

ASSIGNMENT -4

Student Name	TAMILSELVI T
Student Roll Number	811219205019
Team Id	PNT2022TMID45006

Question 1:

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

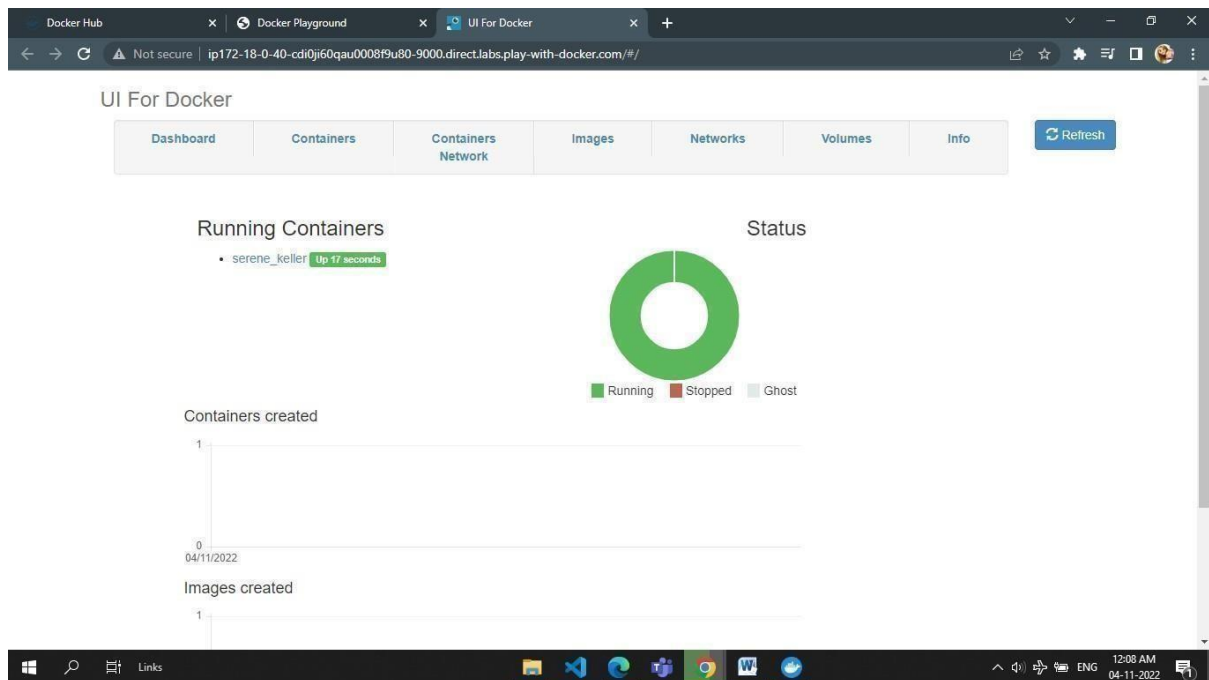
Solution 1:

```
docker pull uifd/ui-for-docker
```

```
docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
```

The screenshot displays the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:57:05, a 'CLOSE SESSION' button, and a list of instances including '192.168.0.13 node1'. The main area shows a container named 'cdi0ji60_cdi0jpe0qau0008f9u8g' with IP '192.168.0.13', memory usage of '1.59% (63.77MiB / 3.906GiB)', and CPU usage of '0.45%'. Below this, there's an SSH command: 'ssh ip172-18-0-40-cdi0ji60qau0008f9u80@direct.labs.play-v'. The terminal window shows the following commands and output:

```
# 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. #
#####
[model] (local) root@192.168.0.13 ~
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371ff5a69549269b24073a5ab1244d4c0b834cbadF244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
[model] (local) root@192.168.0.13 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
c2557355d58010b2607d19372fd954a94b3f2c922d1c5377d8458ff941cb2cab
[model] (local) root@192.168.0.13 ~
$
```

