Assignment - 4
Docker and Kubernetes

Assignment Date	November 15
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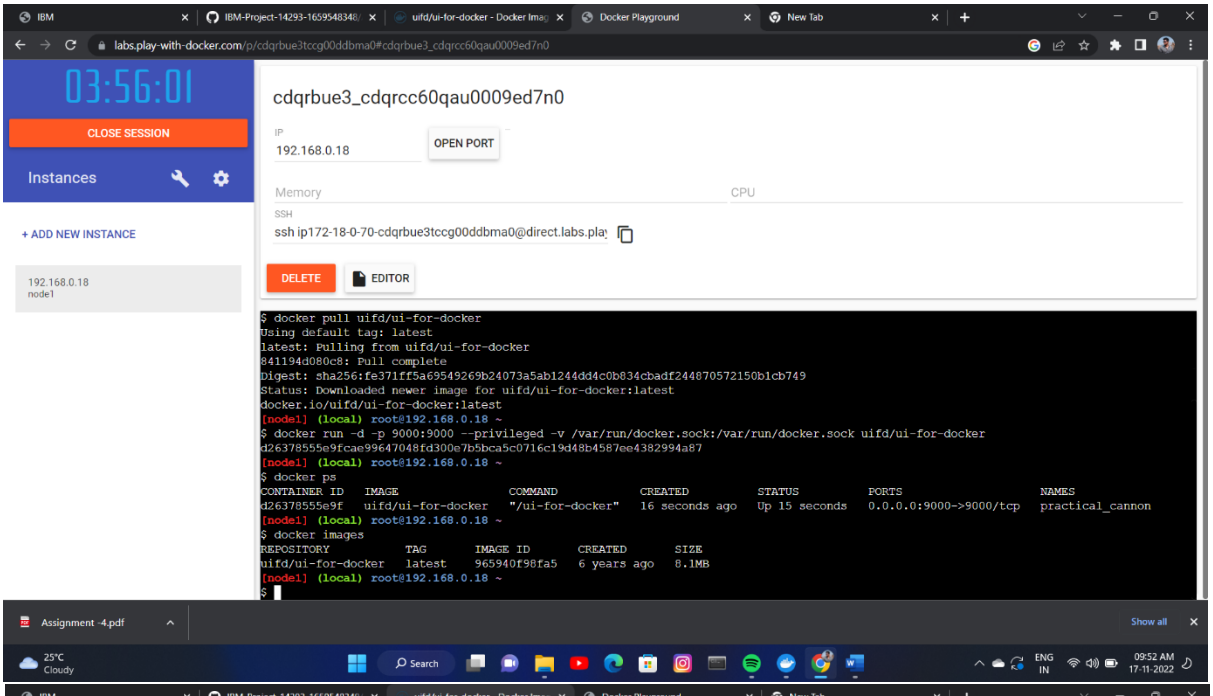
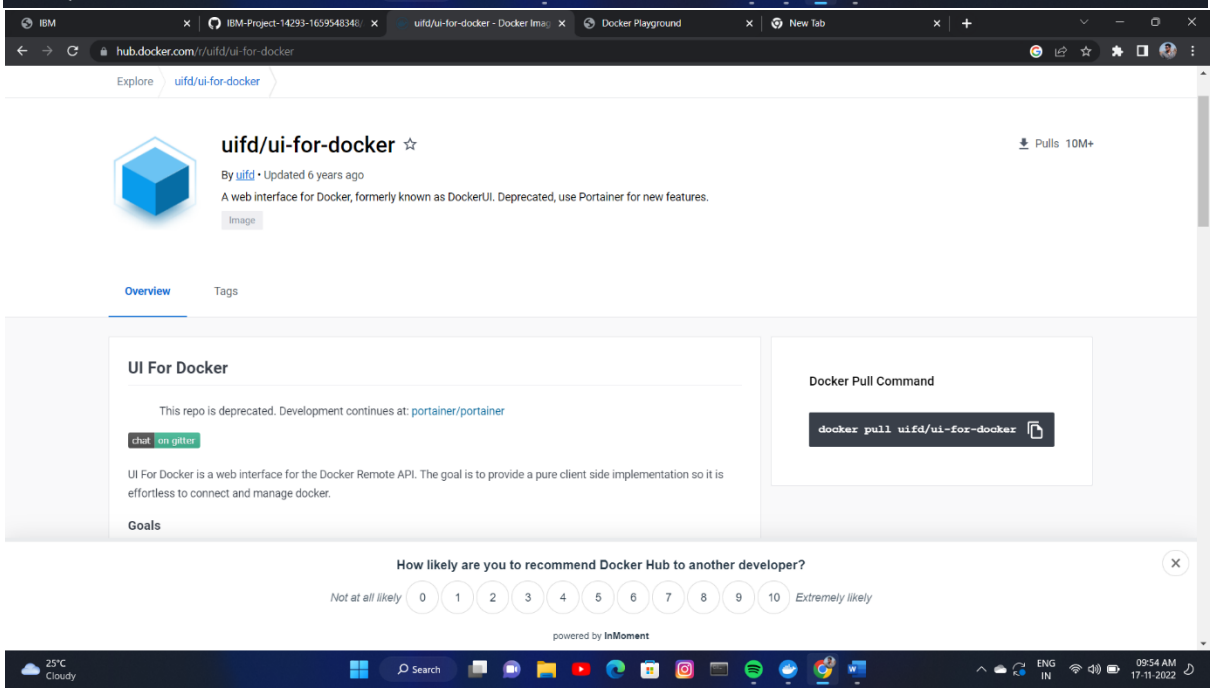
Student Roll Number	820419106030
Maximum Marks	2 Marks

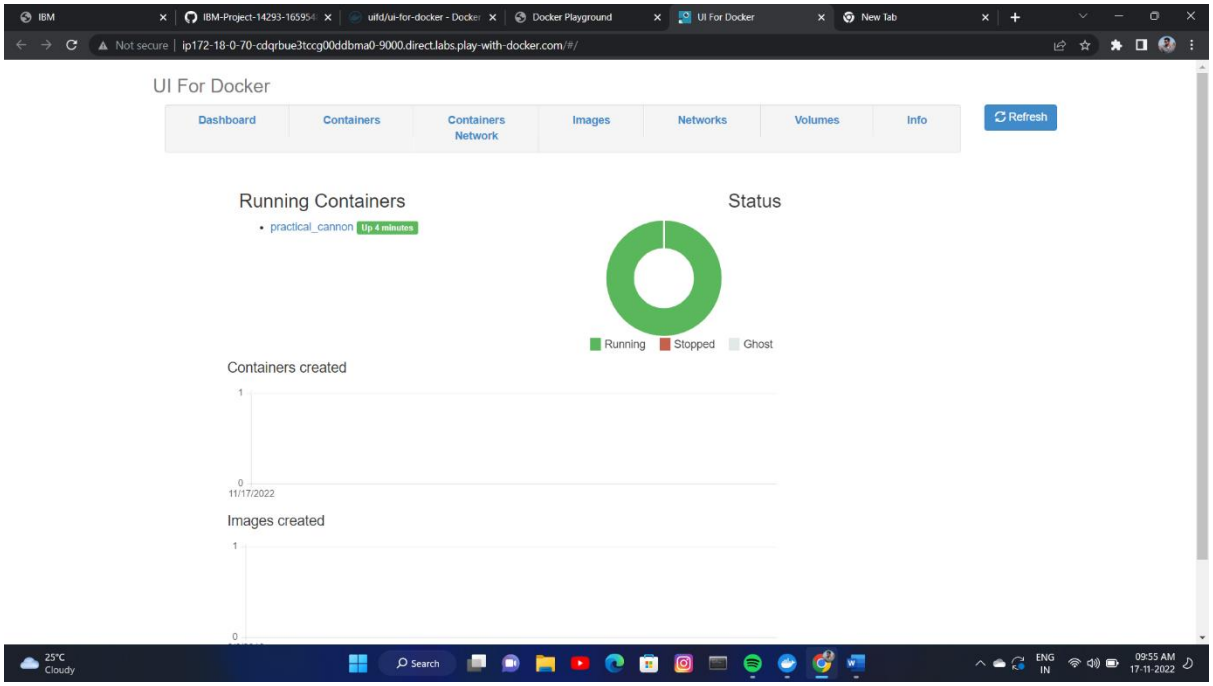
Question-1:

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

Solution:

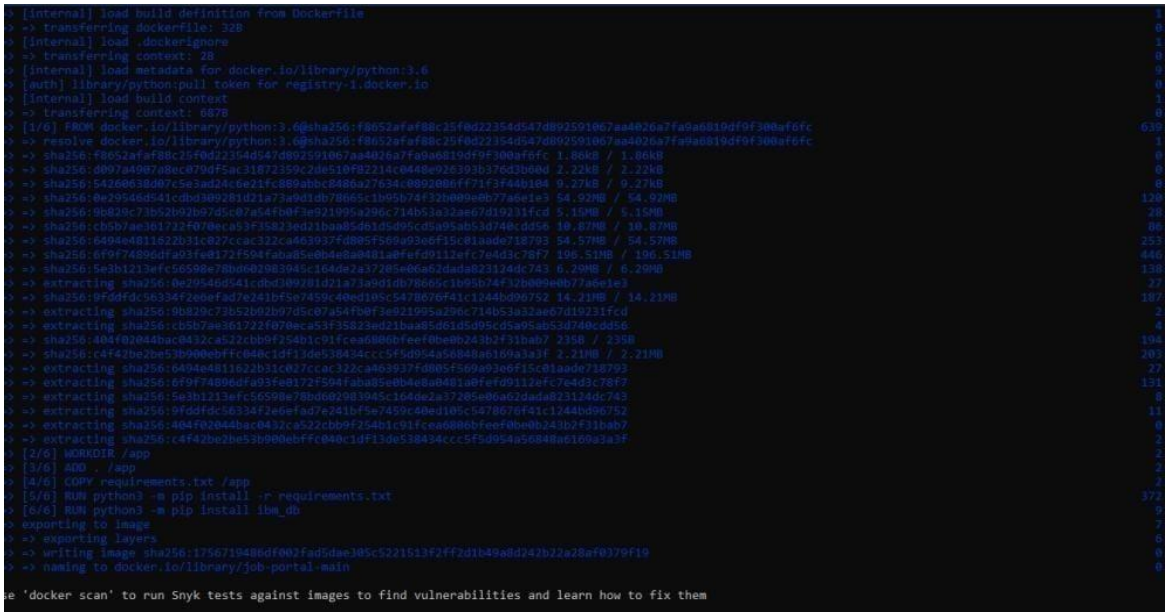

labs.play-with-docker.com/p/cdqrbue3tccg00ddbma0#cdqrbue3_cdqrcc60qau0009ed7n0
03:56:01
CLOSE SESSION
Instances
+ ADD NEW INSTANCE
192.168.0.18
node1
cdqrbue3_cdqrcc60qau0009ed7n0
IP
192.168.0.18
OPEN PORT
Memory
CPU
SSH
ssh ip172-18-0-70-cdqrbue3tccg00ddbma0@direct.labs.pla
DELETE
EDITOR
$ docker pull 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] (local) root@192.168.0.18 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
d26378555e9fcae99647048fd300e7b5bca5c0716c19d48b4587ee4382994a87
[node1] (local) root@192.168.0.18 ~
$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
d26378555e9f uifd/ui-for-docker "/ui-for-docker" 16 seconds ago Up 15 seconds 0.0.0.0:9000->9000/tcp practical_cannon
[node1] (local) root@192.168.0.18 ~
$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
uifd/ui-for-docker latest 965940f98fa5 6 years ago 8.1MB
[node1] (local) root@192.168.0.18 ~
$
Assignment -4.pdf
Show all
25°C Cloudy
Search
ENG IN
09:52 AM 17-11-2022

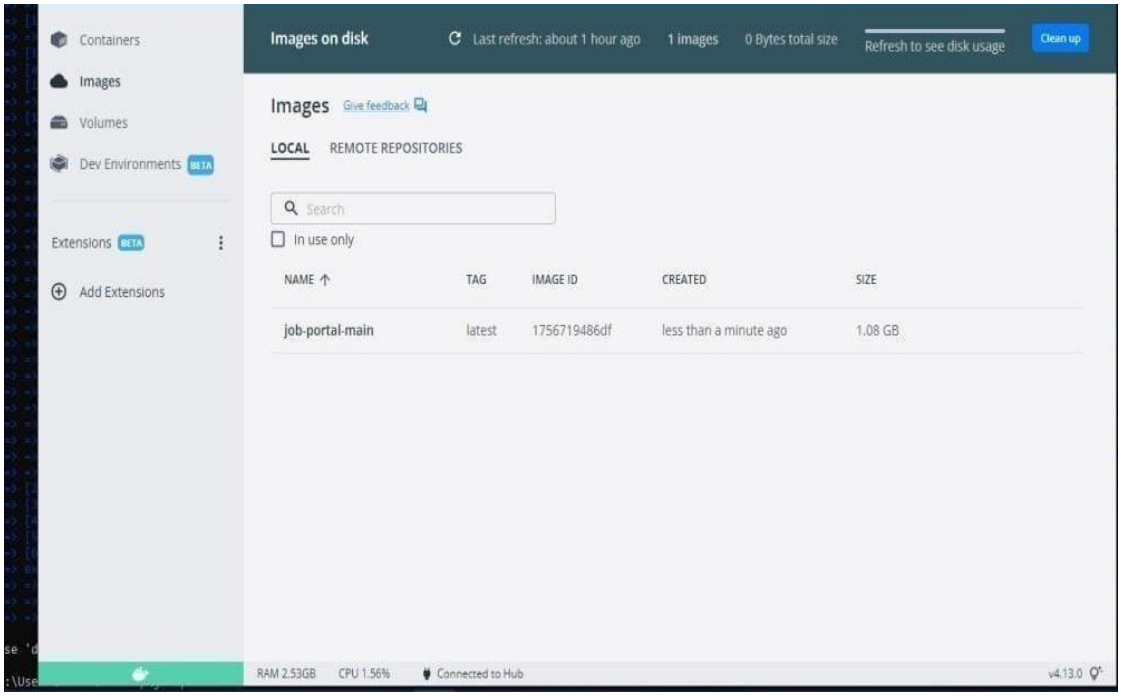

hub.docker.com/r/uifd/ui-for-docker
Explore
uifd/ui-for-docker
uifd/ui-for-docker
By uifd • Updated 6 years ago
A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features.
Image
Pulls 10M+
Overview
Tags
UI For Docker
This repo is deprecated. Development continues at: portainer/portainer
chat on gitter
UI For Docker is a web interface for the Docker Remote API. The goal is to provide a pure client side implementation so it is effortless to connect and manage docker.
Goals
Docker Pull Command
docker pull uifd/ui-for-docker
How likely are you to recommend Docker Hub to another developer?
Not at all likely 0 1 2 3 4 5 6 7 8 9 10 Extremely likely
powered by InMoment
25°C Cloudy
Search
ENG IN
09:54 AM 17-11-2022



Question-2:

2. Create a docker file for the jobportal application and deploy it in Docker desktop application.



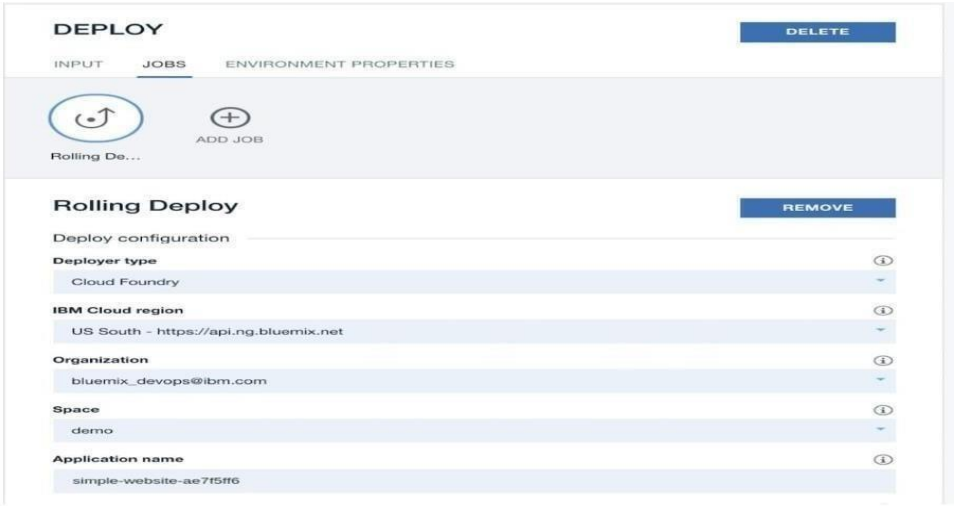


QUESTION-3:

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

Solution:

```
<html>
  <body>
    Hello, IBM Cloud World!
  </body>
</html>---
applications:
- buildpack: https://github.com/cloudfoundry/staticfile-buildpack.git host: simple-website-${random} name: simple-website-${random} memory: 64M
  stack: cflinuxfs2
```




```
{
  "ServiceId": "com.ibm.cloudoe.orion.client.deploy",
  "Params": {
    "Target": {
      "Url": "https://api.ng.bluemix.net",
      "Org": "bluemix_devops@ibm.com",
      "Space": "demo"
    },
    "Name": "simple-website-ae7f5ff6",
    "Instrumentation": {}
  },
  "Path": "manifest.yml",
  "Type": "Cloud Foundry"
}
```

QUESTION-4:

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:

ibmcloud target -g <resource_group_name>ibmcloud cr nishanthc-add <your_nishanthc>ibmcloudresource service-instance-create example-postgresql databases-for-postgresql standard us- southibmcloud ks cluster-service-bind mycluster default example-postgresqlgit clone -b node git@github.com:IBM-Cloud/clouddatabases-helloworld-kubernetes-examples.gitspec:

replicas: 3name: cloudpostgres-nodejs-app image:

"registry.<region>.bluemix.net/<namespace>/icdpg" # Edit me

imagePullPolicy: Alwaysibmcloud cr regionYou are targeting region 'us-south', the registry is 'registry.ng.bluemix.net'.ibmcloud cr build -t registry.ng.bluemix.net/<namespace>/icdpg .ibmcloud cr images

env:

```
            - name: BINDING
              valueFrom:
                secretKeyRef: name: <postgres-secret-
                  name> # Edit me key: binding
apiVersion: v1
kind: Service
metadata: name:
cloudpostgres-service
labels: run: clouddb-demo
spec:
  type: NodePort
  selector: run:
    clouddb-demo
  ports:
  - protocol: TCP
    port:       8080
    nodePort:
    30081
    kubectl  apply
    -f      clouddb-
    deployment.y
    ml
    deployment.a
    pps/icdpostgr
    es-app
    created
    service/cloud
    postgres-
    service
    created
kubectl get pods -o wideibmcloud ks workers <your_cluster_name>
```

Hello World!

Thanks for creating an IBM Cloud Databases for PostgreSQL database.

Add a word to the database

The word hello is defined as a greeting Add

Database output

The word **bye** is defined as **a goodbye**
The word **bye** is defined as **a farewell**
The word **hello** is defined as **a greeting**
The word **hello** is defined as **a greeting**
The word **hello bob** is defined as **a greeting**
The word **hello bob** is defined as **a greeting**