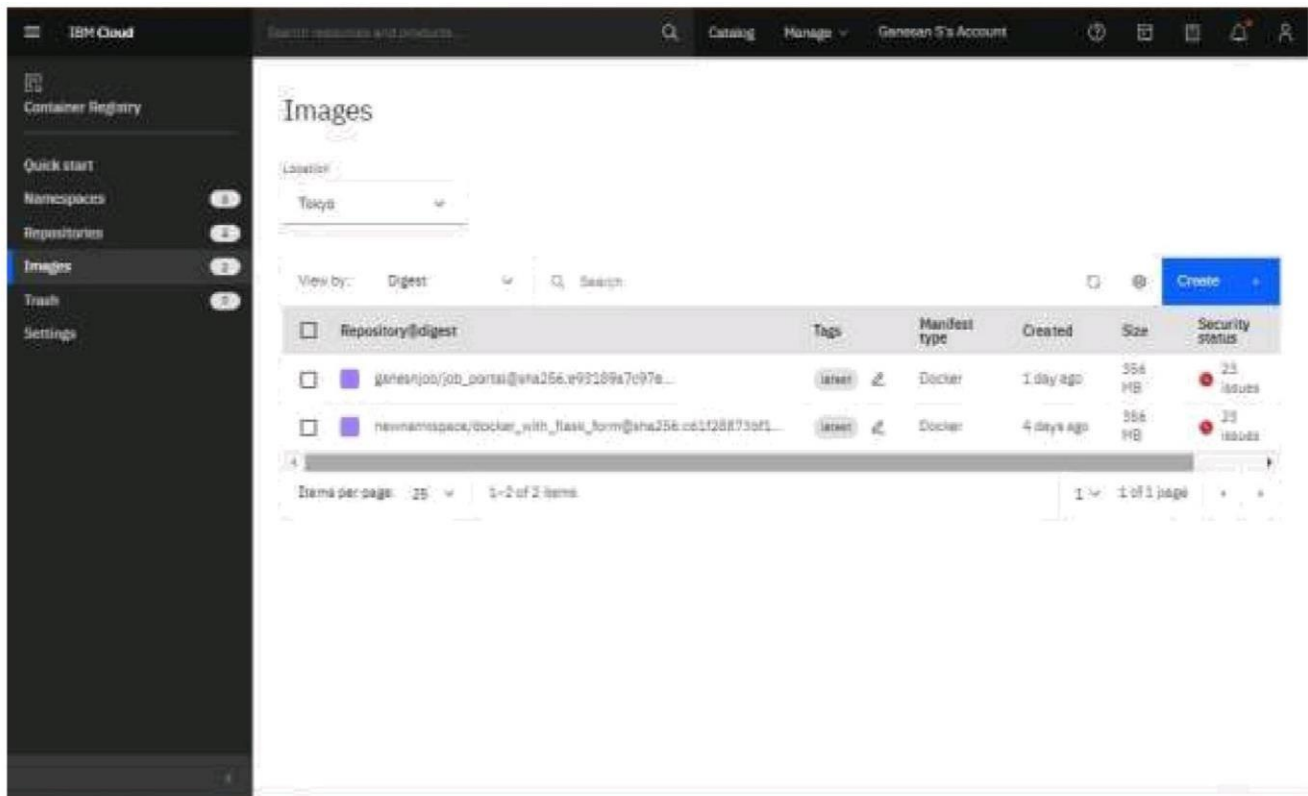


running in docker desktop



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





Deploy helloworld or jobportal

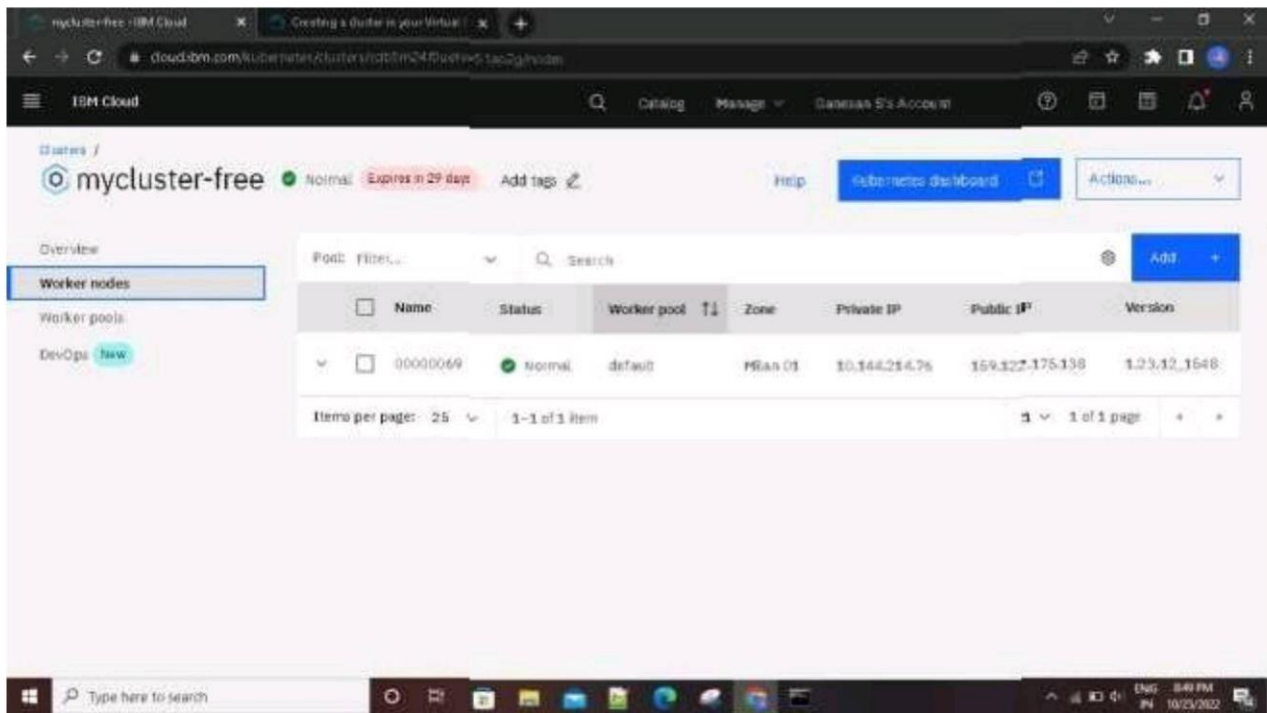
```
C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
e99d1d47b5e1: Waiting
655ed1b74428: Waiting
Failed to lookup host: jp.lcr.io

C:\Users\gan1\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]
15b3b1584025: layer already exists
80e94f95e19b: layer already exists
48c2a74dc12b: layer already exists
9b72c7815466: layer already exists
9fc1de8b136e: layer already exists
1f123196824c: layer already exists
3db6b1152931: Pushed
100796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
e99d1d47b5e1: Pushed
655ed1b74428: Pushing [-----] 89.89MB/124MB
rc
C:\Users\gan1\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]
15b3b1584025: layer already exists
80e94f95e19b: layer already exists
48c2a74dc12b: layer already exists
9b72c7815466: layer already exists
9fc1de8b136e: layer already exists
1f123196824c: layer already exists
3db6b1152931: layer already exists
100796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
e99d1d47b5e1: layer already exists
655ed1b74428: Pushed
latest: digest: sha256:e93189a7c97e9b9306668e54e896cf61aa8ed9b3998c8c7a2147479d1fc207 size: 3952

C:\Users\gan1\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



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>
```



```

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
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 deployment
^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  cncn    *          *            80         27s
C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```