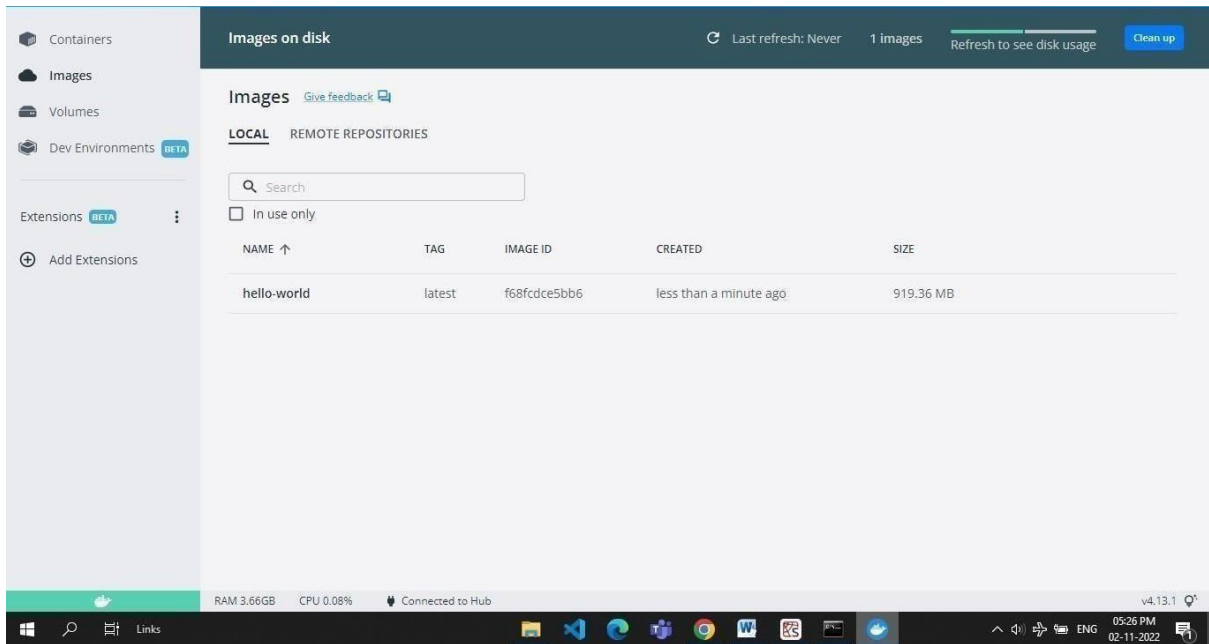


Question 2:

Create a docker file for the job portal app or hello world app and deploy it in docker desktop app. **Solution 2:**

Docker file

```
Dockerfile - Notepad
File Edit Format View Help
FROM python:3.8
WORKDIR /app
ADD . /app
COPY requirements.txt /app
RUN python3 -m pip install -r requirements.txt
EXPOSE 5000
CMD ["python","app.py"]
```

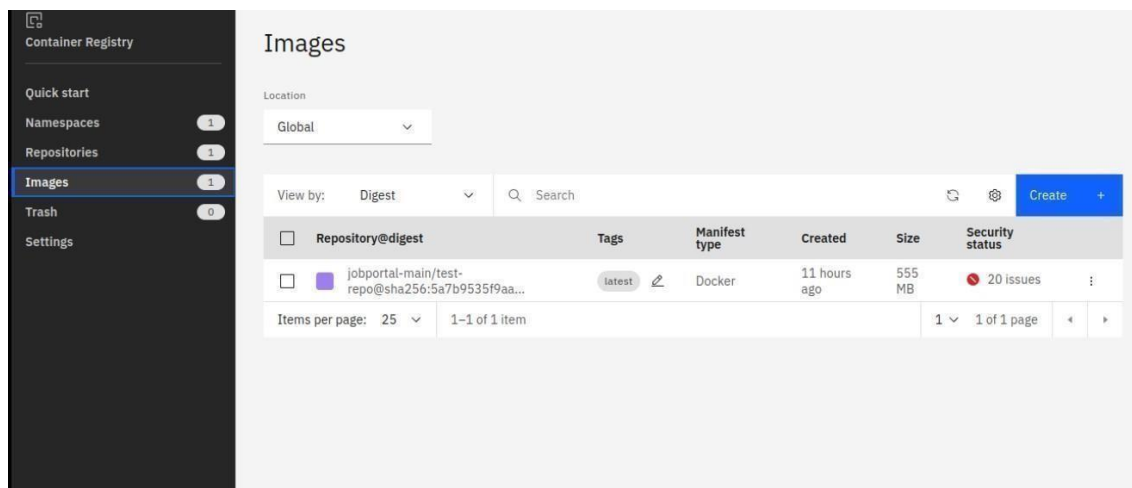


Question 3:

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

Solution 3:

My image link: au.icr.io/hello-world-app/hello-world



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.

Solution 4:

```
apiVersion: v1 kind:
Service metadata:
  name: hello-world-
deployment spec:
  ports: - port:
    5000 targetPort:
5000 selector: app:
hello-world ---
apiVersion: apps/v1
kind: Deployment
metadata: name:
hello-world-
deployment spec:
  replic as: 1 select
or:
  matchLabels: app:
    helloworld
template:
  meta da
  ta :
  la be
  ls :
    app: hello-
world spec:
  containers:
    - name: hello-world image: au.icr.io/hello-worldapp/helloworld
      imagePullPolicy: Always ports:
    - containerPort: 5000
```

Clusters / mycluster-free Normal Expires in 29 days [Add tags](#) [Help](#) [Kubernetes dashboard](#) [Actions...](#)

Overview

Worker nodes
Worker pools
DevOps New

Expires in 29 days:
Be sure to back up your data, your cluster will be deleted in 29 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status
1 of 1
Normal
[Details](#)

Add-on status
0 of 0
Normal
[Details](#)

Master status
Normal
Docs

Ingress status
Unknown
Docs

Details

Cluster ID cd11j33f6a6mchav5kig	Version 1.24.7_1542	Infrastructure Classic	Zones Milan 01
Created 04/11/2022, 01:12	Resource group Default	Image security enforcement <input type="button" value="Enable"/>	

kubernetes default [Search](#) [+](#) [🔔](#) [👤](#)

[Workloads](#) > [Pods](#) > [hello-world-deployment-6c75b9c898-p4ntv](#) > **Logs**

Workloads 🔍

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Service

- Ingresses 🔍
- Ingress Classes
- Services 🔍

Config and Storage

Logs from hello-world in hello-world-dep... [Download](#)

```
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.30.82.142:5000
Press CTRL+C to quit
```

Logs from Nov 4, 2022 to Nov 4, 2022 UTC [⏪](#) [⏴](#) [⏵](#) [⏩](#)

eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cd11j33f6a6mchav5kig/_ser...