

**Assignment - IV**  
**Docker & Kubernetes**  
**Cloud Application Development**

Assignment Date	30 <sup>th</sup> October 2022
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Student Roll Number	61771921003
Maximum Marks	2 Marks

**Question-1:**

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

**pull an image form docker hub**

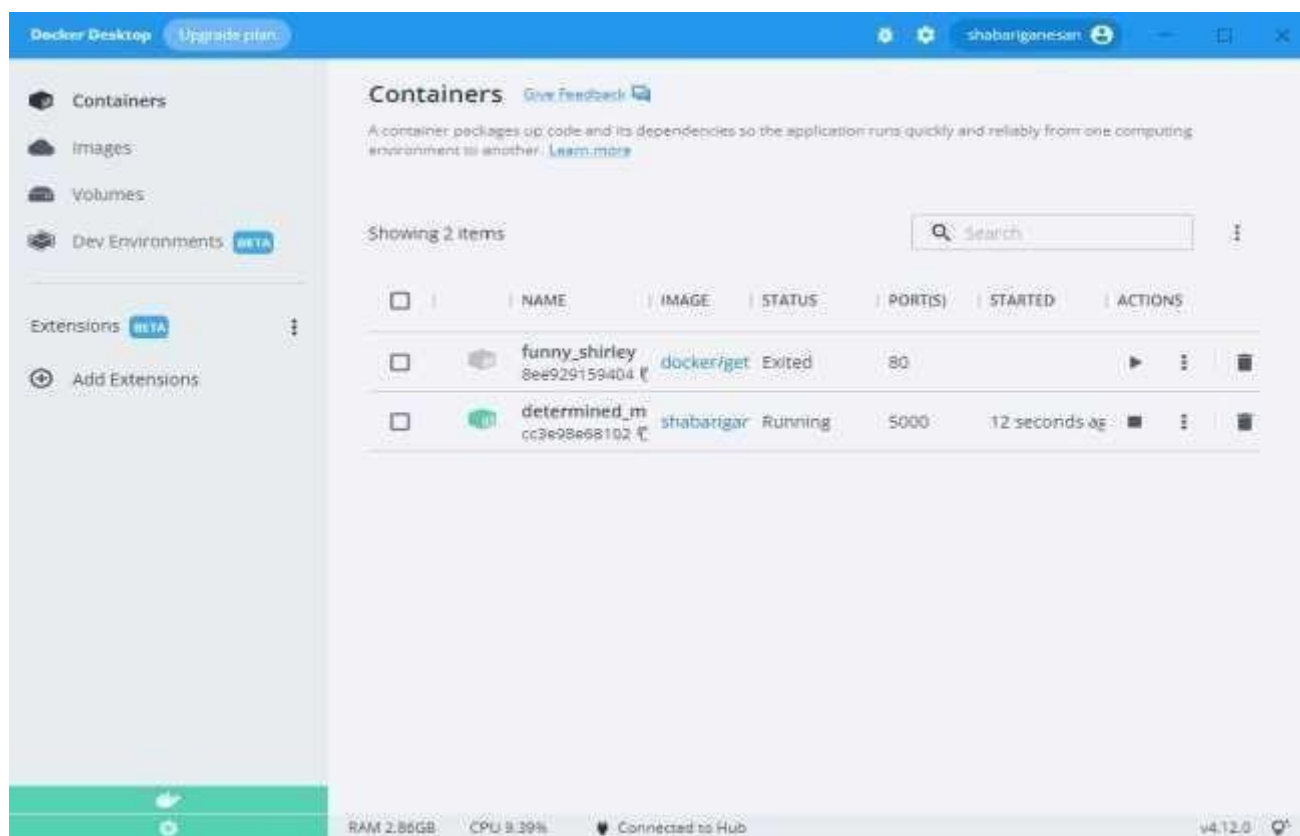
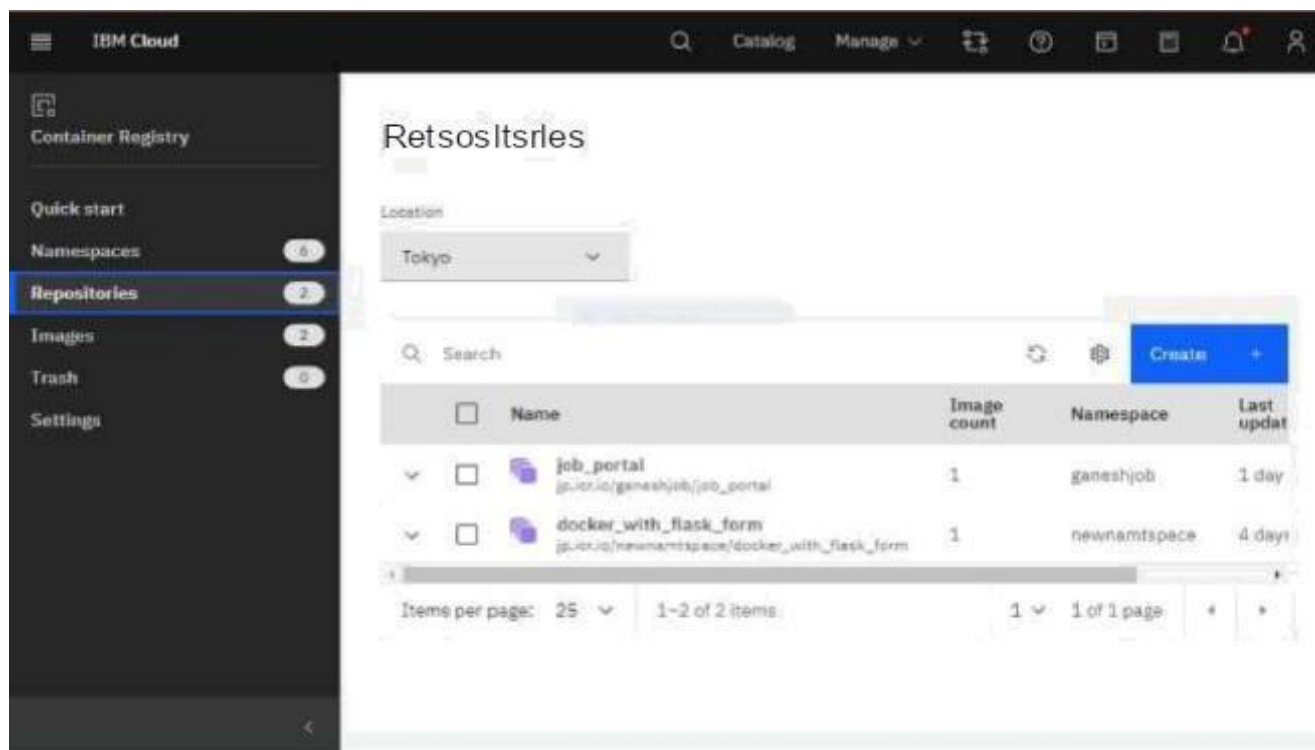
```
Command Prompt
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

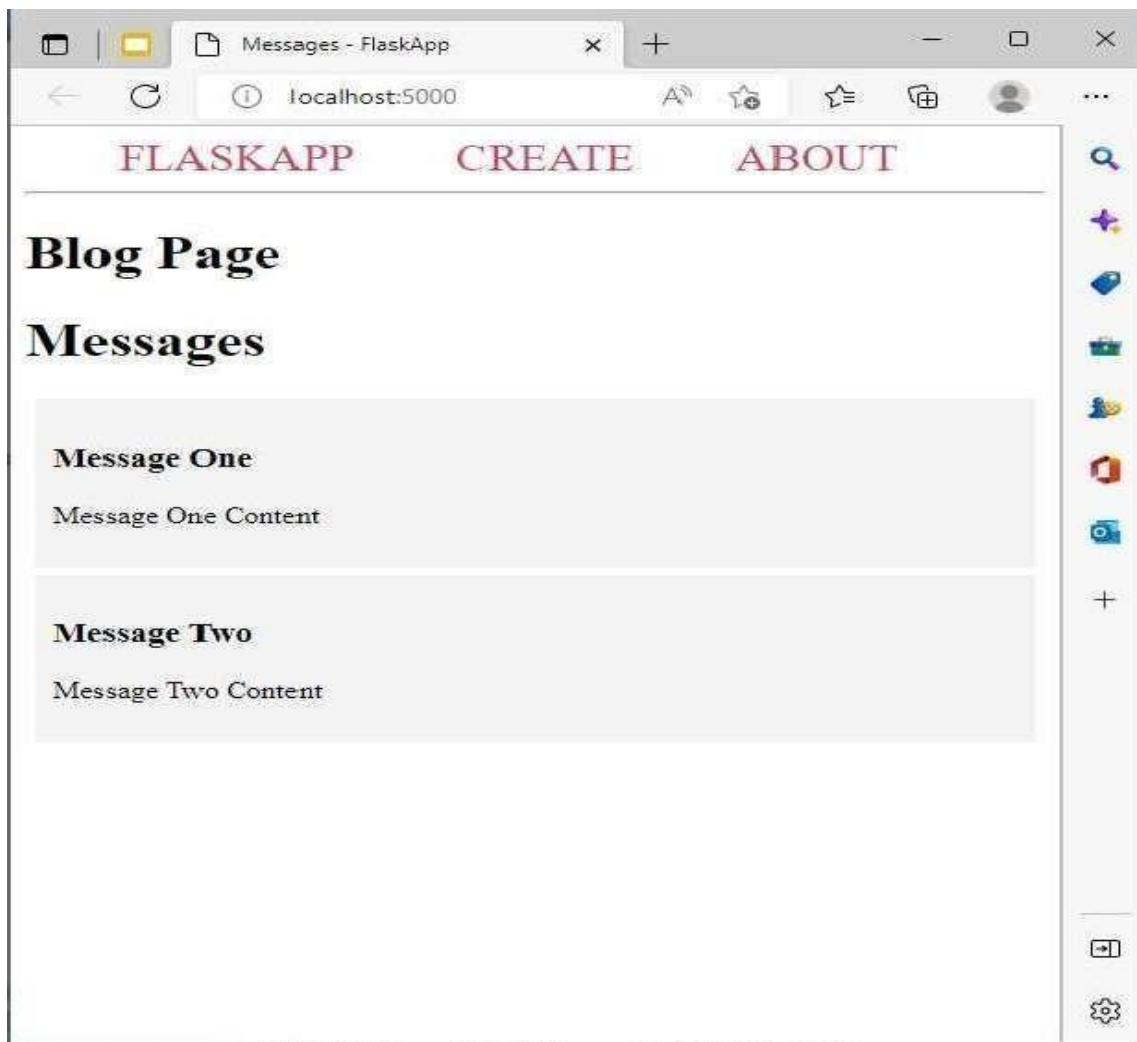
C:\Users\ADMIN>docker push shabariganesan/docker_with_flask_form
