

ASSIGNMENT -4 : DOCKER DESKTOP (Kubernetes)

Assignment Date	9/11/2022
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Marks	2 marks

Question 1:

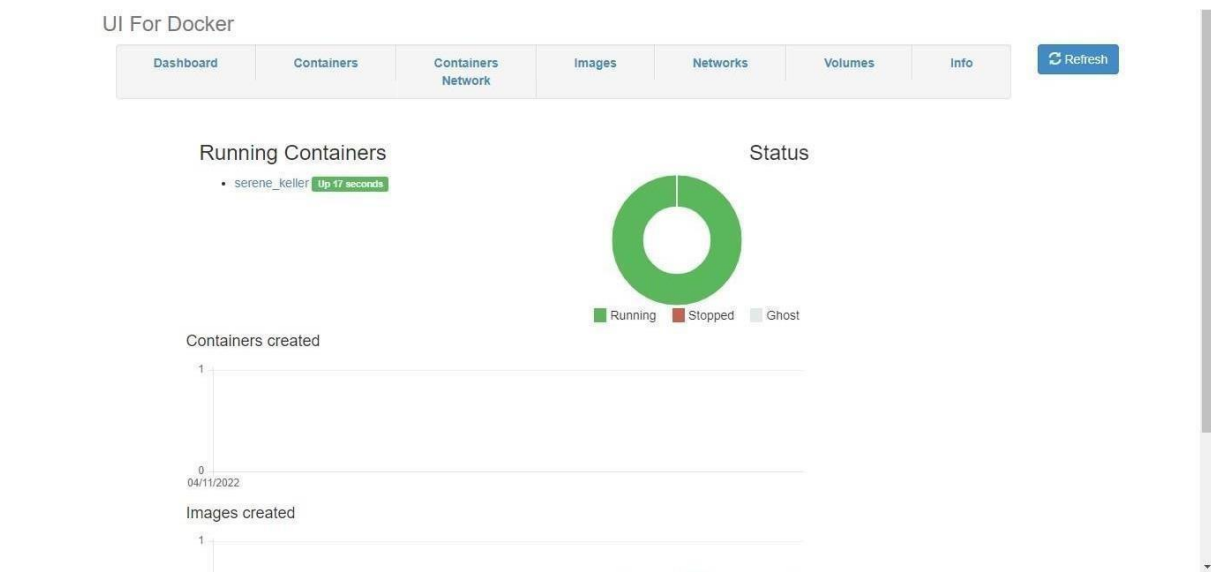
Pull an image from docker hub and run it on docker playground.

docker pull registry

docker run -d -p 9000:9000 --privileged -v
/var/run/docker.sock:/var/run/docker.sock registry

The screenshot displays the Docker Playground interface. On the left, a sidebar shows a digital clock at 03:38:03, a 'CLOSE SESSION' button, and a list of instances including '192.168.0.28 node1'. The main panel shows details for the container 'cdiuhke3_cdiuofm0qau000fq8s20', including its IP (192.168.0.28), memory usage (2.29%), CPU usage (0.68%), and an SSH command. Below this, a terminal window shows the execution of 'docker pull registry' and 'docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock registry'. The terminal output confirms the pull of the 'registry:latest' image and the successful execution of the container. A watermark 'Activate Windows' is visible in the bottom right corner of the terminal area.

