

## Assignment - 4

Assignment Date	9 November 2022
Student Name	Nandita.B
Student Roll Number	311419104060
Maximum Marks	2 Marks

Question 1:

Pull an image from docker hub and run it in docker playground.

03:57:32

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8  
node1

cddvksm0\_cddvkvm0qau000a07j5g

IP  
192.168.0.8

OPEN PORT

Memory  
1.24% (49.52MiB / 3.906GiB)

CPU  
0.31%

SSH  
ssh ip172-18-0-22-cddvksm0qau000a07j50@direct.labs.pla

DELETE

EDITOR

```
#####
# WARNING!!!!
# This is a sandbox environment. Using personal credentials
# is HIGHLY discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The PMO team.
#####
[node1] (local) root@192.168.0.8 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
[node1] (local) root@192.168.0.8 ~
$ docker run hello-world
```

Activate Windows  
Go to Settings to activate Windows.

03:57:05

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8  
node1

cddvksm0\_cddvkvm0qau000a07j5g

IP  
192.168.0.8

OPEN PORT

Memory  
1.26% (50.45MiB / 3.906GiB)

CPU  
0.39%

SSH  
ssh ip172-18-0-22-cddvksm0qau000a07j50@direct.labs.pla

DELETE

EDITOR

```
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

[node1] (local) root@192.168.0.8 ~
$
```

Activate Windows  
Go to Settings to activate Windows.

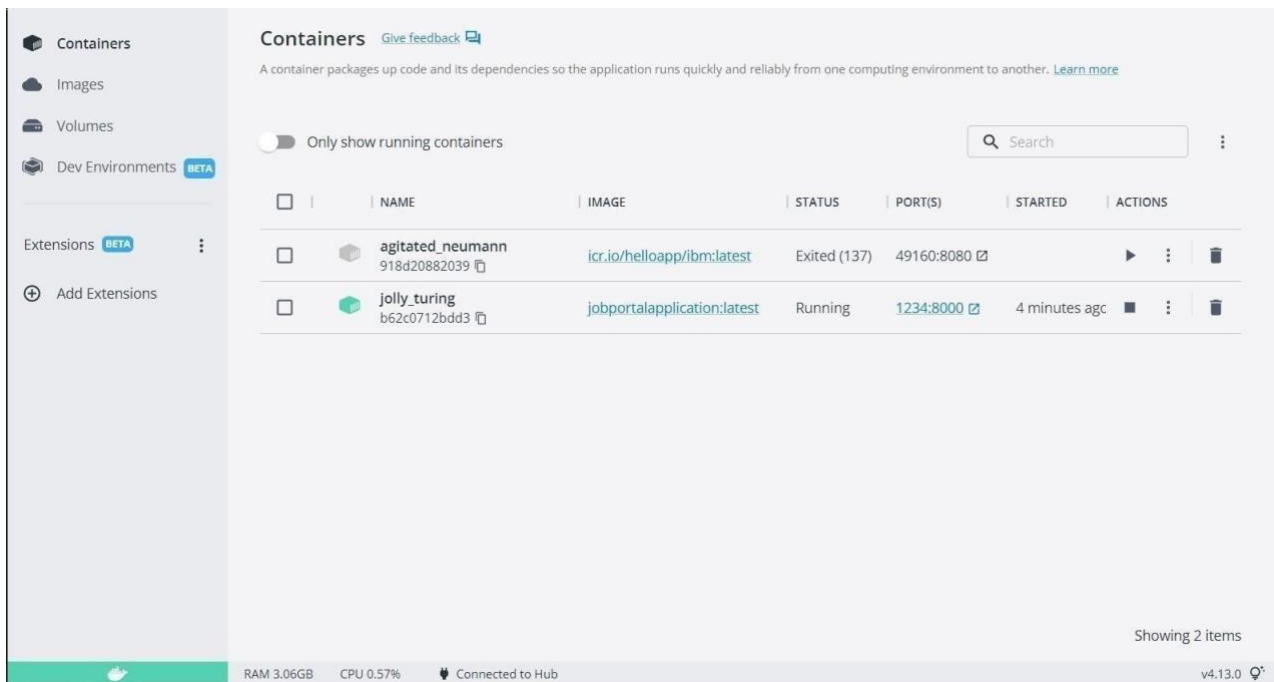
## Question 2:

Create a docker file for the job portal application and deploy it in Docker desktop application.

