

Assignment Date	11-11-2022
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Student Roll Number	311019205043
Maximum Marks	2 Marks
Team ID	PNT2022TMID27406

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 PwD 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:e18f0a777aefabe047a671ab3ec3eed85414477c951ab1a6f352a06974245fe7
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 jobportal application and deploy it in Docker desktop application.

DOCKERFILE:

```
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:

Containers

Images

Volumes

Dev Environments BETA

Extensions BETA

Add Extensions

Containers [Give feedback](#)

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. [Learn more](#)

☐ Only show running containers

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

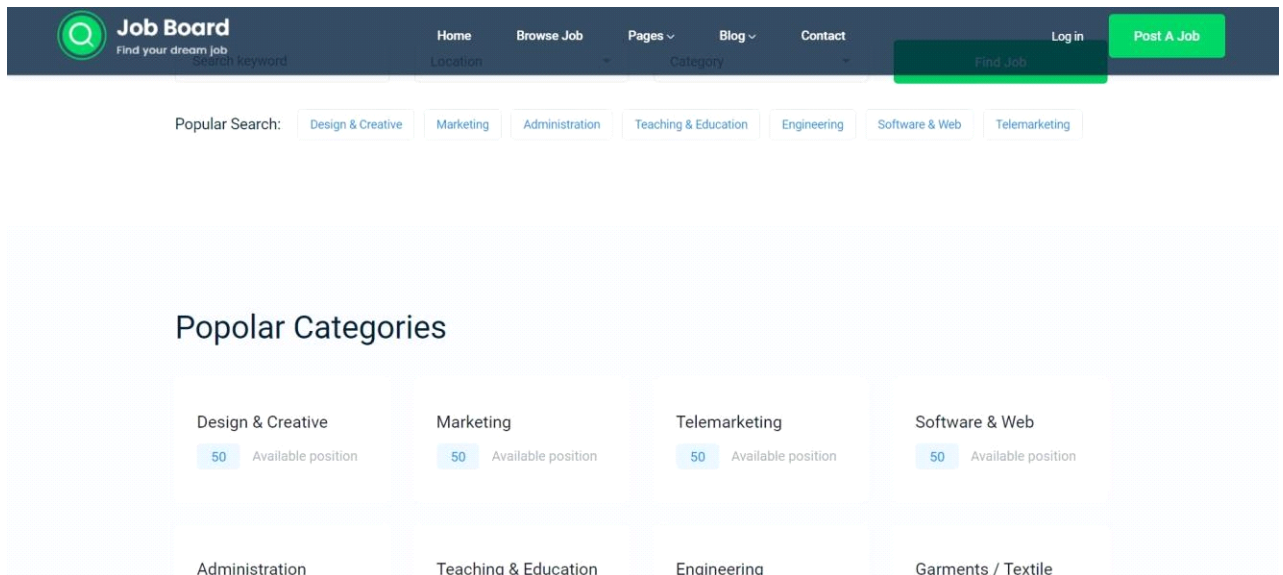
Showing 2 items

RAM 3.06GB CPU 0.57%

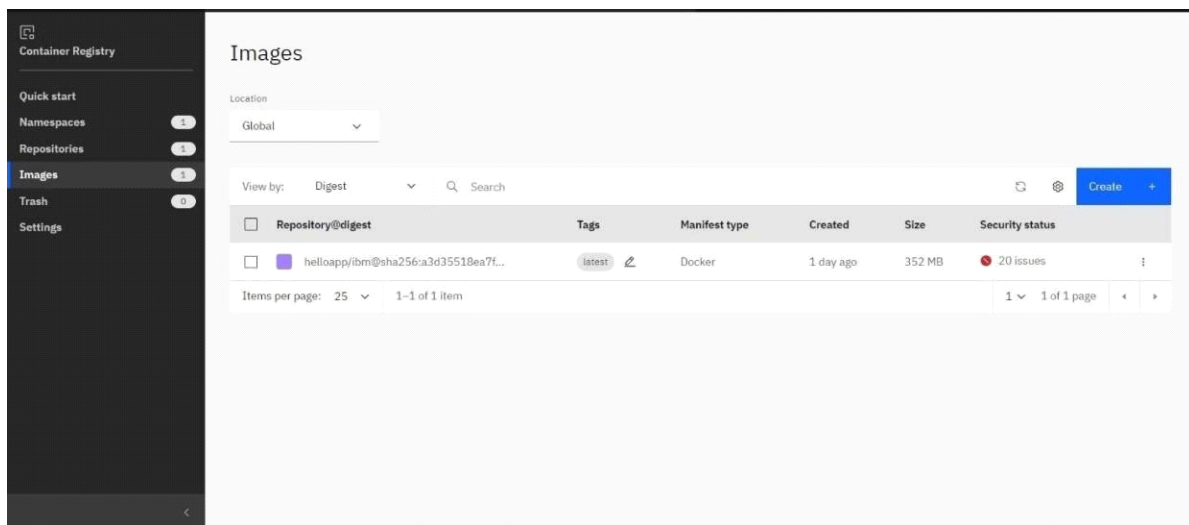
Connected to Hub

v4.13.0

OUTPUT:



Question 3:



Create a IBM container registry and deploy helloworld

app or jobportapp.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 nodeport.

### Creating kubernetes cluster in IBM cloud and exposing nodeport:

A screenshot of the IBM Cloud Kubernetes Dashboard. The top navigation bar shows 'Clusters / mycluster-free' with a status of 'Normal' and 'Expires in 29 days'. There are buttons for 'Help', 'Kubernetes dashboard', and 'Actions...'. The left sidebar has tabs for 'Overview', 'Worker nodes' (selected), 'Worker pools', and 'DevOps'. The main content area shows a table of worker nodes. The table has columns: Name, Status, Worker pool, Zone, Private IP, Public IP, and Version. There is one node listed with ID '0000008c', status 'Normal', worker pool 'default', zone 'Milan 01', private IP '10.144.187.51', public IP '159.122.179.68', and version '1.23.12\_1549'. At the bottom, it shows 'Items per page: 25' and '1-1 of 1 item'.

Output:



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50 Available position

Marketing

50 Available position

Telemarketing

50 Available position

Software & Web

50 Available position

Administration

Teaching & Education

Engineering

Garments / Textile