

## Assignment - 4

|                     |                 |
|---------------------|-----------------|
| Assignment Date     | 24 October 2022 |
| Student Name        | Vignesh C       |
| Student Roll Number | 111519205056    |
| Maximum Marks       | 2 Marks         |

### Question 1:

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

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:57:41, a 'CLOSE SESSION' button, and a list of instances. The main area displays the instance 'cdu4frf9\_cdu4ftf91rrg008mmmc0' with its IP address 192.168.0.18 and an SSH command. Below this, there's a terminal window showing the following commands and output:

```
WARNING!!!!
This is a sandbox environment. Using personal credentials
is HIGHLY discouraged. Any consequences of doing so are
completely the user's responsibilities.

The FWD team.

(node1) (local) root@192.168.0.18 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:faa03e786c97f07ef34423fcccceec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
(node1) (local) root@192.168.0.18 ~
$ docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.
```

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:57:23, a 'CLOSE SESSION' button, and a list of instances. The main area displays the instance 'cdu4frf9\_cdu4ftf91rrg008mmmc0' with its IP address 192.168.0.18 and an SSH command. Below this, there's a terminal window showing the following commands and output:

```
The FWD team.

(node1) (local) root@192.168.0.18 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
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Digest: sha256:faa03e786c97f07ef34423fcccceec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
(node1) (local) root@192.168.0.18 ~
$ docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
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@192.168.0.18 ~
```

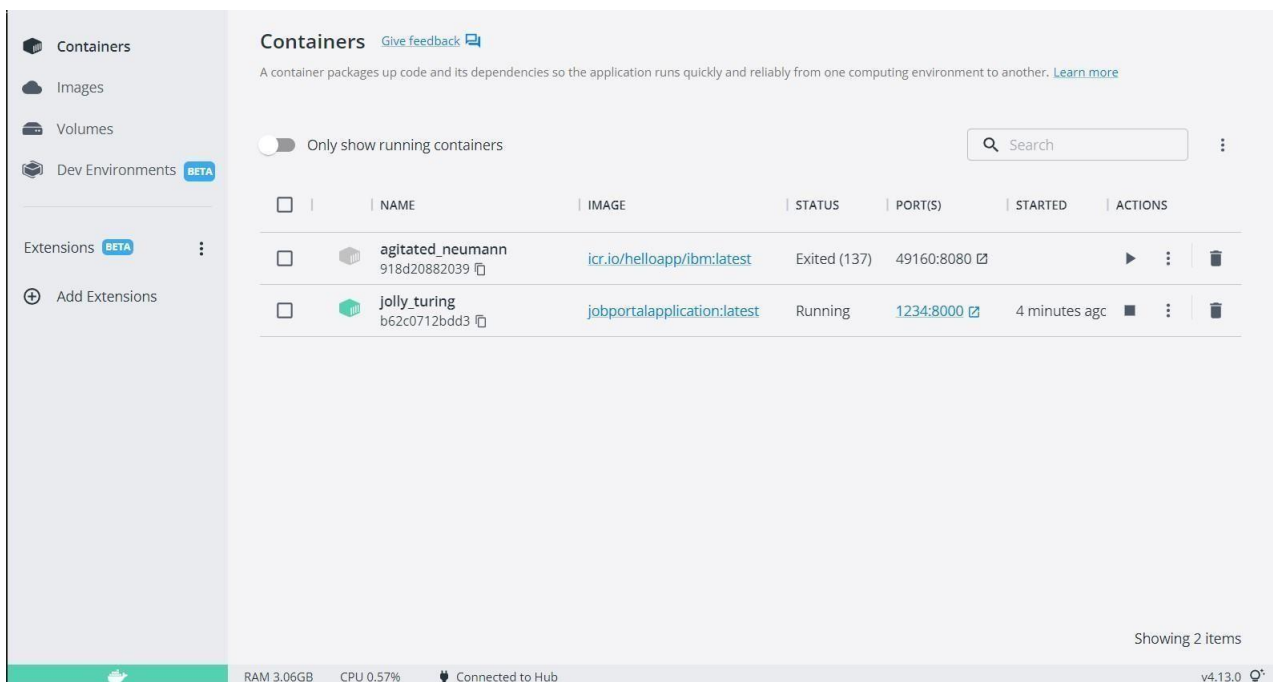
## Question 2:

Create a docker file for the job portal 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:

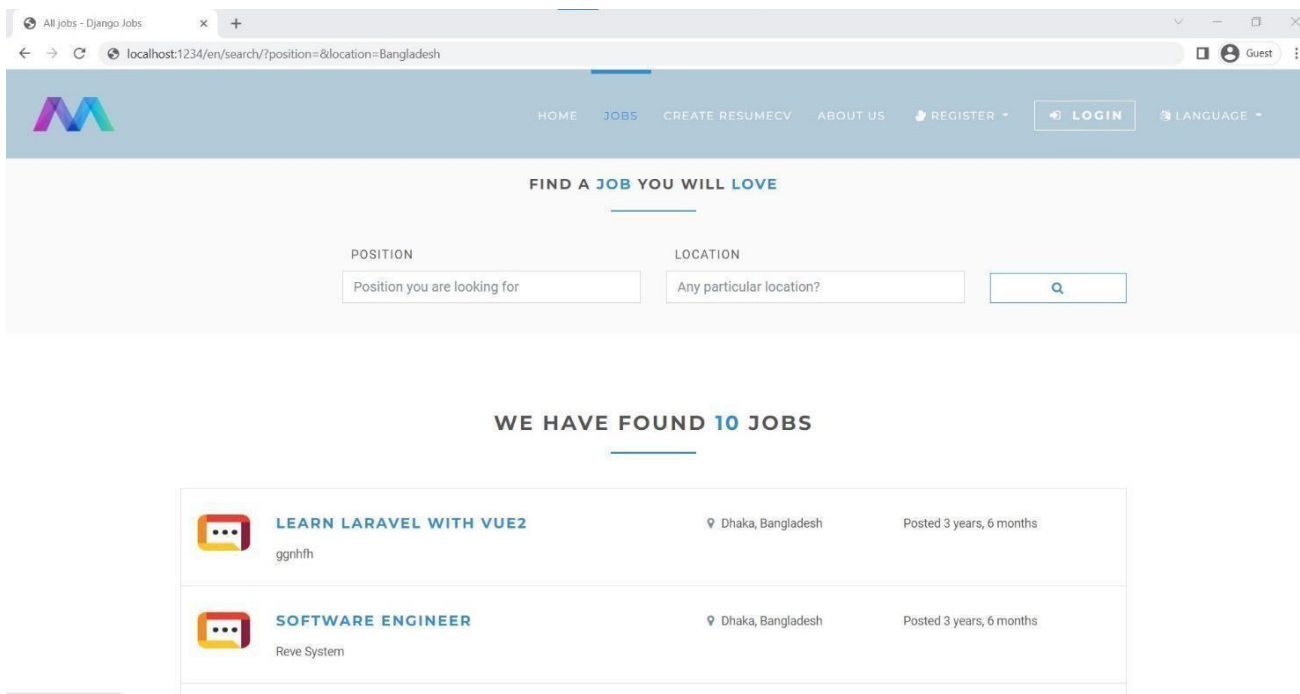


The screenshot shows the Docker Desktop interface. On the left is a sidebar with navigation options: Containers, Images, Volumes, Dev Environments (marked BETA), Extensions (marked BETA), and Add Extensions. The main area is titled 'Containers' and includes a toggle for 'Only show running containers' and a search bar. Below this is a table of containers:

|                          | NAME                             | IMAGE                       | STATUS       | PORT(S)    | STARTED       | ACTIONS |
|--------------------------|----------------------------------|-----------------------------|--------------|------------|---------------|---------|
| <input type="checkbox"/> | agitated_neumann<br>918d20882039 | icr.io/helloapp/ibm: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'.

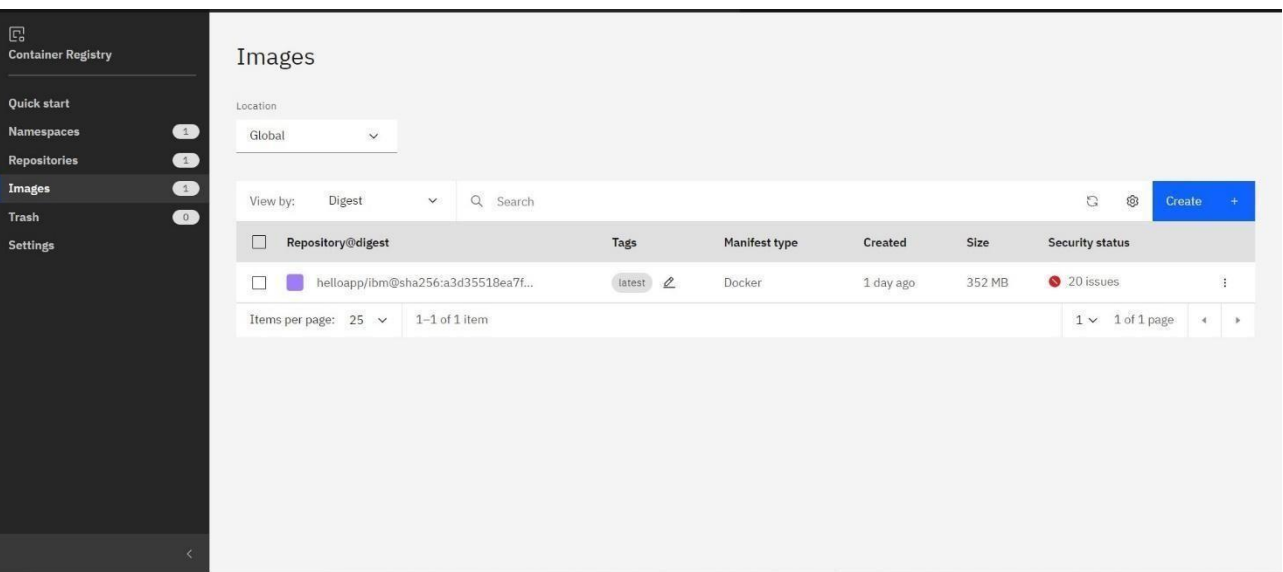
OUTPUT:



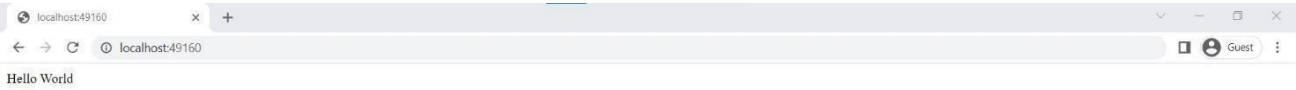
Question 3:

Create an IBM container registry and deploy hello world app or job portal app.

IBM CONTAINER REGISTRY DEPLOYMENT:



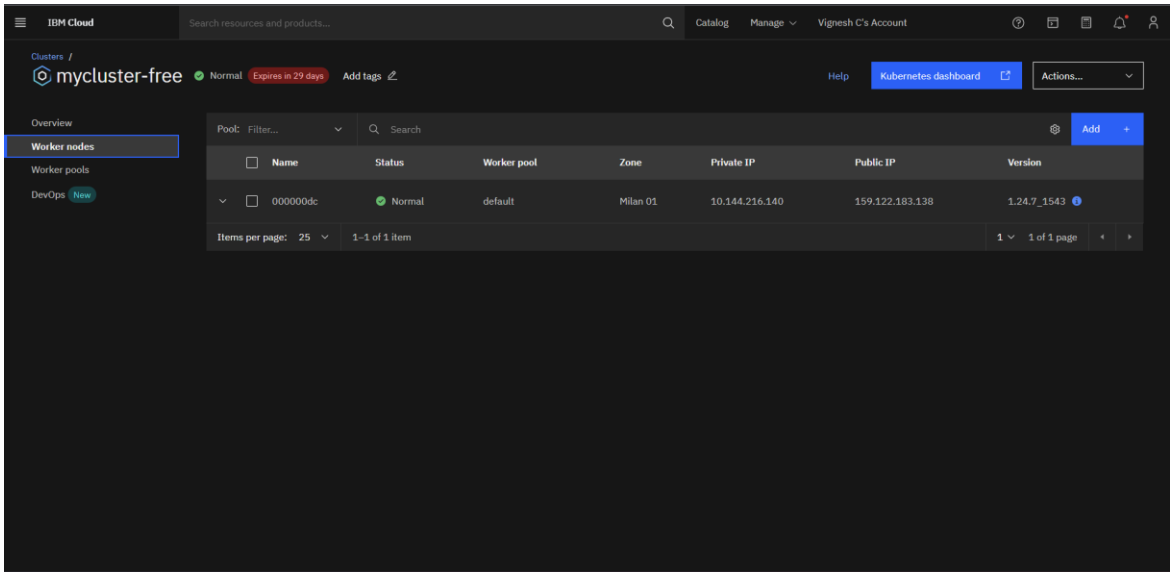
OUTPUT:



Question 4:

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

Creating Kubernetes cluster in IBM cloud and exposing node port:



OUTPUT:

