

## Assignment-4

Assignment Date	5 November 2022
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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 from docker hub.**

```
Microsoft Windows [Version 10.0.19044.2130]
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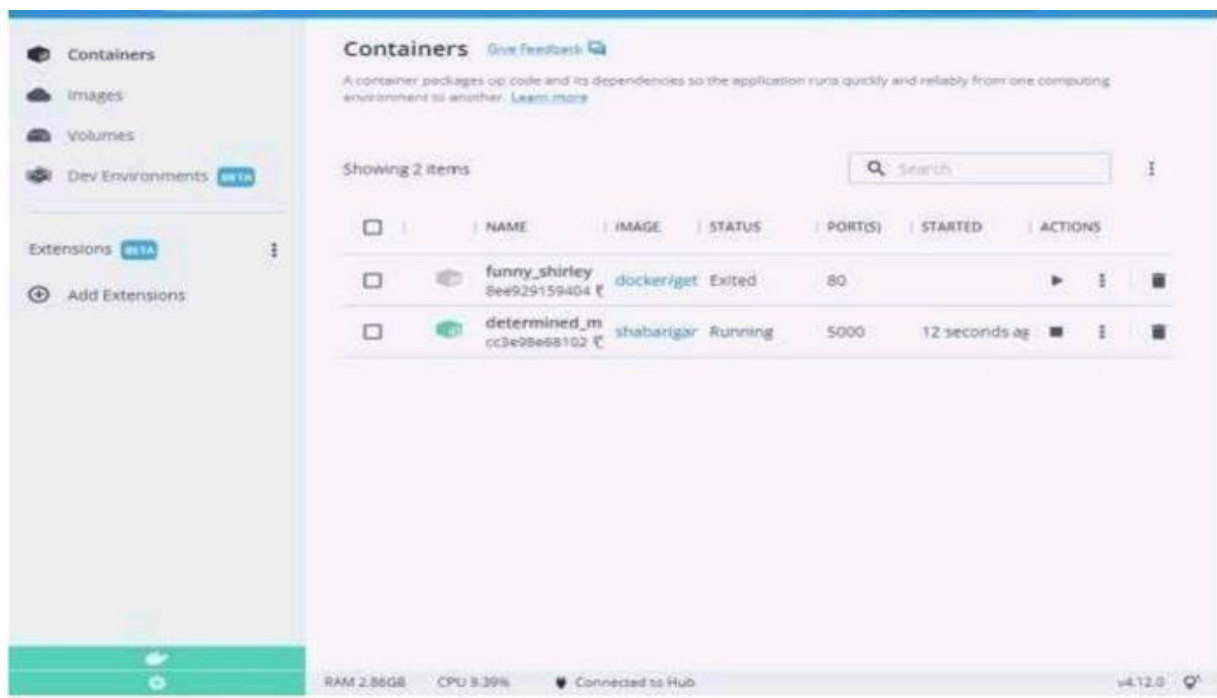
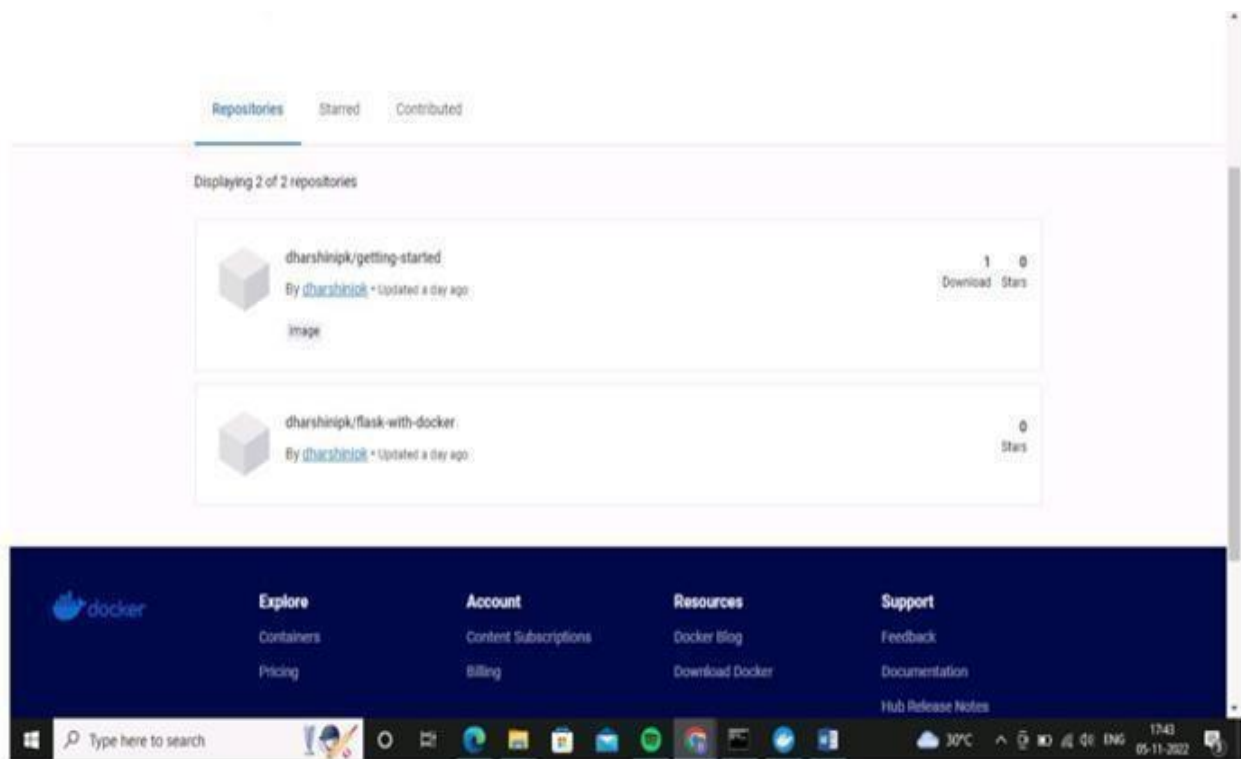
C:\Users\lenovo>docker pull dharshinipk/getting-started
Using default tag: latest
latest: Pulling from dharshinipk/getting-started
Digest: sha256:8dbed1d4d8c9fc72acca1506d0be2734009adb45a2a28a45336bcc0ca2b3ff5d7
Status: Image is up to date for dharshinipk/getting-started:latest
docker.io/dharshinipk/getting-started:latest

