

Assignment 4

Assignment date	18 October 2022
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Maximum Marks	2 Marks

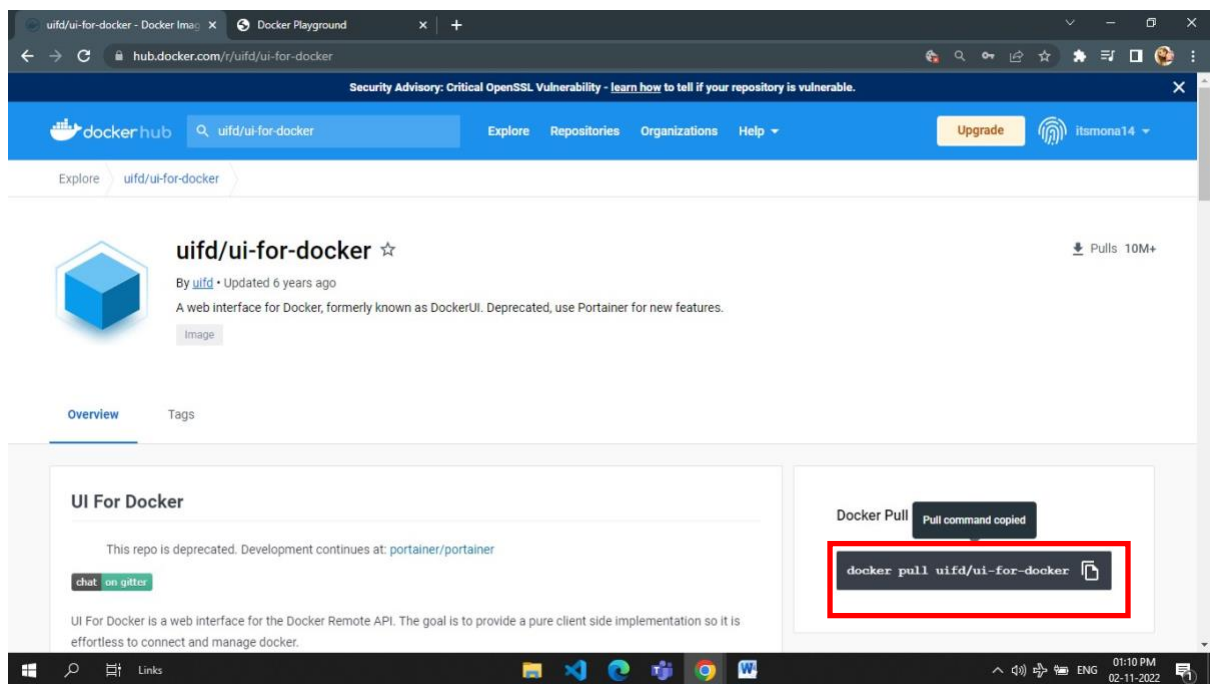
Question 1:

Pull an image from docker hub and run it on docker playground.

Solution 1:

```
docker pull uifd/ui-for-docker
```

```
docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
```



Docker playground:

The screenshot shows the Docker Playground interface. On the left, there's a sidebar with a clock showing 03:57:05, a 'CLOSE SESSION' button, and a list of instances including '192.168.0.13 node1'. The main area displays details for the container 'cdi0ji60_cdi0jpe0qau0008f9u8g', including its IP (192.168.0.13), memory usage (1.59%), CPU usage (0.45%), and an SSH command. Below this is a terminal window showing the execution of 'docker pull uifd/ui-for-docker' and 'docker run' commands.

```
# 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.
#####
[models] (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
[models] (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
c2557355d58010b2607d19372fd954a94b3f2c922d1c5377d8458ff941cb2cab
[models] (local) root@192.168.0.13 ~
$
```

Docker UI:

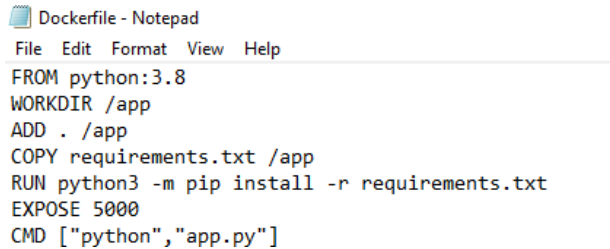
The screenshot shows the Docker UI interface. The top navigation bar includes 'Dashboard', 'Containers', 'Containers Network', 'Images', 'Networks', 'Volumes', and 'Info'. The main content area is titled 'Running Containers' and shows a list of containers, including 'serene_keller' which is 'Up 17 seconds'. To the right, there's a 'Status' section with a donut chart showing the status of containers: Running (green), Stopped (red), and Ghost (grey). Below this, there are two line graphs: 'Containers created' and 'Images created', both showing a count of 1 over time.

