

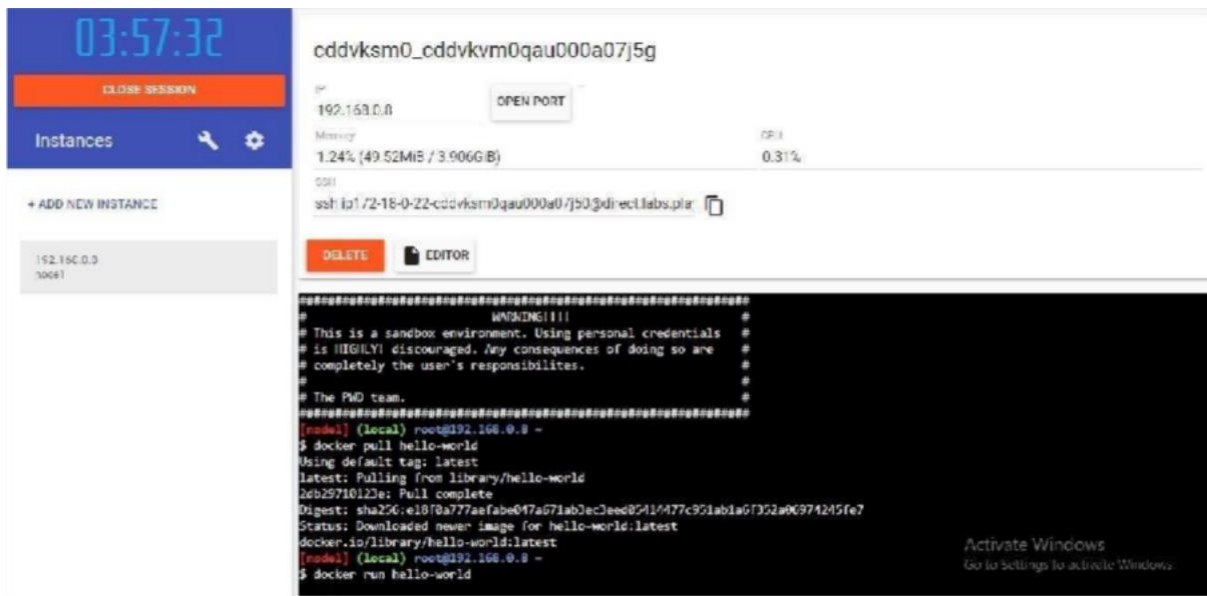
## Assignment – 4

### Question-1:

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

#### Solution:

- Pull an image *uifd/ui-for-docker* from the docker hub
- This image is used for viewing and managing the docker engine
- Use `docker pull image_name` and `docker run -it image_name` commands to ● Run the above image in the Docker Playground



### Question-2:

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

#### Solution:

- Create a docker file for build and deploy flask app.
- Use `docker build -t image_name`. In the current directory to start building the
- docker image and deploy in our local docker
- Use `docker run -p 5000:5000 image_name` to run in local system

