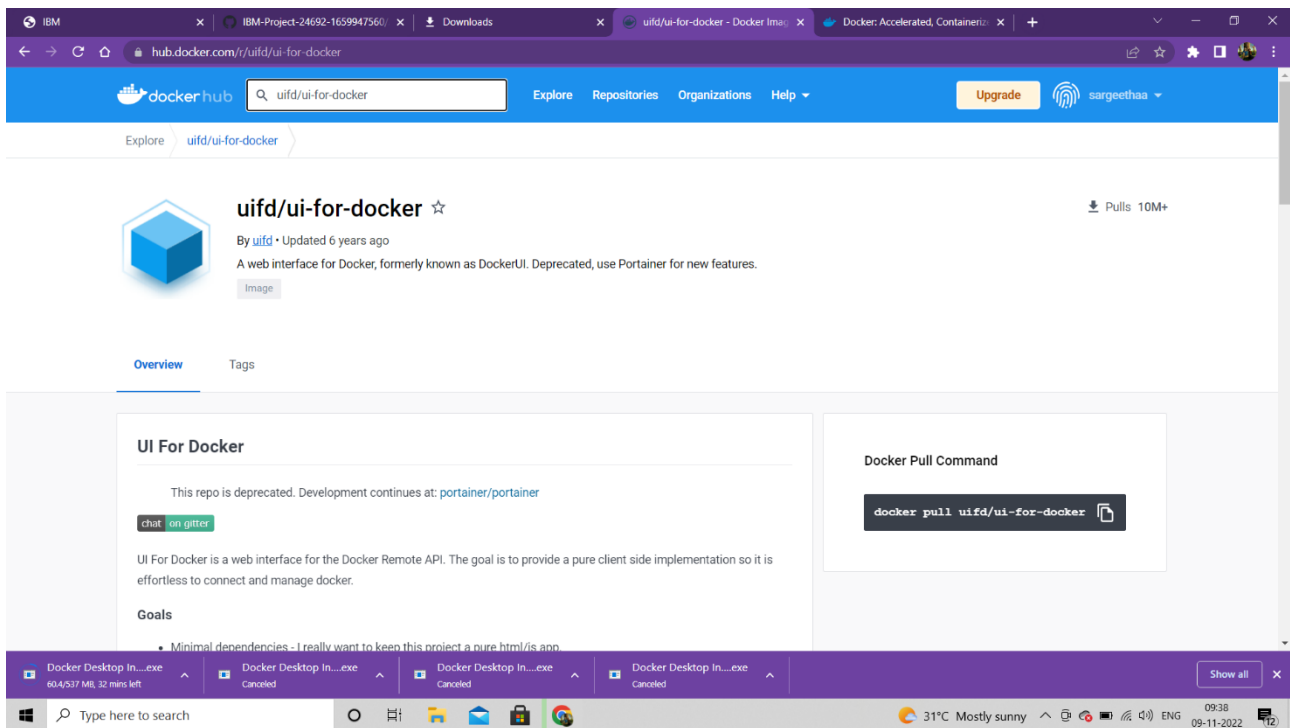


ASSIGNMENT – 4

Date	05 November 2022
Team ID	PNT2022TMID54057
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

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

Image :



Pull image:

The screenshot shows a web browser window with the URL `labs.play-with-docker.com/p/cdliguu0qau000egqasg#cdlihu0_cdlh260qau000egqatg`. The interface includes a sidebar with a clock showing 03:55:33, a 'CLOSE SESSION' button, and an 'Instances' section. The main area displays the instance details for `cdlihu0_cdlh260qau000egqatg`, including IP `192.168.0.8`, memory usage (1.69%), CPU usage (0.75%), and an SSH command. Below this, a terminal window shows the following commands and output:

```
latest: Pulling from uifd/ui-for-docker
Digest: sha256:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Image is up to date for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
[node1] (local) root@192.168.0.8 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
65abe67fc3eb451ad11196422c04b74aff9326d2f23eda34e5e08d5c6cfbebd2
docker: Error response from daemon: driver failed programming external connectivity on endpoint nostalgic_cray (2cd664dala3f8ad6d9fa1313467b79ebd278857fed34838f2f7a6332c5ca2890): Bind for 0.0.0.0:9000 failed: port is already allocated.
[node1] (local) root@192.168.0.8 ~
$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
uifd/ui-for-docker  latest         965940f98fa5   6 years ago    8.1MB
[node1] (local) root@192.168.0.8 ~
$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED         STATUS         PORTS                    NAMES
4b1279cc9301  uifd/ui-for-docker  "/ui-for-docker"       About a minute ago    Up About a minute    0.0.0.0:9000->9000/tcp    vibrant_einste
[node1] (local) root@192.168.0.8 ~
$
```

