

Assignment-4

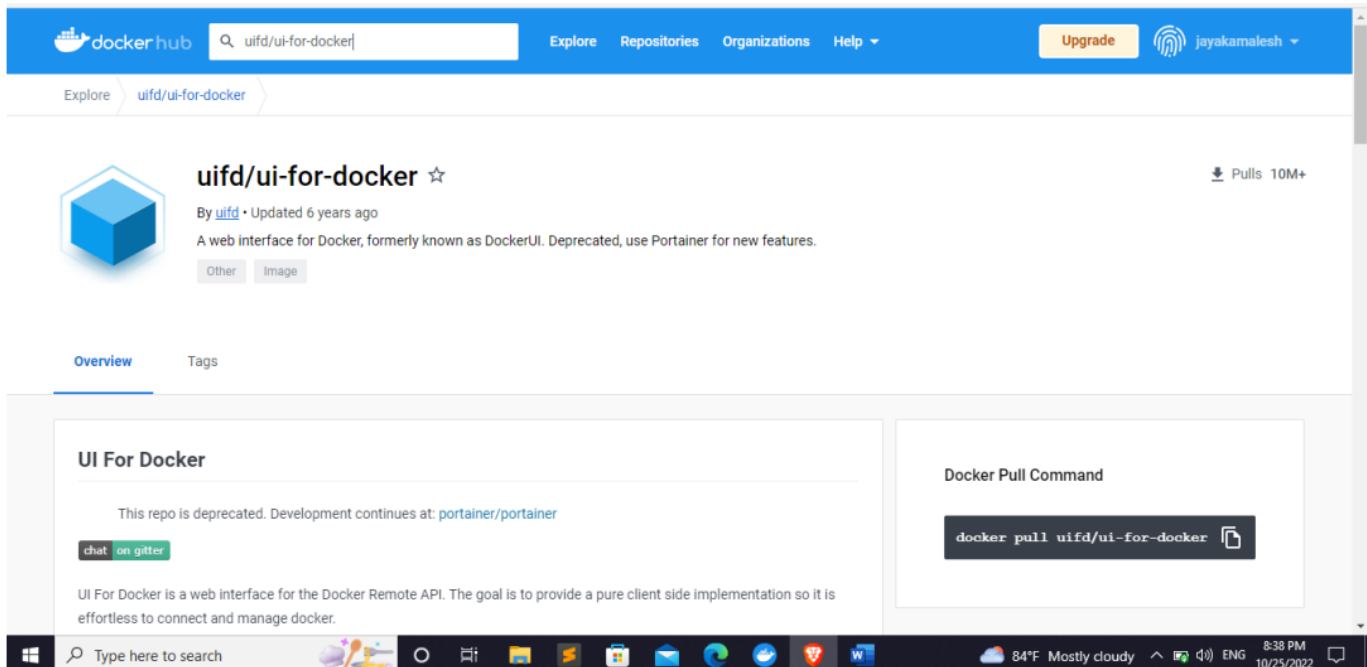
IBM object storage & IBM Watson

| | |
|-----------------|--|
| Date | 19 September 2022 |
| Team ID | PNT2022TMID32325 |
| Project Name | Smart Fashion Recommender Application |
| Student Name | Krithika I |
| Student Roll No | 810019104037 |

