

# **ASSIGNMENT 4**

**Team Batch No: 1A3E**

**Team Members:**

**Soundarya. T**

**Akshaya. S**

**Kanagavalli. B**

**Madhumitha. S**

**Reshma. E**

## 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:e18f0a77aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7  
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

<input type="checkbox"/>	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		<span>▶</span> <span>⋮</span> <span>🗑️</span>
<input type="checkbox"/>	<div>jolly_turing</div> <div>b62c0712bdd3</div>	<a href="#">jobportalapplication:latest</a>	Running	1234:8000	4 minutes ago	<span>■</span> <span>⋮</span> <span>🗑️</span>

Showing 2 items

RAM 3.06GB CPU 0.57% Connected to Hub

v4.13.0

## OUTPUT:

Find Jobs

Web Developer  
Web Developer at Motive Company.  
[Apply](#)

Computer & Information Research Scientist  
Computer & Information Research Scientist at GPSM company.  
[Apply](#)

Android Developer  
Android Developer at Believe Company.  
[Apply](#)

Computer & Information Systems Manager (CISM)  
Computer & Information Systems Manager (CISM) at HYT company.  
[Apply](#)

iOS Developer  
iOS Developer at Norway P&L Company.  
[Apply](#)

Computer Hardware Engineer  
Computer Hardware Engineer at 7Tech company.  
[Apply](#)

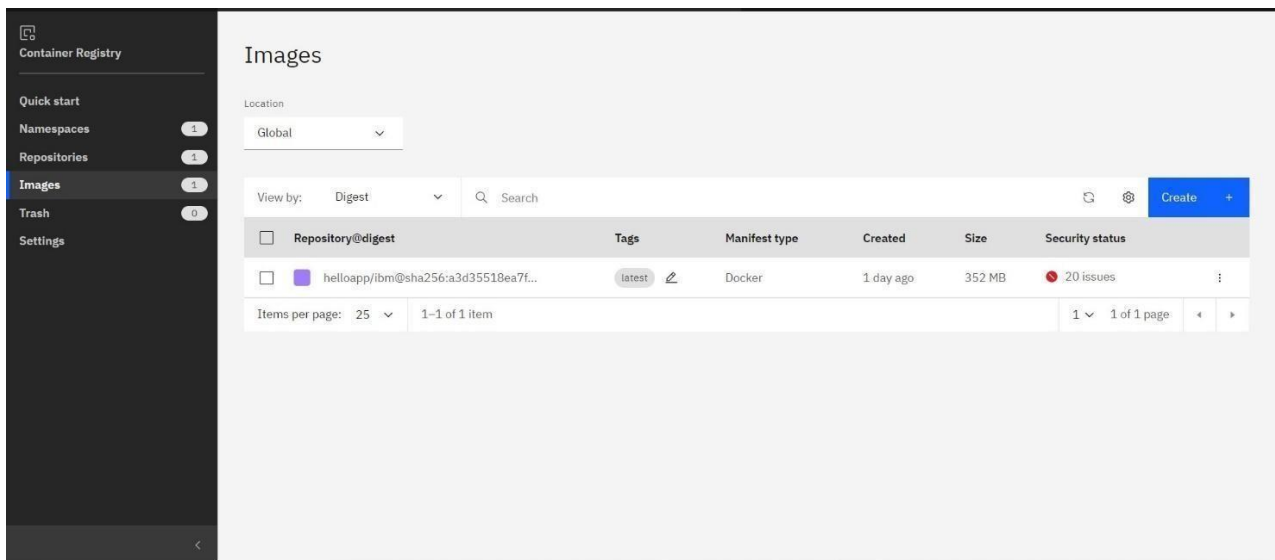
Pen Tester  
Pen Tester at AGC company.  
[Apply](#)

Big Data Engineer  
Big Data Engineer at SMGT company.  
[Apply](#)

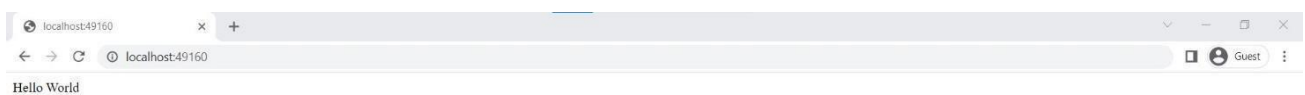
### Question 3:

Create a IBM container registry and deploy helloworld app or jobportapp.

