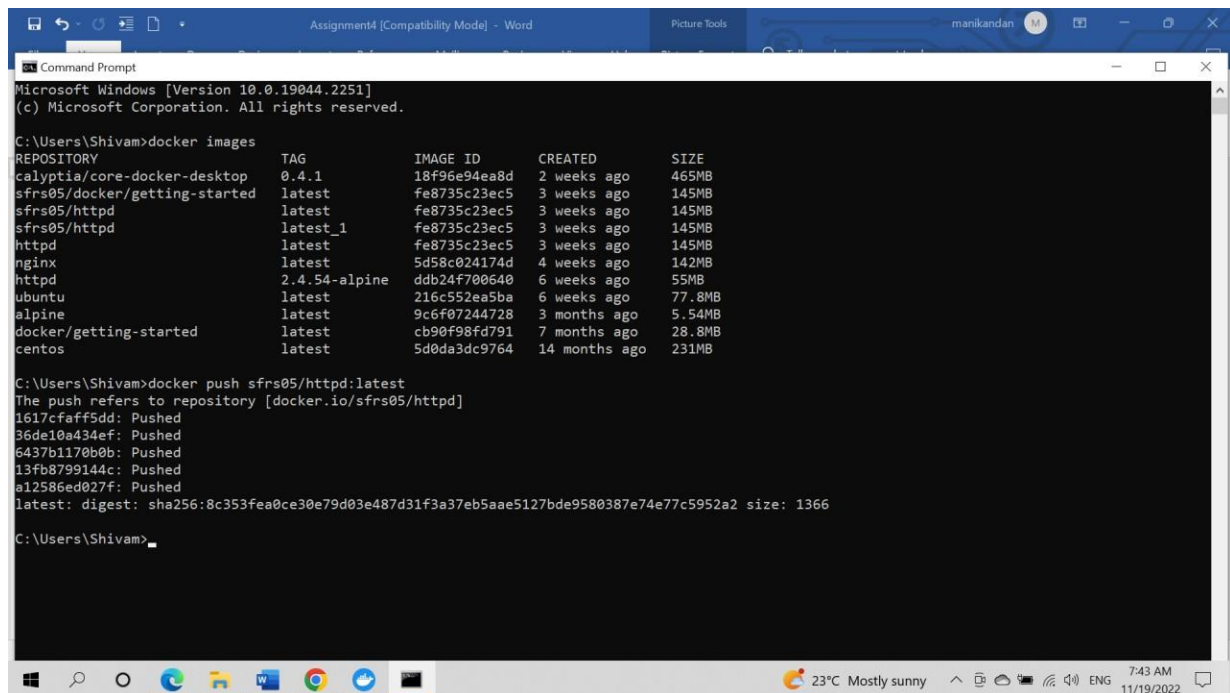


## Assignment -4

Assignment Date	14 November 2022
Student Name	ASTALAKSHMI S
Student Roll Number	422419205005
Maximum Marks	2 Marks