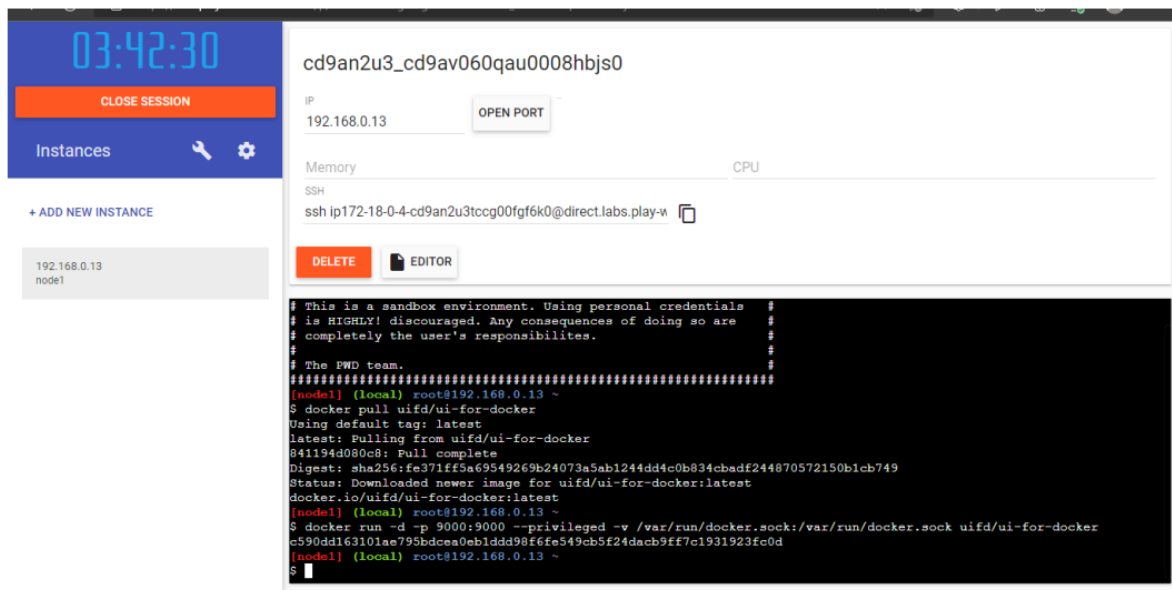
Assignment Kubernetes / Docker:

1. Pull an Image from docker hub and run it in docker playground.
2. Create a docker file for the job portal application and deploy it in Docker desktop application.
3. Create an IBM container registry and deploy a hello world app or job portal app.
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.

1.Pull an image from docker hub and run it in docker Playground



The screenshot shows the Docker Hub repository page for `uifd/ui-for-docker`. The page header includes the Docker Hub logo, a search bar with the text `uifd/ui-for-docker`, and navigation links for Explore, Repositories, Organizations, and Help. A user profile for `jayakamlesh` is visible in the top right corner. The repository name `uifd/ui-for-docker` is prominently displayed, along with a star icon and a pull count of 10M+. Below the repository name, it states "By uifd • Updated 6 years ago" and provides a description: "A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features." There are tabs for "Other" and "Image". The "Overview" tab is selected, showing a notice that the repository is deprecated and development continues at `portainer/portainer`. A "chat on gitter" button is also present. On the right, a "Docker Pull Command" box displays the command `docker pull uifd/ui-for-docker`. The Windows taskbar at the bottom shows the time as 8:38 PM on 10/25/2022.



The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a digital clock showing 03:42:30, a "CLOSE SESSION" button, and a list of instances. One instance named "node1" with IP 192.168.0.13 is listed. The main area displays the details for the selected instance, including its IP (192.168.0.13), memory, CPU, and an SSH command: `ssh lp172-18-0-4-cd9an2u3tccg00fgf6k0@direct.labs.play-w`. Below this, there are "DELETE" and "EDITOR" buttons. The terminal window shows a series of commands and their outputs:

```
# This is a sandbox environment. Using personal credentials
# is HIGHLY discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The FWD team.
#####
(node1) (local) root@192.168.0.13 ~
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371ff5a69549269b24073a5ab1244dd4c0b834cbad244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
(node1) (local) root@192.168.0.13 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
c590dd163101ae795bdcea0eb1ddd98f6fe549cb5f24dab9ff7c1931923fc0d
(node1) (local) root@192.168.0.13 ~
$
```



The screenshot shows the Windows taskbar at the bottom of the screen. It includes a search bar, several application icons (File Explorer, Chrome, etc.), and system tray icons on the right showing the time as 08:46 AM on 31-10-22.

UI For Docker

Dashboard Containers Containers Network Images Networks Volumes Info Refresh

UI For Docker


The UI for Docker container engine

Learn more.

Running Containers

- beautiful_goldwasser Up About a minute

Status



Windows taskbar: 20:13 21-10-2022


UI For Docker

Dashboard Containers Containers Network Images Networks Volumes Info Refresh

Running Containers

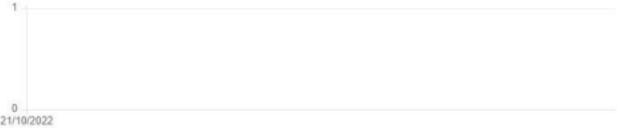
- beautiful_goldwasser Up About a minute

