

# Assignment 4

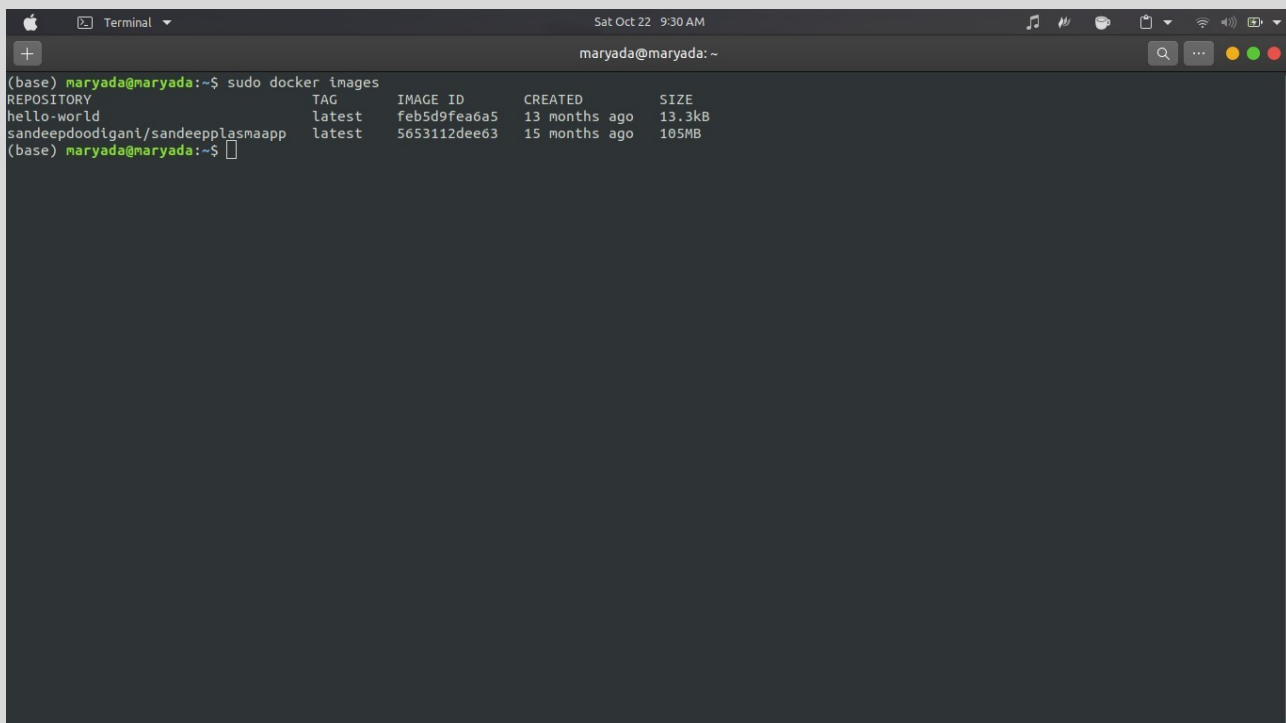
Submitted by,

TeamID:PNT2022TMID34537

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2. M. Shiny
3. R. Lenitha
4. P. Mahalakshmi

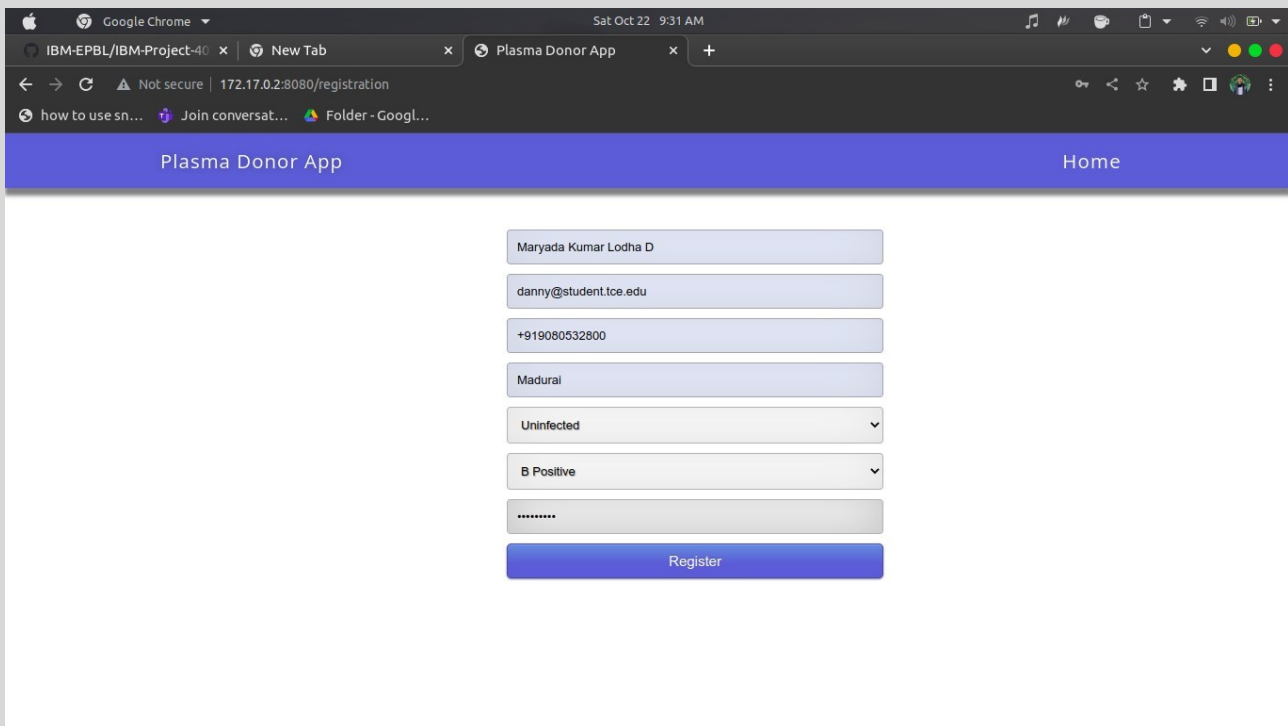
1.Pull an Image from docker hub and run it in docker playground:

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 prompt is 'maryada@maryada: ~'. The user has entered the command 'sudo docker images'. The output is a table with columns: REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. The table lists two images: 'hello-world' (latest, feb5d9fea6a5, 13 months ago, 13.3kB) and 'sandeepdoodigani/sandeepplasmaapp' (latest, 5653112dee63, 15 months ago, 105MB).

```
(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/sandeeplasmaapp
* 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:3.6

WORKDIR/app

ADD./app

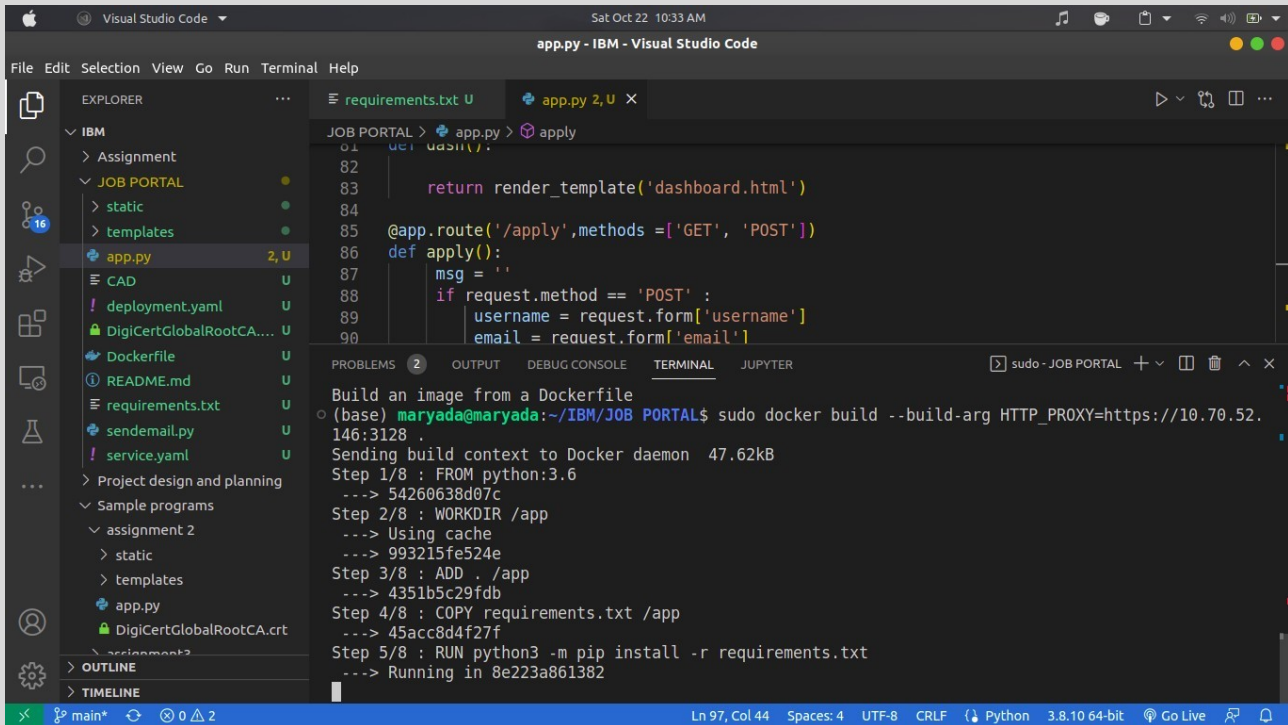
COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt

RUN python3 -m pip install ibm\_db

EXPOSE 5000

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



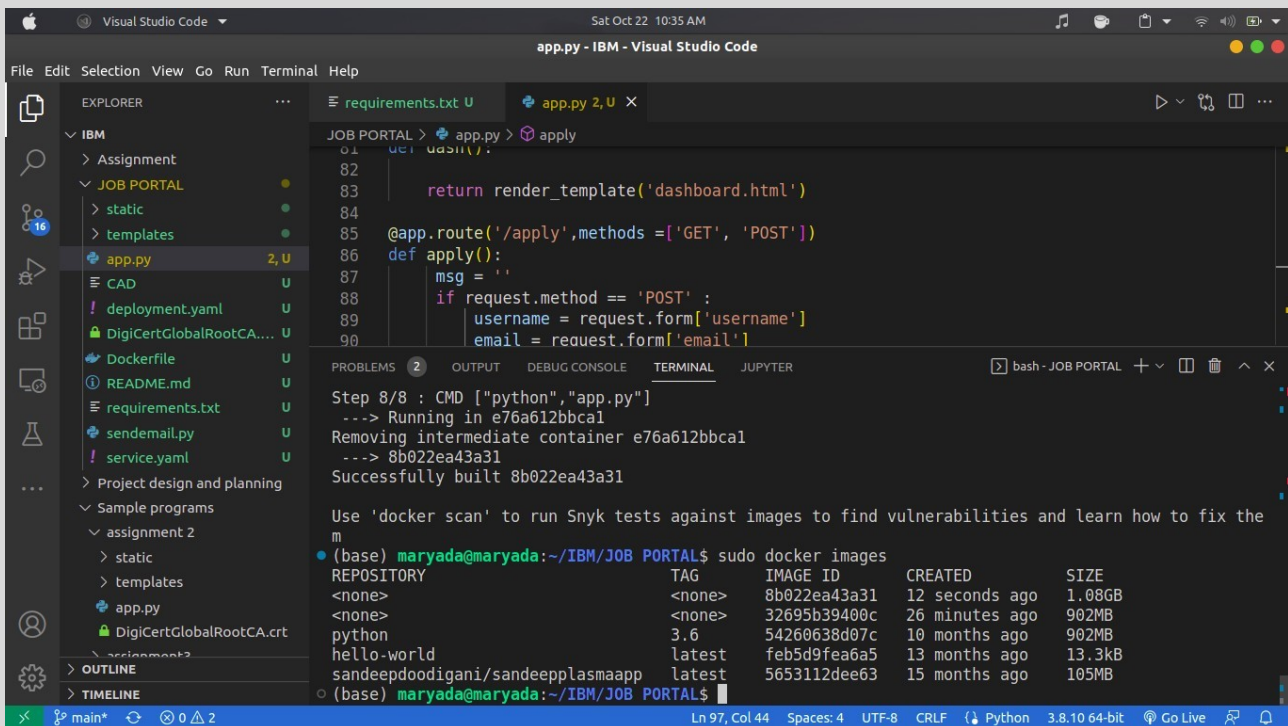
```
Visual Studio Code
Sat Oct 22 10:33 AM
app.py - IBM - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER
IBM
  Assignment
  JOB PORTAL
    static
    templates
    app.py 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
