

ASSIGNMENT -4 : DOCKER DESKTOP (Kubernetes)

Assignment date	06 November 2022
Team Id	PNT2022TMID51933
Maximum Marks	2 Marks

Question 1:

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

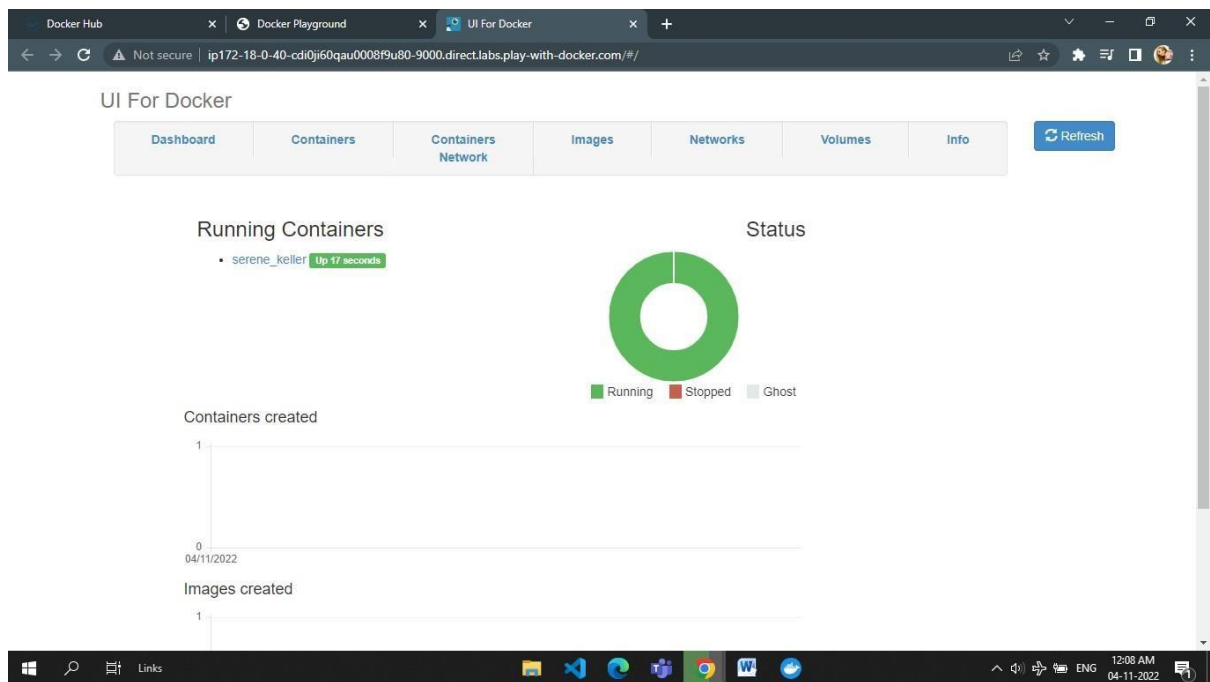
Solution 1:

`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 shows 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. The main panel displays details for a container named 'cdi0ji60_cdi0jpe0qau0008f9u8g'. It shows the IP address 192.168.0.13, memory usage (1.59%), CPU usage (0.45%), and an SSH command. Below this, there's a terminal window showing the execution of the following commands:

```
# 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:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
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
```

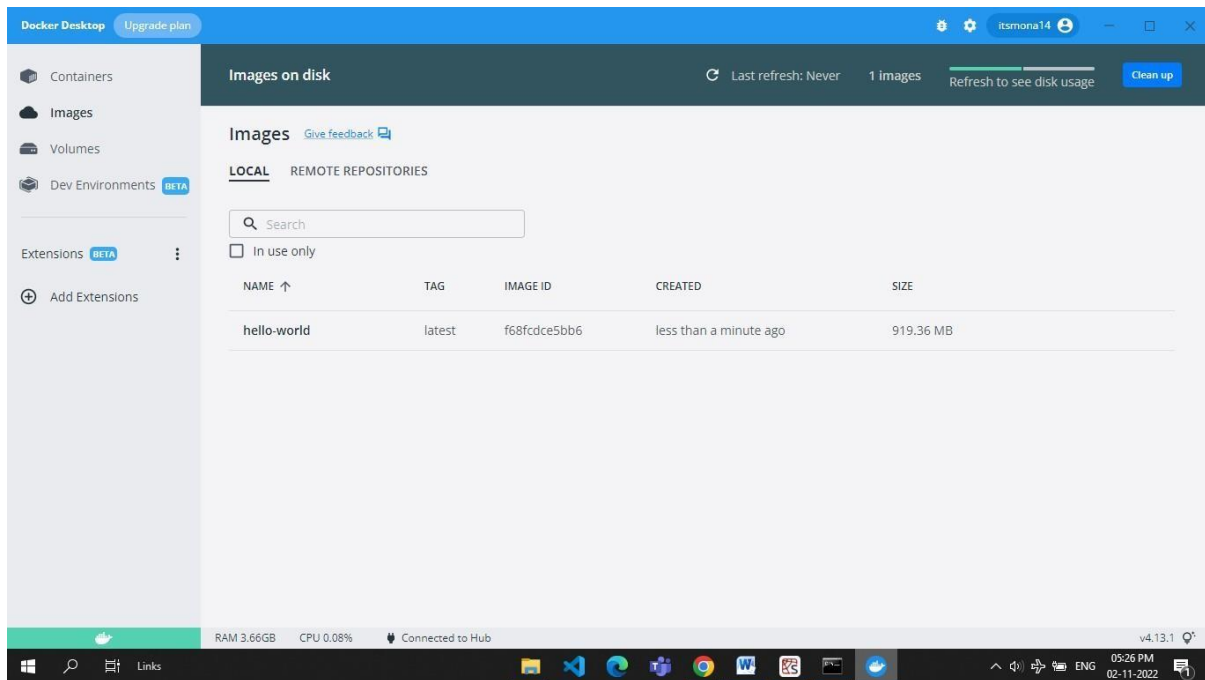
```
ADD . /app
```

```
COPY requirements.txt /app
```

```
RUN python3 -m pip install -r requirements.txt
```

```
EXPOSE 5000
```

```
CMD ["python","app.py"]
```

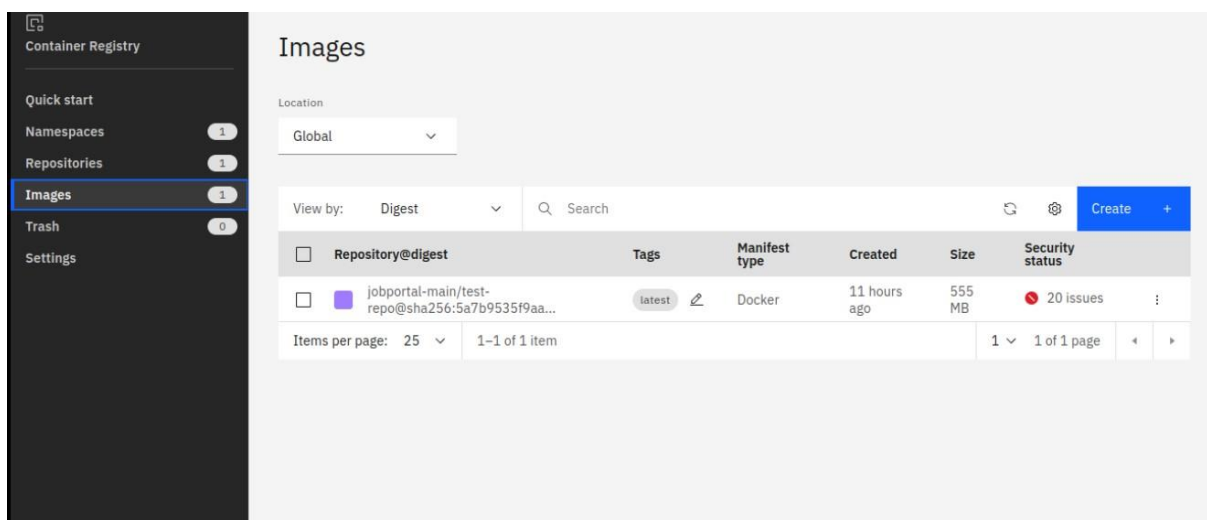


Question 3:

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-world-
      app/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 cd11j33f0a6mchav5kig	Version 1.24.7_1542	Infrastructure Classic	Zones Milan 01
Created 04/11/2022, 01:12	Resource group Default	Image security enforcement Enable	

kubernetes default [Search](#) [+](#) [Bell](#) [User](#)

[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...](#)

```
* 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/cd1j33f0a6mchav5kig/...