Status

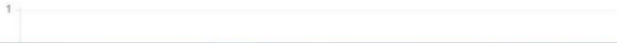


Running Stopped Ghost

Containers created



Images created

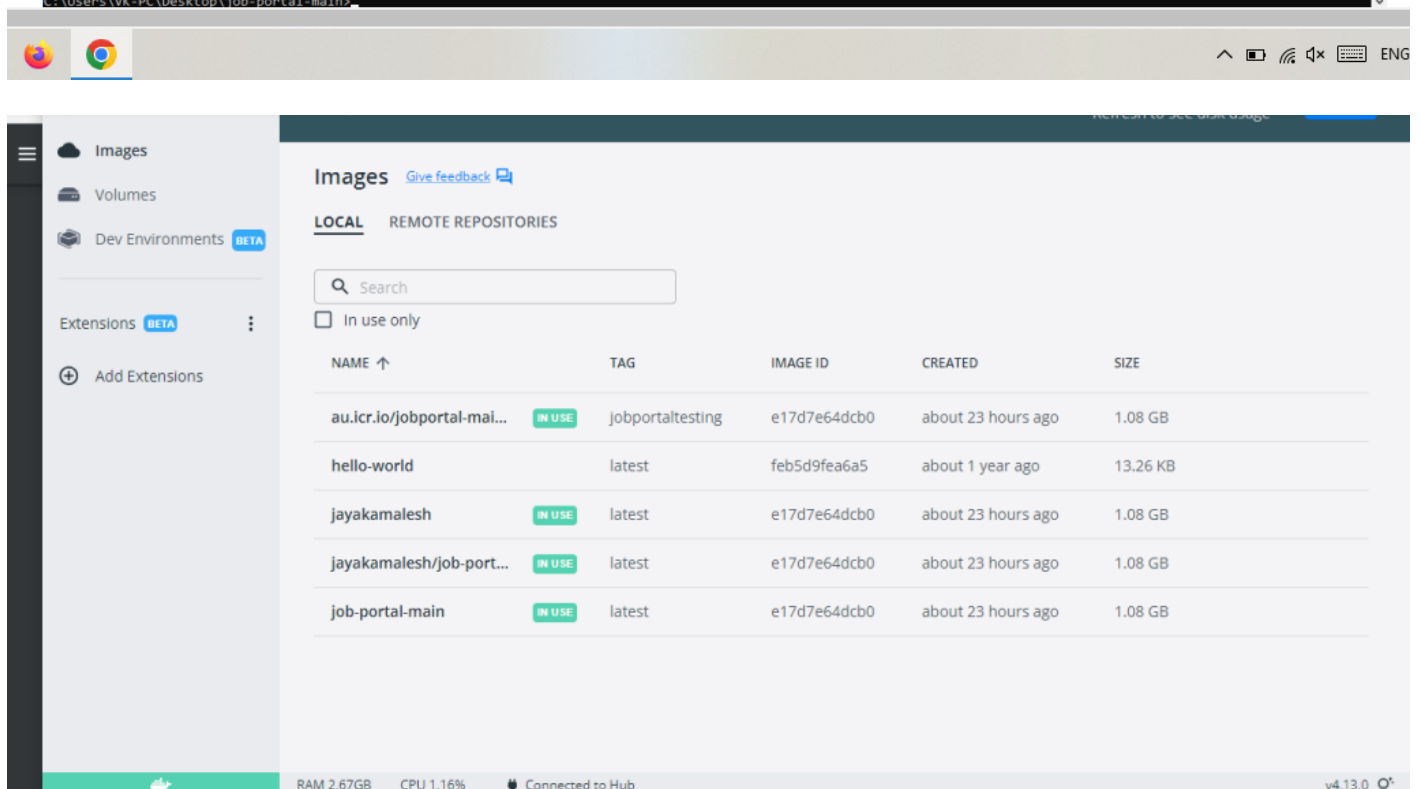


Windows taskbar: 20:13 21-10-2022

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

```
C:\Windows\System32\cmd.exe
-> [internal] load build definition from Dockerfile
-> transferring dockerfile: 32B
-> [internal] load .dockerignore
-> transferring context: 2B
-> [internal] load metadata for docker.io/library/python:3.6
[auth] library/python:pull token for registry-1.docker.io
-> [internal] load build context
-> transferring context: 687B
[1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097a4907a8ec879df5ac31872359c2de510f82214c0448e926393b376d3b60d 2.22kB / 2.22kB
-> sha256:54260638d07c5e3ad24c6e21fc889abbcb486a27634c0892086ff7f1f3f44b104 9.27kB / 9.27kB
-> sha256:0e29546d541cddb309281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 54.92MB / 54.92MB
-> sha256:9b829c73b52b92b97d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 5.15MB / 5.15MB
-> sha256:cb5b7ae361722f070eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 10.87MB / 10.87MB
-> sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 54.57MB / 54.57MB
-> sha256:6f9f74896dfa93fe0172f594faba85e0b4e8a0481a0fef9112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd602983945c164de2a37205e06a62dada823124dc743 6.29MB / 6.29MB
-> extracting sha256:0e29546d541cddb309281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 14.21MB / 14.21MB
-> extracting sha256:9b829c73b52b92b97d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 2.35 / 2.35MB
-> extracting sha256:cb5b7ae361722f070eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 4.05 / 4.05MB
-> sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfeef0be0b243b2f31bab7 235B / 235B
-> sha256:c4f42be2be53b900ebffcc040c1df13de538434ccc5f5d954a56848a6169a3a3f 2.21MB / 2.21MB
-> extracting sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 27.35 / 27.35MB
-> extracting sha256:6f9f74896dfa93fe0172f594faba85e0b4e8a0481a0fef9112efc7e4d3c78f7 131.44 / 131.44MB
-> extracting sha256:5e3b1213efc56598e78bd602983945c164de2a37205e06a62dada823124dc743 8.25 / 8.25MB
