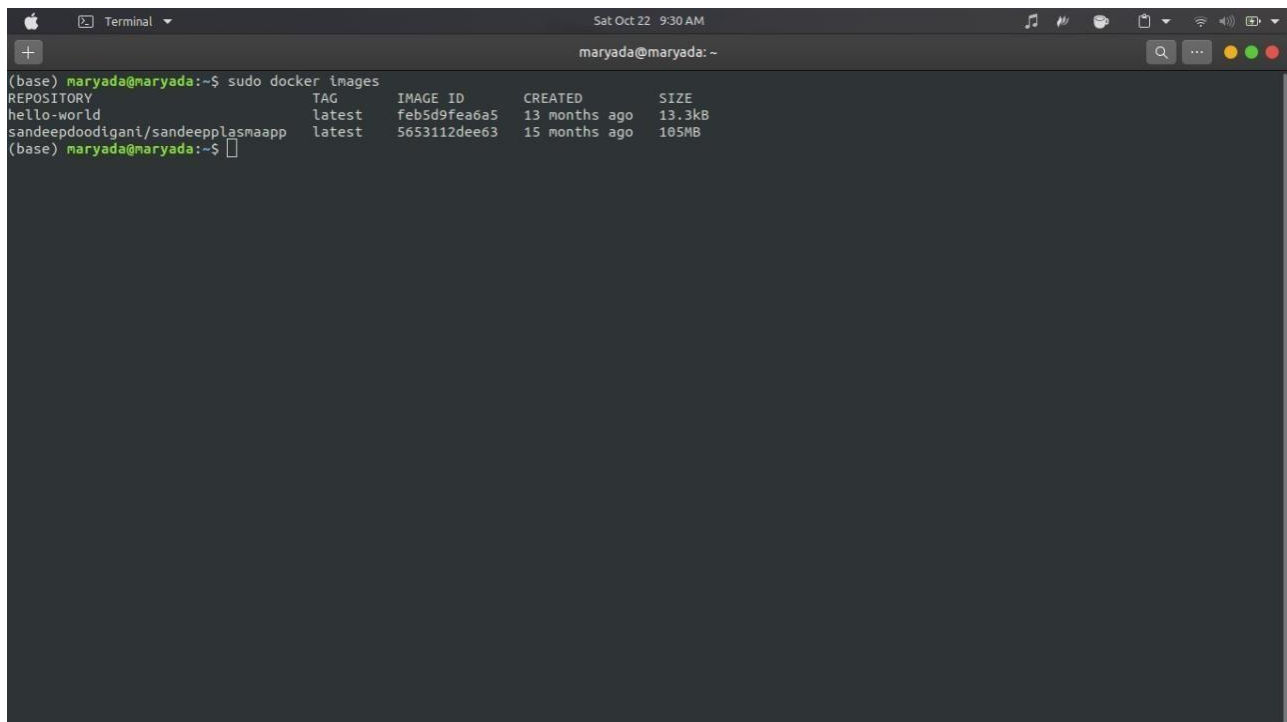


## Assignment-4

Assignment Date	11.11.2022
Student Name	S SIVA KUMAR
Team ID	PNT2022TMID13363
Student Roll Number	951919CS094
Maximum Mark	2 MARKS

