

#### Assignment-4

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Batch No	B9 - 3A5E
Project Name	CONTAINMENT ZONE ALERTING APPLICATION
Team ID	PNT2022TMID31809

#### Question-1:

pull an image from docker hub and run it in docker

playground.pullan image form dockerhub

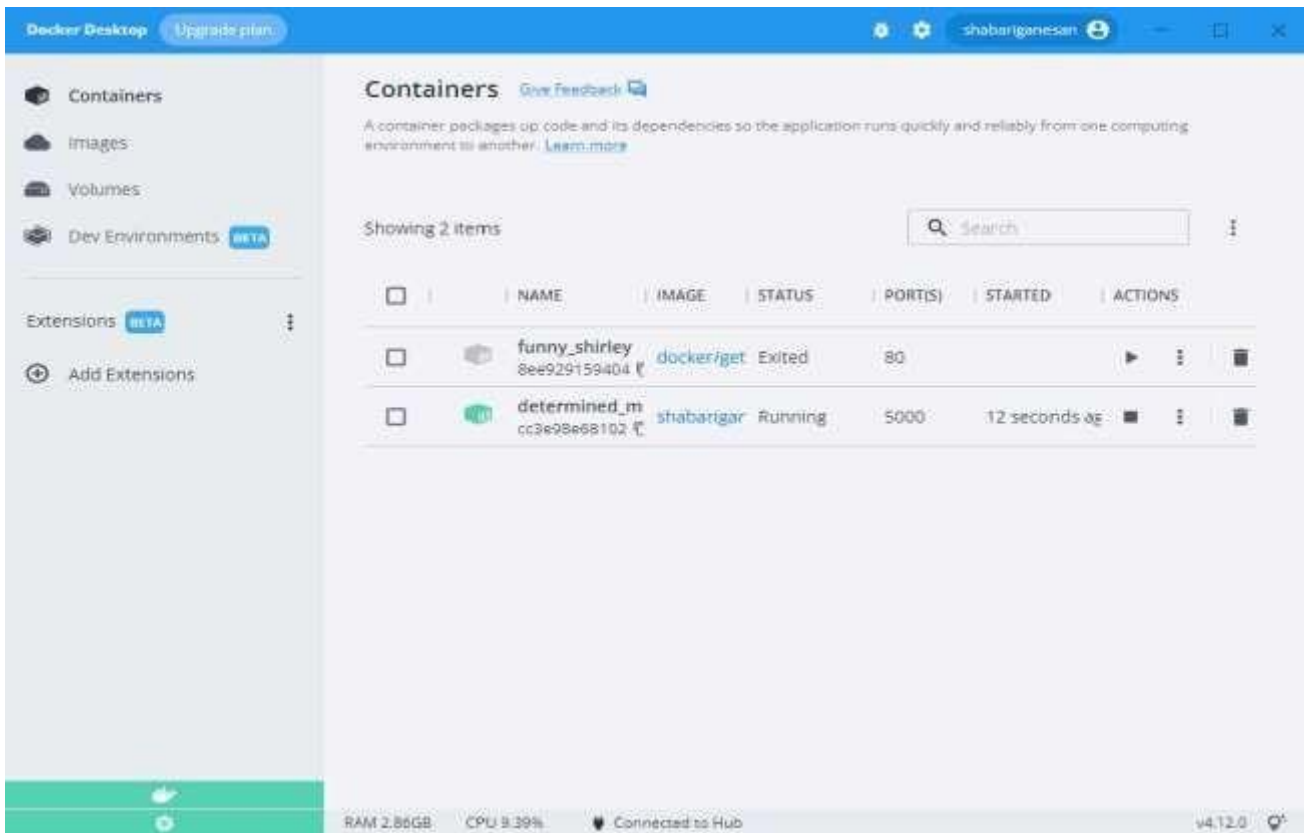
```
Command Prompt
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

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
d6b983117533: Pull complete
d8092d56ded5: Pull complete
c71afc637d59: Pull complete
864a18b3c784: Pull complete
4334b2fe8293: Pull complete
8944578783f4: 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 titin docker playground





**Question-2:**

**Create a dockerfile for the job portal application and deploy it in a docker application.**

**Creating a dockerfile for the job portal application**

```
C:\Users\gan1\Desktop\job_portal\DockeFile - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
C:\Users\gan1\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
```

## deployinindockerapplication

```
Select C:\Windows\System32\cmd.exe
C:\Users\gan1\Desktop\job_portal>cd ..
C:\Users\gan1\Desktop>cd job_portal
C:\Users\gan1\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\gan1\Desktop\job_portal>dir
Volume in drive C has no label.
Volume Serial Number is 86A3-108E

Directory of C:\Users\gan1\Desktop\job_portal

10/25/2022  04:59 PM  <DIR>          .
10/25/2022  04:59 PM  <DIR>          ..
10/25/2022  04:11 PM          320 app.py
10/22/2022  10:48 PM       148 Dockerfile
10/22/2022  10:48 PM           5 requirements.txt
10/25/2022  04:59 PM  <DIR>          static
10/25/2022  04:59 PM  <DIR>          templates
10/25/2022  04:59 PM  <DIR>          __pycache__
               3 File(s)          424 bytes
               5 Dir(s)  77,847,854,876 bytes free

