

## Assignment -4

Assignment Date	17 November 2022
Student Name	Thaslima Banu S
Student Roll Number	912819104054
Maximum Marks	2 Marks

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

The screenshot displays a web browser window showing the Docker Hub page for the 'hello-world' official image. The page includes a search bar, navigation links, and a 'Quick reference' section. Overlaid on the browser is a Windows Command Prompt window showing the execution of the 'docker pull hello-world' command. The output indicates that the image was successfully pulled from the library/hello-world repository, using the 'latest' tag. The Windows taskbar at the bottom shows the system clock as 10:05 PM on 11/2/2022.

hello-world - Official Image | Docker Hub

hub.docker.com/\_/hello-world

Codeforces

Security Advisory: Critical OpenSSL Vulnerability - learn how to tell if your repository is vulnerable.

docker hub Search for great content (e.g., mysql) Explore Repositories Organizations Help Upgrade boropir

Explore Official Images hello-world

>hello world hello-world DOCKER OFFICIAL IMAGE Hello World! (an example of minimal Dockerization)

Overview Tags

Quick reference

- Maintained by: the Docker Community
- Where to get help: the Docker Community Slack, Server Fault, Unix & Linux, or Stack Overflow

Supported tags and respective Dockerfile links

Docker Official Images are a curated set of Docker open source and drop-in solution repositories.

```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

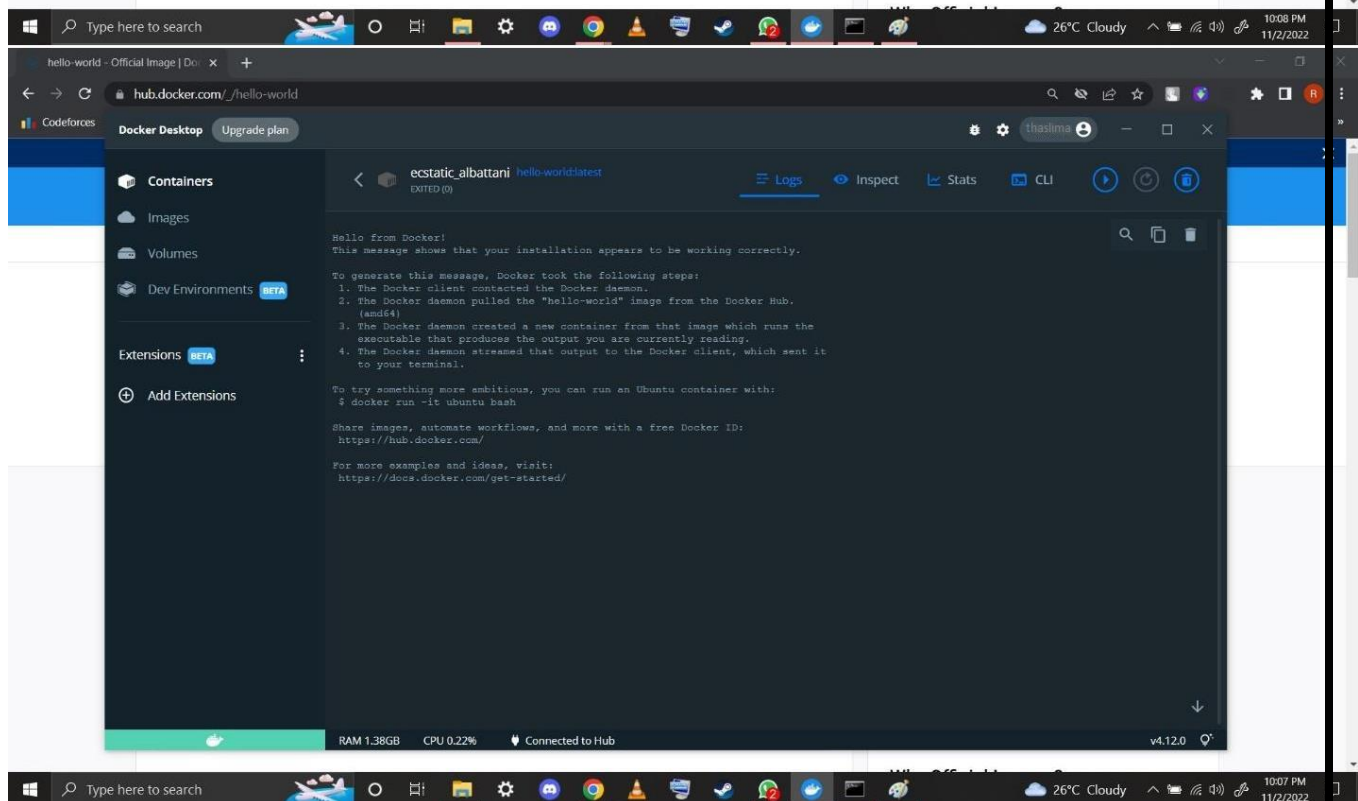
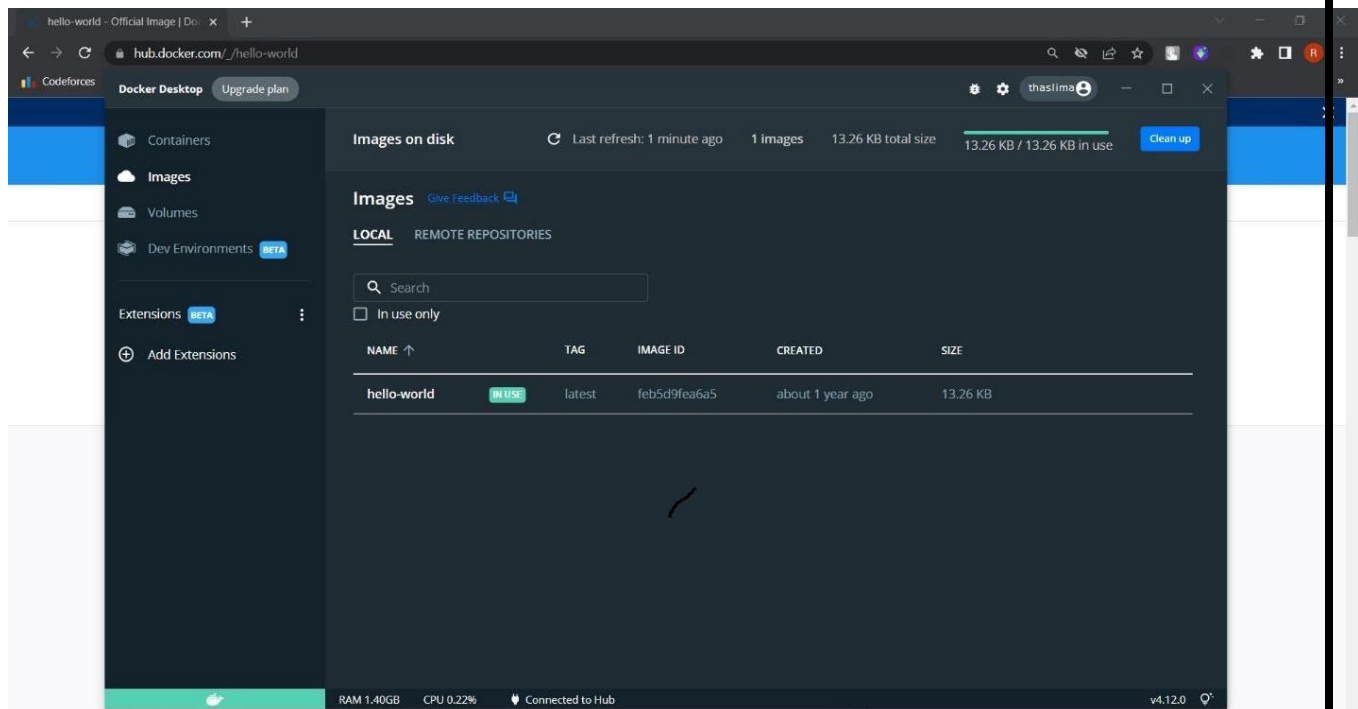
C:\Users\Assig>docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:2e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest

C:\Users\Assig>
```

Type here to search

26°C. Cloudy

10:05 PM 11/2/2022



2. Create a docker file for the job and skill recommender 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","app1.py"]
```

A screenshot of a Windows terminal window. The title bar at the top reads "Command Prompt" and "Microsoft Windows [Version 10.0.19044.2130] (c) Microsoft Corporation. All rights reserved." The terminal shows a series of commands and their outputs. The first command is `C:\Users\Assig>cd C:\Users\Assig\Desktop\IBM-Project\Jobportal`. The second is `C:\Users\Assig\Desktop\IBM-Project\Jobportal>docker build .`, which outputs `[+] Building 492.2s (12/12) FINISHED`. The third is `[pineternal] don't build our build from ImageRegistry`, followed by a long list of Docker build logs for a Java application named `jobportal`. The logs show the image being built as `pineternal/jobportal:latest` with a size of `492.2s`. The final command is `C:\Users\shaha\Desktop\IBM-Project\Jobportal>`. At the bottom of the terminal, there is a text prompt: "Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them". The Windows taskbar is visible at the bottom, showing the Start button, search bar, and several application icons. The system tray on the right shows the date and time as "11:28 PM 11/2/2023".