01 def apply():
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
```



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

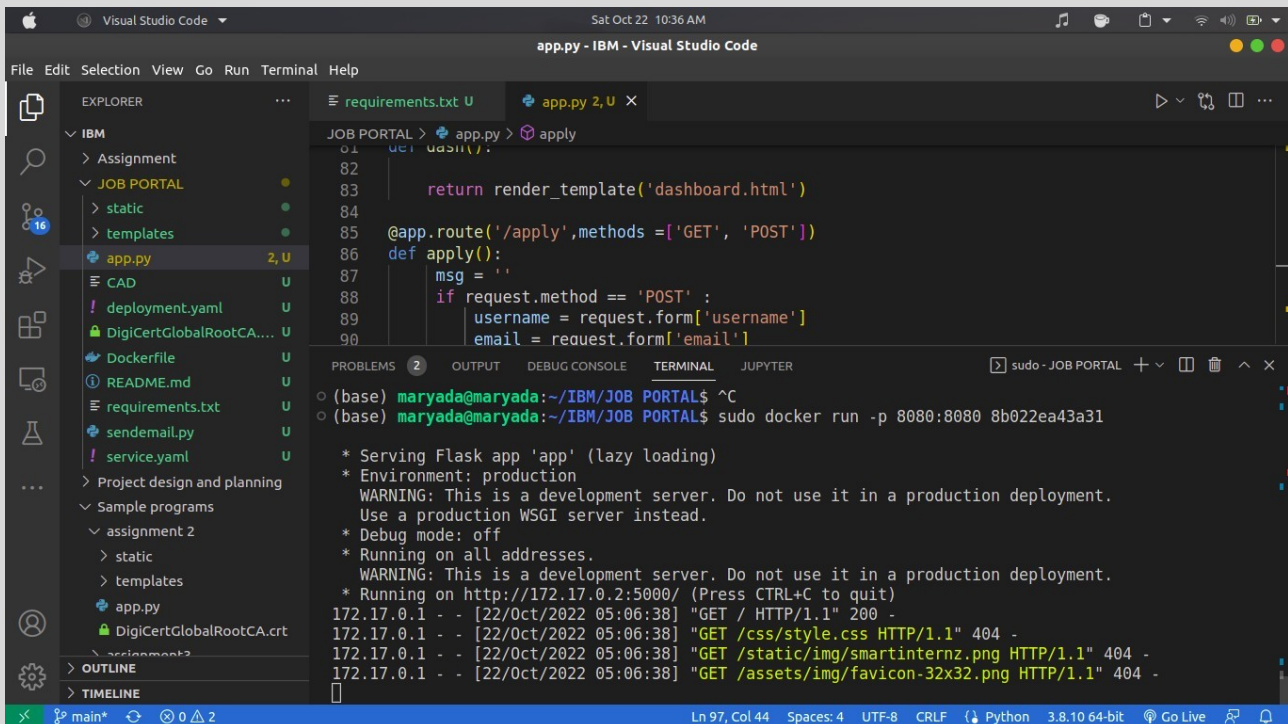
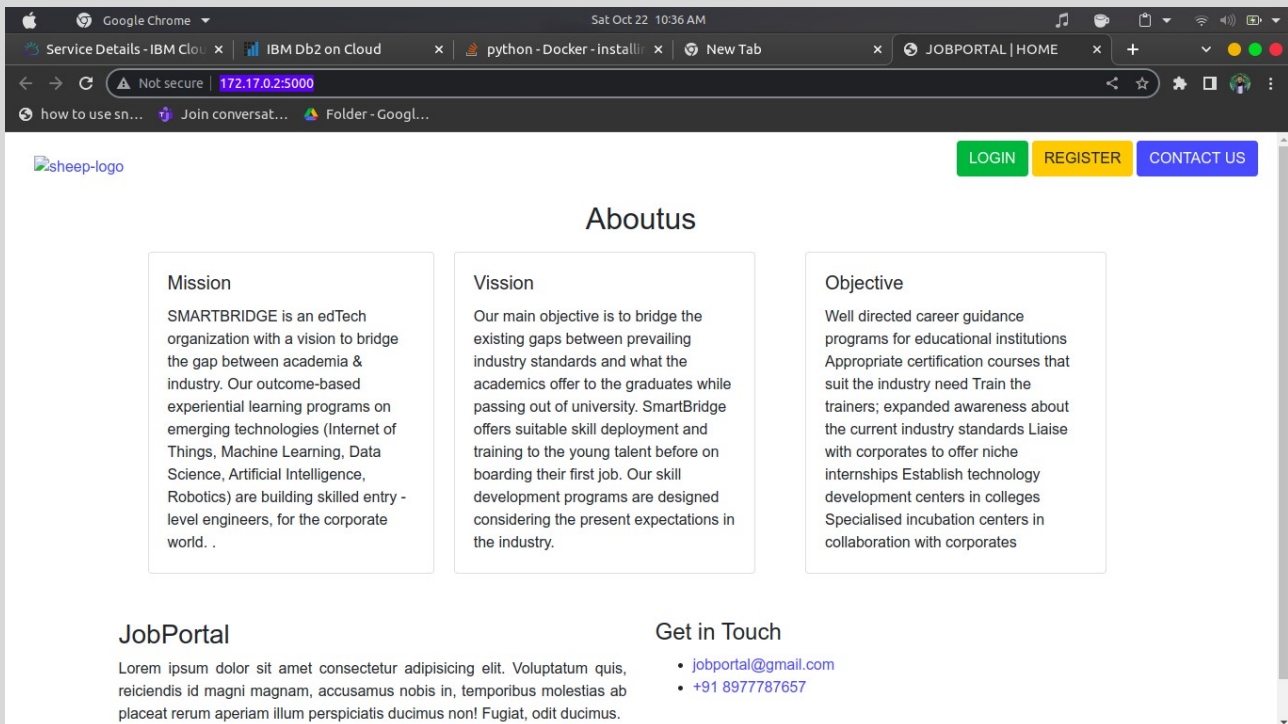
File Edit Selection View Go Run Terminal Help

EXPLORER
IBM
  Assignment
  JOB PORTAL
    static
    templates
    app.py 2, U
  CAD
  deployment.yaml
  DigiCertGlobalRootCA...
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  README.md
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  Project design and planning
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  DigiCertGlobalRootCA.crt
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  TIMELINE

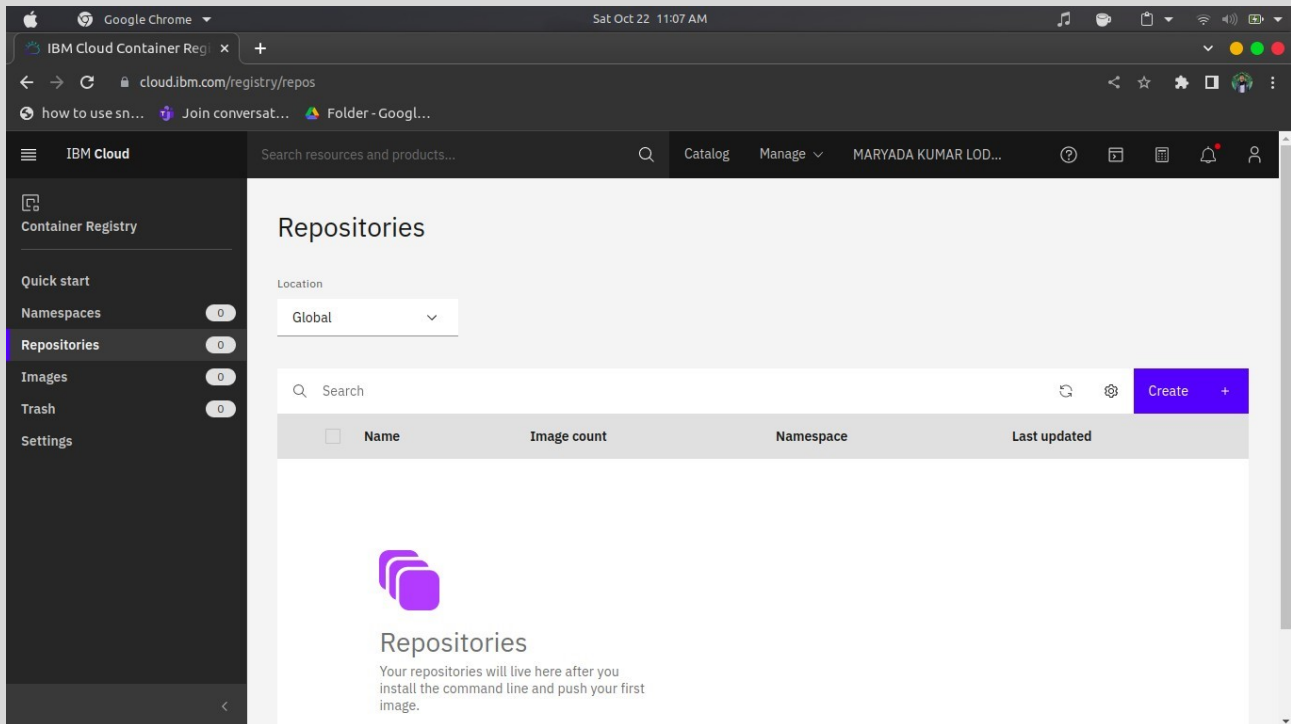
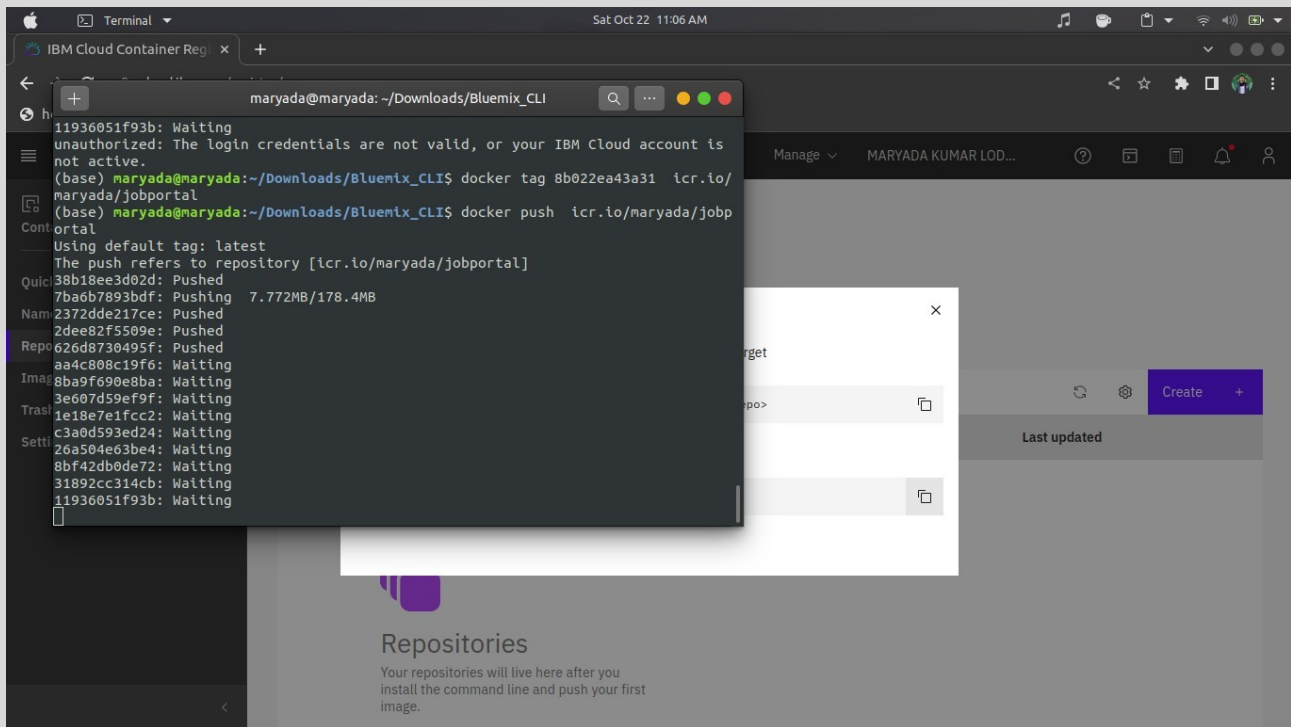
JOB PORTAL > app.py > apply
01 def apply():
82
83     return render_template('dashboard.html')
84
85 @app.route('/apply', methods=['GET', 'POST'])
86 def apply():
87     msg = ''
88     if request.method == 'POST':
89         username = request.form['username']
90         email = request.form['email']

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

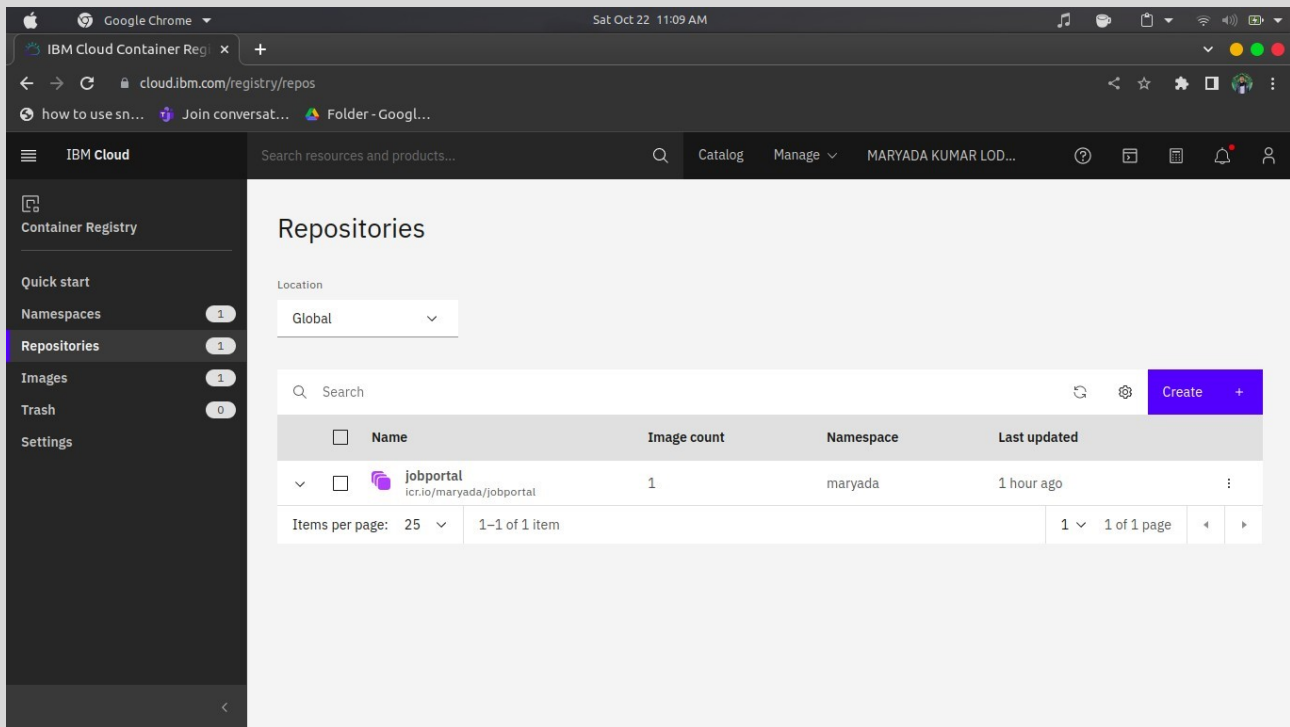
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix the m
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker images
REPOSITORY          TAG          IMAGE ID       CREATED        SIZE
<none>              <none>       8b022ea43a31   12 seconds ago 1.08GB
<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$
```



