

ASSIGNMENT -4 : DOCKER DESKTOP (Kubernetes)

Assignment Date	9/11/2022
Student Name	Arvindkumar S
Student Roll no	921319104026
Marks	2 marks

Question 1:

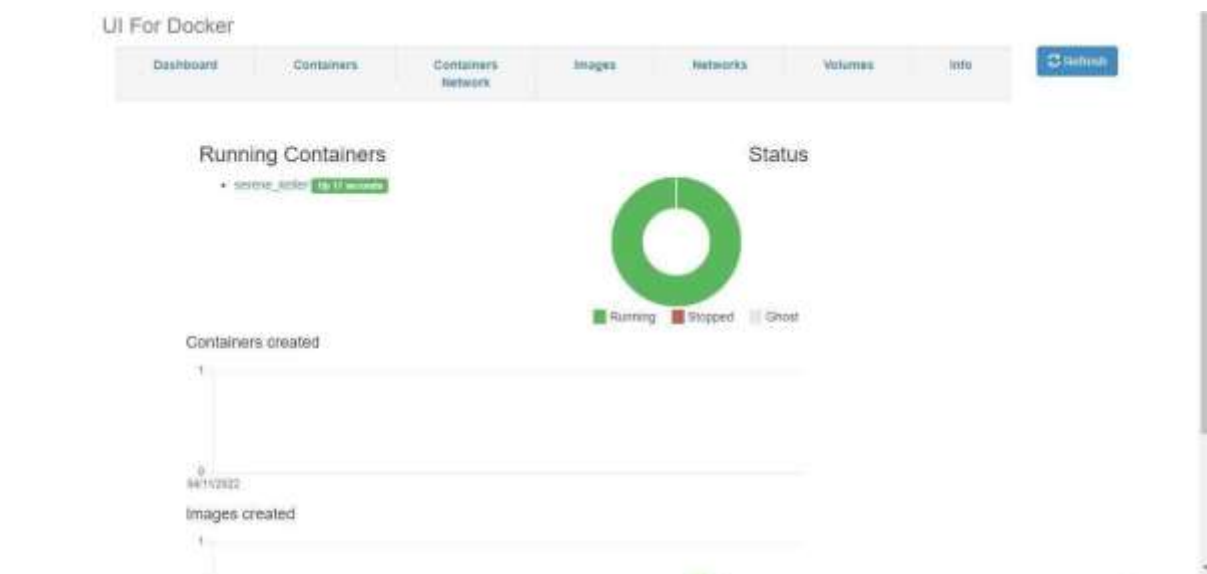
Pull an image from docker hub and run it on docker playground.

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, a sidebar shows a digital clock at 03:38:03, a 'CLOSE SESSION' button, and a list of instances with '192.168.0.28' and 'root@'. The main panel shows a container named 'cdiuhke3_cdiuofm0qau000fq8s20' with IP '192.168.0.28', an 'OPEN PORT' button for '9000', and resource usage: 2.29% (91.5MiB / 3.906GiB) memory and 0.68% CPU. Below this, an SSH command is shown: 'ssh ip172-18-0-8-cdiuhke3tccg000@pdg@direct.labs.play-with-docker.com content_copy'. A terminal window at the bottom shows the following commands and output:

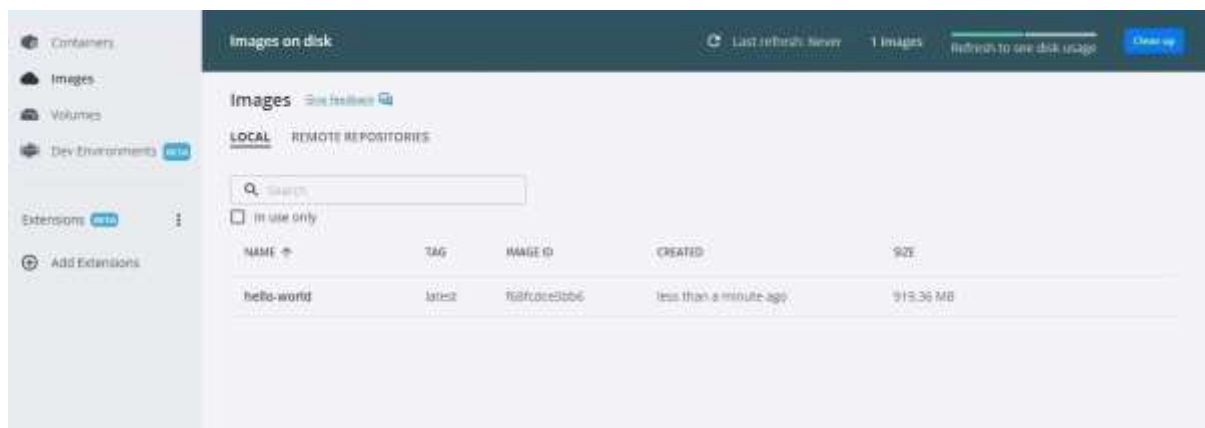
```
# The FWD team. #
(node1) (local) root@192.168.0.28 ~
$ docker pull registry
Using default tag: latest
latest: Pulling from library/registry
213ec9ee027d: Pull complete
4583459ba027: Pull complete
6f6a6c5733ef: Pull complete
b136d5c19b1d: Pull complete
fd4e5435f342: Pull complete
Digest: sha256:2e830e6b682d73e1b70cac4343a6a541a87d5271617841d887eab67a824e5b3f2
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:

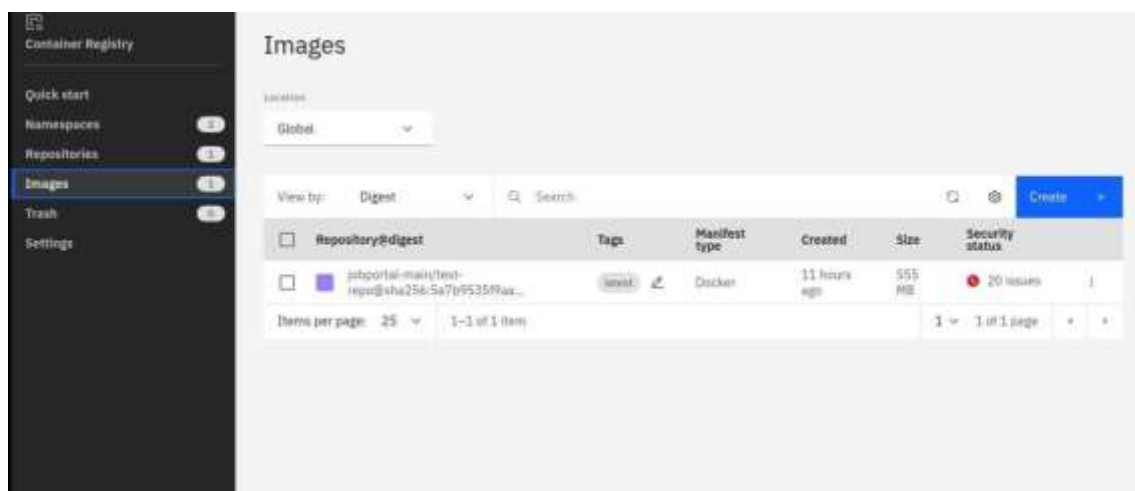
Create a docker file for the job portal app or hello world app and deploy it in docker desktop app.

```
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
  be
  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 Normal Docs	Ingress status Unknown Docs
--	--	---	--

Details

Cluster ID ed1j3359adnchrdkig	Version 1.24.7-1542	Infrastructure Classic	Zone Mian 01
Created 04/11/2022, 01:12	Resource group Default	Image security enforcement Enable	

kubernetes default

[Workloads](#) > [Pods](#) > [hello-world-deployment-dc75bdc898-p4tpe](#) > **Logs**

Workloads

- Onco 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://172.30.92.142:5000
Press CTRL+C to quit
```