Image in port 9000:

The screenshot shows the UI For Docker web interface in a browser window. The URL is `ip172-18-0-71-cdliguu0qau000egqasg-9000.direct.labs.play-with-docker.com/#/`. The interface is divided into two main sections: 'Running Containers' and 'Status'.

Running Containers:

- `nostalgic_cray` (Created)
- `vibrant_einstein` (Up About a minute)

Status:

A donut chart shows the status of containers: Running (green), Stopped (red), and Ghost (grey). The 'Running' status is the only one shown.

Containers created:

A line graph shows the number of containers created over time, with a peak of 2 containers created on 11/9/2022.

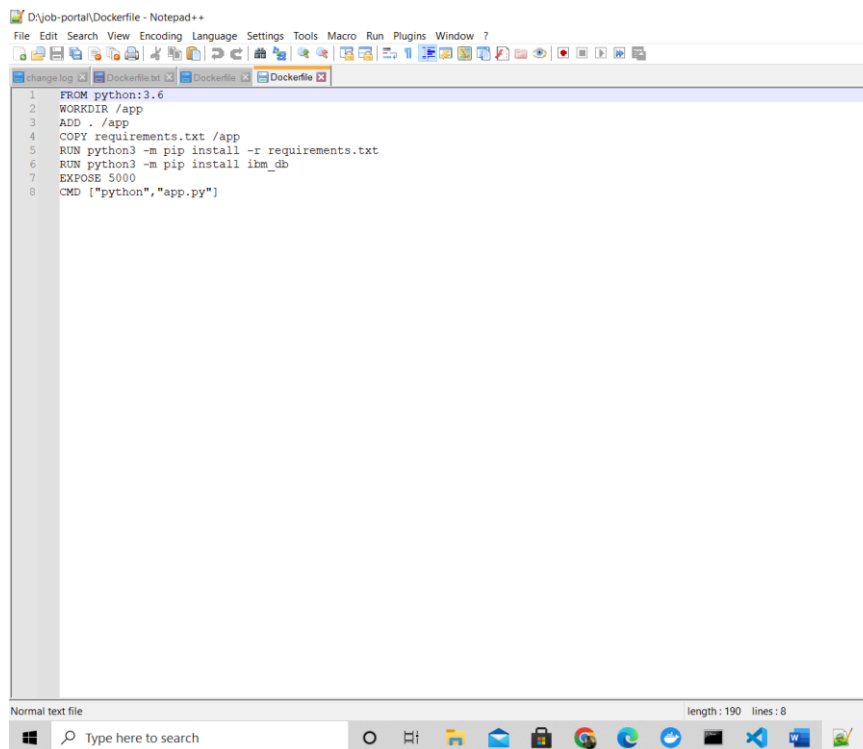
Images created:

A line graph shows the number of images created over time, with a peak of 1 image created on 9/8/2016.

The footer of the interface displays 'Docker API Version: 1.41 UI Version: v0.11.0' and 'UI For Docker'.