Using default tag: latest
The push refers to repository [docker.io/shabariganesan/docker_with_flask_form]
An image does not exist locally with the tag: shabariganesan/docker_with_flask_form

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
3e94d11e55e7: 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
086f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b8b68cd976765077f344e34d50e6cce8cf8d95c3
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.

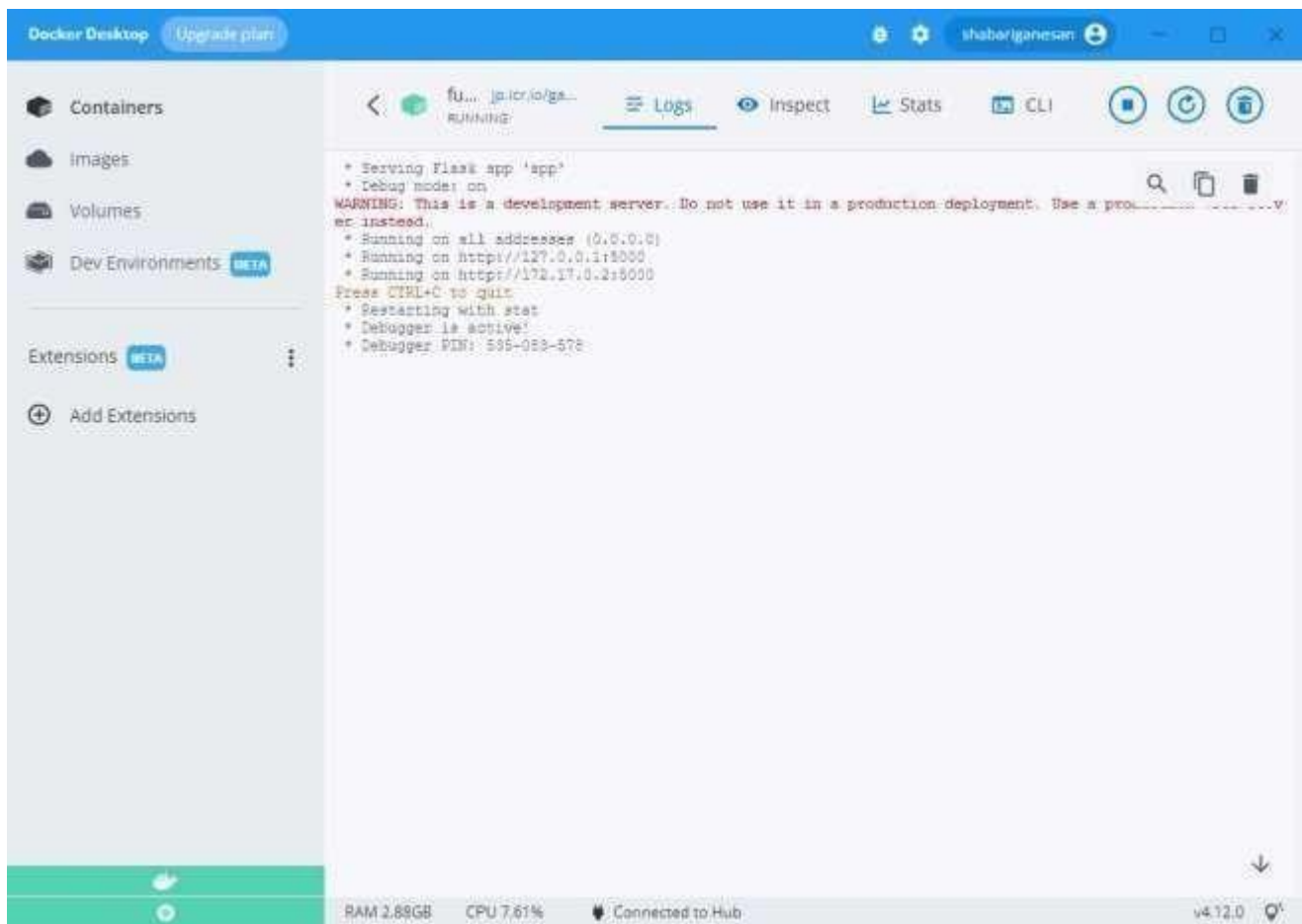
Creating a docker file for the jobportal application



```

[...]
```

Ccraťziners



running in docker desktop 1

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

## create a ibm container registry



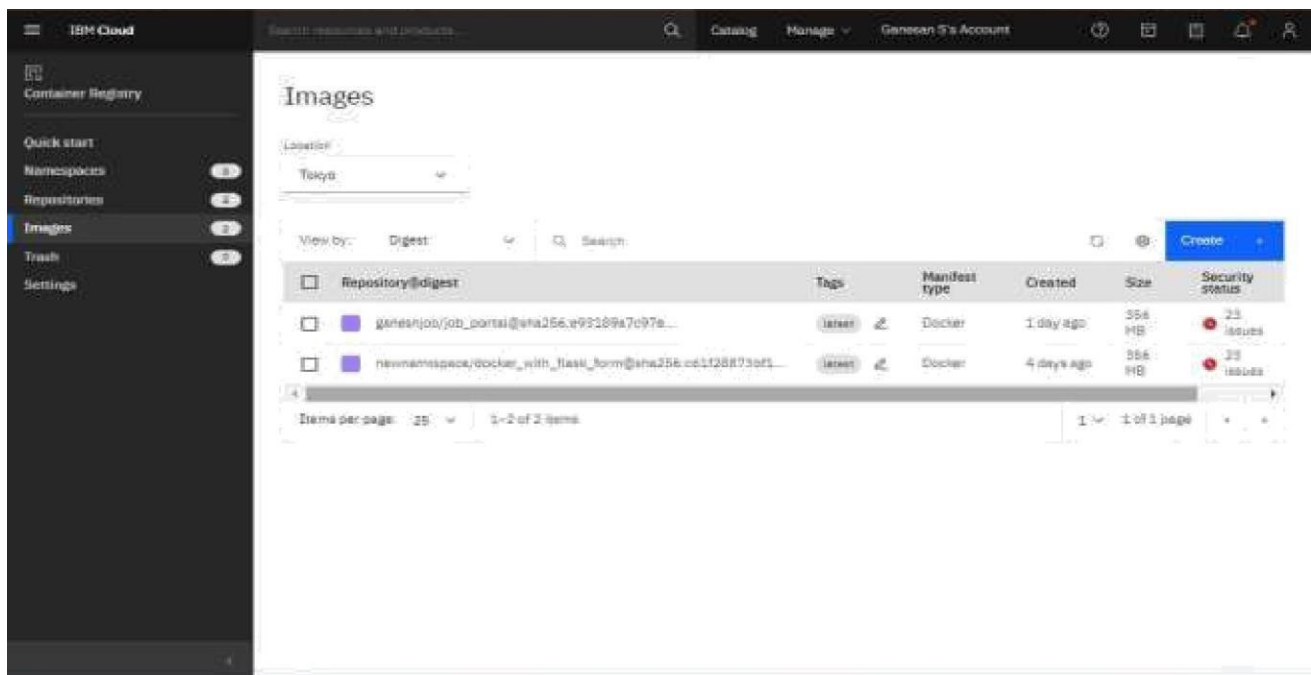
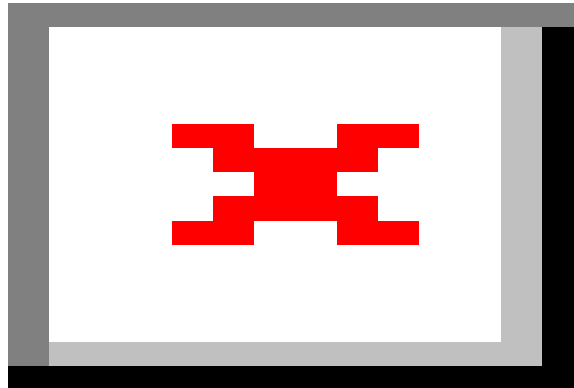
## deployhelloworld or jobportal

```
C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
a99dd47b541: Waiting
655ed1b74428: Waiting
Failed to lookup host: 'jp.lcr.io'

C:\Users\ganil\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
80e94f5e186: Pushed
48c2a744c12b: layer already exists
9b72c7835466: layer already exists
bfc1deb8136e: layer already exists
1f123186824c: layer already exists
9d5eb1152931: Pushed
180796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
a99dd47b541: Pushed
655ed1b74428: Pushing [=====] 89.80MB/134MB
^C

