

ASSIGNMENT-4

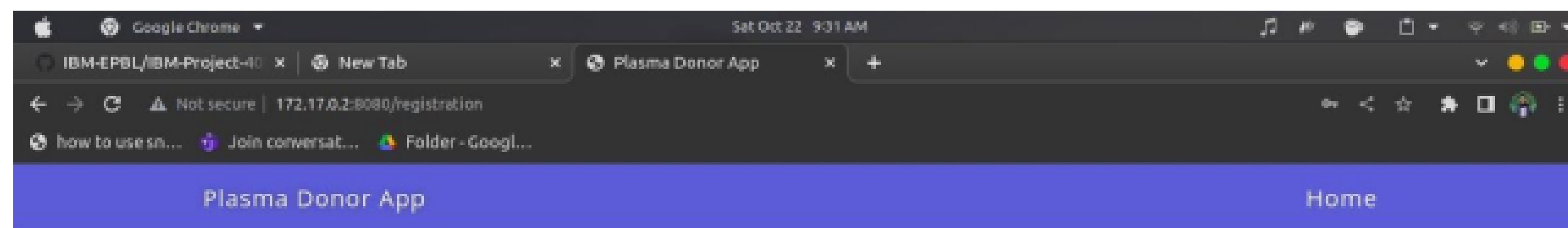
Student Name	Jeevitha P
Student Roll Number	6113191031039
Maximum Marks	

1.Pull an Image from docker hub and run it in docker playground. Pulled sandeepdoodigani/plasmaapplication and running in docker:

```

(base) naryada@naryada:~$ 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) naryada@naryada:~$
```

```
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)
```



