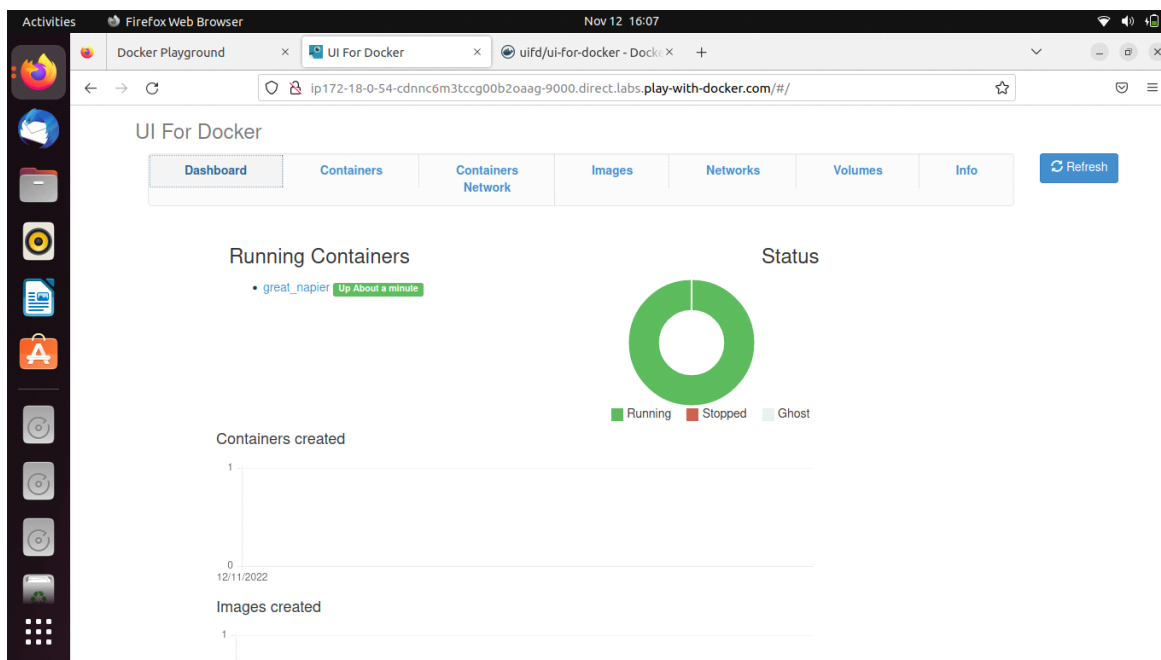
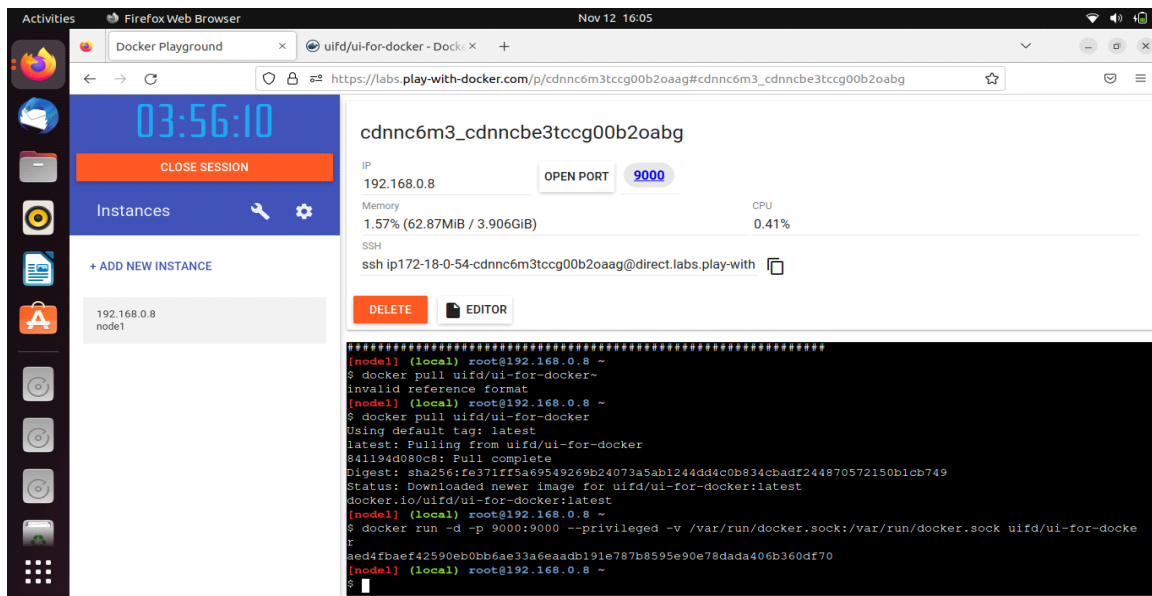


