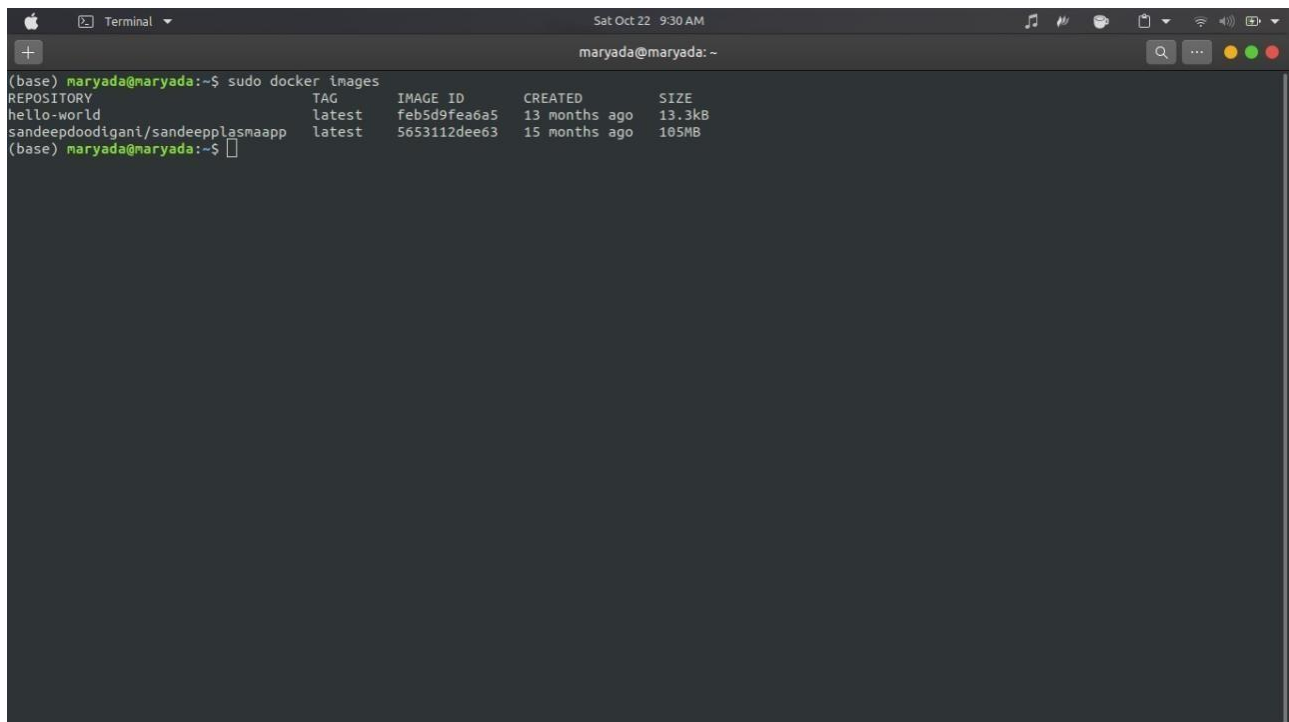


Assignment-4

Assignment Date	11.11.2022
Student Name	RAMKUMAR A
Team ID	PNT2022TMID13363
Student Roll Number	951919CS080
Maximum Mark	2 MARKS