Create a docker file for the job-portal application and deploy it in docker desktop application :

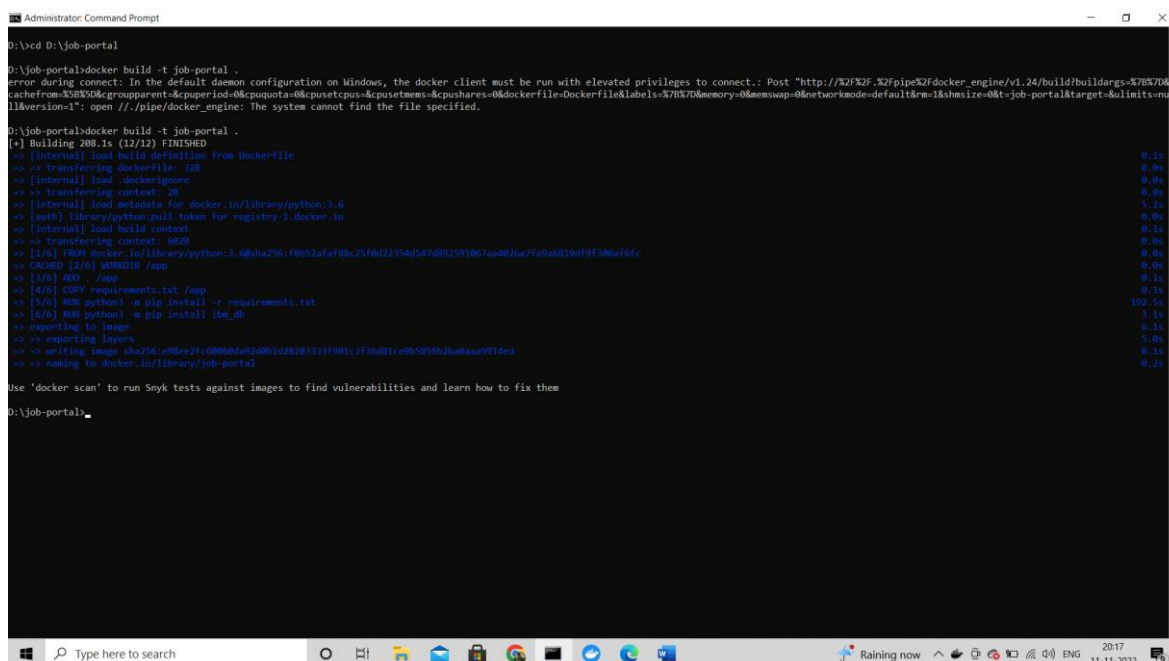
Docker file :



```
D:\job-portal\dockerfile - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
change.log Dockerfile.txt Dockerfile Dockerfile
1 FROM python:3.6
2 WORKDIR /app
3 ADD . /app
4 COPY requirements.txt /app
5 RUN python3 -m pip install -r requirements.txt
6 RUN python3 -m pip install ihm_db
7 EXPOSE 5000
8 CMD ["python","app.py"]

Normal text file length: 190 lines: 8
Type here to search
```

Image pulled in docker :



