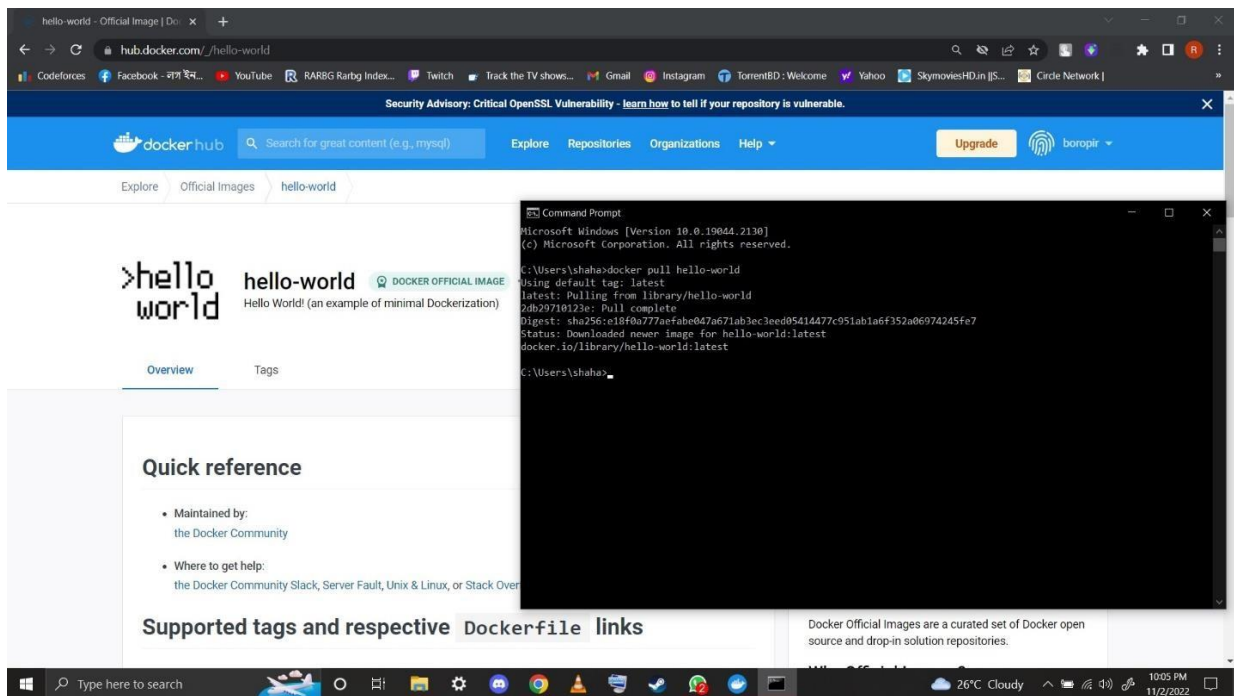
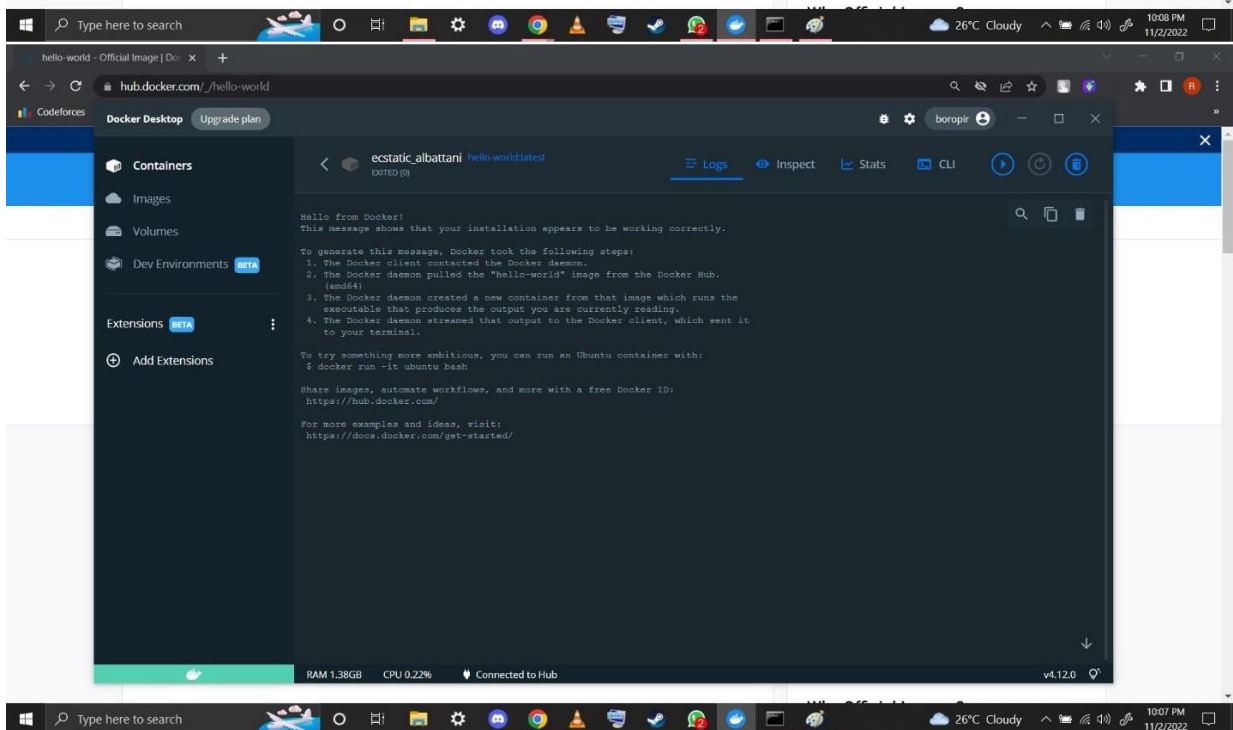