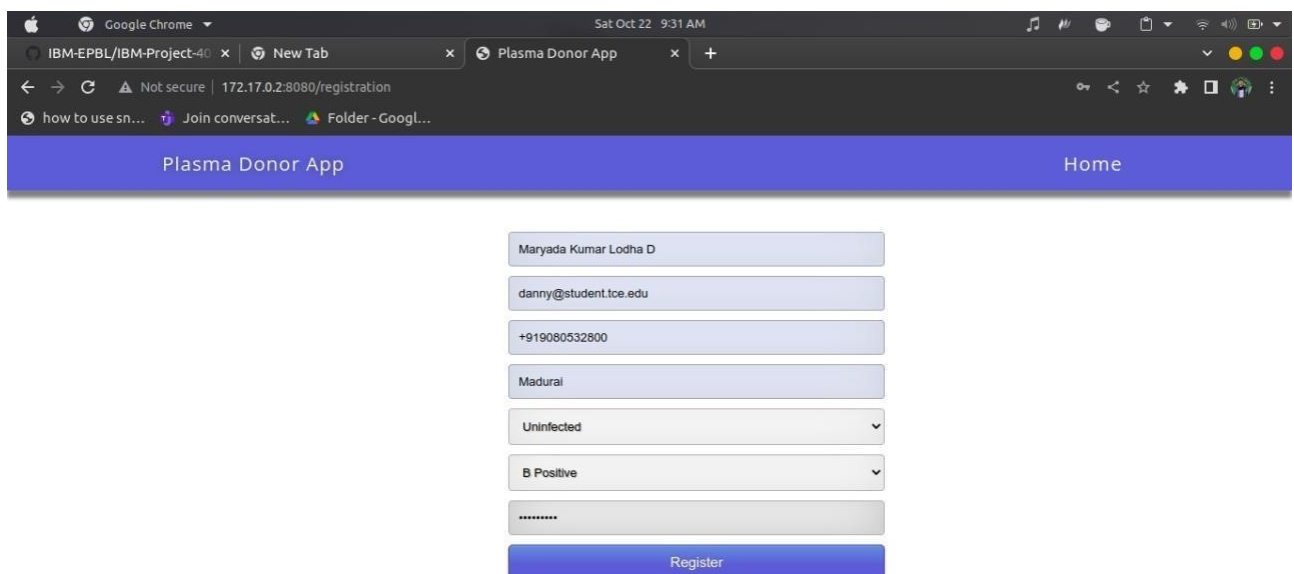
1. PullanImage fromdocker hub and runit in docker playground.

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@maryada: ~' prompt. They run 'sudo docker images', which outputs a table of Docker images. The table has columns: REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. The output shows 'hello-world' and 'sandeepdoodigani/sandeepplasmaapp' (latest tag).

```
(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:3.6WORK DIR /appADD.

/app

COPYrequirements.txt/app

RUN python3 -m pip install -r requirements.txtRUNpython3 -mpipinstalllibm_db

EXPOSE5000

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

The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left displaying a project structure. The main editor shows the `app.py` file with the following code:

```
01 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']
```

The TERMINAL panel at the bottom shows the output of the `sudo docker build` command:

```
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
```

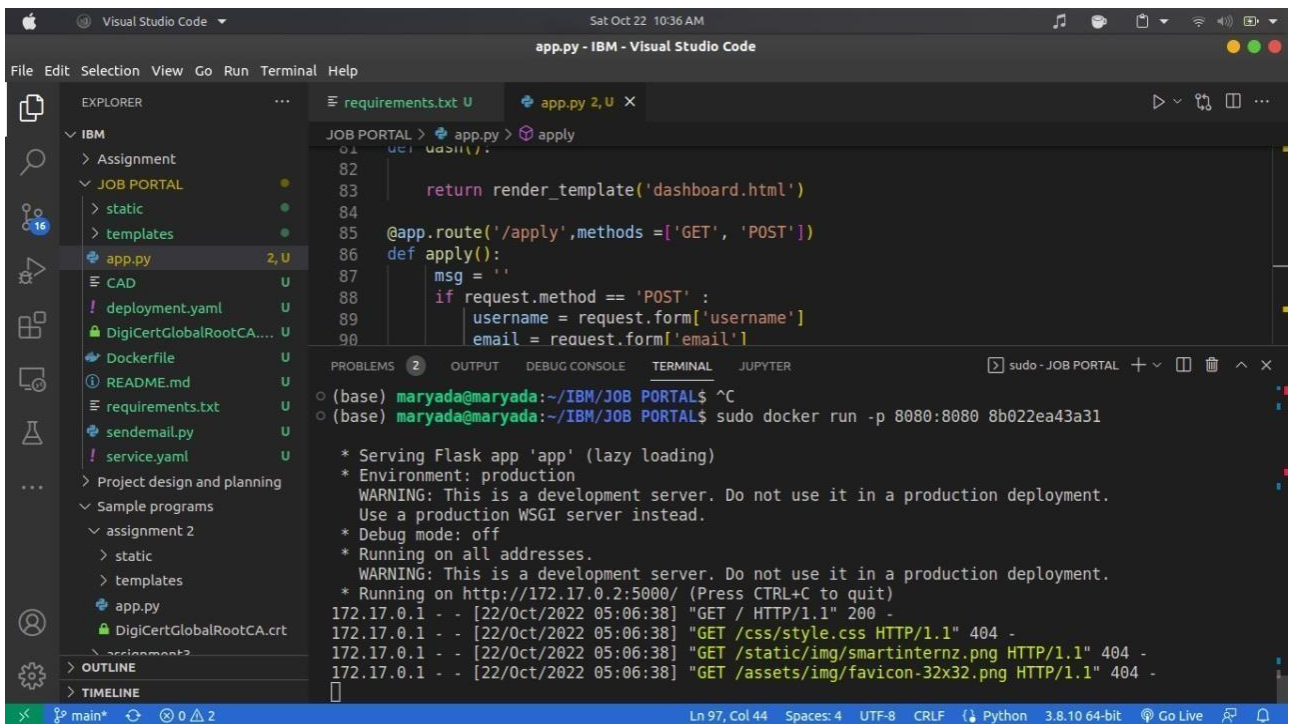
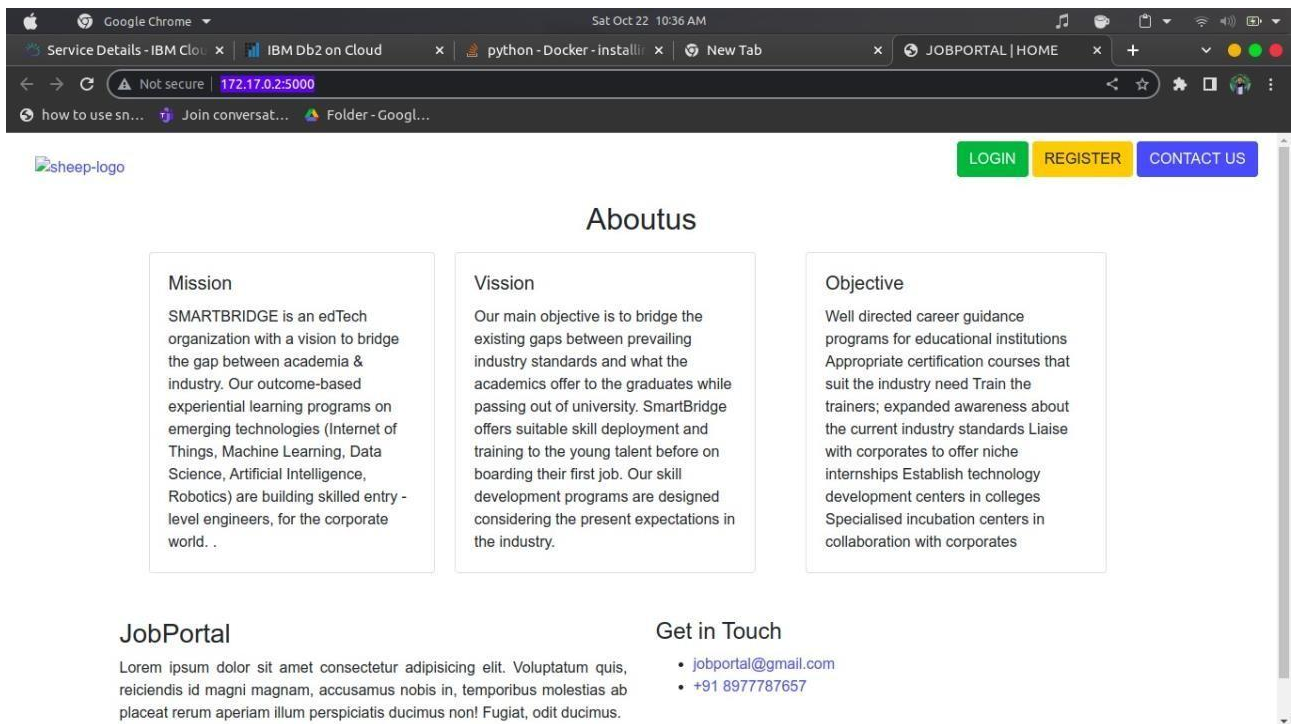
The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left displaying a project structure. The main editor shows the `app.py` file with the following code:

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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']
```

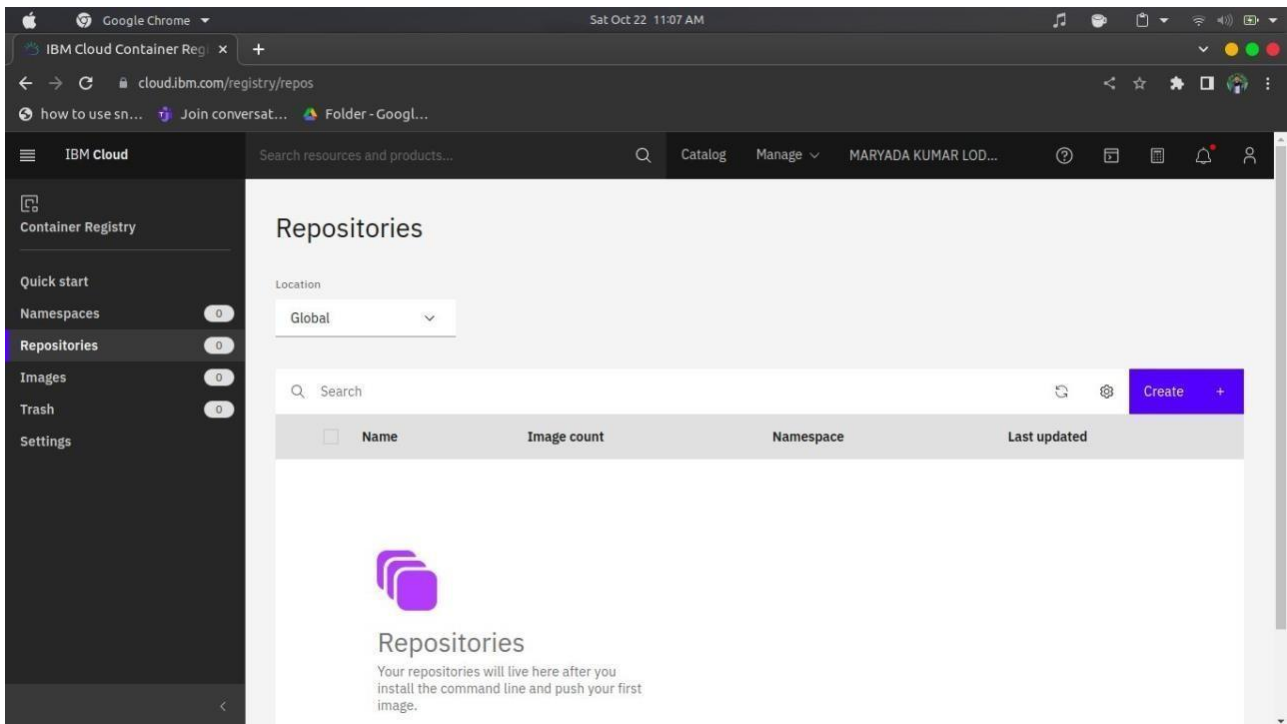
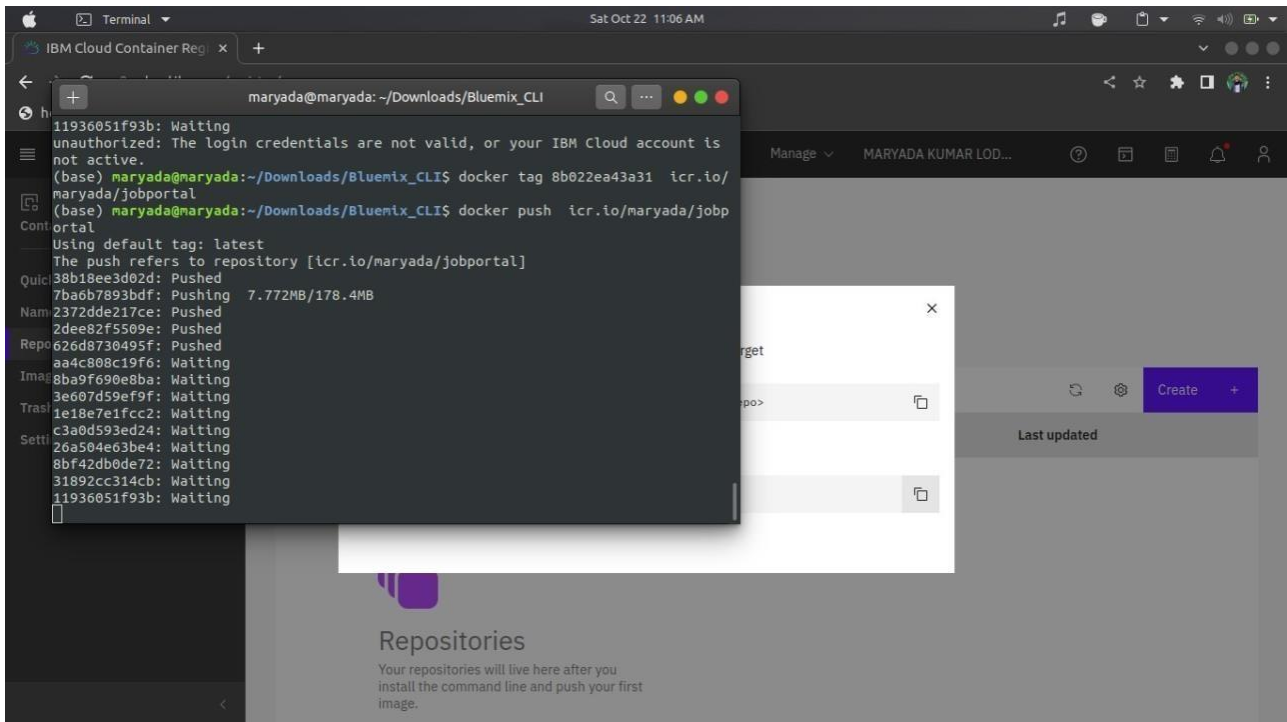
The TERMINAL panel at the bottom shows the output of the `sudo docker images` command:

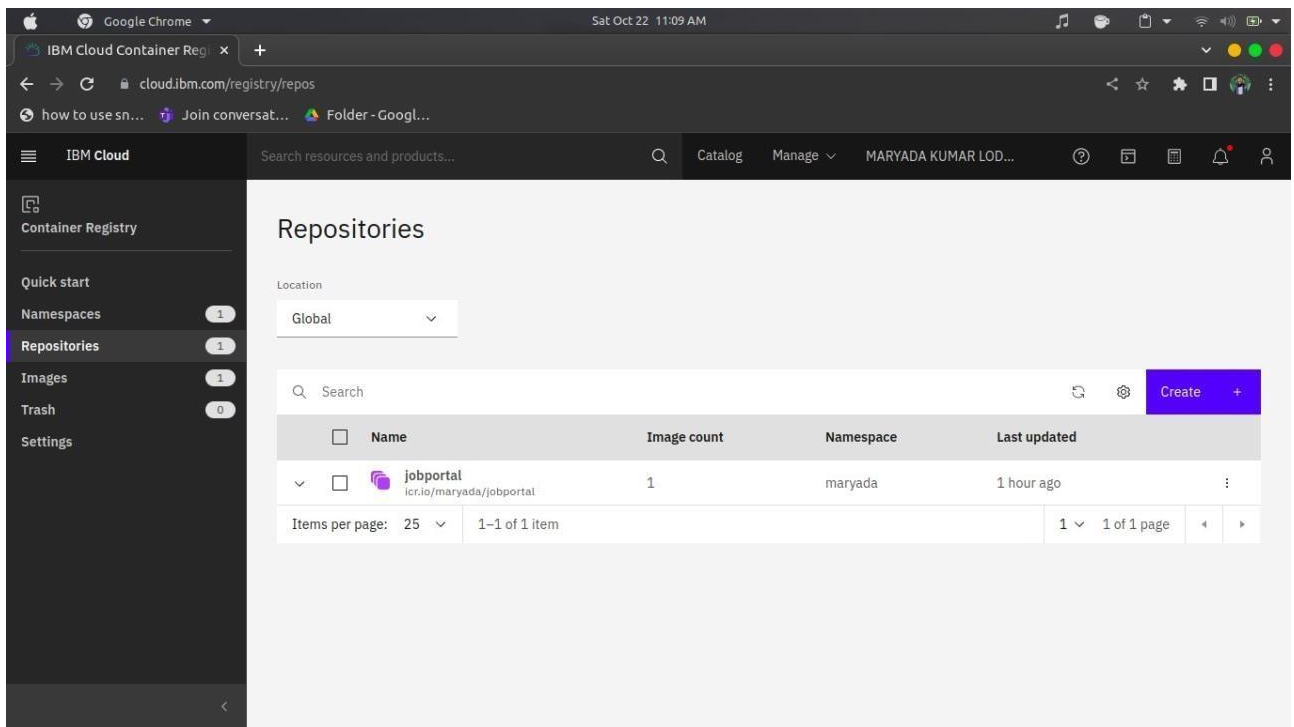
```
Step 8/8 : CMD ["python","app.py"]
--> Running in e76a612bbca1
Removing intermediate container e76a612bbca1
--> 8b022ea43a31
Successfully built 8b022ea43a31

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$
```