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Madurai

Uninfected

Positive

Register

**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**

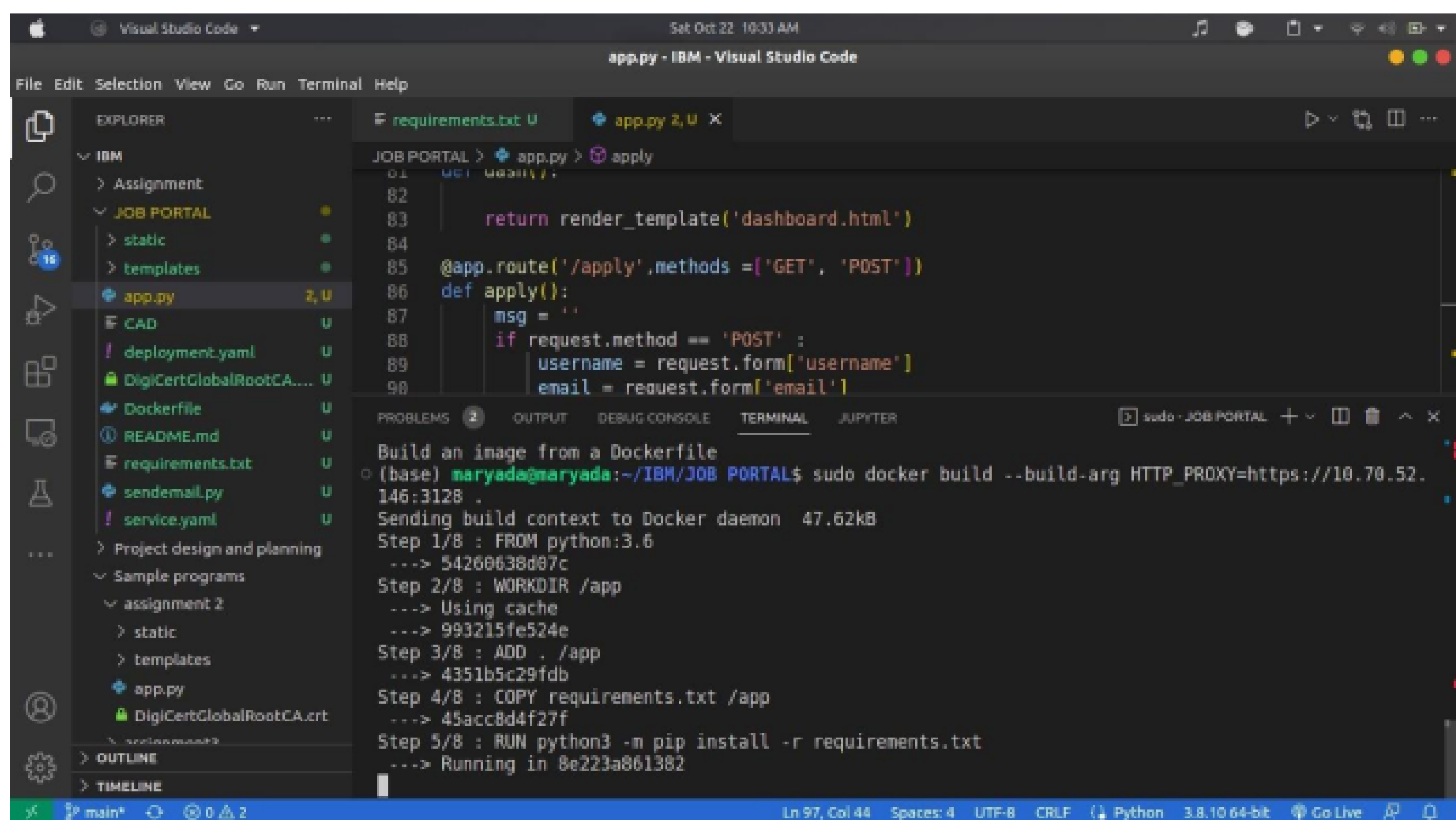
**COPY requirements.txt /app**

**RUN python3 -m pip install -r requirements.txt**