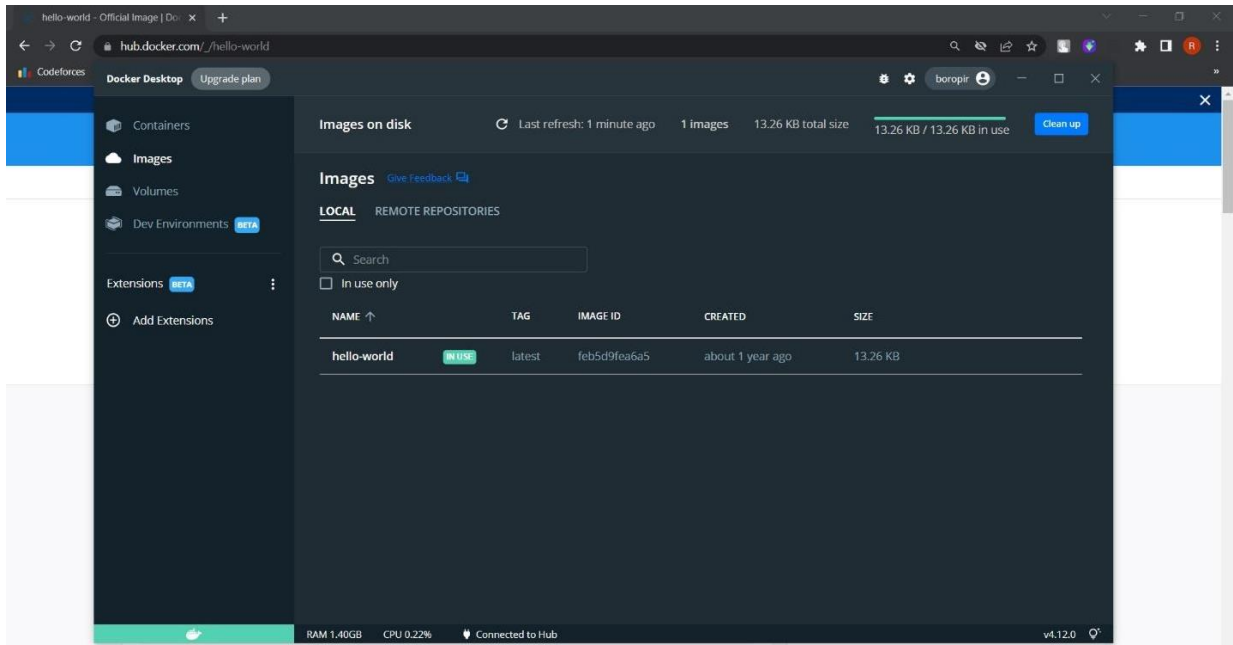