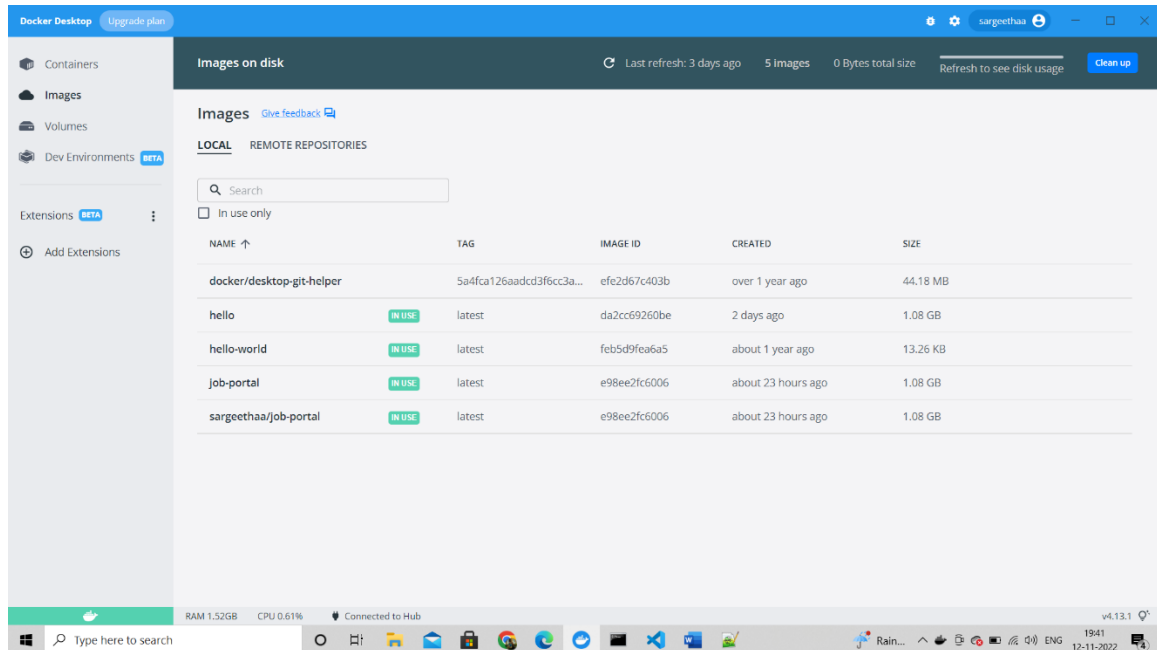
```
Administrator Command Prompt
D:\>cd D:\job-portal
D:\job-portal>docker build -t job-portal .
error during connect: In the default daemon configuration on Windows, the docker client must be run with elevated privileges to connect.: Post "http://2f2f2f.32fpipe32fdocker_engine/v1.24/build?buildargs=3783704
cachefrom=35835D&groupparent=&cpuquota=0&cpusetcpu=&cpusetmem=&cpushares=0&dockerfile=Dockerfile&labels=3783708memory=0&memswap=0&networkmode=default&rm=1&shmsize=0&t=job-portal&target=&ulimits=nu
11&version=1": open //./pipe/docker_engine: The system cannot find the file specified.

D:\job-portal>docker build -t job-portal .
[*] Building 288.1s (12/32) FINISHED
-> [internal] load build definition from Dockerfile
0.1s
-> transferring dockerfile: 3kB
0.0s
-> [internal] load .dockerignore
0.0s
-> transferring context: 2B
0.0s
-> [internal] load metadata for docker.io/library/python:3.6
5.2s
-> [auth] library/python:pull token for registry-1.docker.io
0.0s
-> [internal] load build context
0.2s
-> transferring context: 60B
0.0s
-> [1/6] FROM docker.io/library/python:3.6@sha256:f802a1ef8b25f6d2235d547d802591067a0404ca7faa0819d70f30ba40c
0.0s
-> CACHED [2/6] WORKDIR /app
0.0s
-> [3/6] RUN . /app
0.1s
-> [4/6] COPY requirements.txt /app
0.1s
-> [5/6] RUN python3 -m pip install -r requirements.txt
102.5s
-> [6/6] RUN python3 -m pip install ihm_db
3.1s
-> exporting to image
6.1s
-> writing image sha256:e08ee2f60000da020b1a2828133f9b1c3f36d01c0b5850b2ba0a09914ed
3.0s
-> naming to docker.io/library/job-portal
0.2s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

D:\job-portal>
```

Docker desktop :



Our image in hub :

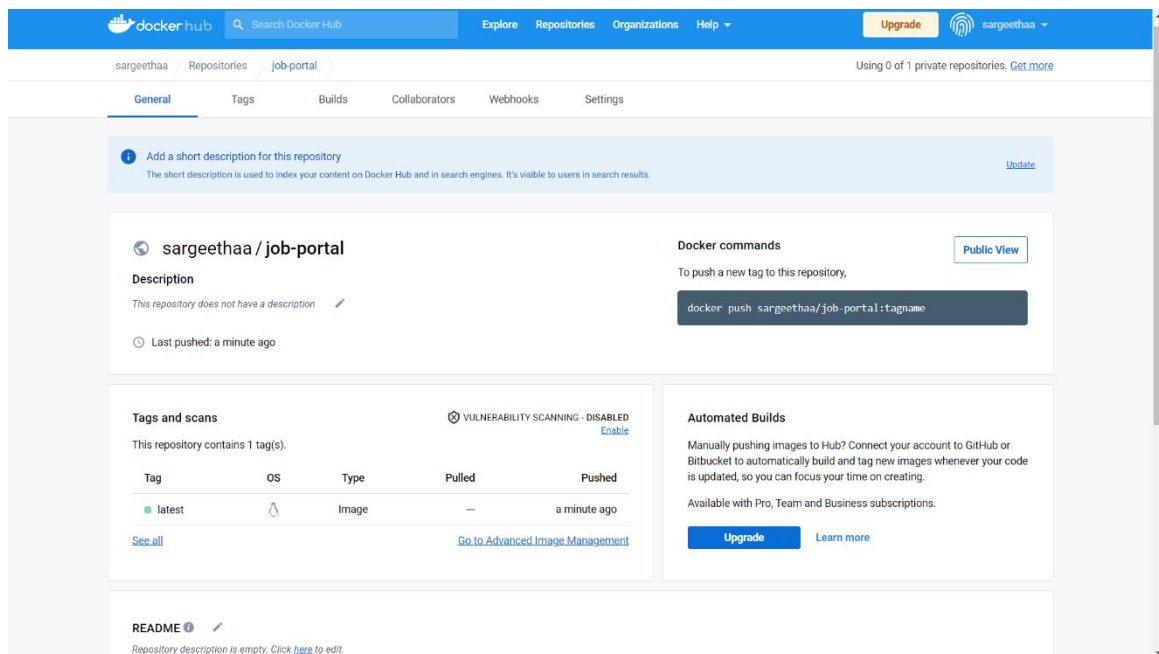


Image run in playground :

The screenshot shows the Labs Playground interface. On the left, there's a sidebar with a timer at 03:53:03, a 'CLOSE SESSION' button, and an 'Instances' section. Below 'Instances', there's a '+ ADD NEW INSTANCE' button and a list of instances, including '192.168.0.28 node1'. The main area displays details for the instance 'cdnqknu3_cdnqkpu3tccg00b2oel0'. It shows the IP address '192.168.0.28', an 'OPEN PORT' button set to '5000', memory usage '31.96% (1.249GiB / 3.906GiB)', CPU usage '1.05%', and an SSH command 'ssh ip172-18-0-9-cdnqknu3tccg00b2oelg@direct.labs.play-1'. Below this, there are 'DELETE' and 'EDITOR' buttons. The terminal window shows the following commands and output:

```
#####
[node1] (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
[node1] (local) root@192.168.0.28 ~
$ docker pull sargeethaa/job-portal
Using default tag: latest
latest: Pulling from sargeethaa/job-portal
0e29546d541c: Pull complete
9b829c73b52b: Pull complete
cb5b7ae36172: Pull complete
6494ae4811622: Pull complete
6f9f74896dfa: Pull complete
9e3b1213efc5: Pull complete
9fddfd56334: Pull complete
404f02044bac: Pull complete
c4f42be2be53: Pull complete
e4a5a4f8caf9: Pull complete
a5b33b76c99b: Pull complete
090eb60a3677: Pull complete
269ea76cd9c0: Pull complete
8ffff6eedf8c: Pull complete
Digest: sha256:6a75b38bca39cd2052b94784d4d982a28752013faed453bc6a918522613cca25
```

The screenshot shows the same Labs Playground interface as the previous one, but the terminal window now displays the successful pull of the 'sargeethaa/job-portal' Docker image and the execution of 'docker run' to start the application. The output shows the image being pulled from 'sargeethaa/job-portal:latest' and the container being started with the command 'docker run -p 5000:5000 sargeethaa/job-portal'. The application is now running on 'http://127.0.0.1:5000/' and the debugger is active.

```
a5b33b76c99b: Pull complete
090eb60a3677: Pull complete
269ea76cd9c0: Pull complete
8ffff6eedf8c: Pull complete
Digest: sha256:6a75b38bca39cd2052b94784d4d982a28752013faed453bc6a918522613cca25
Status: Downloaded newer image for sargeethaa/job-portal:latest
docker.io/sargeethaa/job-portal:latest
[node1] (local) root@192.168.0.28 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
sargeethaa/job-portal latest e98ee2fc6006 24 hours ago 1.08GB
[node1] (local) root@192.168.0.28 ~
$ docker run -p 5000:5000 sargeethaa/job-portal
* 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: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 243-284-626
```

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Mission

SMARTBRIDGE is an edTech organization with a vision to bridge the gap between academia & industry. Our outcome-based experiential learning programs on emerging technologies (Internet of Things, Machine Learning, Data Science, Artificial Intelligence, Robotics) are building skilled entry - level engineers, for the corporate world. .

Vission

Our main objective is to bridge the existing gaps between prevailing industry standards and what the academics offer to the graduates while passing out of university. SmartBridge offers suitable skill deployment and training to the young talent before on boarding their first job. Our skill development programs are designed considering the present expectations in the industry.

Objective

Well directed career guidance programs for educational institutions
Appropriate certification courses that suit the industry need
Train the trainers; expanded awareness about the current industry standards
Liaise with corporates to offer niche internships
Establish technology development centers in colleges
Specialised incubation centers in collaboration with corporates

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Get in Touch

- jobportal@gmail.com
- +91 8977787657

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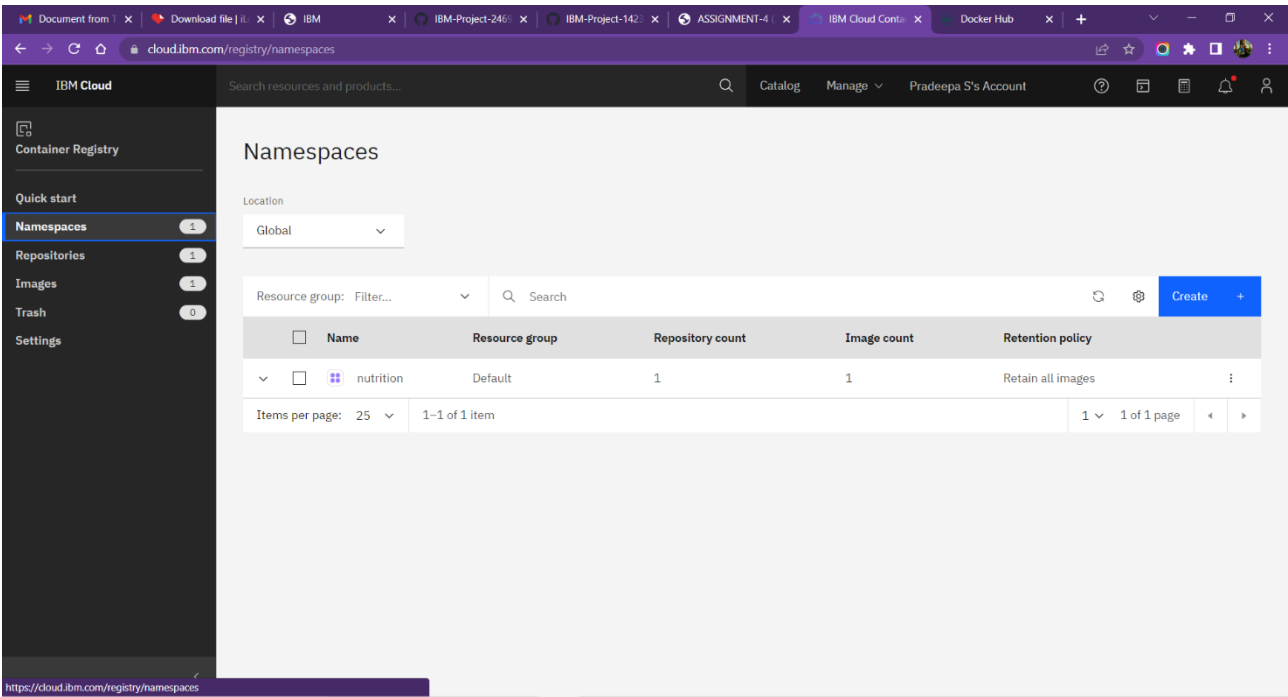
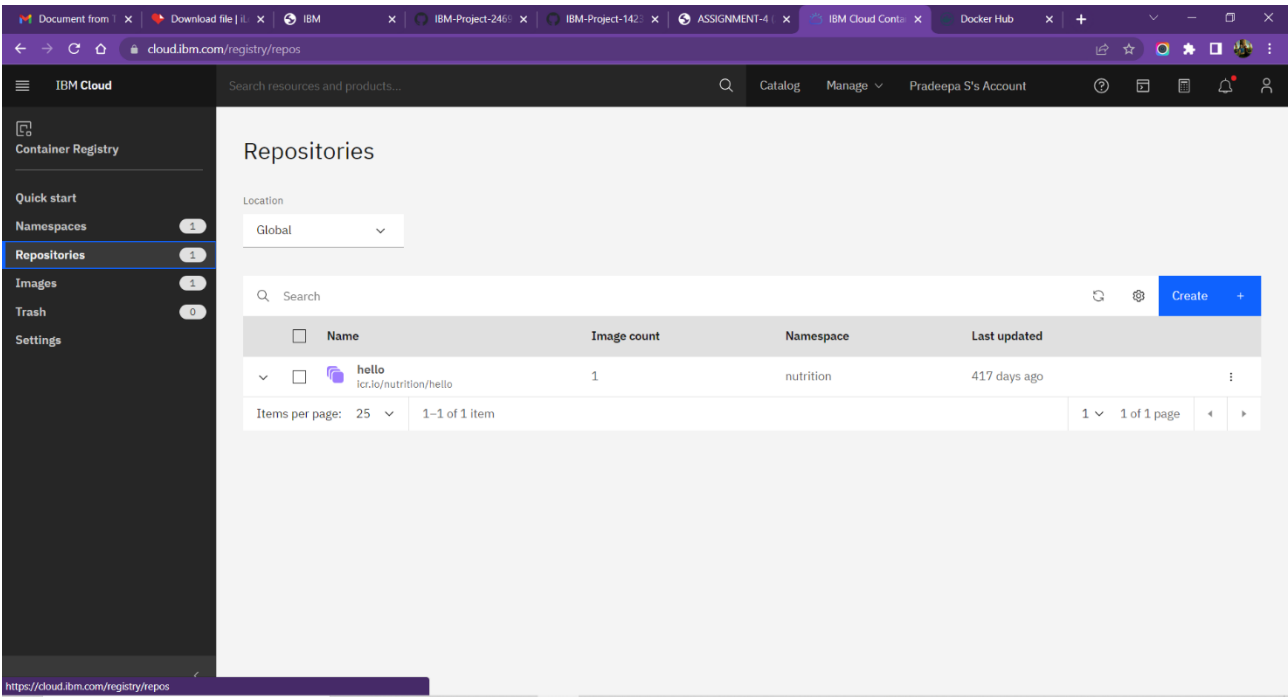
Smart Internz