## ASSIGNMENT – 4

DHANALAKSHMI.S  
PNT2022TMID27807  
dhanalakshmi.sat@gmail.com

### 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.

### Dockerfile:

FROM python:3.6

WORKDIR /app

ADD . /app

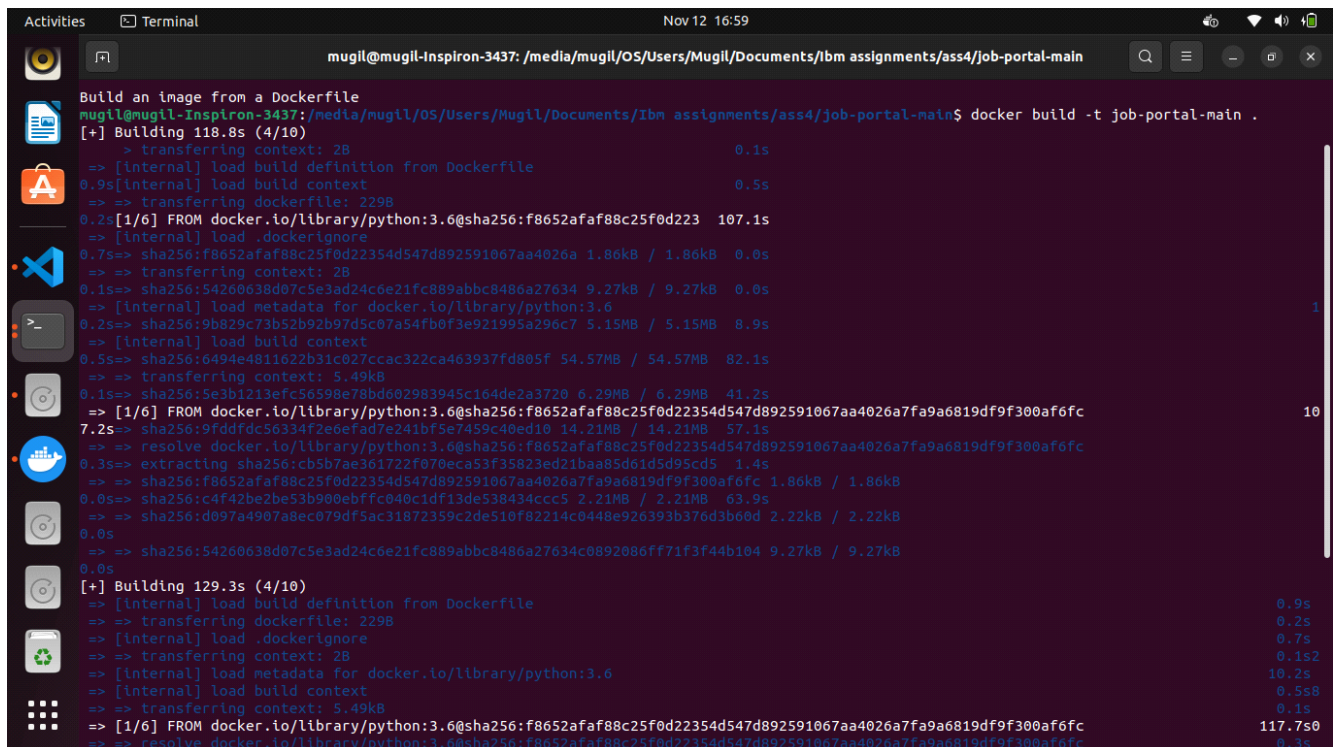
COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt

RUN python3 -m pip install ibm\_db

EXPOSE 5000

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



```
mugil@mugil-Inspiron-3437: /media/mugil/OS/Users/Mugil/Documents/ibm assignments/ass4/job-portal-main$ docker build -t job-portal-main .
[+] Building 118.8s (4/10)
  > transferring context: 28B 0.1s
  => [internal] load build definition from Dockerfile
  0.9s[internal] load build context 0.5s
  => transferring dockerfile: 229B
  0.2s[1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 107.1s
  => [internal] load .dockerignore
  0.7s=> sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB 0.0s
  => transferring context: 28B
  0.1s=> sha256:54260638d07c5e3ad24c6e21fc889abbc8486a276340892086ff71f3f44b104 9.27kB / 9.27kB 0.0s
  => [internal] load metadata for docker.io/library/python:3.6
  0.2s=> sha256:9b829c73b52b92b97d5c07a54fb0f3e921995a296c7 5.15MB / 5.15MB 8.9s
  => [internal] load build context
  0.5s=> sha256:6494e4811622b31c027ccac322ca463937fd805f 54.57MB / 54.57MB 82.1s
  => transferring context: 5.49kB
  0.1s=> sha256:5e3b1213efc56598e78bd602983945c164de2a3720 6.29MB / 6.29MB 41.2s
  => [1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 10
  7.2s=> sha256:9fddfd56334f2e6efad7e241bf5e7459c40ed18 14.21MB / 14.21MB 57.1s
  => resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc
  0.3s=> extracting sha256:cb5b7ae361722f070eca53f35823ed21baa85d61d5d95cd5 1.4s
  => sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
  0.0s=> sha256:c4f42be2be53b900ebffcc040c1df13de538434ccc5 2.21MB / 2.21MB 63.9s
  => sha256:d097a4907a8ec079df5ac31872359c2de510f82214c0448e926393b376d3b60d 2.22kB / 2.22kB
  0.0s
  => sha256:54260638d07c5e3ad24c6e21fc889abbc8486a276340892086ff71f3f44b104 9.27kB / 9.27kB
  0.0s
[+] Building 129.3s (4/10)
  => [internal] load build definition from Dockerfile 0.9s
  => transferring dockerfile: 229B 0.2s
  => [internal] load .dockerignore 0.7s
  => transferring context: 28B 0.1s
  => [internal] load metadata for docker.io/library/python:3.6 10.2s
  => [internal] load build context 0.5s
  => transferring context: 5.49kB 0.1s
  => [1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 117.7s
  => resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 0.3s
```

Activities

Docker Desktop

Nov 12 17:05

Docker Desktop

Update to latest

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Images on disk

Last refresh: 11 minutes ago

987.16 MB total size

0 Bytes / 987.16 MB in use

Images

An image is a read-only template with instructions for creating a Docker container.

LOCAL

REMOTE REPOSITORIES

Q Search

	NAME	TAG	STATUS	CREATED	SIZE	ACTIONS
<input type="checkbox"/>	job-portal-main e6215078c8d9	latest	Unused	less than a minute a	1.08 GB	<div></div> <div></div> <div></div>

Showing 1 items

RAM 0.88GB CPU 0.75% Not connected to Hub v4.13.1

Activities

Docker Desktop

Nov 12 17:13

Docker Desktop

Update to latest

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Containers

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another.