## Assignment -4

Assignment Date	27 October 2022
Student Name	BADHRI KESAVA RAJA S M
Student Roll Number	211419104034
Maximum Marks	2 Marks

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





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
```

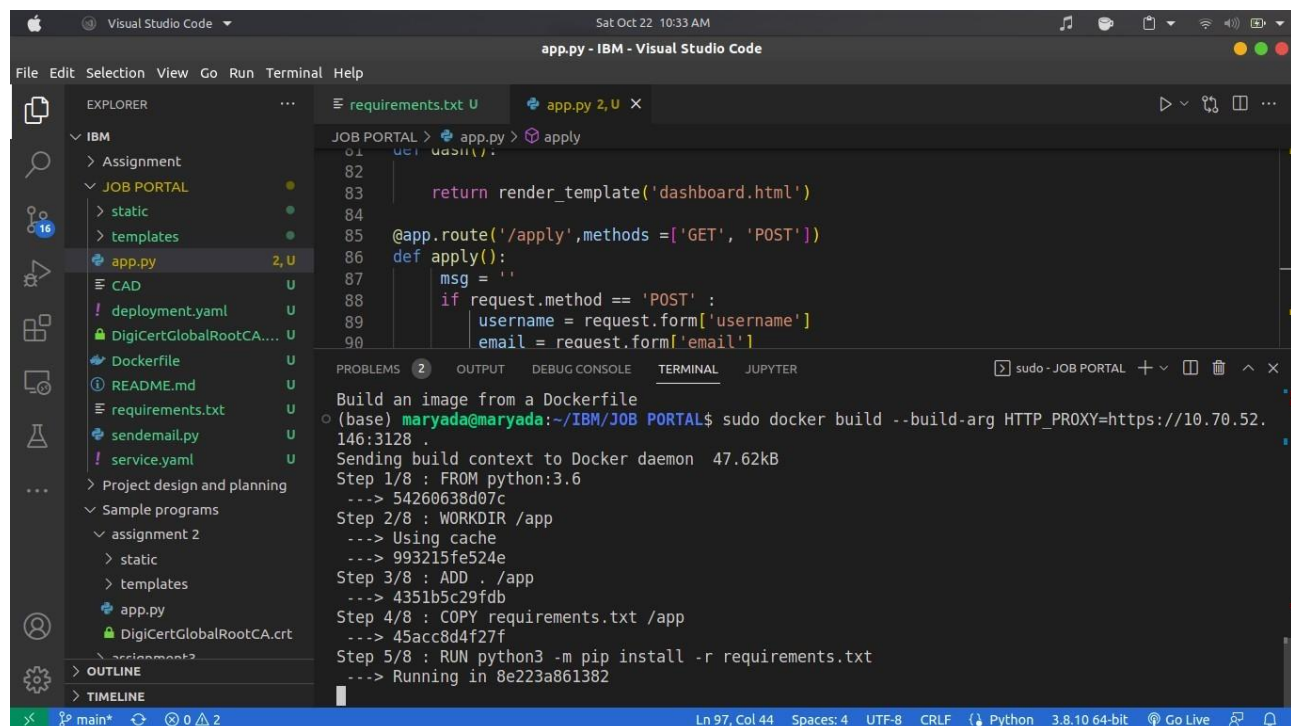
```
requirements.txt
```

