ASSIGNMENT-4

TEAM ID	PNT2022TMID47448
DATE	15-11-22

1.PULL AN IMAGE FROM DOCKER HUB AND RUN IT IN DOCKER PLAYGROUND

2.CREATE A DOCKER FILE FOR THE JOBPORTAL APPLICATION AND DEPLOY IT IN DOCKER DESKTOP APPLICATION.

Building the image hello world:

Run:


```
C:\Users\nithe\AppData\Local\Programs\Python\Python310\job-portal>docker run -p 8080:8080 helloworld
 * 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)
```

Docker desktop:
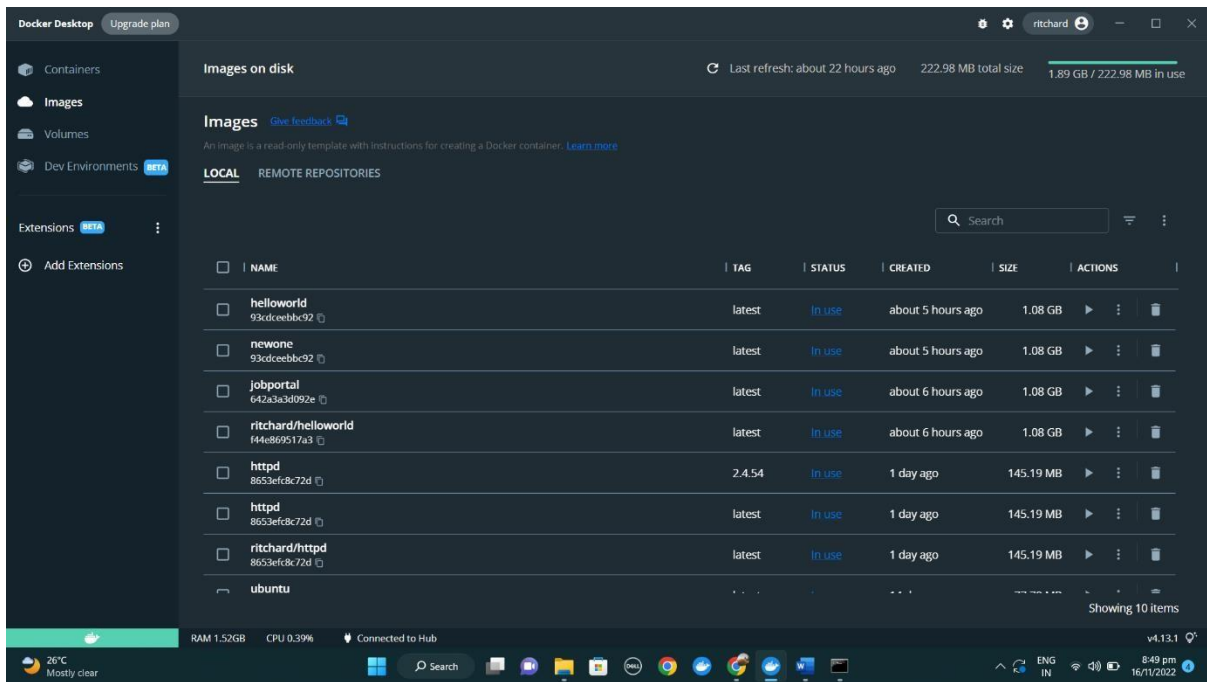
3.CREATE A IBM CONTAINER REGISTRY AND DEPLOY HELLO WORLD APP.

