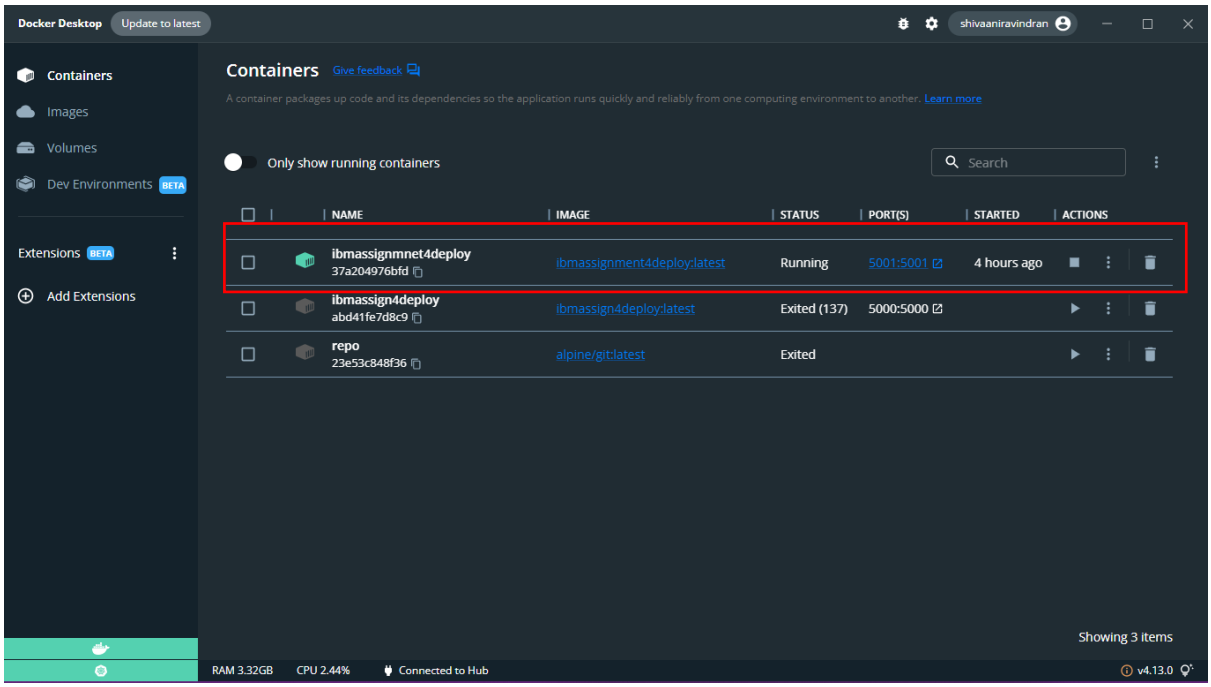
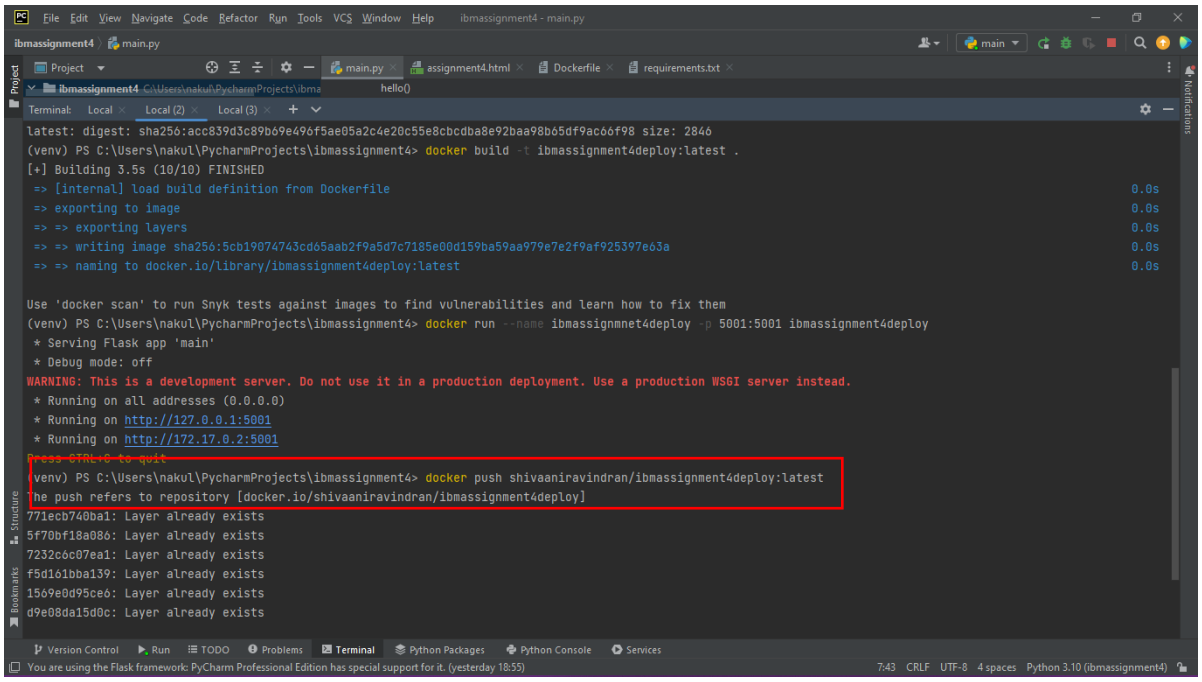
ASSIGNMENT 4

Student Name	Shivaani.R
Roll Number	813819104092
Maximum Marks	2 Marks

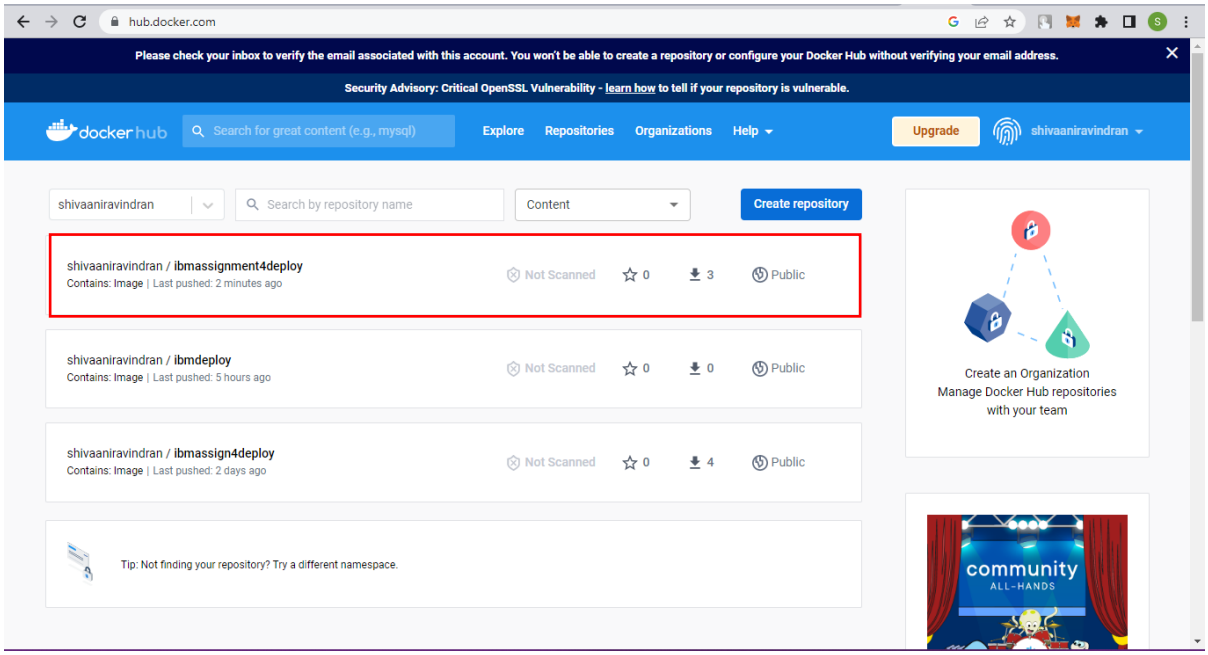
1. Pull an Image from docker hub and run it in docker playground.



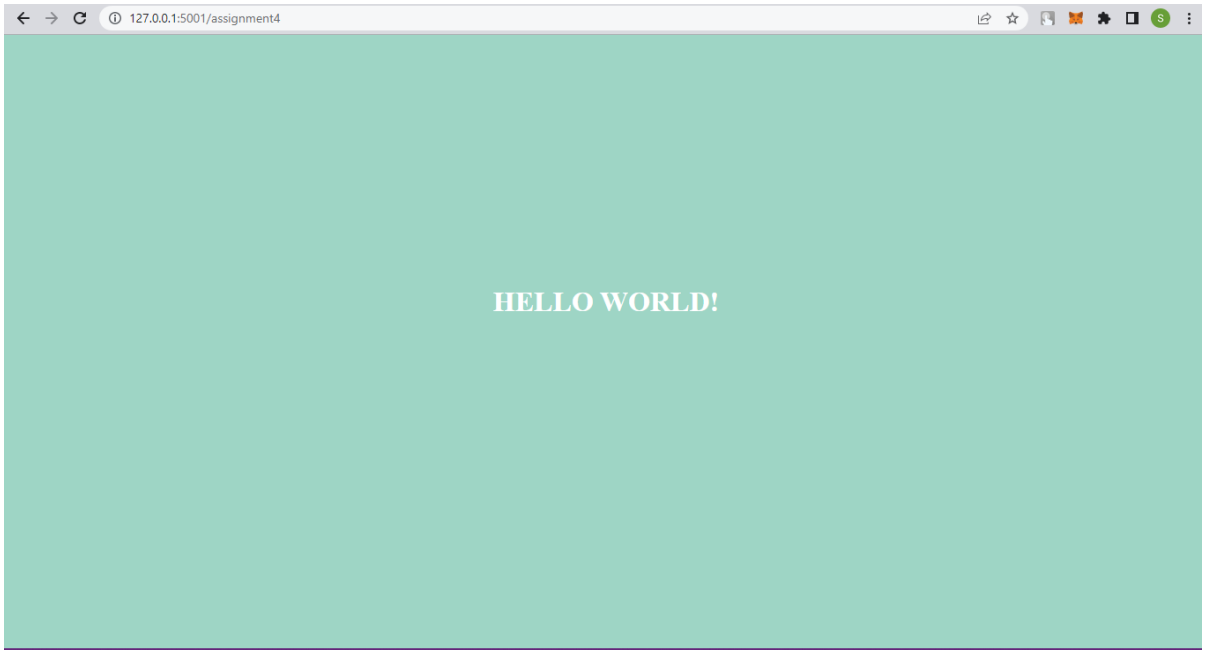
The image is built in Docker Desktop.



The same image is pushed to docker hub using the command



Here image name is ibmassignment4deploy. Thus it is pushed in docker hub.

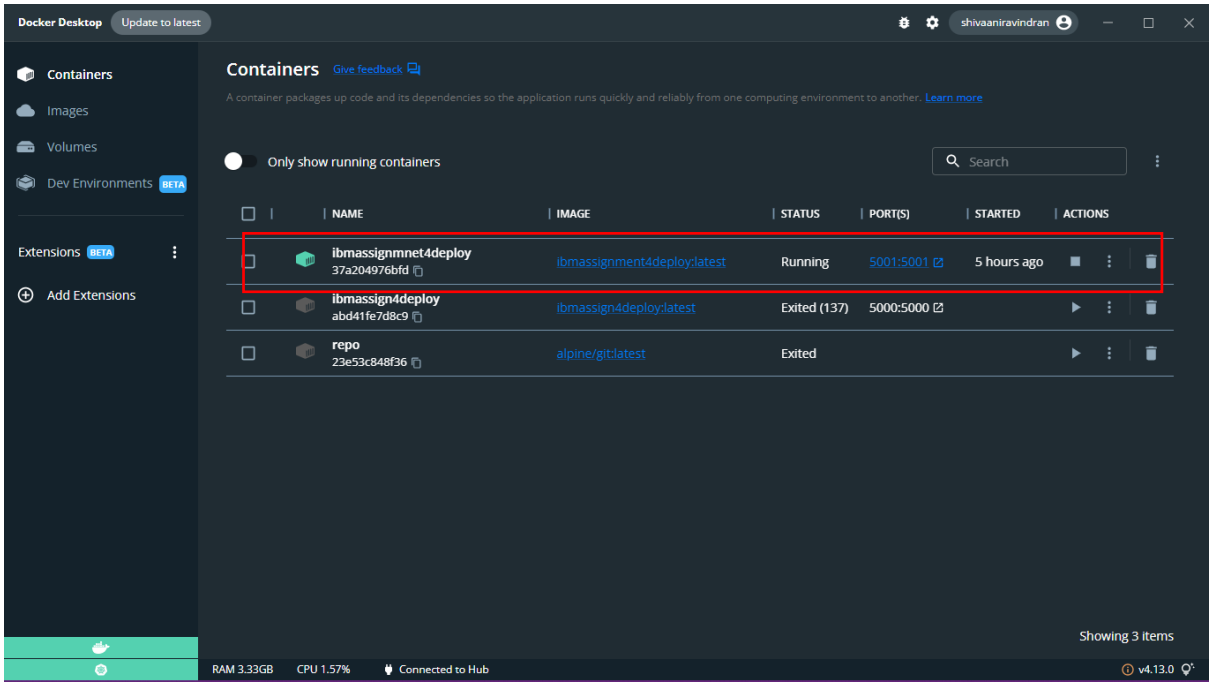


The app is running at the specified port.

2. Create a docker file for the application and deploy it in Docker desktop application.

Dockerfile:

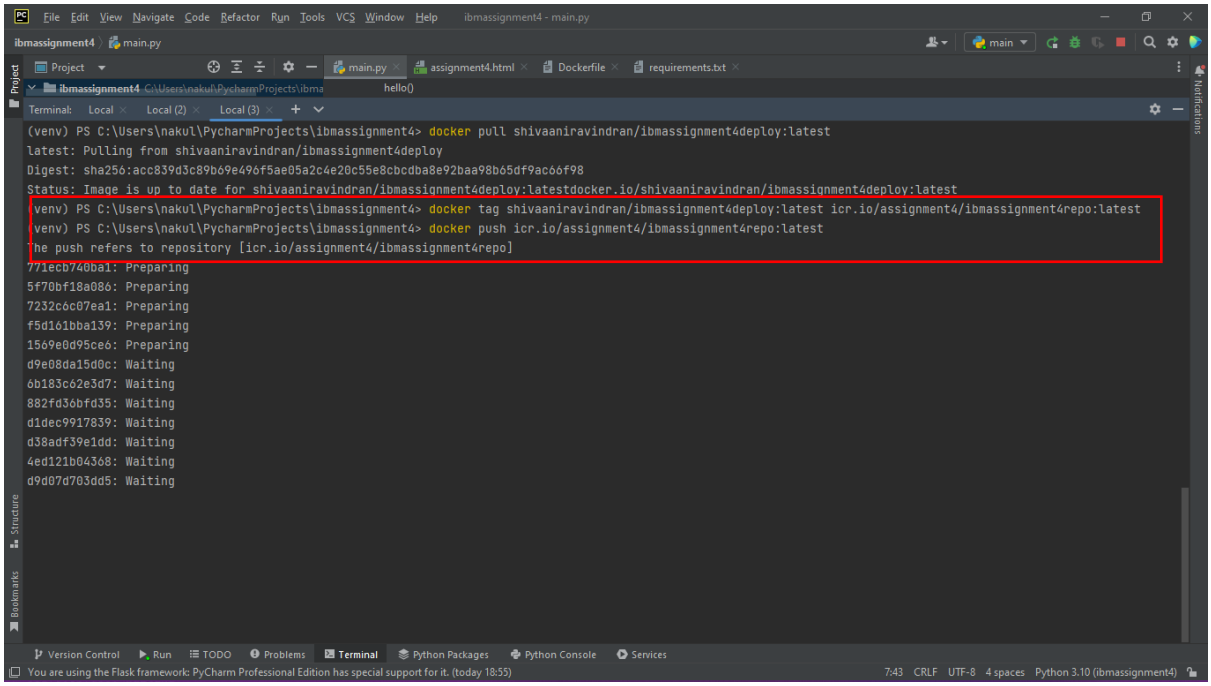
```
FROM python:3.10
COPY . /app
WORKDIR /app
RUN pip install -r requirements.txt
EXPOSE 5001
ENTRYPOINT [ "python" ]
CMD ["main.py"]
```

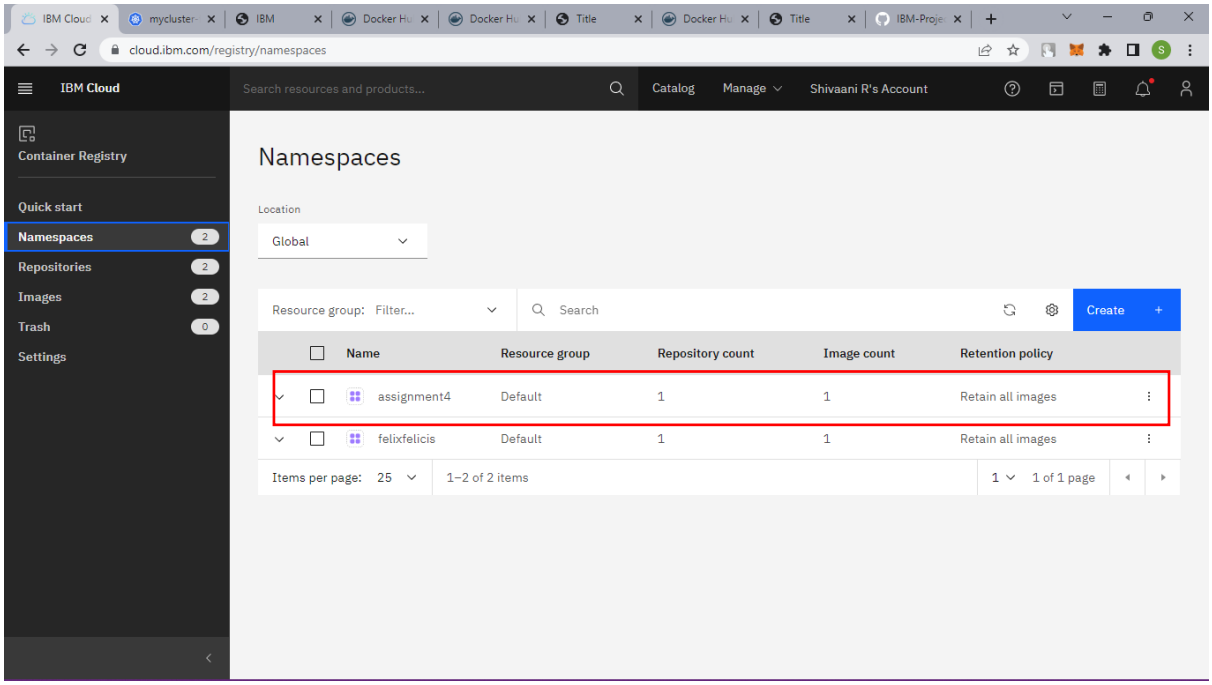


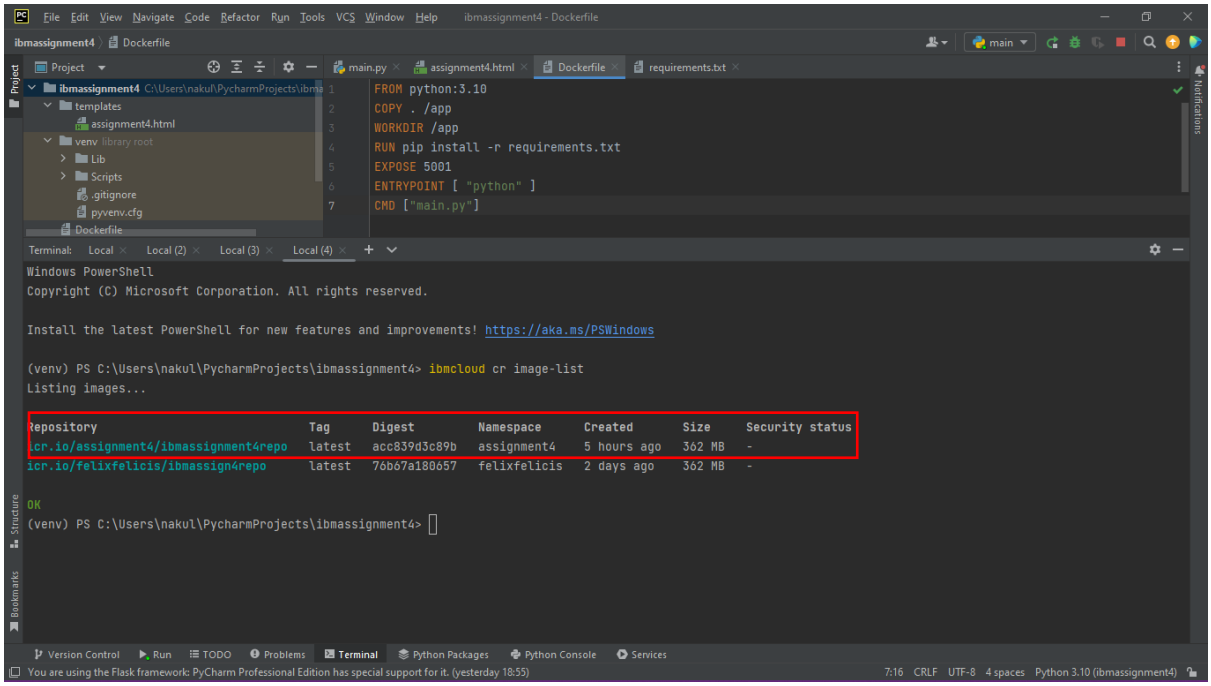
Thus a docker file is created and deployed in docker desktop.

3. Create a IBM container registry and deploy hello world app.

Container registry is created by

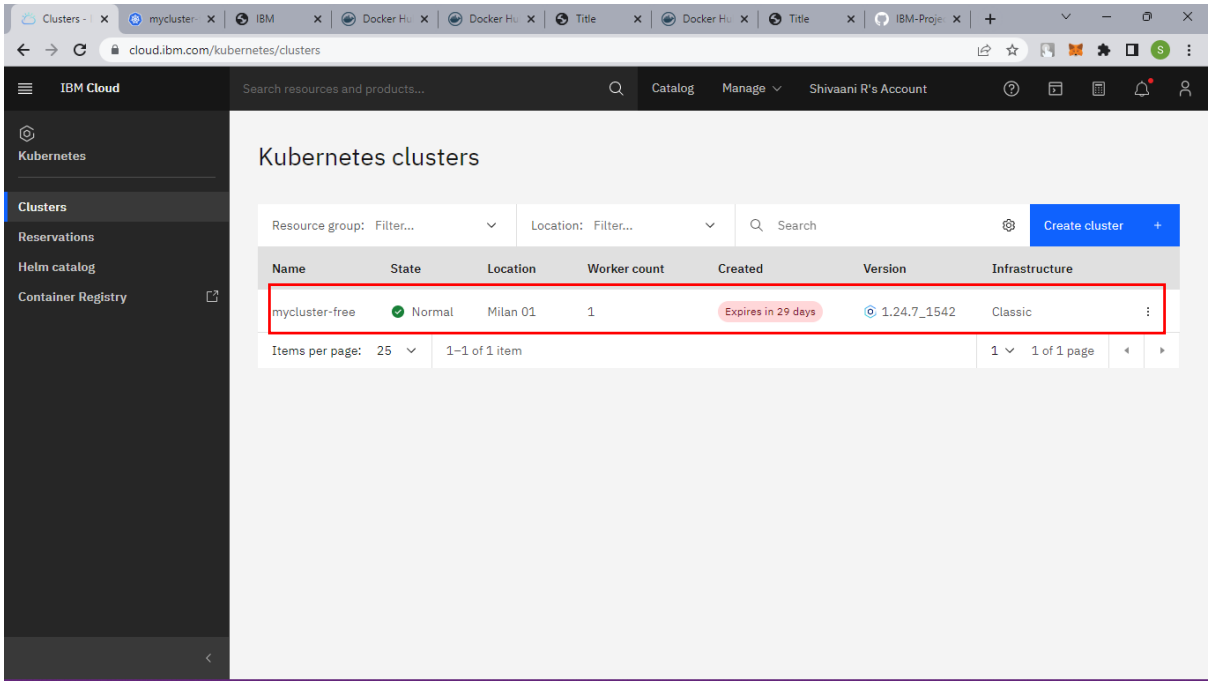

(venv) PS C:\Users\nakul\PycharmProjects\ibmassignment4> docker pull shivaaniravindran/ibmassignment4deploy:latest
latest: Pulling from shivaaniravindran/ibmassignment4deploy
Digest: sha256:acc839d3c89b69e496f5ae05a2c4e20c55e8cbcdba8e92baa98b65df9ac66f98
Status: Image is up to date for shivaaniravindran/ibmassignment4deploy:latestdocker.io/shivaaniravindran/ibmassignment4deploy:latest
(venv) PS C:\Users\nakul\PycharmProjects\ibmassignment4> docker tag shivaaniravindran/ibmassignment4deploy:latest icr.io/assignment4/ibmassignment4repo:latest
(venv) PS C:\Users\nakul\PycharmProjects\ibmassignment4> docker push icr.io/assignment4/ibmassignment4repo:latest
The push refers to repository [icr.io/assignment4/ibmassignment4repo]
771ecb740ba1: Preparing
5f70bf18a086: Preparing
7232c6c07ea1: Preparing
f5d161bba139: Preparing
1569e0d95ce6: Preparing
d9e08da15d0c: Waiting
6b183c62e3d7: Waiting
882fd36bfd35: Waiting
d1dec9917839: Waiting
d38adf39e1dd: Waiting
4ed121b04368: Waiting
d9d07d703dd5: Waiting


IBM Cloud
Search resources and products...
Catalog
Manage
Shivaani R's Account
Container Registry
Quick start
Namespaces 2
Repositories 2
Images 2
Trash 0
Settings
Namespaces
Location
Global
Resource group: Filter...
Search
Create
Name
Resource group
Repository count
Image count
Retention policy
assignment4 Default 1 1 Retain all images
felixfelicis Default 1 1 Retain all images
Items per page: 25
1–2 of 2 items
1 of 1 page

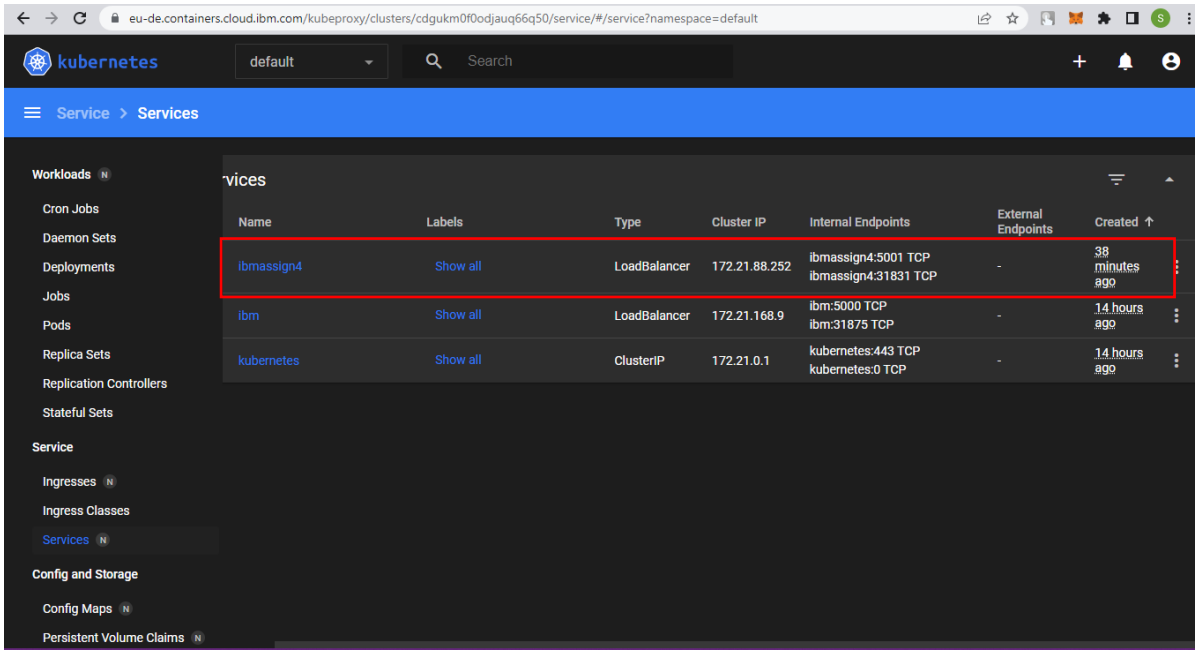


Thus, images in container registry are listed.

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



Thus, a cluster is created.



App is live at http://169.51.200.210:31831/assignment4