-> extracting sha256:9fddfd56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 11.35 / 11.35MB
-> extracting sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfeef0be0b243b2f31bab7 0.05 / 0.05MB
-> extracting sha256:c4f42be2be53b900ebffcc040c1df13de538434ccc5f5d954a56848a6169a3a3f 2.25 / 2.25MB
-> [2/6] WORKDIR /app
-> [3/6] ADD . /app
-> [4/6] COPY requirements.txt /app
-> [5/6] RUN python3 -m pip install -r requirements.txt
-> [6/6] RUN python3 -m pip install ibm_db
-> exporting to image
-> exporting layers
-> writing image sha256:1756719486df002fad5dae305c5221513f2ff2d1b49a8d242b22a28af0379f19
-> naming to docker.io/library/job-portal-main

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
C:\Users\VK\PC\Desktop\job-portal-main>
```



The screenshot shows the Docker Desktop application interface. On the left is a sidebar with navigation options: Images, Volumes, Dev Environments (BETA), Extensions (BETA), and Add Extensions. The main area is titled 'Images' and has tabs for 'LOCAL' and 'REMOTE REPOSITORIES'. The 'LOCAL' tab is active, displaying a table of local images. The table has columns for NAME, TAG, IMAGE ID, CREATED, and SIZE. Several images are listed, including 'au.icr.io/jobportal-main' (IN USE), 'hello-world', 'jayakamalesh', 'jayakamalesh/job-port...', and 'job-portal-main' (IN USE). The 'job-portal-main' image is highlighted, showing its details: NAME: job-portal-main, TAG: latest, IMAGE ID: e17d7e64dcb0, CREATED: about 23 hours ago, SIZE: 1.08 GB. At the bottom of the interface, there is a status bar showing RAM usage (2.67GB), CPU usage (1.16%), and connection status (Connected to Hub). The version number v4.13.0 is also displayed.

| NAME | TAG | IMAGE ID | CREATED | SIZE |
|--------------------------|------------------|--------------|--------------------|----------|
| au.icr.io/jobportal-main | jobportaltesting | e17d7e64dcb0 | about 23 hours ago | 1.08 GB |
| hello-world | latest | feb5d9fea6a5 | about 1 year ago | 13.26 KB |
| jayakamalesh | latest | e17d7e64dcb0 | about 23 hours ago | 1.08 GB |
| jayakamalesh/job-port... | latest | e17d7e64dcb0 | about 23 hours ago | 1.08 GB |
| job-portal-main | latest | e17d7e64dcb0 | about 23 hours ago | 1.08 GB |