### DOCKER FILE:

```
1 FROM python:3.8-buster
2
3 WORKDIR /app
4
5 COPY requirements.txt /app/
6
7 RUN pip install -r requirements.txt
8
9 COPY . /app/
10
11 RUN cp .env.dev.sample .env
12
13 EXPOSE 8000
14
15 RUN chmod +x entrypoint.sh
16
17 CMD ["sh", "entrypoint.sh"]
```

### DEPLOYMENT OF JOBPORTAL APPLICATION:

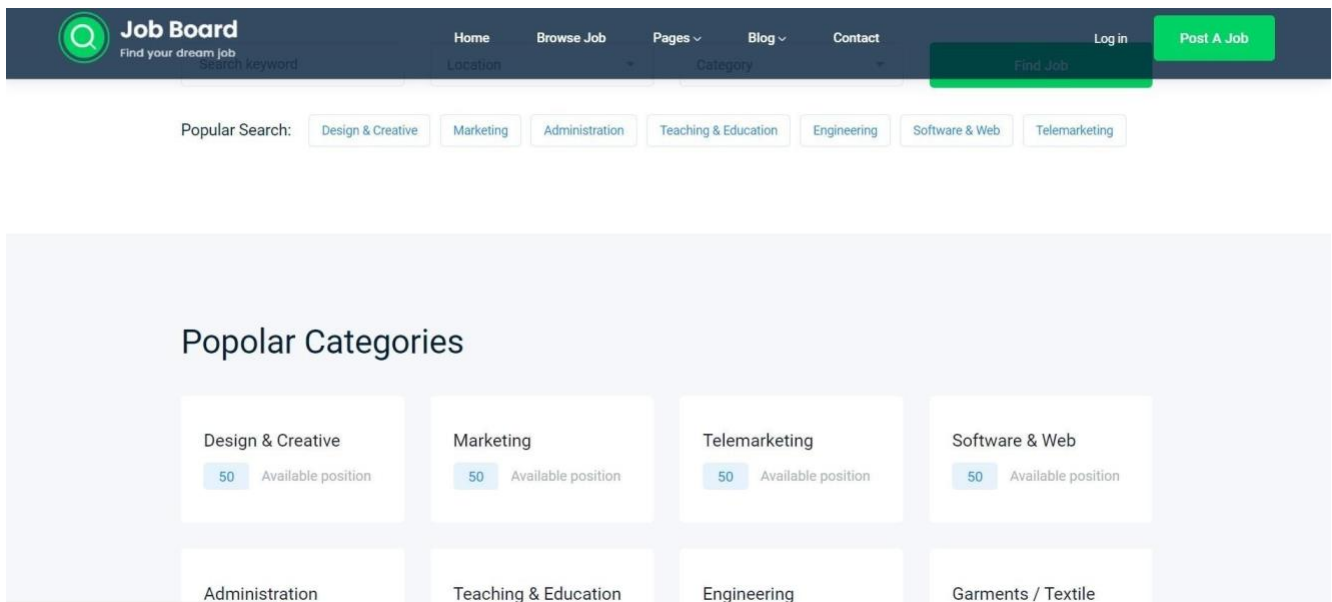


The screenshot displays the Docker Desktop interface. On the left sidebar, the 'Containers' tab is selected. The main panel shows a list of containers with the following details:

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	agitated_neumann 918d20882039	icr.io/helloapp/ibm:latest	Exited (137)	49160:8080		▶ ⋮ 🗑
<input type="checkbox"/>	jolly_turing b62c0712bdd3	jobportalapplication:latest	Running	1234:8000	4 minutes ago	■ ⋮ 🗑

At the bottom of the interface, system statistics are shown: RAM 3.06GB, CPU 0.57%, and a connection status 'Connected to Hub'. The version 'v4.13.0' is also displayed in the bottom right corner.

