

ASSIGNMENT 4

TEAM ID : PNT2022TMID07854

PROJECT NAME : NUTRITION ASSISTANT APPLICATION

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

```
Command Prompt
Microsoft Windows [Version 10.0.19044.1706]
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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
864a10b3c704: Pull complete
4334b2fe8293: Pull complete
8944570703f4: Pull complete
f885911288d0: Pull complete
086f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b6b68cd976765077f344e34d50e6cce8cf8d95c3
Status: Downloaded newer image for shabariganesan/docker_with_flask_form:latest
docker.io/shabariganesan/docker_with_flask_form:latest

C:\Users\ADMIN>
```

IBM Cloud

Container Registry

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Settings

Retsoslsrles

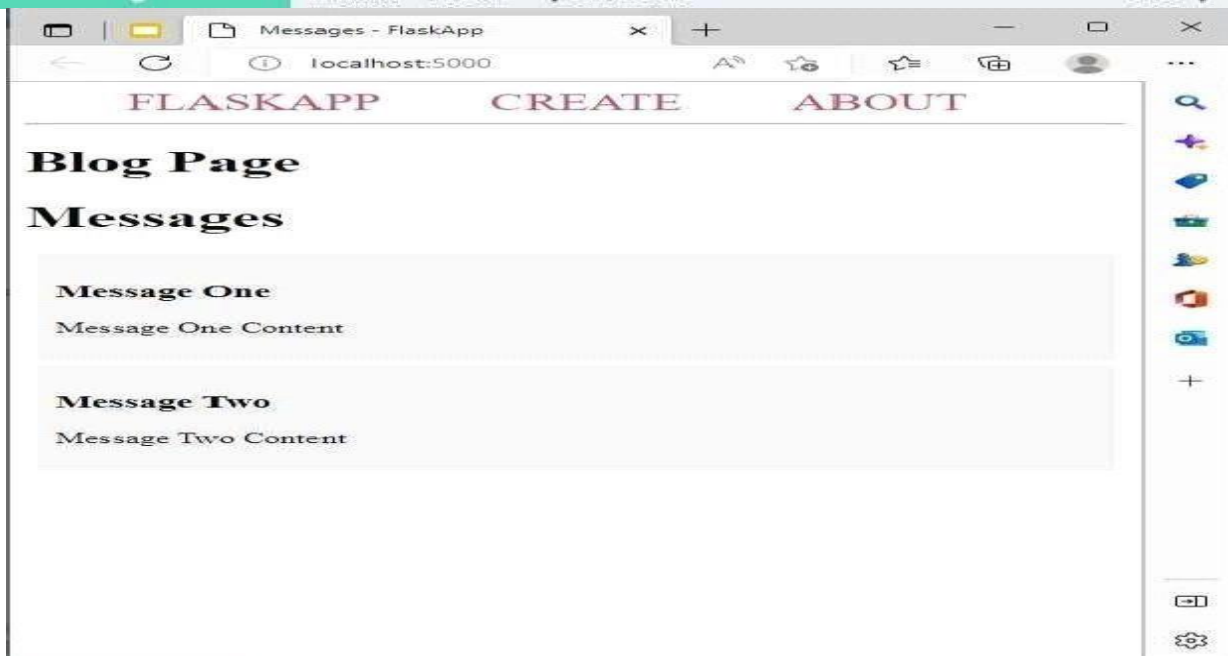
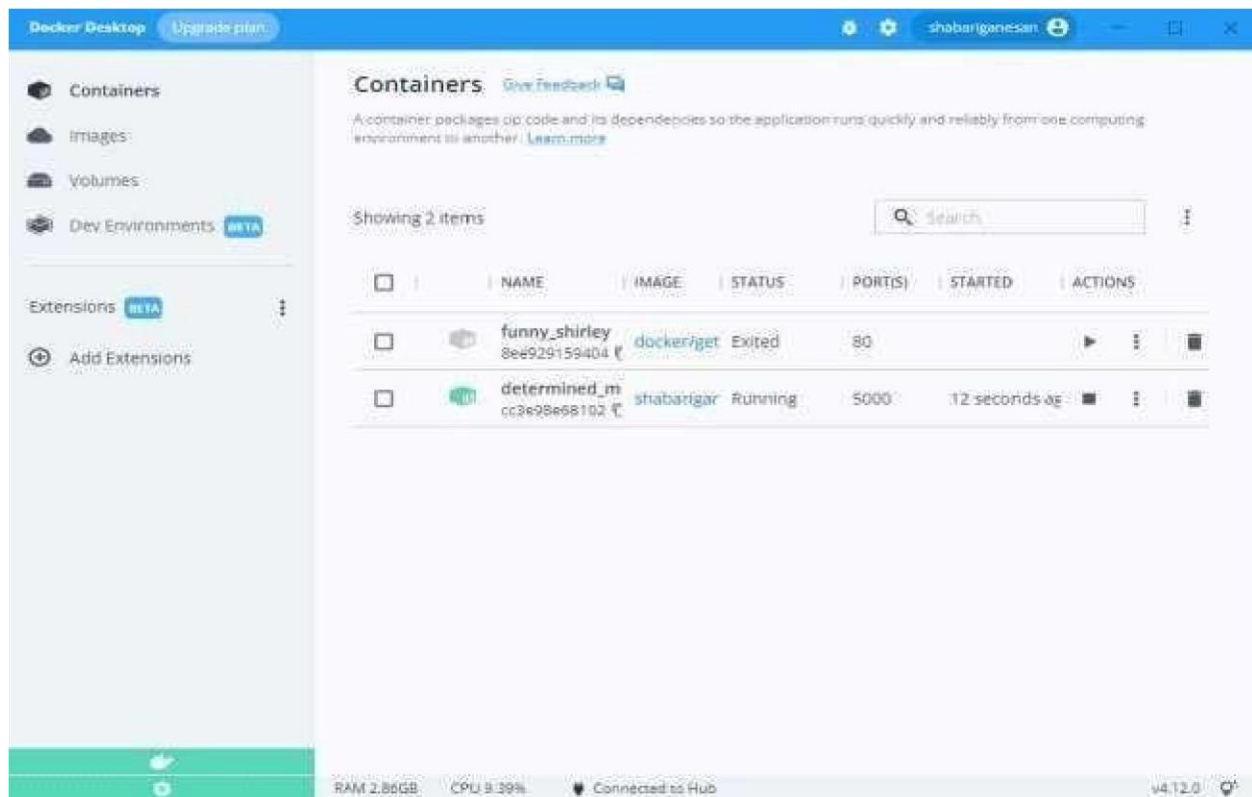
LocationTokyo

