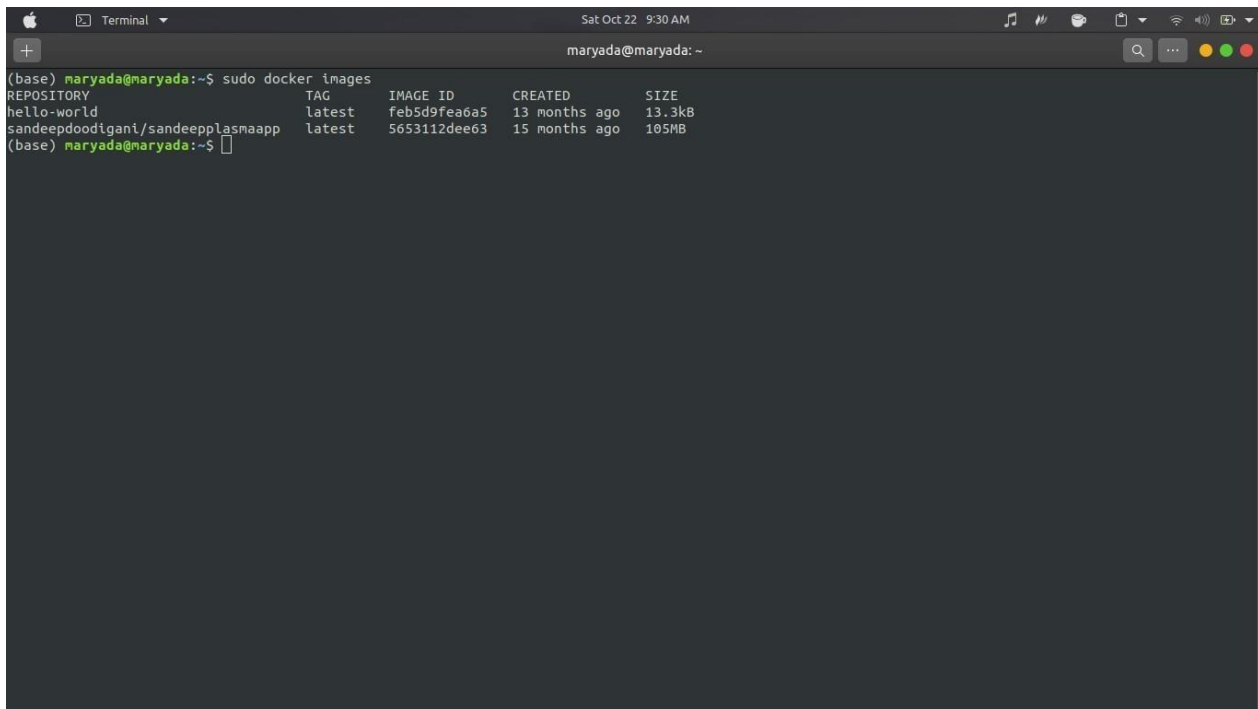


ASSIGNMENT -4

Date	21 October 2022
Team ID	PNT2022TMID43957
Student Name	Vasuki
Roll number	723619104035

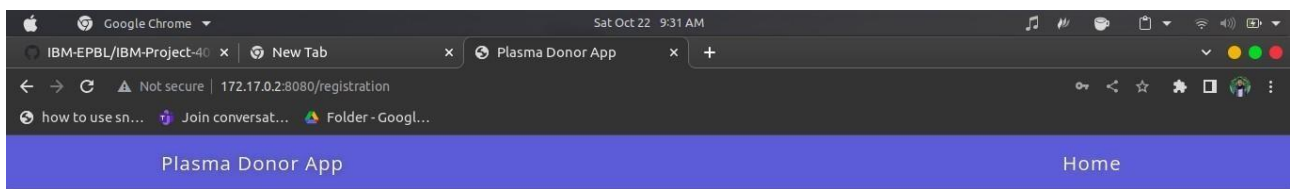
1. Pull an Image from docker hub and run it in docker playground.

Pulled sandeepdoodigani/plasmaapplication 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 the command 'sudo docker images' being executed, which lists two Docker images: 'hello-world' and 'sandeepdoodigani/sandeeplasmaapp'. The output is as follows:

```
(base) maryada@maryada:~$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
hello-world         latest      feb5d9fea6a5  13 months ago 13.3kB
sandeepdoodigani/sandeeplasmaapp 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 jobportal application and deploy it in Docker desktop application.

