

<b>Assignment Number</b>	<b>4</b>
<b>Assignment Date</b>	<b>28<sup>th</sup> October 2022</b>
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<b>Maximum marks</b>	<b>2 MARKS</b>

**Question:**

1. Pull an Image from docker hub and run it in docker playground.
2. Create a dockerfile for the job portal / flask application and deploy it in Docker desktop application.
3. Create an IBM container registry and push a docker image of a flask application or job portal app.
4. Create a Kubernetes cluster in IBM cloud and deploy flask application image or job portal image and also expose the same app to run in nodeport.

# Answers:

## 1. Pull an Image from docker hub and run it in docker playground.

```
Command Prompt
Microsoft Windows [Version 10.0.22000.1098]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DharaniViky> docker images
REPOSITORY                                TAG                IMAGE ID           CREATED            SIZE
dharanisriii/flask_with_form_and_docker-main  latest            c791640c7657      8 days ago        932MB
flask_with_form_and_docker-main              latest            c791640c7657      8 days ago        932MB
<none>                                       <none>            ebed074801f8      8 days ago        314MB
alpine                                       latest            9c6f07244728      2 months ago      5.54MB
docker/getting-started                      latest            cb90f98fd791      6 months ago      28.8MB

C:\Users\DharaniViky> docker pull debian:flask_with_form_and_docker-main
Error response from daemon: Get "https://registry-1.docker.io/v2/": dialing registry-1.docker.io:443 no HTTPS proxy: connecting to 44.205.64.79:443: dial tcp 44.205.64.79:443: i/o timeout

C:\Users\DharaniViky> docker pull debian
Using default tag: latest
Error response from daemon: Get "https://registry-1.docker.io/v2/": dialing registry-1.docker.io:443 no HTTPS proxy: connecting to 44.205.64.79:443: dial tcp 44.205.64.79:443: i/o timeout

C:\Users\DharaniViky>
C:\Users\DharaniViky> Using default tag: latest
'Using' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> latest: Pulling from library/debian
'latest:' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> fdd5d7827f33: Pull complete
'fdd5d7827f33:' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> a3ed95cae02: Pull complete
'a3ed95cae02:' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> Digest: sha256:e7d38b3517548a1c71e41bffe9c8ae6d6d29546ce46bf62159837aad072c90aa
'Digest:' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> docker pull --all-tags fedora
Error response from daemon: Get "https://registry-1.docker.io/v2/": dialing registry-1.docker.io:443 no HTTPS proxy: connecting to 44.205.64.79:443: dial tcp 44.205.64.79:443: i/o timeout

C:\Users\DharaniViky>
C:\Users\DharaniViky> Pulling repository fedora
'Pulling' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DharaniViky> ad57ef8d78d7: Download complete
'ad57ef8d78d7:' is not recognized as an internal or external command,
```

## 2.Create a dockerfile for the job portal / flask application and deploy it in Docker desktop application.

Docker Desktop

Upgrade plan

Sign in

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Images on disk

Last refresh: Never5 images

Clean up

Images

Give feedback

LOCAL

REMOTE REPOSITORIES

Search

In use only

NAME	TAG	IMAGE ID	CREATED	SIZE
<none>	<none>	ebed074801f8	8 days ago	313.62 MB
alpine	latest	9c6f07244728	3 months ago	5.54 MB
dharanisriiii/flask_with_form_and_d...	latest	c791640c7657	8 days ago	932.41 MB
docker/getting-started	latest	cb90f98fd791	7 months ago	28.78 MB
flask_with_form_and_docker-main	latest	c791640c7657	8 days ago	932.41 MB

Connect to Remote Content

Not connected

Store and backup your images remotely

Collaborate with your team

Unlock vulnerability scanning for greater security

Connect for free

Sign in

RAM 1.32GB

CPU 0.41%

Not connected to Hub

v4.13.0

### 3. Create an IBM container registry and push a docker image of a flask application or job portal app.

IBM Cloud

Search resources and products...

Buckets

Buckets serve as containers for objects, and can be individually configured in terms of their location, resiliency, billing rates, security, and object lifecycle rules.

Create bucket +

Name	Public access ⓘ	Location ⓘ	Storage class	Created
imagebkt	Yes	jp-tok	Smart Tier	2022-10-11 1:13 PM
test0bkt	Yes	jp-tok	Smart Tier	2022-10-11 2:33 PM

### 4. Create a Kubernetes cluster in IBM cloud and deploy flask application image or job portal image and also expose the same app to run in nodeport

#### 2. Change directory to Lab 1:

```
cd "Lab 1"
```

#### 3. Log in to the IBM Cloud CLI:

```
ibmcloud login
```

To specify an IBM Cloud region, include the API endpoint.

4. In order to upload images to the IBM Cloud Container Registry, you first need to create a namespace with the following command:

```
ibmcloud cr namespace-add <my_namespace>
```

5. Build the container image with a `1` tag and push the image to the IBM Cloud

Registry: `ibmcloud cr build --tag us.icr.io/<my_namespace>/hello-world:1 .`

6. Verify the image is built:

```
ibmcloud cr images
```