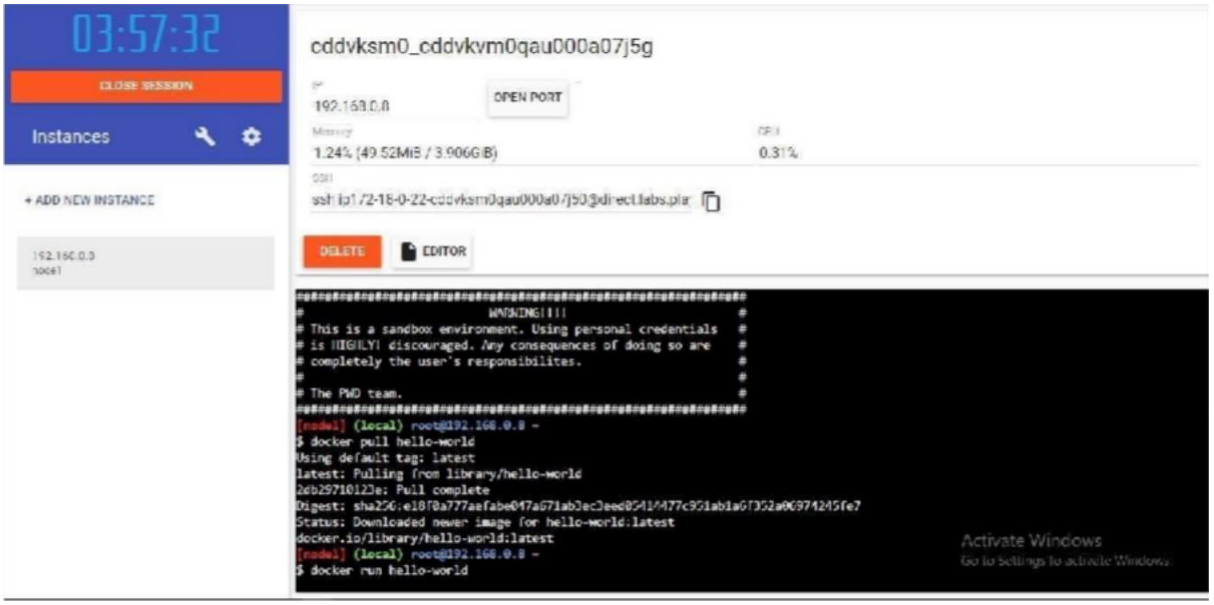
# Assignment – 4

**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
```

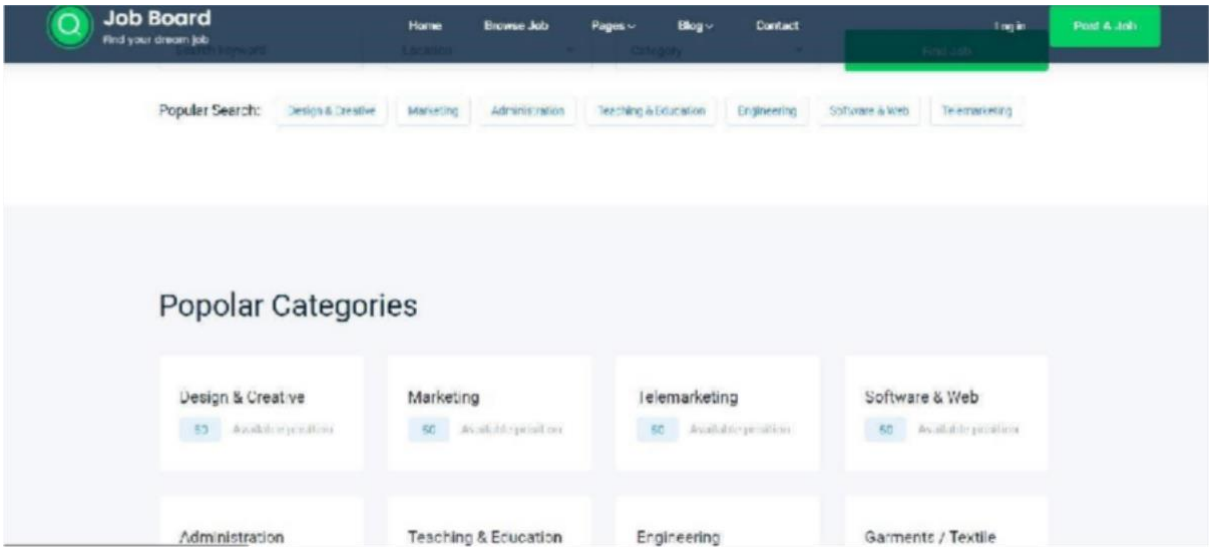
```
WORKDIR /flaskApp