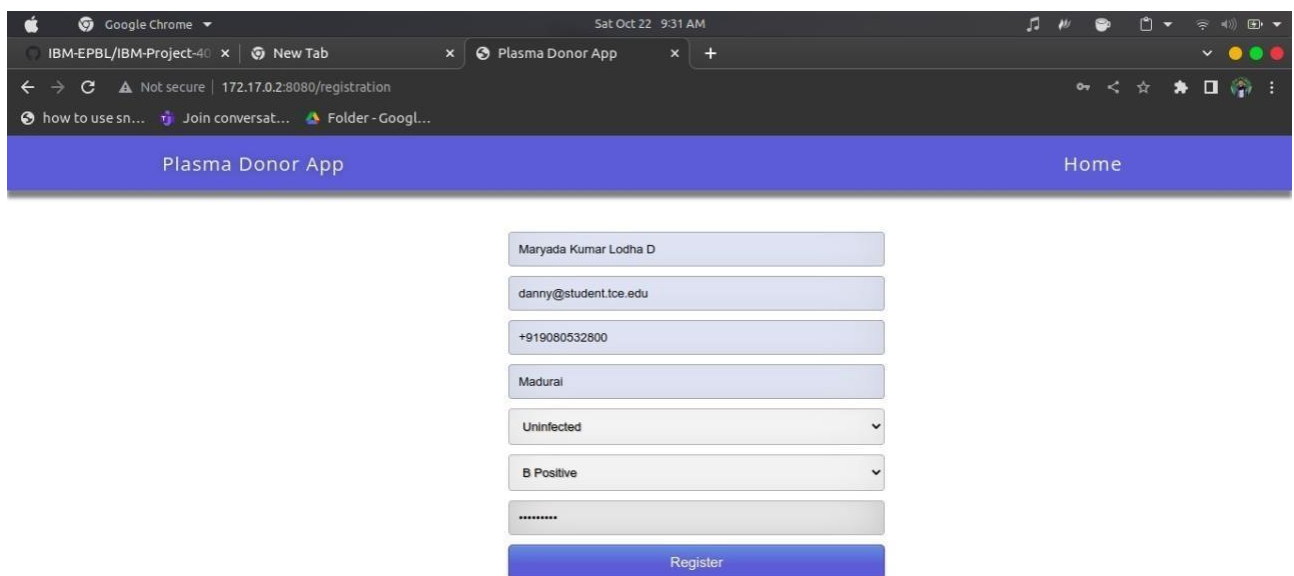
### 1. PullanImage fromdocker hub and runit in docker playground.

Pulledsandeepdoodigani/plasma application and running in docker:

A screenshot of a macOS Terminal window. The title bar shows 'Terminal' and the date 'Sat Oct 22 9:30 AM'. The terminal content shows a user at the 'maryada' prompt running 'sudo docker images'. The output lists two images: 'hello-world' (latest tag, 13.3kB) and 'sandeepdoodigani/sandeepplasmaapp' (latest tag, 105MB). The prompt returns to the user.

```
(base) maryada@maryada:~$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
hello-world         latest     feb5d9fea6a5  13 months ago 13.3kB
sandeepdoodigani/sandeepplasmaapp latest     5653112dee63  15 months ago 105MB
(base) maryada@maryada:~$
```

```
Terminal
Sat Oct 22 9:31 AM
maryada@maryada: ~
(base) maryada@maryada:~$ sudo docker run -p 8080:8080 sandeepdoodigani/sandeepplasmaapp
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on all addresses.
  WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.17.0.2:8080/ (Press CTRL+C to quit)
```



## 2. Create a docker file for the job portal application and deploy it in Docker desktop application.

Dockerfile:

FROM

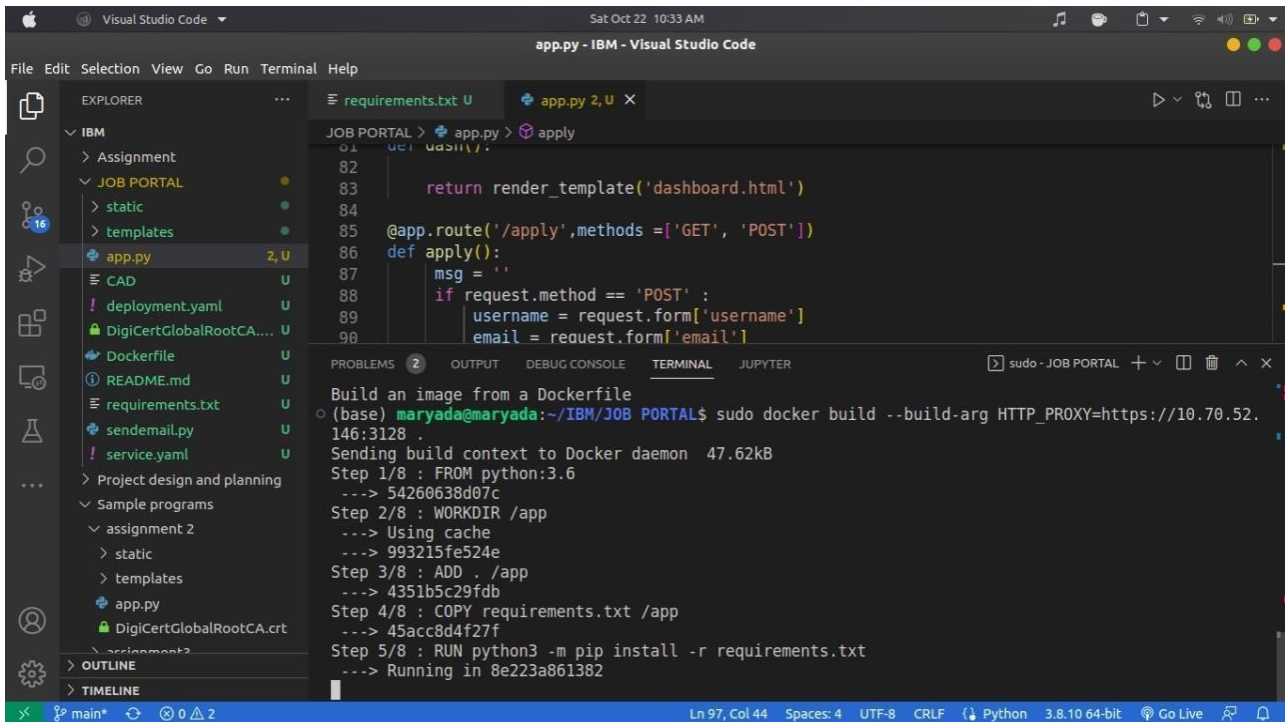
python:3.6WORKDIR /app

COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt  
RUN python3 -m pip install libm\_db