Question 2:

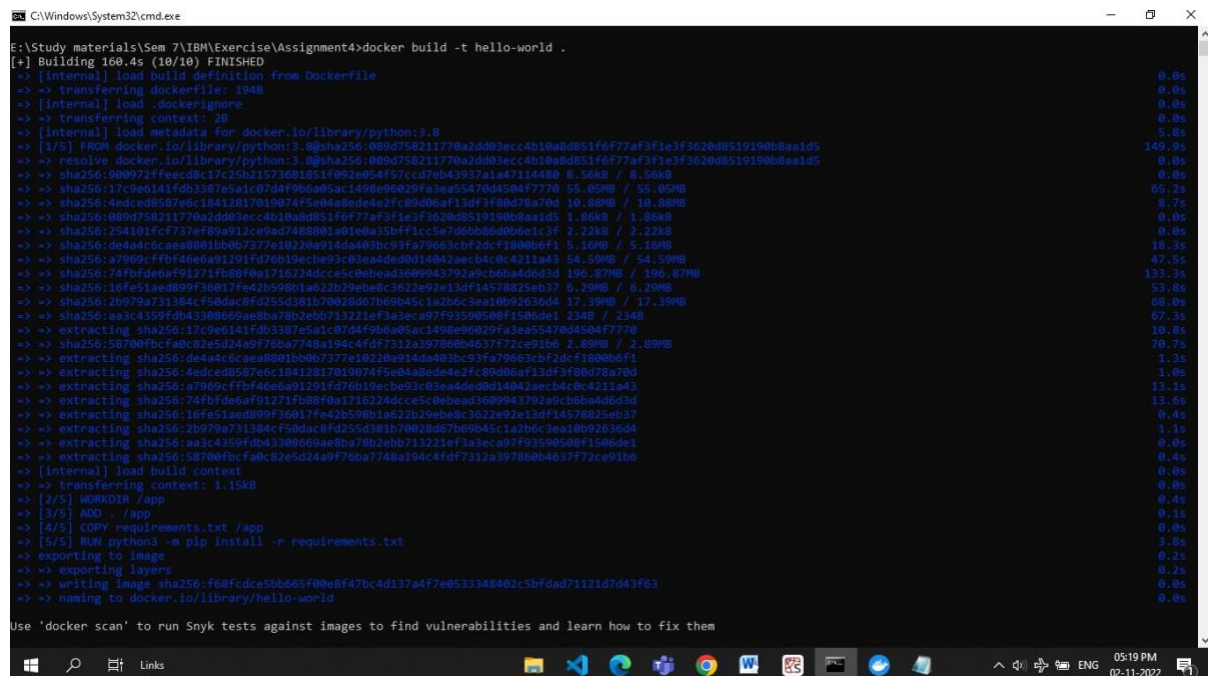
Create a docker file for the job portal app or hello world app and deploy it in docker desktop app.

Solution 2:

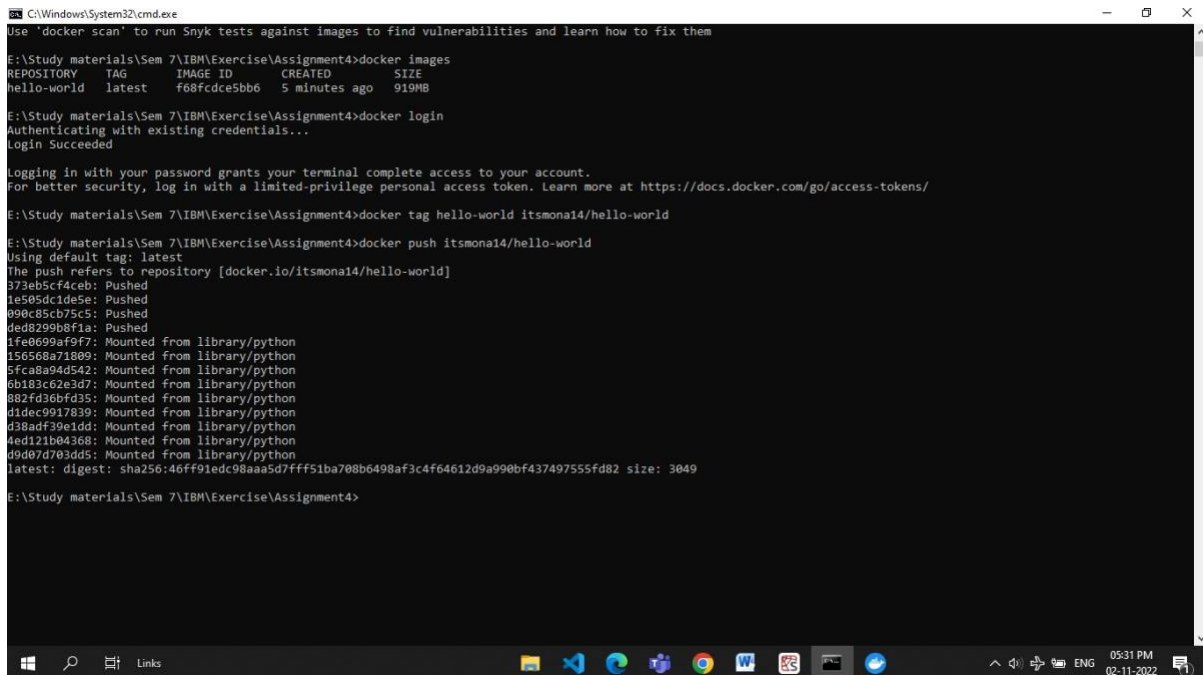
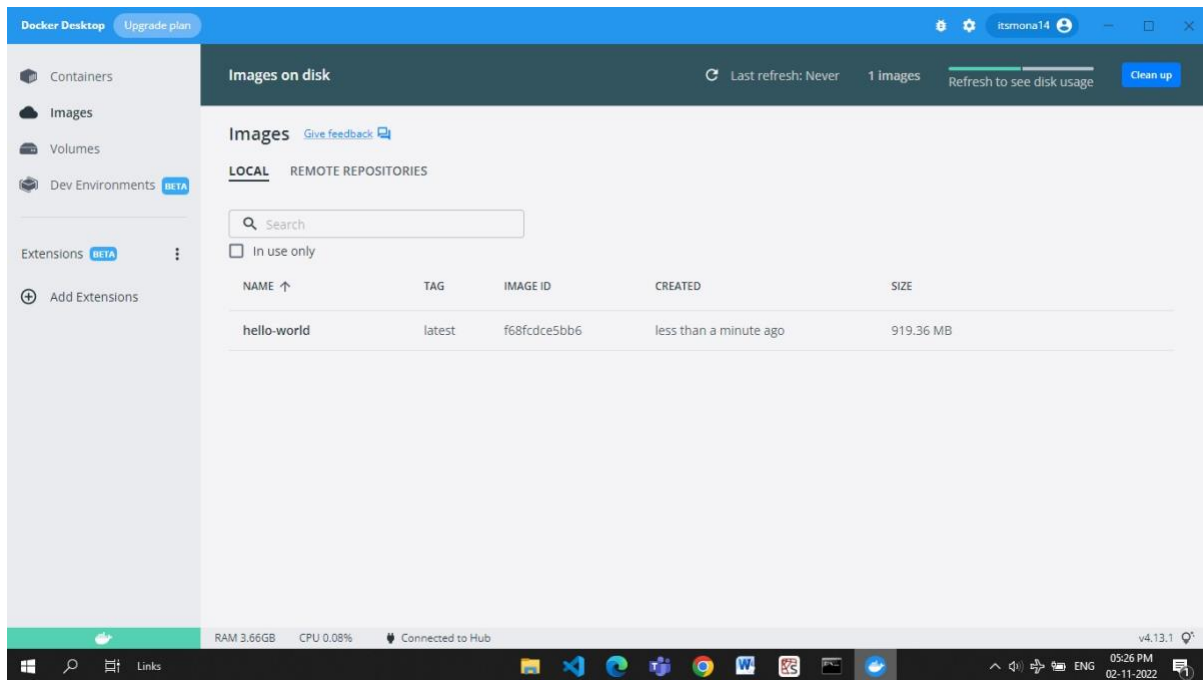
DockerFile



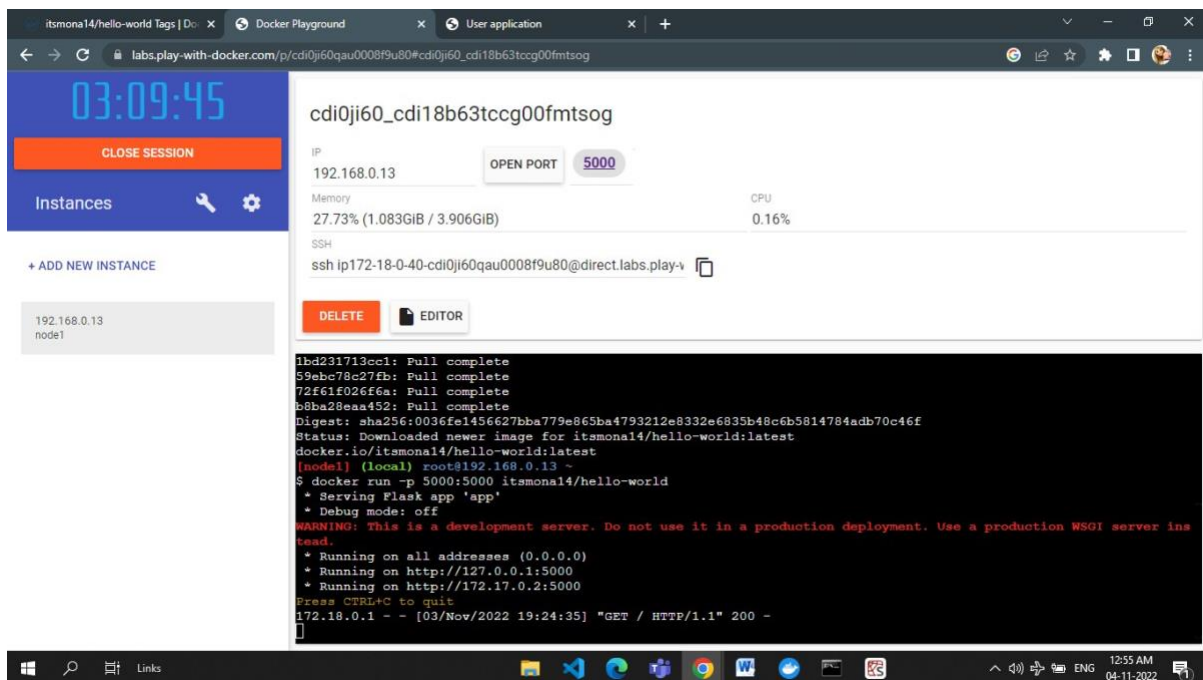
Bulid Docker image



Deploy it on Docker hub



Tested it using Docker playground

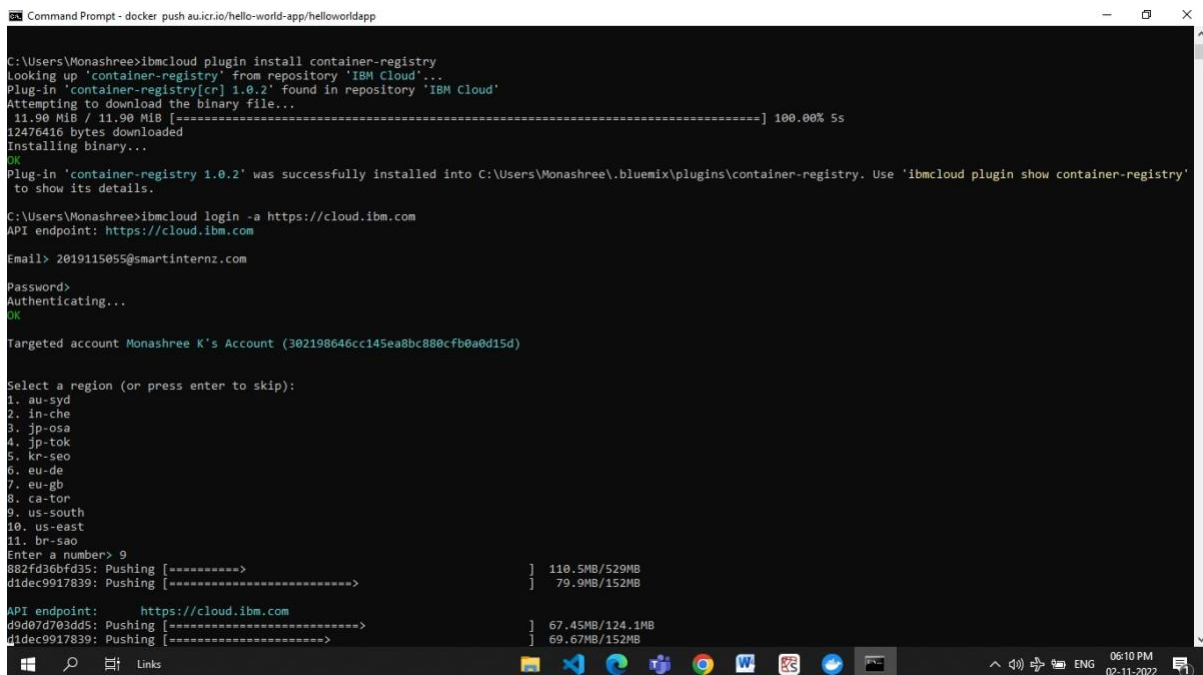


Question 3:

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

Solution 3:

My image link: au.icr.io/hello-world-app/hello-world



```
C:\Windows\System32\cmd.exe - docker run -p 5000:5000 au.icr.io/hello-world-app/hello-world

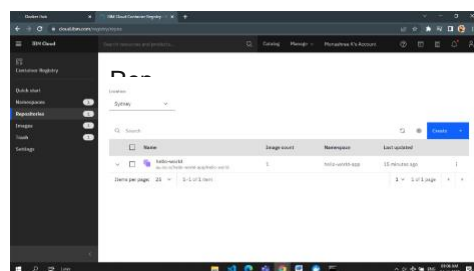
E:\Study materials\Sem 7\IBM\Exercise\Assignment4>docker tag hello-world au.icr.io/hello-world-app/hello-world
E:\Study materials\Sem 7\IBM\Exercise\Assignment4>docker push au.icr.io/hello-world-app/hello-world
Using default tag: latest
The push refers to repository [au.icr.io/hello-world-app/hello-world]
492bcd5cc0e0: Pushed
006e0938fc5e: Pushed
4bb20ce8724f: Pushed
402dea3c8533: Pushed
f5d161bba139: Pushed
1559e0d95ce6: Pushed
d9e08da15d0e: Pushed
6b183c62e3d7: Mounted from hello-world-app/hello-world-app
882fd36bf3d5: Mounted from hello-world-app/hello-world-app
d1dec9917839: Mounted from hello-world-app/hello-world-app
d38adf39e1dd: Mounted from hello-world-app/hello-world-app
4ed121b04368: Mounted from hello-world-app/hello-world-app
d9d07d703dd5: Mounted from hello-world-app/hello-world-app
latest: digest: sha256:0030fe1456627bba779e805ba4793212e8332e6835b48c6b5814784adb70c46f size: 3049

E:\Study materials\Sem 7\IBM\Exercise\Assignment4>ibmcloud cr image-list
Listing images...

Repository          Tag    Digest          Namespace      Created      Size    Security status
au.icr.io/hello-world-app/hello-world  latest  0030fe145662    hello-world-app  12 minutes ago  356 MB  -

OK

E:\Study materials\Sem 7\IBM\Exercise\Assignment4>docker run -p 5000:5000 au.icr.io/hello-world-app/hello-world
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://172.17.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
172.17.0.1 - - [03/Nov/2022 19:35:58] "GET / HTTP/1.1" 200 -
```



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.

Solution 4:

<https://raw.githubusercontent.com/itsmona14/IBM-Assignment-cloud/main/deployment.yaml>

```
apiVersion: v1
kind: Service
metadata:
  name: hello-world-deployment
spec:
  ports:
    - port: 5000
      targetPort: 5000
  selector:
    app: hello-world
---
apiVersion: apps/v1
kind: Deployment
metadata:
  name: hello-world-deployment
spec:
  replicas: 1
  selector:
    matchLabels:
      app: hello-world
  template:
    metadata:
      labels:
        app: hello-world
    spec:
      containers:
        - name: hello-world
          image: au.icr.io/hello-world-app/hello-world
          imagePullPolicy: Always
          ports:
            - containerPort: 5000
```

mycluster-free - IBM Cloud

cloud.ibm.com/kubernetes/clusters/cdi1j33f0a6mchav5kig/overview

IBM Cloud

Search resources and products...

Catalog

Manage

Monashree K's Account

Help

Kubernetes dashboard

Actions...

Clusters / mycluster-free

Normal Expires in 29 days Add tags

Overview

Worker nodes

Worker pools

Expires in 29 days:

Be sure to back up your data, your cluster will be deleted in 29 days. To access the full capabilities of the service, try out a standard cluster.

Node status

1 of 1

da s 15

Normal

Unknown

Details

Details g

Docs

Details

cd1j33f0a6mchav5kig

1.24.7 15 2

Classic

Milan 01

04/1N/2022, 0F:12

Default

Image security enforcement

Enable



kubernetes

default

Search

+ * 0

Workloads > Deployments

Workloads

Daemon Sets

Replication Controllers

Service

Ingresses

Ingress Classes

Services

CPU Usage

Memory usage

CPU Usage

Memory usage

Deployments

Name

Images

Labels

Pods

Created

hello-world-deployment

Show all

1 / 1

34 minutes ago