Search

Create +

<input type="checkbox"/>	Name	Image count	Namespace	Last update
<input type="checkbox"/>	 job_portal jp.xer.io/ganeshjob/job_portal	1	ganeshjob	1 day
<input type="checkbox"/>	 docker_with_flask_form jp.xer.io/newnamespace/docker_with_flask_form	1	newnamespace	4 days

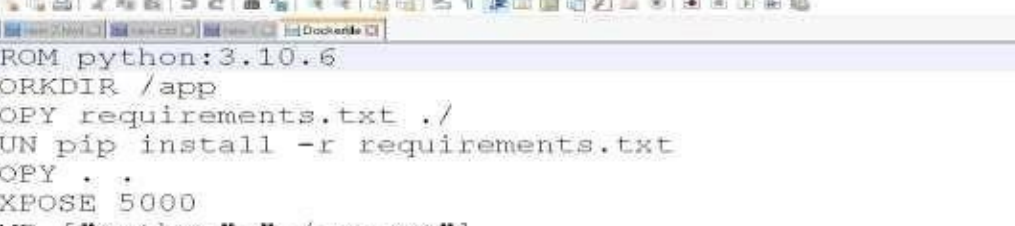
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Question-2:

Create a docker file for the jobportal application and deploy it in docker application.

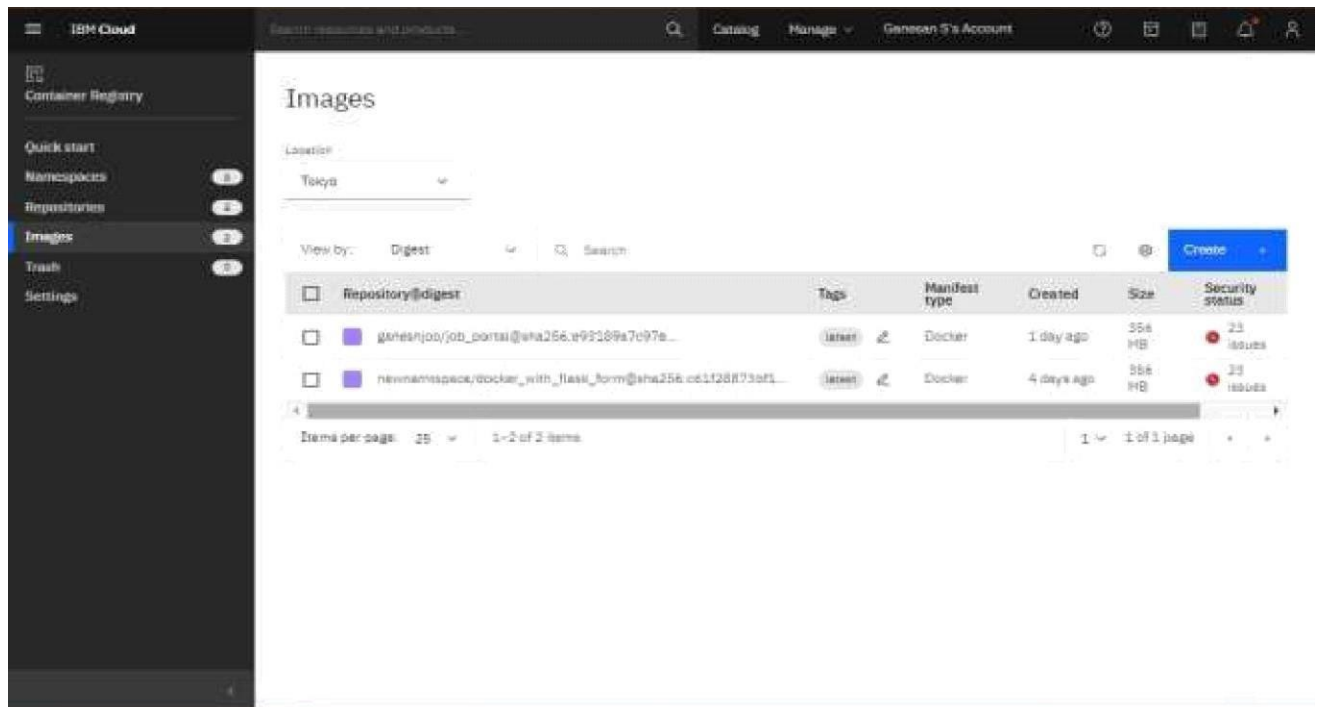
```
C:\Users\gan\Desktop>cd ..  
C:\Users\gan\Desktop>cd job_portal  
C:\Users\gan\Desktop\job_portal>docker build -t job_portal  
"docker build" requires exactly 1 argument.  
See 'docker build --help'.  
  
usage: docker build [OPTIONS] PATH | URL | -  
  
Build an image from a Dockerfile  
  
C:\Users\gan\Desktop\job_portal>dir  
Volume in drive C has no label.  
Volume Serial Number is B6A3-108E  
  
Directory of C:\Users\gan\Desktop\job_portal  
  
10/25/2022 04:59 PM <DIR> .  
10/25/2022 04:59 PM <DIR> ..  
10/25/2022 04:11 PM      520 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__  
                5 File(s)      474 bytes  
                5 Dir(s)  77,047,894 bytes free  
  
C:\Users\gan\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\gan\Desktop\job_portal>docker build -t job_portal .  
[+] Building 0.0s (11/1) FINISHED  
=> [internal] load build definition from Dockerfile                                0.0s  
=> [internal] load dockerfile /Dockerfile                                         0.0s  
=> [internal] load .dockerignore                                                    0.0s  
=> [internal] fetch cache                                                           0.0s  
=> [internal] load metadata for docker.io/library/python:3.9-slim               0.0s  
=> [build] Downloading python base layer for platform linux/amd64                 0.0s  
=> [build] 20m python base layer for platform linux/amd64                        20.0s  
=> [build] 20m python base layer for platform linux/amd64                         20.0s  
=> [build] 20m python base layer for platform linux/amd64                         20.0s  
=> [build] 20m python base layer for platform linux/amd64                         20.0s
```



The screenshot shows a Notepad++ window with a Dockerfile. The file path in the title bar is "C:\Users\gaur\Desktop\python\python\dockerfile - Notepad++". The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Tools, Macro, Run, Plugins, and Window. The toolbar contains various icons for file operations and development. The Dockerfile content is as follows:

```
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
```

