

### **DOCKER AND KUBERNETES**

Assignment Date	15 NOVEMBER 2022
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Maximum Marks	2 Marks

- 1. Pull an image from docker hub and run it in docker Playground and**
- 2. Create a docker file for the job portal application and deploy it in Docker desktop application**

The image shows two overlapping screenshots from a Windows desktop. The top screenshot is of the Docker Hub repository page for `uifd/ui-for-docker`. It shows the repository name, a description stating it is deprecated and to use Portainer instead, and a Docker pull command: `docker pull uifd/ui-for-docker`. The bottom screenshot is of the Docker Playground interface. It shows a session titled `cd9an2u3_cd9av060qau0008hajs0` with IP `192.168.0.13`. The terminal window displays the following commands and output:

```
# 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:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
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
c590dd163101ae795bdcea0b1ddd98f6fe549cb5f24dab9ff7c1931923fc0d
(node1) (local) root@192.168.0.13 ~
$
```

3.Create an IBM container registry and deploy Helloworld or job portal app.

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



Running Stopped Ghost

UI For Docker

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# UI For Docker


The UI for Docker container engine

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Running Containers

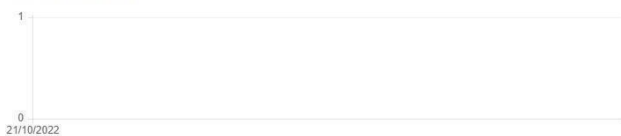
- beautiful\_goldwasser Up About a minute

Status




Running Stopped Ghost

Containers created



Images created



#### 4. Create a Kubernetes cluster in IBM cloud and deploy Helloworld image or job portal app image and also expose the same app to run in no deport.

The image shows a Windows command prompt window with the following output:

```
C:\Windows\System32\cmd.exe
-> [internal] load build definition from Dockerfile
-> [internal] load .dockerignore
-> [internal] load metadata for docker.io/library/python:3.6
[auth] library/python:pull token for registry-1.docker.io
-> [internal] load build context
-> [internal] transferring context: 687B
-> [1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097a497a8ec079d75ac31872359c2de510f82214c64a8e2e393b376d2b6d0 2.22kB / 2.22kB
-> sha256:5420063b007c5c3d4c621f0809d8b8406a27634c0092006ff71f344b104 9.27kB / 9.27kB
-> sha256:6e29546d541cdd380281d21a73a9d1db78665c1b95b74f32b00e0e8b77a6e1e3 54.92MB / 54.92MB
-> sha256:9b829c73b52b02b07d5c07a54fbaf3e921995a296c714b53a32a6e7d19231fcd 5.15MB / 5.15MB
-> sha256:cb5b7ae361722f070eca53f35823ed21baa85d81d5d95cd5a95ab53d740cdd58 10.87MB / 10.87MB
-> sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 54.57MB / 54.57MB
-> sha256:6f9f74896d9a93fe0172f594faba85e0b4e8a0481a0fef9d9112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd602983945c164de2a37285e06a62dada823124dc743 6.29MB / 6.29MB
-> extracting sha256:0e29546d541cdd380281d21a73a9d1db78665c1b95b74f32b00e0e8b77a6e1e3 27.35
-> sha256:9fd0f0c5e3134f2a6efad7e2410f5c7459c4b0ed105c5478076f41c1244b096752 14.21MB / 14.21MB
-> extracting sha256:9b829c73b52b02b07d5c07a54fbaf3e921995a296c714b53a32a6e7d19231fcd 2.35
-> extracting sha256:cb5b7ae361722f070eca53f35823ed21baa85d81d5d95cd5a95ab53d740cdd58 4.86
-> sha256:404f02044bac0432ca522cbb0f754b1c91fcea6006bfeef0be0b243b2f31bab7 2358 / 2358
-> sha256:c4f42be2be53b090ebff040c1df13de538434ccc5f5d954a56848a6169a3a3f 2.21MB / 2.21MB
-> extracting sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 27.35
-> extracting sha256:6f9f74896d9a93fe0172f594faba85e0b4e8a0481a0fef9d9112efc7e4d3c78f7 131.45
-> extracting sha256:5e3b1213efc56598e78bd602983945c164de2a37285e06a62dada823124dc743 8.25
-> extracting sha256:9fd0f0c5e3134f2a6efad7e2410f5c7459c4b0ed105c5478076f41c1244b096752 11.35
-> extracting sha256:404f02044bac0432ca522cbb0f754b1c91fcea6006bfeef0be0b243b2f31bab7 0.65
-> extracting sha256:c4f42be2be53b090ebff040c1df13de538434ccc5f5d954a56848a6169a3a3f 2.25
-> [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 sha256:1756719486df082fad5d4e305c5221513f2ff2d1b49a8d242b22a28af0379f19
-> naming to docker.io/library/job-portal-main
0.15

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 Docker Desktop interface shows the following information:

- Containers: 0
- Images: 1
- Volumes: 0
- Dev Environments: 0
- Extensions: 0
- Images on disk: 1 images, 0 Bytes total size
- Images: Give feedback
- LOCAL: Search, In use only
- Table:

NAME	TAG	IMAGE ID	CREATED	SIZE
job-portal-main	latest	1756719486df	less than a minute ago	1.08 GB

At the bottom, the status bar shows: RAM 2.53GB, CPU 1.56%, Connected to Hub, v4.13.0.

**Create a IBM container registry and deploy hello word app**