

## Assignment - 4

Assignment Date	24 October 2022
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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 timer at 03:57:39, a 'CLOSE SESSION' button, and an 'Instances' section with a '+ ADD NEW INSTANCE' button and a list of instances including '192.168.0.28 node1'. The main area displays the session title 'cdu5fae3\_cdu5fcu3tccg00cckckg' and the IP '192.168.0.28' with an 'OPEN PORT' button. Below this, there are sections for 'Memory', 'CPU', and 'SSH'. The SSH section shows the command 'ssh ip172-18-0-8-cdu5fae3tccg00cckckg@direct.labs.play-w'. There are 'DELETE' and 'EDITOR' buttons. The terminal output shows a warning message, the command 'docker pull hello-world', the output of the pull command, and the command 'docker run hello-world', followed by the 'Hello from Docker!' message.

```
#####  
# 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@192.168.0.28 ~  
$ docker pull hello-world  
Using default tag: latest  
latest: Pulling from library/hello-world  
2db29710123e: Pull complete  
Digest: sha256:faa03e786c97f07ef34423fccceec239ec8a5759259f94d99078f264e9d7af  
Status: Downloaded newer image for hello-world:latest  
docker.io/library/hello-world:latest  
[node1] (local) root@192.168.0.28 ~  
$ 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:
```

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a timer at 03:57:13, a 'CLOSE SESSION' button, and an 'Instances' section with a '+ ADD NEW INSTANCE' button and a list of instances including '192.168.0.28 node1'. The main area displays the session title 'cdu5fae3\_cdu5fcu3tccg00cckckg' and the IP '192.168.0.28' with an 'OPEN PORT' button. Below this, there are sections for 'Memory', 'CPU', and 'SSH'. The SSH section shows the command 'ssh ip172-18-0-8-cdu5fae3tccg00cckckg@direct.labs.play-w'. There are 'DELETE' and 'EDITOR' buttons. The terminal output shows the 'Hello from Docker!' message, a list of steps to generate the message, and a suggestion to try running an Ubuntu container.

```
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@192.168.0.28 ~  
$
```

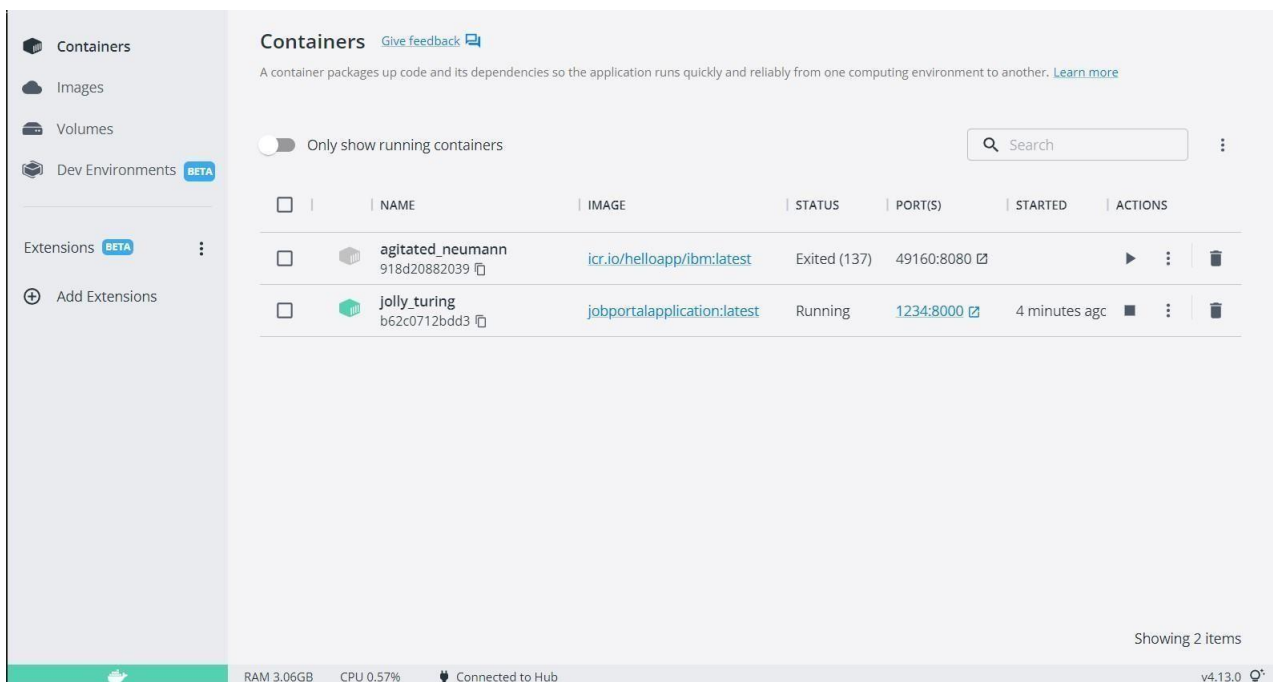
## Question 2:

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:

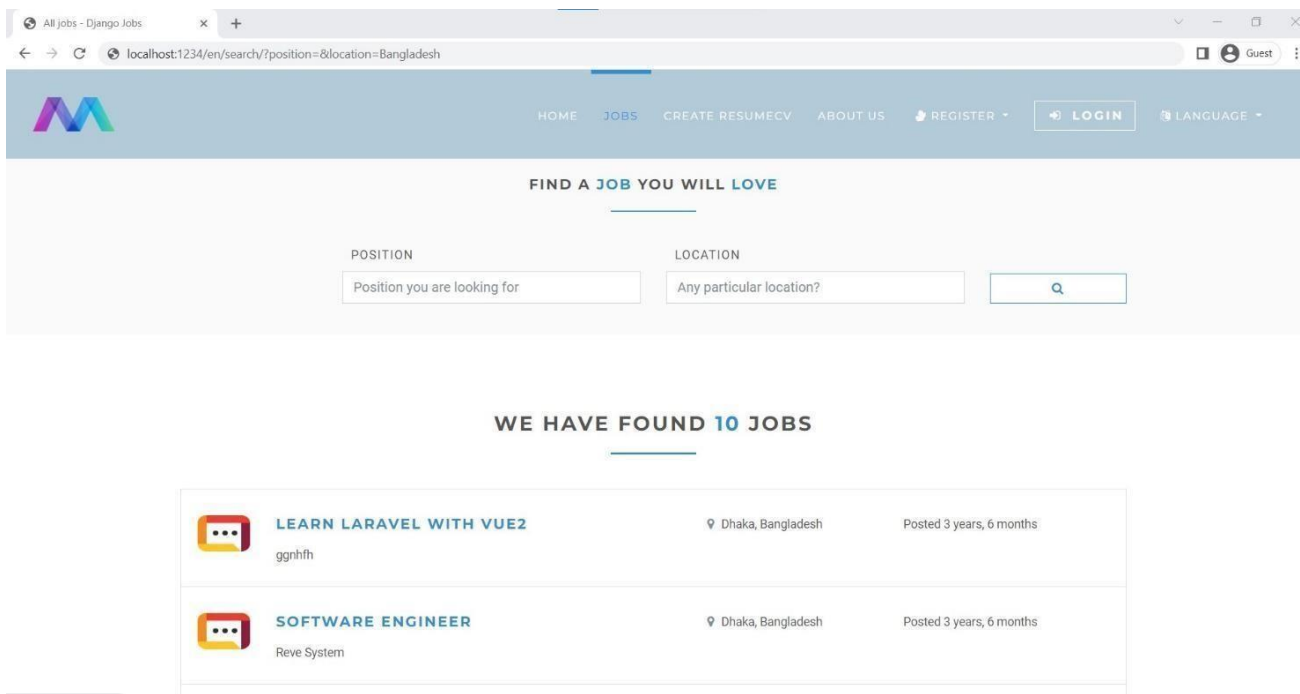


The screenshot shows the Docker Desktop interface. On the left is a sidebar with navigation options: Containers, Images, Volumes, Dev Environments (marked BETA), Extensions (marked BETA), and Add Extensions. The main area is titled 'Containers' and includes a toggle for 'Only show running containers'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