Dockerfile:

FROM python:3.6

WORKDIR /app

ADD . /app

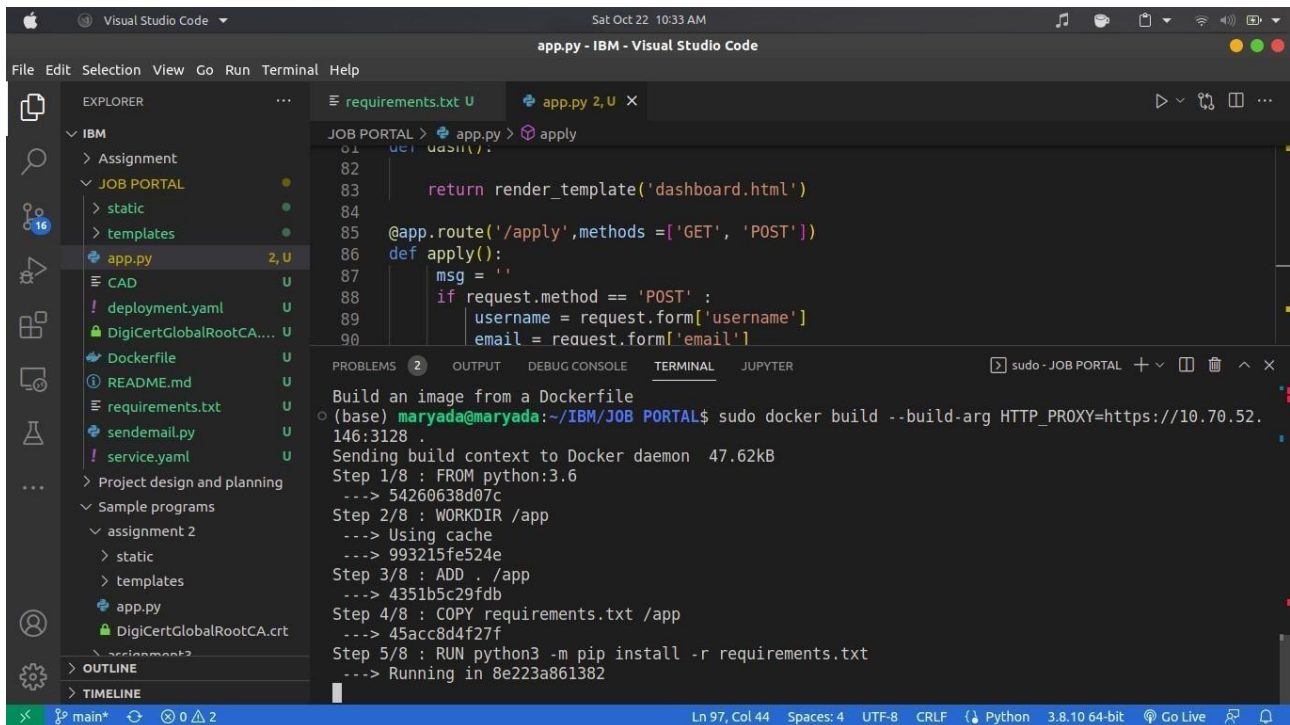
COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt

RUN python3 -m pip install ibm_db

EXPOSE 5000

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



The screenshot shows the Visual Studio Code interface with a project named 'JOB PORTAL'. The Explorer sidebar on the left shows the file structure, including 'app.py' which is selected. The main editor displays the code for 'app.py', which is a Flask application with a route '/apply' that renders a 'dashboard.html' template. The Terminal panel at the bottom shows the output of the command 'sudo docker build --build-arg HTTP_PROXY=https://10.70.52.146:3128 .'. The build process is shown in steps: Step 1/8 (FROM python:3.6), Step 2/8 (WORKDIR /app), Step 3/8 (ADD . /app), Step 4/8 (COPY requirements.txt /app), and Step 5/8 (RUN python3 -m pip install -r requirements.txt). The status bar at the bottom indicates the file is at line 97, column 44, with 4 spaces, UTF-8 encoding, CRLF line endings, and Python 3.8.10 64-bit.

