

## Assignment - 4

Assignment Date	10 November 2022
Student Name	Allen Joshy
Student Roll Number	721419104004
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:e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
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.

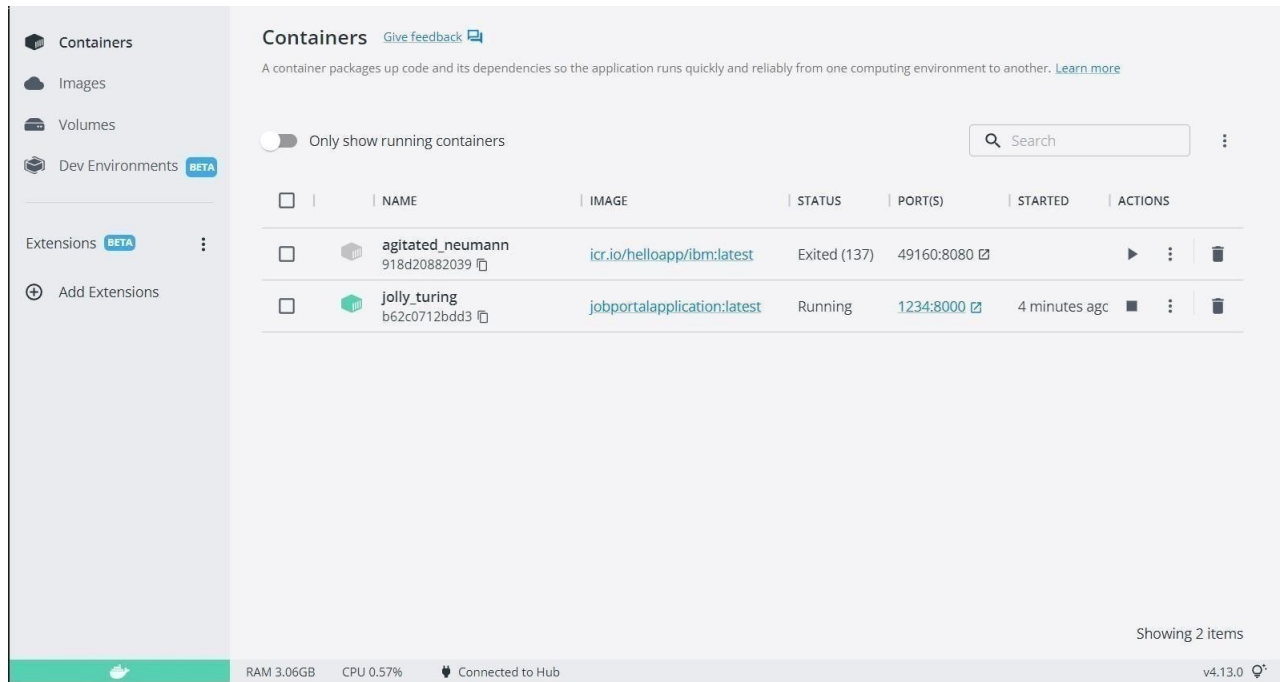
Question 2:

Create a docker file for the job portal application and deploy it in Docker desktop application.

