

Assignment-4

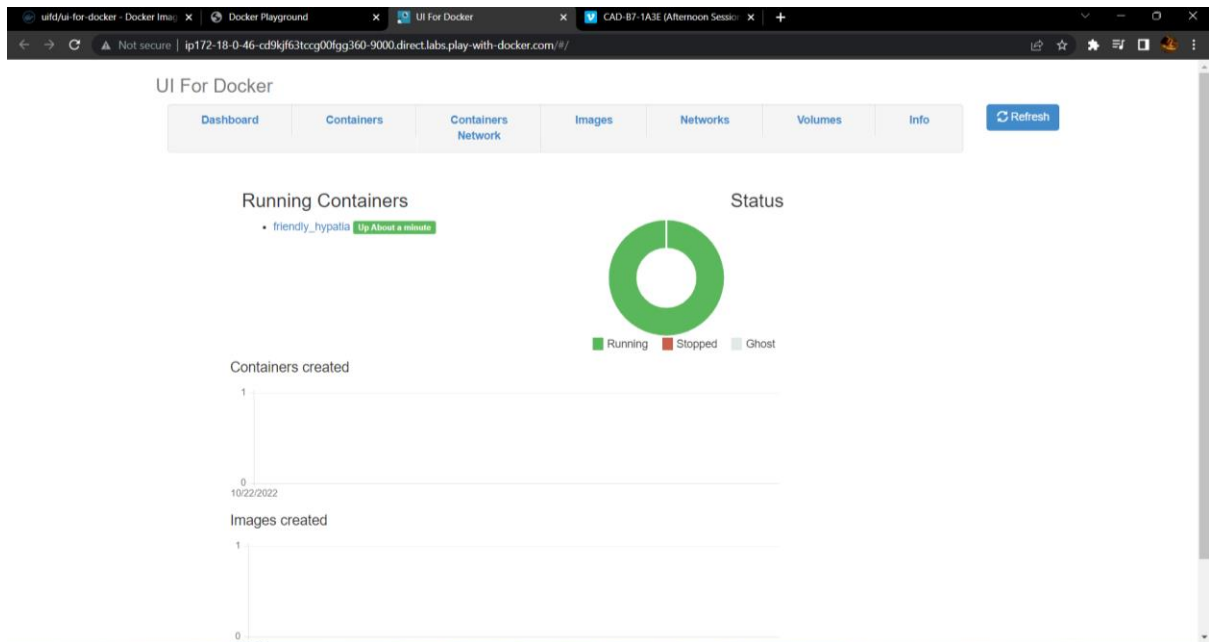
Date	20 October 2022
Team ID	PNT2022TMID28022
Project Name	Inventory Management System For Retailers
Maximum Marks	2 Marks

1.Pull an Image from docker hub and run it in docker playground.

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:58:38, a 'CLOSE SESSION' button, and a list of instances. The main area displays the container details for 'cd9kjf63_cd9kj63tccg00fgg36g'. The IP is 192.168.0.13. The SSH command is 'ssh ip172-18-0-46-cd9kjf63tccg00fgg360@direct.labs.play-'. Below this, there's a terminal window showing the following commands and output:

```
# The FWD team.
#####
(node1) (local) root@192.168.0.13 ~
$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
(node1) (local) root@192.168.0.13 ~
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371fff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
(node1) (local) root@192.168.0.13 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
40592613046c0e90ad9757849a942b162bb56067034f73a5ccf38883fdecbe7d
(node1) (local) root@192.168.0.13 ~
$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
40592613046c   uifd/ui-for-docker   "/ui-for-docker"      13 seconds ago   Up 11 seconds   0.0.0.0:9000->9000/tcp   friendly_hypatia
(node1) (local) root@192.168.0.13 ~
$
```

The screenshot shows the Docker Playground interface with a dialog box open. The dialog box is titled 'labs.play-with-docker.com says' and asks 'What port would you like to open?'. The input field contains '9000'. There are 'OK' and 'Cancel' buttons. The background shows the same container details as the previous screenshot, but the terminal output is partially obscured by the dialog box.