Install Container registry and create namespace


```
Microsoft Windows [Version 10.0.22000.1219]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91936>ibmcloud plugin install container-registry
Looking up 'container-registry' from repository 'IBM Cloud'...
Plug-in 'container-registry[cr] 1.0.2' found in repository 'IBM Cloud'
Attempting to download the binary file...
 11.90 MiB / 11.90 MiB [==================================================================================================================] 100.00% 1m0s
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\91936\.bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to show its details.

C:\Users\91936>
```



```
C:\Users\91936>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK

C:\Users\91936>ibmcloud cr namespace-add newhelloworld
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'newhelloworld' in resource group 'Default' for account Ritchard M's Account in registry icr.io...

Successfully added namespace 'newhelloworld'

OK

C:\Users\91936>
```

IBM cloud login

```
Command Prompt                                                                                          —   □   ×
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\91936\.bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to show its details.

C:\Users\91936>ibmcloud login -a https://cloud.ibm.com
API endpoint: https://cloud.ibm.com

Email> ritchardmahimai@student.autmdu.in

Password>
Authenticating...
OK

Targeted account Ritchard M's Account (c0e796459feb45e1a6bb8a7ebfec54ab)


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> 9
Targeted region us-south


API endpoint:      https://cloud.ibm.com
Region:            us-south
User:              ritchardmahimai@student.autmdu.in
Account:           Ritchard M's Account (c0e796459feb45e1a6bb8a7ebfec54ab)
Resource group:    No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:

C:\Users\91936>
```