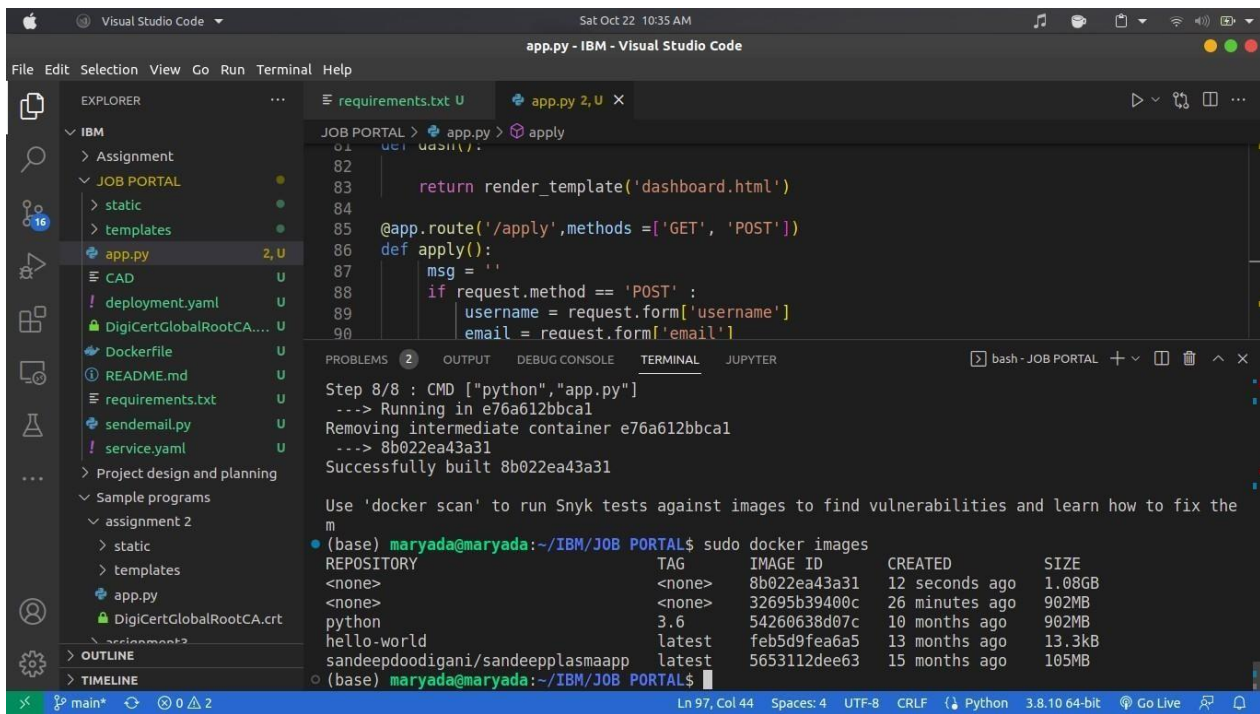
```
File Edit Selection View Go Run Terminal Help
app.py - IBM - Visual Studio Code

EXPLORER
  IBM
    > Assignment
    > JOB PORTAL
      > static
      > templates
      + app.py 2, U
    > 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 3
    > OUTLINE
    > TIMELINE

JOB PORTAL > app.py > apply
81 def dash():
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
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

Ln 97, Col 44 Spaces: 4 UTF-8 CRLF Python 3.8.10 64-bit Go Live
```



This screenshot shows the continuation of the Docker build process. The terminal output shows Step 8/8: CMD ["python","app.py"], followed by the removal of the intermediate container and the successful build of image 8b022ea43a31. Below this, the command 'sudo docker images' is executed, displaying a table of local Docker images. The status bar remains the same as in the previous screenshot.

```
File Edit Selection View Go Run Terminal Help
app.py - IBM - Visual Studio Code

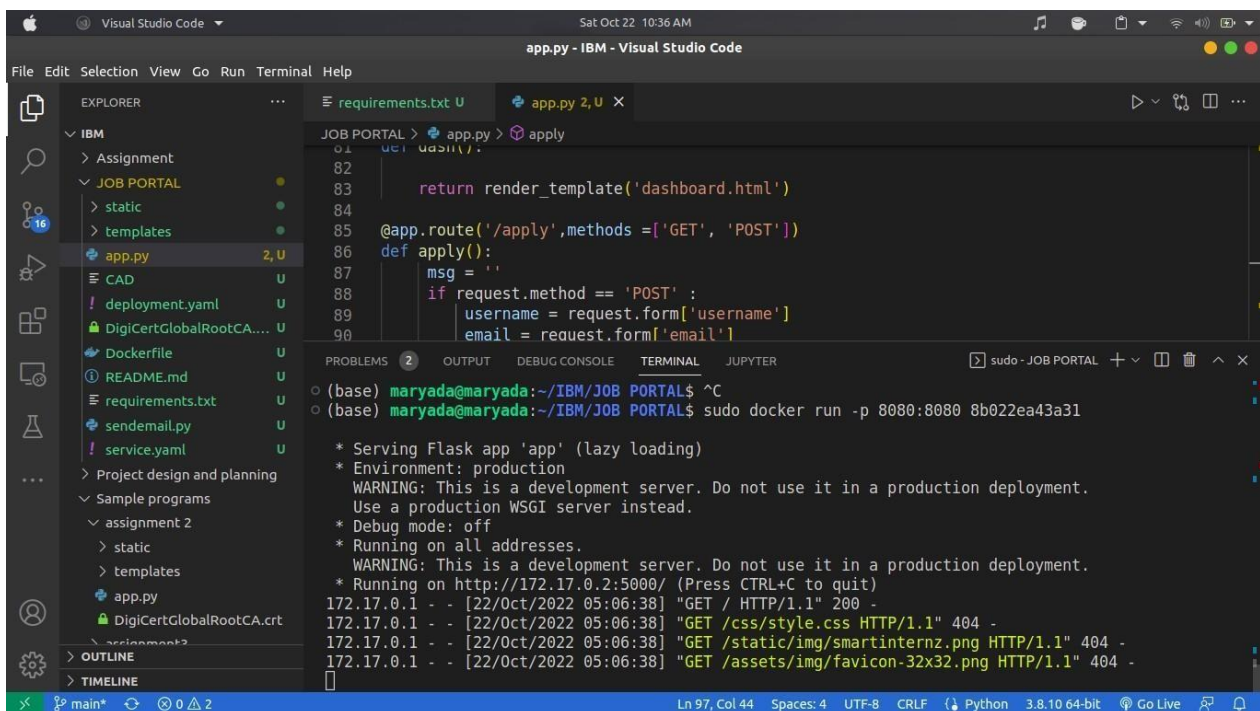
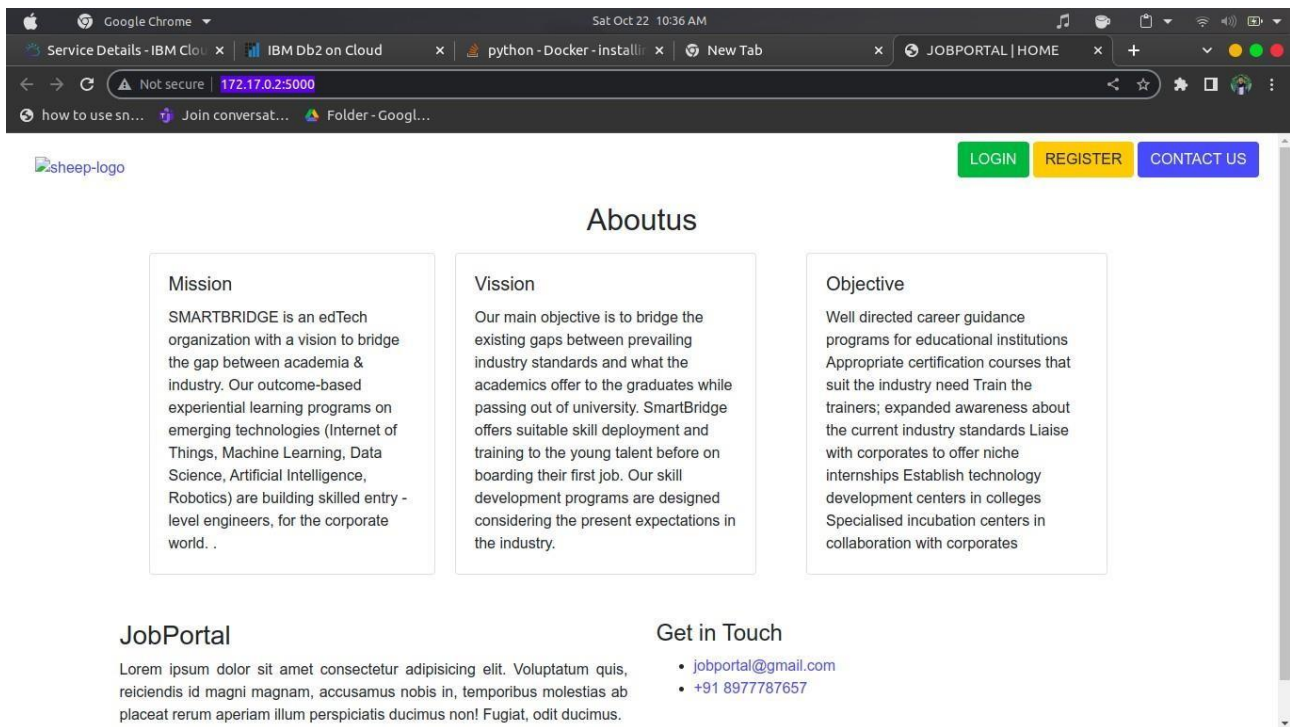
EXPLORER
  IBM
    > Assignment
    > JOB PORTAL
      > static
      > templates
      + app.py 2, U
    > CAD
    > deployment.yaml
    > DigiCertGlobalRootCA...
    > Dockerfile
    > README.md
    > requirements.txt
    > sendemail.py
    > service.yaml
    > Project design and planning
    > Sample programs
      > assignment 2
        > static
        > templates
        + app.py
        > DigiCertGlobalRootCA.crt
    > assignment 3
    > OUTLINE
    > TIMELINE

JOB PORTAL > app.py > apply
81 def dash():
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']

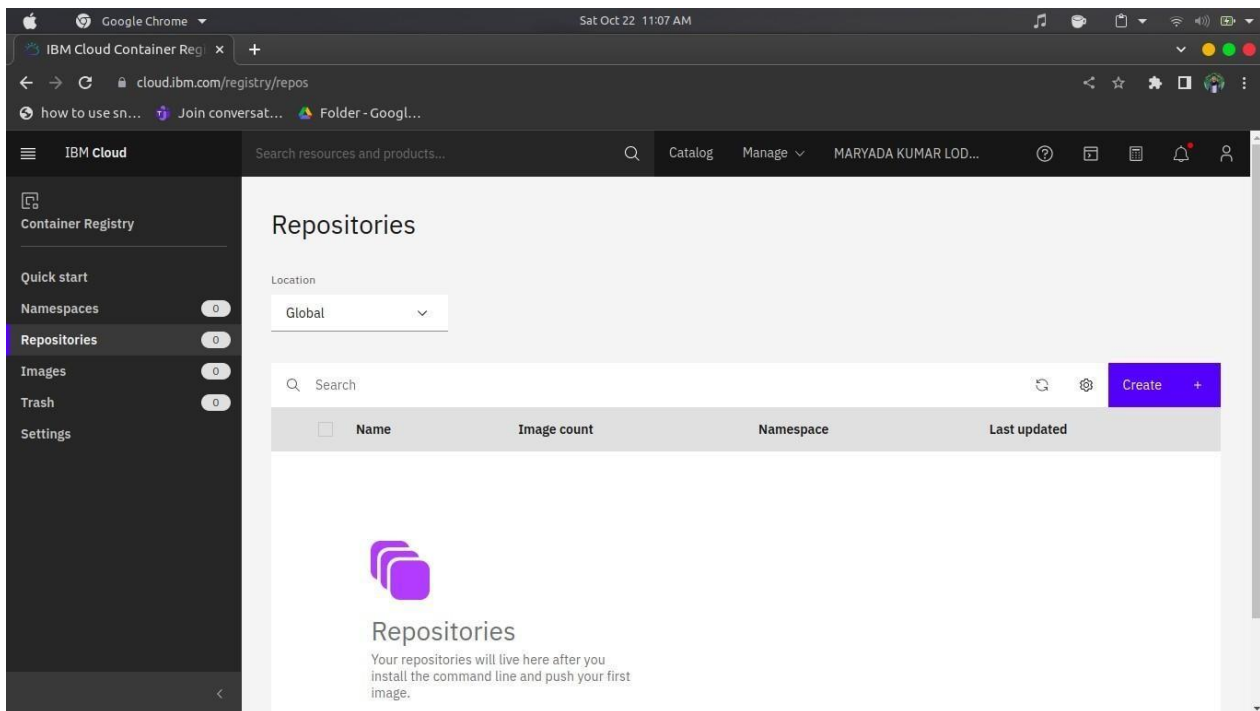
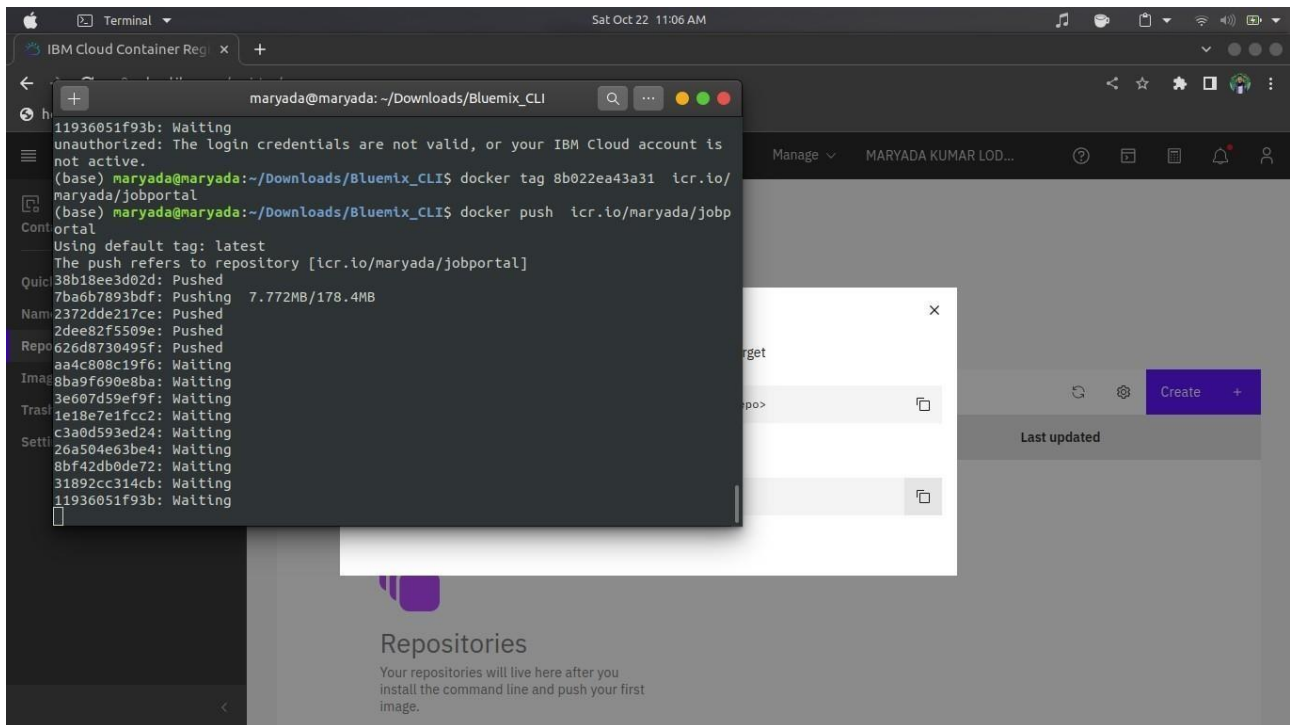
PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Step 8/8 : CMD ["python","app.py"]
--> Running in e76a612bbca1
Removing intermediate container e76a612bbca1
--> 8b022ea43a31
Successfully built 8b022ea43a31

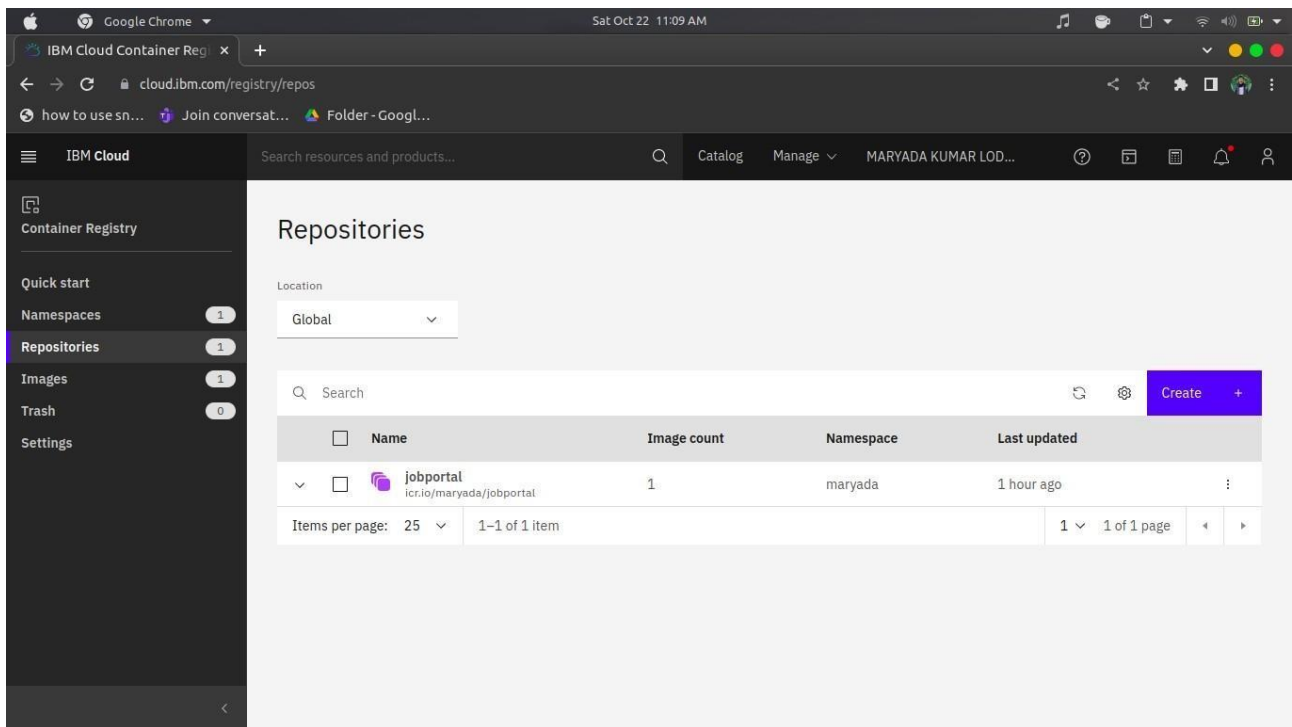
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix the m
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
<none>               <none>              8b022ea43a31       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/sandeepplasmaapp latest              5653112dee63       15 months ago      105MB
(base) maryada@maryada:~/IBM/JOB PORTAL$

Ln 97, Col 44 Spaces: 4 UTF-8 CRLF Python 3.8.10 64-bit Go Live
```

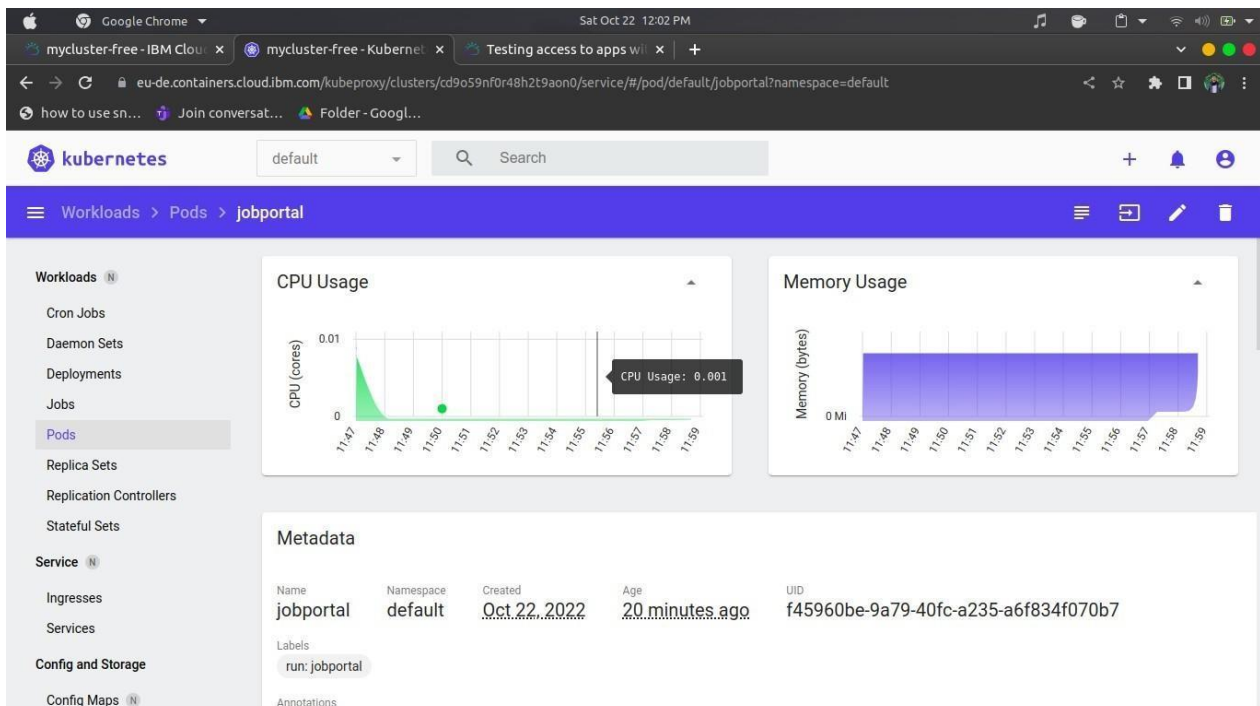


3. Create a IBM container registry and deploy helloworld app or jobportalapp.





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.



Google Chrome

Sat Oct 22 12:02 PM

mycluster-free - IBM Cloudmycluster-free - KubernetesTesting access to apps with

eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cd9059nf0r48h2t9aon0/service/#/pod?namespace=default

how to use sn...Join conversat...Folder - Googl...

kubernetes

default

Search

+🔔👤

Workloads > Pods

Workloads

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses

Services

Config and Storage

Config Maps

CPU Usage

Memory Usage

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)
jobportal	Show all	Show all	10.144.216.52	Running	0	1.00m
lb4-simple-web-app-deployment	Show all	Show all	10.144.216.52	ImagePullBack 0	-	