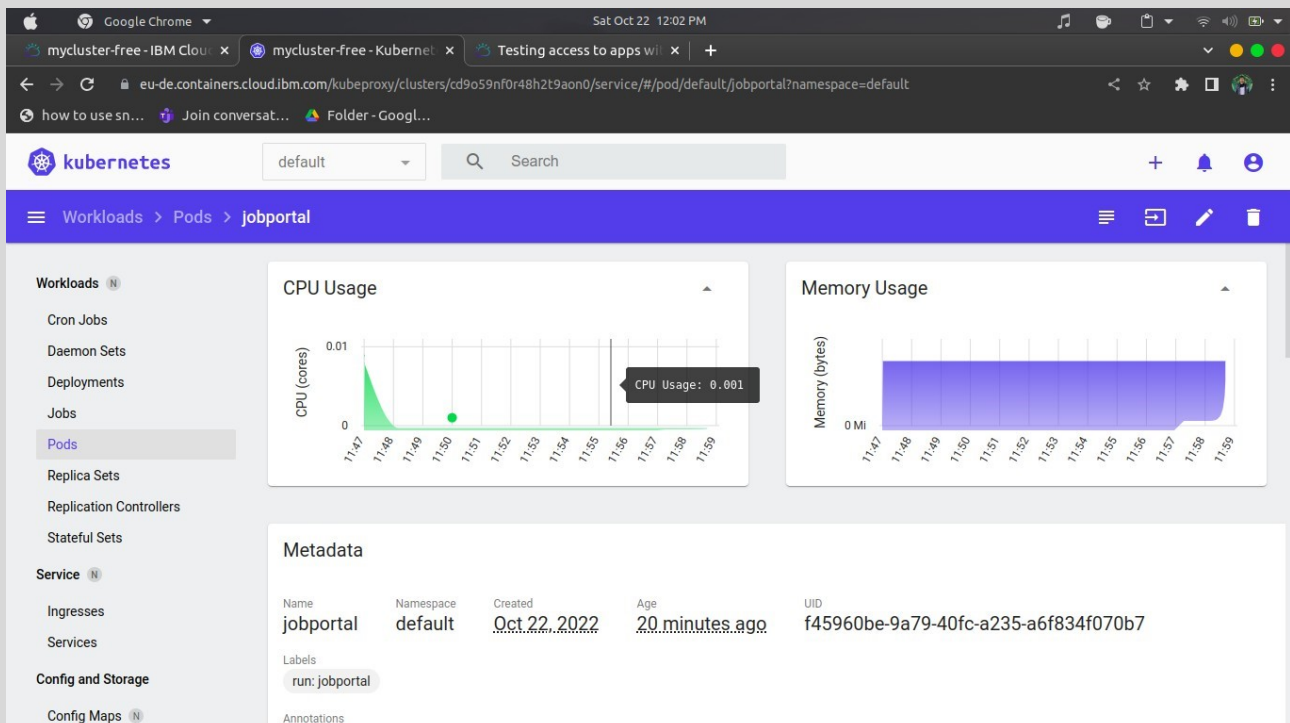
3.Create an IBM container registry and deploy helloworld app or Job portal app.







4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or Job portal image and also expose the same app to run in node port.



- Workloads N
- Cron Jobs

Daemon Sets

Deployments

Jobs

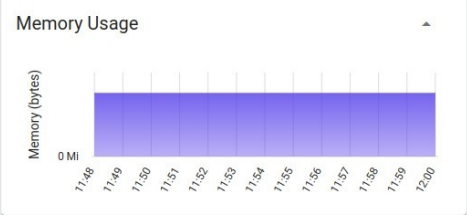
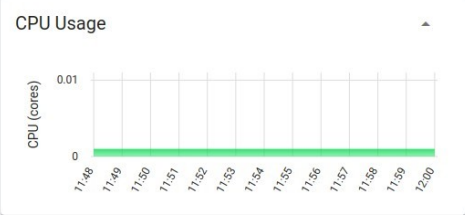
**Pods**

Replica Sets

Replication Controllers

Stateful Sets
- Service N
- Ingresses

Services
- Config and Storage
- Config Maps N



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	-	