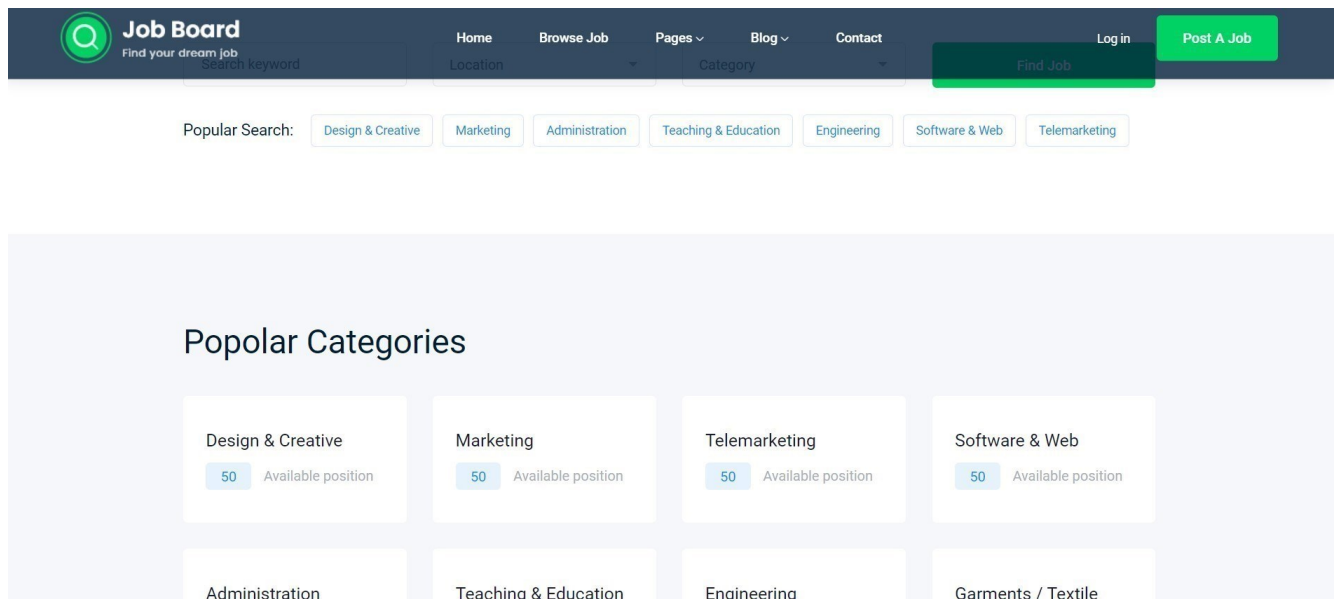
DOCKER FILE:

```
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:



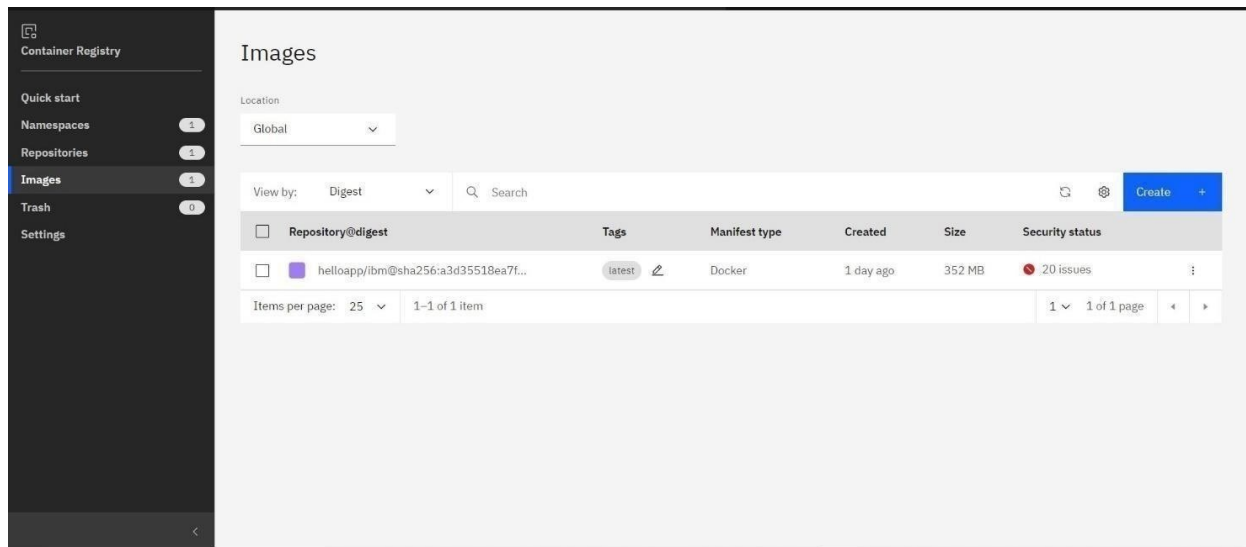
OUTPUT:



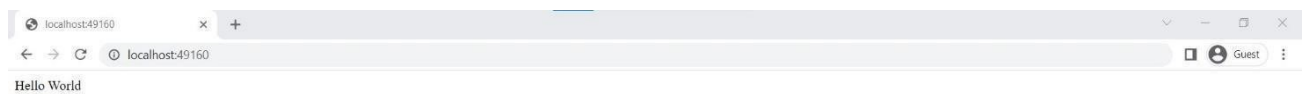
### Question 3:

Create a IBM container registry and deploy hello-world app or job port app. IBM CONTAINER

#### REGISTRY DEPLOYMENT:



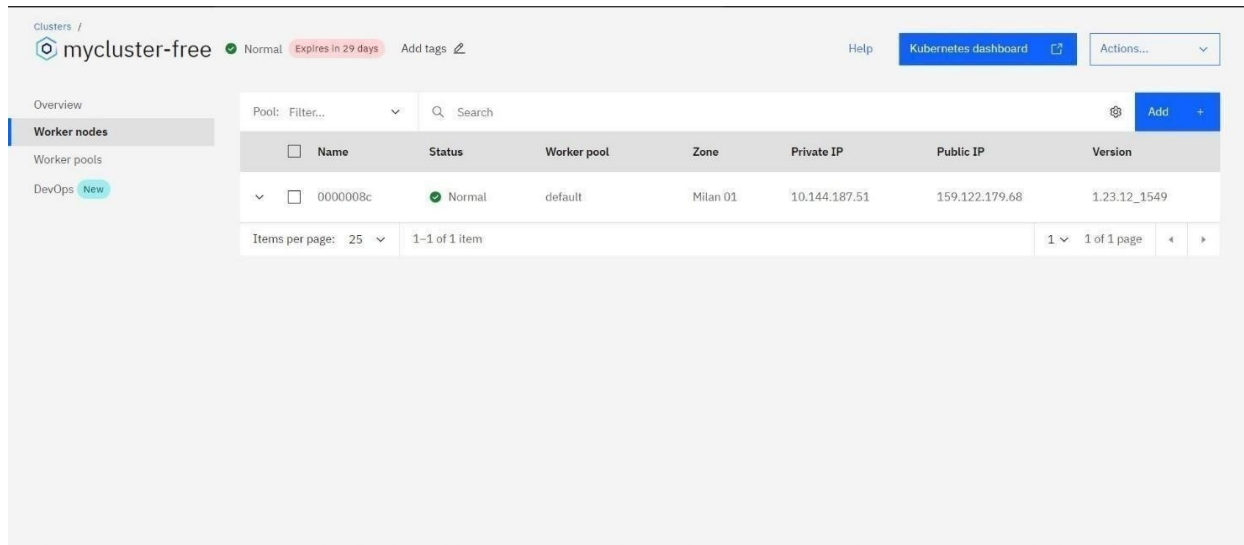
#### OUTPUT:



### Question 4:

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

Creating Kubernetes cluster in IBM cloud and exposing node port:

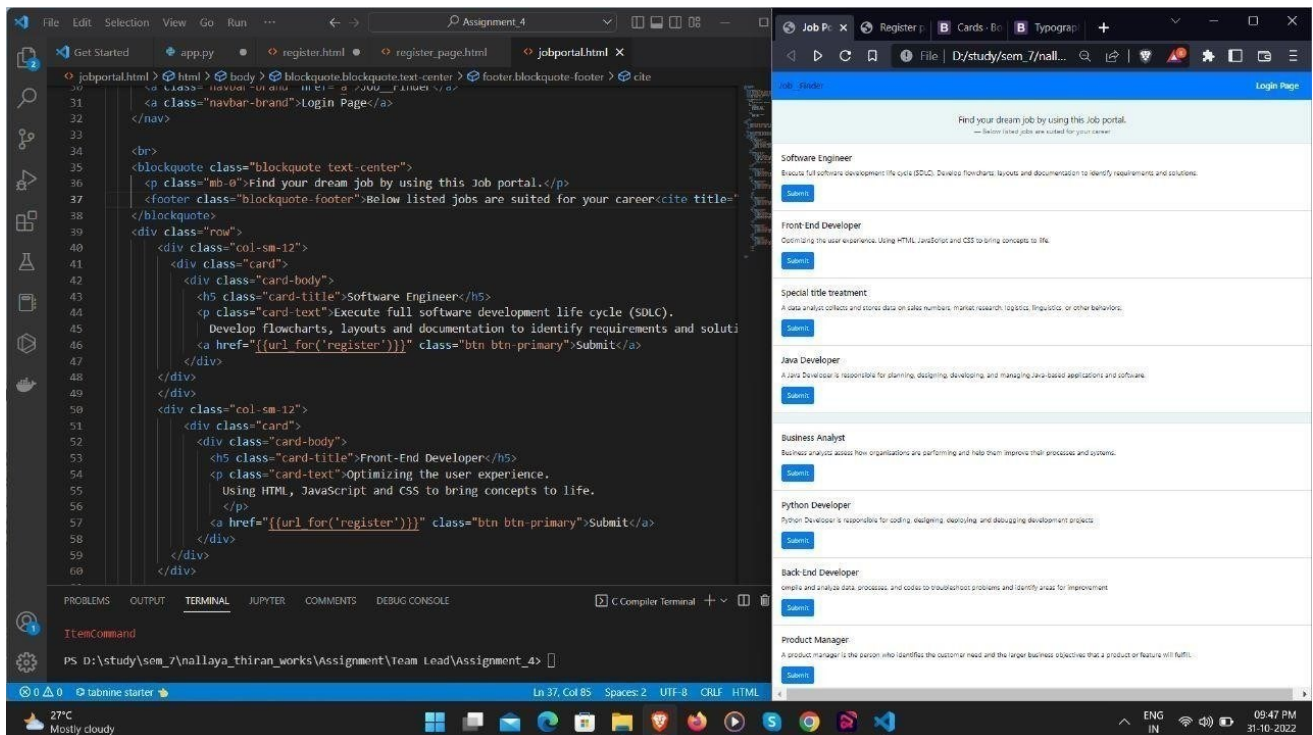


The screenshot shows the IBM Cloud Clusters console for a cluster named 'mycluster-free'. The cluster is in a 'Normal' state and expires in 29 days. The 'Worker nodes' tab is selected, showing a table with one node.

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

Output:



The screenshot shows a code editor on the left and a web browser on the right. The code editor displays the HTML code for a job portal application, including a navigation bar, a main content area with job listings, and a footer. The web browser shows the rendered output of the application, which is a job portal with a blue header, a search bar, and a list of job listings.

**Code Editor (jobportal.html):**

```
30 <a class="navbar-brand">Login Page</a>
31 </nav>
32
33
34
35 <blockquote class="blockquote text-center">
36 <p class="mb-0">Find your dream job by using this Job portal.</p>
37 <footer class="blockquote-footer">Below listed jobs are suited for your career.<cite title="
38 </blockquote>
39 <div class="row">
40 <div class="col-sm-12">
41 <div class="card">
42 <div class="card-body">
43 <h5 class="card-title">Software Engineer</h5>
44 <p class="card-text">Execute full software development life cycle (SDLC).
45 Develop flowcharts, layouts and documentation to identify requirements and soluti
46 <a href="{{url_for('register')}}" class="btn btn-primary">Submit</a>
47 </div>
48 </div>
49 </div>
50 <div class="col-sm-12">
51 <div class="card">
52 <div class="card-body">
53 <h5 class="card-title">Front-End Developer</h5>
54 <p class="card-text">Optimizing the user experience.
55 using HTML, JavaScript and CSS to bring concepts to life.
56 </p>
57 <a href="{{url_for('register')}}" class="btn btn-primary">Submit</a>
58 </div>
59 </div>
60 </div>
```

**Web Browser (Job Portal):**

Find your dream job by using this Job portal.  
— Below listed jobs are suited for your career.

- Software Engineer**  
Execute full software development life cycle (SDLC). Develop flowcharts, layouts and documentation to identify requirements and solutions.  
[Submit](#)
- Front-End Developer**  
Optimizing the user experience. Using HTML, JavaScript and CSS to bring concepts to life.  
[Submit](#)
- Special title treatment**  
A data analyst collects and stores data on sales numbers, market research, logistics, linguistics, or other behaviors.  
[Submit](#)
- Java Developer**  
A Java Developer is responsible for planning, designing, developing, and managing Java-based applications and software.  
[Submit](#)
- Business Analyst**  
Business analysts assess how organizations are performing and help them improve their processes and systems.  
[Submit](#)
- Python Developer**  
Python Developer is responsible for coding, designing, developing, and debugging development projects.  
[Submit](#)
- Back-End Developer**  
Complete and analyze data, processes, and codes to troubleshoot problems and identify areas for improvement.  
[Submit](#)
- Product Manager**  
A product manager is the person who identifies the customer need and the larger business objectives that a product or feature will fulfill.  
[Submit](#)