**RUN python3 -m pip install ibm\_db**

**EXPOSE 5000**

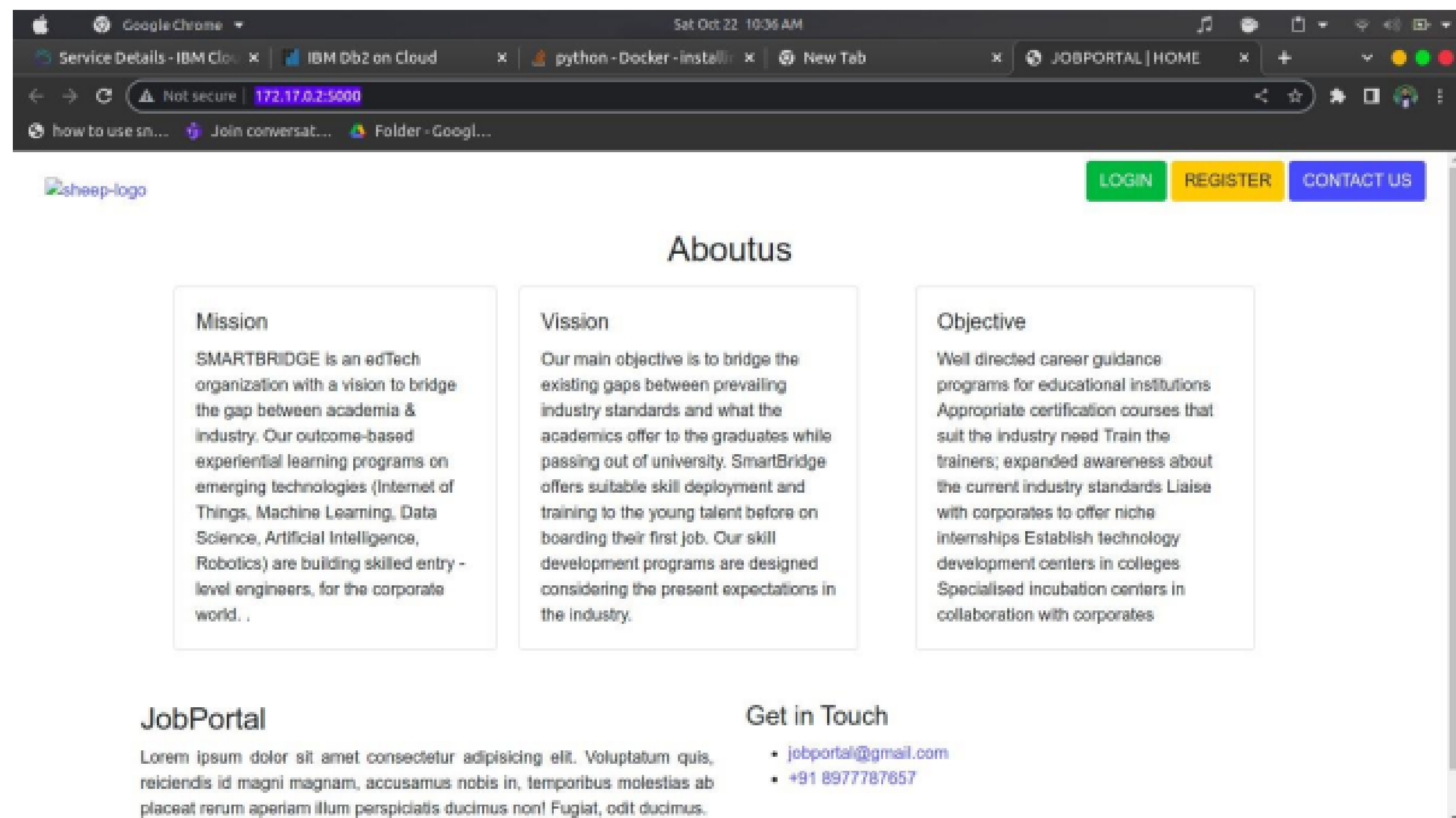
**CMD ["python","app.py"]**



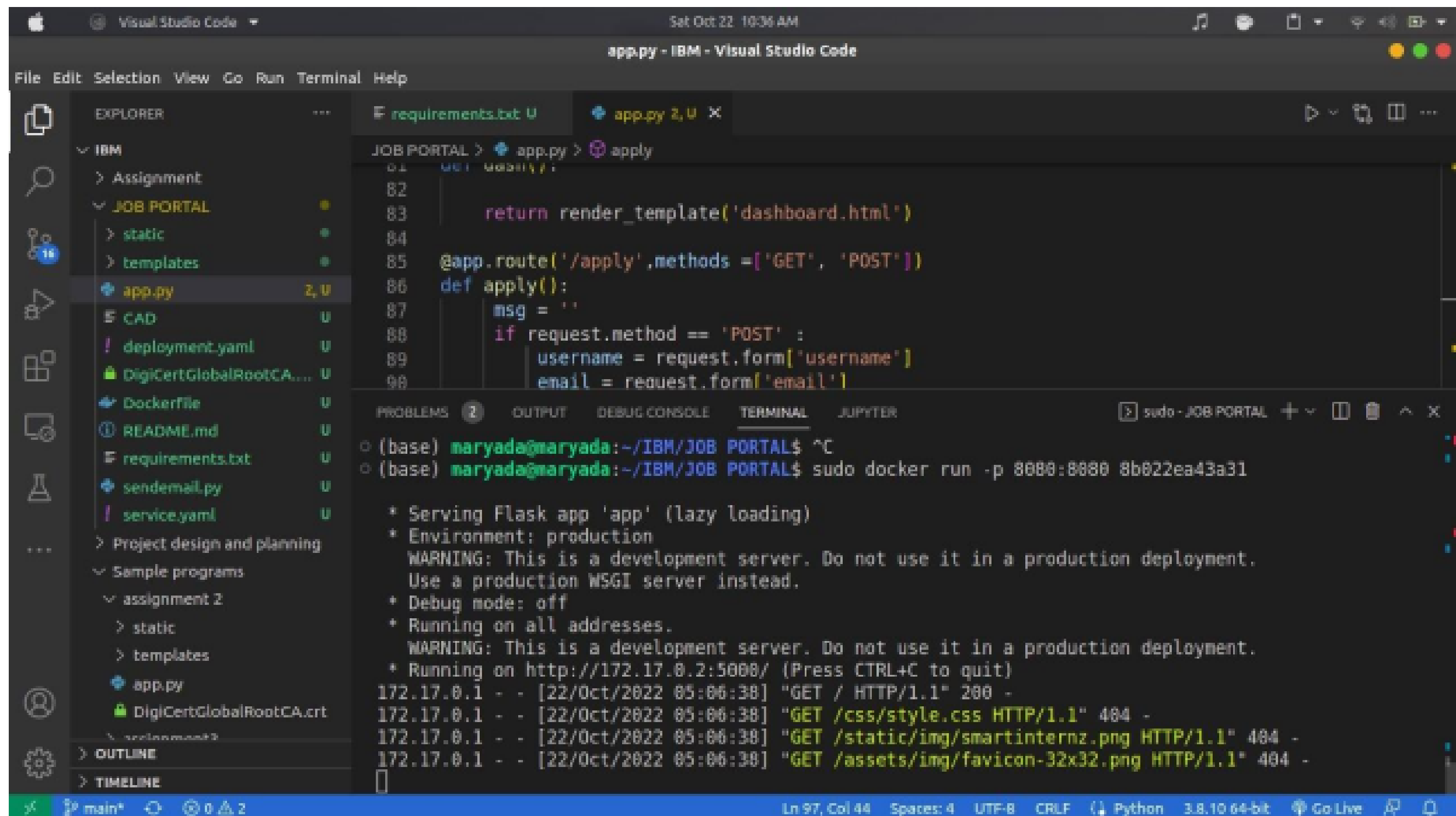
```
requirements.txt
app.py
JOB PORTAL > app.py > apply
82
83
84
85
86
87
88
89
90
return render_template('dashboard.html')
@app.route('/apply', methods=['GET', 'POST'])
def apply():
    msg = ''
    if request.method == 'POST':
        username = request.form['username']
        email = request.form['email']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

```
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
n
(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>       32695b39480c   26 minutes ago 902MB
python              3.6         54260638d87c   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$
```



```
requirements.txt
app.py
JOB PORTAL > app.py > apply
82
```



The screenshot shows the Visual Studio Code interface with a project named 'JOB PORTAL'. The Explorer sidebar on the left shows the project structure, including files like 'app.py', 'requirements.txt', 'Dockerfile', and 'service.yaml'. The main editor displays the 'app.py' file, which contains a Flask application. The terminal window at the bottom shows the command 'sudo docker run -p 8080:8080 8b022ea43a31' being executed, followed by the output of the application running on http://172.17.0.2:5000/.

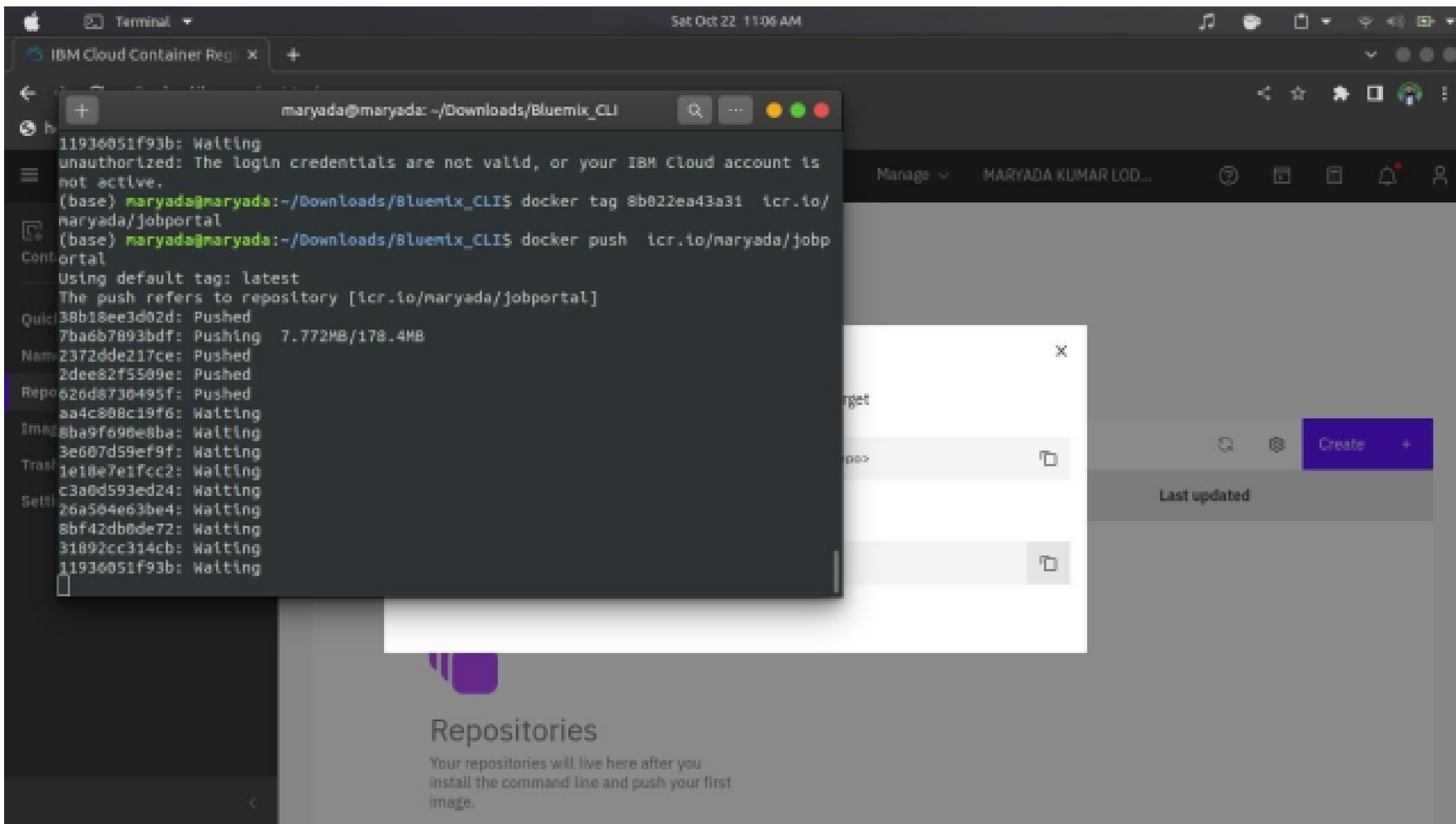
```
app.py - IBM - Visual Studio Code
File Edit Selection View Go Run Terminal Help

EXPLORER
IBM
  > Assignment
  > JOB PORTAL
    > static
    > templates
    + app.py 2, U
    + CAD U
    + deployment.yaml U
    + DigiCertGlobalRootCA... U
    + Dockerfile U
    + README.md U
    + requirements.txt U
    + sendemail.py U
    + service.yaml U
  > Project design and planning
  > Sample programs
    > assignment 2
      > static
      > templates
      + app.py
      + DigiCertGlobalRootCA.crt
  > OUTLINE
  > TIMELINE

JOB PORTAL > app.py > 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']

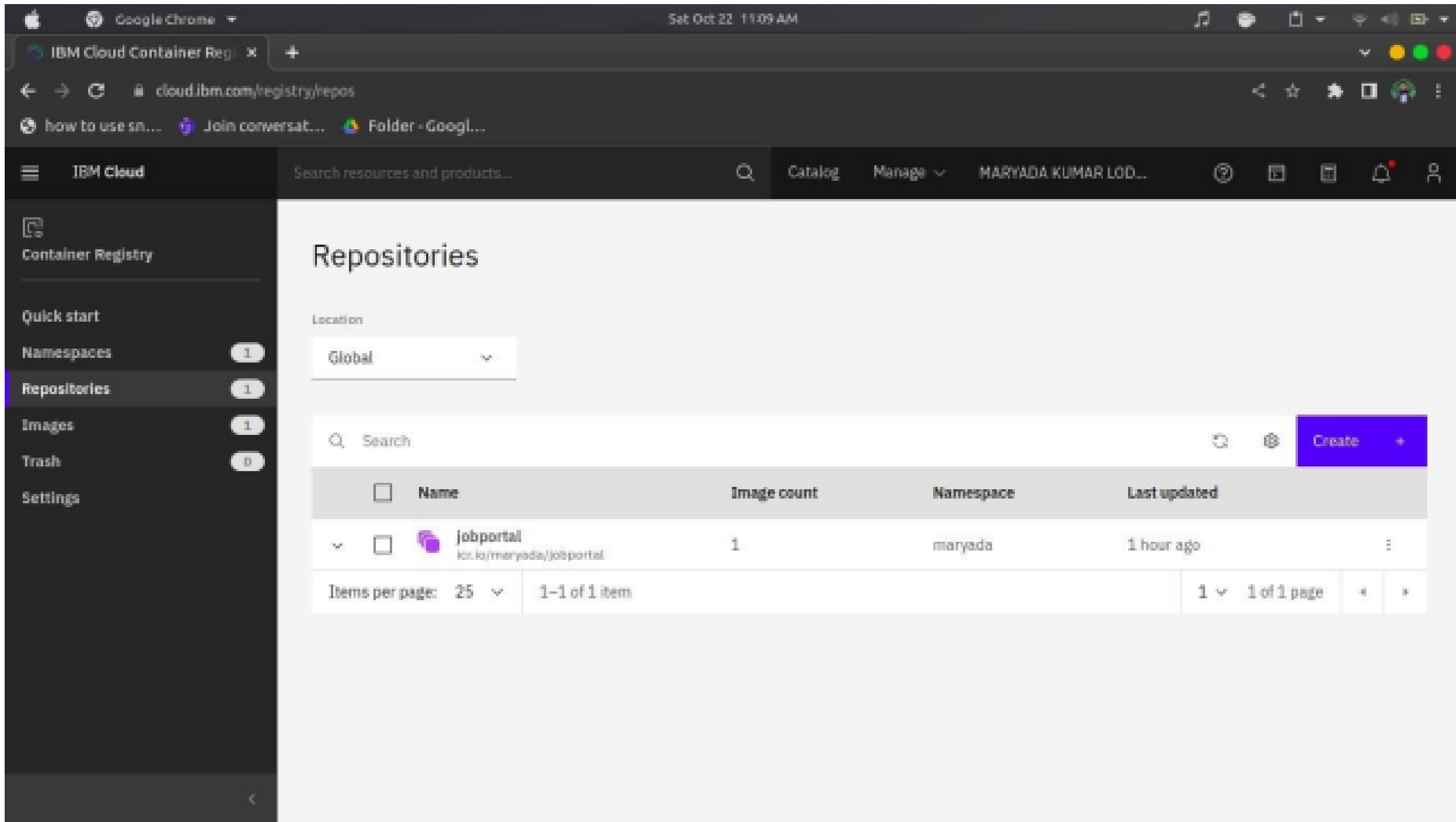
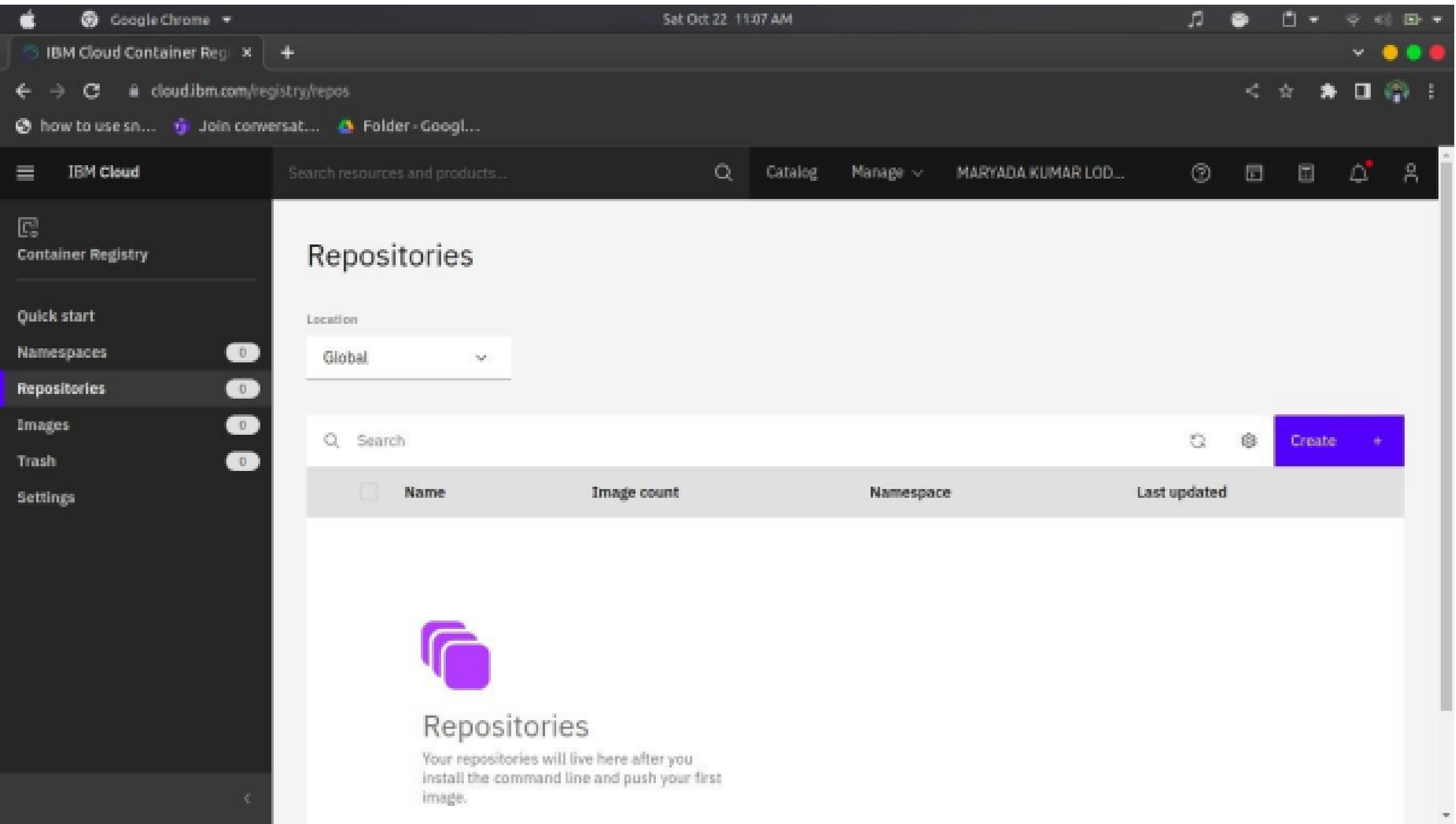
TERMINAL
sudo - JOB PORTAL
(base) maryada@maryada:~/IBM/JOB PORTAL$ ^C
(base) maryada@maryada:~/IBM/JOB PORTAL$ sudo docker run -p 8080:8080 8b022ea43a31
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  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.



The screenshot shows a terminal window with the following commands and output:

```
maryada@maryada: ~/Downloads/Bluemix_CLI
11936051f93b: Waiting
unauthorized: The login credentials are not valid, or your IBM Cloud account is not active.
(base) maryada@maryada:~/Downloads/Bluemix_CLI$ docker tag 8b022ea43a31 icr.io/maryada/jobportal
(base) maryada@maryada:~/Downloads/Bluemix_CLI$ docker push icr.io/maryada/jobportal
Using default tag: latest
The push refers to repository [icr.io/maryada/jobportal]
Pushing 7.772MB/178.4MB
38b18ee3d02d: Pushed
7ba6b7893bdf: Pushed
2372d0e217ce: Pushed
2dee82f5509e: Pushed
620d8730495f: Pushed
aa4c888c19f6: Waiting
8ba9f090e0ba: Waiting
3e007d59ef9f: Waiting
1e18e7e1fcc2: Waiting
c3a0d593ed24: Waiting
26a504e63be4: Waiting
8bf42db0de72: Waiting
31892cc314cb: Waiting
11936051f93b: Waiting
```



#### 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.