C:\Users\gan1\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\gan1\Desktop\job_portal>docker build -t job_portal .
[+] Building 403.6s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load Dockerfile 170s
=> [internal] load Dockerignore 2.7s
=> [internal] resolve image config for docker.io/python:3.10.6 3.1s
=> [internal] load metadata for docker.io/python:3.10.6 46.4s
=> [internal] create build context from Dockerfile 4.9s
=> [internal] build context 421.5s
=> [internal] build 0.3s
```





runningindockerdesktop1

**Question-3: Create an IBM container registry and deploy helloworldapp or jobportalapp**

## createa ibm container registry

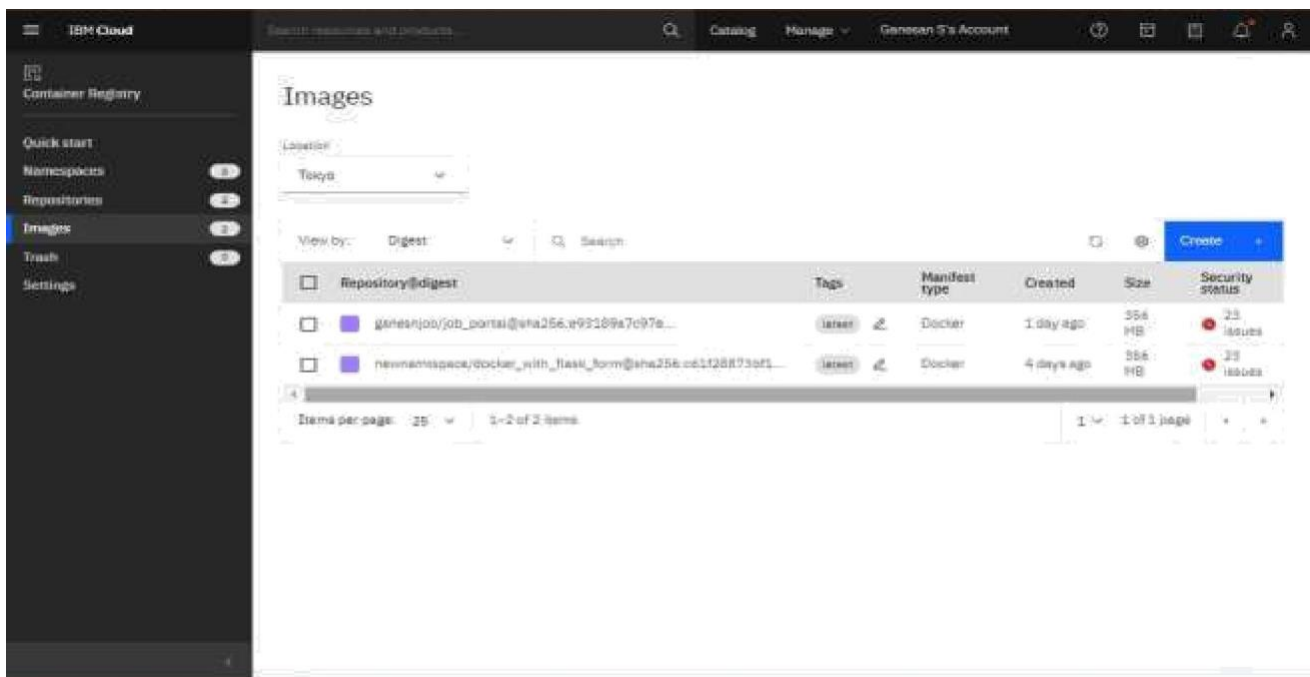


## deployhelloworldorjobportal

```
C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
a90d1d47b5a1: 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]
1fe3b1584025: layer already exists
80e94f05e186: Pushed
48c2a7a4c12b: layer already exists
9b72c7835466: layer already exists
bfcd5eb8136e: layer already exists
1f123186024c: layer already exists
3d5eb1152931: Pushed
180796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
a90d1d47b5a1: Pushed
655ed1b74428: Pushing [-----] 89.88MB/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]
1503b1584025: layer already exists
80e94f05e186: layer already exists
48c2a7a4c12b: layer already exists
9b72c7835466: layer already exists
bfcd5eb8136e: layer already exists
1f123186024c: layer already exists
3d5eb1152931: layer already exists
180796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
a90d1d47b5a1: layer already exists
655ed1b74428: Pushed
latest: digest: sha256:e92189a7197eeb99086668a54e896cf61a48eda939998c8c7a21a7a7961fc207 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 job portal image and also expose the same app to run in note port

```
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

Walingformoredalaadisplaycharl...Walingformoredata adisplaychart...

Running

Services

```
~/ing Flask app 'app'
bug 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
bugger is active!
bugger PIN: 116-487-149
```



Workloads > Pods > flask app-79447b5c8c-408ww > 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
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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  cnoe>    *          80           27h

C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```