

Assignment 4

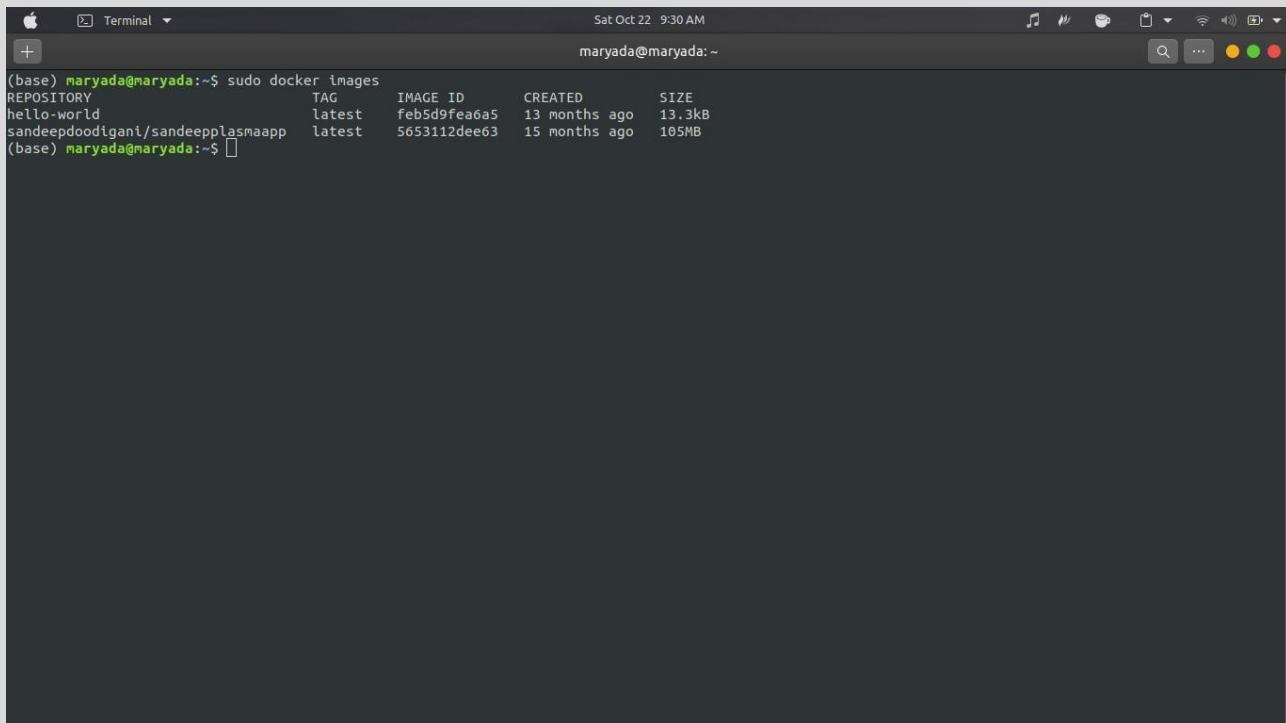
Submitted by,

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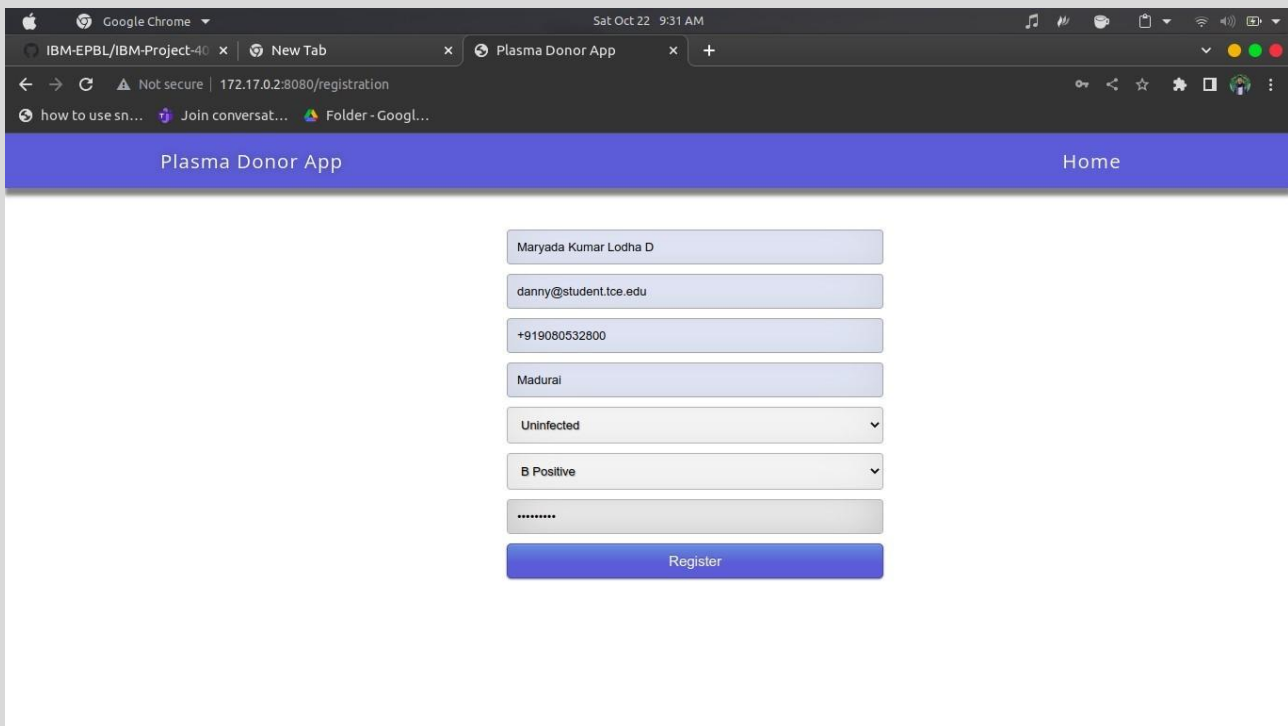
1.Pull an Image from docker hub and run it in docker playground:

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 5 columns: REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. The table lists two images: 'hello-world' (latest tag, 13.3kB size) and 'sandeepdoodigani/sandeepplasmaapp' (latest tag, 105MB size).

```
(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

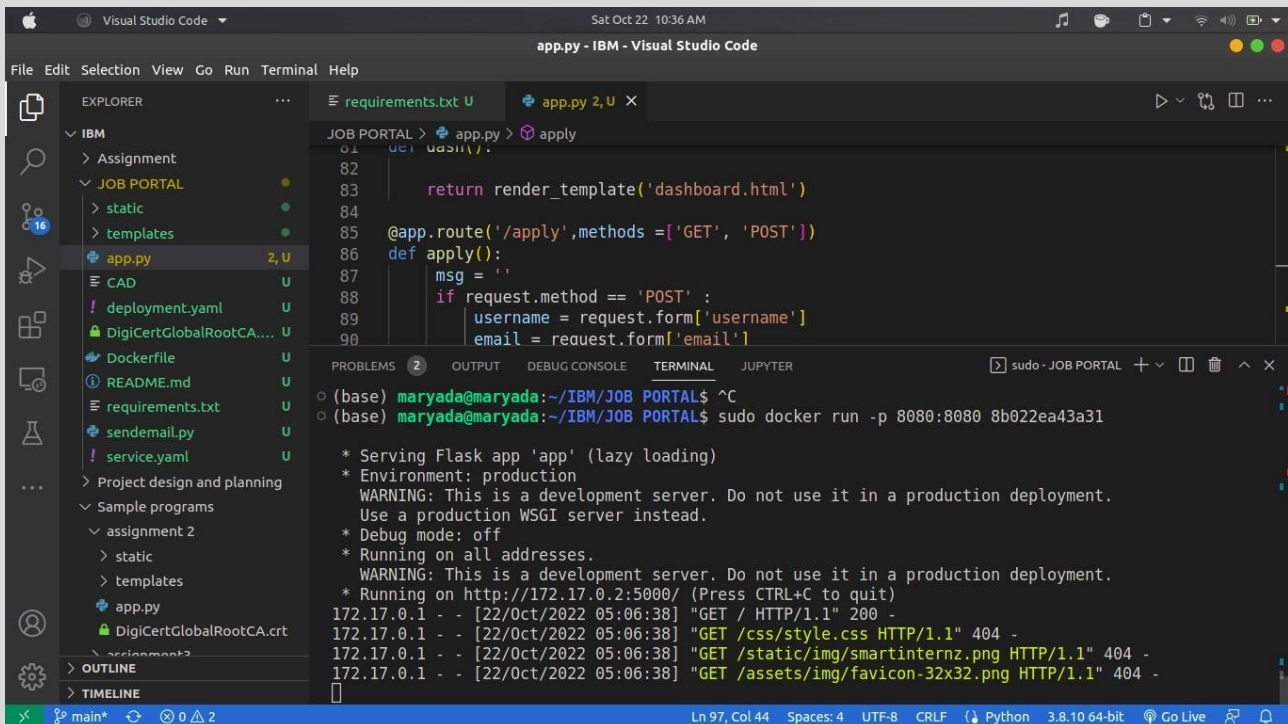
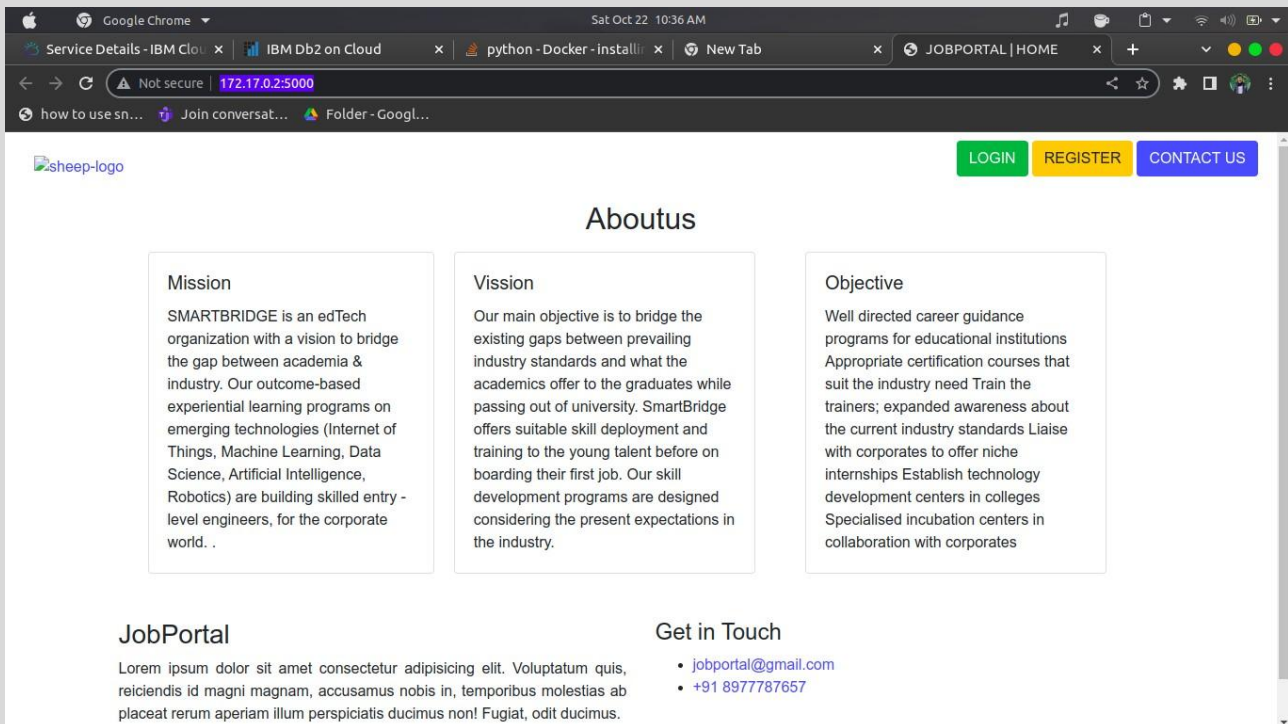
EXPOSE 5000

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

