

# Assignment 4

## 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\_cddvkm0qau000a07j5g

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 PwD team.                                         #
#####
[node1] (local) root@192.168.0.8 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29718123e: Pull complete
Digest: sha256:e18f8a777aefabe947a671ab3ec3eed85414477c951ab1a6f352a06974245fe7
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\_cddvkm0qau000a07j5g

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

```
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:

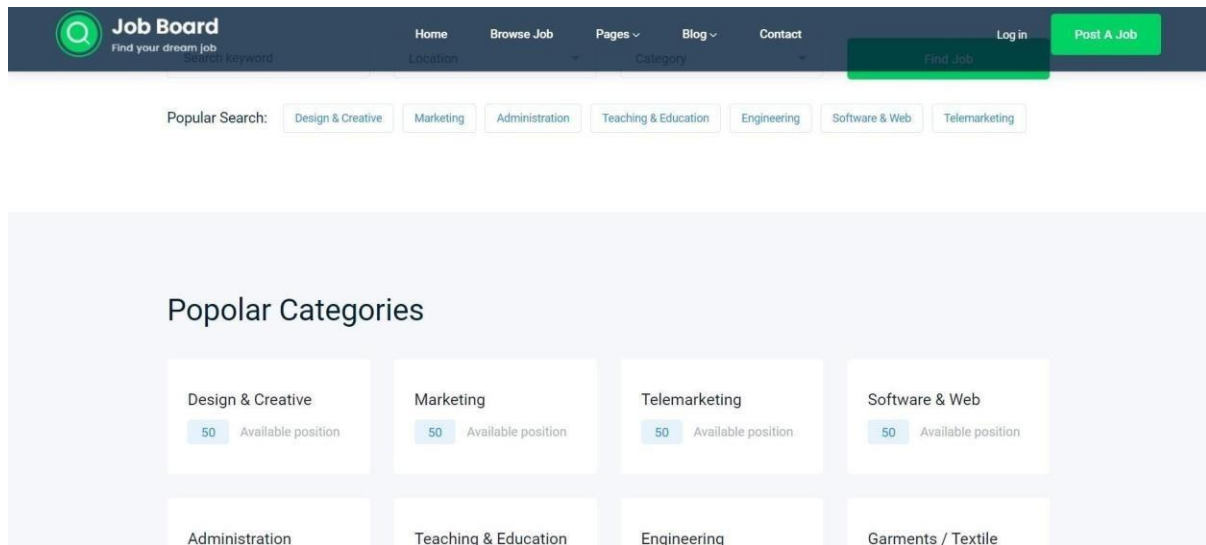
The screenshot shows the Docker Desktop 'Containers' tab. On the left sidebar, there are links for Containers, Images, Volumes, Dev Environments (marked BETA), Extensions (marked BETA), and Add Extensions. The main area shows a table of containers with columns for NAME, IMAGE, STATUS, PORT(S), STARTED, and