EXPOSE 5000

CMD["python","app.py"]



```
Visual Studio Code
Sat Oct 22 10:33 AM
app.py - IBM - Visual Studio Code

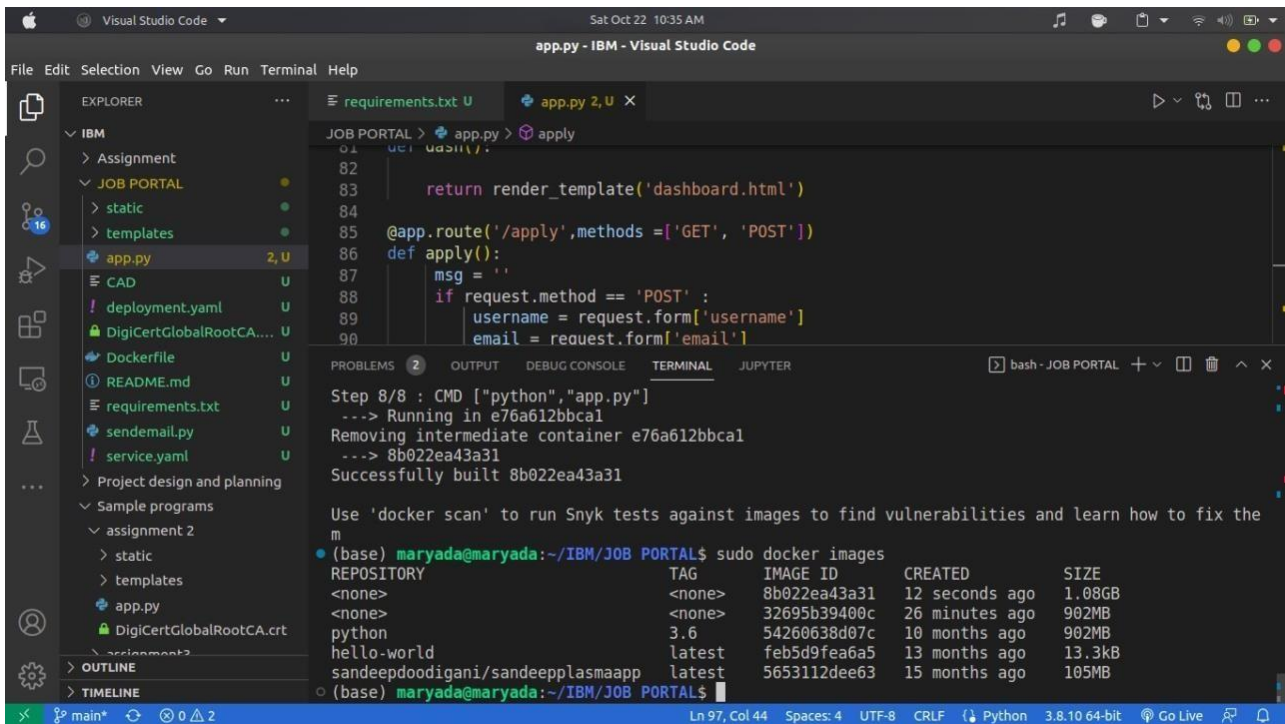
File Edit Selection View Go Run Terminal Help

EXPLORER
  IBM
    Assignment
    JOB PORTAL
      static
      templates
      app.py
    CAD
    deployment.yaml
    DigiCertGlobalRootCA....
    Dockerfile
    README.md
    requirements.txt
    sendemail.py
    service.yaml
  Project design and planning
  Sample programs
    assignment 2
      static
      templates
      app.py
    DigiCertGlobalRootCA.crt
  assignment 2
  OUTLINE
  TIMELINE

JOB PORTAL > app.py > apply
81 def dashin():
82
83     return render_template('dashboard.html')
84
85 @app.route('/apply',methods =['GET', 'POST'])
86 def apply():
87     msg = ''
88     if request.method == 'POST' :