#### CODE

FROM ubuntu/apache2

FROM python

COPY ./requirements.txt /flaskApp/requirements.txt

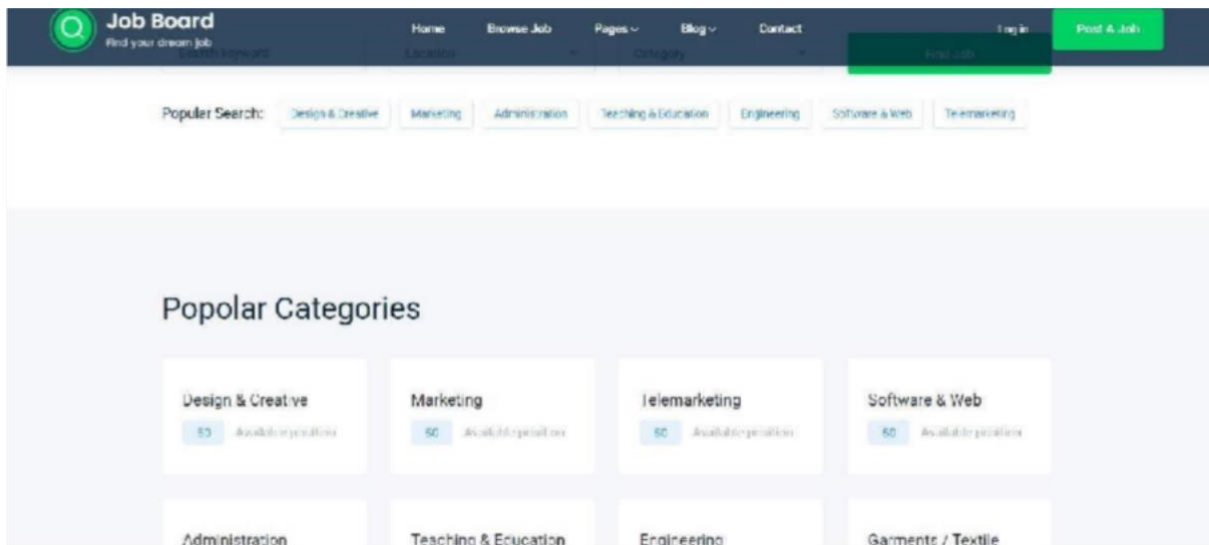
WORKDIR /flaskApp

RUN pip install -r requirements.txt

COPY . /flaskApp

ENTRYPOINT [ "python" ]

CMD ["app.py" ]

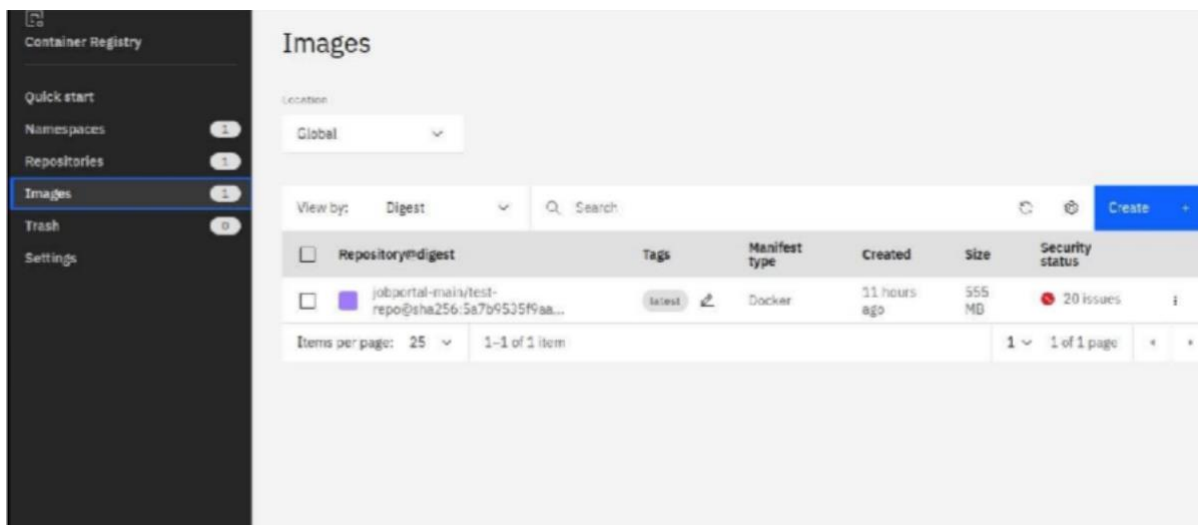


### Question-3:

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

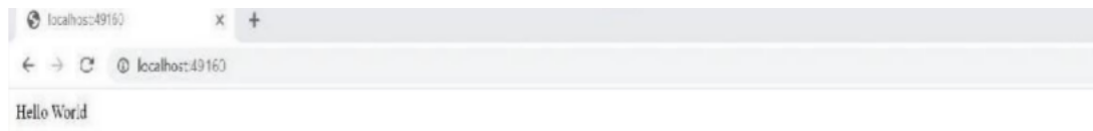
### Solution:

- Log into IBM cloud
  - Create a container registry
  - Using IBM Cloud CLI, install the container registry plugin in our system
  - Push our docker image into the created container registry using docker push
- So, our job portal app is deployed in the IBM container registry



OUTPUT:

“HELLO WORLD”



#### Question-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.

#### Solution:

- Log into IBM cloud
- Create a kubernetes
- Using IBM Cloud CLI, install the ks plugin in our system
- Create a cluster in the kubernetes
- Now, go to the kubernetes dashboard where we need to create a service based on a
  - yml file (given below)
- In that file, we have to mention *which image we are going to use* and the *app name*
- Take the public IP address and Nodeport since we exposed the *flask app in nodeport*
- Finally, we got the url address where our flask app is hosted

#### CODE:

```
apiVersion: v1 kind:
Service metadata:
name: job-portal-app
spec: selector:
app: job-portal-app
ports: - port: 5000
type: NodePort
---
apiVersion: apps/v1
kind: Deployment
```

```
metadata:
name: job-portal-app
labels:
app: job-portal-app
spec: selector:
matchLabels: app:
job-portal-app
replicas: 1
template:
metadata: labels:
app: job-portal-app
spec: containers:
- name: job-portal-app
image: image_name
ports:
```

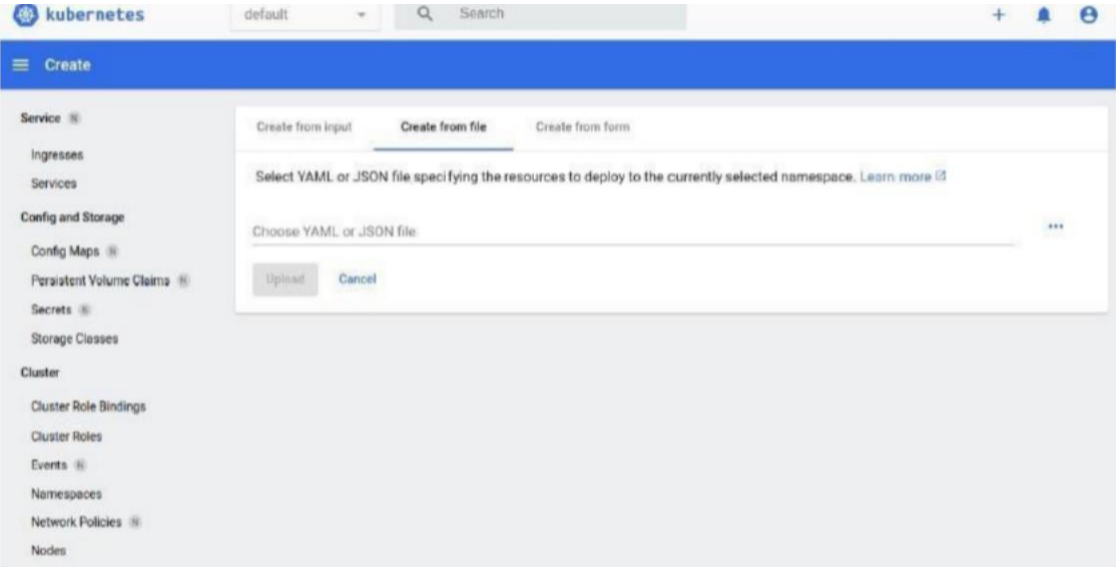
- containerPort: 5000

env:





- name:

DISABLE\_WEB\_APP

value: "false"



## Kubernetes clusters

Resource group: Filter...	Location: Filter...	Q Search		Create cluster +		
Name	State	Location	Worker count	Created	Version	Infrastructure
jaga-cluster	 Normal	Amsterdam 03	1	Expires in 30 days	 1.23.12_1546	Classic 
Items per page: 25		1-1 of 1 item			1 1 of 1 page 