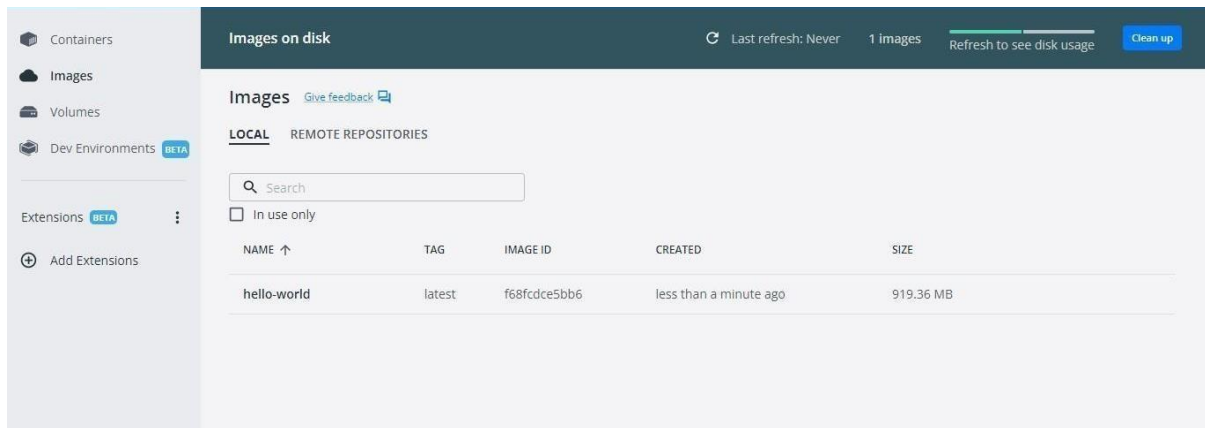
```
# The FWD team. #
#####
(node1) (local) root@192.168.0.28 ~
$ docker pull registry
Using default tag: latest
latest: Pulling from library/registry
213ec9aee27d: Pull complete
4583459ba037: Pull complete
6f6a6c5733af: Pull complete
b136d5c19b1d: Pull complete
fd4a5435f342: Pull complete
Digest: sha256:2e830e8b682d73a1b70cac4343a6a541a87d5271617841d87eeb67a824a5b3f2
Status: Downloaded newer image for registry:latest
docker.io/library/registry:latest
(node1) (local) root@192.168.0.28 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock registry
7a5d897ccb6fbac91b8c46b3bb8e45510584a8ea2a26388cd65e9d5e295d2001
(node1) (local) root@192.168.0.28 ~
$
```



Question 2:

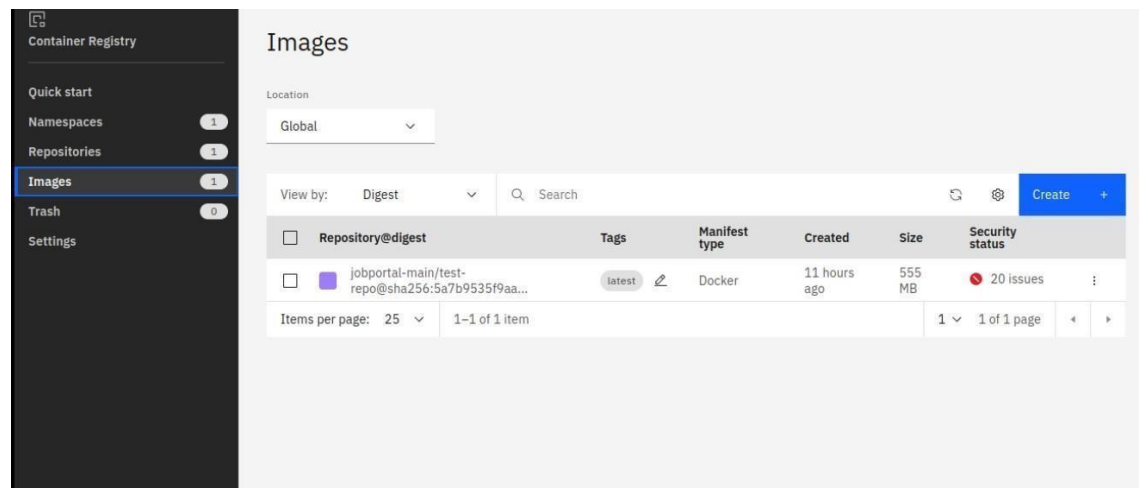
Create a docker file for the job portal app or hello world app and deploy it in docker desktop app.

```
docker - 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 portalapp.



Question 4:

Create a kubernetes cluster in IBM cloud and deploy helloworld image or job portal image and also expose the same app to run in nodeport.

```
apiVersion:
v1kind:
Service
metadata:
  name:
hello-world-
deploymentspec:
  ports:
    - port: 5000
      targetPort:
5000selector:
  app:
hello-world
---
apiVersion:
apps/v1kind
:
Deployment
metadata:
  name:
hello-world-
deploymentspec:
  replic
as: 1
select
or:
  matchLabels:
    app: hello-
worldtemplate:
  meta
da
ta
:
la
b
e
ls
:
  app: hello-
worldspec:
  containers:
    - name: hello-world
      image: au.icr.io/hello-world-app/hello-
worldimagePullPolicy: 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

cd1133f0a6mchav6kig

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

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

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