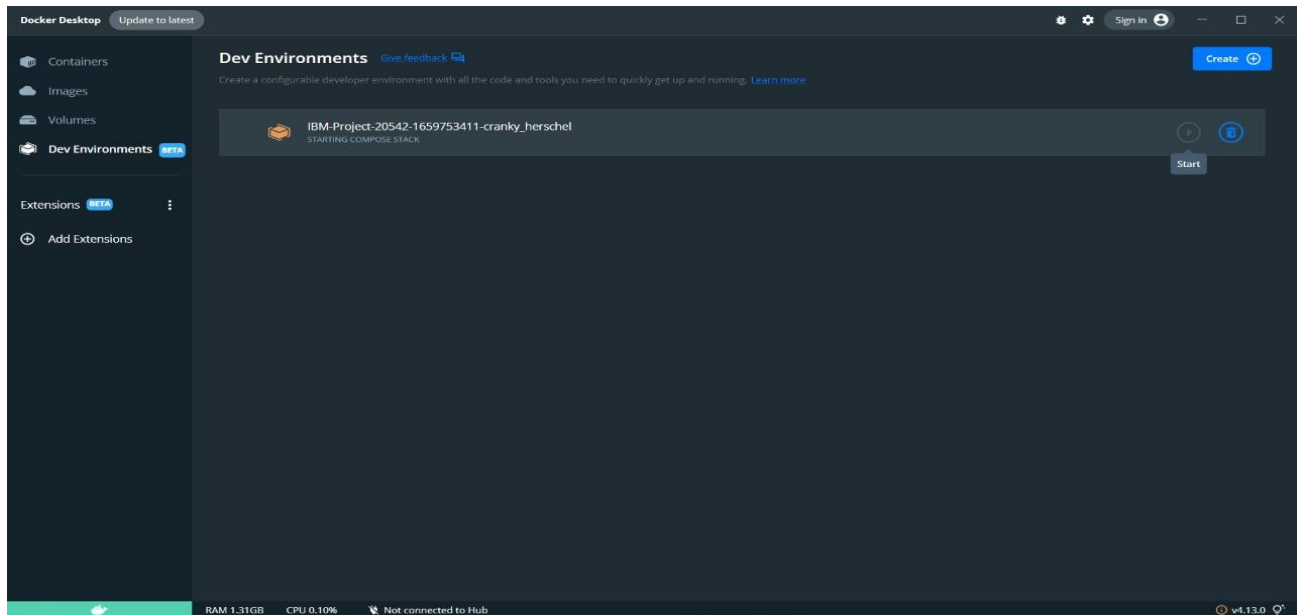


## ASSIGNMENT-4

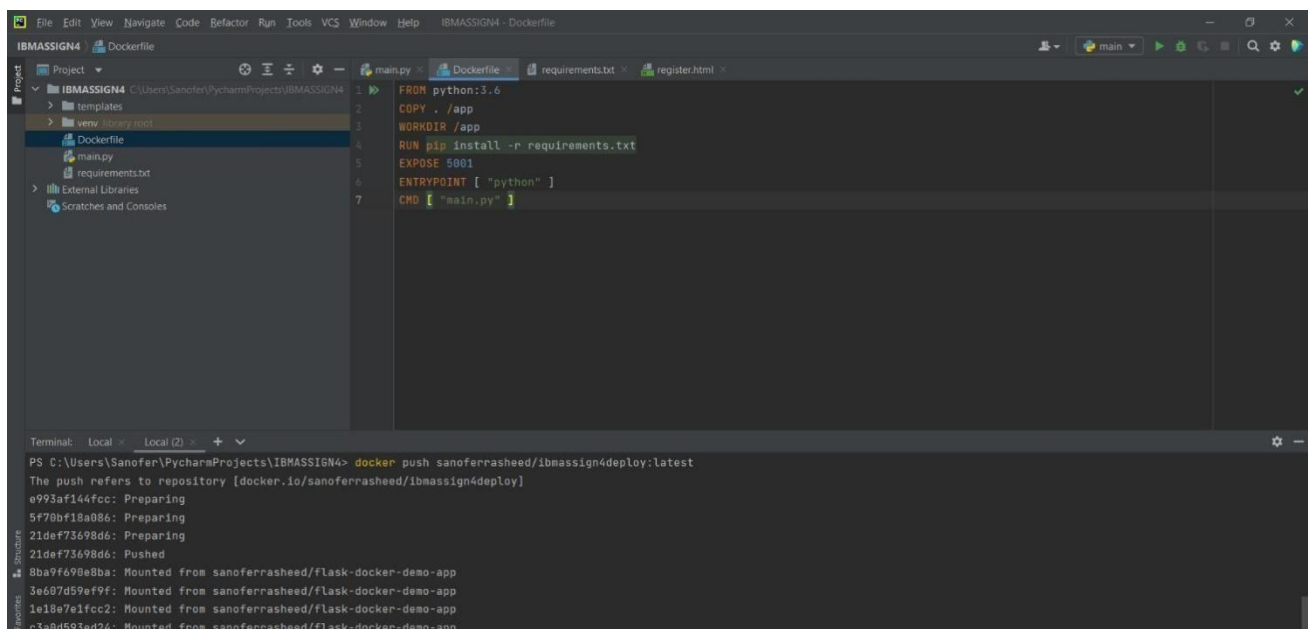
Assignment Date	05 October2022
Student Name	Hari Haran
Student Roll Number	311019205015
Maximum Marks	2 Marks