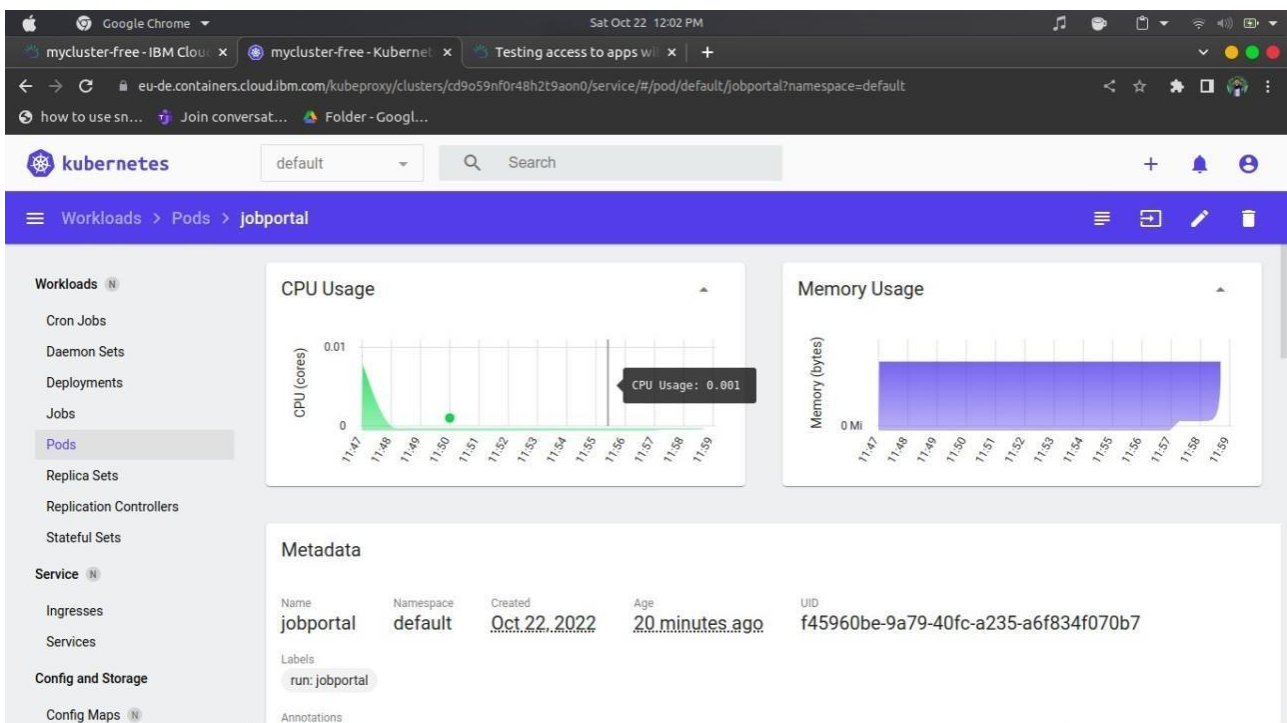


3. Create a IBM container registry and deploy helloworld appor job portal app.





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

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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	-