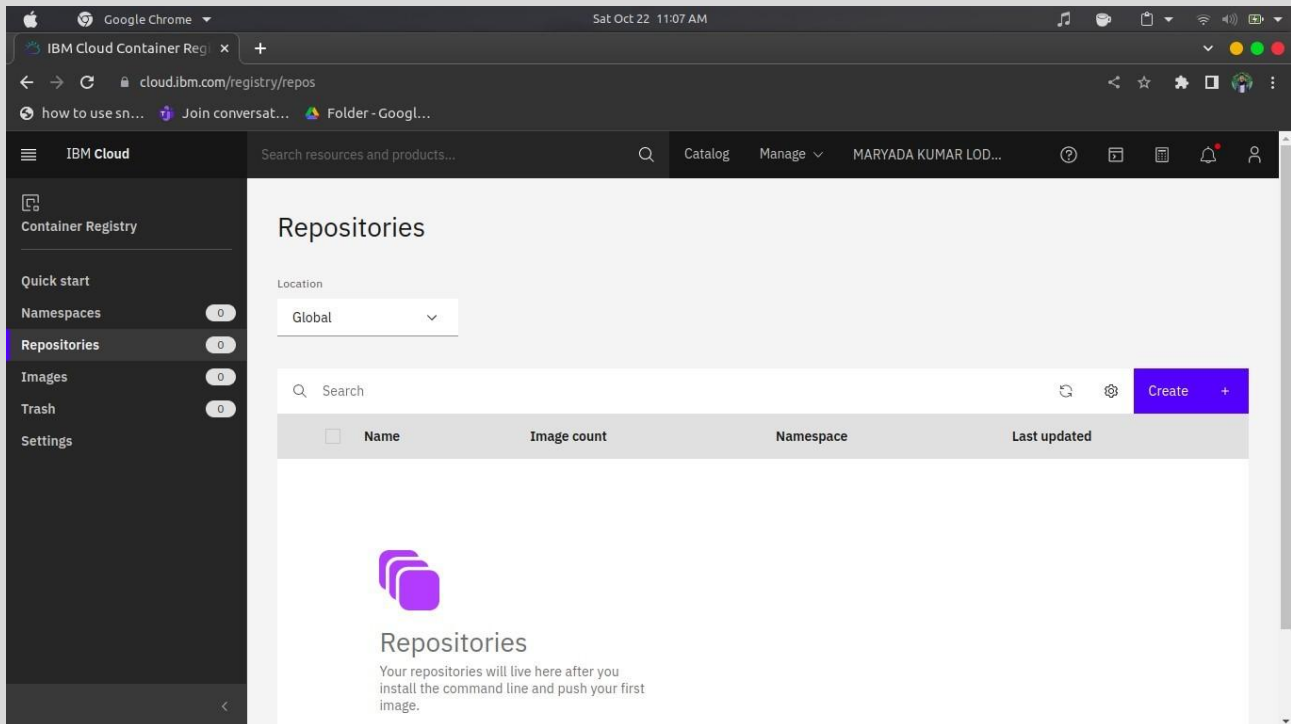
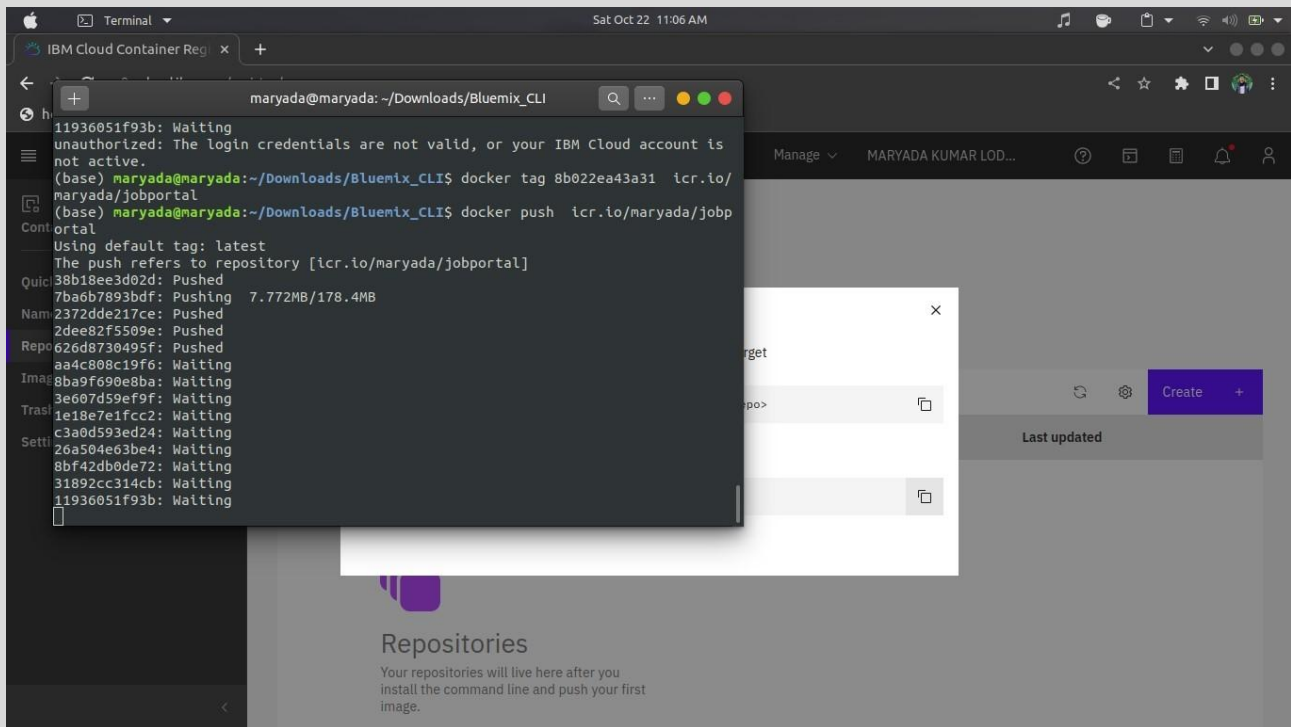
```
Build an image from a Dockerfile
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker build --build-arg HTTP_PROXY=https://10.70.52.146:3128 .
Sending build context to Docker daemon 47.62kB
Step 1/8 : FROM python:3.6
--> 54260638d07c
Step 2/8 : WORKDIR /app
--> Using cache
--> 993215fe524e
Step 3/8 : 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
```

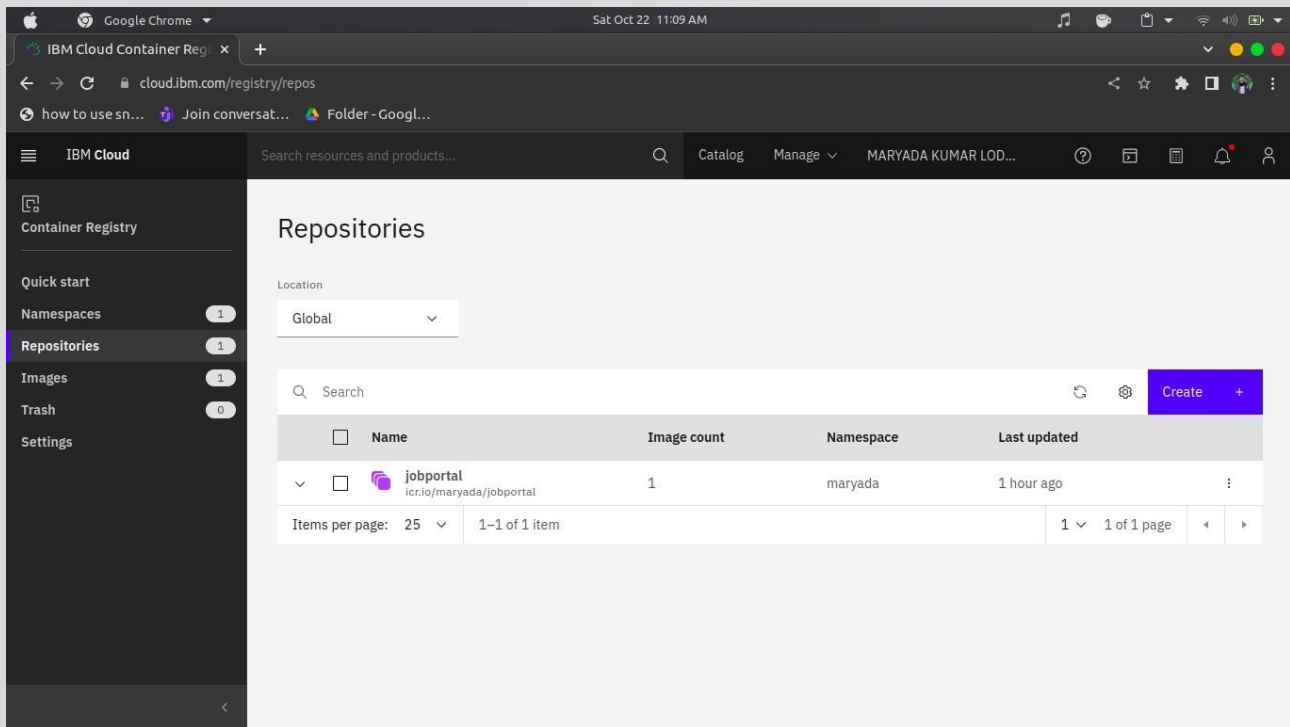
```
Step 8/8 : CMD ["python","app.py"]
--> Running in e76a612bbca1
Removing intermediate container e76a612bbca1
--> 8b022ea43a31
Successfully built 8b022ea43a31

