

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 screenshot is divided into two main horizontal sections. The top section shows the Docker Hub repository page for `uifd/ui-for-docker`. The page includes the Docker Hub logo, the repository name, a star icon, and a note stating "This repo is deprecated. Development continues at: portainer/portainer". It also features a "chat on gitter" button and a "Docker Pull Command" box with the command `docker pull uifd/ui-for-docker`. The bottom section 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 including "192.168.0.13 node1". The main area displays the IP address 192.168.0.13 and an "OPEN PORT" button. Below this, there's a terminal window showing 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 -w /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




UI For Docker

Dashboard Containers Containers Network Images Networks Volumes Info Refresh

Running Containers

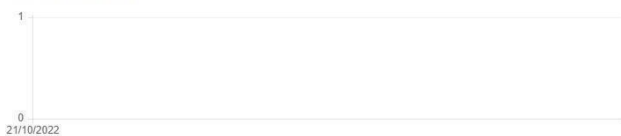
- beautiful_goldwasser Up About a minute

Status




Running Stopped Ghost

Containers created



Images created



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 screenshot displays the Docker Desktop application window. The top pane shows the build progress of the 'job-portal-main' image. The bottom pane shows the Docker Desktop interface with the 'Images on disk' section selected, displaying the 'job-portal-main' image.

Build Progress:

```
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>
[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:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f8652afaf88c25f6dd22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097c4907a8ec079d5ac31872359c2de510f82214c6418e26393b376d2b00d 2.22kB / 2.22kB
-> sha256:5420063b007c53ad24c621f0809bb8486a27634c0092006ff71f3f44b104 9.27kB / 9.27kB
-> sha256:6e29546d541c8bd380281d21a73a9d1db78665c1b95b74f32b009e8b77a6e1e3 54.92MB / 54.92MB
-> sha256:9b829c73b52b2b07d5c07a54fbaf3e921995a296c714b53a32ae67d19231fcd 5.15MB / 5.15MB
-> sha256:cb5b7ae3172f070eca53f35823ed21baa85d61d5d095cd5a95ab53d740cdd56 10.87MB / 10.87MB
-> sha256:6494e481622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 54.57MB / 54.57MB
-> sha256:6f9f74896df93fe0172f594faba85e0b4e8a0481a0fef9d9112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd602983945c164de2a37285e06a62dad823124dc743 6.29MB / 6.29MB
-> extracting sha256:0e29546d541c8bd380281d21a73a9d1db78665c1b95b74f32b009e8b77a6e1e3 27.35 / 27.35
-> sha256:9fd0fd58334f2e6efad7e24115e7a59c40ed105c5478070f411244b096752 14.21MB / 14.21MB
-> extracting sha256:9b829c73b52b2b07d5c07a54fbaf3e921995a296c714b53a32ae67d19231fcd 2.35 / 2.35
-> extracting sha256:cb5b7ae3172f070eca53f35823ed21baa85d61d5d095cd5a95ab53d740cdd56 4.86 / 4.86
-> sha256:404f02044bac0432ca522cbb0f754b1c91fcea6006bfeef0be0b243b2f31bab7 2358 / 2358
-> sha256:caf42be2be53b090ebff040c1df13de538434ccc5f5d954a56848a6169a3a3f 2.21MB / 2.21MB
-> extracting sha256:6494e481622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 27.35 / 27.35
-> extracting sha256:6f9f74896df93fe0172f594faba85e0b4e8a0481a0fef9d9112efc7e4d3c78f7 131.45 / 131.45
-> extracting sha256:5e3b1213efc56598e78bd602983945c164de2a37285e06a62dad823124dc743 8.25 / 8.25
-> extracting sha256:9fd0fd58334f2e6efad7e24115e7a59c40ed105c5478070f411244b096752 11.35 / 11.35
-> extracting sha256:404f02044bac0432ca522cbb0f754b1c91fcea6006bfeef0be0b243b2f31bab7 6.85 / 6.85
-> extracting sha256:caf42be2be53b090ebff040c1df13de538434ccc5f5d954a56848a6169a3a3f 7.25 / 7.25
-> [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 sha256:1756719486df082fad5dae305c5221513f2ff2d1b40a8d242b22a28af0379f19
-> naming to docker.io/library/job-portal-main
0.15
```

Docker Desktop Interface:

The Docker Desktop window shows the 'Images on disk' section. It displays a table of local images:

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

The status bar at the bottom shows the system is connected to Hub, with RAM usage at 2.53GB and CPU usage at 1.56%.

Create a IBM container registry and deploy hello word app