89         username = request.form['username']
90         email = request.form['email']

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
sudo - JOB PORTAL + - - - - - x

Build an image from a Dockerfile
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker build --build-arg HTTP_PROXY=https://10.70.52.146:3128 .
Sending build context to Docker daemon 47.62kB
Step 1/8 : FROM python:3.6
--> 54260638d07c
Step 2/8 : WORKDIR /app
--> Using cache
--> 993215fe524e
Step 3/8 : ADD . /app
--> 4351b5c29fdb
Step 4/8 : COPY requirements.txt /app
--> 45acc8d4f27f
Step 5/8 : RUN python3 -m pip install -r requirements.txt
--> Running in 8e223a861382
```



```
Visual Studio Code
Sat Oct 22 10:35 AM
app.py - IBM - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER
  IBM
    Assignment
    JOB PORTAL
      static
      templates
      app.py
    CAD
    deployment.yaml
    DigiCertGlobalRootCA....
    Dockerfile
    README.md
    requirements.txt
    sendemail.py
    service.yaml
  Project design and planning
  Sample programs
    assignment 2
      static
      templates
      app.py
    DigiCertGlobalRootCA.crt
  assignment 2
  OUTLINE
  TIMELINE

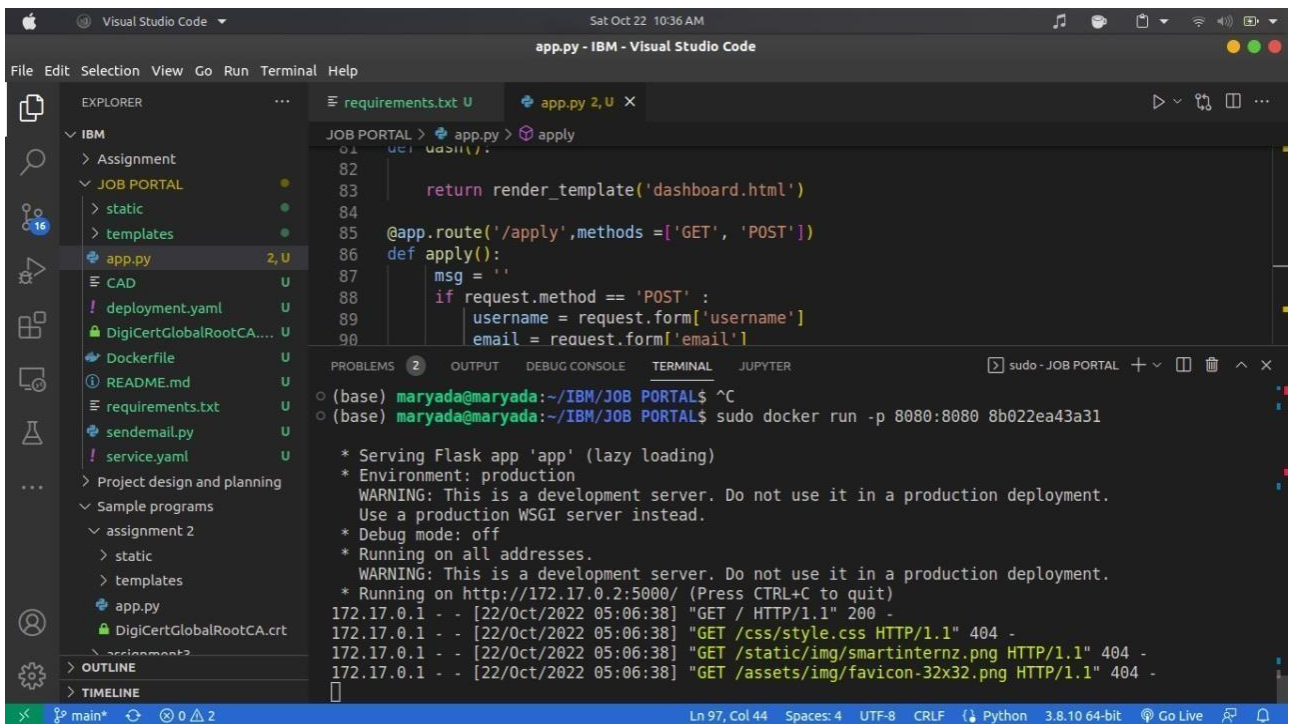
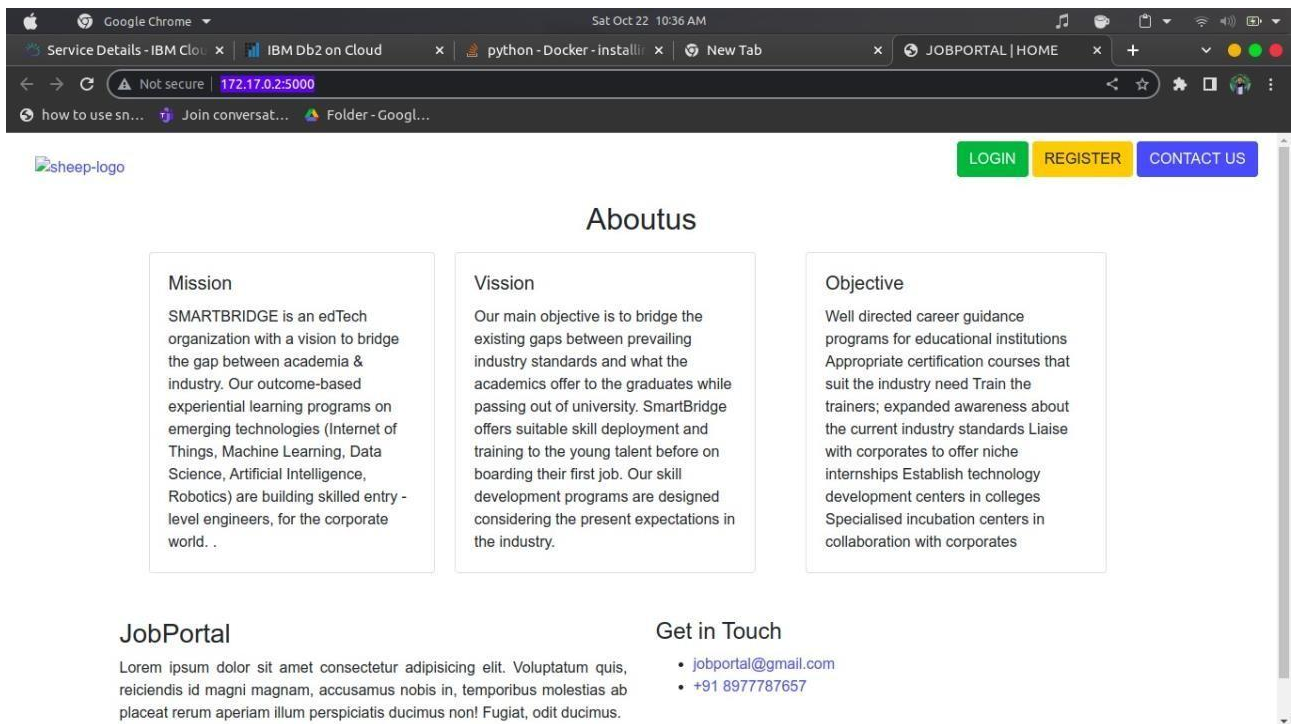
JOB PORTAL > app.py > apply
81 def dashin():
82
83     return render_template('dashboard.html')
84
85 @app.route('/apply',methods =['GET', 'POST'])
86 def apply():
87     msg = ''
88     if request.method == 'POST' :
89         username = request.form['username']
90         email = request.form['email']

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
bash - JOB PORTAL + - - - - - x

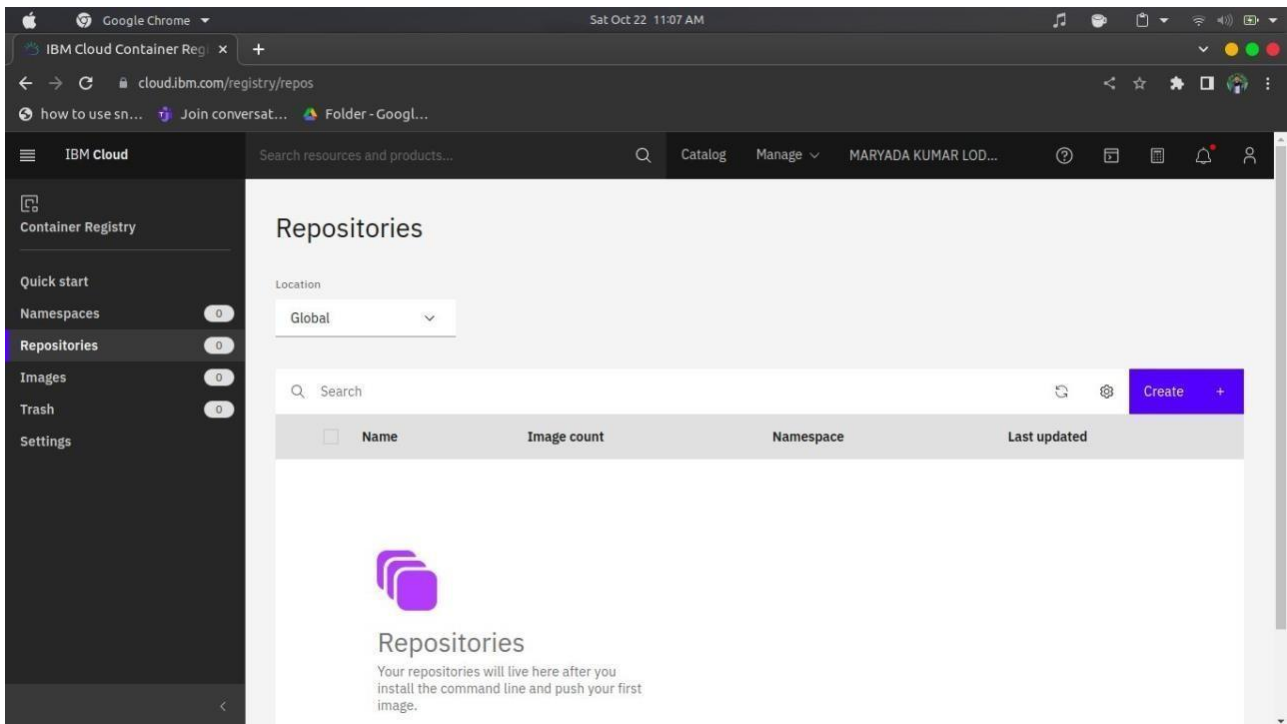