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



```
Command Prompt

C:\Users\User>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

C:\Users\User>docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
Digest: sha256:faa03e786c97f0ef34423fccceec2398ec8a5759259f94d99078f264e9d7af
Status: Image is up to date for hello-world:latest
docker.io/library/hello-world:latest

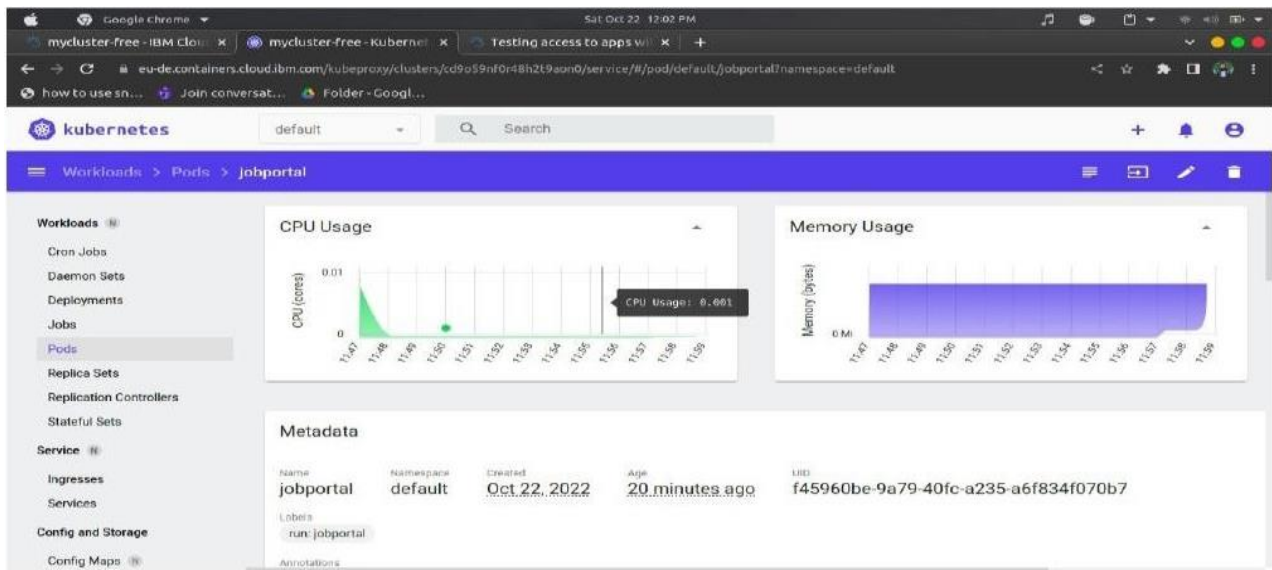
C:\Users\User>docker tag hello-world icr.io/nutrition/hello:hello-world

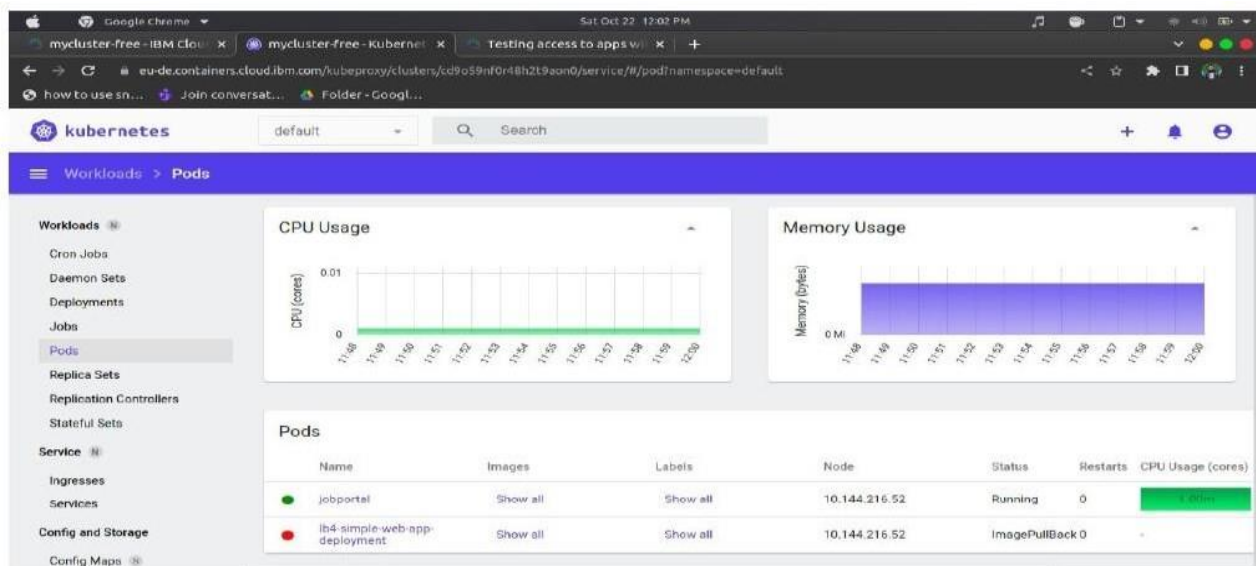
C:\Users\User>docker push icr.io/nutrition/hello:hello-world
The push refers to repository [icr.io/nutrition/hello]
e07ee1baac5f: Pushed
hello-world: digest: sha256:f54a58bc1aac5e1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525

C:\Users\User>ibmcloud cr image-list
Listing images...

Repository      Tag      Digest      Namespace   Created    Size    Security status
icr.io/nutrition/hello  hello-world  f54a58bc1aac  nutrition   1 year ago  2.5 kB  -
```

4. Create a Kubernetes cluster in IBM cloud and deploy job portal image and also expose the same app to run in nodeport.





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