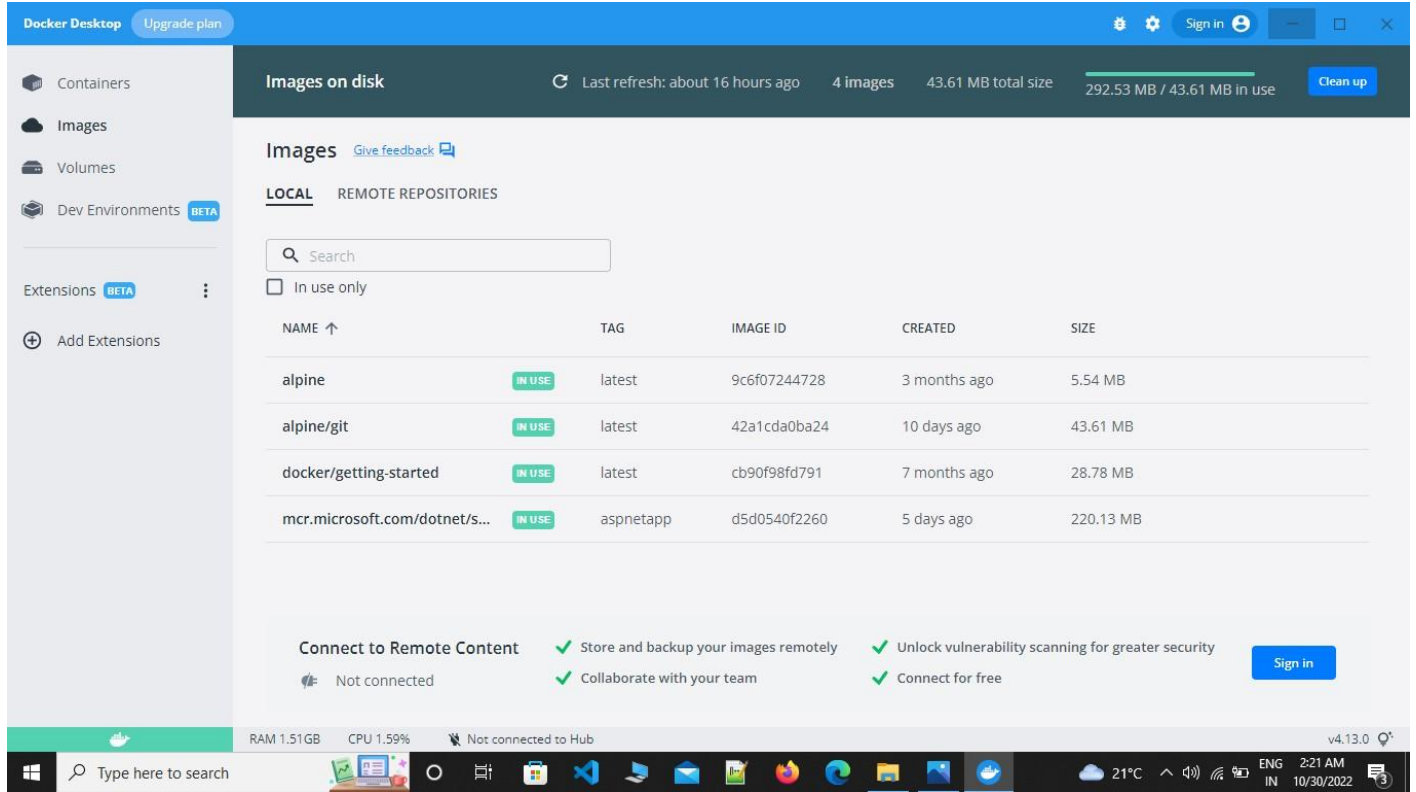
3. Create an IBM container registry and deploy a hello world app

```
Command Prompt
Microsoft Windows [Version 10.0.19042.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Brins>docker run -d -p 80:80 docker/getting-started
Unable to find image 'docker/getting-started:latest' locally
latest: Pulling from docker/getting-started
df9b9388f04a: Already exists
5867cba5fcbd: Pull complete
4b639e65cb3b: Pull complete
061ed9e2b976: Pull complete
bc19f3e8eeb1: Pull complete
4071be97c256: Pull complete
79b586f1a54b: Pull complete
0c9732f52d6: Pull complete
Digest: sha256:b559be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aae
Status: Downloaded newer image for docker/getting-started:latest
0acd90a012579d14bf95cb0d8c97b2ea5ce16fa82dc972ddab4b70086c04d88a

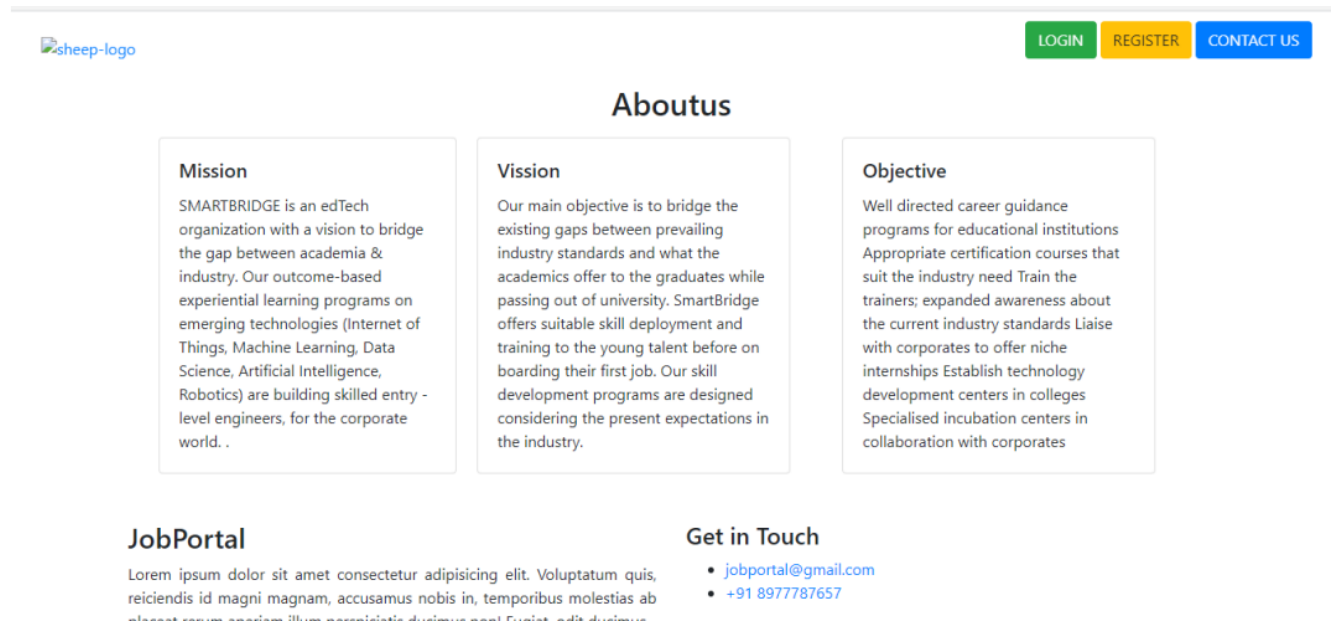
C:\Users\Brins>docker container run alpine echo "Hello World"
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
213ec9aee27d: Already exists
Digest: sha256:bc41182d7ef5ffc53a40b044e725193bc10142a1243f395ee852a8d9730fc2ad
Status: Downloaded newer image for alpine:latest
Hello World

C:\Users\Brins>
```