Pull and Push image


```
Command Prompt                                                                                          —   □   ×
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\91936>docker pull sandeepdoodigani/jobportalapp
Using default tag: latest
latest: Pulling from sandeepdoodigani/jobportalapp
0e29546d541c: Already exists
9b829c73b52b: Already exists
cb5b7ae36172: Already exists
6494e4811622: Already exists
6f9f74896dfa: Already exists
5e3b1213efc5: Already exists
9fddfdc56334: Already exists
404f02044bac: Already exists
c4f42be2be53: Already exists
296c00cdb64e: Pull complete
86df5f9cfbe4: Pull complete
b0a57da07333: Pull complete
96d74d4156fd: Downloading [==>                                      ]  3.753MB/89.51MB
778a951e5719: Download complete
^C
C:\Users\91936>docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
ca7dd9ec2225: Pull complete
Digest: sha256:b95359c2505145f16c6aa384f9cc74eeff78eb36d308ca4fd902eeeb0a0b161b
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

C:\Users\91936>docker tag hello-world icr.io/newhelloworld/alpine:new
Error response from daemon: No such image: hello-world:latest

C:\Users\91936>docker tag alpine icr.io/newhelloworld/alpine:newapp

C:\Users\91936>docker push icr.io/newhelloworld/alpine:newapp
The push refers to repository [icr.io/newhelloworld/alpine]
e5e13b0c77cb: Pushed
newapp: digest: sha256:3d426b0bfc361d6e8303f51459f17782b219dece42a1c7fe463b6014b189c86d size: 528

C:\Users\91936>
```
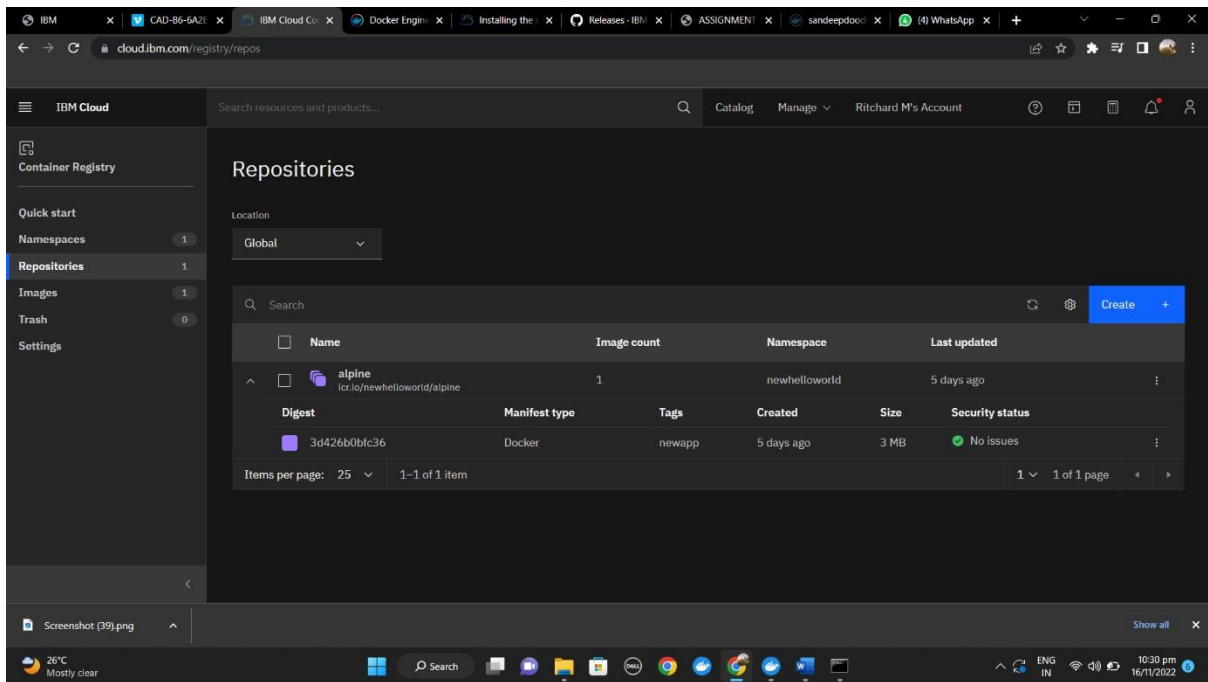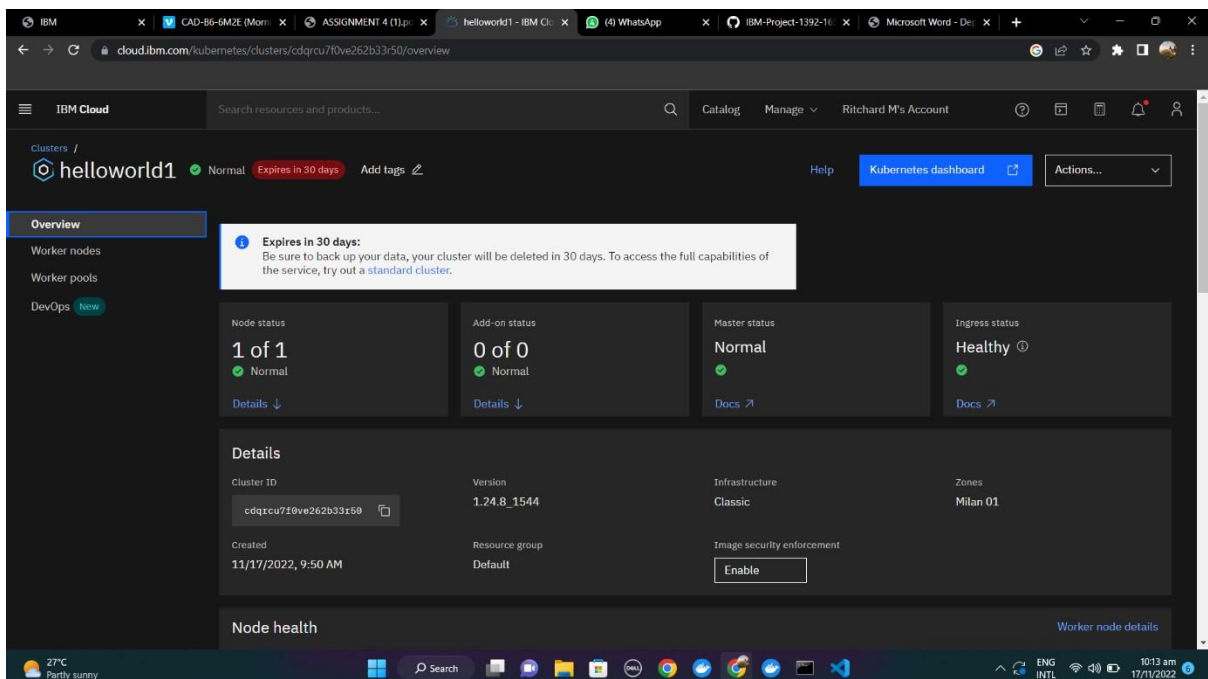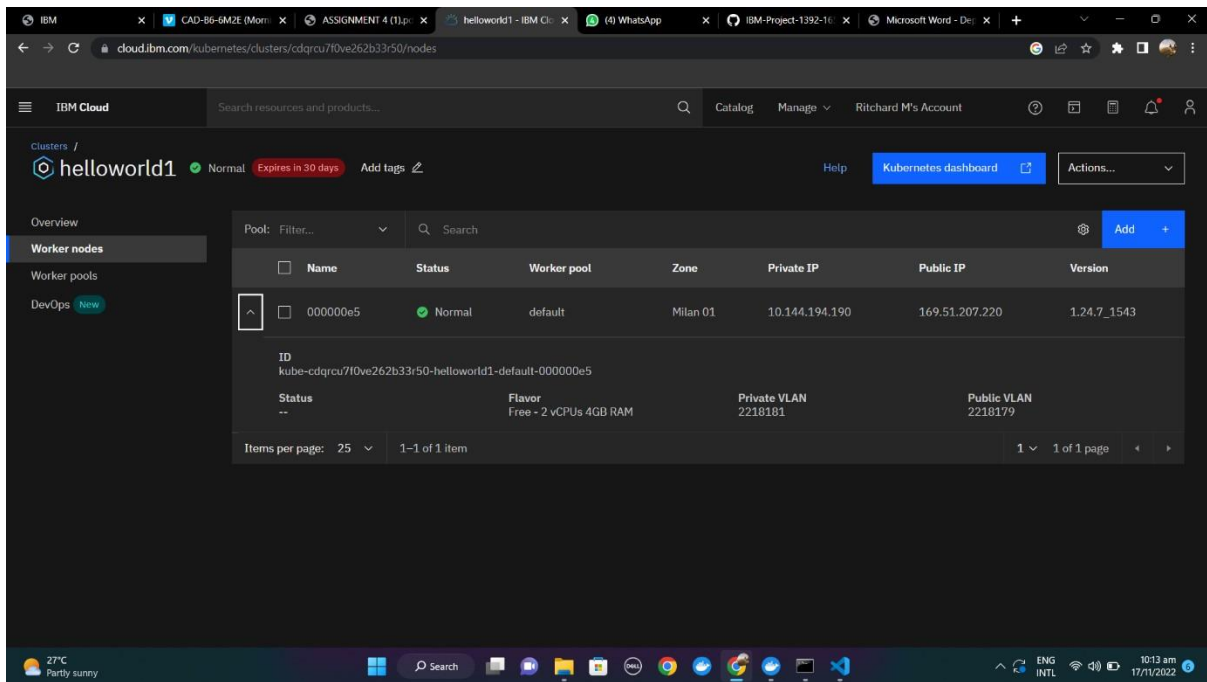
IBM container registry

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

Cluster creation

Deployment.yaml

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
    name: jobportal
spec:
    replicas: 1
selector:
        matchLabels:
app: flasknode
template:
metadata:
labels:
        app: flasknode
spec:
        containers:        - name: flasknode
image: icr.io/helloworld1/newhelloworld
imagePullPolicy: Always        ports:
          - containerPort: 5000
```

Service.yaml

```yaml
 apiVersion: v1
kind: Service
metadata:
    name: flask-node-deployment
 spec:      ports:     -
port: 5000
```

```
targetPort: 5000
selector:
      app: flasknode
```