

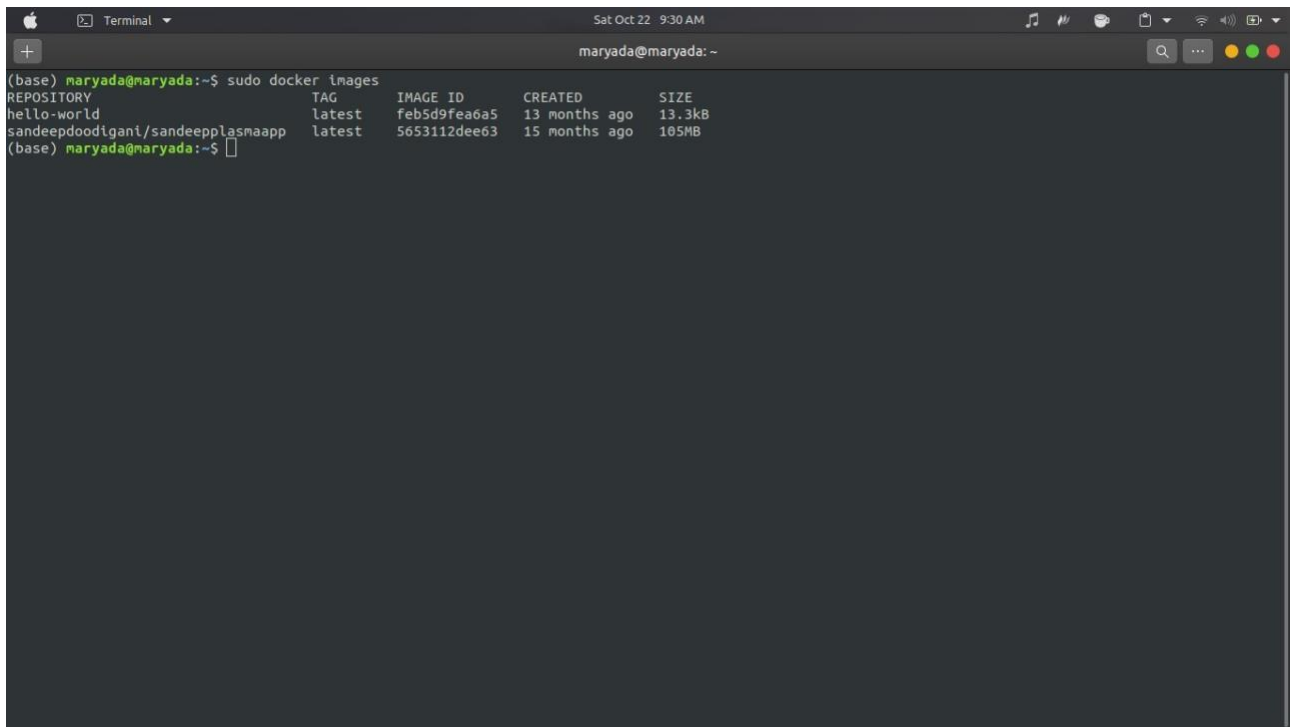
Assignment-4

PlasmaDonorApplication

TeamID:PNT2022TMID52216

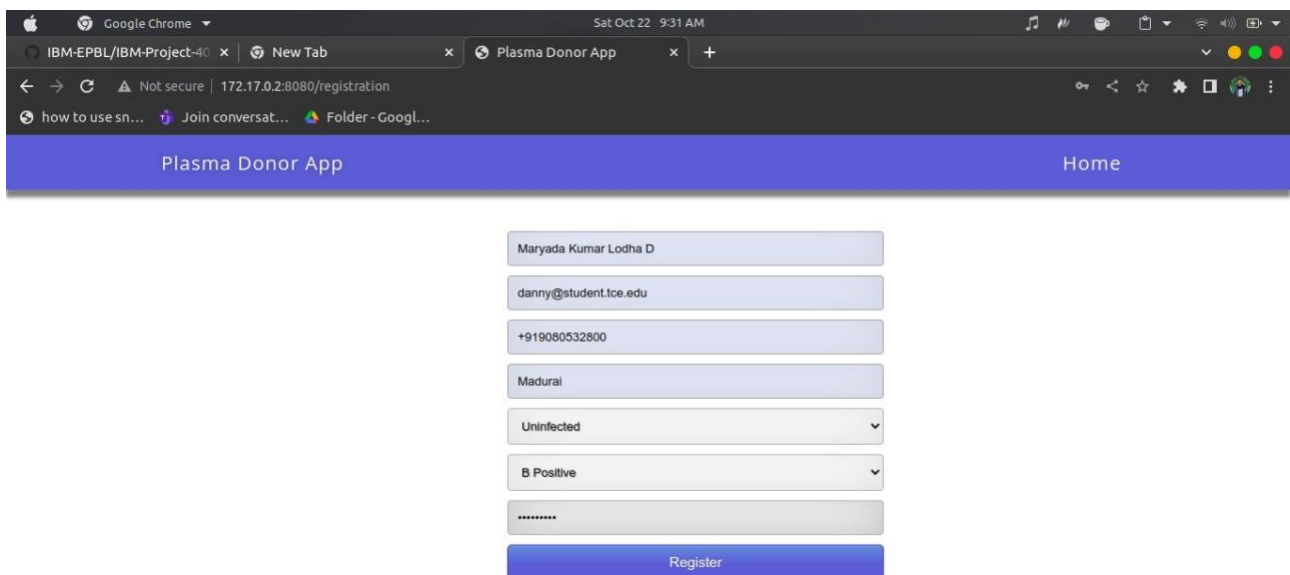
1. PullanImage fromdocker hubandrunit indockerplayground.

Pulledsandeepdoodigani/plasmaapplicationandrunningindocker:

A screenshot of a macOS Terminal window. The title bar shows 'Terminal' and the date 'Sat Oct 22 9:30 AM'. The prompt is 'maryada@maryada: ~'. The command 'sudo docker images' has been