```
RUN python3 -m pip
```

```
install ibm_db
```

```
EXPOSE 5000
```

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



The screenshot shows the Visual Studio Code interface with a project named 'JOB PORTAL'. The Explorer sidebar on the left shows the file structure, including 'app.py', 'requirements.txt', and 'Dockerfile'. The main editor displays the content of 'app.py', which is a Flask application with a route for '/apply'. The bottom panel shows the 'TERMINAL' output, which details the process of building a Docker image from the Dockerfile. The build steps include: FROM python:3.6, WORKDIR /app, ADD . /app, COPY requirements.txt /app, and RUN python3 -m pip install -r requirements.txt. The build is successful, and the image is named 'maryada@maryada:~/IBM/JOB PORTAL\$ sudo docker build --build-arg HTTP\_PROXY=https://10.70.52.146:3128 .'. The status bar at the bottom indicates the file is 'main\*' and the Python version is '3.8.10 64-bit'.

```
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 window showing the development of a Flask application named 'JOB PORTAL'.

**File Explorer:**

- IBM
  - Assignment
  - JOB PORTAL
    - static
    - templates
    - app.py (2, 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

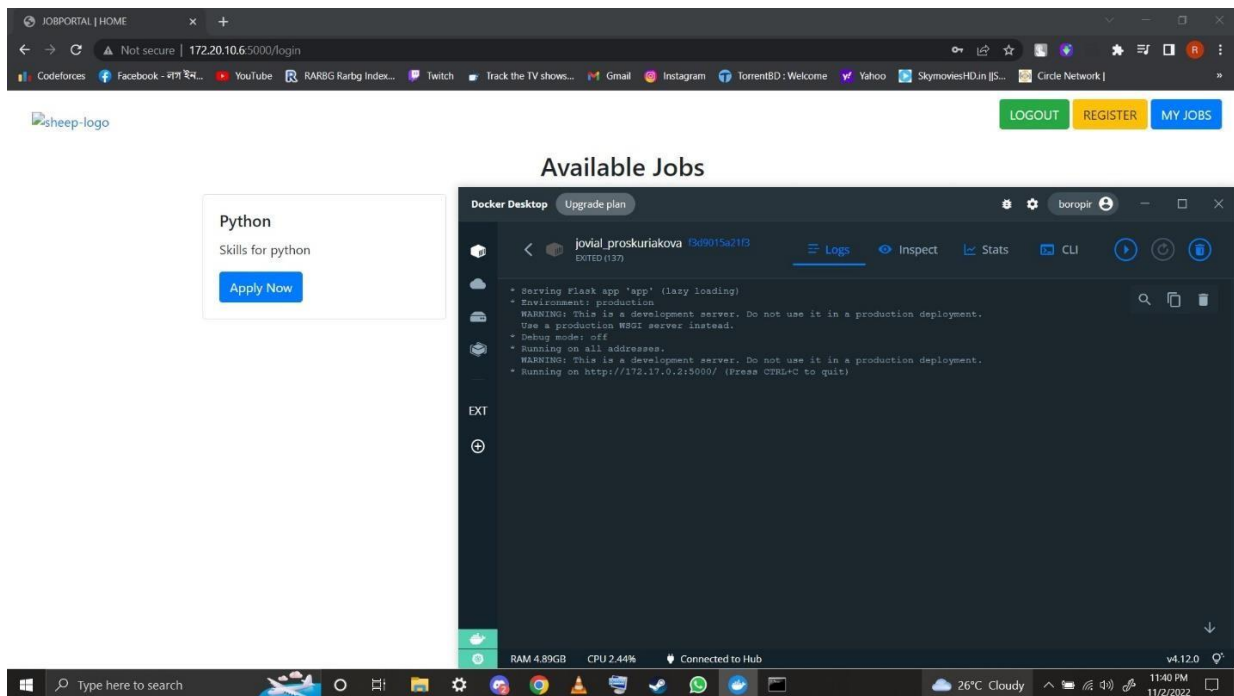
**Code Editor (app.py):**

```
1 def udsit():
2     return render_template('dashboard.html')
3
4 @app.route('/apply', methods = ['GET', 'POST'])
5 def apply():
6     msg = ''
7     if request.method == 'POST':
8         username = request.form['username']
9         email = request.form['email']
```

**Terminal:**

```
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 a IBM container registry and deploy job portal app.