### IBM CONTAINER REGISTRY DEPLOYMENT:



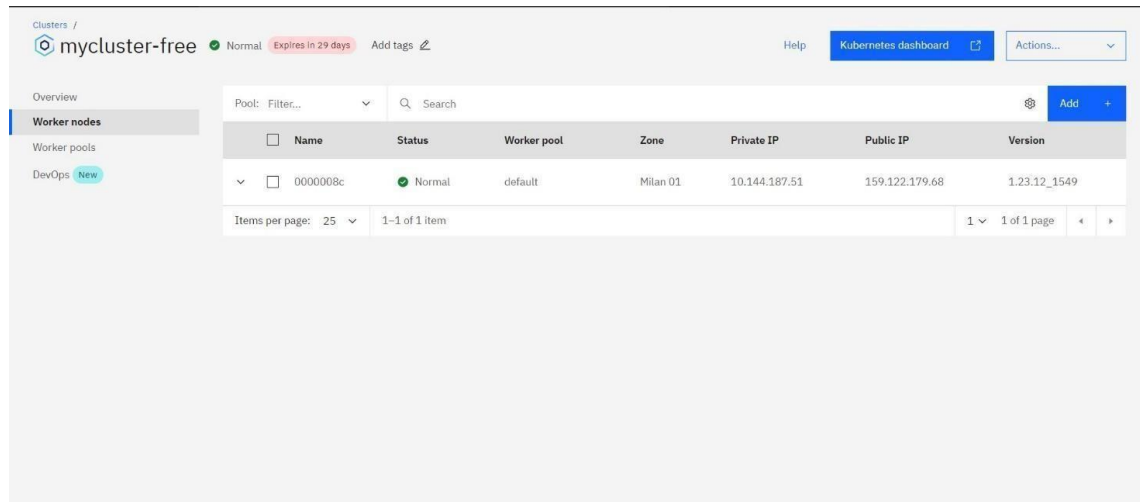
### OUTPUT:



## 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:

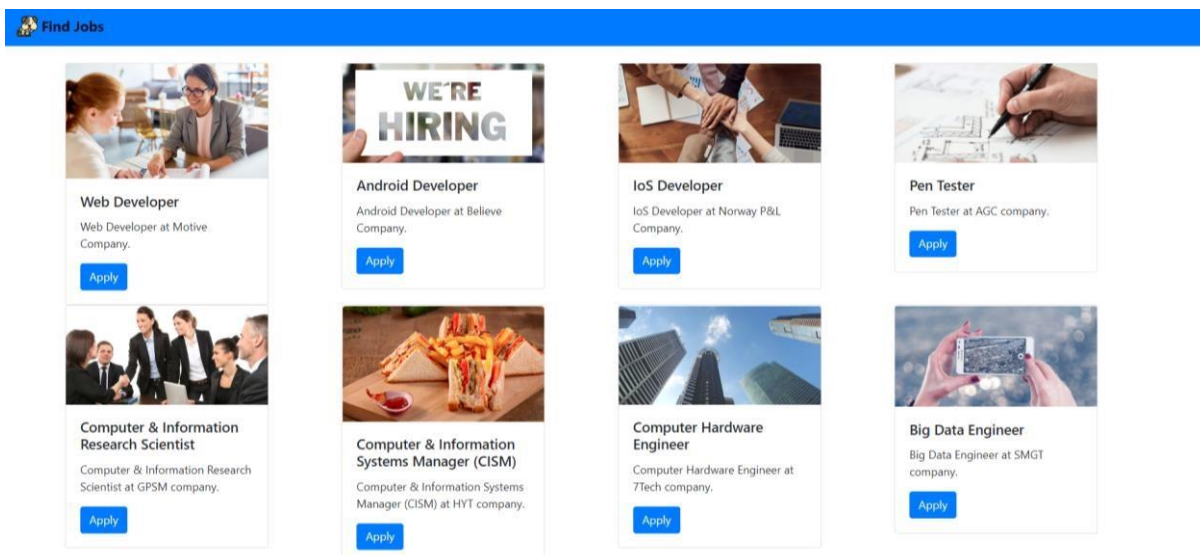


The screenshot shows the IBM Cloud Clusters dashboard for a cluster named 'mycluster-free'. The cluster is in a 'Normal' state and expires in 29 days. The 'Worker nodes' tab is selected, displaying a table with one node.

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

Items per page: 25 | 1-1 of 1 item | 1 of 1 page

## OUTPUT:



The screenshot shows a job portal interface with a blue header 'Find Jobs'. Below the header, there are eight job listings arranged in a 2x4 grid. Each listing includes a title, a brief description, and an 'Apply' button.

Job Title	Company
Web Developer	Web Developer at Motive Company.
Android Developer	Android Developer at Believe Company.
IoT Developer	IoT Developer at Norway P&L Company.
Pen Tester	Pen Tester at AGC company.
Computer & Information Research Scientist	Computer & Information Research Scientist at GPSM company.
Computer & Information Systems Manager (CISM)	Computer & Information Systems Manager (CISM) at HYT company.
Computer Hardware Engineer	Computer Hardware Engineer at 7Tech company.
Big Data Engineer	Big Data Engineer at SMGT company.