

Assignment 3

Team ID	PNT2022TMID14132
Project Name	Inventory Management System for Retailers

Question:

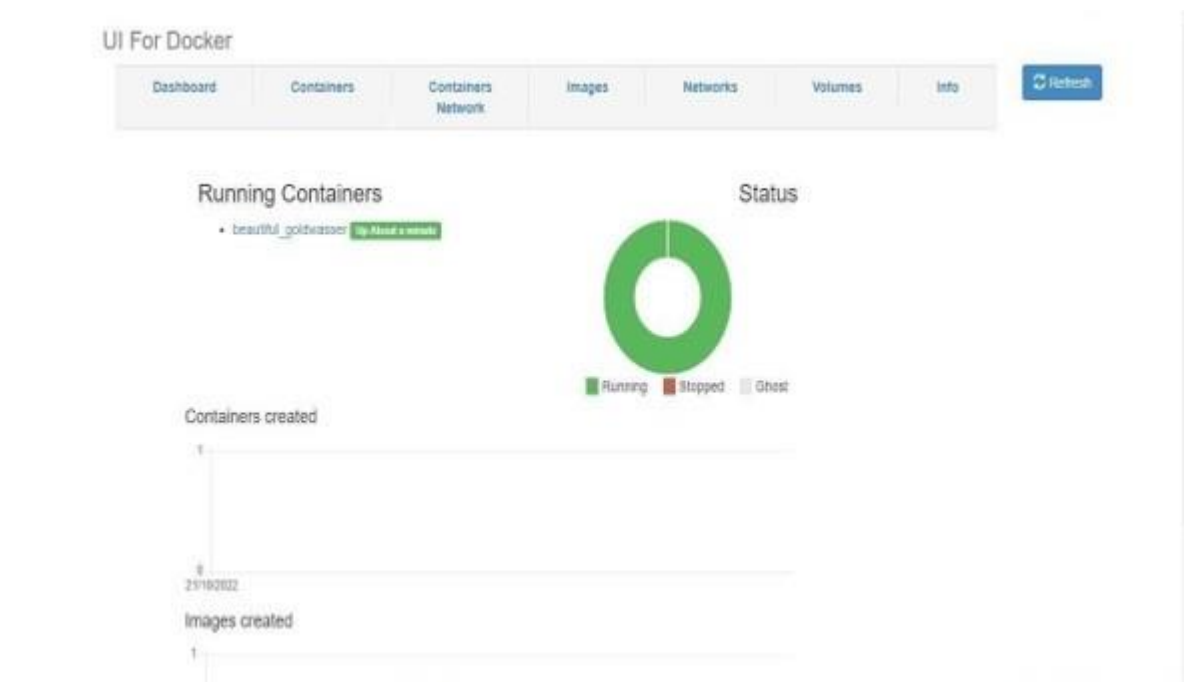
1. Pull an Image from docker hub and run it in docker playground.
2. Create a docker file for the jobportal application and deploy it in Docker desktop application.
3. Create a IBM container registry and deploy helloworld app or jobportalapp.
4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

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

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:43:09, a 'CLOSE SESSION' button, and a list of instances. The main area displays details for a container named 'cdkdf5m3_cdkdknu0qau0008f60pg' with IP 192.168.0.28. It shows memory usage (1.59%) and CPU usage (0.05%). Below this, there's a terminal window with the following output:

```
WARNING!!!!
# 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@192.168.0.28 ~
$ docker pull uidf/ui-for-docker
Using default tag: latest
latest: Pulling from uidf/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Downloaded newer image for uidf/ui-for-docker:latest
docker.io/uidf/ui-for-docker:latest
(node1) (local) root@192.168.0.28 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uidf/ui-for-docker
407ef6cfe3139637eac643bb0a88086430be1bb91f7a54af8e8f94b05beb4e52
(node1) (local) root@192.168.0.28 ~
$
```

```
PS C:\Windows\system32> docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
Digest: sha256:e18f0a777aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Image is up to date for hello-world:latest
docker.io/library/hello-world:latest
PS C:\Windows\system32>
```



2. Create a docker file for the jobportal 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:f0652afaf88c25f0d22354d547d802591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f0652afaf88c25f0d22354d547d802591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f0652afaf88c25f0d22354d547d802591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097a4907a8ec079df5ac31872359c2de510f82214c0448e926393b376d3b60d 2.22kB / 2.22kB
-> sha256:54280b38007c5e3ad24c6e21fc089abbcb486a27634c0892686ff71f3f44b104 0.27kB / 0.27kB
-> sha256:0e29540dc41cd909281d21e73e9d1db7806c1b95b74f32b009e0b779ae1e3 54.92MB / 54.92MB
-> sha256:98829c73b52b2b97d5c07e54fb0f3e621995a256c714b53a32ae67d19231fcd 5.15MB / 5.15MB
-> sha256:cb5b7ae361722f07eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 10.87MB / 10.87MB
-> sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 54.57MB / 54.57MB
-> sha256:6f9f74896df9a3fe0172f594faba85e0b4e8a0481a0fef0d112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd062983945c164de2a37205e06ae2dada823124dc743 6.29MB / 6.29MB
-> extracting sha256:0e29540dc41cd909281d21e73e9d1db7806c1b95b74f32b009e0b779ae1e3
-> sha256:9fd0fddfc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 14.21MB / 14.21MB
-> extracting sha256:98829c73b52b2b97d5c07e54fb0f3e621995a256c714b53a32ae67d19231fcd
-> extracting sha256:cb5b7ae361722f07eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 4.06
-> sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfeef0be0b243b2f31bab7 235B / 235B
-> sha256:c4f42be2be53b900ebfffc040c1df13de538434ccc5f5d954a56848a169a3a3f 2.21MB / 2.21MB
-> extracting sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793
-> extracting sha256:6f9f74896df9a3fe0172f594faba85e0b4e8a0481a0fef0d112efc7e4d3c78f7
-> extracting sha256:5e3b1213efc56598e78bd062983945c164de2a37205e06ae2dada823124dc743 8.2B
-> extracting sha256:9fd0fddfc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 11.3B
-> extracting sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfeef0be0b243b2f31bab7
-> sha256:c4f42be2be53b900ebfffc040c1df13de538434ccc5f5d954a56848a169a3a3f
-> [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 sha256:1756719486df002fad5dae305c5221513f2ff2d1b49a8d242622a28af0379f19
-> 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\Desktop\job-portal-main_
```

FROM helloworld:latest

WORKDIR ~/Desktop/

ADD . helloworld/

WORKDIR ~/Desktop/htmlfile

RUN pip install -r requirements

RUN chmod +x app.sh

CMD ["/bin/sh","app.sh"]

3. Create a IBM container registry and deploy helloworld app or jobportalapp.

```
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
```

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