Only show running containers

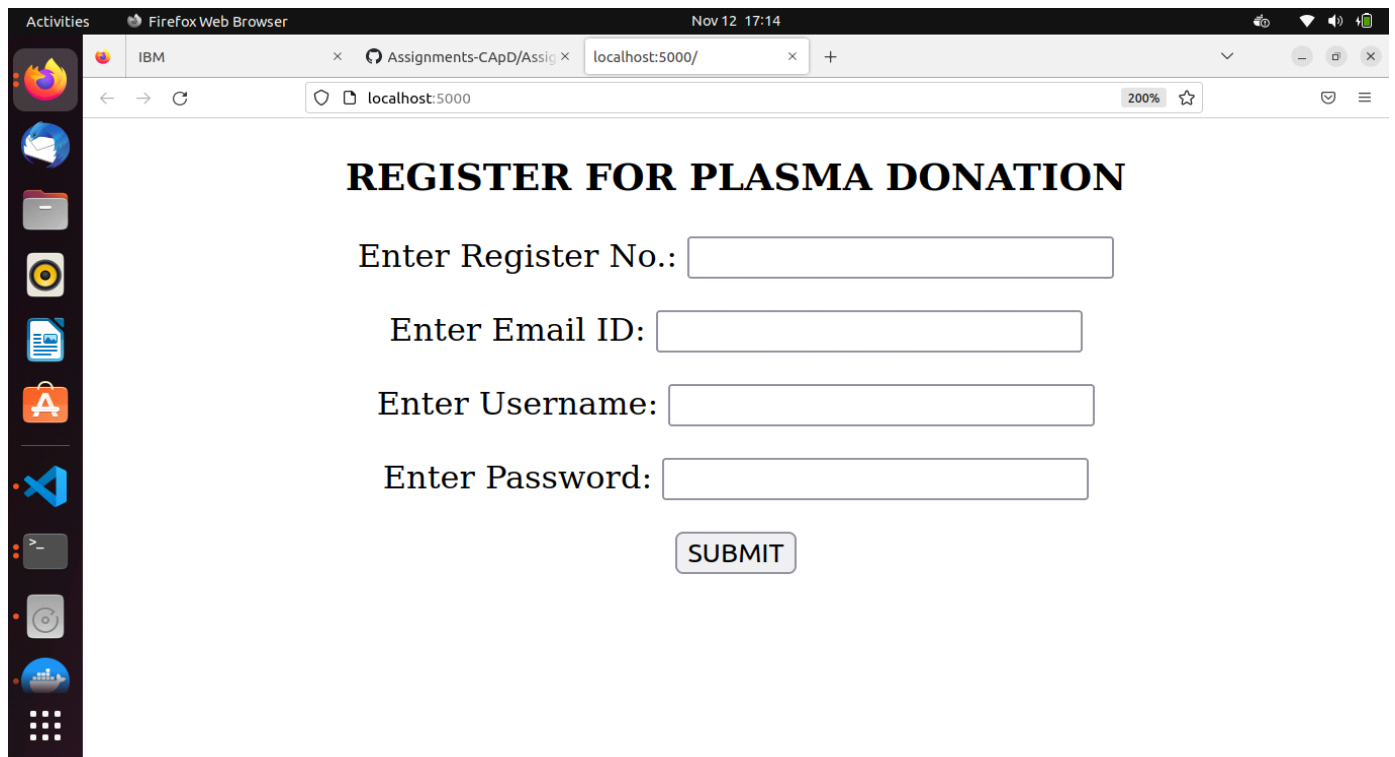
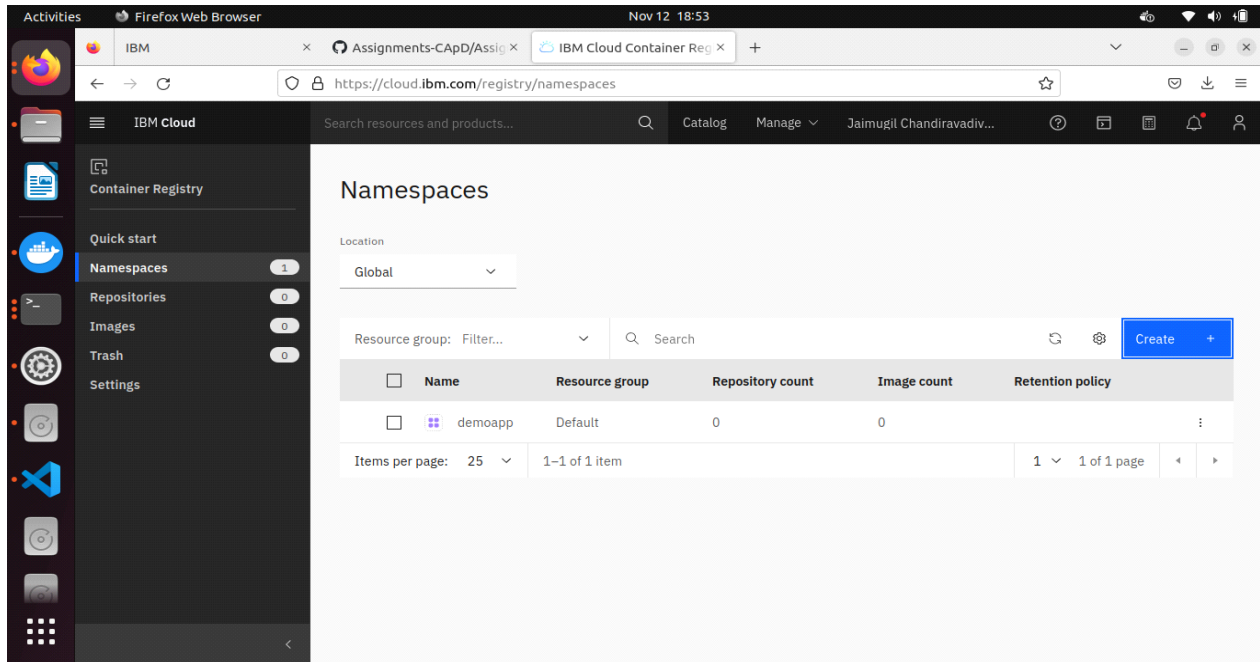
Q Search

