

Assignment -4

Docker and kubernetes

Assignment Date	10 October 2022
Student Name	Mr. S. Ganesan
Student Roll Number	612419104010
Maximum Marks	2 Marks

Question-1: pull an image from docker hub and run it in docker playground.

1)pull an image form docker hub

```
C:\Windows\System32\cmd.exe - docker pull shabariganesan/docker_with_flask_form:latest
53ad072f9cd1: Download complete
d6b983117533: Retrying id6b983117533: Retrying in 15 seconds
53ad072f9cd1: Pull complete
d6b983117533: Downloading
864a10b3c704: Download complete
4334b2fe8293: Download complete
8944570703f4: Download complete
f885911288d0: Download complete
086f369ca59f: Download complete
e113bd27b88e: Download complete

Failed to lookup host: registry-1.docker.io

C:\Windows\system32>docker pull shabariganesan/docker_with_flask_form:latest
latest: Pulling from shabariganesan/docker_with_flask_form
1671565cc8df: Extracting [=====] 12.26MB/55.01MB
3e94d13e55e7: Download complete
fa9c7528c685: Download complete
53ad072f9cd1: Downloading [=====] 50.15MB/54.58MB
d6b983117533: Downloading [=====] 32.35MB/196.8MB
d8092d56ded5: Downloading [=====] 3.582MB/6.291MB
c71afc637d59: Waiting
864a10b3c704: Waiting
4334b2fe8293: Waiting
8944570703f4: Waiting
f885911288d0: Waiting
086f369ca59f: Waiting
e113bd27b88e: Waiting
```

2)run it in docker playground

```
C:\Windows\System32\cmd.exe
C:\Users\ganil\Desktop\job_portal>cd ..
C:\Users\ganil\Desktop>cd job_portal
C:\Users\ganil\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\ganil\Desktop\job_portal>dir
Volume in drive C has no label.
Volume Serial Number is B6A3-1D8B

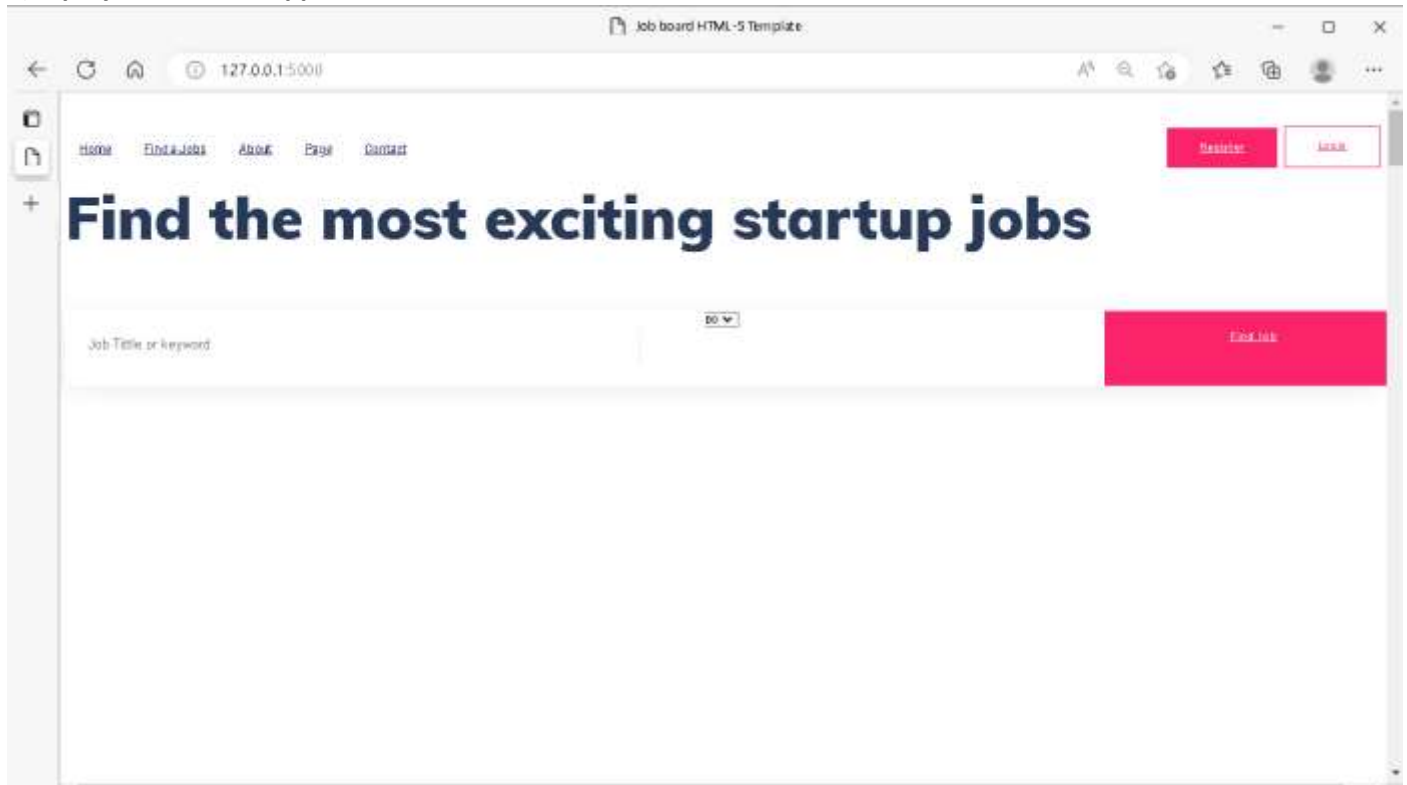
Directory of C:\Users\ganil\Desktop\job_portal

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                 6 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)   77,047,934,976 bytes free

C:\Users\ganil\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\ganil\Desktop\job_portal>docker build -t job_portal .
[+] Building 403.6s (11/11) FINISHED
-> [internal] load build definition from Dockerfile                                1.2s
-> [internal] load metadata for docker.io/library/python:3.9-slim                0.8s
-> [internal] load definitions for docker.io/library/python:3.9-slim             2.3s
-> [internal] load metadata for docker.io/library/python:3.9-slim               0.1s
-> [internal] load metadata for docker.io/library/python:3.9-slim               18.4s
-> [build] info copying runtime layer for registry.docker.io                   0.8s
-> [STEP 1/5] RUN python /usr/local/bin/pip install -r requirements.txt         413.5s
-> [STEP 2/5] RUN python /usr/local/bin/pip install -r requirements.txt         0.5s
```