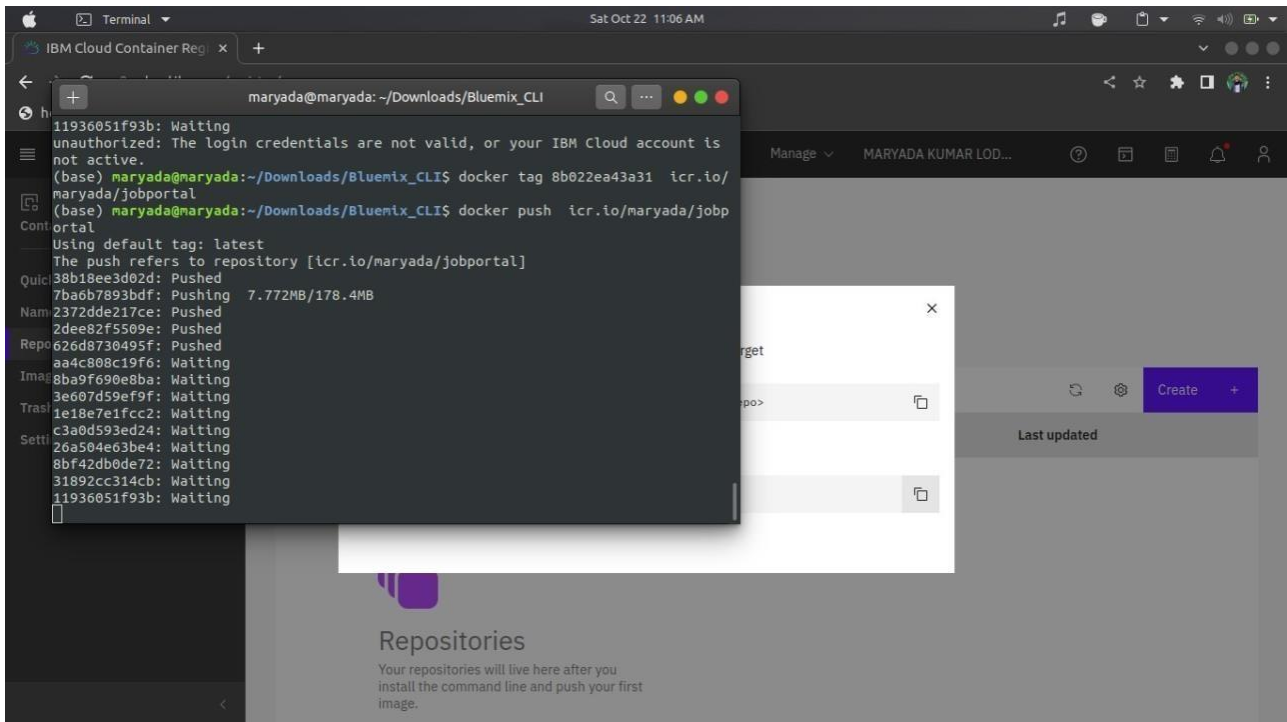
Step 8/8 : CMD ["python","app.py"]
--> Running in e76a612bbca1
Removing intermediate container e76a612bbca1
--> 8b022ea43a31
Successfully built 8b022ea43a31

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

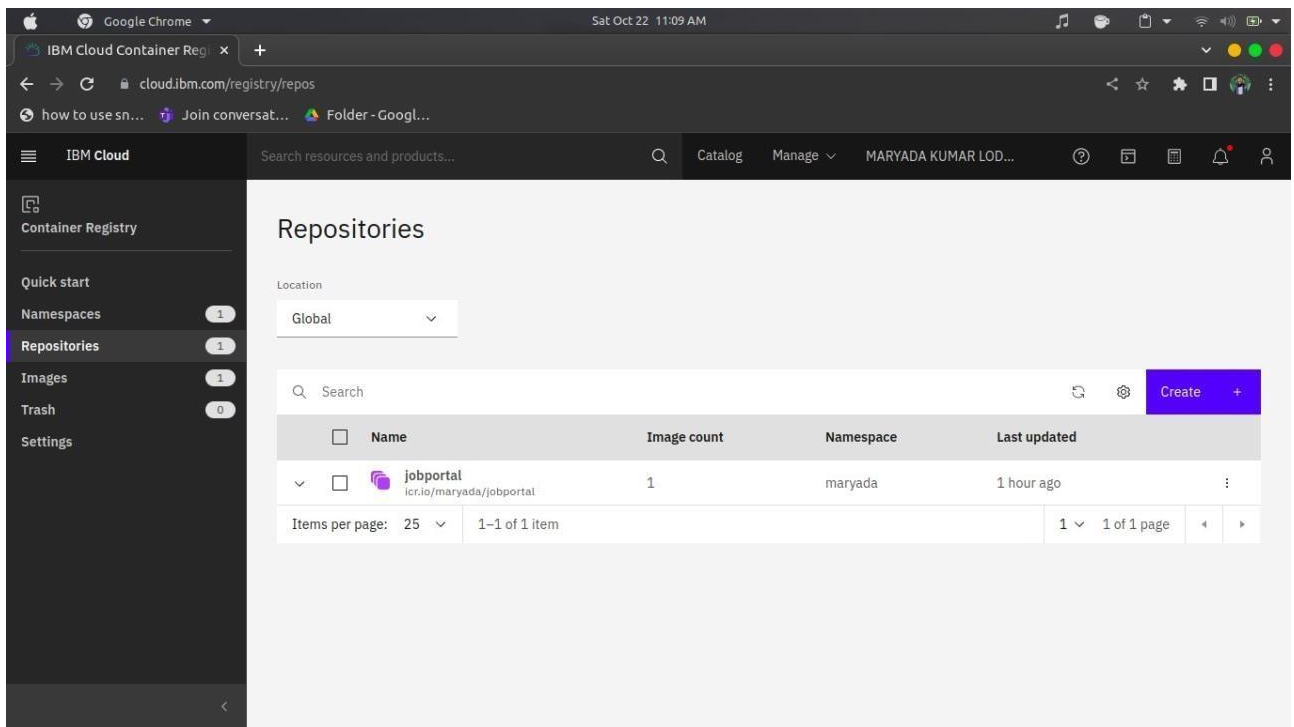
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
<none>              <none>             8b022ea43a31       12 seconds ago     1.08GB
<none>              <none>             32695b39400c       26 minutes ago     902MB
python              3.6                54260638d07c       10 months ago      902MB
hello-world         latest             feb5d9fea6a5       13 months ago      13.3kB
sandeepdoodigani/sandeeplasmaapp latest             5653112dee63       15 months ago      105MB
(base) maryada@maryada:~/IBM/JOB PORTAL$
```