```
Command Prompt - docker run f3d9015a21f3

C:\Users\Assig\Desktop\IBM-Project\Jobportal>docker images
REPOSITORY                                TAG                                IMAGE ID        CREATED        SIZE
<none>                                    <none>                            f3d9015a21f3    2 minutes ago  1.08GB
hubproxy.docker.internal:5000/docker/desktop-kubernetes  kubernetes-v1.25.0-cni-v1.1.1-critools-v1.24.2-cri-dockerd-v0.2.5-1-debian  2042e761d17a    2 months ago   363MB
k8s.gcr.io/kube-apiserver                  v1.25.0                           4d2edfd10d3e    2 months ago  128MB
k8s.gcr.io/kube-scheduler                  v1.25.0                           bef2cf311509    2 months ago   59.6MB
k8s.gcr.io/kube-controller-manager         v1.25.0                           1a54c86c03a6    2 months ago  117MB
k8s.gcr.io/kube-proxy                      v1.25.0                           58a9a0c6d90f    2 months ago   61.7MB
k8s.gcr.io/pause                           3.8                               4873874c08ef    4 months ago   711kB
k8s.gcr.io/etcd                            3.5.4-0                           a8a176a5d5d6    5 months ago   300MB
k8s.gcr.io/coredns                         v1.9.3                            5185b96f0bec    5 months ago   48.8MB
docker/desktop-vpnkit-controller           v2.0                              8c2c38aa676e    18 months ago   21MB
docker/desktop-storage-provisioner         v2.0                              99f89471f470    18 months ago   41.9MB

C:\Users\Assig\Desktop\IBM-Project\Jobportal>docker run f3d9015a21f3
* 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)
```

JOBPOTAL | HOME

Not secure | 172.20.10.6:5000/login

Codeforces Facebook - नवीन रैंक YouTube RARBG Rarbg Index... Twitch I track the TV shows... Gmail Instagram TorrentBD: Welcome Yahoo SkymoviesHD.in [JS... Circle Network]

sheep-logo

LOGOUT REGISTER MY JOBS

### Available Jobs

Python

Skills for python

Apply Now

Docker Desktop Upgrade plan

thastima

EXITED (137)

Logs Inspect Stats CLI

- \* 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)

EXT

RAM 4.89GB CPU 2.44% Connected to Hub v4.12.0

### 3. Create a IBM container registry and deploy job and skill recommender app.

```
Command Prompt
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Assig>ibmcloud login
API endpoint: https://cloud.ibm.com

Email> 19cs054@syedengg.co.in

Password>
Authenticating...
OK

Targeted account: Thaslima's Account (3828f847bb644584acc551e935d0e383)

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>

API endpoint: https://cloud.ibm.com
Regions:
User: 19cs054@syedengg.co.in
Account: Thaslima (3828f847bb644584acc551e935d0e383)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:

C:\Users\Assig>
```

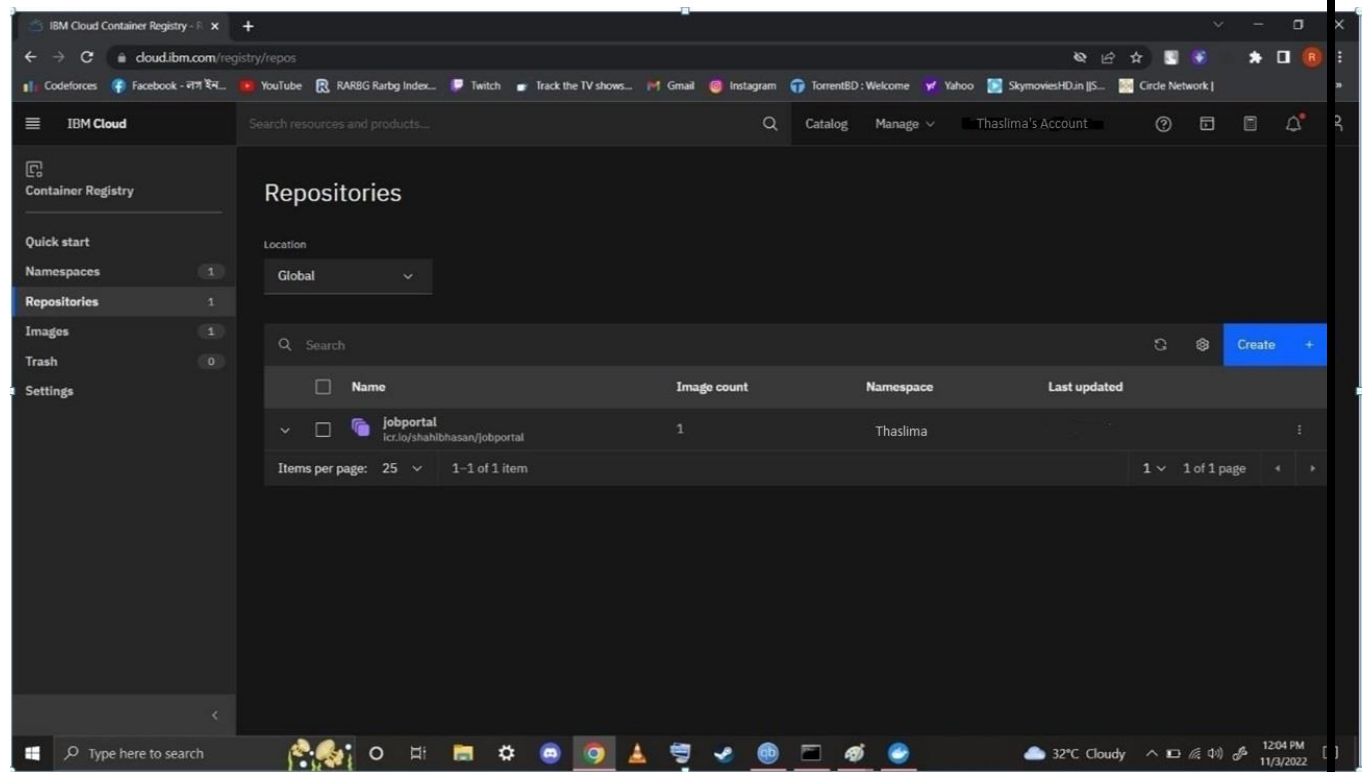
```
Command Prompt
C:\Users\Assig>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\Assig>docker tag f3d9015a21f3 icr.io/thaslima/jobportal

C:\Users\Assig>docker push icr.io/thaslima/jobportal
Using default tag: latest
The push refers to repository [icr.io/thaslima/jobportal]
21d8888e119b: Pushed
e45859251a61: Pushed
ba5faf349894: Pushed
21a1adcafa41: Pushed
4c702597ab0c: Pushed
aa4c808c19f0: Pushed
0ba9f090e8ba: Pushed
3a607d99af9f: Pushed
1a38e7a1fcc2: Pushed
c3a0d930d24: Pushed
26a504e63be4: Pushed
8bf42db0de72: Pushed
31892cc314cb: Pushed
11936051f93b: Pushed
latest: digest: sha256:910c91f1fe2226ae9306e48d02426c6c513bf54cfad9b960a8cb02bcb0926143 size: 3260

C:\Users\Assig>
```



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

The screenshot displays the Kubernetes Dashboard interface in a web browser. The URL bar shows the endpoint: `eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdhm3amf0p6bv6bpl3l0/service/#/pod/default/jobportal-5d9d6b7594-xnd9v?namespace=default`. The dashboard header includes the Kubernetes logo, a namespace dropdown set to 'default', and a search bar. The breadcrumb navigation indicates the path: **Workloads > Pods > jobportal-5d9d6b7594-xnd9v**.

The left sidebar contains a navigation menu with categories: **Workloads** (Cron Jobs, Daemon Sets, Deployments, Jobs, Pods, Replica Sets, Replication Controllers, Stateful Sets), **Service** (Ingresses, Ingress Classes, Services), and **Config and Storage** (Config Maps, Persistent Volume Claims, Secrets). The 'Pods' item is currently selected.

The main content area is divided into three sections:

- Metadata:** A table showing pod details.

Name	Namespace	Created	Age	UID
jobportal-5d9d6b7594-xnd9v	default	Nov 3, 2022	37 seconds ago	c7ca5e6d-6505-4321-a0c7-90418c630ce2

Labels: `app: flasknode`, `pod-template-hash: 5d9d6b7594`

Annotations: `cni.projectcalico.org/containerID`, `cni.projectcalico.org/podIP: 172.30.141.206/32`, `cni.projectcalico.org/podIPs: 172.30.141.206/32`, `kubernetes.io/psp: ibm-privileged-psp`
- Resource information:** A table showing pod resource allocation.

Node	Status	IP	QoS Class	Restarts	Service Account
10.144.212.158	ErrImagePull	172.30.141.206	BestEffort	0	default

Image Pull Secrets: `all-icr-io`
- Conditions:** A section for pod status conditions, currently empty.

The Windows taskbar at the bottom shows the system clock as 1:00 PM on 11/3/2022, along with various system icons and the search bar.