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.
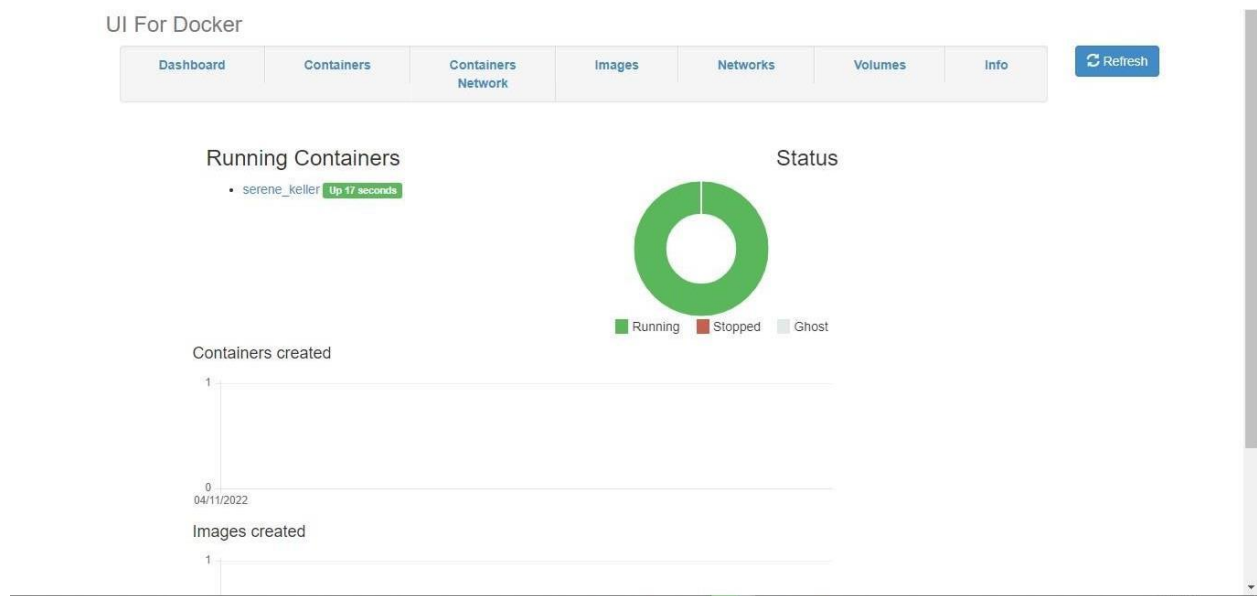
Solution:

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

UI For Docker

| Dashboard | Containers | Containers Network | Images | Networks | Volumes | Info |

Running Containers
- serene_keller `Up 17 seconds`

Status

- Running
- Stopped
- Ghost

Containers created

1

0
04/11/2022
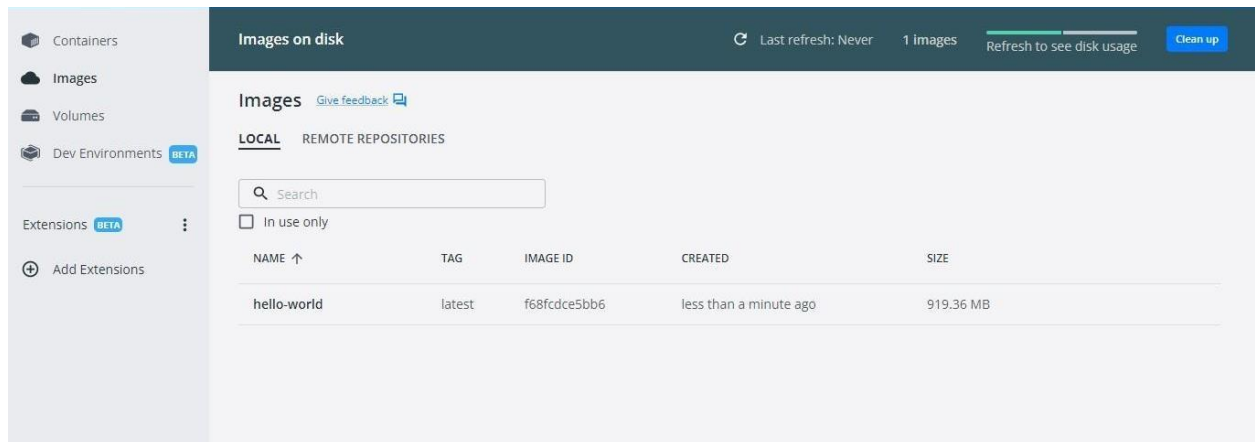
Images created

1

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:
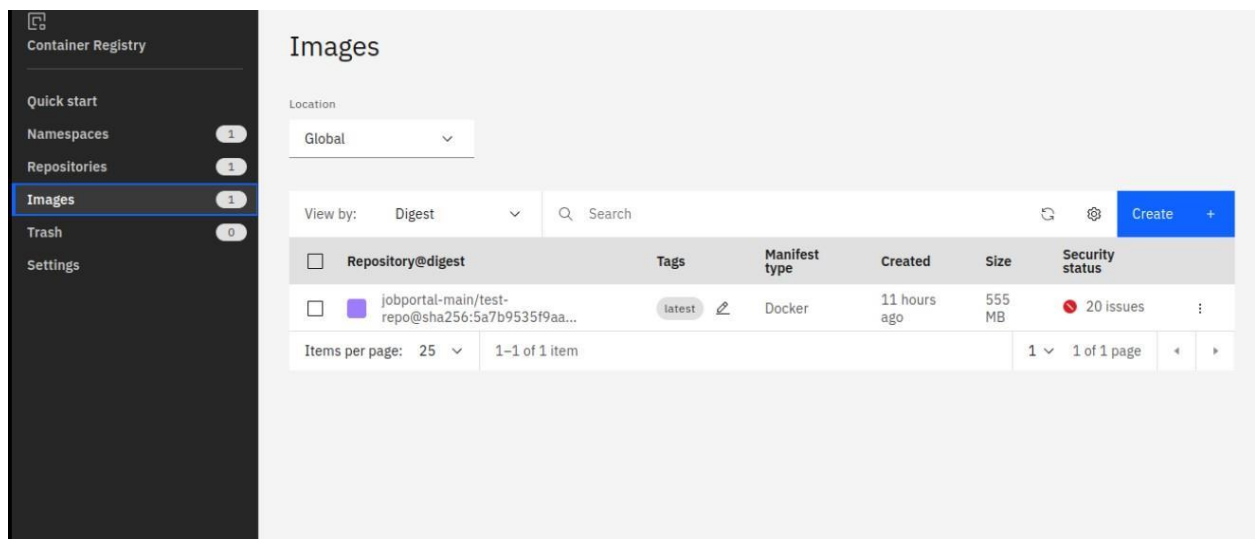
Question 4:

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.

```
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
```

⬡ mycluster-free ✅ Normal Expires in 29 days Add tags ✏️

Help **Kubernetes dashboard** ⧉   Actions... ▾

Overview
Worker nodes
Worker pools
DevOps New

ℹ️ **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	Add-on status	Master status	Ingress status
1 of 1	**0 of 0**	Normal	Unknown
✅ Normal	✅ Normal	✅	—
Details ↓	Details ↓	Docs ↗	Docs ↗

Details

Cluster ID
`cdi1j33f0a6mchav5kig` ⧉

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
```