2)deploy in in dokcer application



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

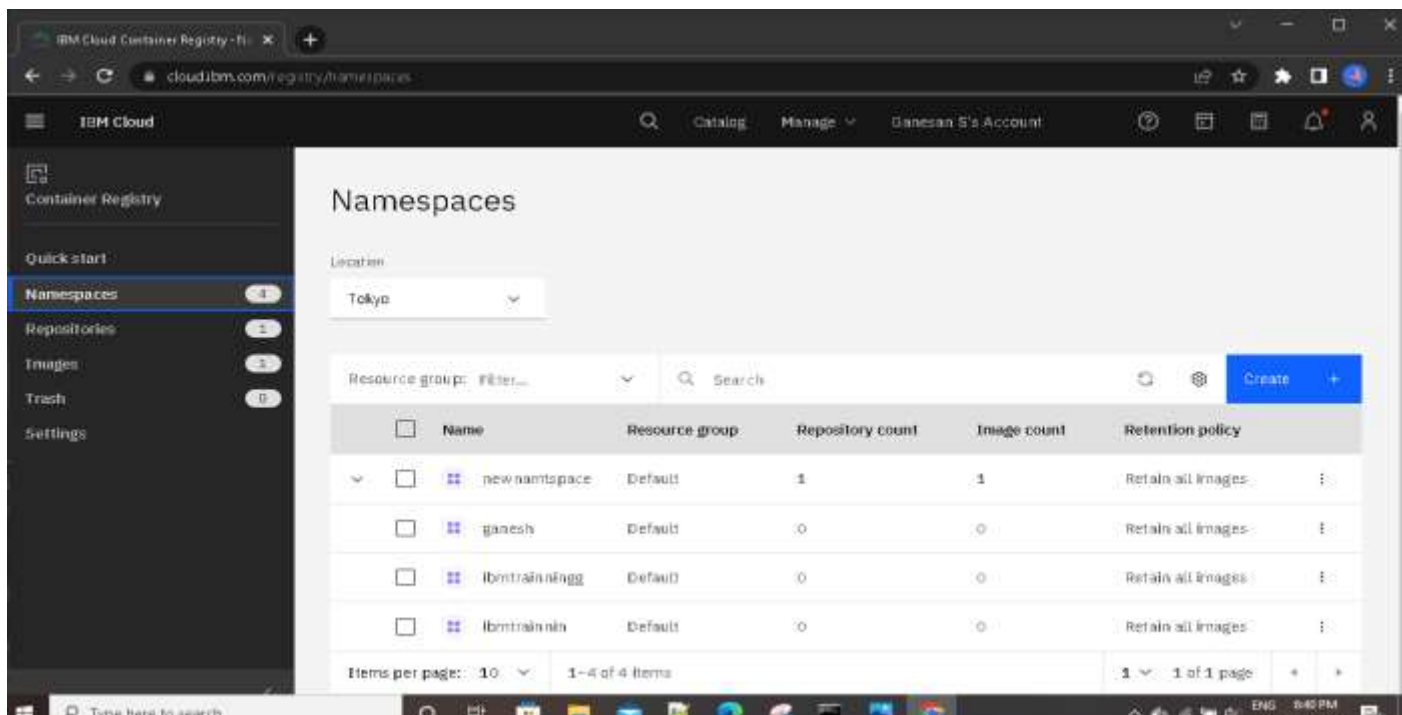
1)create a ibm container registry

```
C:\Windows\system32\cmd.exe
11. br-luo
Enter a number> 4
Targeted region jp-tok

API endpoint: https://cloud.ibm.com
Region: jp-tok
User: 612419104410@martinternz.com
Account: Sanesan S's Account (2a235674b9ba462891acc3c4fcb8a99)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CS API endpoint:
Org:
Space:

C:\Users\ganil\Desktop\job_portal>ibmcloud plugin install container-registry
Looking up 'container-registry' from repository 'IBM Cloud'...
Plug-in 'container-registry[cr] 1.8.2' found in repository 'IBM Cloud'
Plug-in 'container-registry 1.8.2' was already installed. Do you want to update it with 'container-registry[cr] 1.8.2' or not? [y/N] > y
Attempting to download the binary file...
 11.99 MiB / 11.99 MiB [=====] 100.00% 7s
12476416 bytes downloaded
Installing binary...
Plug-in 'container-registry 1.8.2' was successfully installed into C:\Users\ganil\bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to s
how its details.

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



2)deploy helloworld or jobportal