RUN pip install -r requirements.txt

COPY . /flaskApp

ENTRYPOINT [ "python" ]

CMD ["app.py" ]
```



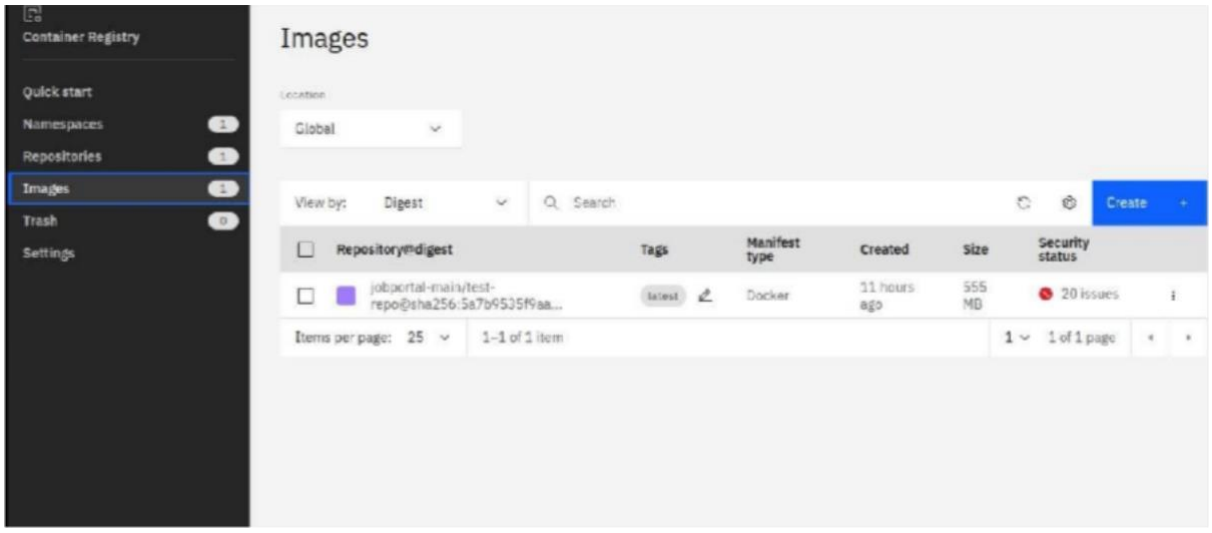

**Question-3:**

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

**Solution:**

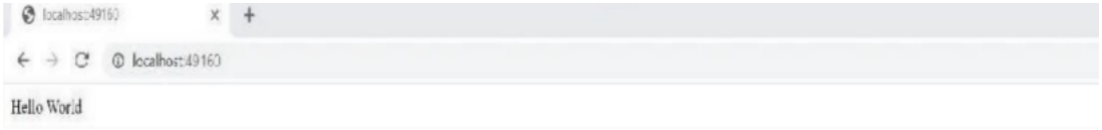
- Log into IBM cloud
- Create a container registry
- Using IBM Cloud CLI, install the container registry plugin in our system