ACTIONS. A toggle switch for 'Only show running containers' is present. The table lists two containers: 'agitated\_neumann' (exited) and 'jolly\_turing' (running). The 'jolly\_turing' container is mapped to port 1234:8000 and started 4 minutes ago. The status bar at the bottom indicates RAM usage (3.06GB), CPU usage (0.57%), and connection to Docker Hub.

	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	

Showing 2 items

RAM 3.06GB CPU 0.57% Connected to Hub v4.13.0

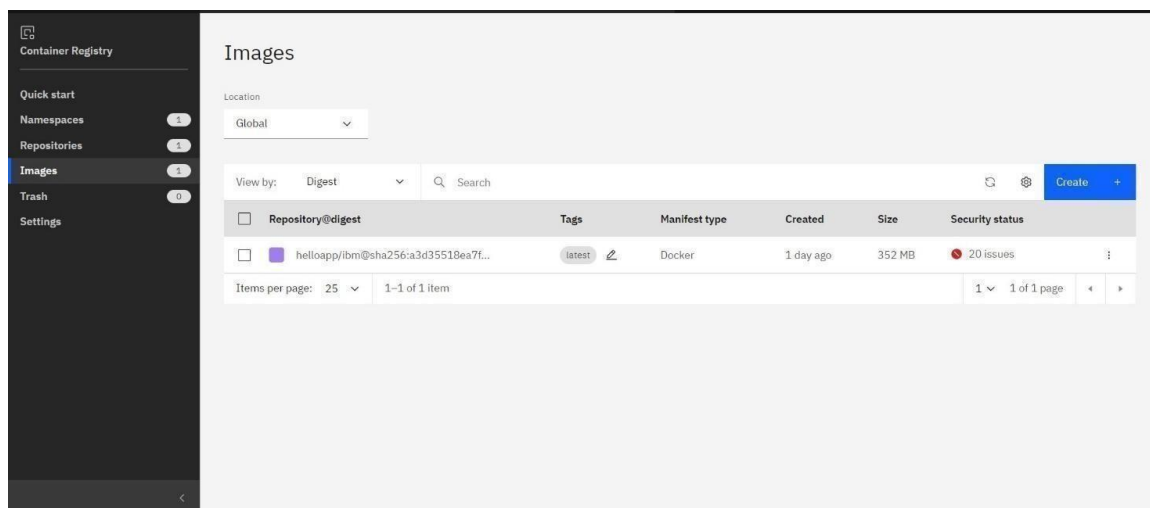
## OUTPUT:



## Question 3

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

## DEPLOYMENT:



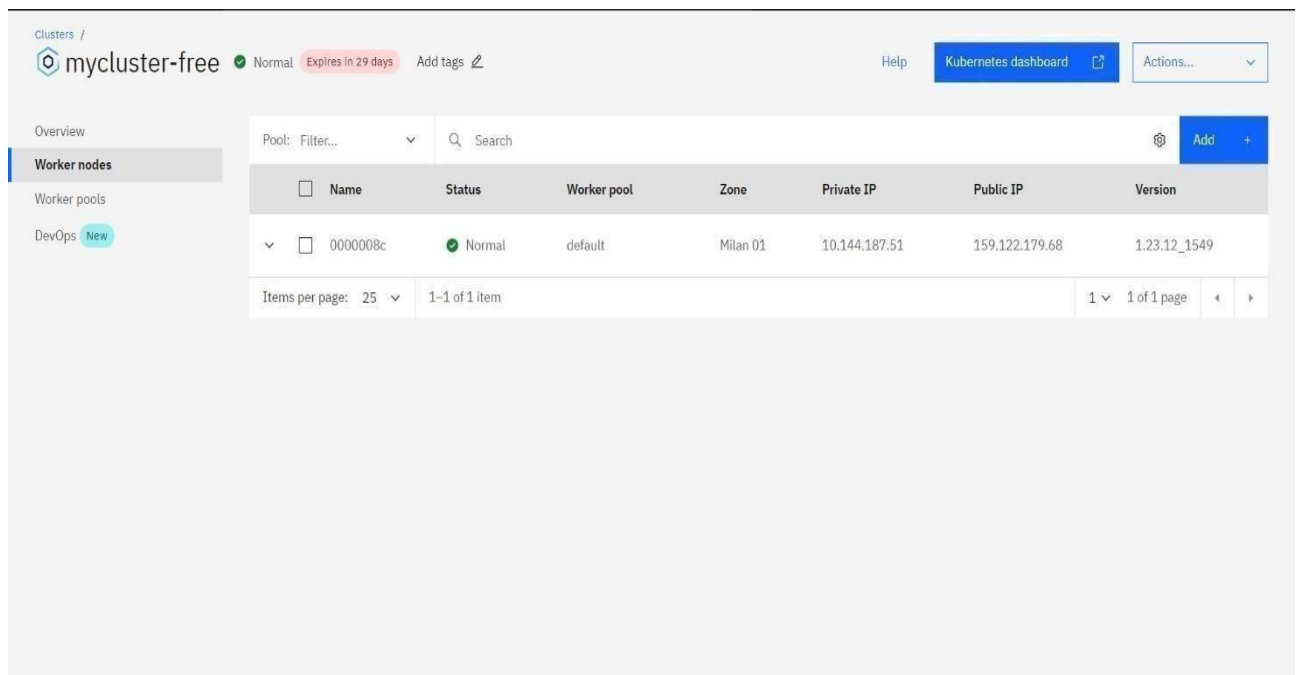
## OUTPUT:



### Question 4

Create a Kubernetes cluster in IBM cloud and deploy hello world image or job portal image and also expose the same app to run in node port.

Creating Kubernetes cluster in IBM cloud and exposing node port:



# Output

