

Assignment-4

Assignment Date	28 October 2022
Student Name	E.Manoj
Student Roll Number	913319104030
Maximum Marks	2 Marks

Question 1:

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

Solution:

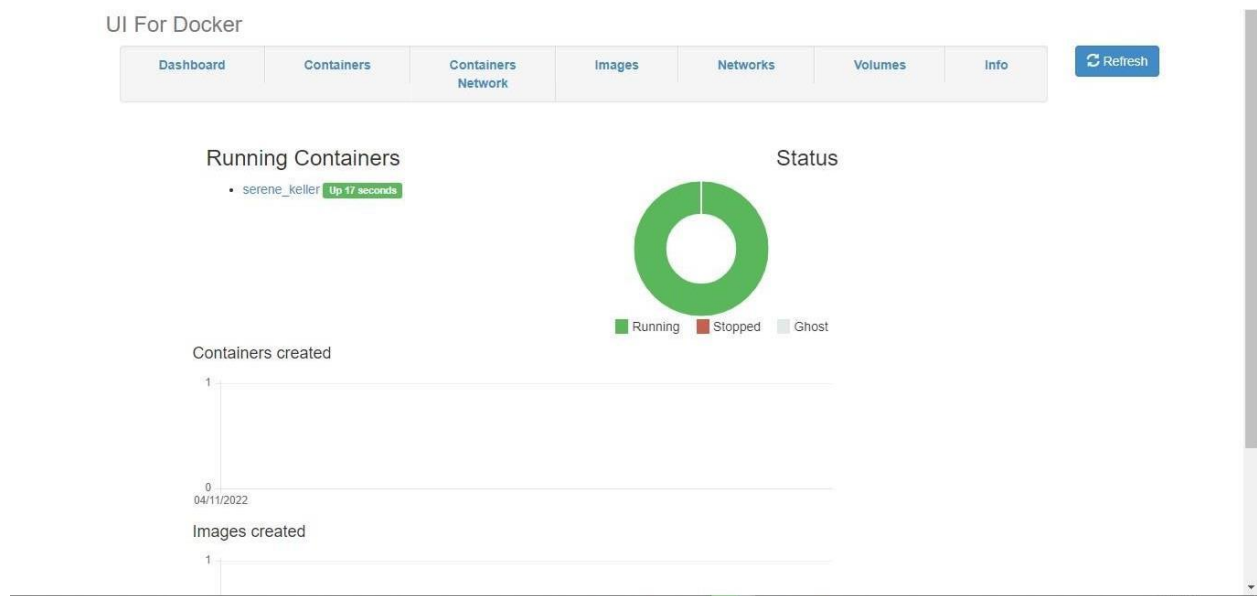
docker pull registry

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 timer at 03:38:03, a 'CLOSE SESSION' button, and a list of instances with one instance named '192.168.0.28 model'. The main panel shows the details of the selected instance, including its IP (192.168.0.28), memory usage (2.29%), CPU usage (0.68%), and an SSH command: `ssh ip172-18-0-8-cdiuhke3tccg008jlpdg@direct.labs.play-with-docker.com content_copy`. Below this, a terminal window shows the execution of the following commands:

```
# The FWD team.#####
[model] (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
[model] (local) root@192.168.0.28 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock registry
7a5d897ccb6fbac91b8c46b3bb8e45510584a8aa2a26388cd65e9d5e295d2001
[model] (local) root@192.168.0.28 ~
```



Question 2:

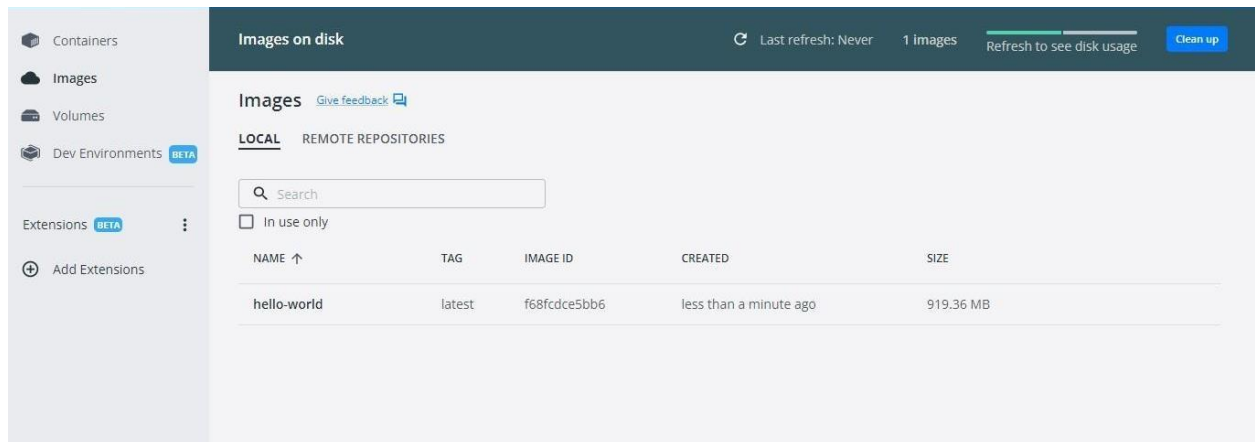
Create a docker file for the job portal / flask application and deploy it in docker desktop application.

Solution:

docker - Notepad

File Edit Format View Help

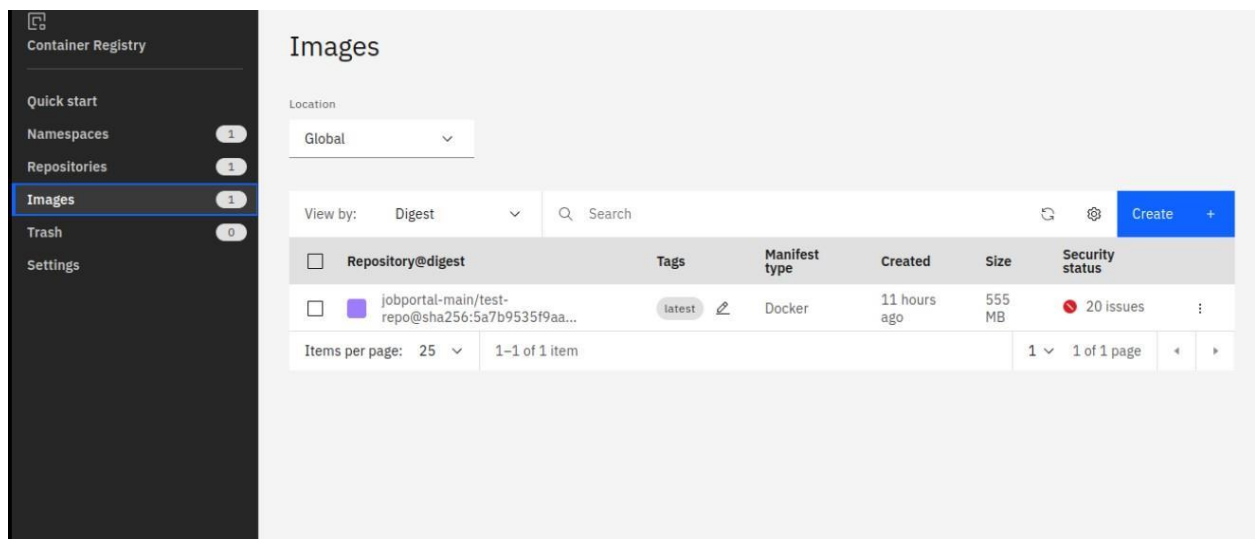
```
FROM python:3.8
WORKDIR /app
ADD . /app
COPY requirements.txt /app
RUN python3 -m pip install -r requirements.txt
EXPOSE 5000
CMD ["python", "app.py"]
```



Question 3:

Create an IBM container registry and push docker image of flask application or job portal app.

Solution:



Question 4:

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

Solution:

```
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 ✓ Docs ↗	Ingress status Unknown Docs ↗
---	---	---	---

Details

Cluster ID cd11j33f0a6mchav5k1g Copy	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 N

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

Service

- Ingresses N
- Ingress Classes
- Services N

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
```