

## Assignment- 4

### KUBERNITES/DOCKER

Assignment Date	10 November 2022
Student Name	Mohammad Arafath M
Student Roll Number	910619104047
Maximum Marks	2 Marks

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:c18f0a777aefabc047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
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/

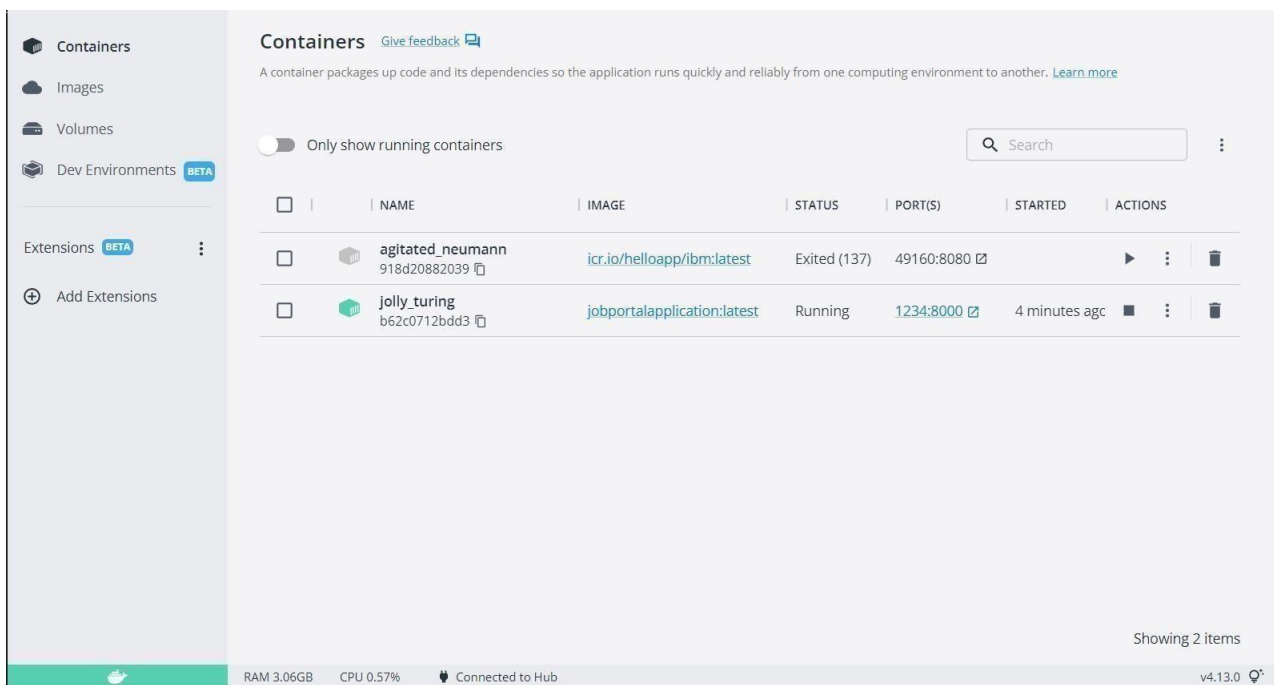
[node1] (local) root@192.168.0.8 ~
$
```

Activate Windows  
Go to Settings to activate Windows.

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

```
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 JOBPOTAL APPLICATION:

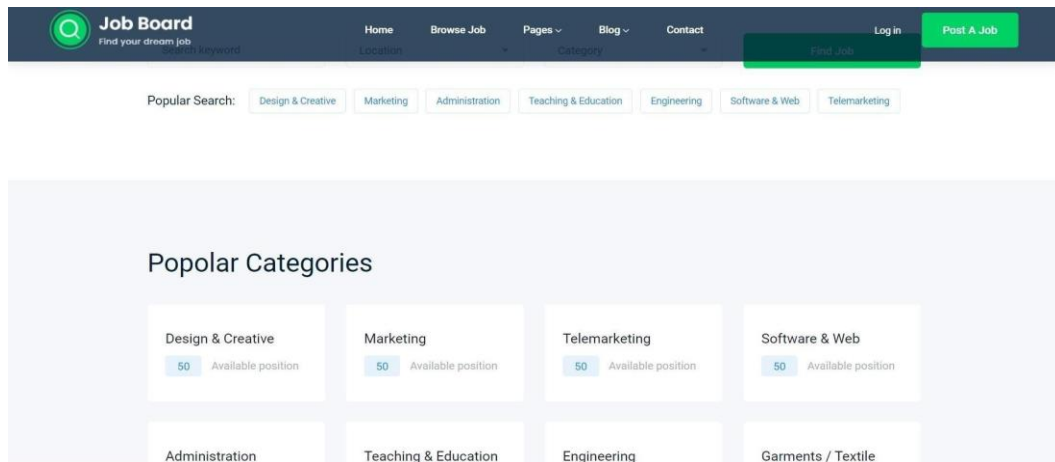


The screenshot shows the Docker Desktop interface. On the left is a sidebar with navigation options: Containers, Images, Volumes, and Dev Environments (marked BETA). Below these are Extensions (marked BETA) and an Add Extensions button. The main area is titled 'Containers' with a 'Give feedback' link. It contains 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 918d20882039	icr.io/helloapp/ibm:latest	Exited (137)	49160:8080		
<input type="checkbox"/>	jolly_turing b62c0712bdd3	jobportalapplication:latest	Running	1234:8000	4 minutes ago	

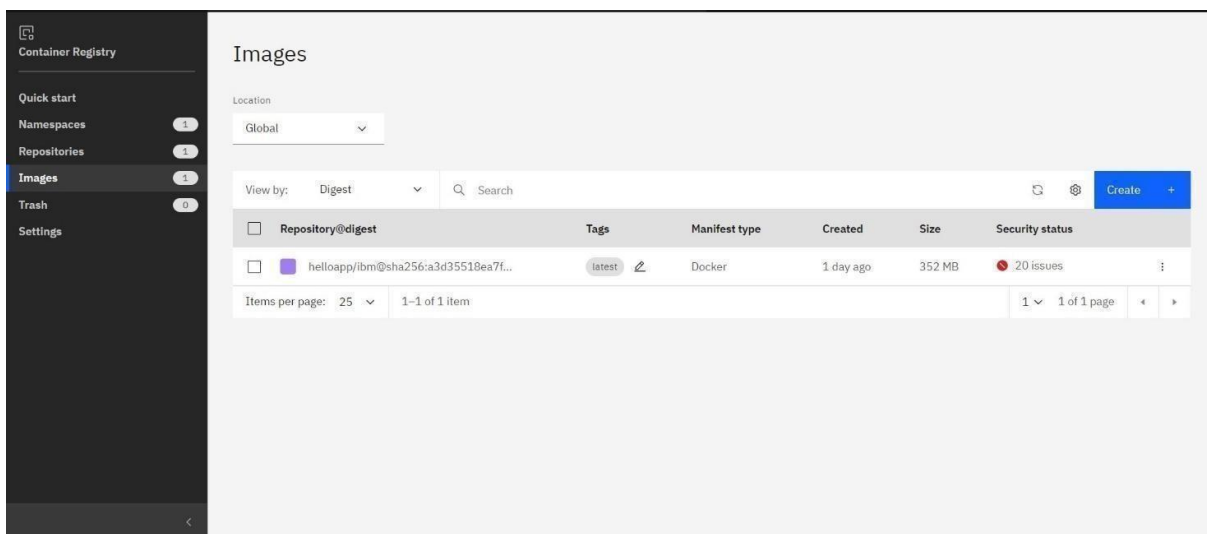
At the bottom right, it says 'Showing 2 items'. The bottom status bar shows 'RAM 3.06GB', 'CPU 0.57%', 'Connected to Hub', and 'v4.13.0'.

OUTPUT:

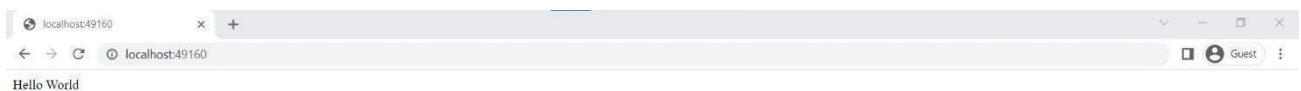


3.Create a IBM container registry and deploy hello-world app or job port app

IBM CONTAINER REGISTRY DEPLOYMENT:



OUTPUT:



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:

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:

```
31 <a class="navbar-brand">Login Page</a>
32 </nav>
33
34 <br>
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         <a href="{url_for('register')}}" class="btn btn-primary">Submit</a>
57       </div>
58     </div>
59   </div>
60 </div>
```

Job Portal

Find your dream job by using this job portal.

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, logistics 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's responsibilities for coding, debugging, designing, and debugging development projects.

Submit

Back-End Developer

compile 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