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

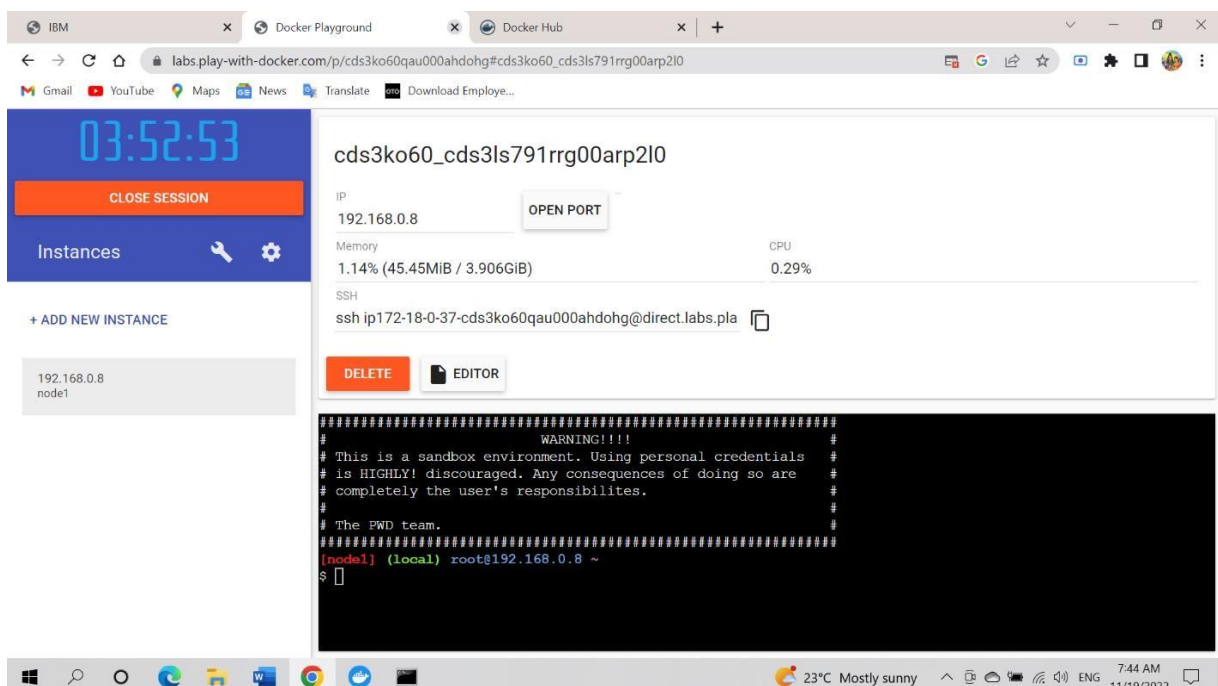


```
Microsoft Windows [Version 10.0.19044.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shivam>docker images
REPOSITORY              TAG          IMAGE ID       CREATED        SIZE
calyptia/core-docker-desktop 0.4.1       18f96e94ea8d   2 weeks ago   465MB
sfrs05/docker/getting-started latest       fe8735c23ec5   3 weeks ago   145MB
sfrs05/httpd             latest       fe8735c23ec5   3 weeks ago   145MB
sfrs05/httpd             latest_1     fe8735c23ec5   3 weeks ago   145MB
httpd                    latest       fe8735c23ec5   3 weeks ago   145MB
nginx                    latest       5d58c024174d   4 weeks ago   142MB
httpd                    2.4.54-alpine ddb24f700640   6 weeks ago   55MB
ubuntu                   latest       216c552ea5ba   6 weeks ago   77.8MB
alpine                   latest       9c6f07244728   3 months ago  5.54MB
docker/getting-started    latest       cb90f98fd791   7 months ago  28.8MB
centos                    latest       5d0da3dc9764   14 months ago 231MB

C:\Users\Shivam>docker push sfrs05/httpd:latest
The push refers to repository [docker.io/sfrs05/httpd]
1617cfaff5dd: Pushed
36de10a434ef: Pushed
6437b1170b0b: Pushed
13fb8799144c: Pushed
e12586ed027f: Pushed
latest: digest: sha256:8c353fea0ce30e79d03e487d31f3a37eb5aae5127bde9580387e74e77c5952a2 size: 1366

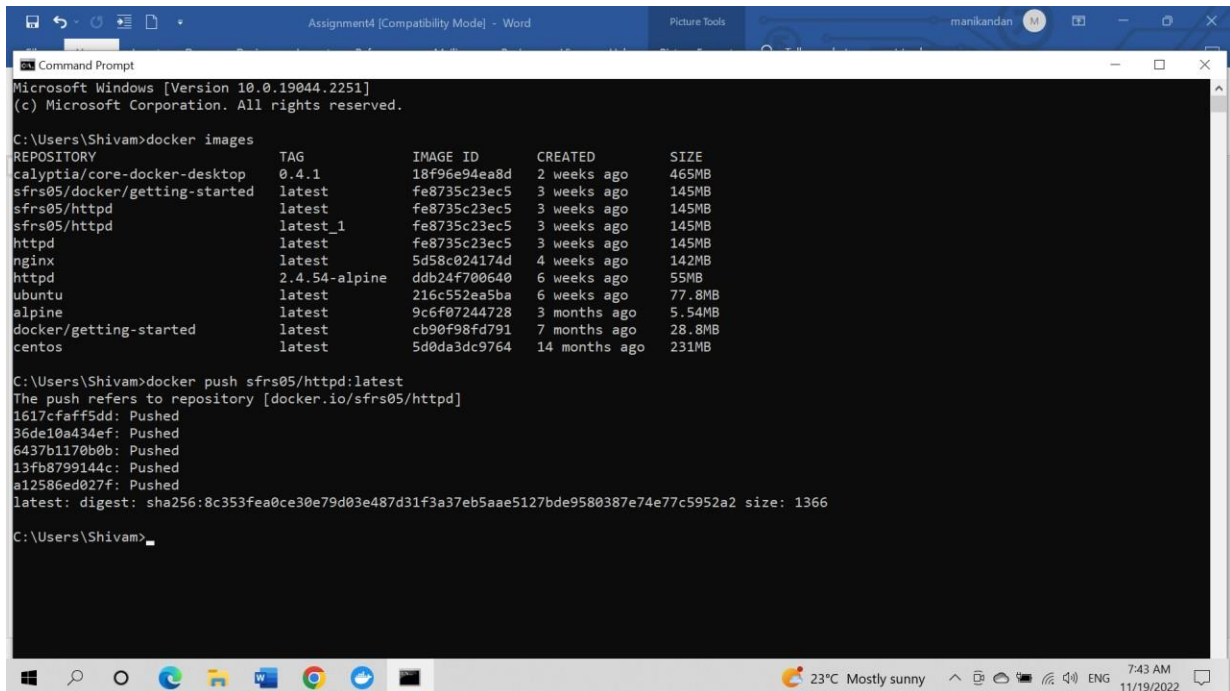
C:\Users\Shivam>
```



The screenshot shows the Docker Playground web interface. On the left, there's a sidebar with a timer at 03:52:53, a 'CLOSE SESSION' button, and an 'Instances' section showing one instance named 'node1' with IP 192.168.0.8. The main area displays details for the 'cds3ko\_cds3ls791rrg00arp2l0' instance, including its IP (192.168.0.8), memory usage (1.14%), CPU usage (0.29%), and an SSH command. Below this is a terminal window showing a warning message and a shell prompt.

```
#####
# WARNING!!!!
# This is a sandbox environment. Using personal credentials
# is HIGHLY! discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The PWD team.
#####
[node1] (local) root@192.168.0.8 ~
$
```

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



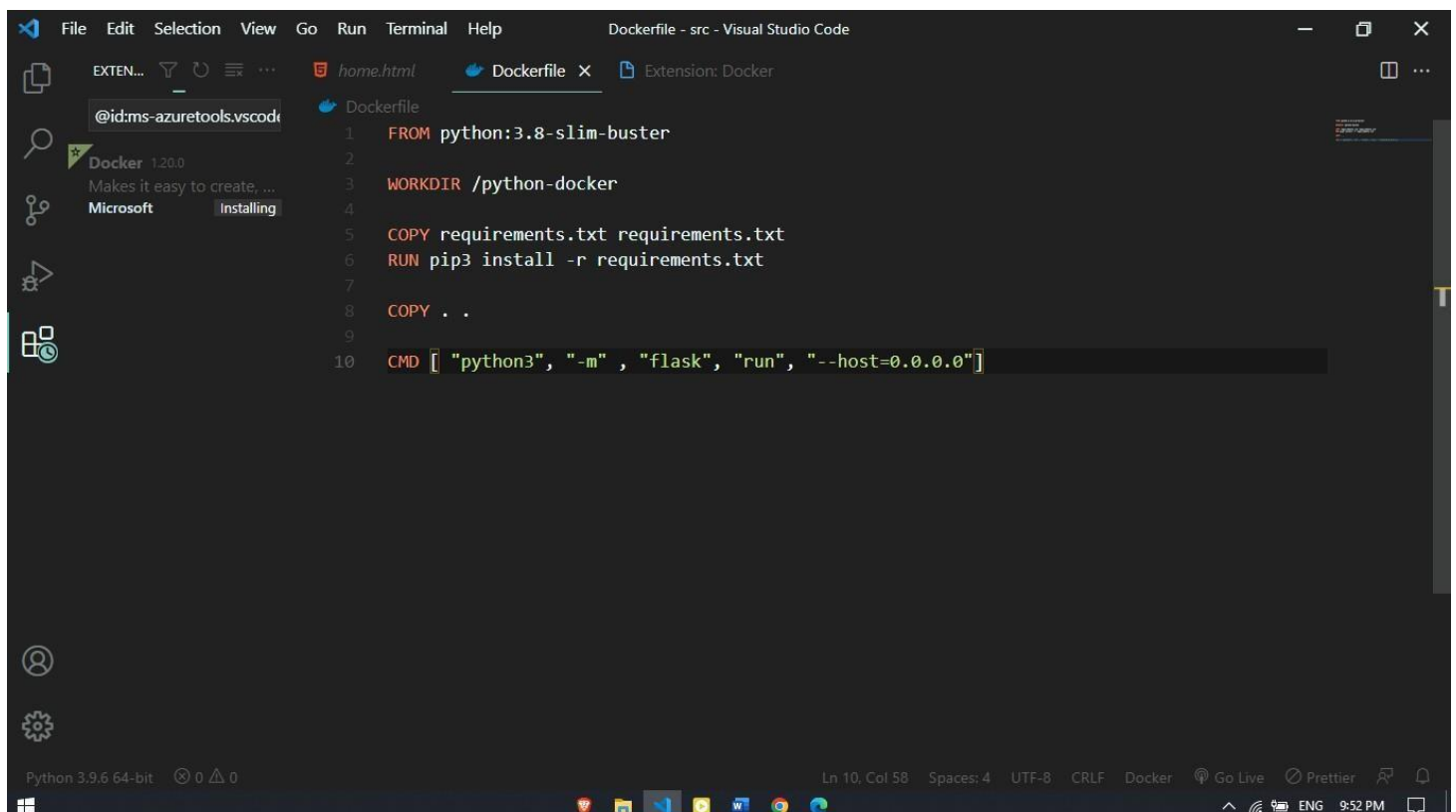
```
Microsoft Windows [Version 10.0.19044.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shivam>docker images
REPOSITORY              TAG         IMAGE ID      CREATED       SIZE
calyptia/core-docker-desktop 0.4.1      18f96e94ea8d  2 weeks ago  465MB
sfrs05/docker/getting-started latest     fe8735c23ec5  3 weeks ago  145MB
sfrs05/httpd             latest     fe8735c23ec5  3 weeks ago  145MB
sfrs05/httpd             latest_1   fe8735c23ec5  3 weeks ago  145MB
httpd                    latest     fe8735c23ec5  3 weeks ago  145MB
nginx                    latest     5d58c024174d  4 weeks ago  142MB
httpd                    2.4.54-alpine ddb24f700640  6 weeks ago  55MB
ubuntu                   latest     216c552ea5ba  6 weeks ago  77.8MB
alpine                   latest     9c6f07244728  3 months ago  5.54MB
docker/getting-started    latest     cb90f98fd791  7 months ago  28.8MB
