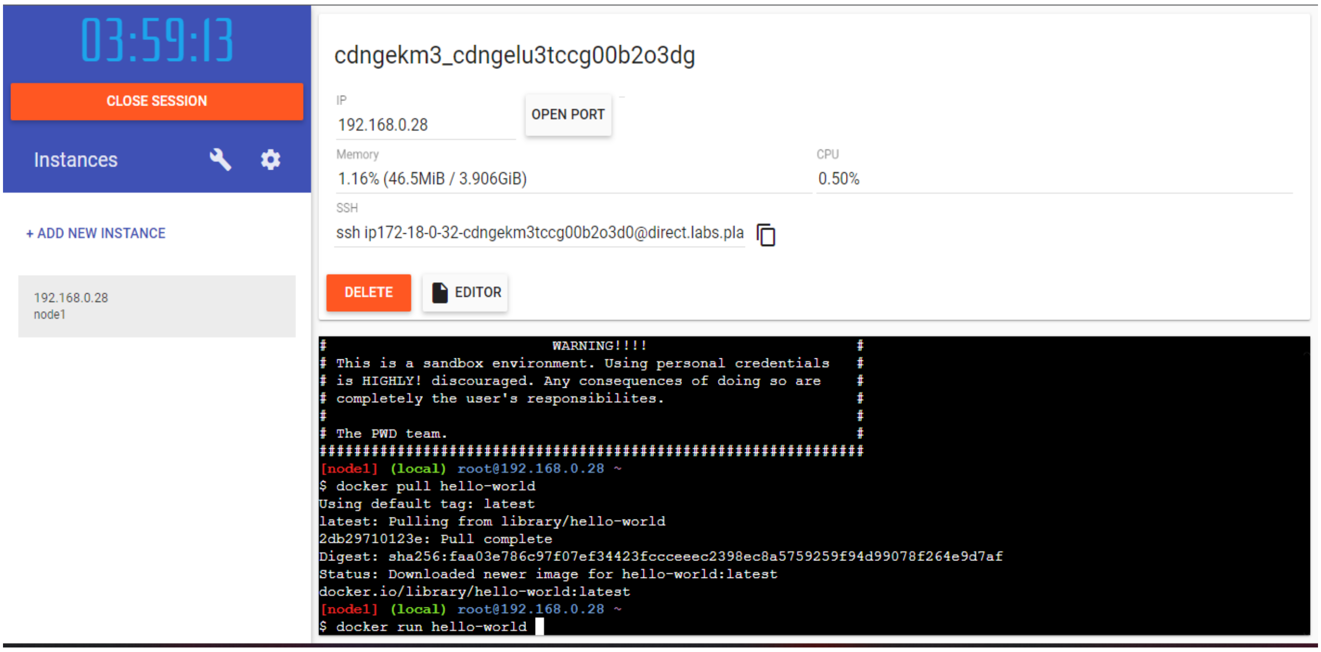
ASSIGNMENT 4

Question 1:

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

docker pull hello-world



cdngekm3_cdngelu3tccg00b2o3dg

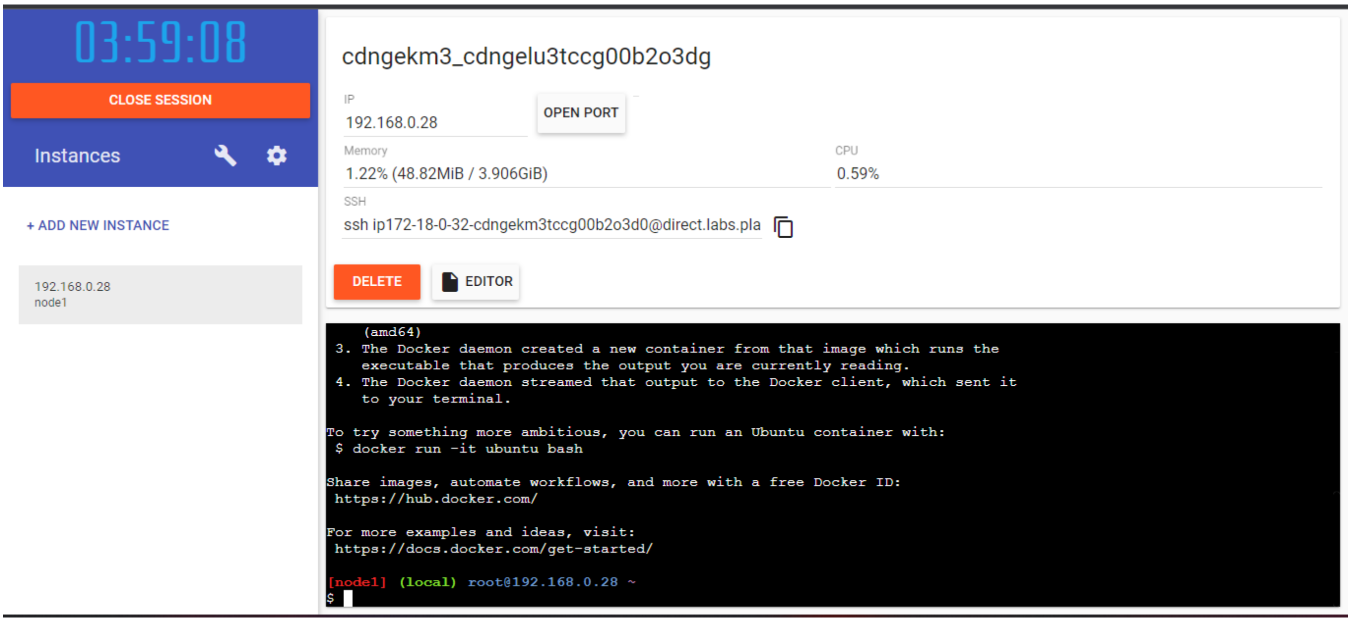
IP
192.168.0.28

Memory
1.16% (46.5MiB / 3.906GiB)

CPU
0.50%

SSH
ssh ip172-18-0-32-cdngekm3tccg00b2o3d0@direct.labs.pla

```
#                           WARNING!!!!                          #
# This is a sandbox environment. Using personal credentials      #
# is HIGHLY! discouraged. Any consequences of doing so are       #
# completely the user's responsibilites.                         #
#                                                                #
# The PWD team.                                                  #
#################################################################
[node1] (local) root@192.168.0.28 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:faa03e786c97f07ef34423fccceeec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
[node1] (local) root@192.168.0.28 ~
$ docker run hello-world
```



cdngekm3_cdngelu3tccg00b2o3dg

IP: 192.168.0.28

Memory: 1.22% (48.82MiB / 3.906GiB)

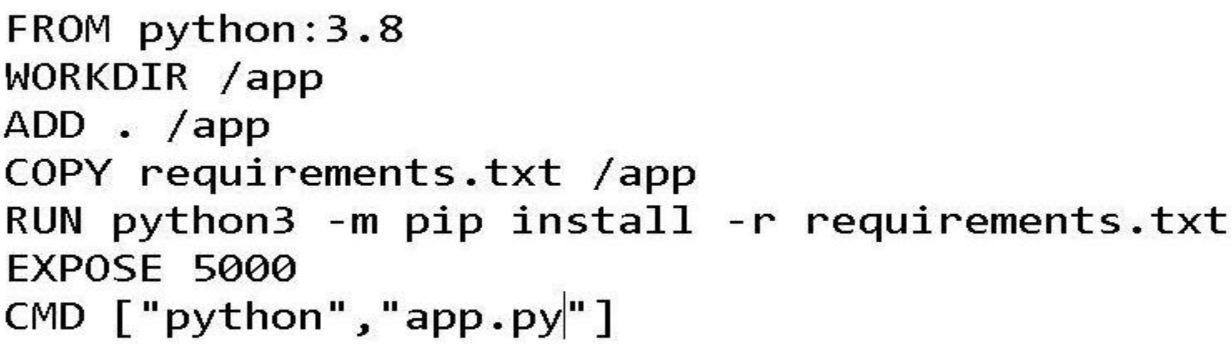
CPU: 0.59%

SSH: ssh ip172-18-0-32-cdngekm3tccg00b2o3d0@direct.labs.pla

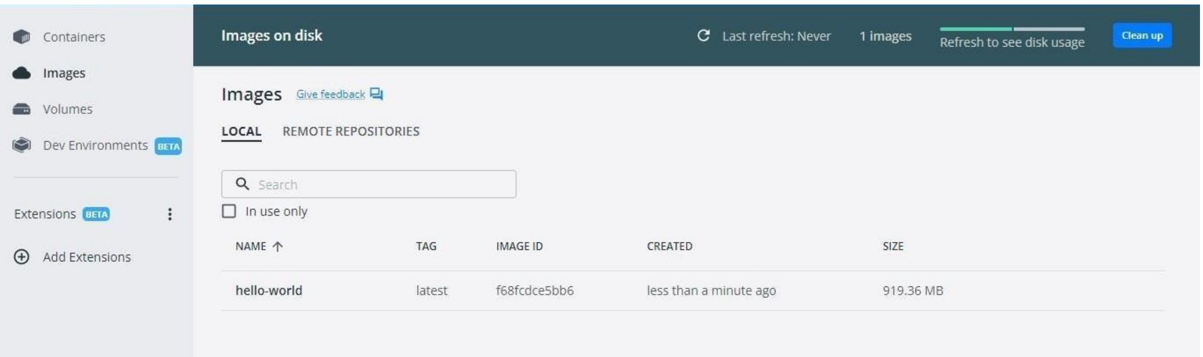
```
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/

[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.



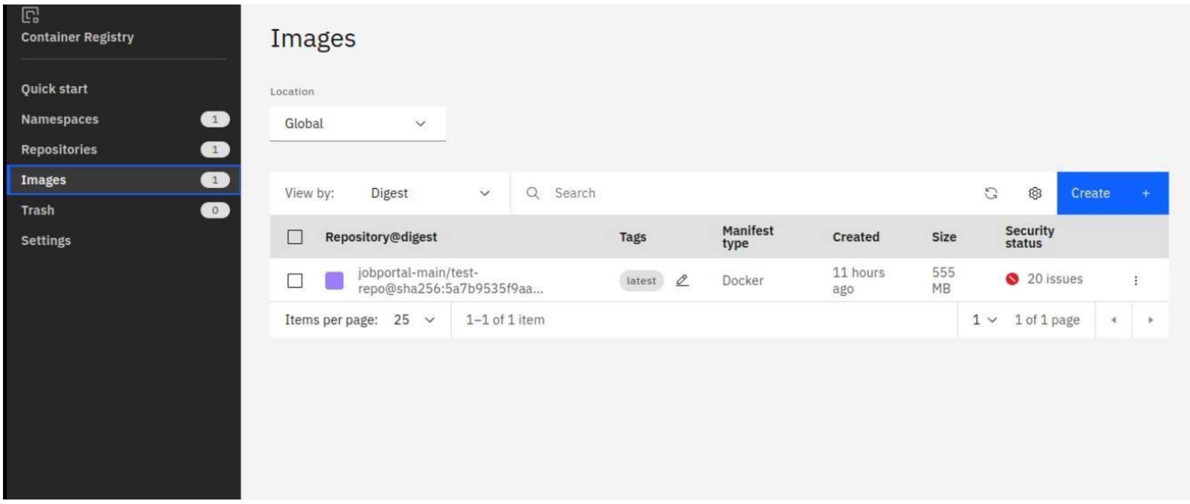
```
FROM python:3.8
WORKDIR /app
ADD . /app
COPY requirements.txt /app
RUN python3 -m pip install -r requirements.txt
EXPOSE 5000
CMD ["python","app.py"]
```



NAME	TAG	IMAGE ID	CREATED	SIZE
hello-world	latest	f68fcdce5bb6	less than a minute ago	919.36 MB

Question 3:

Create an IBM container registry and deploy hello world app or job portal app.



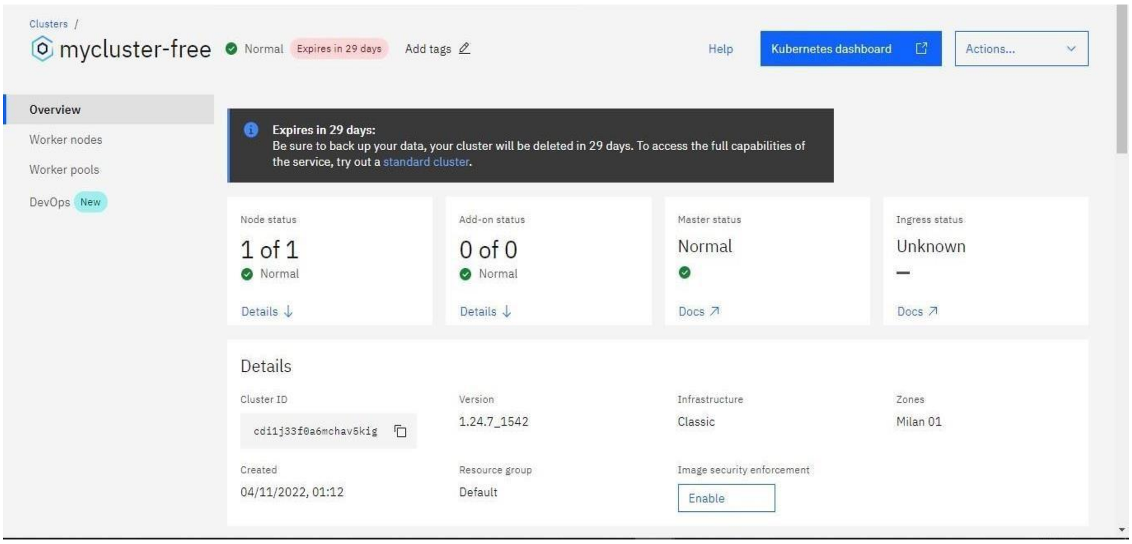
☐	Repository@digest	Tags	Manifest type	Created	Size	Security status
☐	jobportal-main/test-repo@sha256:5a7b9535f9aa...	latest	Docker	11 hours ago	555 MB	20 issues

Question 4:

Create a Kubernetes cluster in IBM cloud and deploy hello world image or job portal image and also expose the same app to run in node port.

