

# Assignment - 4

## Question-1:

pull an image from docker hub and  
run it in dockerplayground. pull  
an image form docker hub

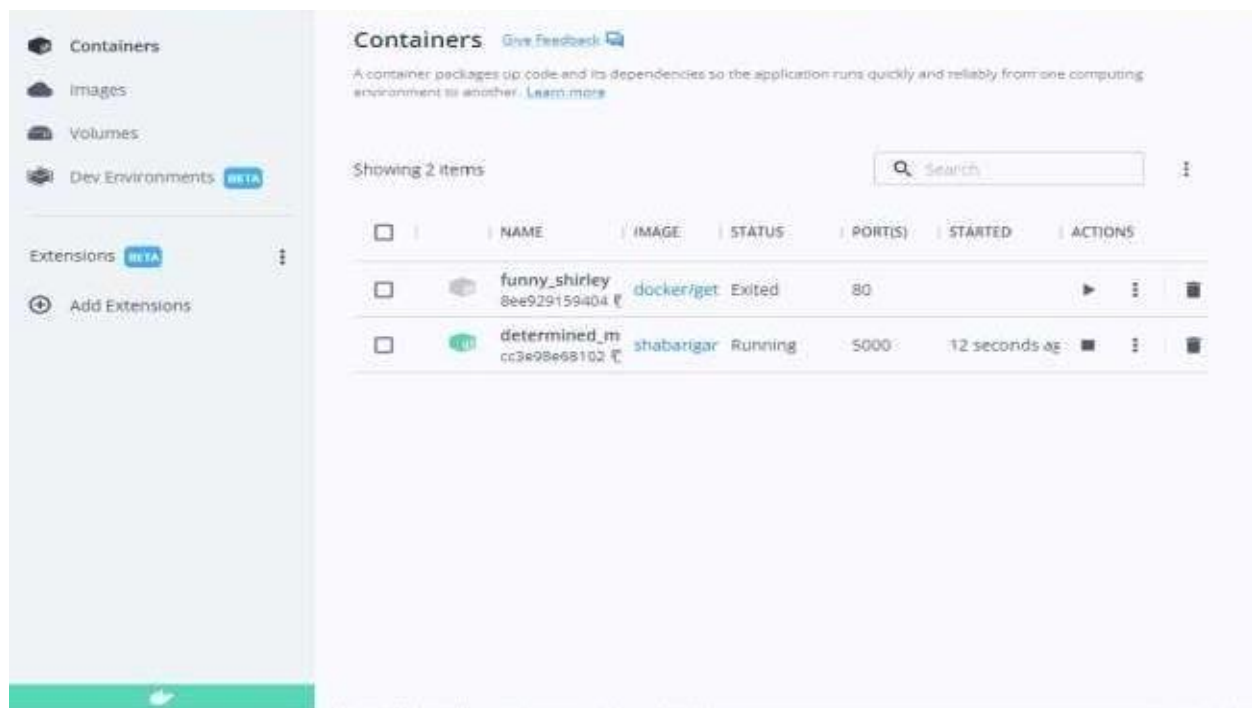
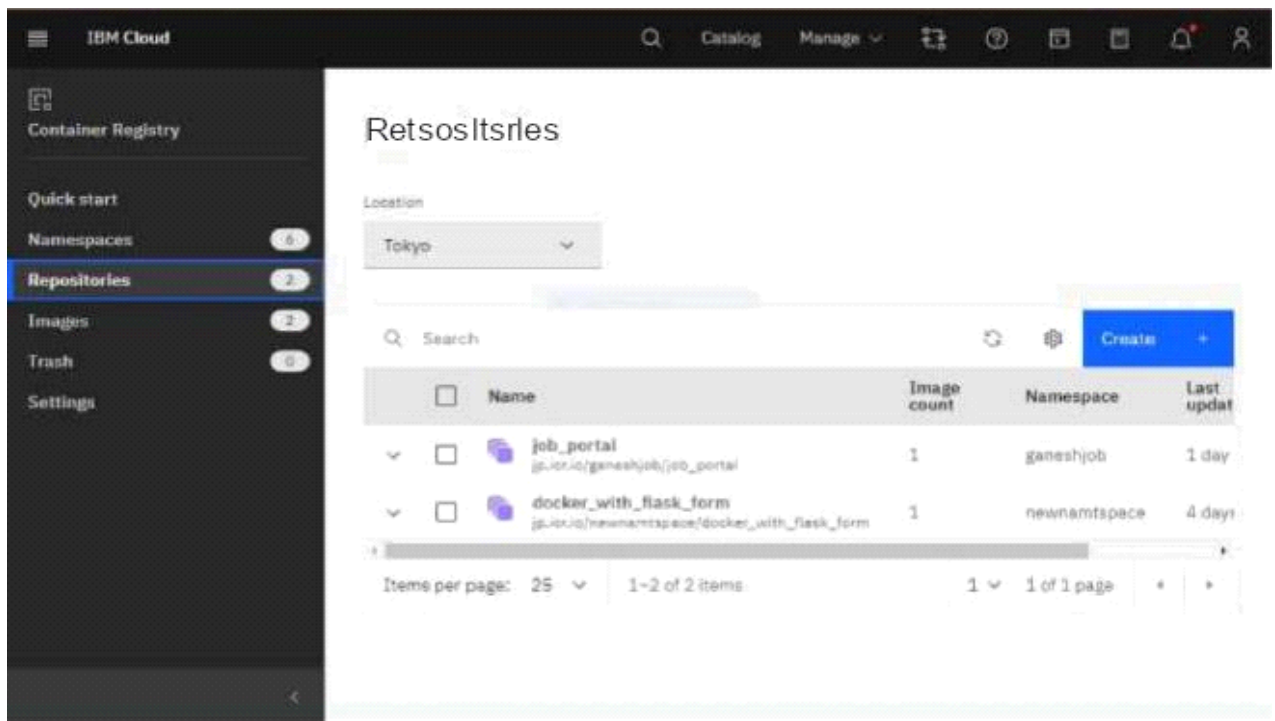
```
Command Prompt
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

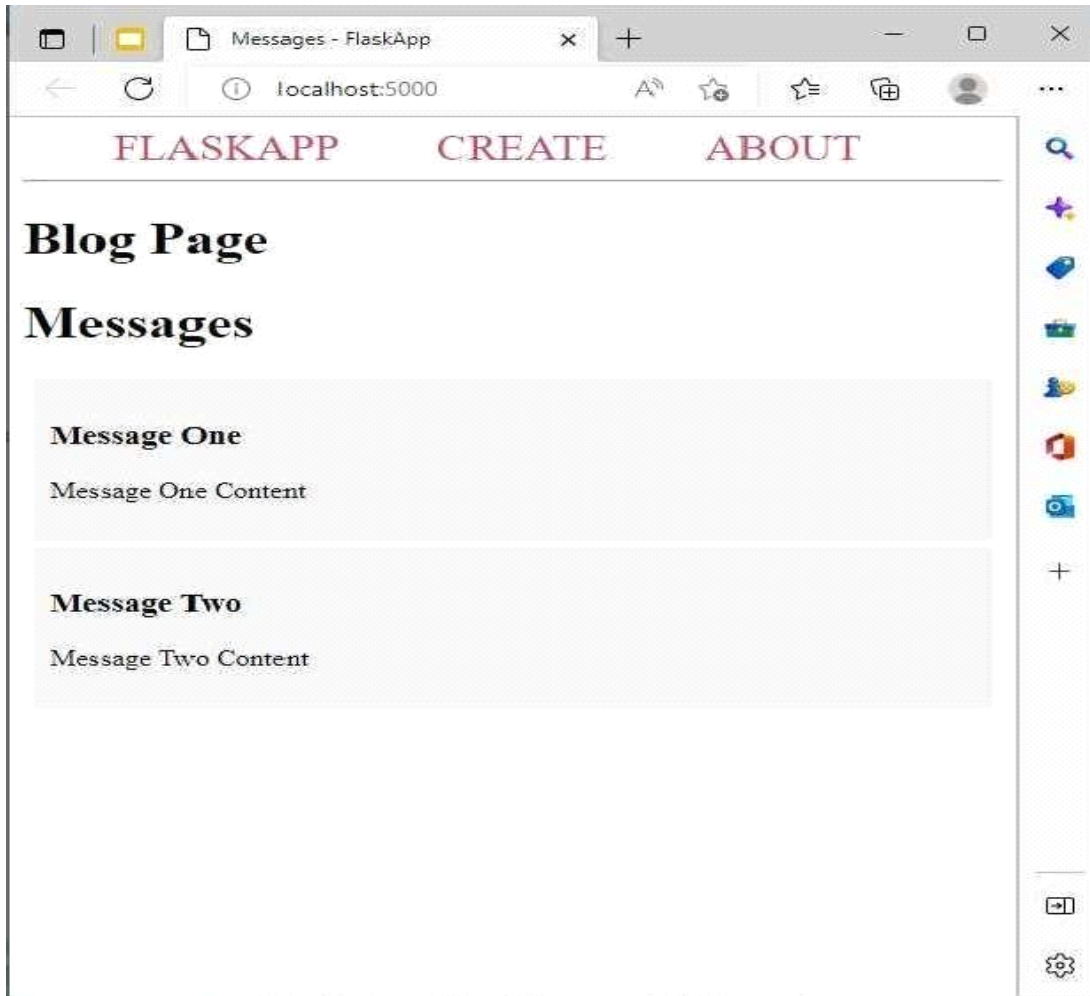
C:\Users\ADMIN>docker push shabariganesan/docker_with_flask_form
Using default tag: latest
The push refers to repository [docker.io/shabariganesan/docker_with_flask_form]
An image does not exist locally with the tag: shabariganesan/docker_with_flask_form

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
d8b983117533: Pull complete
d8092d56ded5: Pull complete
c71afc637d59: Pull complete
864a10b3c704: 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**

```
C:\Users\lgani\Desktop\job_portal\DockeFile - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugin Window ?
C:\Users\lgani\Desktop\job_portal\DockeFile
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
```

## deploy in in dokcer application

```
Select C:\Windows\System32\cmd.exe
C:\Users\lgani\Desktop\job_portal>cd ..
C:\Users\lgani\Desktop>cd job_portal
C:\Users\lgani\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\lgani\Desktop\job_portal>dir
Volume in drive C has no label.
Volume Serial Number is B6A3-1D8E

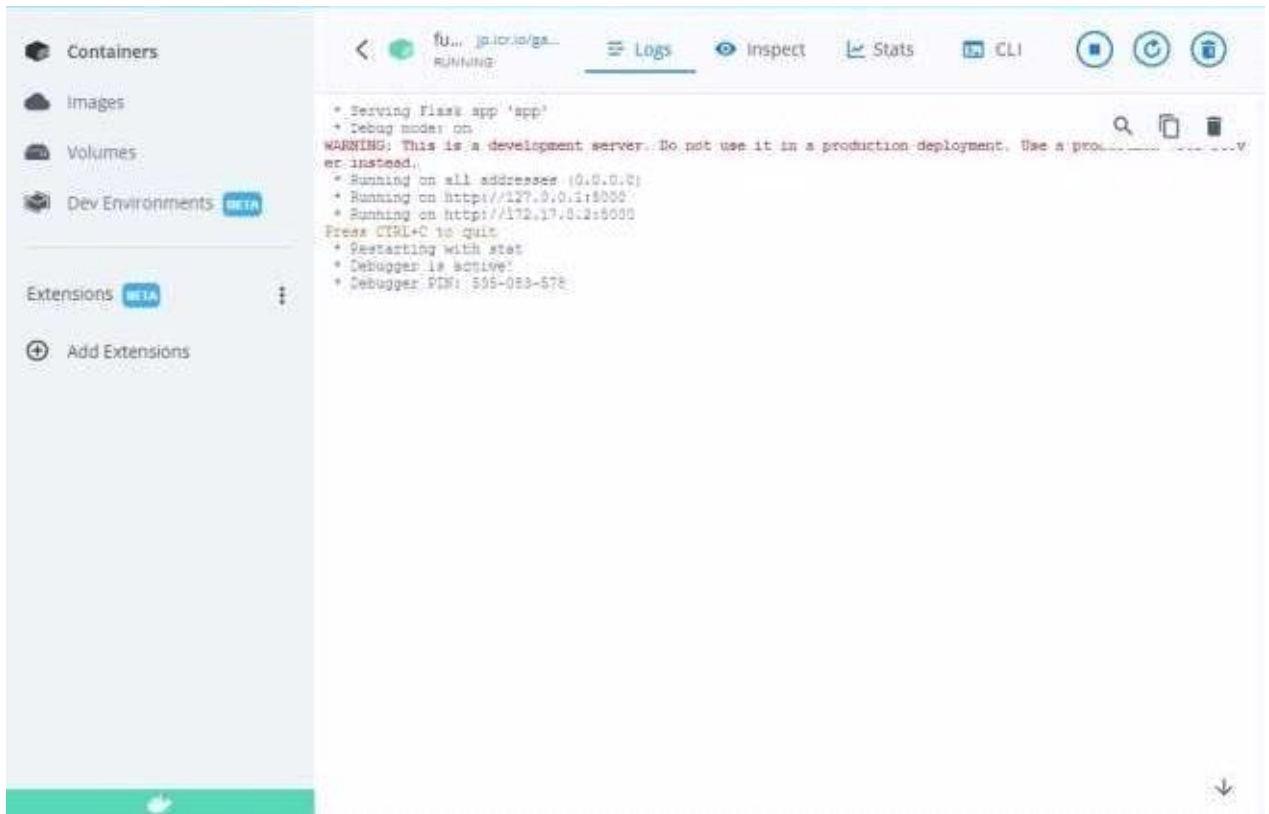
Directory of C:\Users\lgani\Desktop\job_portal

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 10:40 PM     148 Dockerfile
10/22/2022 10:40 PM       1 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)  77,847,854,976 bytes free

C:\Users\lgani\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\lgani\Desktop\job_portal>docker build -t job_portal .
[+] Building 0.7s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load Dockerfile 170B
=> [internal] load .dockerignore
=> [internal] load build definition from Dockerfile
=> [internal] load metadata for docker.io/python:3.10.6
=> [cache] 22m python:3.10.6 base image [python:3.10.6]
=> [1/1] FROM python:3.10.6@sha256:1486c2711511cf2c759992d389b10151295939e7821f145f0e5434d07c094d72
=> [2/1] COPY requirements.txt /app
=> [3/1] RUN pip install --no-cache-dir -r /app/requirements.txt
=> [4/1] COPY . /app
=> [5/1] EXPOSE 5000
=> [6/1] CMD ["python", "app.py"]
[+] Building 0.7s (11/11) FINISHED
```





running in docker desktop 1

**Question-3: Create albm container registry and deploy helloworld app or jobportalapp create a ibmcontainer registry**

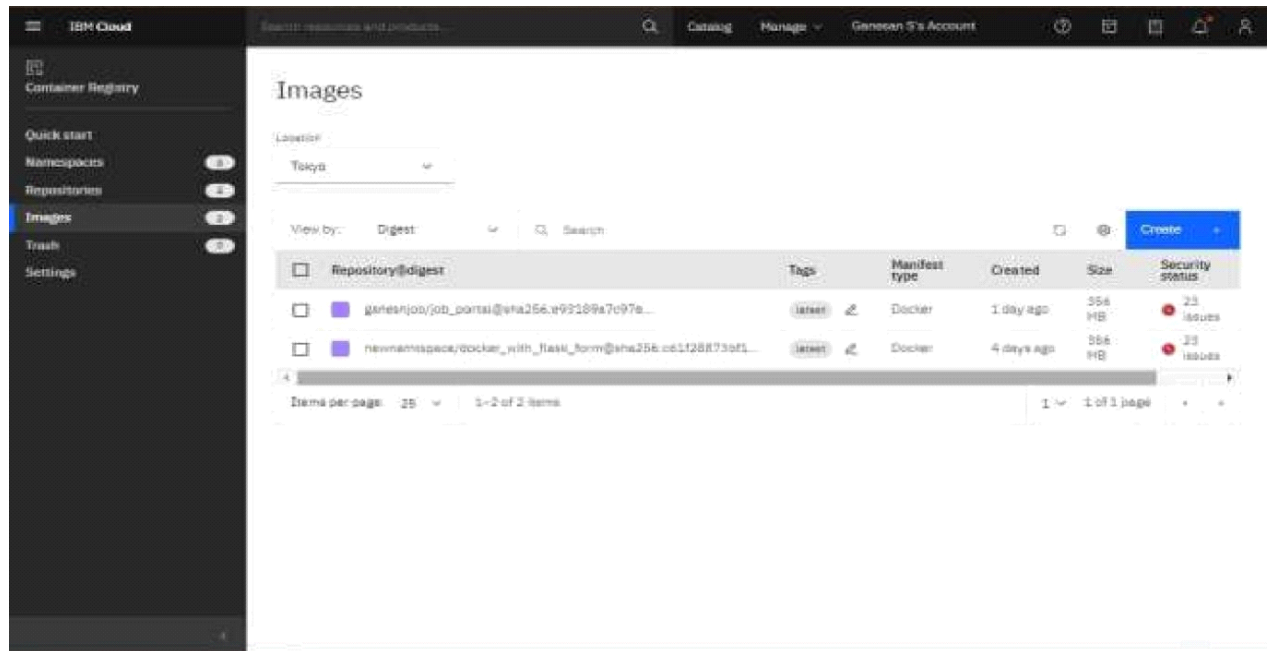


**deployhelloworld or jobportal**

```
C:\Windows\system32\cmd.exe
54c05a6fa8b: Retrying in 1 second
8d51c018126f: Retrying in 1 second
0ff6e4d0744: Waiting
e89d1d47b5a1: Waiting
055ed1b74428: Waiting
failed to lookup host: jp.lcr.io

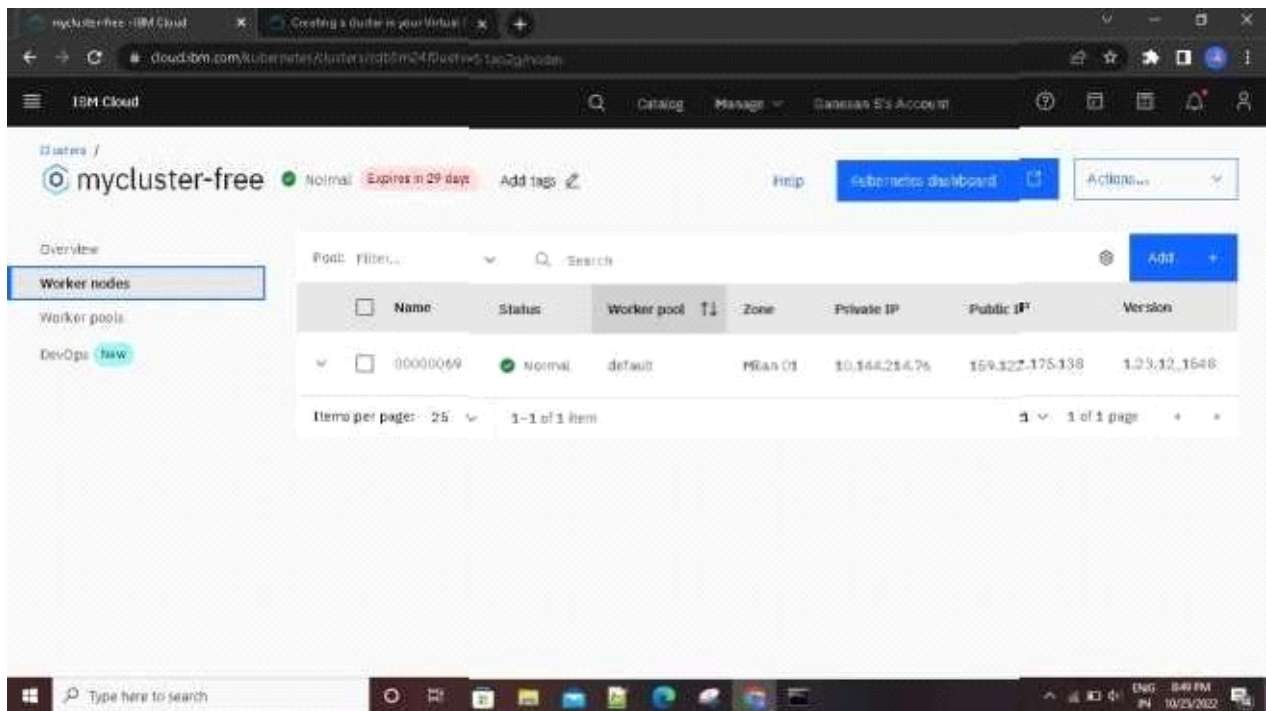
C:\Users\gan1\Desktop\job_portal>docker push jp.lcr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganeshjob/job_portal]
15b3b158a025: layer already exists
8be94f95e186: Pushed
48c2a744c12b: Layer already exists
9b72c7835466: Layer already exists
bfcddeb8136e: Layer already exists
1f123186824c: Layer already exists
3ddeb1152931: Pushed
180796cd03b1: Pushed
54c05a6fa8b: Retrying in 1 second
8d51c018126f: Pushed
0ff6e4d0744: Pushed
e89d1d47b5a1: Pushed
055ed1b74428: Pushing [-----] 89.88MB/134PB
^C
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]
15b3b158a025: Layer already exists
8be94f95e186: Layer already exists
48c2a744c12b: Layer already exists
9b72c7835466: Layer already exists
bfcddeb8136e: Layer already exists
1f123186824c: Layer already exists
3ddeb1152931: Layer already exists
180796cd03b1: Layer already exists
54c05a6fa8b: Pushed
8d51c018126f: Layer already exists
0ff6e4d0744: Layer already exists
e89d1d47b5a1: Layer already exists
055ed1b74428: Pushed
latest: digest: sha256:e93189a7c97ceeb95086668a54e895cf61a36eda039998c8c7a21a7a7963fc207 size: 3852

C:\Users\gan1\Desktop\job_portal>
C:\Users\gan1\Desktop\job_portal>
```



**Question-4: Create a kubernetes cluster in ibm cloud and deploy helloworld image or jobportal image andalso 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>

```

Services

...



Search

Workloads > Pods

...

Deployment

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

...

Running



Service



Workloads > Pods > flask-app-79447bfc8c-4t8rw > 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  cnone>   *          *            80         27m
C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```