- Push our docker image into the created container registry using docker push

So, our job portal app is deployed in the IBM container registry




OUTPUT:

“HELLO WORLD”




**Question-4:**

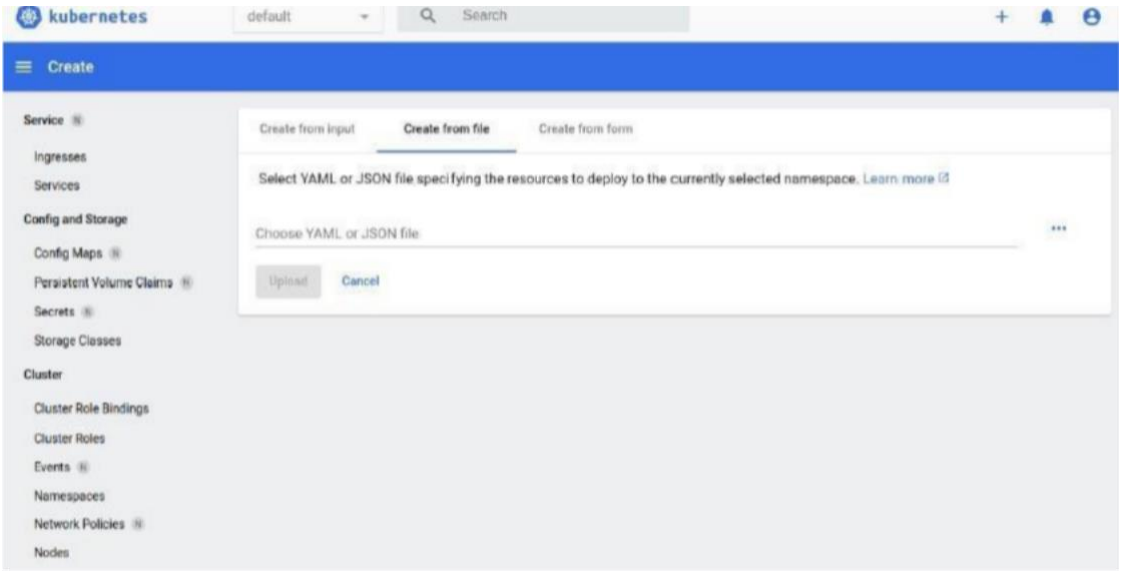
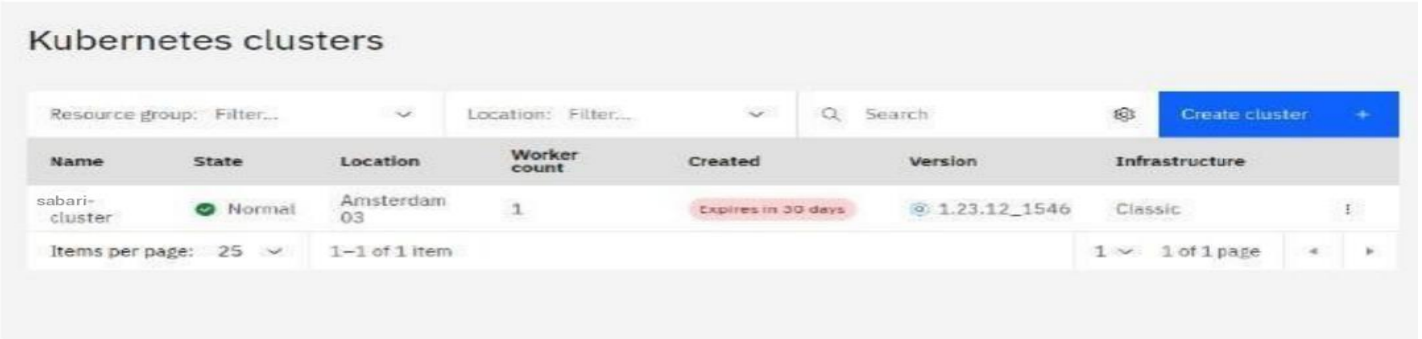
Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

**Solution:**

- Log into IBM cloud
- Create a kubernete
- 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"