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

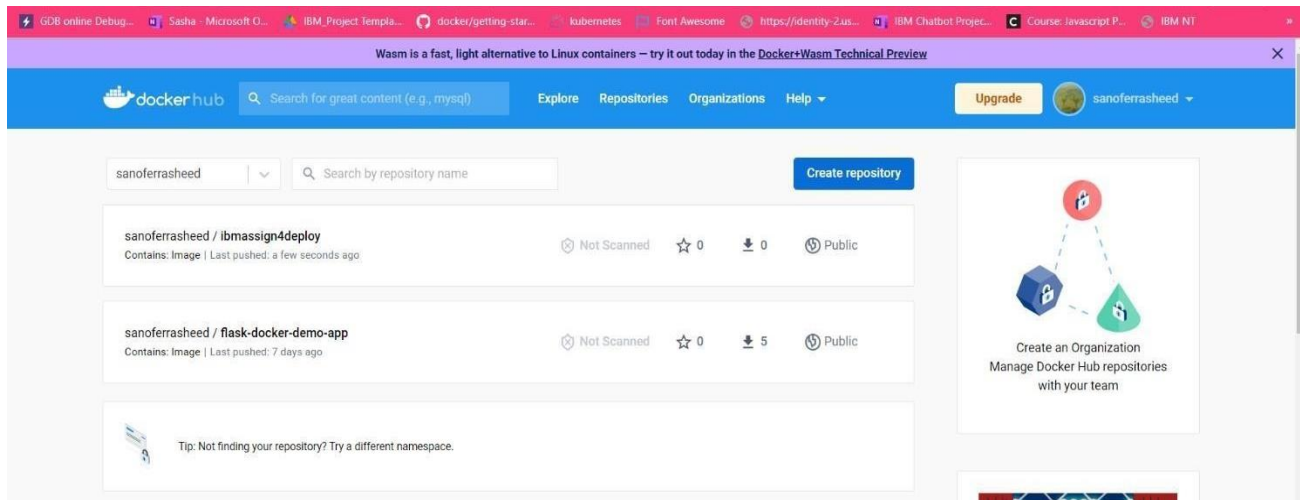
The image is built.



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.

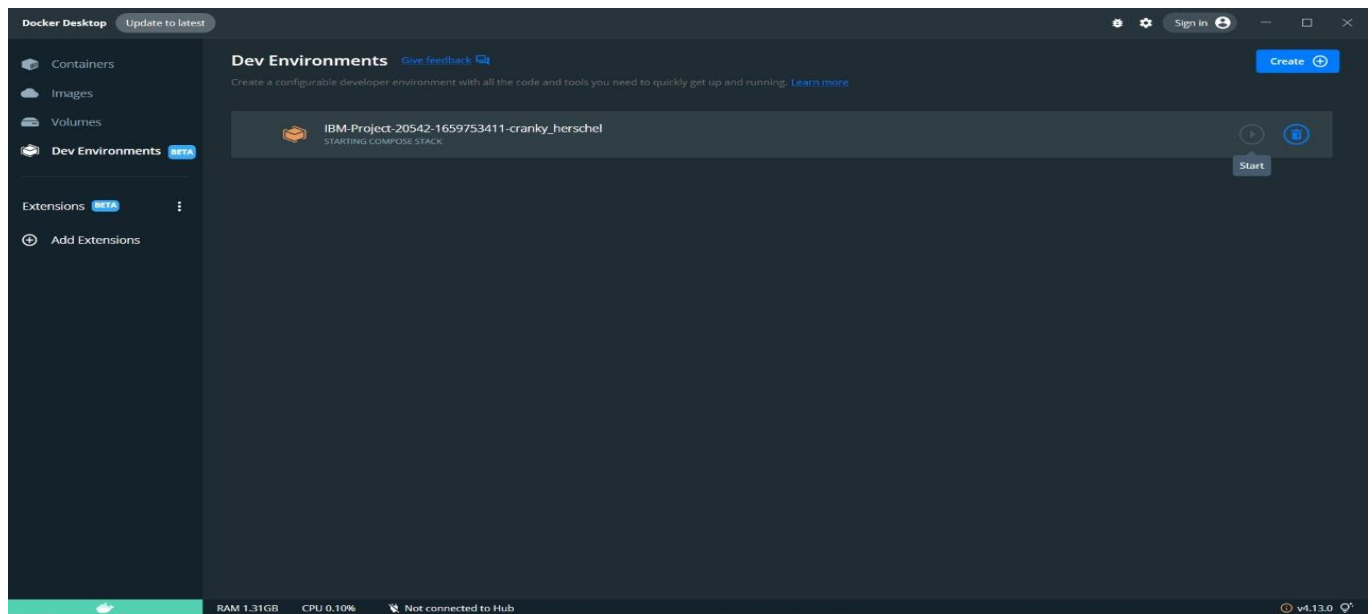
A screenshot of a web page titled 'Registration Form'. The form contains several input fields: 'Enter name', 'Enter Email', 'Enter Mobile', 'Enter City', 'Enter State', and 'Enter Country'. Below these fields is a 'Submit' button. The page is displayed in a browser window with multiple tabs open at the top, 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.

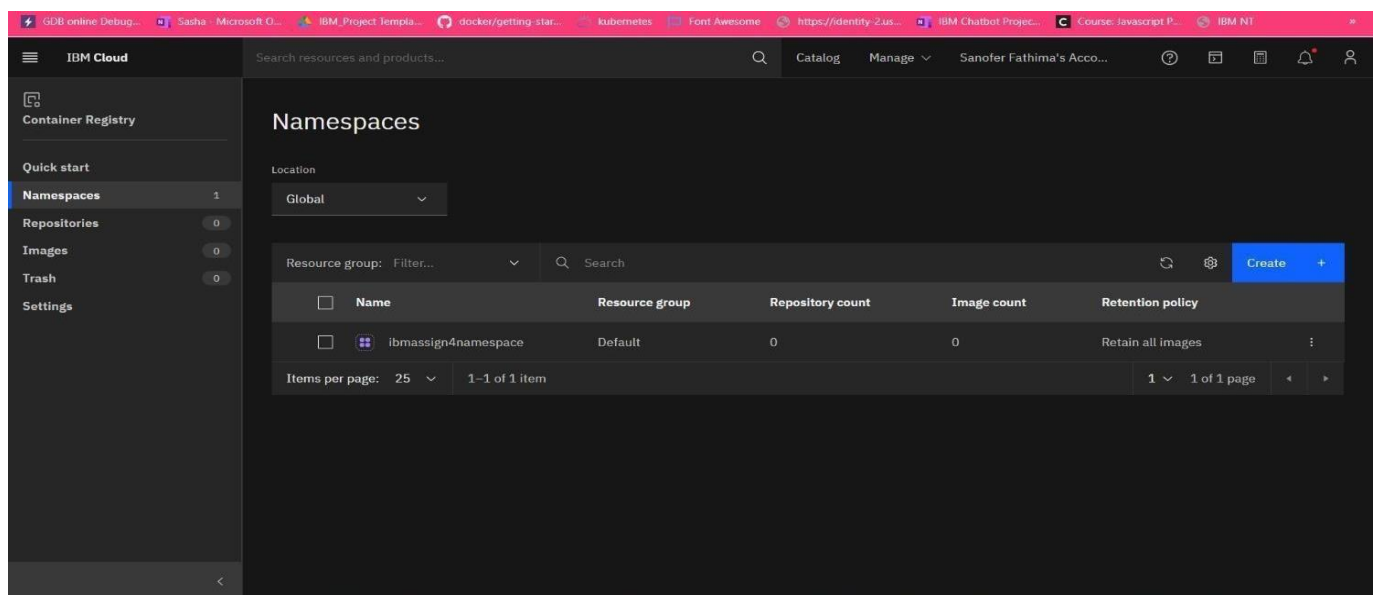


### 3. Create a IBM container registry and deploy hello world app.

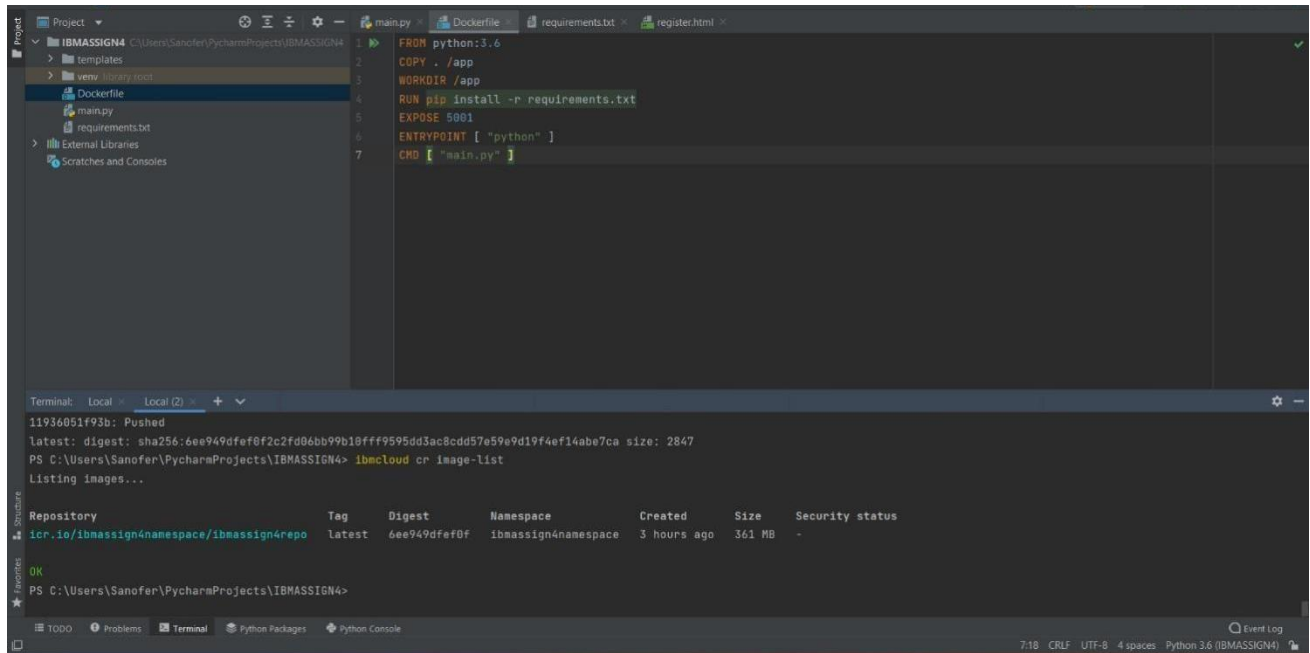
Container registry created using

```
> docker tag sanoferasheed/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" ]
```

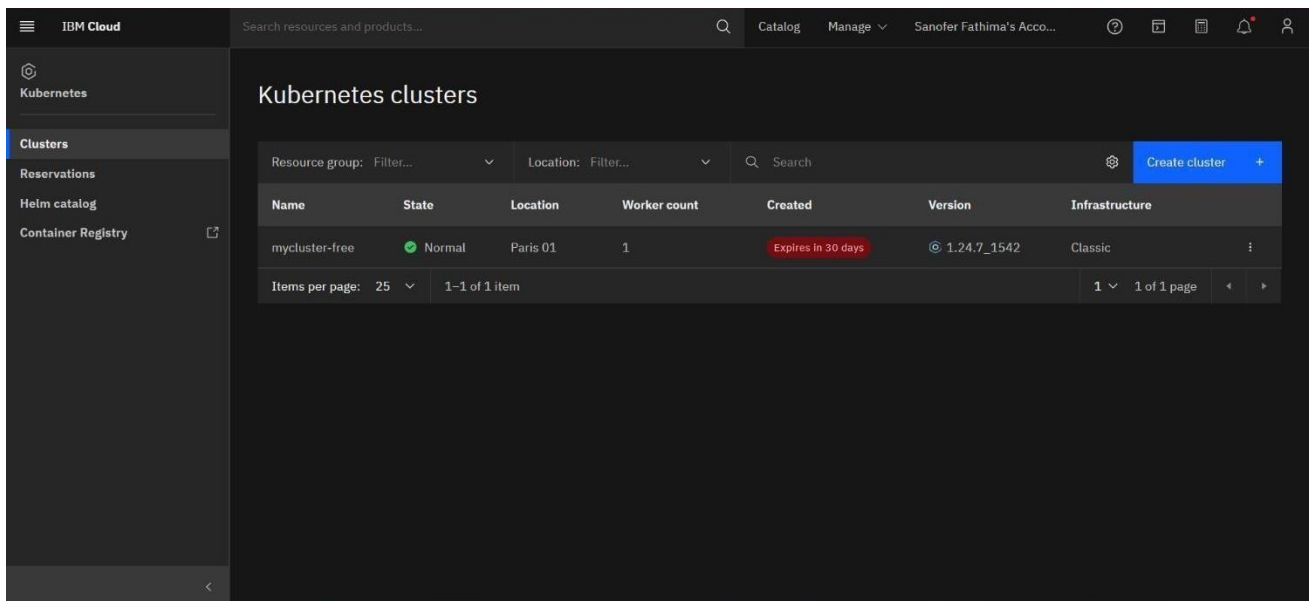
The bottom pane shows a terminal window with the following output:


```
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



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Stateful Sets

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Services

Config and Storage

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Persistent Volume Claims

Secrets

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/>