```
C:\Windows\System32\cmd.exe
64acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d46744: Waiting
a89d1d47b5a1: Waiting
655ed1b7a428: Waiting
Failed to lookup host: jp.icr.io

C:\Users\ganli\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]
15e3b158a025: Layer already exists
8be94fb5e186: Pushed
48c2a7a4c12b: Layer already exists
8b72c7035466: Layer already exists
bfc1deb0136e: Layer already exists
1f123106024c: Layer already exists
3d0eb1152931: Pushed
100796cdf3b1: Pushed
64acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d46744: Pushed
a89d1d47b5a1: Pushed
655ed1b7a428: Pushing [-----] 89.98MB/124MB
^C

C:\Users\ganli\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]
15e3b158a025: Layer already exists
8be94fb5e186: Layer already exists
48c2a7a4c12b: Layer already exists
8b72c7035466: Layer already exists
bfc1deb0136e: Layer already exists
1f123106024c: Layer already exists
3d0eb1152931: Layer already exists
100796cdf3b1: Layer already exists
64acb5a6fa8b: Pushed
8d51c618126f: Layer already exists
9ff6e4d46744: Layer already exists
a89d1d47b5a1: Layer already exists
655ed1b7a428: Pushed
latest: digest: sha256:e93189a7c57eeb09d86660a54e096cf61aa6eda039998c8c7a2147a7963fc287 size: 3852

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

Question-4: Create a kubernetes cluster in ibm cloud

The screenshot displays the IBM Cloud Kubernetes dashboard. The top navigation bar includes the IBM Cloud logo, a search icon, and links for Catalog, Manage, and the user's account (Ganesan S's Account). The main header shows the cluster name 'mycluster-free' with a status of 'Normal' and a warning 'Expires in 29 days'. A 'Kubernetes dashboard' button is visible. The left sidebar contains links for Overview, Worker nodes (highlighted), Worker pools, and DevOps. The main content area shows a table of worker nodes. A single node is listed with the following details:

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
00000069	Normal	default	Milan 01	10.144.214.76	159.122.175.138	1.23.12_1548

At the bottom of the dashboard, there are pagination controls showing '1-1 of 1 item' and '1 of 1 page'. The Windows taskbar at the very bottom shows the time as 8:49 PM on 10/25/2022.