

## ASSIGNMENT -4 : DOCKER DESKTOP (Kubernetes)

Assignment Date	21/10/22
Student Name	Arunsnalan R
Student Roll no	921319104025
Marks	2 marks

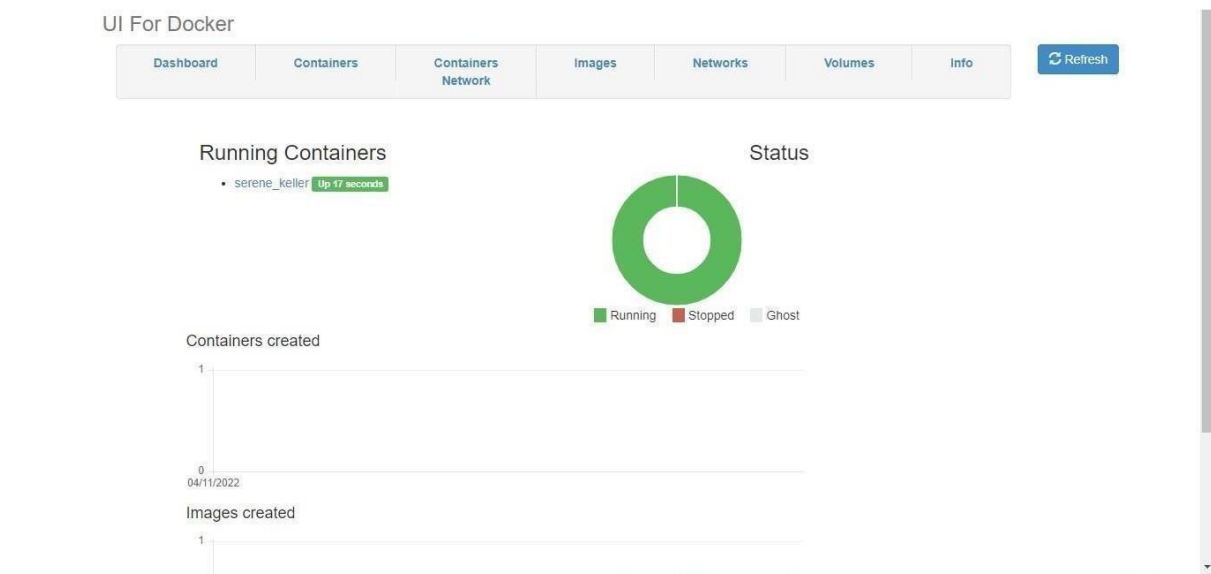
### Question 1:

**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

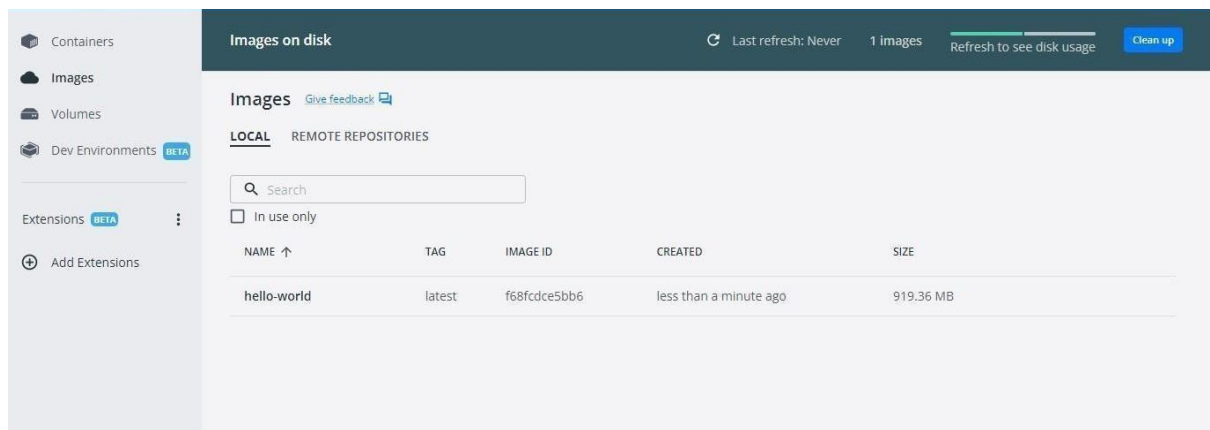
The screenshot displays the Docker Desktop interface. On the left sidebar, there is a clock showing 03:38:03, a 'CLOSE SESSION' button, and tabs for 'Instances', 'bui', and 'seti'. Below these, there is a '+ ADD NEW INSTANCE' button and a list of instances showing '192.168.0.28' and 'node1'. The main panel shows details for a container named 'cdiuhke3\_cdiuofm0qau000fq8s20'. It includes an 'IP' field with the value '192.168.0.28', an 'OPEN PORT' button, and a '9000' port input. Below this, it shows 'Memory' usage at 2.29% (91.5MiB / 3.906GiB) and 'CPU' usage at 0.68%. An 'SSH' section provides a command: 'ssh ip172-18-0-8-cdiuhke3tccg008jlpdg@direct.labs.play-wit content\_copy'. There are 'DELETE' and 'insert\_cli' buttons. At the bottom, a terminal window shows the execution of the commands: 'docker pull registry' and 'docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock registry'. The terminal output shows the pull of the 'registry:latest' image and the successful execution of the run command. An 'Activate Windows' watermark is visible in the bottom right corner of the terminal area.



## Question 2:

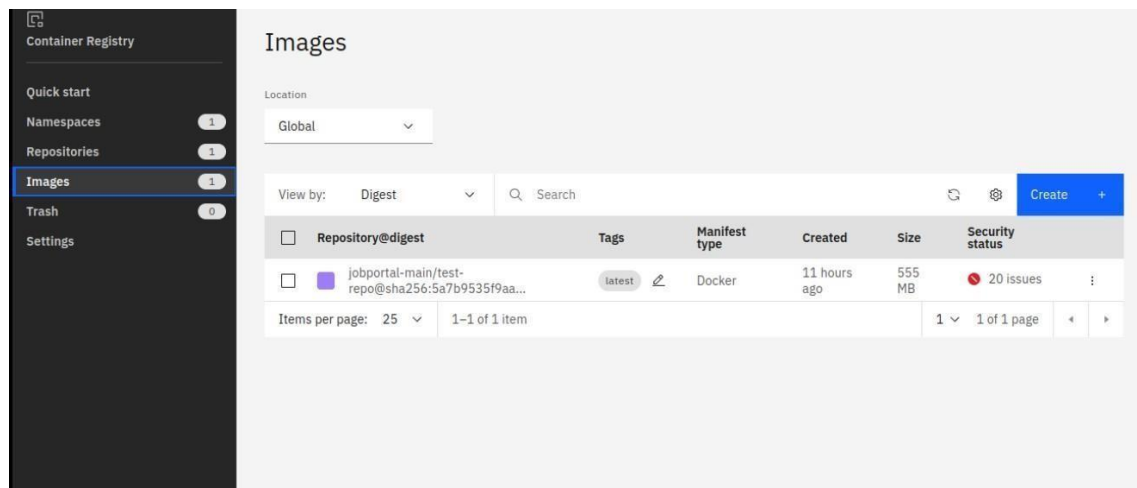
Create a docker file for the job portal app or hello world app and deploy it in docker desktop app.

```
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

cd11j33f0a6mchav6k1g

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