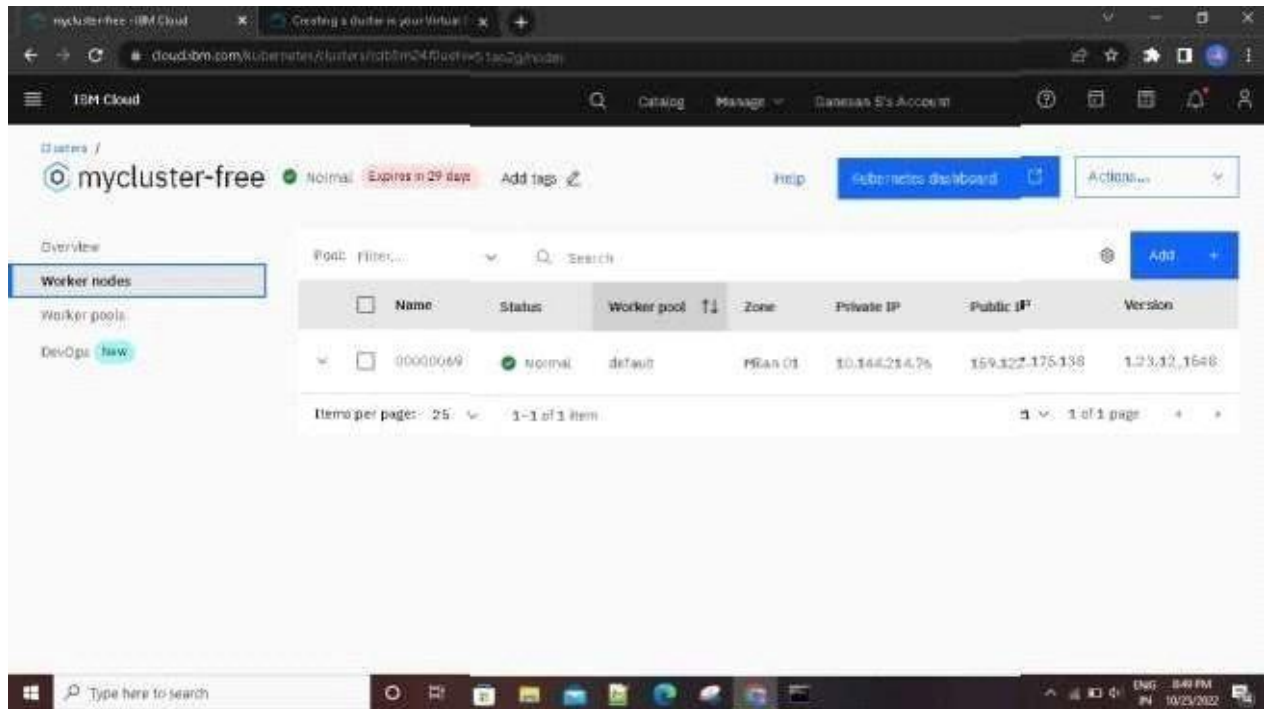
The bottom status bar shows "Ln: 8 Col: 1" and "ENC: UTF-8".



```
C:\Windows\system32\cmd.exe
54acb5abf8b: Retrying in 1 second
8d53c618126f: Retrying in 1 second
0ff6e446744: Waiting
a90c1d4795a1: Waiting
655ed1b74428: Waiting
Failed to lookup host: jp.lcr.io

C:\Users\ganesh\Desktop\job_portal>docker push jp.lcr.io/ganesh/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganesh/job_portal]
150311584025: layer already exists
80e94f95e186: Pushed
48c2a744c12b: layer already exists
8b72c7815466: layer already exists
0fc1deb0136e: layer already exists
1c123186924c: layer already exists
3d5eb1152931: Pushed
189796cdf3b1: Pushed
54acb5abf8b: Retrying in 1 second
8d53c618126f: Pushed
0ff6e446744: Pushed
a90c1d4795a1: Pushed
655ed1b74428: Pushing [-----] | 89.89MB/124MB
C:\Users\ganesh\Desktop\job_portal>docker push jp.lcr.io/ganesh/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganesh/job_portal]
150311584025: layer already exists
80e94f95e186: layer already exists
48c2a744c12b: layer already exists
8b72c7815466: layer already exists
0fc1deb0136e: layer already exists
1c123186924c: layer already exists
3d5eb1152931: layer already exists
189796cdf3b1: layer already exists
54acb5abf8b: Pushed
8d53c618126f: layer already exists
0ff6e446744: layer already exists
a90c1d4795a1: layer already exists
655ed1b74428: Pushed
latest: digest: sha256:e99189a7c97e0b9308660854e896cf61a46eda039996c8c7a21a7a7963fc287 size: 3852
C:\Users\ganesh\Desktop\job_portal>
C:\Users\ganesh\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



```
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 127.0.0.1:8001
^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  cncn    *              80           27m
C:\Windows\system32>kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP    PORT(S)      AGE

```