

## Assignment - 4

|                 |                        |
|-----------------|------------------------|
| Assignment Date | 28 October 2022        |
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| Team ID         | PNT2022TMID33768       |
| 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 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:c18f0a777acfabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
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

```

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 ~
$

```

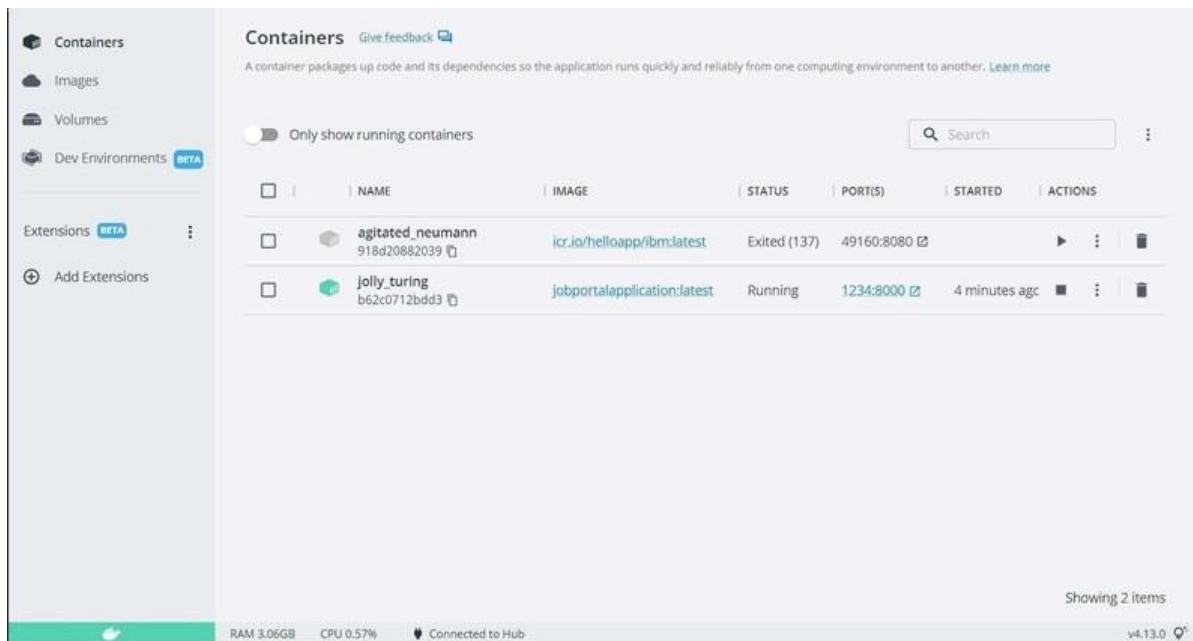
## Question 2:

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:

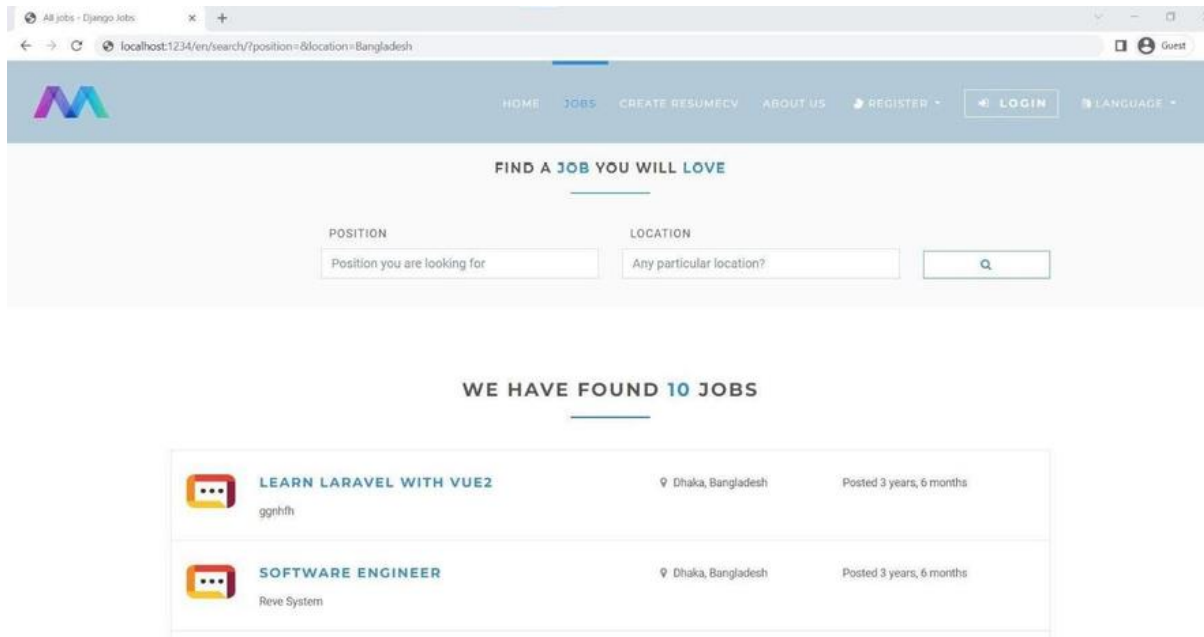


The screenshot shows the Docker Desktop interface. On the left is a sidebar with navigation options: Containers, Images, Volumes, Dev Environments (marked BETA), Extensions (marked BETA), and Add Extensions. The main panel is titled 'Containers' and includes a 'Give feedback' link. Below the title is a description: 'A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. [Learn more](#)'. There is a toggle for 'Only show running containers' and a search bar. A table lists the containers:

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

At the bottom right, it says 'Showing 2 items'. The bottom status bar shows 'RAM 3.06GB', 'CPU 0.57%', 'Connected to Hub', and 'v4.13.0'.

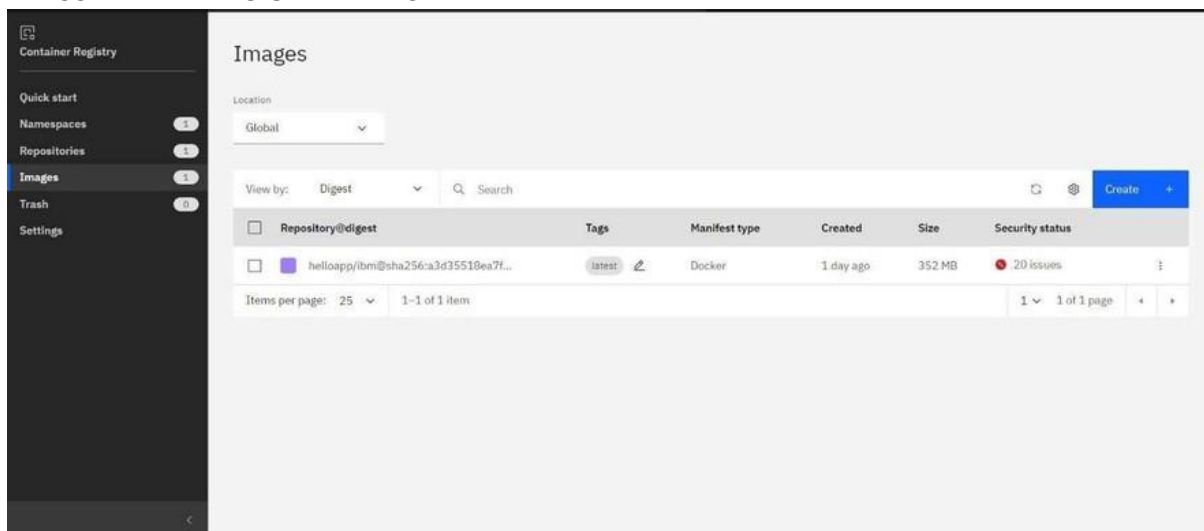
OUTPUT:



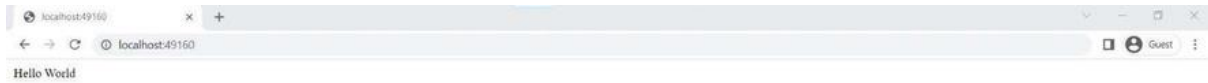
Question 3:

Create a IBM container registry and deploy helloworld app or jobportal 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 nodeport.

Creating kubernetes cluster in IBM cloud and exposing nodeport:


A screenshot of the IBM Cloud Kubernetes Service (K8S) dashboard. The page title is 'mycluster-free'. The left sidebar shows navigation options: Overview, Worker nodes (selected), Worker pools, and DevOps. The main content area displays a table of worker nodes. The table has columns: Name, Status, Worker pool, Zone, Private IP, Public IP, and Version. One node is listed with ID '0000008c', status 'Normal', and version '1.23.12\_1549'. The table includes search and filter controls at the top and pagination at the bottom.

| Name     | Status | Worker pool | Zone     | Private IP    | Public IP      | Version      |
|----------|--------|-------------|----------|---------------|----------------|--------------|
| 0000008c | Normal | default     | Milan 01 | 10.144.187.51 | 159.122.179.68 | 1.23.12_1549 |

Output:

## CHOOSE A TEMPLATE FOR YOUR RESUME/CV


**ALL TEMPLATES** **RESUMES** **CV**



**FREE**

Resume 1


**BUILDER**



**FREE**

Resume 2

**BUILDER**



**FREE**

CV

**BUILDER**