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

Job Portal:



IBM Cloud

Search resources and products...

Catalog

Manage

Jayakamalesh k's Acco...

Container Registry

Quick start

Namespaces2

Repositories1

Images1

Trash0

Settings

Repositories

Location

Sydney

Search

Create

| Name | Image count | Namespace | Last updated |
|--|-------------|----------------|--------------|
| testrepo au.icr.io/jobportal-main/testrepo | 1 | jobportal-main | 1 day ago |

Items per page: 251-1 of 1 item

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

Type here to search

Docker Playground

CAD-B7-1A3E (Evening Session)-Day

uifd/ui-for-docker - Docker Image | D

IBM Cloud Container Registry - R

84°F

8:53 PM

10/25/2022

IBM Cloud

Search resources and products...

Catalog

Manage

Jayakamalesh k's Acco...

Container Registry

Quick start

Namespaces2

Repositories1

Images1

Trash0

Settings

Images

Location

Sydney

View by: Digest

Search

Create

| Repository@digest | Tags | Manifest type | Created | Size | Security status |
|---|------------------|---------------|-----------|--------|-----------------|
| jobportal-main/testrepo@sha256:dc6a1d3f8898... | jobportaltesting | Docker | 1 day ago | 435 MB | 99 issues |

Items per page: 251-1 of 1 item

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

Type here to search

84°F

8:53 PM

10/25/2022