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	dreamy_khayyam ad8a3f785bd3	job-portal-main:latest	Running	8080:8080	30 seconds ag	<div></div> <div></div> <div></div>

Showing 1 items

RAM 0.86GB CPU 0.75% Not connected to Hub v4.13.1

### 3. Create a IBM container registry and deploy helloworld app or jobportalapp.



```
Activities Terminal Nov 12 19:09 mugil@mugil-Inspiron-3437: -
Region:
User: 311519104023@smartinternz.com
Account: Jaimugil Chandiravadivu's Account (f09b8bdb60854a8dbeab8f1543367039)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:
mugil@mugil-Inspiron-3437:~$ ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.
OK
mugil@mugil-Inspiron-3437:~$ ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.
OK
mugil@mugil-Inspiron-3437:~$ docker tag job-portal-main au.icr.io/demoapp/demorepo:jobportaldemo
mugil@mugil-Inspiron-3437:~$ docker tag job-portal-demo icr.io/demoapp/demorepo:jobportaldemo
Error response from daemon: No such image: job-portal-demo:latest
mugil@mugil-Inspiron-3437:~$ docker tag job-portal-main icr.io/demoapp/demorepo:jobportaldemo
mugil@mugil-Inspiron-3437:~$ docker push icr.io/demoapp/demorepo:jobportaldemo
The push refers to repository [icr.io/demoapp/demorepo]
547786279b52: Pushed
f83b5be749a7: Pushed
54a38c02f7d0: Pushed
58bfe3fe59d7: Pushed
ef1bf27a40fa: Pushed
aa4e000c19f6: Pushed
8ba9f690e8ba: Pushed
3e007d59ef9f: Pushed
1e18e7e1fcc2: Pushed
c3a0d593ed24: Pushed
26a504e63be4: Pushed
8bf42db0de72: Pushed
31892cc314cb: Pushed
11936051f93b: Pushed
jobportaldemo: digest: sha256:0e4bb2ecacbddfa01b54afec39a46abd9c2a44f6f6c21c172c3c54de81546329 size: 3258
mugil@mugil-Inspiron-3437:~$
```

Activities Firefox Web Browser Nov 12 19:09

IBM Assignments-CAPD/Assign IBM Cloud Container Reg

https://cloud.ibm.com/registry/images

IBM Cloud Search resources and products... Catalog Manage Jaimugil Chandiravadiv...

Container Registry

Quick start

Namespaces 1

Repositories 1

Images 1

Trash 0

Settings

### Images

Location: Global

View by: Digest Search

<input type="checkbox"/>	Repository@digest	Tags	Manifest type	Created	Size	Security status
<input type="checkbox"/>	demoapp/demorepo@sha256:0e4bb2ecacbd...	jobportaldemo	Docker	2 hours ago	435 MB	102 issues

Items per page: 25 1-1 of 1 item 1 1 of 1 page

Activities Firefox Web Browser Nov 12 19:09

IBM Assignments-CAPD/Assig IBM Cloud Container Reg

https://cloud.ibm.com/registry/repos

IBM Cloud Search resources and products... Catalog Manage Jaimugil Chandiravadi...

Container Registry

Quick start

Namespaces 1

Repositories 1

Images 1

Trash 0

Settings

## Repositories

Location Global

Search

Create +

<input type="checkbox"/>	Name	Image count	Namespace	Last updated
<input checked="" type="checkbox"/>	<b>demorepo</b> icr.io/demoapp/demorepo	1	demoapp	2 hours ago