```
Command Prompt
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\shaha>ibmcloud login
API endpoint: https://cloud.ibm.com

Email> 410619104029@smartinternz.com

Password>
Authenticating...
OK

Targeted account Raad Chowdhury's Account (3828f847bb644584acc551e935d0e383)

Select a region (or press enter to skip):
1. au-syd
2. in-che
3. jp-osa
4. jp-tok
5. kr-seo
6. eu-de
7. eu-gb
8. ca-tor
9. us-south
10. us-east
11. br-sao
Enter a number>

API endpoint: https://cloud.ibm.com
Region:
User: 410619104029@smartinternz.com
Account: Raad Chowdhury's Account (3828f847bb644584acc551e935d0e383)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:

C:\Users\shaha>
```

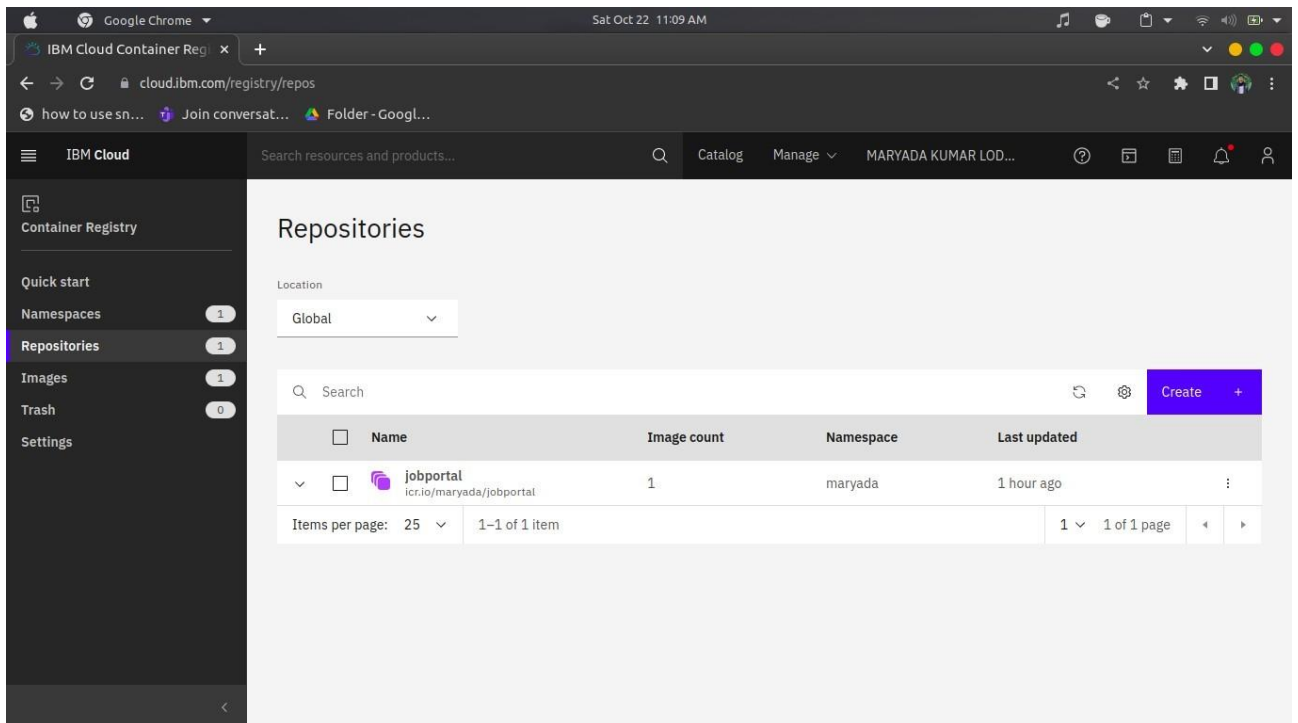
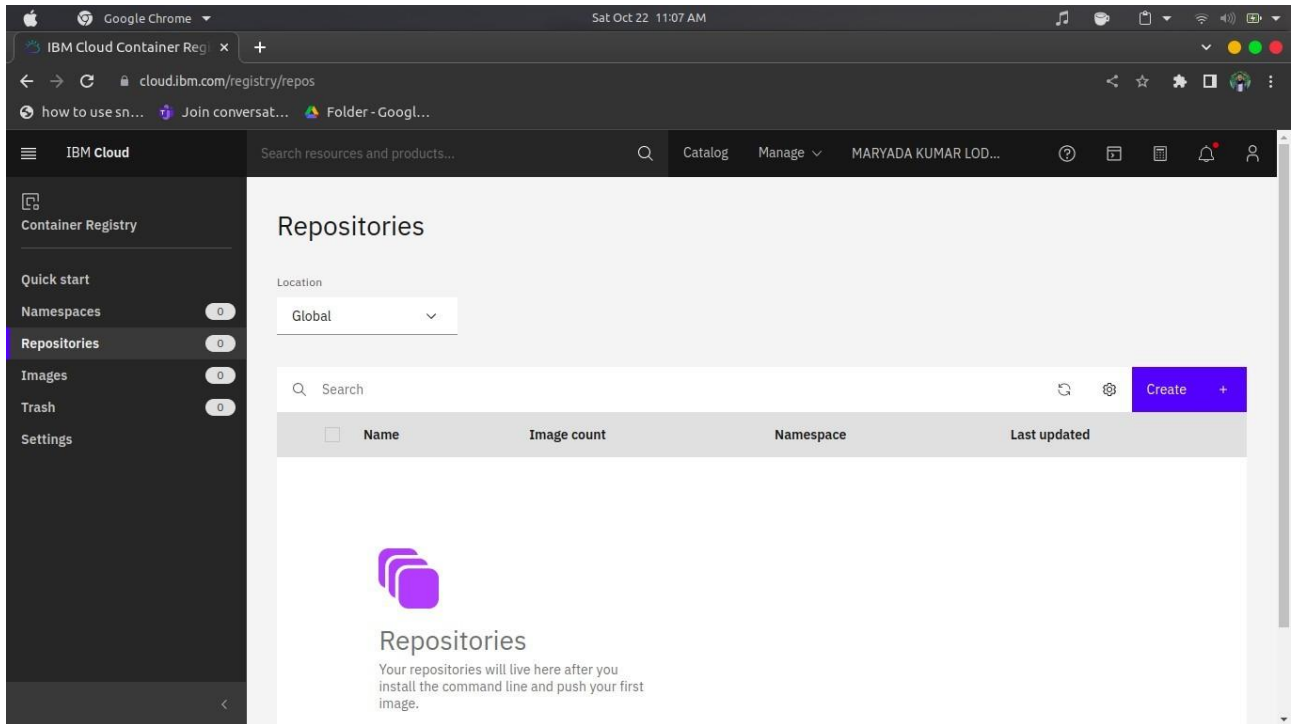
```
Command Prompt
C:\Users\shaha>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\shaha>docker tag f3d9015a21f3 icr.io/shahibhasan/jobportal

C:\Users\shaha>docker push icr.io/shahibhasan/jobportal
Using default tag: latest
The push refers to repository [icr.io/shahibhasan/jobportal]
21d8888e119b: Pushed
ef5059251a61: Pushed
ba5faf349894: Pushed
21a1ndcfa41: Pushed
4c702997ab0c: Pushed
aad4808c19f6: Pushed
8ba9f090e8ba: Pushed
3e607d59ef9f: Pushed
1e18e7e1fcc2: Pushed
c3a8d993ae724: Pushed
26a504e63be4: Pushed
8bf42db0de72: Pushed
31892cc314cb: Pushed
11936051f93b: Pushed
latest: digest: sha256:910c91f1fe2226ae9306e48d02426c6c513bf54cfad9b960a8cb07bcb0926143 size: 3260

C:\Users\shaha>
```



4. Create a Kubernetes cluster in IBM cloud and deploy job portal image and also expose the same app to run in nodeport.