C:\Users\ganil\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
80e94f5e186: layer already exists
48c2a744c12b: layer already exists
9b72c7835466: layer already exists
bfc1deb8136e: layer already exists
1f123186824c: layer already exists
9d5eb1152931: layer already exists
180796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
a99dd47b541: layer already exists
655ed1b74428: Pushed
latest: digest: sha256:e93189a7970eb89386668a54e896cf61446eda939996c8c7a214747961fc207 size: 3852

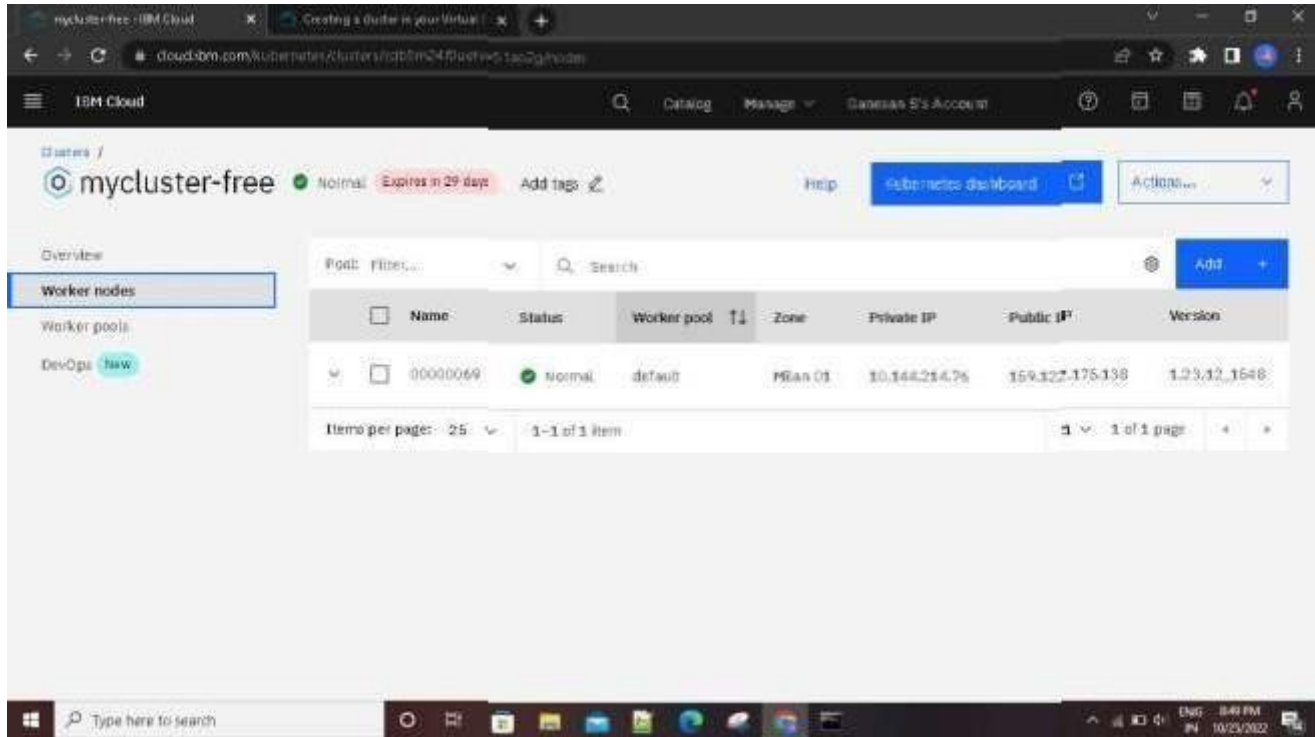
C:\Users\ganil\Desktop\job_portal>
C:\Users\ganil\Desktop\job_portal>
```



**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 Set

...

Service

...

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

Running

Service

```
Running Flask app 'app'
bug mode: on
[14:48:30] 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:
bugger is active!
bugger PIN: 110-487-349
```



Workloads > Pods > flask-app-79447b5c8c-4dfhw > 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  <none>  *          80           27m
C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```