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
```

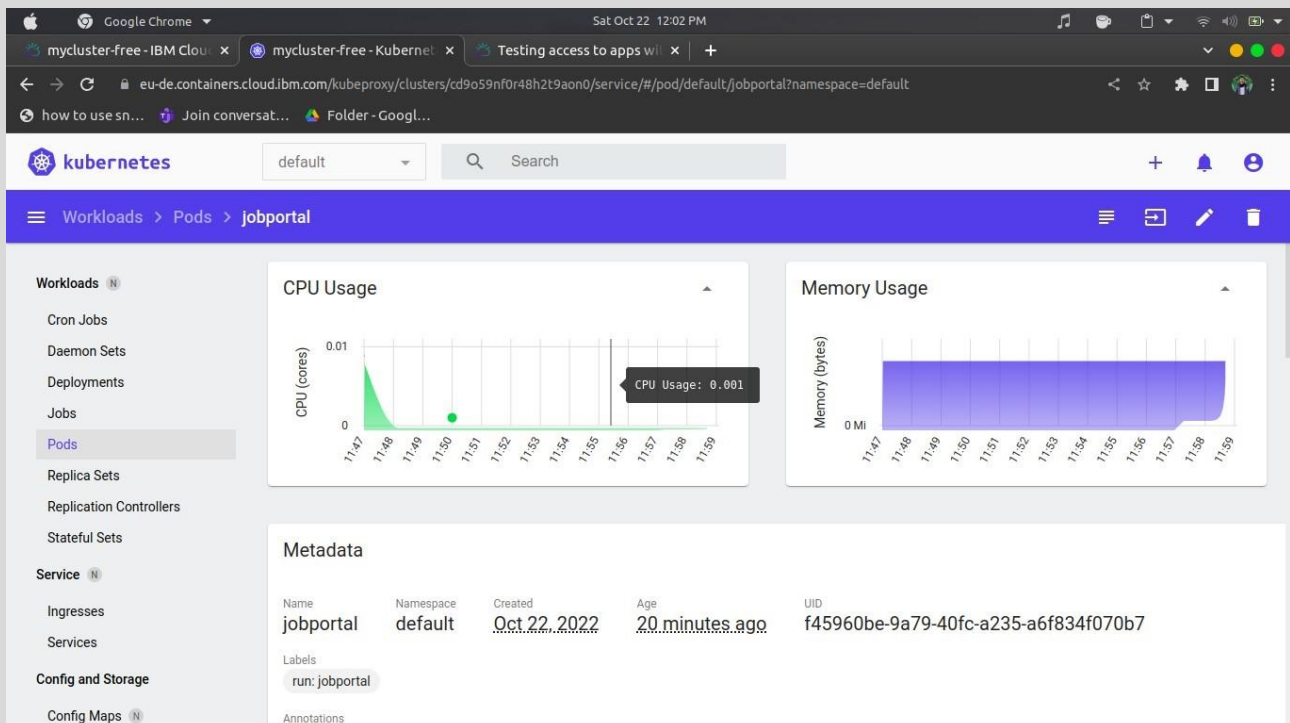


3.Create an IBM container registry and deploy helloworld app or Job portal app.





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

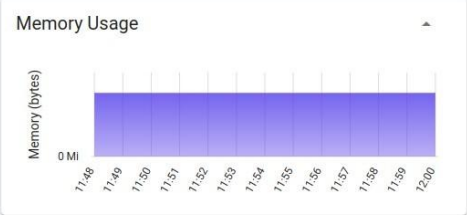
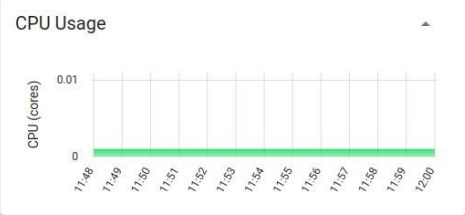
Pods

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)
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	-	