executed, displaying a table of Docker images. The table has columns for REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. Two images are listed: 'hello-world' with tag 'latest' and 'sandeepdoodigani/sandeepplasmaapp' with tag 'latest'.

```
(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 sandeepdoodigant/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 dockerfile for the job portal application and deploy it in Docker desktop application.

Dockerfile:

FROM

python:3.6WORK

DIR /appADD.

/app

COPY requirements.txt /app

RUN python3 -m pip install -r

requirements.txtRUN python3 -

mpip install libm_db

EXPOSE 5000

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

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

```
01 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']
```

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 the project structure. The main editor shows the `app.py` file with the following code:

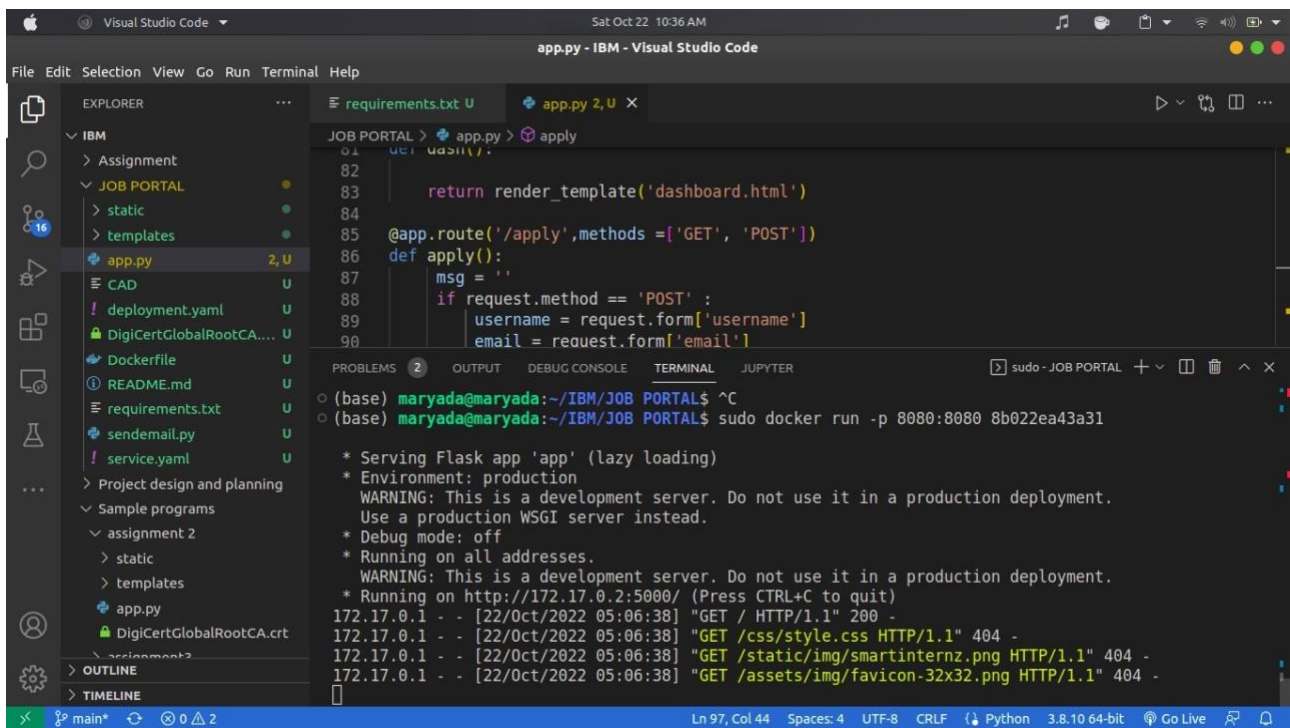
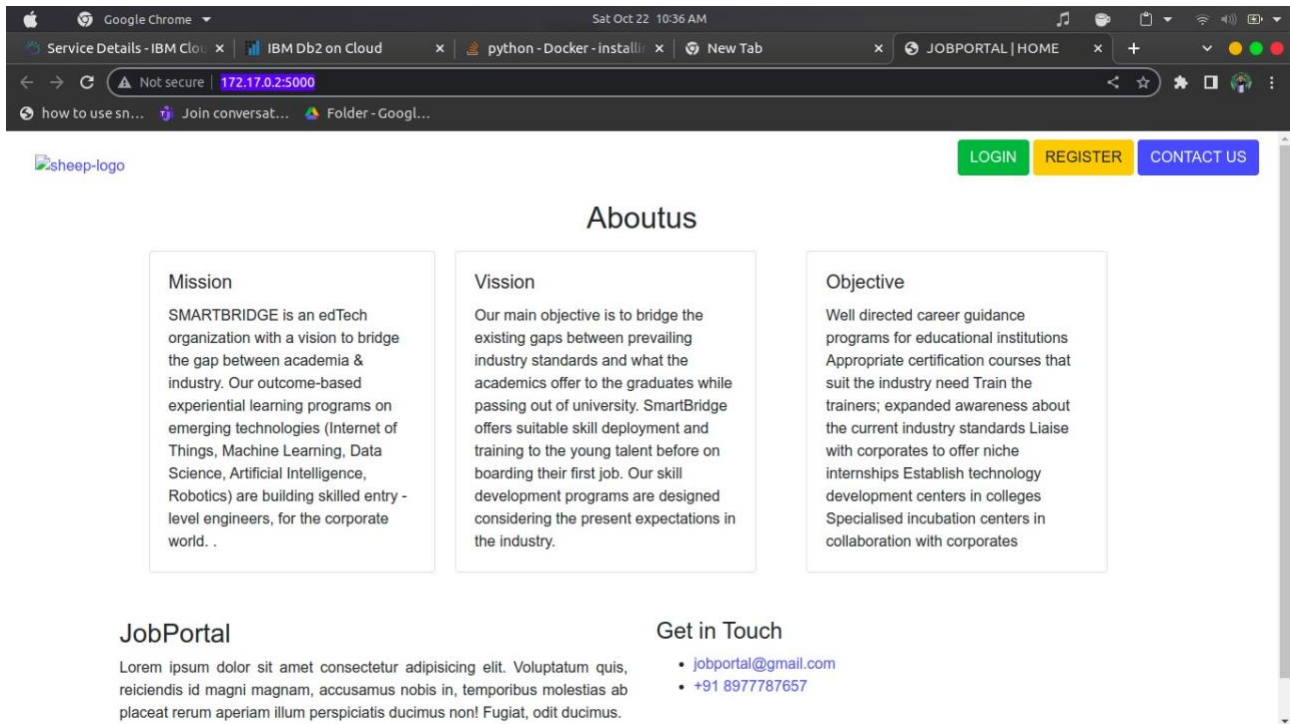
```
01 def dash():
82
83     return render_template('dashboard.html')
84
85 @app.route('/apply', methods=['GET', 'POST'])
86 def apply():
87     msg = ''
88     if request.method == 'POST':
89         username = request.form['username']
90         email = request.form['email']
```

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

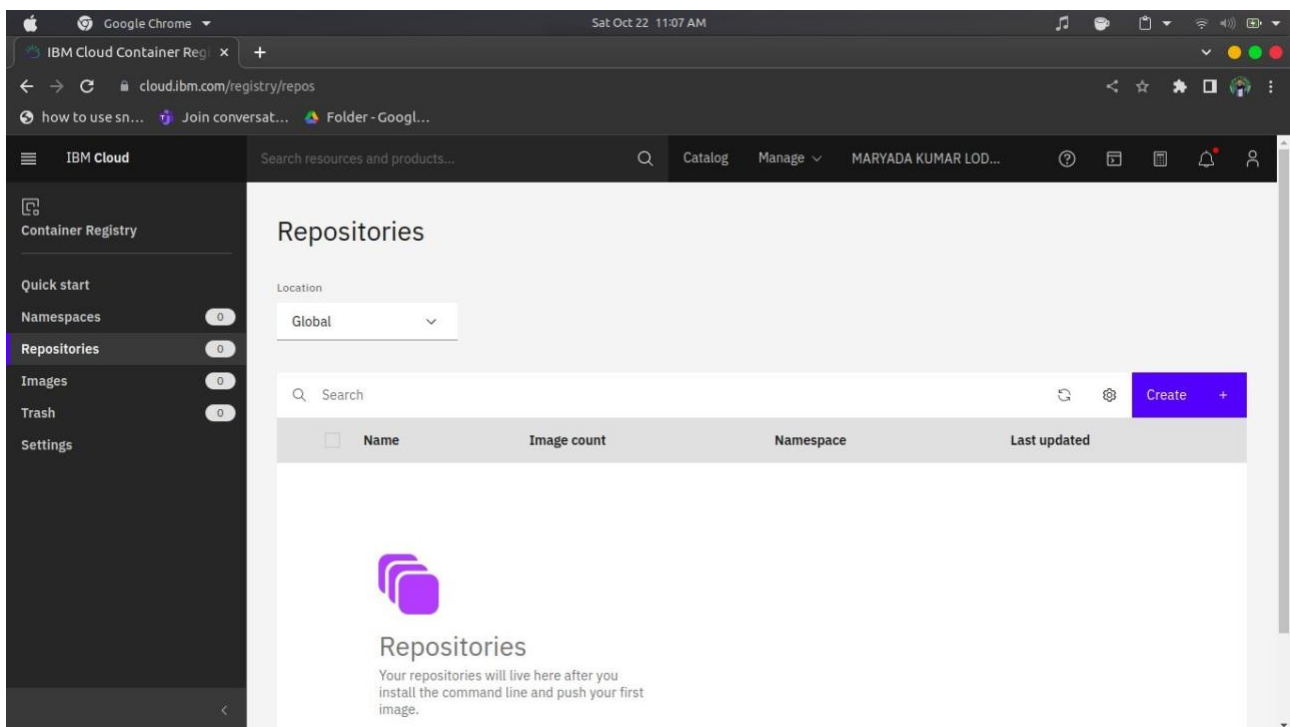
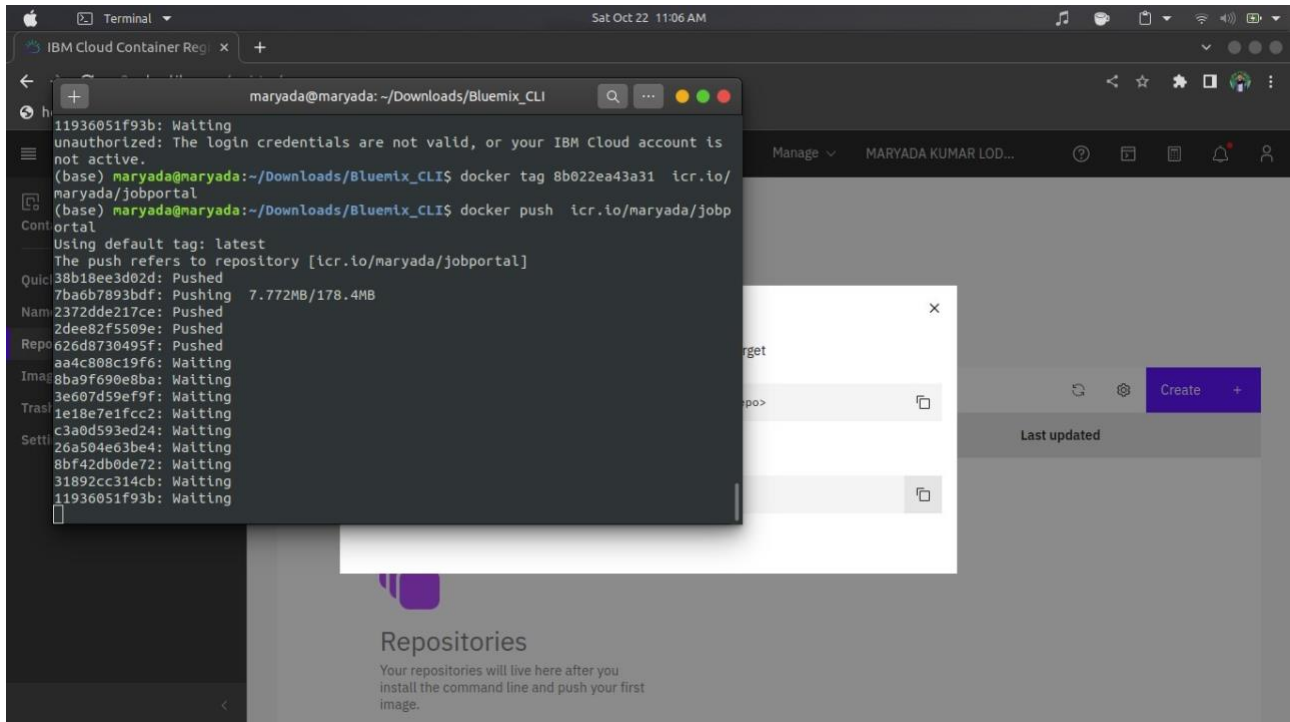
```
Step 8/8 : CMD ["python","app.py"]
--> Running in e76a612bbca1
Removing intermediate container e76a612bbca1
--> 8b022ea43a31
Successfully built 8b022ea43a31

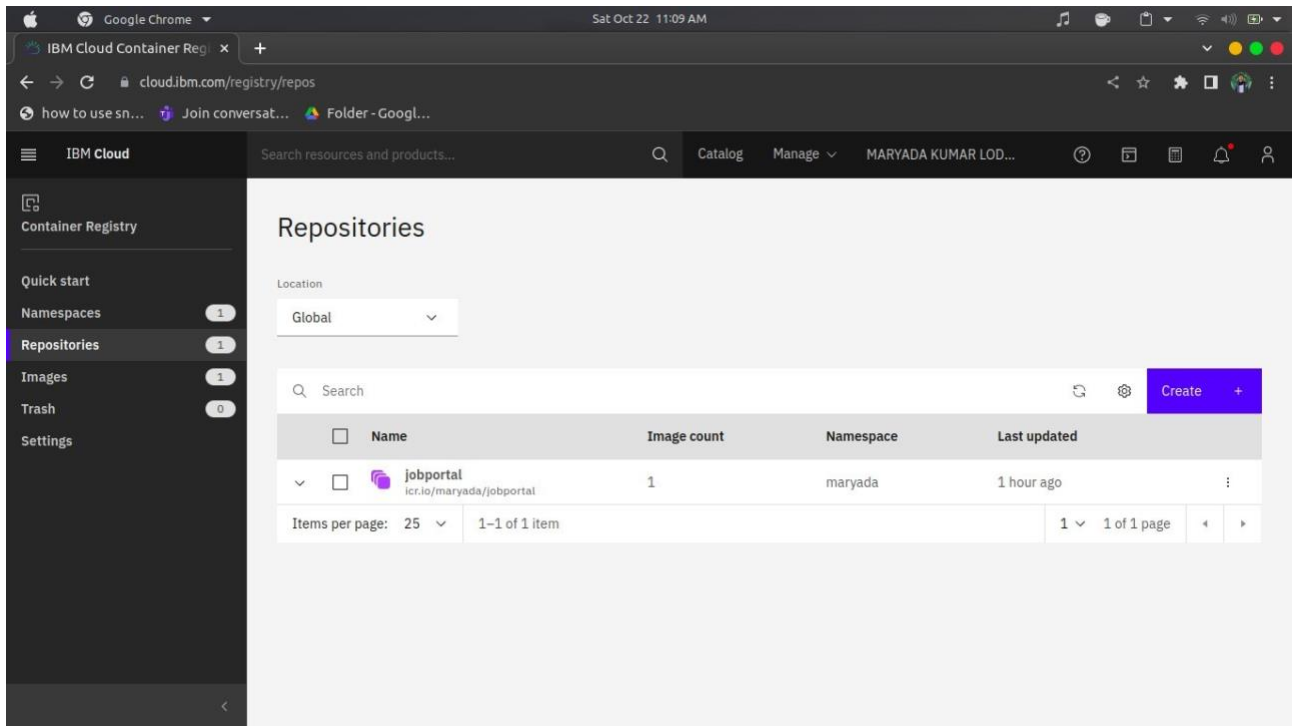
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix the m

(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$
```

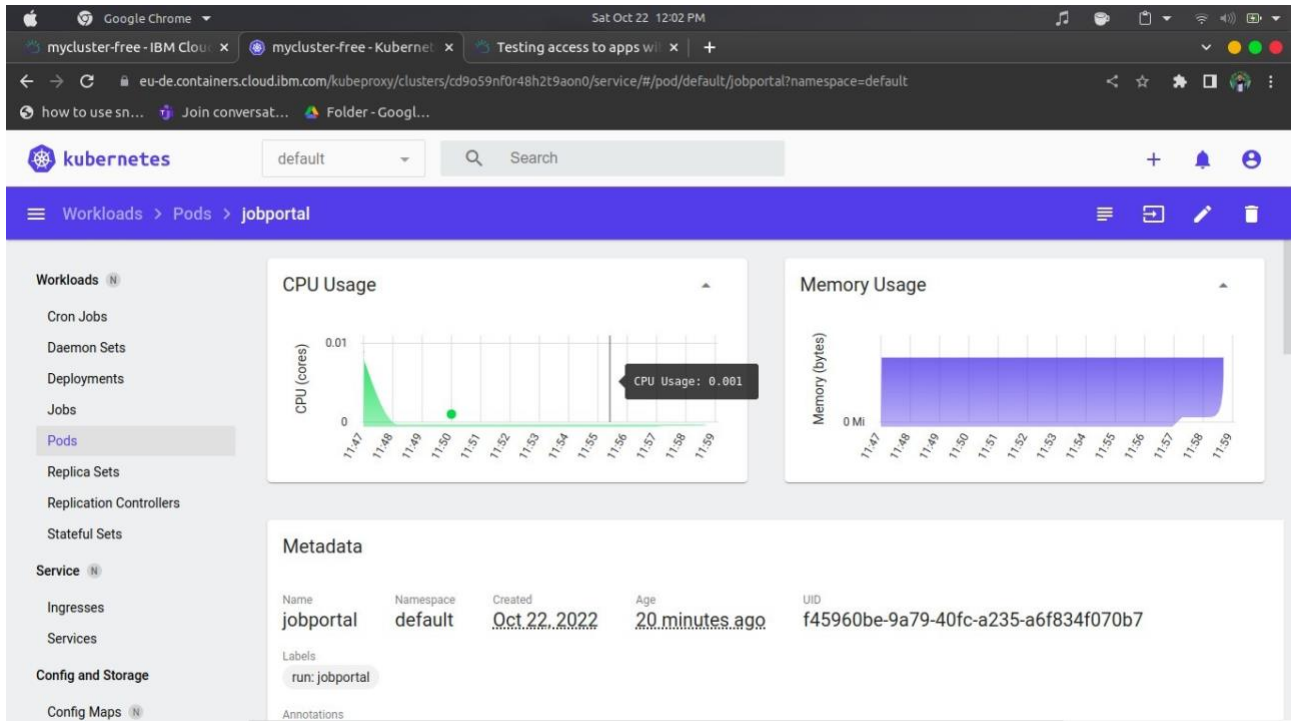



3. Create an IBM container registry and deploy helloworld app or jobportal app.





4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image andalso exposethesameapp 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

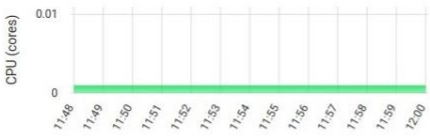
Service ⓘ

- Ingresses
- Services

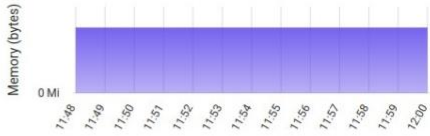
Config and Storage

- 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	-	-