Items per page: 25 1-1 of 1 item 1 1 of 1 page

Activities Terminal Nov 12 19:19

mugil@mugil-Inspiron-3437: ~

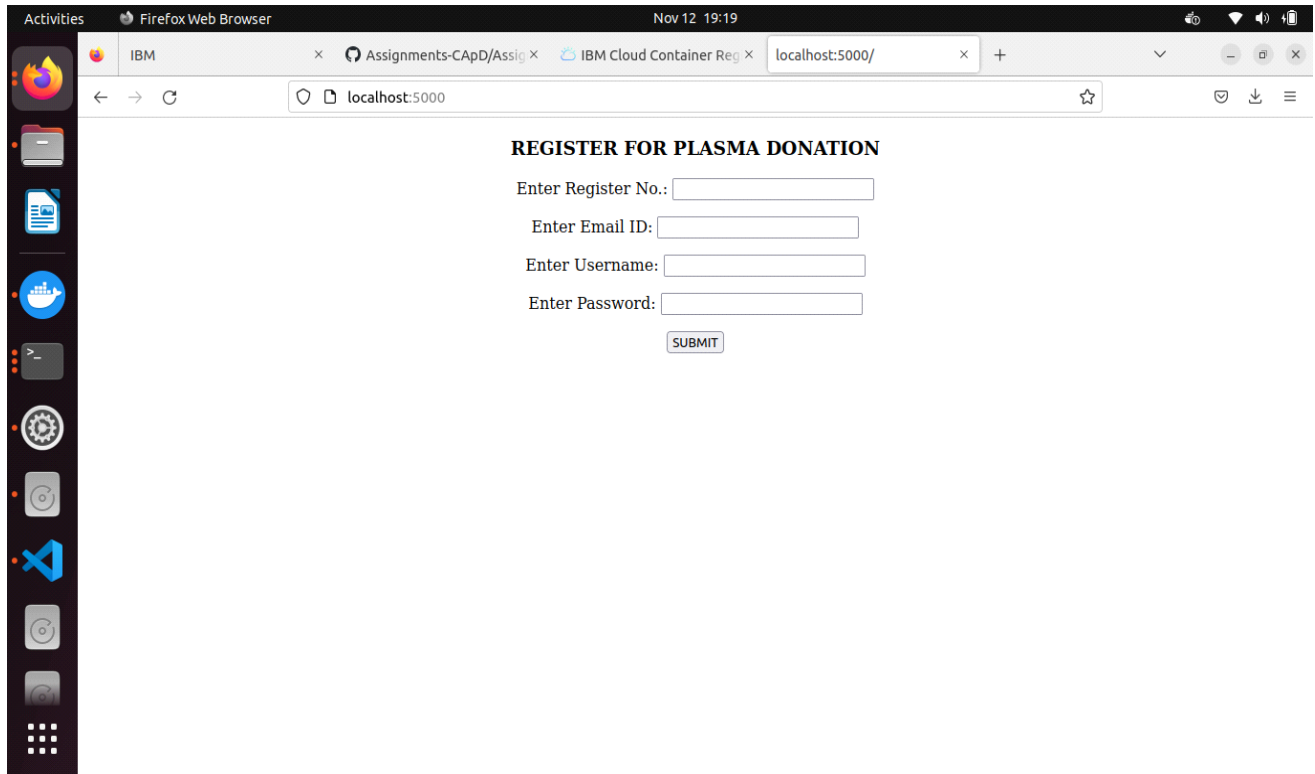
```
31892cc314cb: Pushed
11936051f93b: Pushed
jobportaldemo: digest: sha256:0e4bb2ecacbddfa01b54afec39a46abd9c2a44f6f6c21c172c3c54de81546329 size: 3258
mugil@mugil-Inspiron-3437:~$ docker run -p 5000:5000 au.icr.io/demoapp/demorepo/jobportaldemo
Unable to find image 'au.icr.io/demoapp/demorepo/jobportaldemo:latest' locally
docker: Error response from daemon: Head "https://au.icr.io/v2/demoapp/demorepo/jobportaldemo/manifests/latest": unauthorized: The login credentials are not valid, or your IBM Cloud account is not active.
See 'docker run --help'.
mugil@mugil-Inspiron-3437:~$ ibmcloud cr image-list
Listing images...

Repository          Tag          Digest          Namespace      Created        Size        Security status
icr.io/demoapp/demorepo  jobportaldemo  0e4bb2ecacbd    demoapp        2 hours ago    435 MB      -

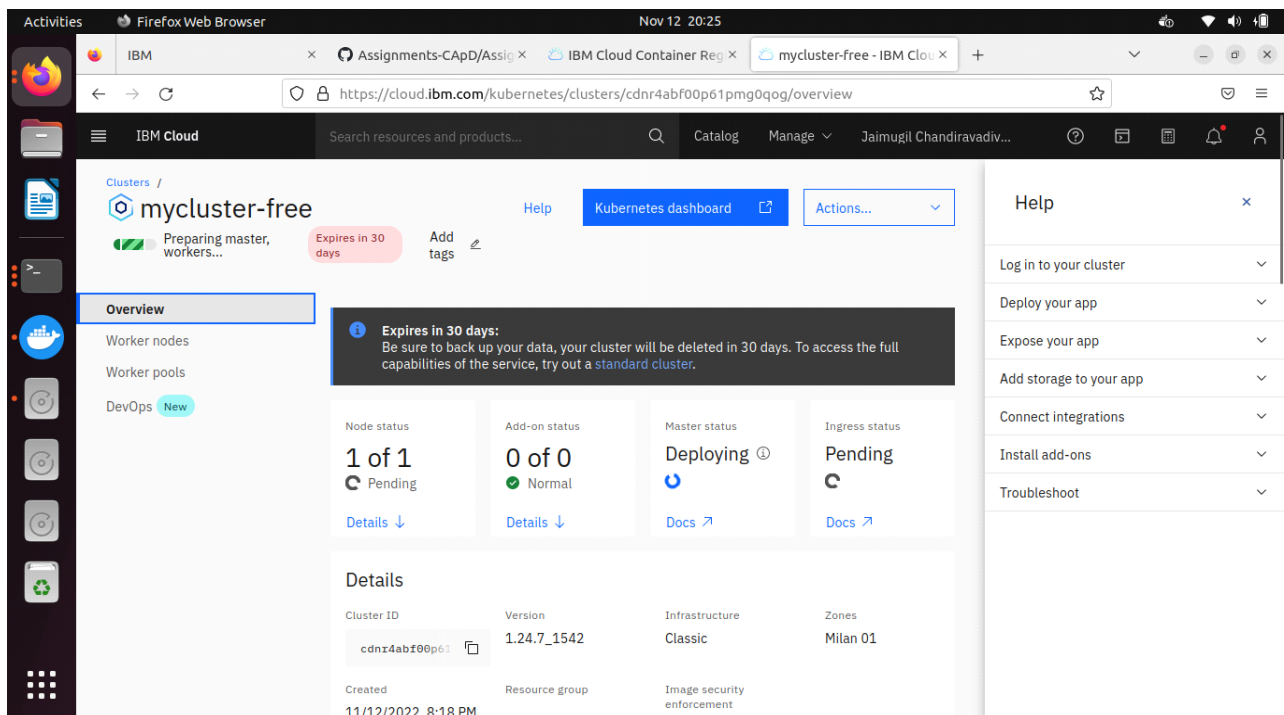
OK
mugil@mugil-Inspiron-3437:~$ docker pull icr.io/demoapp/demorepo
Using default tag: latest
Error response from daemon: manifest for icr.io/demoapp/demorepo:latest not found: manifest unknown: manifest unknown
mugil@mugil-Inspiron-3437:~$ ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK
mugil@mugil-Inspiron-3437:~$ docker pull icr.io/demoapp/demorepo
Using default tag: latest
Error response from daemon: manifest for icr.io/demoapp/demorepo:latest not found: manifest unknown: manifest unknown
mugil@mugil-Inspiron-3437:~$ docker run -p 5000:5000 au.icr.io/demoapp/demorepo/jobportaldemo
* 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)
172.17.0.1 - - [12/Nov/2022 13:48:56] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [12/Nov/2022 13:48:57] "GET /favicon.ico HTTP/1.1" 404 -
```