2. Create a docker file for the jobportal application and deploy it in Docker desktop application.

Dockerfile

FROM python:3.10

WORKDIR /app

ADD . /app

COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt

EXPOSE 3000

CMD ["python", "app.py", "--host", "0.0.0.0"]

```

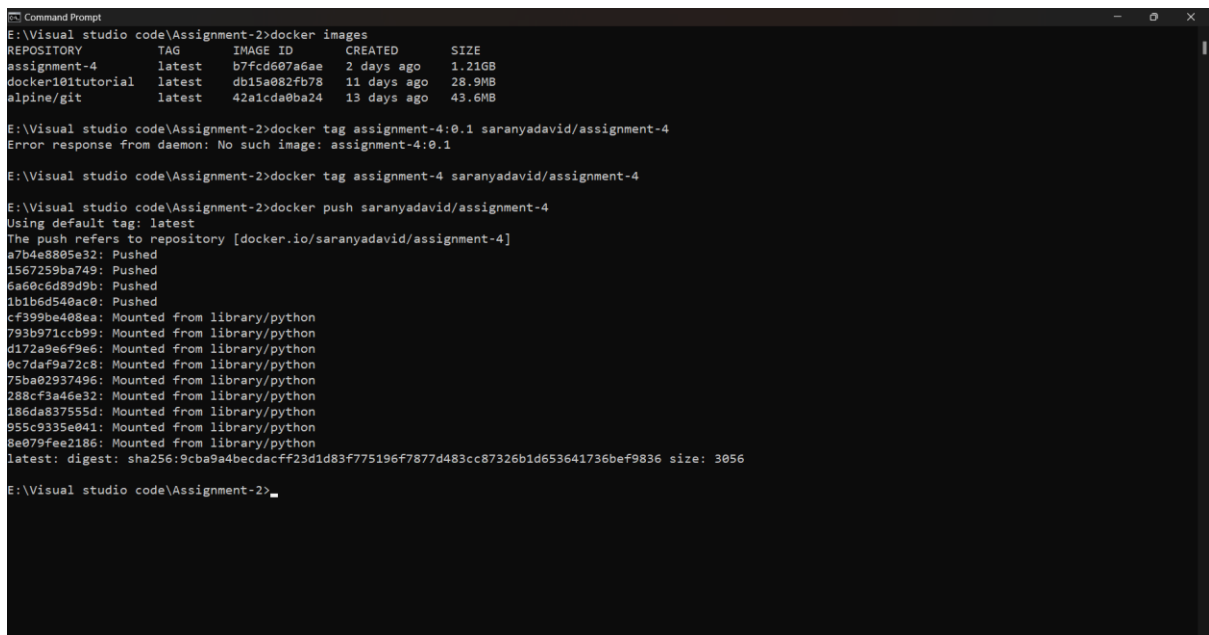
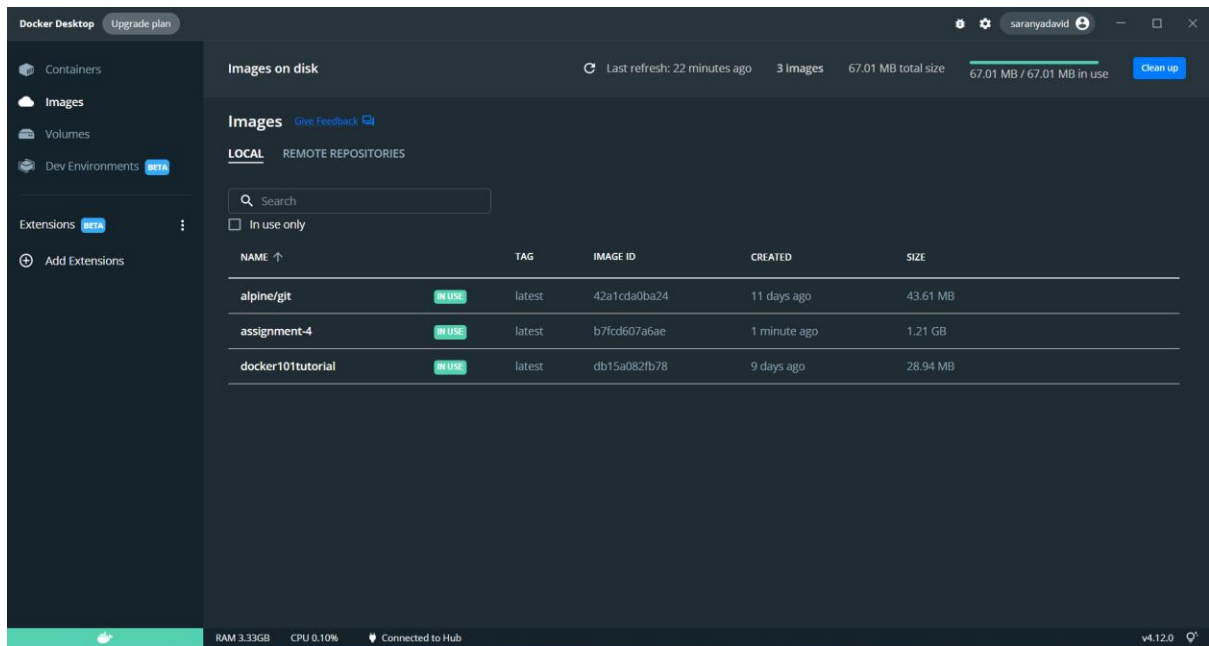
Command Prompt - docker run -p 5000:5000 assignment-4
E:\Visual studio code\Assignment-2\docker build -t assignment-4 .
[+] Building 61.1s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load .dockerignore
=> [internal] load context: 2B
=> [internal] load metadata for docker.io/library/python:3.10.7
=> [1/5] FROM docker.io/library/python:3.10.7@sha256:53e577284d36223ee92aeb5119449271f5eb24f99c61464fe9167ddbc
=> [internal] load build context
=> [internal] load context: 185.52KB
=> [2/5] WORKDIR /app
=> [3/5] ADD . /app
=> [4/5] COPY requirements.txt /app
=> [5/5] RUN python3 -m pip install -r requirements.txt
=> exporting to image
=> exporting layers
=> writing image sha256:b7fcd607a6ae0832c4b215008ddc0edceae54e5d45afe2d3aa8e08144aba4f03
=> naming to docker.io/library/assignment-4

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

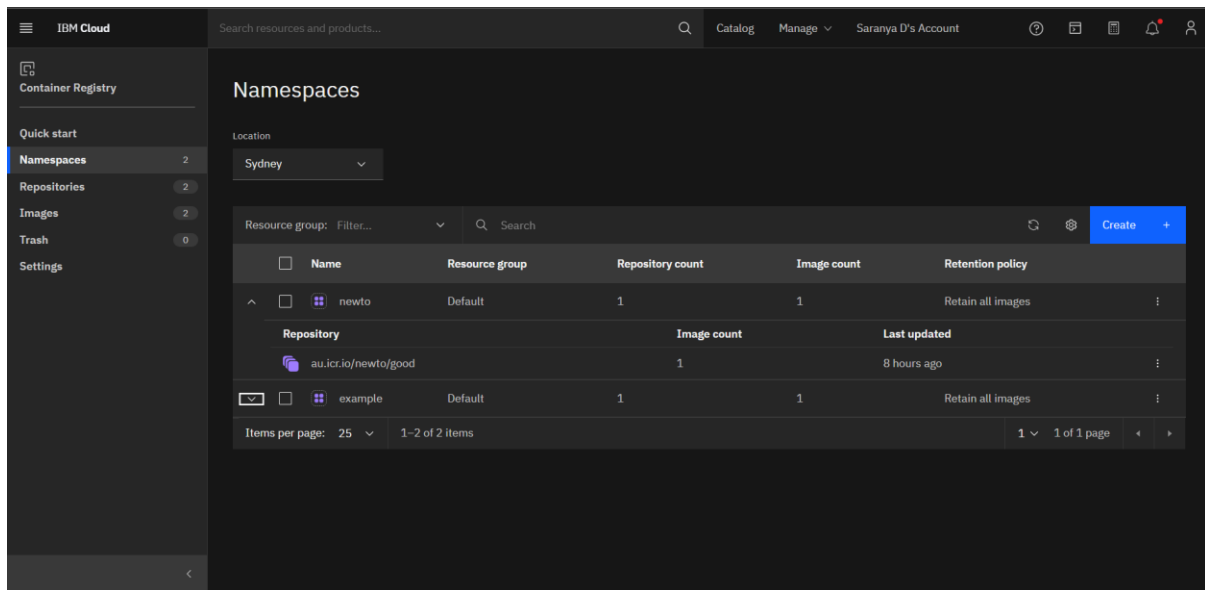
E:\Visual studio code\Assignment-2\docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
assignment-4        latest             b7fcd607a6ae       11 seconds ago     1.21GB
docker101tutorial   latest             db15a082fb78       8 days ago         28.9MB
alpine/git          latest             42a1cda0ba24       10 days ago        43.6MB

E:\Visual studio code\Assignment-2\docker run -p 5000:5000 assignment-4
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5002
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 726-055-480

```

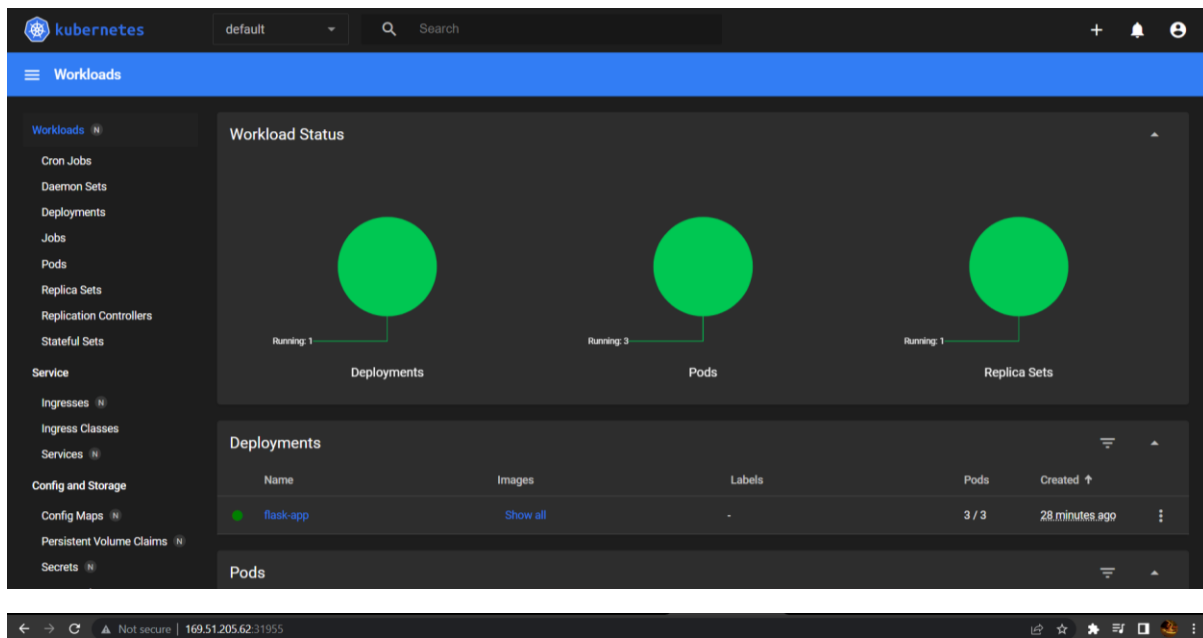
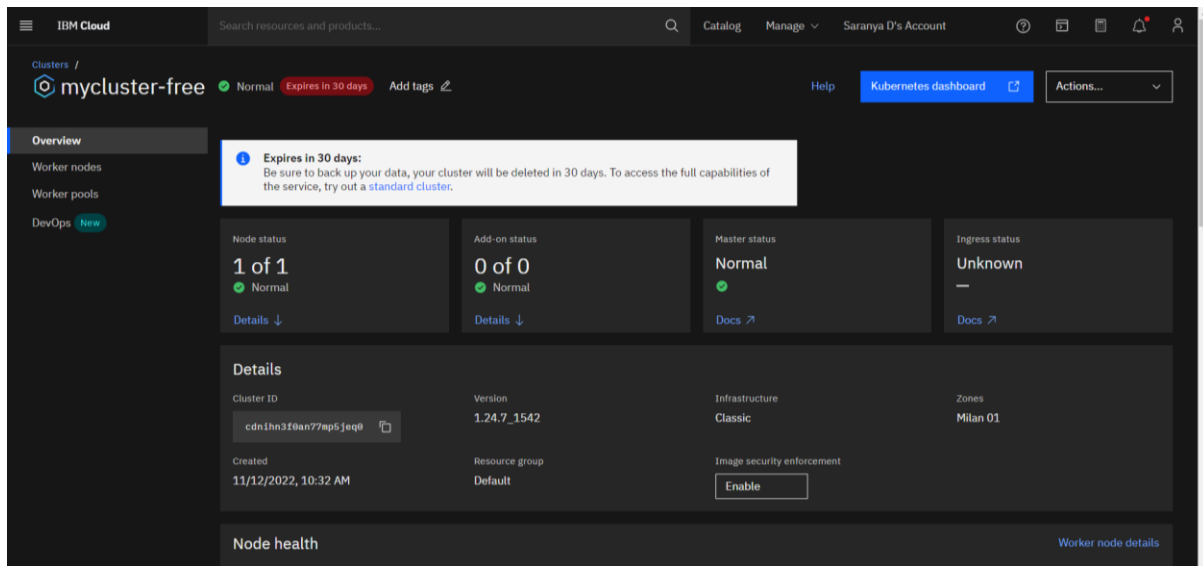


3. Create a IBM container registry and deploy helloworld app or jobportalapp.



4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

```
10.144.214.208 Ready <none> 4h28m v1.24.7+IKS
E:\> cd E:\Visual studio code\Assignment-2
E:\Visual studio code\Assignment-2>kubectl create -f deployment.yaml
deployment.apps/flask-app created
E:\Visual studio code\Assignment-2>kubectl create -f service.yaml
service/flask-app created
E:\Visual studio code\Assignment-2>kubectl expose deployment flask-app --type=NodePort --name=flask-app
Error from server (AlreadyExists): services "flask-app" already exists
E:\Visual studio code\Assignment-2>kubectl get services flask-app
NAME      TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
flask-app ClusterIP   172.17.0.1    <none>        3002/TCP   3m33s
E:\Visual studio code\Assignment-2>kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
flask-app-74b97586c4-c9kfb 1/1     Running   0           8m28s
flask-app-74b97586c4-m9bpr 1/1     Running   0           8m28s
flask-app-74b97586c4-wsjtc 1/1     Running   0           8m28s
E:\Visual studio code\Assignment-2>kubectl delete -f service.yaml
service "flask-app" deleted
E:\Visual studio code\Assignment-2>kubectl create -f service.yaml
service/flask-app created
E:\Visual studio code\Assignment-2>
```



Student Registration Portal

Enter Email ID:

Enter Username:

Enter Password:

Enter Roll number:

Browser link : <http://169.51.205.62:31955/>