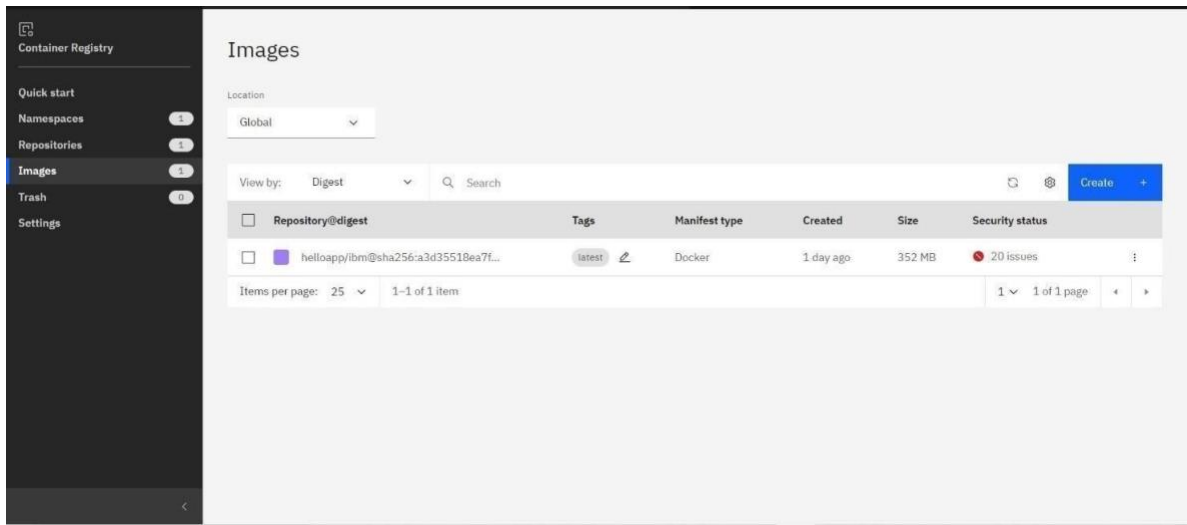
OUTPUT:



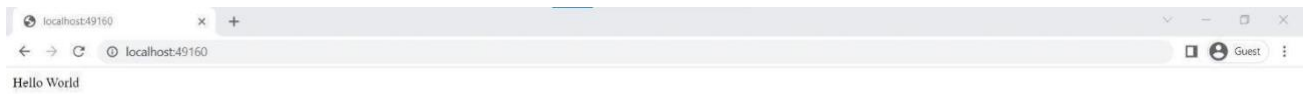
Question 3:

Create a IBM container registry and deploy hello-world app or job port app.IBM CONTAINER

REGISTRY DEPLOYMENT:



OUTPUT:



#### 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 node port.

Creating Kubernetes cluster in IBM cloud and exposing node port:

A screenshot of the IBM Cloud Kubernetes Dashboard. The cluster is named 'mycluster-free' and is in a 'Normal' state, with a note that it 'Expires in 29 days'. The 'Worker nodes' tab is selected, showing a single node with the name '00000008c'. The node's status is 'Normal', and it belongs to the 'default' worker pool in the 'Milan 01' zone. The node's private IP is '10.144.187.51' and its public IP is '159.122.179.68'. The node is running version '1.23.12\_1549'. The dashboard includes a sidebar with 'Overview', 'Worker nodes', 'Worker pools', and 'DevOps' (marked as 'New'). The top right has links for 'Help', 'Kubernetes dashboard', and 'Actions...'. The bottom of the table shows 'Items per page: 25' and '1-1 of 1 item'.

OUTPUT:

