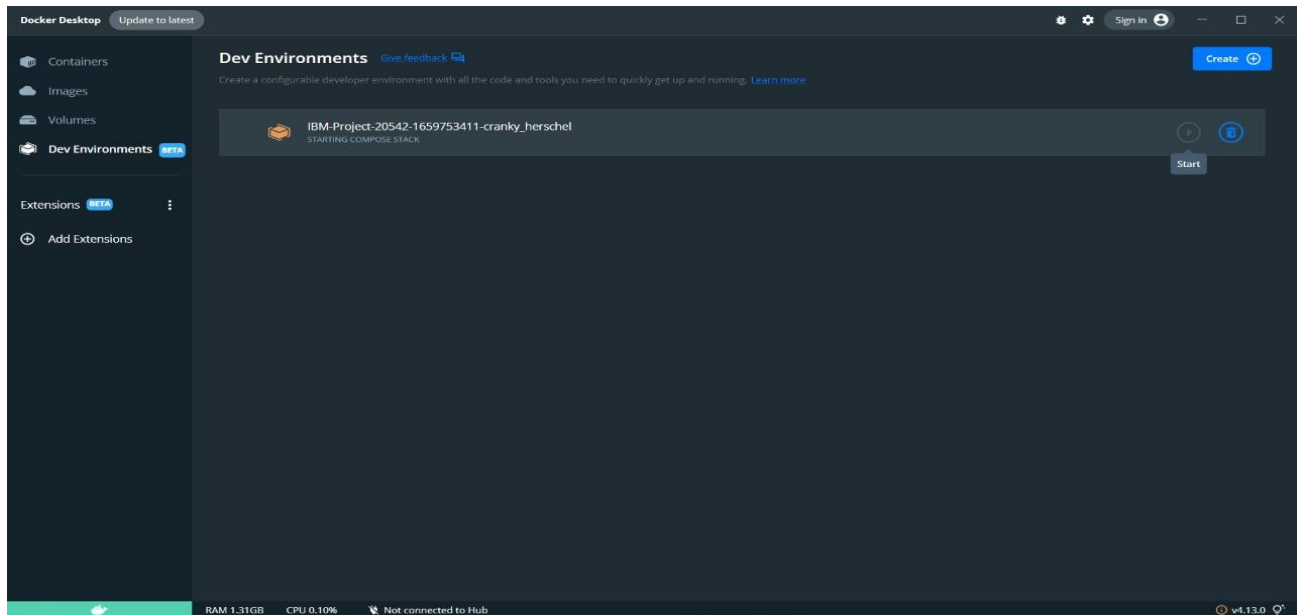


ASSIGNMENT-4

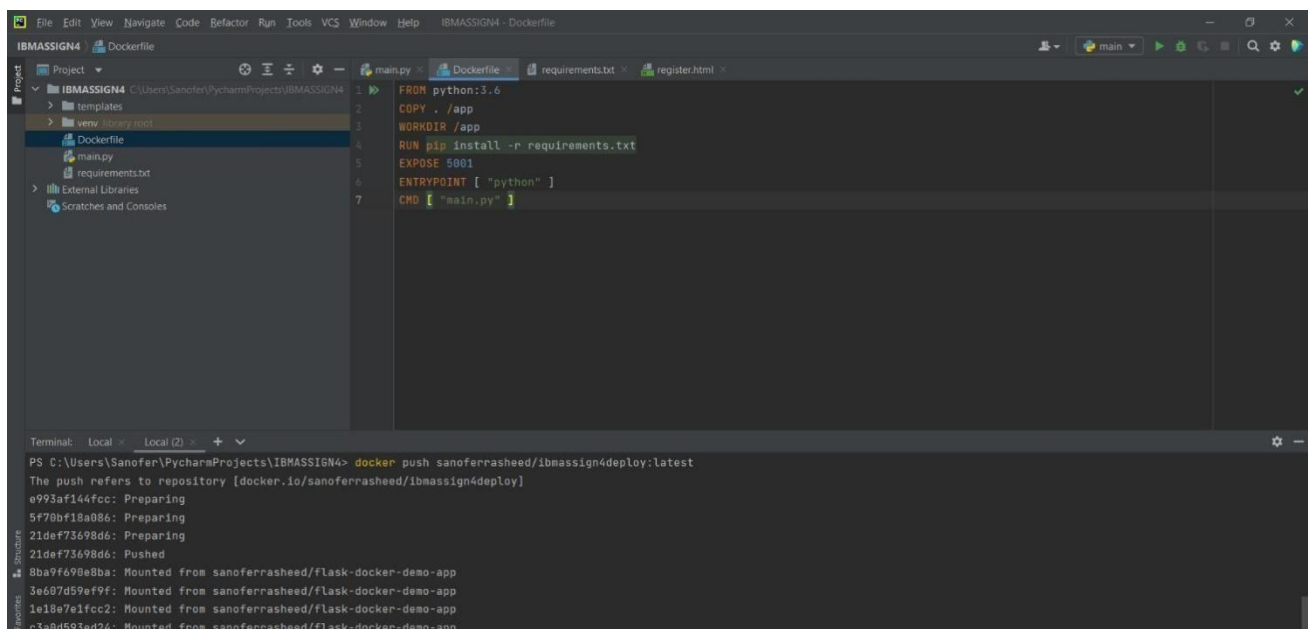
Assignment Date	05 October2022
Student Name	Lokesh
Student Roll Number	311019205026
Maximum Marks	2 Marks

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

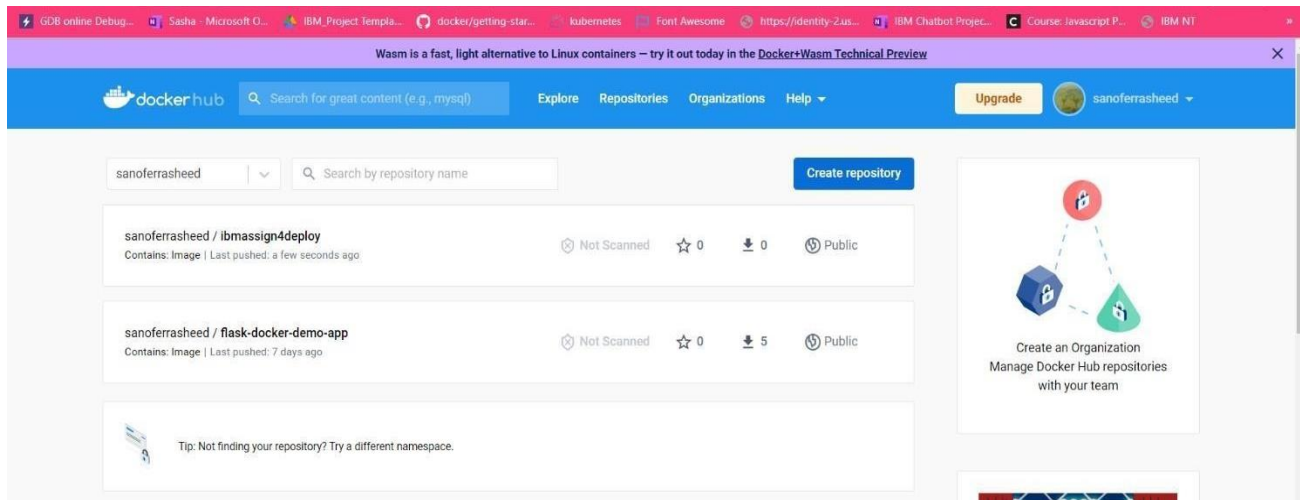
The image is built.



The same image is pushed to docker hub using the command



Here image name is ibmassign4deploy. Thus it is pushed in docker hub.



The app is running at the specified port.

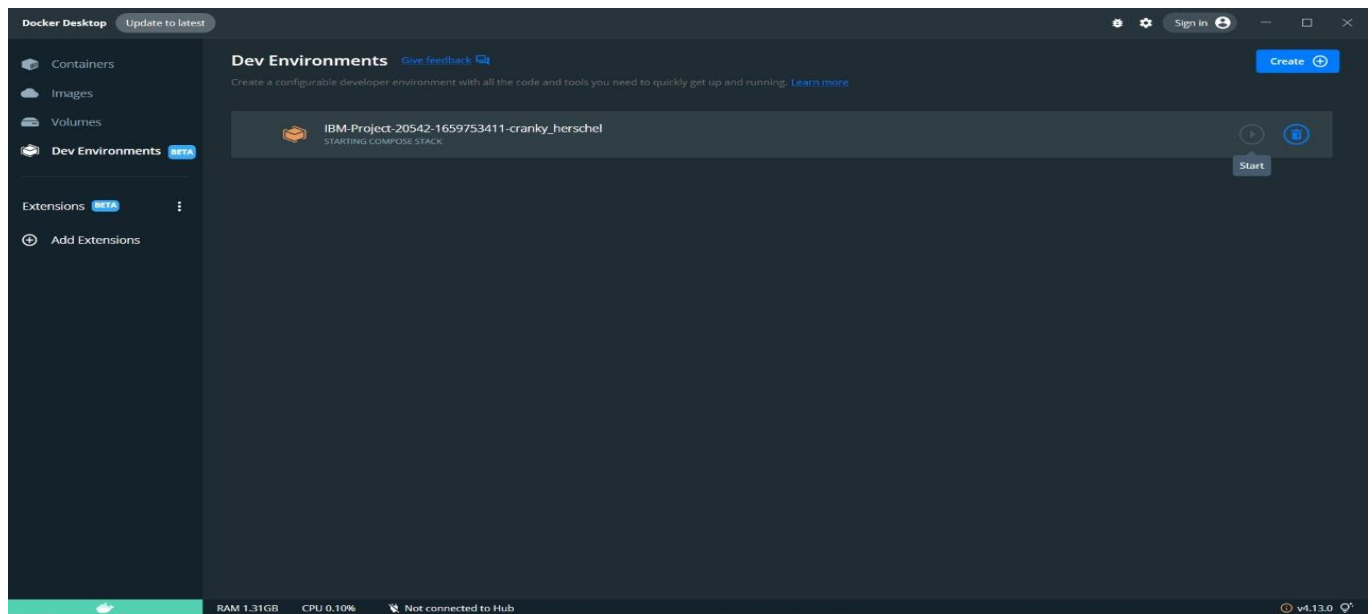
A screenshot of a web page titled 'Registration Form'. The form contains several input fields: 'Enter name', 'Enter Email', 'Enter Mobile', 'Enter City', 'Enter State', and 'Enter Country'. Below these fields is a 'Submit' button. The page has a pink header bar with various browser tabs open, including 'GDB online Debug...', 'Sasha - Microsoft O...', 'IBM Project Templa...', 'docker/getting-star...', 'kubernetes', 'Font Awesome', 'https://identity-2.us...', 'IBM Chatbot Projec...', 'Course: javascript P...', and 'IBM NT'.

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

Dockerfile:

```
FROM python:3.6
COPY . /app
WORKDIR /app
RUN pip install -r requirements.txt
EXPOSE 5001
ENTRYPOINT [ "python" ]
CMD [ "main.py" ]
```

Thus docker file created and deployed in docker desktop.

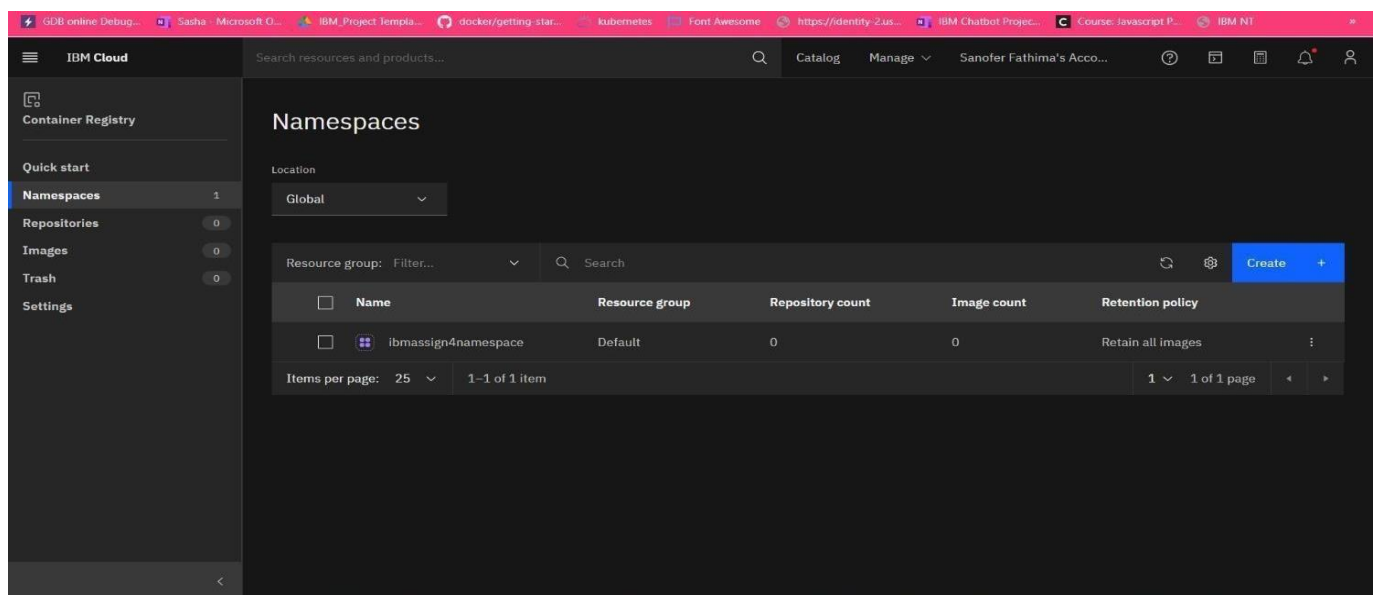


3. Create a IBM container registry and deploy hello world app.

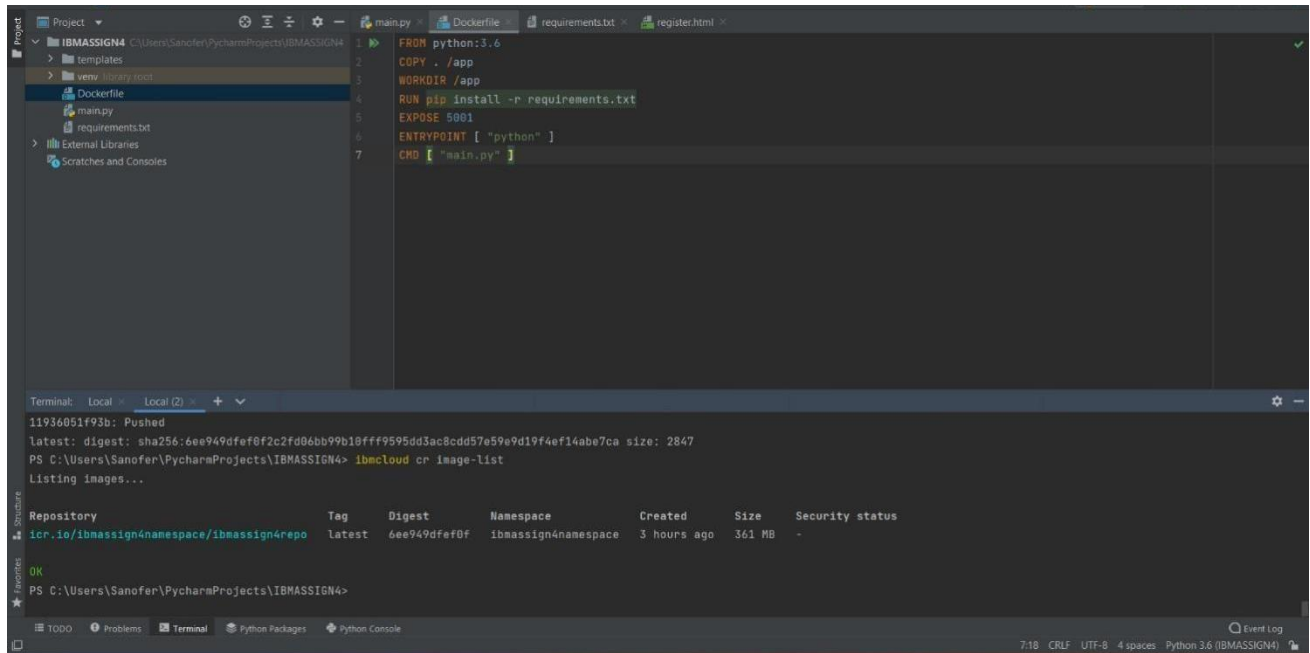
Container registry created using

```
> docker tag sanoferrasheed/ibmassign4deploy:latest  
icr.io/ibmassign4namespace/ibmassign4repo:latest
```

```
> docker push icr.io/ibmassign4namespace/ibmassign4repo:latest
```



Thus, images in container registry are listed



The screenshot shows the PyCharm IDE interface. The top pane displays a Dockerfile with the following content:

```
1 FROM python:3.6
2 COPY . /app
3 WORKDIR /app
4 RUN pip install -r requirements.txt
5 EXPOSE 5001
6 ENTRYPOINT [ "python" ]
7 CMD [ "main.py" ]
```

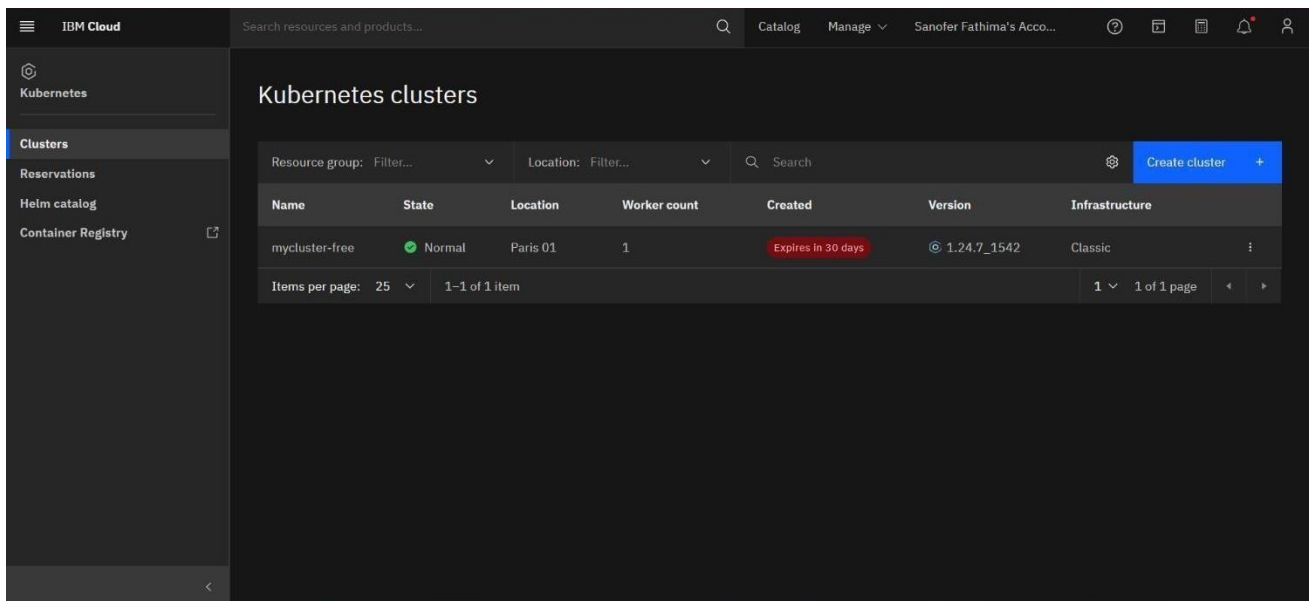
The bottom pane shows the terminal output:


```
11936051f93b: Pushed
latest: digest: sha256:6ee949dfe0f2c2fd06bb99b10fff9595dd3ac8cdd57e59e9d19f4ef14abe7ca size: 2847
PS C:\Users\Sanofer\PycharmProjects\IBMASSIGN4> ibmcCloud cr image-list
Listing images...

Repository                                Tag    Digest                                Namespace                Created                Size    Security status
icr.io/ibmassign4namespace/ibmassign4repo latest 6ee949dfe0f                ibmassign4namespace      3 hours ago           361 MB  -
```


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, cluster is created.



kubernetes

default

 Search



Service > Services

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses 1

Ingress Classes

Services 1



Config and Storage

Config Maps 1

Persistent Volume Claims 1

Secrets 1

Services

Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints	Created ↑
 ibmassign4appln	Show all	LoadBalancer	172.21.216.77	ibmassign4appln:5001 TCP ibmassign4appln:30878 TCP	-	7 minutes ago
 kubernetes	Show all	ClusterIP	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	28 minutes ago

APP IS LIVE AT <http://159.122.174.152:30089/>