

DOCKER AND KUBERNETES

Assignment Date	21 October 2022
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Maximum Marks	2 Marks

Question 1:

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

The screenshot shows a web browser window with multiple tabs. The active tab is 'uifd/ui-for-docker - Docker Hub'. The URL bar shows 'hub.docker.com/r/uifd/ui-for-docker'. The page content includes the Docker Hub logo, the repository name 'uifd/ui-for-docker', and a note that the repository is deprecated. A 'Docker Pull Command' box displays the command: `docker pull uifd/ui-for-d`. The Windows taskbar at the bottom shows the time as 12:45 on 23-10-2022.

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:42:30, a 'CLOSE SESSION' button, and a list of instances. The main area displays the details of a container named 'cd9an2u3_cd9av060qau0008hbjso'. It shows the IP address '192.168.0.13' and an 'OPEN PORT' button. Below this, there's a terminal window with 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 PWD 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:fe371ff5a69549269b24073a5ab1244dd4e0b834cbadf244870572150b1cb749
Status: Downloaded newer image for 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
c590dd163101ae75bdc0ea0eb1dd98f6fe549cb5f24dacb9ff7c1931923fc0d
(node1) (local) root@192.168.0.13 ~
$
```

The Windows taskbar at the bottom shows the time as 20:11 on 21-10-2022.

UI For Docker

Dashboard Containers Containers Network Images Networks Volumes Info Refresh

UI For Docker


The UI for Docker container engine

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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

1

0

21/10/2022

Images created

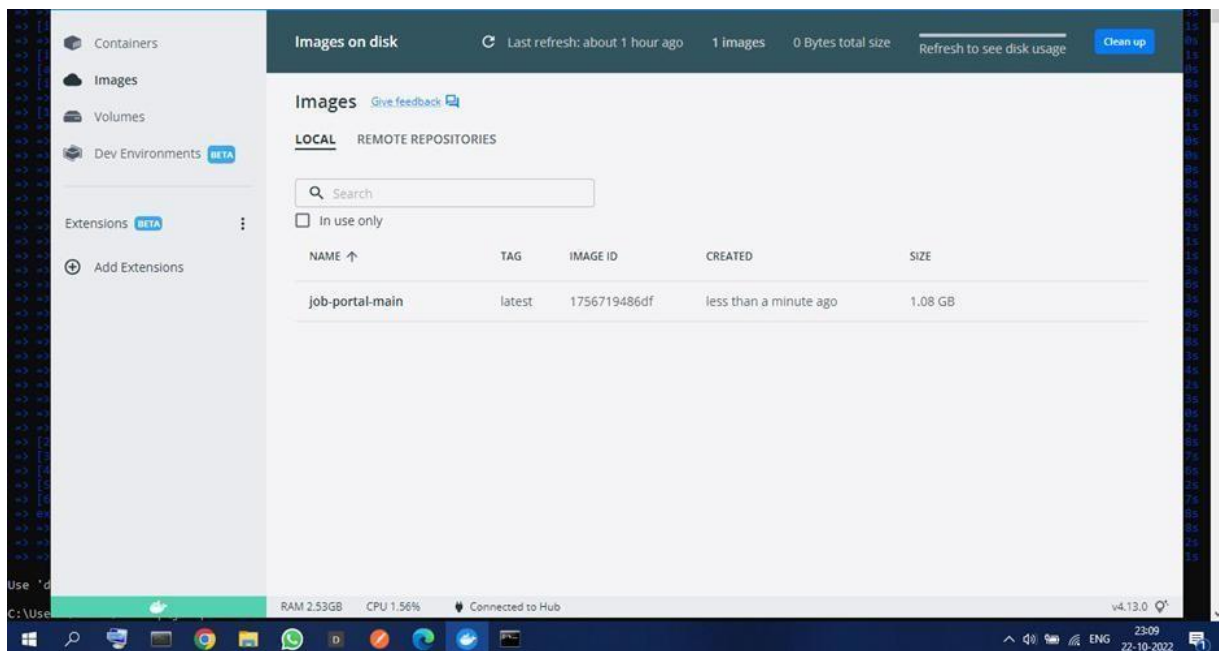
1

Windows taskbar: 20:13 21-10-2022

Question 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:f8652afaf8bc25fbd22354d547d892591067aa4026a7fa9a6019df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf8bc25fbd22354d547d892591067aa4026a7fa9a6019df9f300af6fc
-> sha256:f8652afaf8bc25fbd22354d547d892591067aa4026a7fa9a6019df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097a4007a8ec078df5ac31072359c2de510f82214c0448e826393b376d3b00d 2.22kB / 2.22kB
-> sha256:5426033007c5eaa4c4e21f180a0bc048e077634c000208af71f3f44b104 9.27kB / 9.27kB
-> sha256:0e295462c44cd0709201d21a750d1d072e85c1b50b54f7300090077ade1e3 54.22kB / 54.22kB
-> sha256:90829c73652b02b97d5c07a54f0f3a921995a296c714b51a37ae67019231fd 5.15kB / 5.15kB
-> sha256:c5b7a361722f470eac53f35823ed71ba05d61d5d95cd5a95ab5d740cdd56 10.87kB / 10.87kB
-> sha256:6040e4811622031c027ccac322ca463937fd005f569a93e0f15c01aade718793 54.57kB / 54.57kB
-> sha256:0f974800dfad3fe0172f504fab85e0b4e0a0401a0ef0d112efc7e4d3c78f7 196.51kB / 196.51kB
-> sha256:5e3b1213efc56598e78bd602963945c164de2a37205e06a62dad823124dc743 6.29kB / 6.29kB
-> extracting sha256:0e295462c44cd0709201d21a750d1d072e85c1b50b54f7300090077ade1e3
-> sha256:9fd0f0c5033af20efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 14.21kB / 14.21kB
-> extracting sha256:0e295462c44cd0709201d21a750d1d072e85c1b50b54f7300090077ade1e3
-> extracting sha256:c057a0301722f470eac53f35823ed71ba05d61d5d95cd5a95ab5d740cdd56
-> sha256:404f02044bac0422ca522c0b0f254b1c91fcea0806f0e0e0b243b2f31bab7 235B / 235B
-> sha256:c442be3e3b900ebff04dc1df13de53843ccc5f50954a50848a0109a3a3f 2.21kB / 2.21kB
-> extracting sha256:6040e4811622031c027ccac322ca463937fd005f569a93e0f15c01aade718793
-> extracting sha256:0f974800dfad3fe0172f504fab85e0b4e0a0401a0ef0d112efc7e4d3c78f7
-> sha256:5e3b1213efc56598e78bd602963945c164de2a37205e06a62dad823124dc743
-> extracting sha256:9fd0f0c5033af20efad7e241bf5e7459c40ed105c5478676f41c1244bd96752
-> extracting sha256:404f02044bac0422ca522c0b0f254b1c91fcea0806f0e0e0b243b2f31bab7
-> extracting sha256:c442be3e3b900ebff04dc1df13de53843ccc5f50954a50848a0109a3a3f
[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 lm_db
-> exporting to image
-> exporting layers
-> using image sha256:1756719486df003fad1dae305c5221513f2ff2d1b49a80242b22a20ef0379f19
-> 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>
```



Question 3:

Create an IBM container registry and deploy helloworld app or Job portal app.

```
PS C:\Users\HP> docker tag hello-world icr.io/0034ns/helloworld
PS C:\Users\HP> docker push icr.io/0034ns/helloworld
Using default tag: latest
The push refers to repository [icr.io/0034ns/helloworld]
e07ee1baac5f: Pushed
latest: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525
```

Question 4:

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