```
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
```



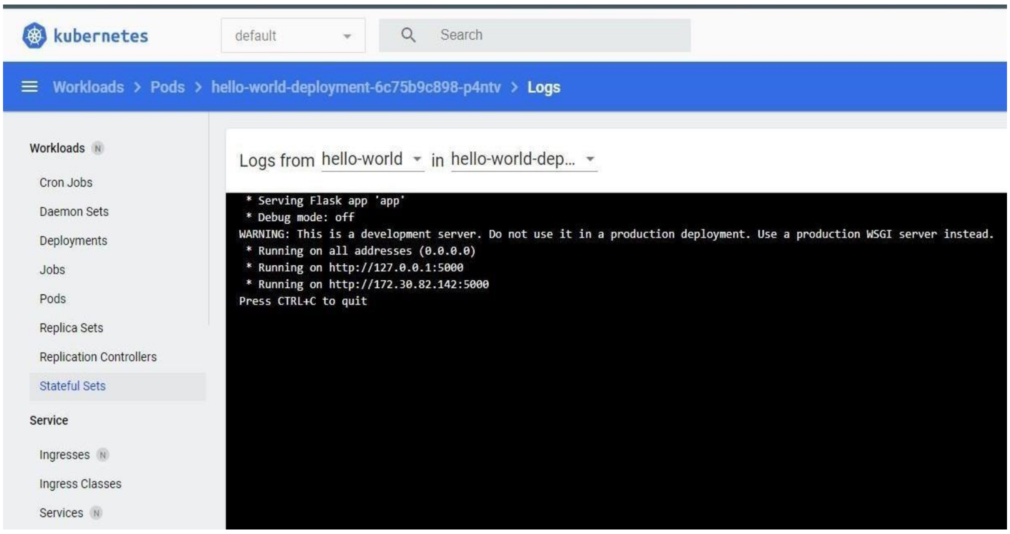
mycluster-free ● Normal Expires in 29 days

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	Version	Infrastructure	Zones
cdi1j33f0a6mchav5kig	1.24.7_1542	Classic	Milan 01
Created	**Resource group**	**Image security enforcement**	
04/11/2022, 01:12	Default	Enable	



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
```