

# DOCKER AND KUBERNETES

Assignment Date	27 October 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 displays two overlapping windows. The top window is the Docker Hub page for the repository `uifd/ui-for-docker`. It shows the repository is deprecated, with a note that development continues at `portainer/portainer`. The Docker Pull Command is shown as `docker pull uifd/ui-for-docker`.

The bottom window is the Docker Playground interface. It shows a session titled `cd9an2u3_cd9av060qau0008hbjs0` with IP `192.168.0.13`. The terminal output shows the following commands and results:

```
# 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. #
#####
(model) (local) root@192.168.0.13 ~
$ docker pull uifd/ui-for-docker
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371ff5a69549263b24072a5ab1244dd4c0b834cbad244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
(model) (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
c590dd163101ae795bdcea0eb1dd98f6fe549cb5f24dadb9ff7c1931923fc0d
(model) (local) root@192.168.0.13 ~
```

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

The image displays two screenshots of the 'UI For Docker' web application interface, accessed via a browser at the URL `ip172-18-0-4-cd9an2u3tccg00fgf6sk0-9000.direct.labs.play-with-docker.com/#/`.

**Top Screenshot:**

- Navigation Bar:** Includes links for Dashboard, Containers, Containers Network, Images, Networks, Volumes, and Info, along with a Refresh button.
- Header:** 'UI For Docker' with the tagline 'The UI for Docker container engine' and a 'Learn more.' button.
- Running Containers:** Lists one container named 'beautiful\_goldwasser' with a status of 'Up About a minute'.
- Status:** A green donut chart indicating the status of the containers.

**Bottom Screenshot:**

- Running Containers:** Same as the top screenshot, showing one running container.
- Status:** A green donut chart with a legend for 'Running' (green), 'Stopped' (red), and 'Ghost' (grey).
- Containers created:** A line graph showing the number of containers created over time, with a peak of 1 on 21/10/2022.
- Images created:** A line graph showing the number of images created over time, with a peak of 1 on 21/10/2022.

#### 4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal app image and also expose the same app to run in nodeport.

```
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:f8652afaf88c25f0d22354d547d891501067ea4026a7fa9ae819df9f300af6fc
639.15
-> => sha256:f8652afaf88c25f0d22354d547d891501067ea4026a7fa9ae819df9f300af6fc 1.86kB / 1.86kB
-> => sha256:d097e4907a8ec979df5ac31872359c2de510f82214c0448e926393b376d3b60d 2.22kB / 2.22kB
-> => sha256:54260638d07c5e3ad24c6e21fc889abbcb486a27634c0892006ff71f3f44b104 9.27kB / 9.27kB
-> => sha256:0e29546d541cddb309281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 54.92MB / 54.92MB
-> => sha256:9b829c73b52b92b07d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 5.15MB / 5.15MB
-> => sha256:c65b7ae361722f070ecae53f35823ed21baa850b105d95cd5a05ab53d748cdd56 10.87MB / 10.87MB
-> => sha256:6404e4811622b31c027ccac322ca4e3037f0805f589a93ae6f15c01aade718793 54.57MB / 54.57MB
-> => sha256:6f9f74896df993fe0172f504fab85e0b4e8a0481a0fef0112efc7eadd3c78f7 196.51MB / 196.51MB
-> => sha256:5e3b1213efc56598e78bd062983945c164de2a37705e06ae2dad823124dc743 6.29MB / 6.29MB
-> => extracting sha256:0e29546d541cddb309281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 27.3s
-> => sha256:9fddfdc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 14.21MB / 14.21MB
-> => extracting sha256:9b829c73b52b92b07d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 2.3s
-> => extracting sha256:c65b7ae361722f070ecae53f35823ed21baa850b105d95cd5a05ab53d748cdd56 4.0s
-> => sha256:484f02044bac0432ca522cb9f254b1c91fcae8080bfeef0be0b243b2f31bab7 2358 / 2358
-> => sha256:c4f42be2be53b900ebffcc040c1df13de538434ccc5f5d954a58848a6160a3af 2.21MB / 2.21MB
-> => extracting sha256:6404e4811622b31c027ccac322ca4e3037f0805f589a93ae6f15c01aade718793 27.3s
-> => extracting sha256:6f9f74896df993fe0172f504fab85e0b4e8a0481a0fef0112efc7eadd3c78f7 131.4s
-> => sha256:5e3b1213efc56598e78bd062983945c164de2a37705e06ae2dad823124dc743 8.2s
-> => extracting sha256:9fddfdc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 11.3s
-> => extracting sha256:484f02044bac0432ca522cb9f254b1c91fcae8080bfeef0be0b243b2f31bab7 0.0s
-> => extracting sha256:c4f42be2be53b900ebffcc040c1df13de538434ccc5f5d954a58848a6160a3af 2.2s
-> [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 sha256:1756719486df002fad5dae385c5221513f2f2d1b49a8d242b22a28af979f19
-> => 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