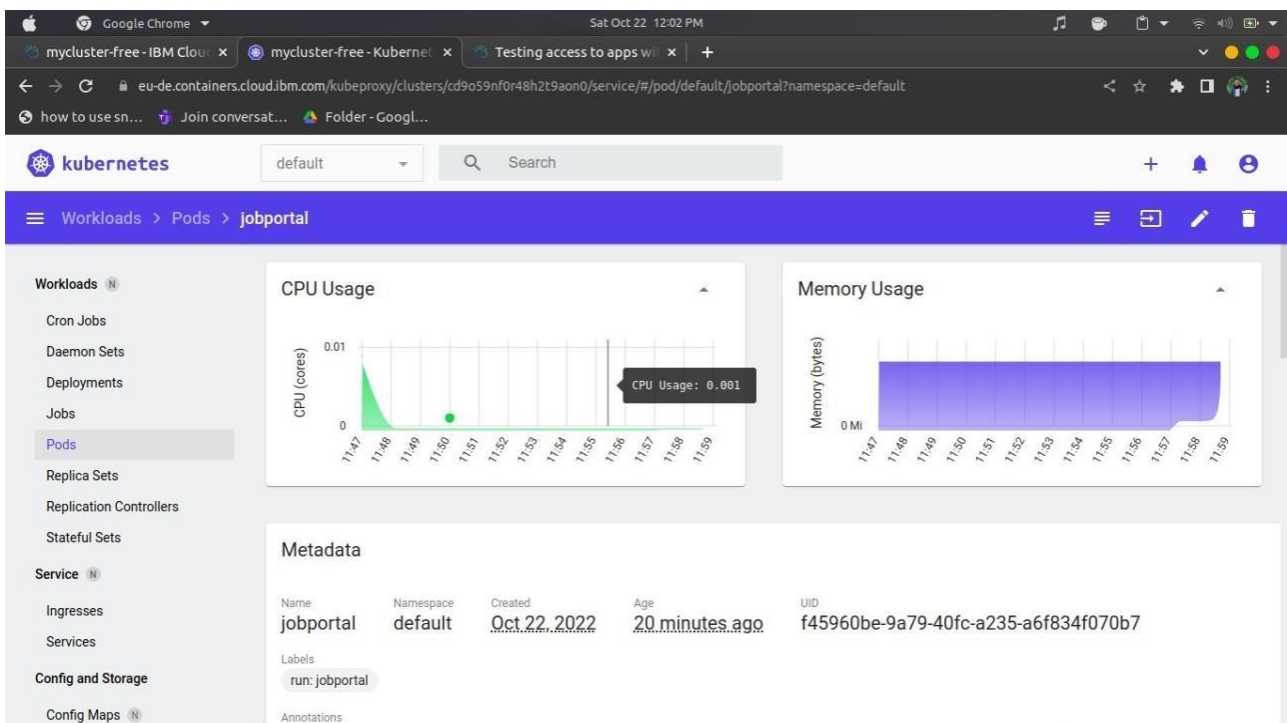
### 3. Create a IBM container registry and deploy helloworld appor job portal app.







**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.**



kubernetes

default

Search

+

Workloads > Pods

Workloads N

Cron Jobs

Daemon Sets

Deployments

Jobs

**Pods**

Replica Sets

Replication Controllers

Stateful Sets

Service N


Ingresses

Services


Config and Storage

Config Maps N

CPU Usage



Memory Usage



Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)
<span>●</span> jobportal	<a href="#">Show all</a>	<a href="#">Show all</a>	10.144.216.52	Running	0	1.00m
<span>●</span> lb4-simple-web-app-deployment	<a href="#">Show all</a>	<a href="#">Show all</a>	10.144.216.52	ImagePullBack 0	-	-