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

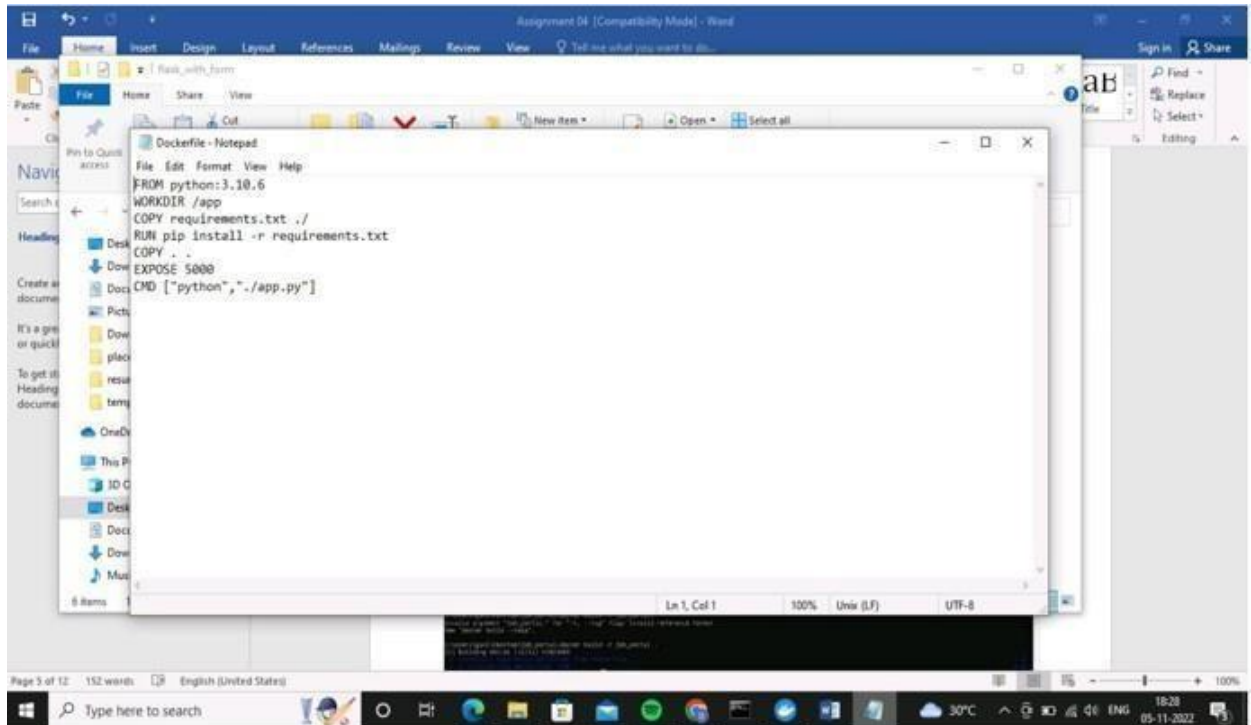
C:\Users\lenovo>docker push dharshinipk/docker_flask_with_form
Using default tag: latest
The push refers to repository [docker.io/dharshinipk/docker_flask_with_form]
99613df76242: Pushed
73ee95d0486b: Pushed
a79bf86c66cb: Pushed
583275d8d6c8: Pushed
bfc1deb8136e: Pushed
1f123186824c: Layer already exists
3d6eb1152931: Layer already exists
100796cdf3b1: Retrying in 1 second
54acb5a0fa8b: Pushing [=====] 71.27MB/528.7MB
8d51c618126f: Layer already exists
9ff6e4d46744: Pushing [=====] 8.333MB/18.05MB
a809d1d47b5a1: 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
docker_flask_with_form                 latest      94ac771be3b1  23 hours ago  932MB
dharshinipk/getting-started           latest      cb90f98fd791  6 months ago  28.0MB
docker/getting-started                 latest      cb90f98fd791  6 months ago  28.0MB

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%3Aubuntu%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
```



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



## Deploy in docker application

```
C:\Users\sgsl\Desktop>cd ..
C:\Users\sgsl\Desktop>cd job_portal
C:\Users\sgsl\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\sgsl\Desktop\job_portal>dir
Volume in drive C has no label.
Volume Serial Number is 86A3-106B

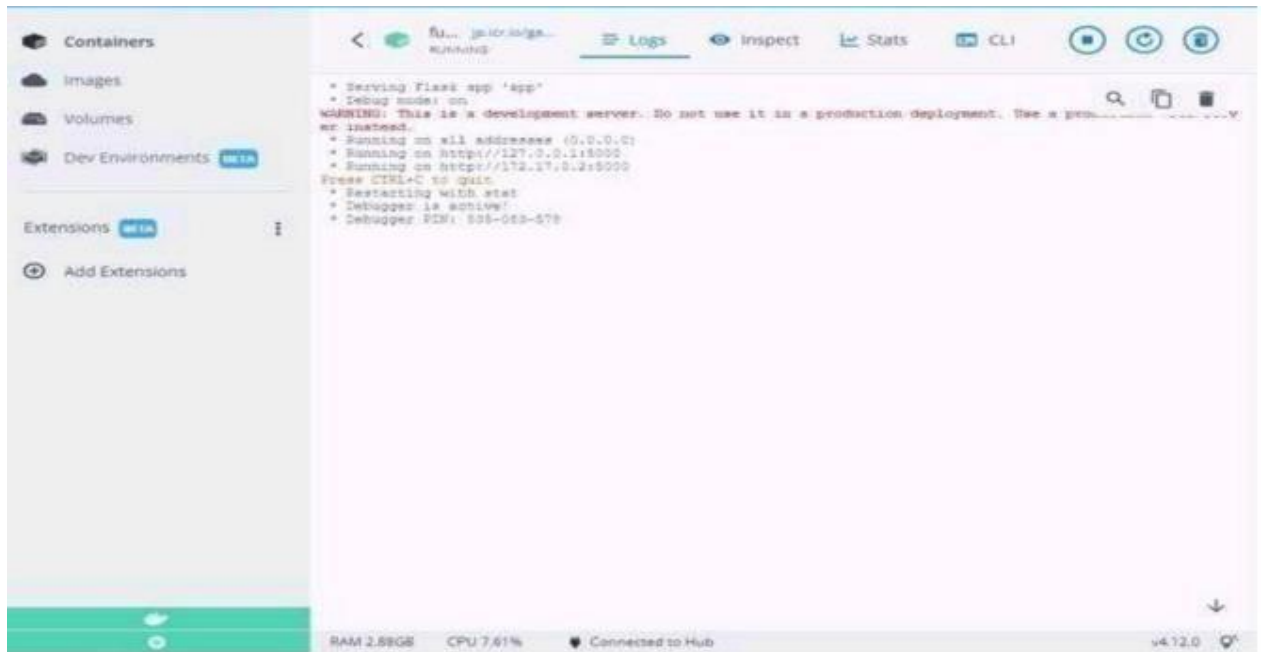
Directory of C:\Users\sgsl\Desktop\job_portal

10/25/2022  04:53 PM    <DIR>          .
10/25/2022  04:53 PM    <DIR>          ..
10/25/2022  04:11 PM             329 app.py
10/22/2022  10:48 PM             148 Dockerfile
10/22/2022  10:48 PM               5 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__
           5 File(s)              474 bytes
           5 Dir(s)  77,947,934,976 bytes free

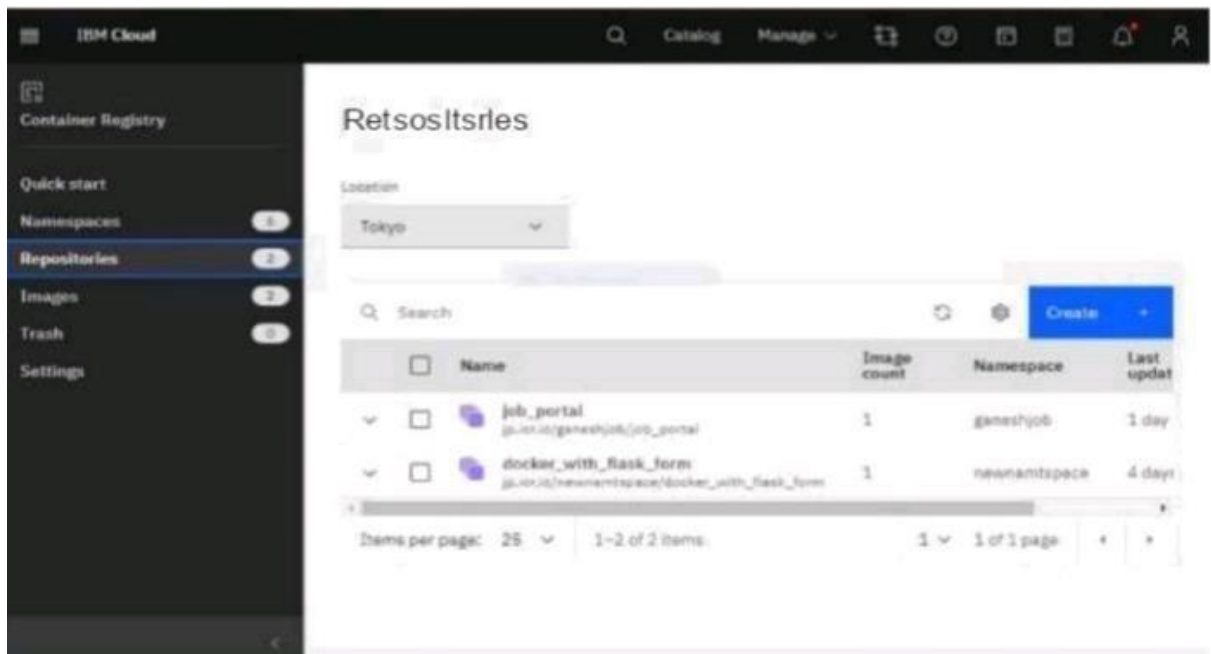
C:\Users\sgsl\Desktop\job_portal>docker build -t job_portal
Invalid argument "job_portal." for "--tag" flag: invalid reference format
See "docker build --help".

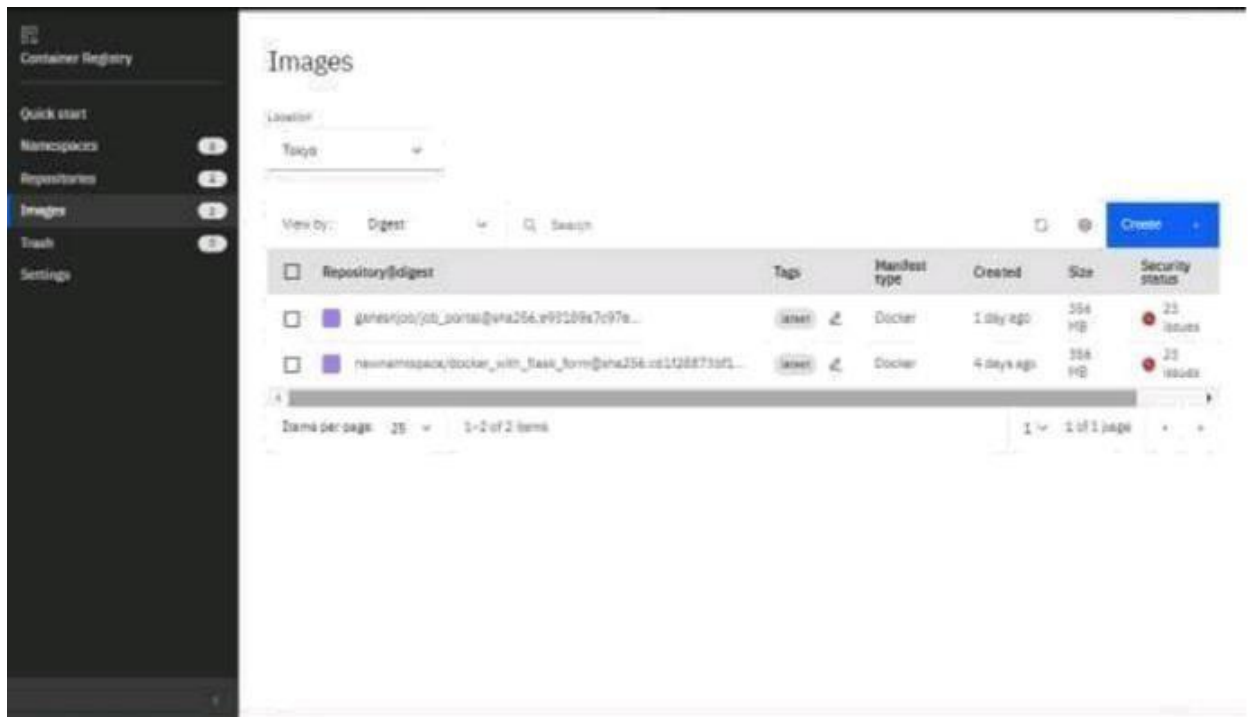
C:\Users\sgsl\Desktop\job_portal>docker build -t job_portal .
[+] Building 442.6s (11/1) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [internal] load .dockerignore
=> [internal] resolve working context
=> [internal] fetch metadata for docker.io/docker/docker-buildx
=> [internal] load metadata for docker.io/docker/docker-buildx
=> [internal] load metadata for docker.io/docker/docker-buildx
=> [internal] load metadata for docker.io/docker/docker-buildx
```

## Running in docker desktop



3. Create a IBM container registry and deploy helloworld app or jobportalapp.





## Deploy helloworld or jobportal

```
C:\Windows\system32\cmd.exe
54cb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
a90d1d470541: Waiting
a55ed1b74428: Waiting
Failed to lookup host: jp.icr.io

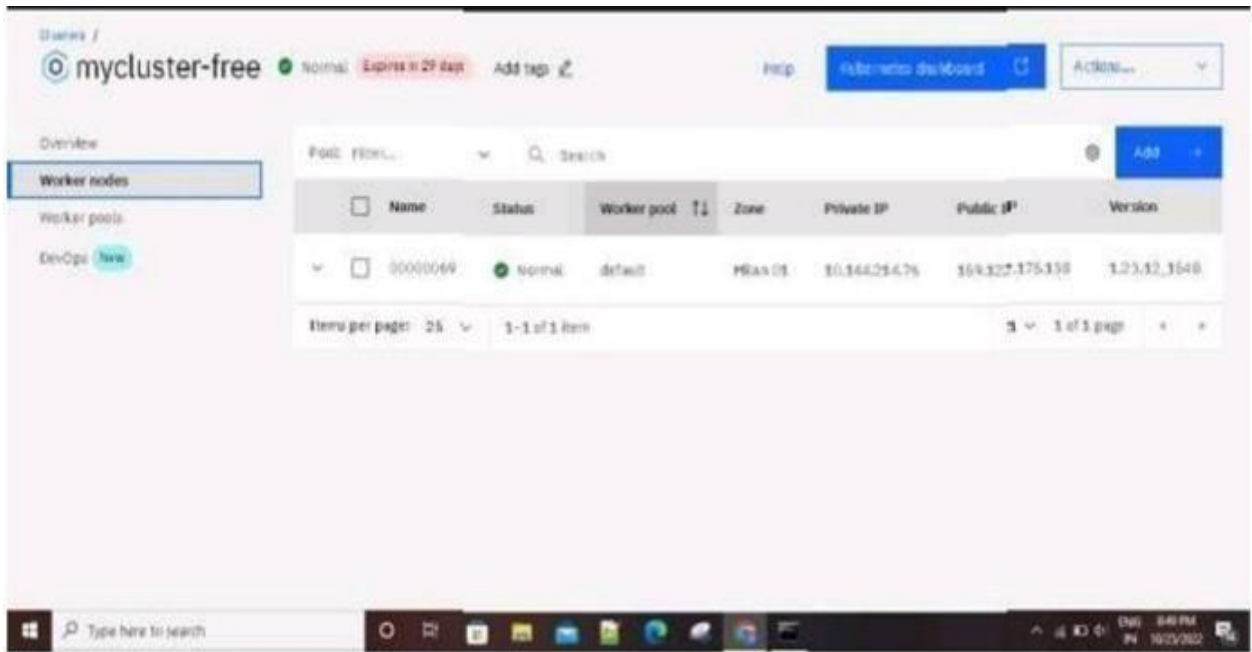
C:\Users\ganesh\Desktop\job_portal>docker push jp.icr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.icr.io/ganeshjob/job_portal]
15a3b158a825: layer already exists
8ae941b5e106: Pushed
48c2a746c12b: layer already exists
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
a90d1d470541: layer already exists
a55ed1b74428: layer already exists
15a3b158a825: Pushed
100796cdf3b1: Pushed
54cb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
a90d1d470541: Pushed
a55ed1b74428: Pushing [=====] | 99.80MB/124MB
^C

C:\Users\ganesh\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]
15a3b158a825: layer already exists
8ae941b5e106: layer already exists
48c2a746c12b: layer already exists
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
a90d1d470541: layer already exists
a55ed1b74428: Pushed
latest: digest: sha256:e951067c97e9b9086648a54e89c761e48ede9b99906c87a2147e7961fc287 size: 3952

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

4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

### 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 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 127.0.0.1:8081
^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

```