**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.**



Activities Firefox Web Browser Nov 12 22:19

IBM Assignments-CA IBM Cloud Cont Deploying Kuber mycluster-free - mycluster-free -

https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdnr4abf00p61pmg0qog/service/#/service?namespace=

kubernetes default Search

Service > Services

Pods  
Replica Sets  
Replication Controllers  
Stateful Sets  
Service  
Ingresses  
Ingress Classes  
Services  
Config and Storage  
Config Maps  
Persistent Volume Claims  
Secrets  
Storage Classes  
Cluster  
Cluster Role Bindings

### Services

Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints
job-service	-	NodePort	172.21.67.238	job-service:80 TCP job-service:31000 TCP	-
kubernetes	Show all	ClusterIP	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-

Activities Firefox Web Browser Nov 12 23:04

IBM Assignments- IBM Cloud Co mycluster-free Testing acces mycluster-free Problem load

https://cloud.ibm.com/kubernetes/clusters/cdnr4abf00p61pmg0qog/nodes

IBM Cloud Search resources and products... Catalog Manage Jaimugil Chandiravadiv...

Clusters / mycluster-free Normal Expires in 30 days Add tags Help Kubernetes dashboard Actions...

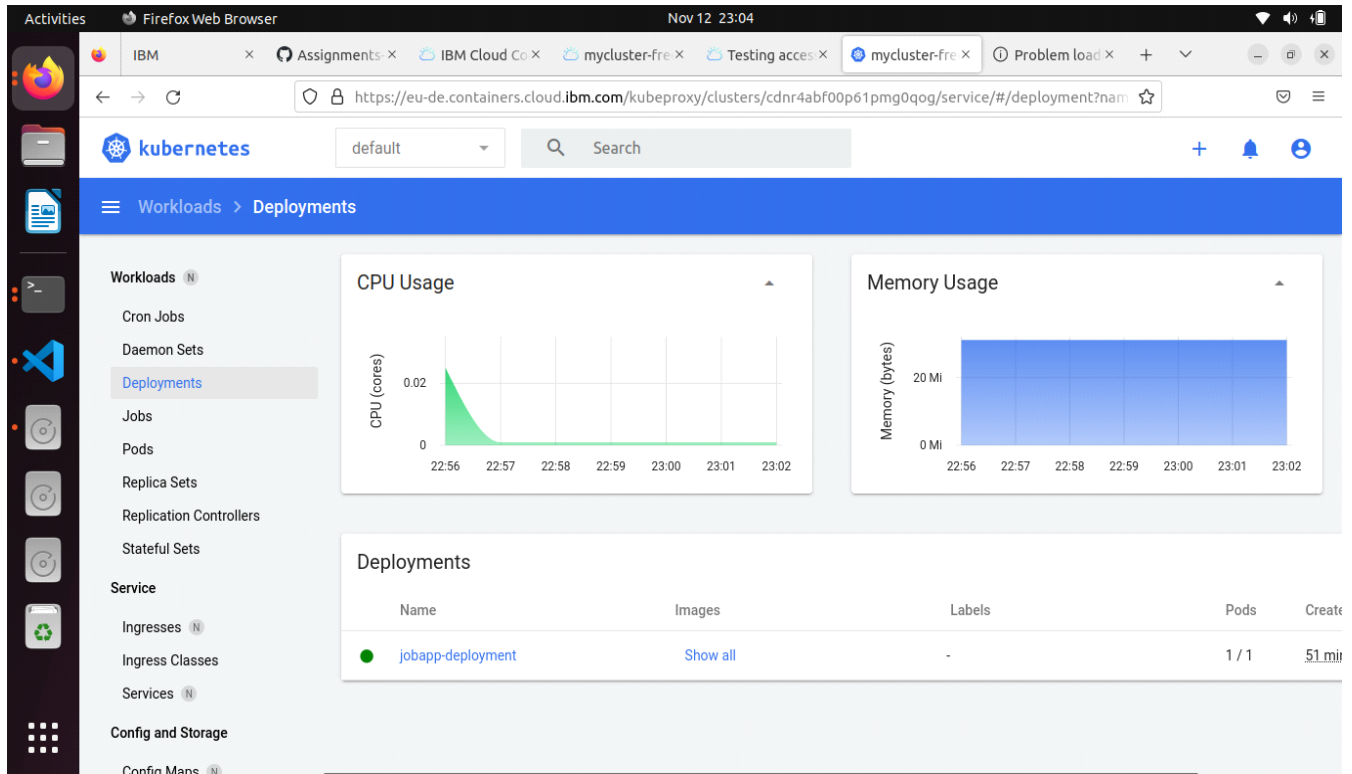
Overview  
Worker nodes  
Worker pools  
DevOps New

Pool: Filter... Search Add +

<input type="checkbox"/>	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
<input type="checkbox"/>	0000008c	Normal	default	Milan 01	10.144.188.96	169.51.206.153	1.24.7_1543

Items per page: 25 1-1 of 1 item 1 1 of 1 page





Activities Firefox Web Browser Nov 12 17:15

IBM Assignments-CApD/Assig X localhost:5000/ +

← → ↻ localhost:5000 ☆

**REGISTER FOR PLASMA DONATION**

Enter Register No.:

Enter Email ID:

Enter Username:

Enter Password: