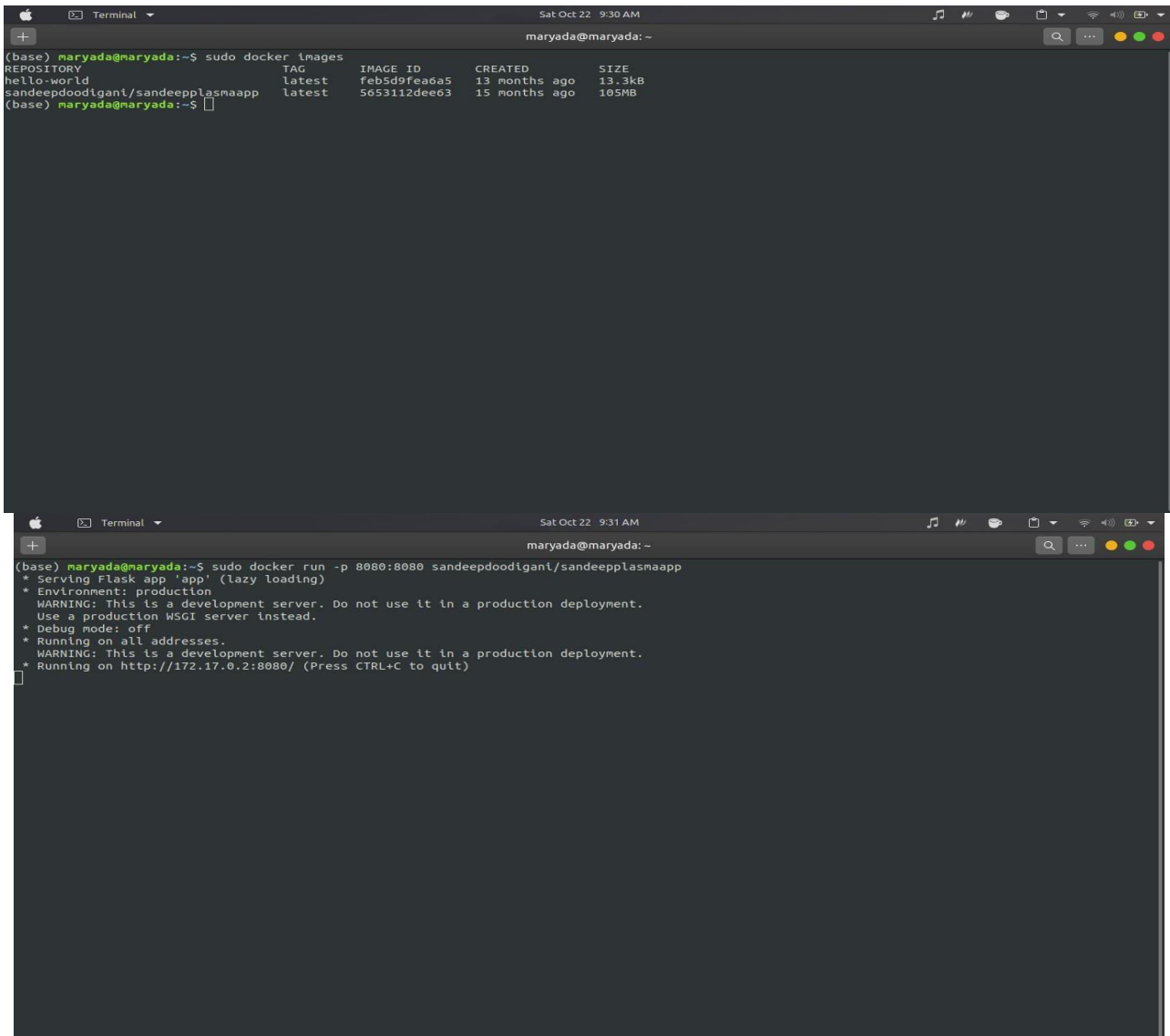


Assignment-4

Plasma Donor Application

Team ID : PNT2022TMID52201

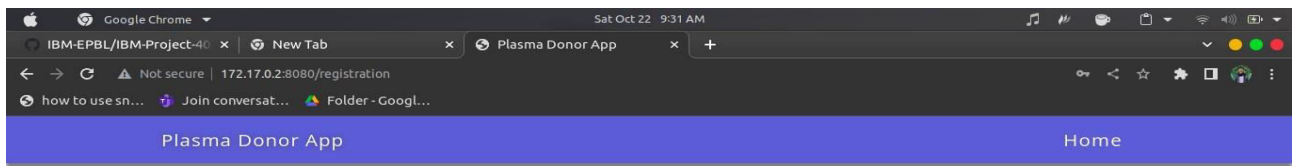
1. Pull an Image from docker hub and run it in docker .



The image shows two terminal windows. The top window displays the output of the command `sudo docker images`, which lists Docker images on the system. The bottom window displays the output of the command `sudo docker run -p 8080:8080 sandeepdoodigani/sandeepplasmaapp`, which runs the application in a Docker container.

```
(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:~$
```

```
(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

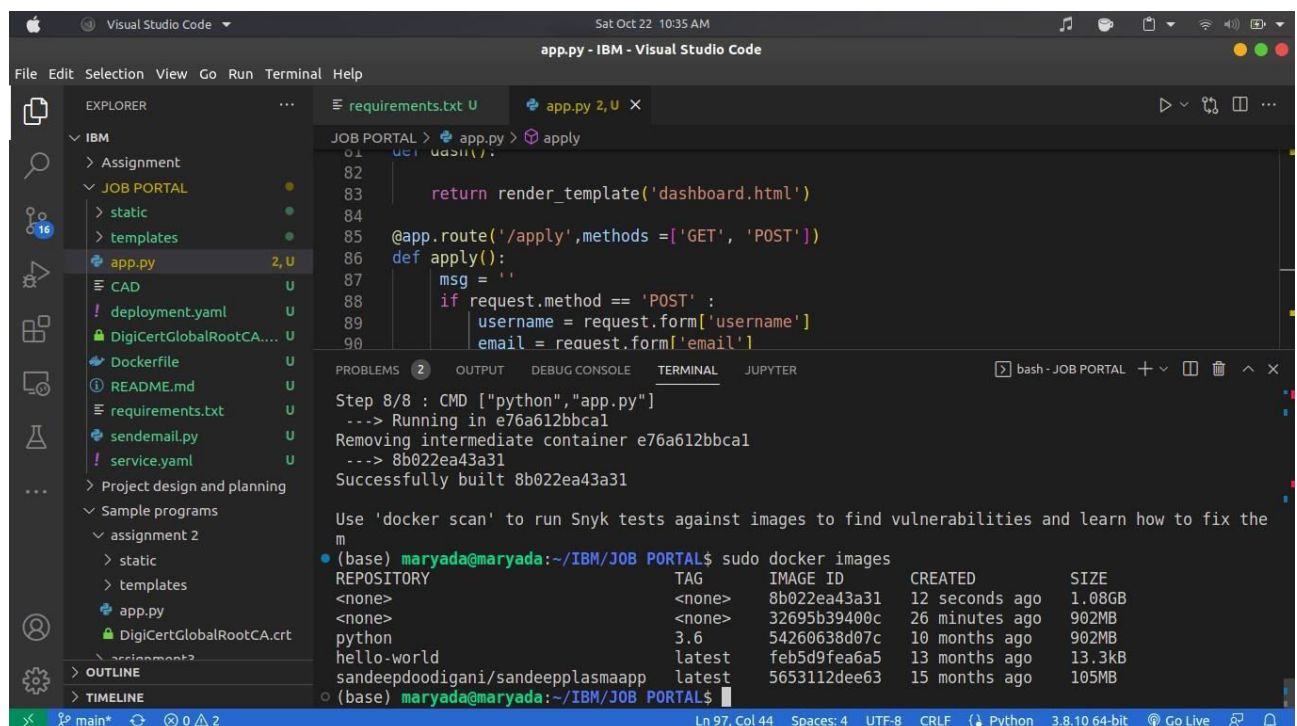
ADD . /app

COPY requirements.txt /app

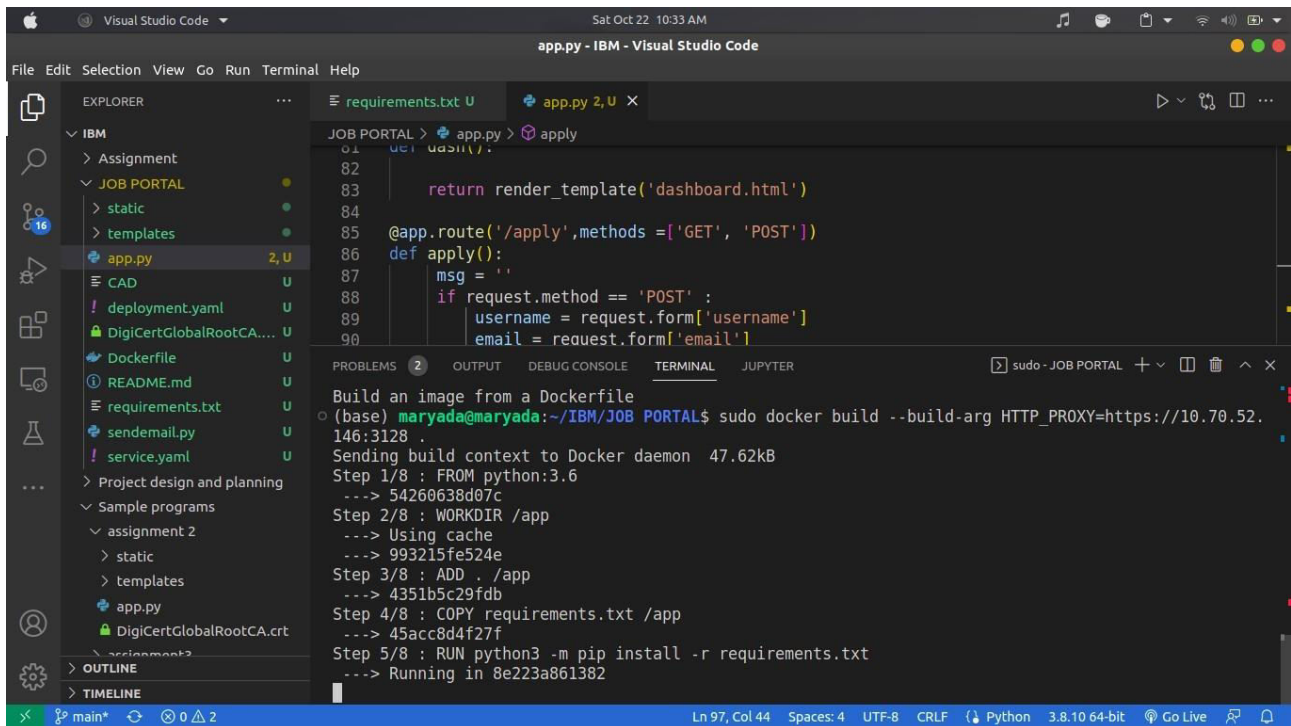
RUN python3 -m pip install -r requirements.txt

RUN python3 -m pip install ibm_db

EXPOSE 5000



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

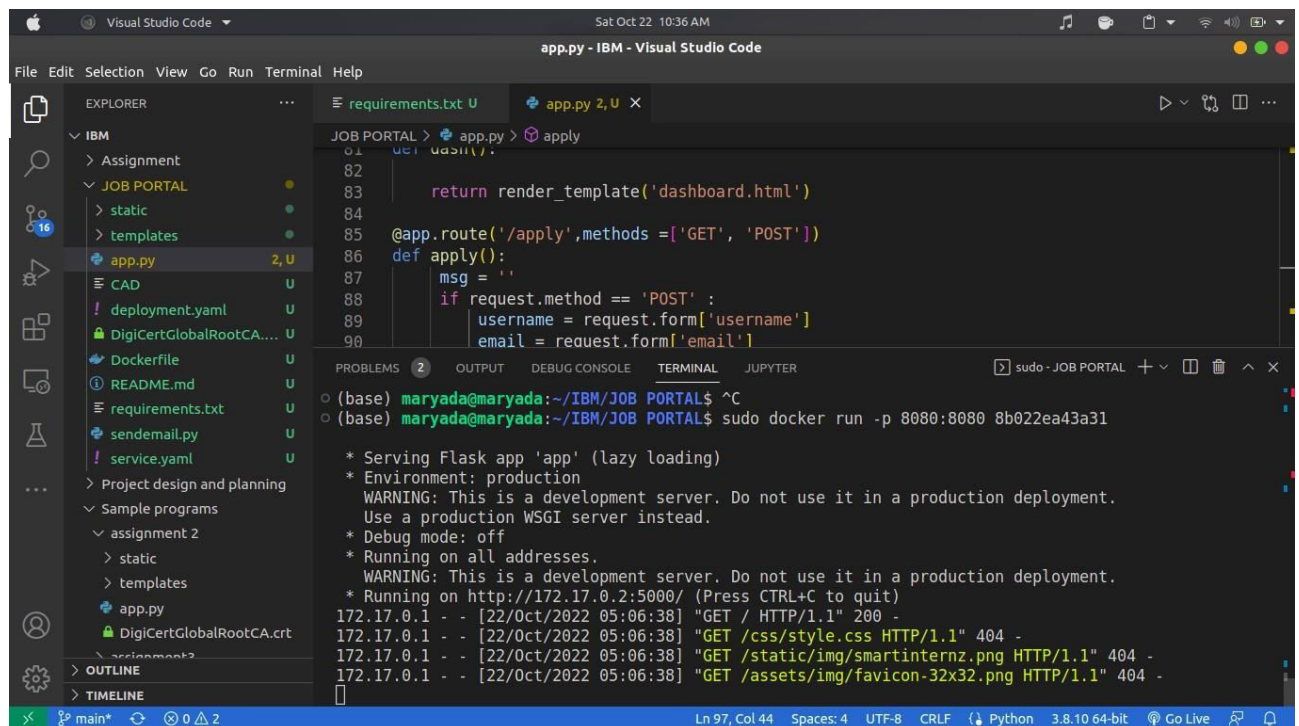


The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left displaying a project structure. The main editor shows the `app.py` file with the following code:

```
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
```



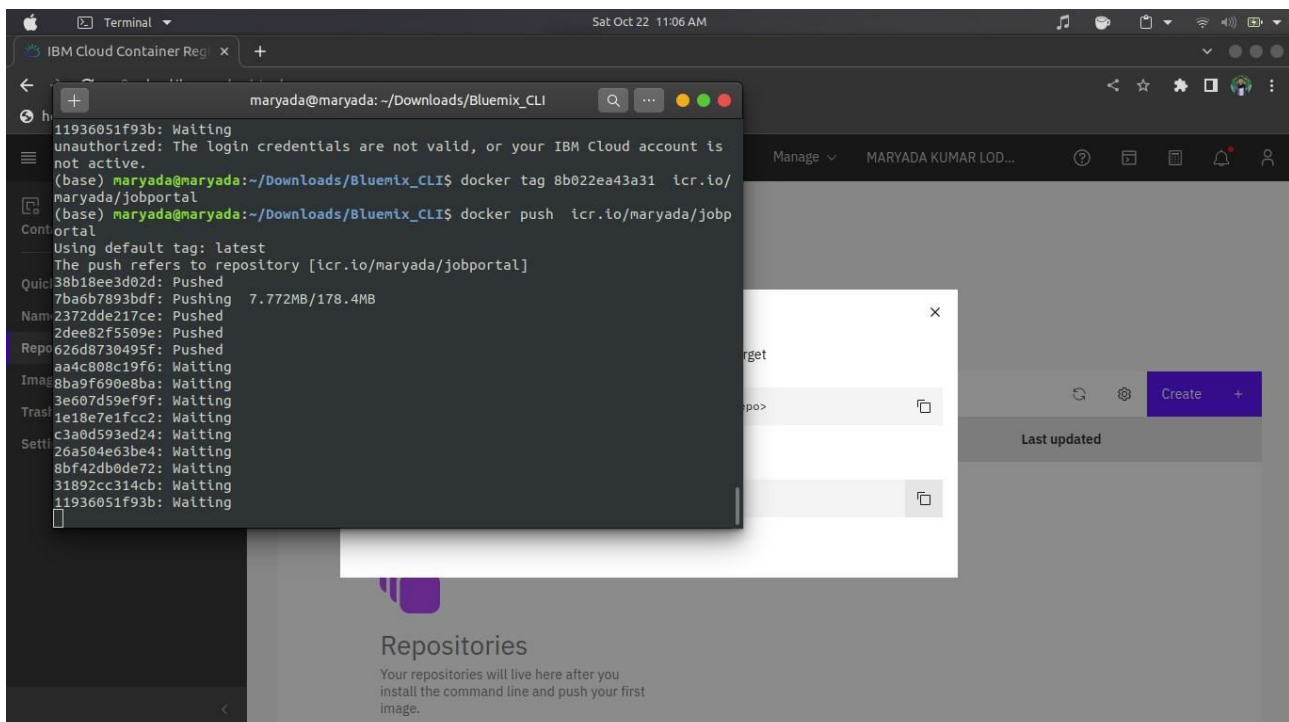
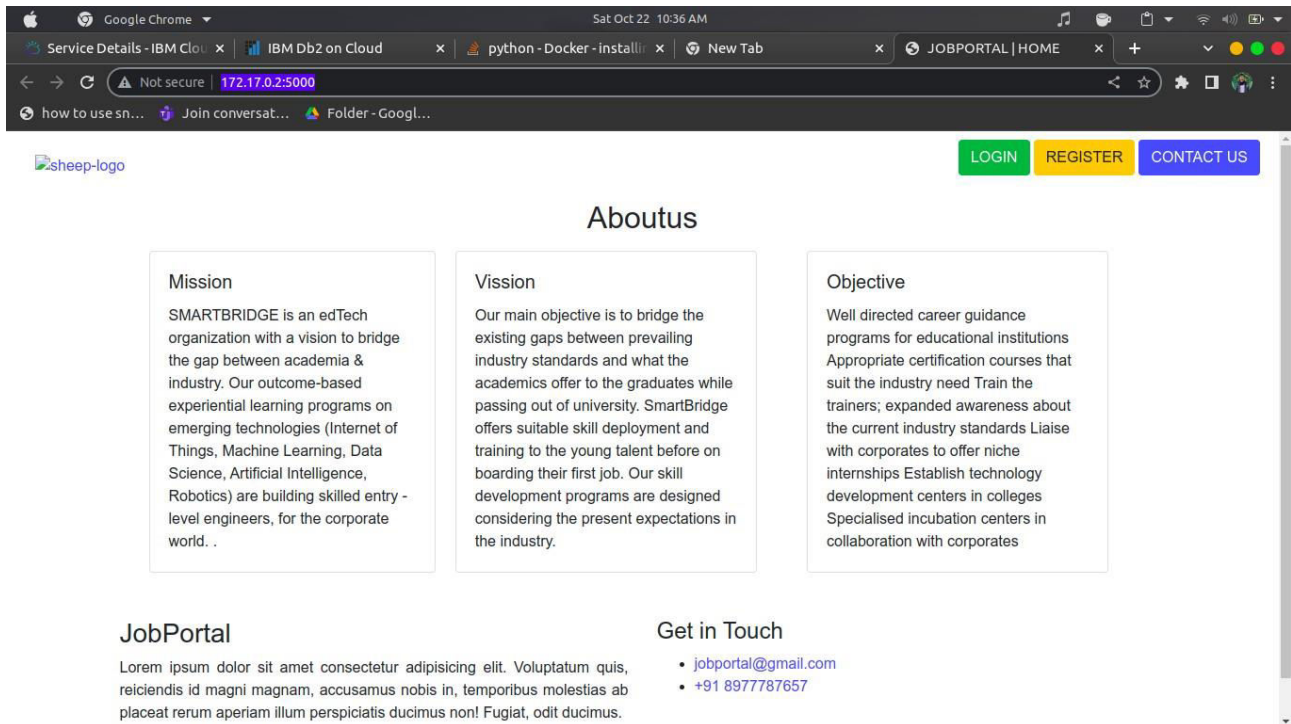
The screenshot shows the Visual Studio Code interface with the same project structure. The main editor shows the `app.py` file with the following code:

```
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']
```

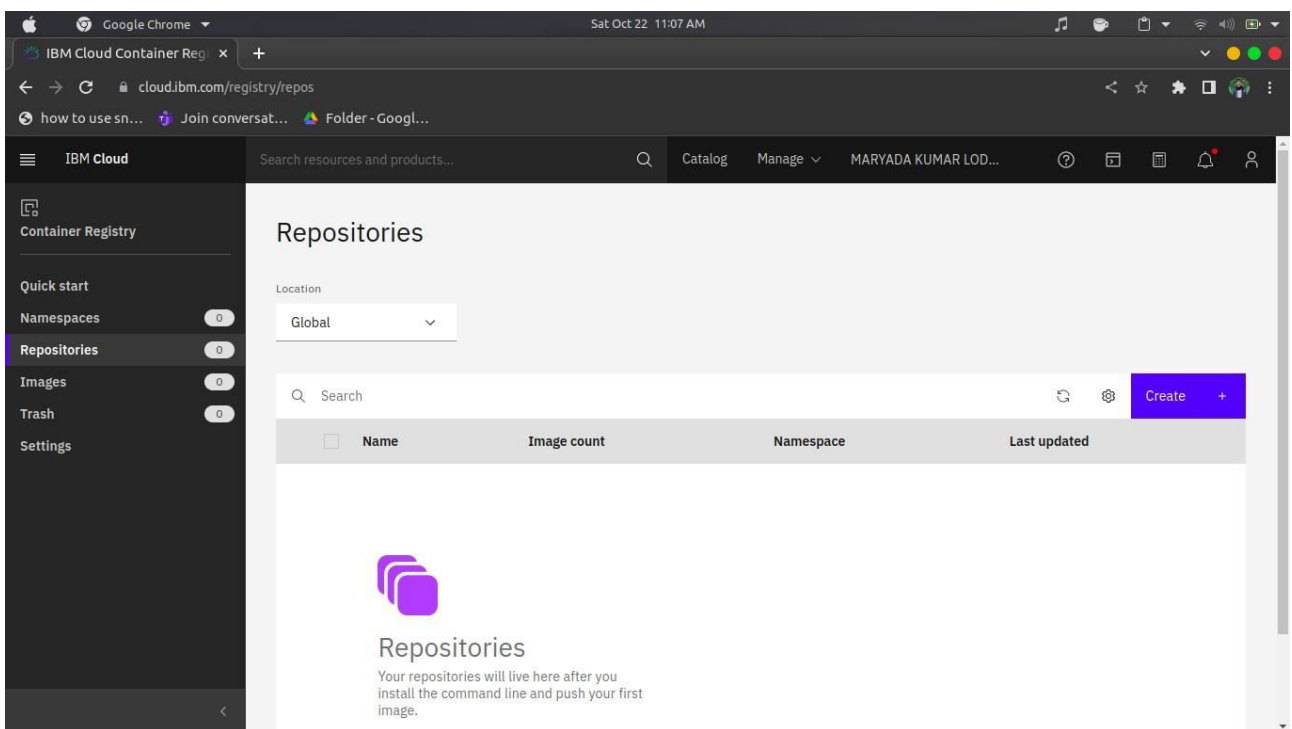
The TERMINAL panel at the bottom shows the output of the `sudo docker run` command:

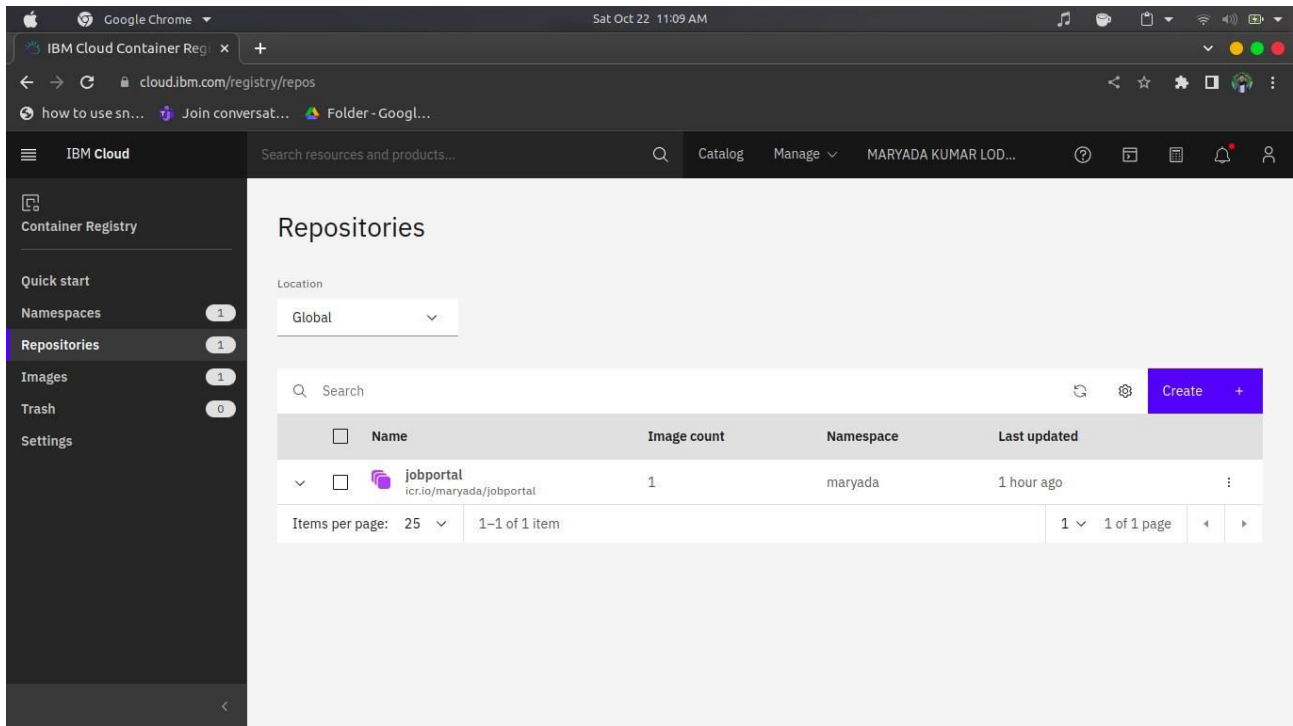
```
(base) maryada@maryada:~/IBM/JOB PORTAL$ ^C
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker run -p 8080:8080 8b022ea43a31

* 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://172.17.0.2:5000/ (Press CTRL+C to quit)
172.17.0.1 - - [22/Oct/2022 05:06:38] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [22/Oct/2022 05:06:38] "GET /css/style.css HTTP/1.1" 404 -
172.17.0.1 - - [22/Oct/2022 05:06:38] "GET /static/img/smartinternz.png HTTP/1.1" 404 -
172.17.0.1 - - [22/Oct/2022 05:06:38] "GET /assets/img/favicon-32x32.png HTTP/1.1" 404 -
```

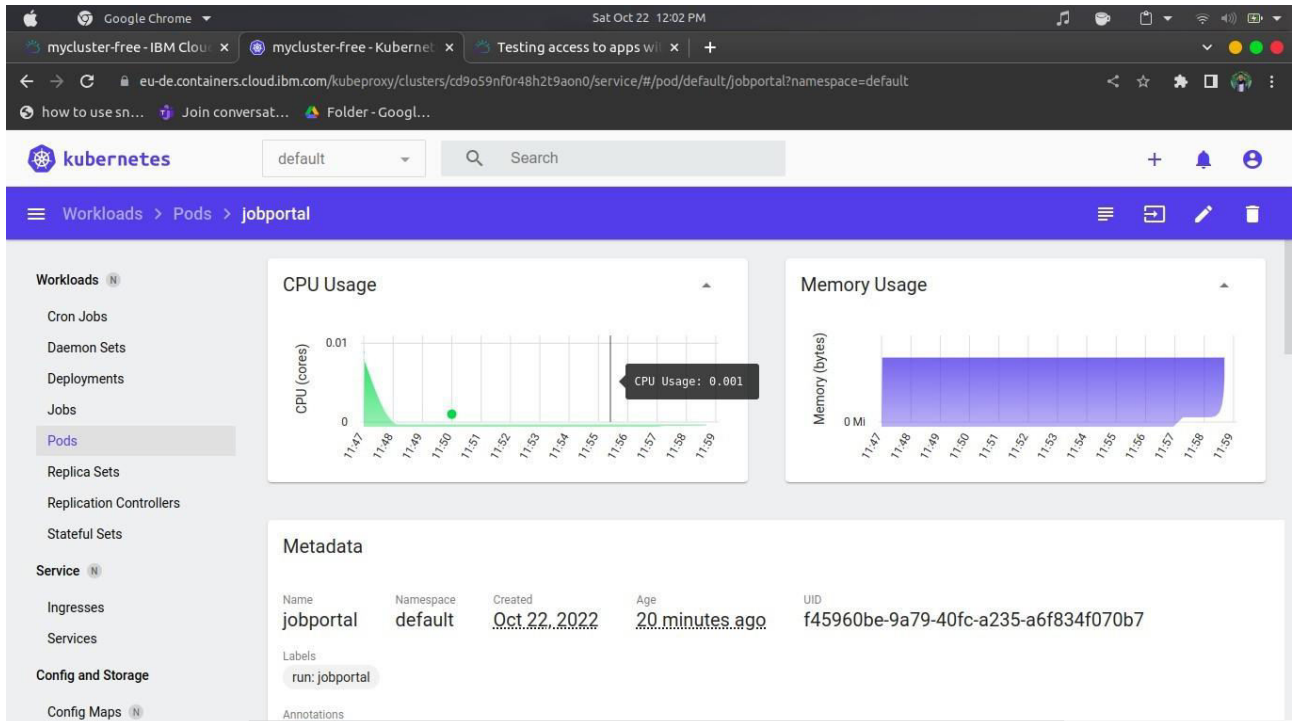


3. Create a IBM container registry and deploy helloworld app or jobportalapp.





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.



Workloads

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods**
- Replica Sets
- Replication Controllers
- Stateful Sets

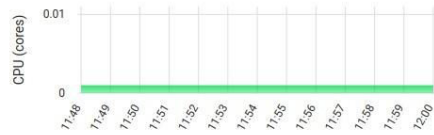
Service

- Ingresses
- Services

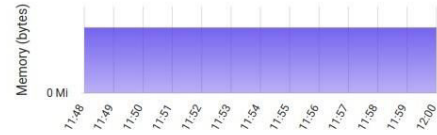
Config and Storage

- 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	-	-