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

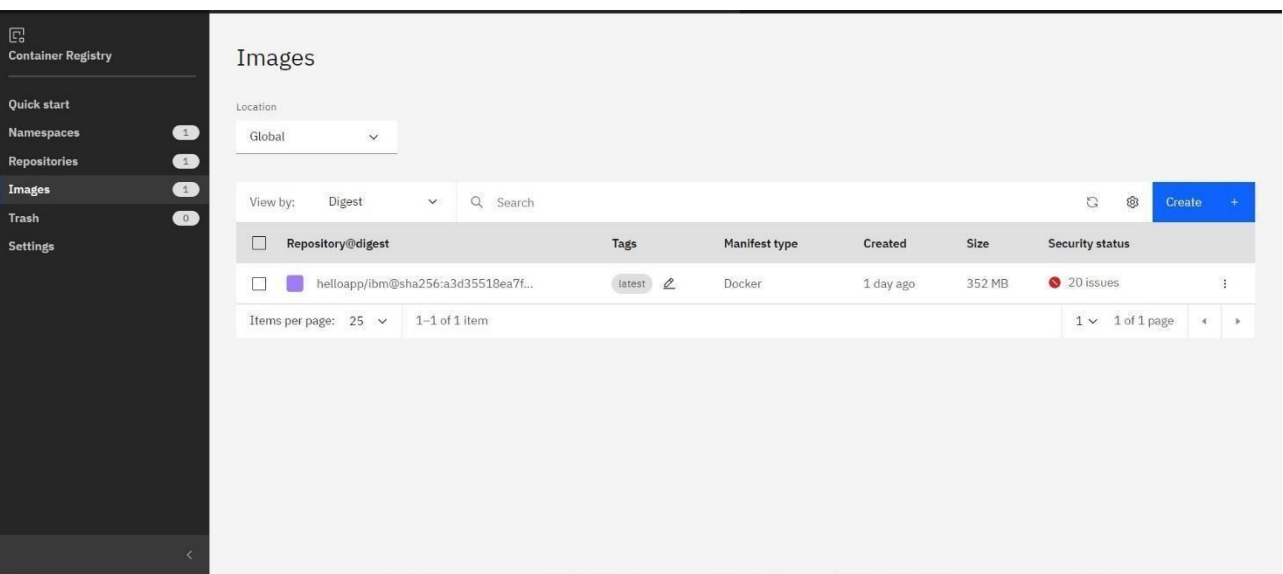
OUTPUT:



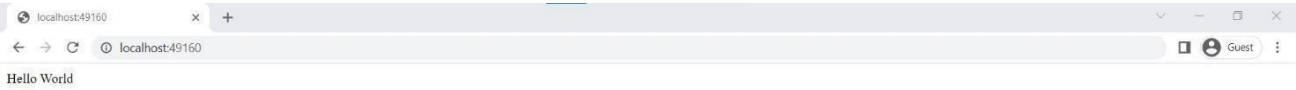
Question 3:

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

IBM CONTAINER REGISTRY DEPLOYMENT:



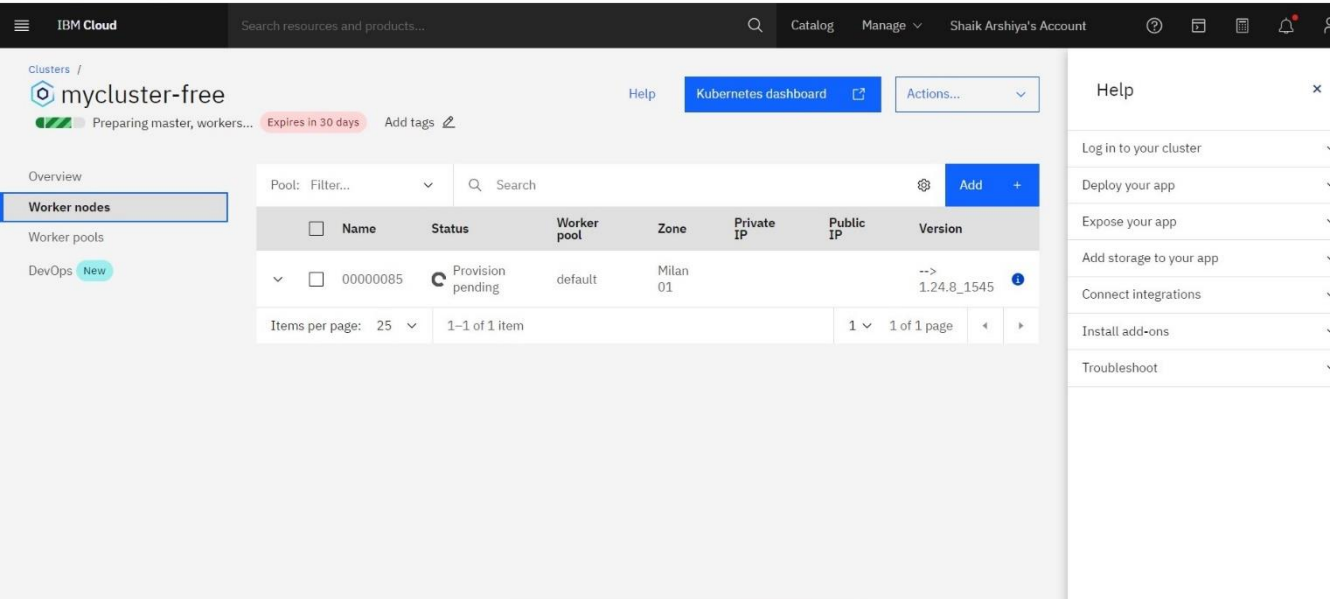
OUTPUT:



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:

