

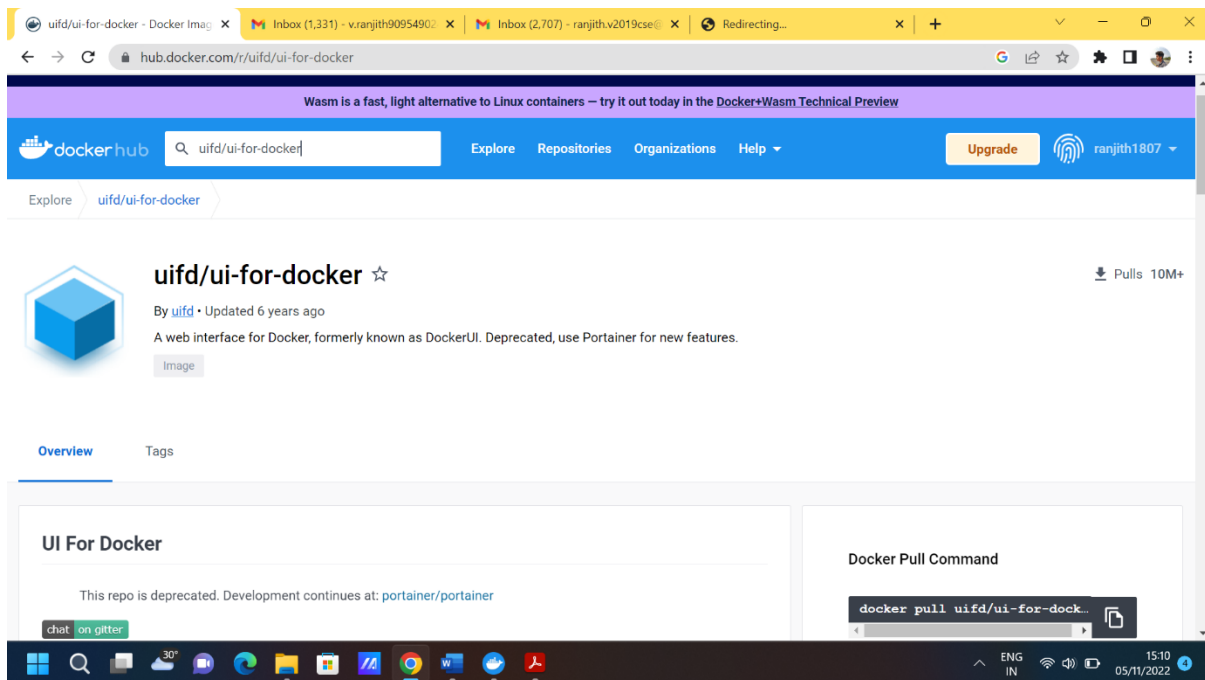
Assignment -4

Docker and Kubernetes

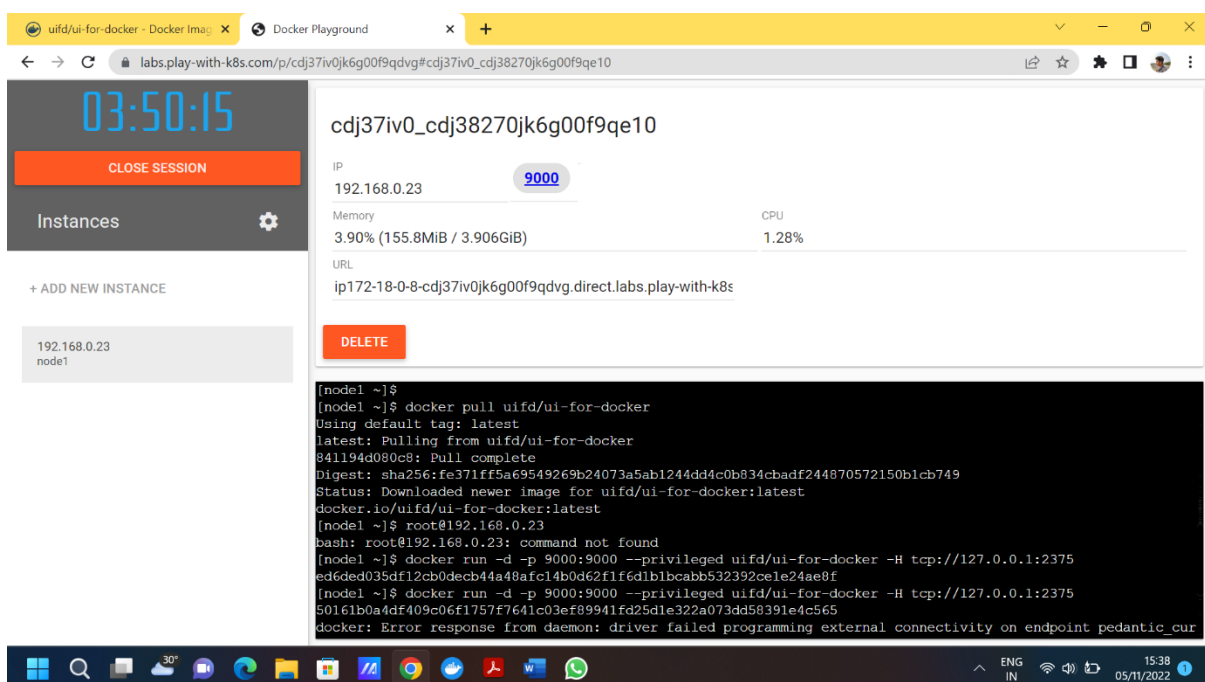
Assignment Date	21 October 2022
Student Name	Madhavan A
Student Roll Number	722819104071
Maximum Marks	2 Marks

Question-1:

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

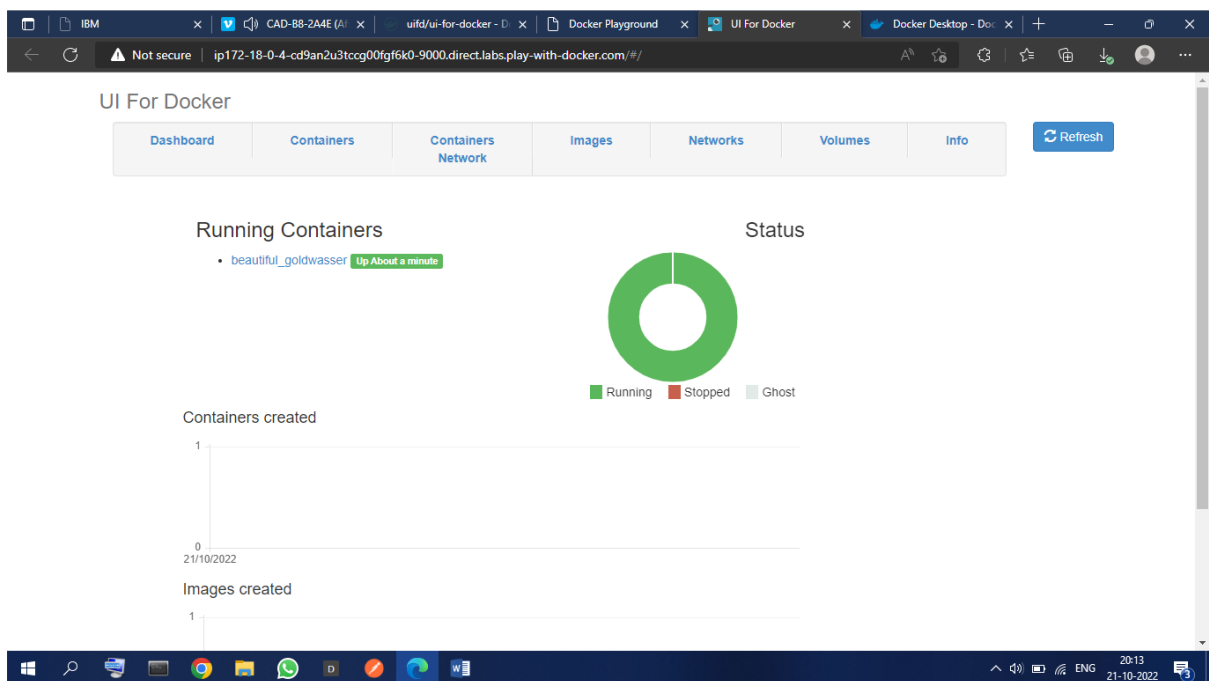
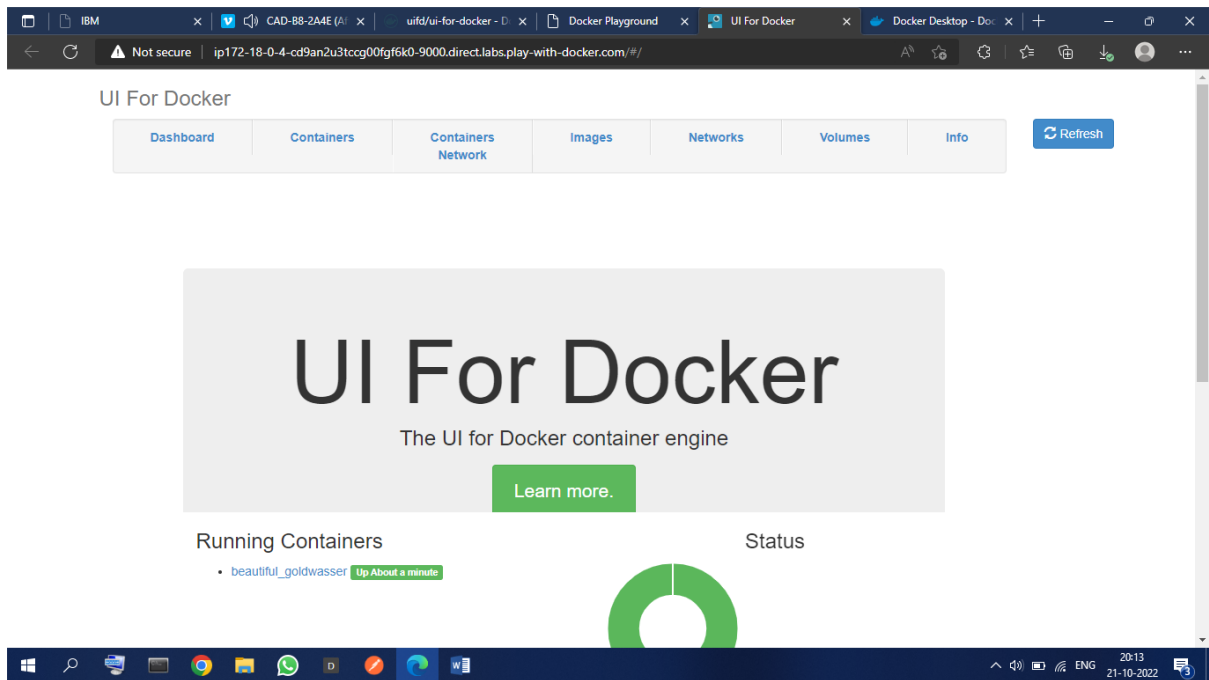


The screenshot shows the Docker Hub page for the repository `uifd/ui-for-docker`. The page header includes the Docker Hub logo, a search bar with the text `uifd/ui-for-docker`, and navigation links for Explore, Repositories, Organizations, and Help. The repository page shows a blue cube icon, the name `uifd/ui-for-docker`, and a star icon. Below the icon, it says "By uifd · Updated 6 years ago" and "A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features." The page also shows a "Pulls 10M+" badge. The "Overview" tab is selected, showing a description of the repository and a "chat on gitter" link. The "Tags" tab is also visible. A "UI For Docker" section mentions that the repo is deprecated and development continues at `portainer/portainer`. A "Docker Pull Command" section shows the command `docker pull uifd/ui-for-docker`.



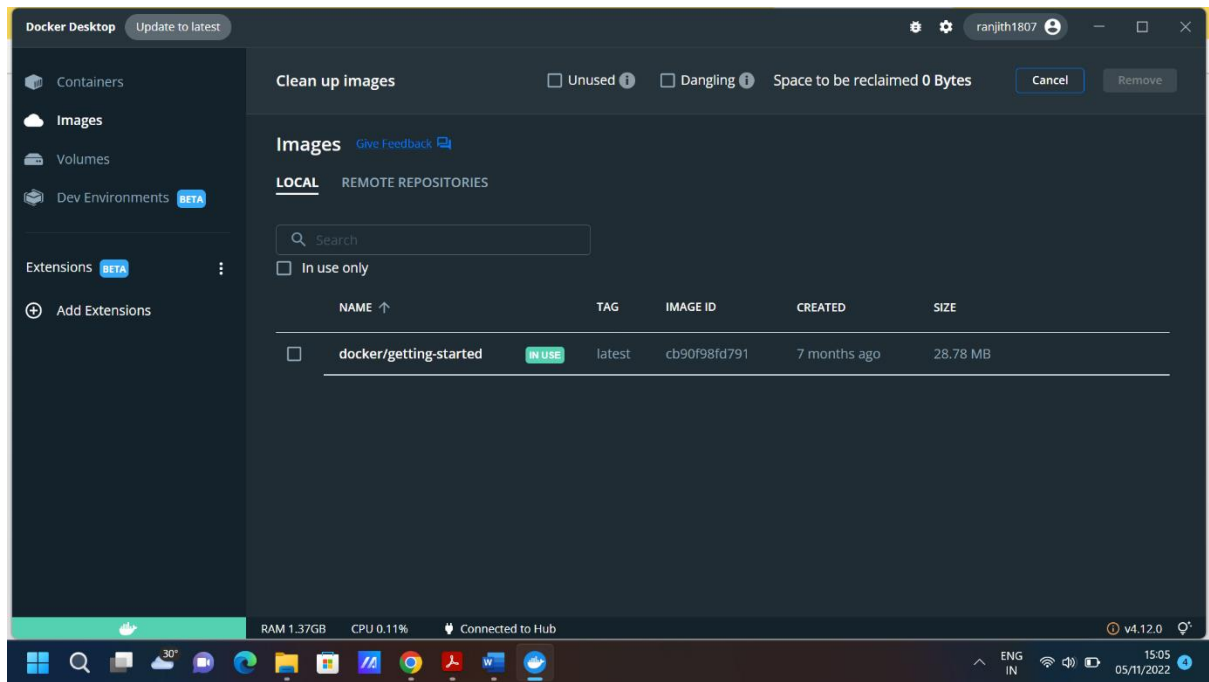
The screenshot shows the Docker Playground interface. The top bar displays the time `03:50:15` and a "CLOSE SESSION" button. Below this, there is a section for "Instances" with a "DELETE" button. The main area shows the details of a container named `cdj37iv0_cdj38270jk6g00f9qe10`. The container's IP is `192.168.0.23`, and its memory usage is `3.90% (155.8MiB / 3.906GiB)`. The CPU usage is `1.28%`. The URL is `ip172-18-0-8-cdj37iv0jk6g00f9qdvq.direct.labs.play-with-k8s`. The container's status is "Running". The terminal output shows the following commands and their results:

```
[node1 ~]$  
[node1 ~]$ 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 ~]$ root@192.168.0.23  
bash: root@192.168.0.23: command not found  
[node1 ~]$ docker run -d -p 9000:9000 --privileged uifd/ui-for-docker -H tcp://127.0.0.1:2375  
ed6ded035df12cb0decbb44a48afc14b0d62f1f6d1b1bcabb532392ce1e24ae8f  
[node1 ~]$ docker run -d -p 9000:9000 --privileged uifd/ui-for-docker -H tcp://127.0.0.1:2375  
50161b0a4df409c06f1757f7641c03ef89941fd25d1e322a073dd50391e4c565  
docker: Error response from daemon: driver failed programming external connectivity on endpoint pedantic_cur
```



Question 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: 328
-> [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:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f8652afaf88c25f0d22354d547d892591067aa4026a7fa9a6819df9f300af6fc 1.86kB / 1.86kB
-> sha256:d097a4907a8e070d15ac31972359c2de510f82214e044ae926393b376d3b60d 2.22kB / 2.22kB
-> sha256:5426e638d07c5e3ad24c6e21fc889abbcb486a27634c0892888ff71f3f44b104 9.27kB / 9.27kB
-> sha256:0e29546d541cdd389281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 54.92MB / 54.92MB
-> sha256:9b829c73b52b92b7d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 5.15MB / 5.15MB
-> sha256:cb5b7ae361722f070eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 10.87MB / 10.87MB
-> sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 54.57MB / 54.57MB
-> sha256:6f9f74896dfa93fe0172f594faba85e0b4e8a0481a0fef9d112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd02883945c164de2a37205e06a62dada823124dc743 6.29MB / 6.29MB
-> extracting sha256:0e29546d541cdd389281d21a73a9d1db78665c1b95b74f32b009e0b77a6e1e3 27.38
-> sha256:9fd4dc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 14.21MB / 14.21MB
-> extracting sha256:9b829c73b52b92b7d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 2.35
-> extracting sha256:cb5b7ae361722f070eca53f35823ed21baa85d61d5d95cd5a95ab53d740cdd56 4.05
-> sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfee0be0b243b2f31bab7 235B / 235B
-> sha256:c4f42be2be53b900ebffcc040c1df13de53843cccc5f5d954a56848a6169a3a3f 2.21MB / 2.21MB
-> extracting sha256:6494e4811622b31c027ccac322ca463937fd805f569a93e6f15c01aade718793 27.35
-> extracting sha256:6f9f74896dfa93fe0172f594faba85e0b4e8a0481a0fef9d112efc7e4d3c78f7 131.45
-> extracting sha256:5e3b1213efc56598e78bd02883945c164de2a37205e06a62dada823124dc743 8.25
-> extracting sha256:9fd4dc56334f2e6efad7e241bf5e7459c40ed105c5478676f41c1244bd96752 11.35
-> extracting sha256:404f02044bac0432ca522cbb9f254b1c91fcea6806bfee0be0b243b2f31bab7 0.05
-> extracting sha256:c4f42be2be53b900ebffcc040c1df13de53843cccc5f5d954a56848a6169a3a3f 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 372.25
-> [6/6] RUN python3 -m pip install lbm_db 9.75
-> exporting to image
-> exporting layers
-> writing image sha256:1756719486df002fad5dae305c5221513f2ff2d1b49a8d242b22a28af0379f19 0.25
-> 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>
```

Question 3:

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

Question 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