centos                   latest     5d0da3dc9764  14 months ago  231MB

C:\Users\Shivam>docker push sfrs05/httpd:latest
The push refers to repository [docker.io/sfrs05/httpd]
1617cfa5f5dd: Pushed
36de10a434ef: Pushed
6437b1170b0b: Pushed
13fb8799144c: Pushed
a12586ed027f: Pushed
latest: digest: sha256:8c353fea0ce30e79d03e487d31f3a37eb5aae5127bde9580387e74e77c5952a2 size: 1366

C:\Users\Shivam>
```

## Dockerfile



```
File Edit Selection View Go Run Terminal Help Dockerfile - src - Visual Studio Code
EXTEN... home.html Dockerfile x Extension: Docker
@id:ms-azuretools.vscod
Docker 1.20.0
Makes it easy to create, ...
Microsoft Installing
Dockerfile
1 FROM python:3.8-slim-buster
2
3 WORKDIR /python-docker
4
5 COPY requirements.txt requirements.txt
6 RUN pip3 install -r requirements.txt
7
8 COPY . .
9
10 CMD ["python3", "-m", "flask", "run", "--host=0.0.0.0"]

Python 3.9.6 64-bit 0 0 Ln 10, Col 58 Spaces: 4 UTF-8 CRLF Docker Go Live Prettier ENG 9:52 PM
```

## JOB FINDER

# Latest job searching

searching

Email address

Password

Sign in

Not a member? [Signup](#)

### Sign up


Your Name

Your Email

Password

Repeat your password

☐ I agree all statements in [Terms of service](#)



### 3. Create a IBM container registry and deploy hello world app or job portal app.

```
C:\Windows\System32\cmd.exe - docker build.
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker build .
[+] Building 66.3s (7/10)
=> [internal] load build definition from Dockerfile 2.9s
=> => transferring dockerfile: 199B 0.5s
=> [internal] load .dockerignore 3.1s
=> => transferring context: 2B 0.1s
=> [internal] load metadata for docker.io/library/python:3.7-alpine 14.5s
=> [auth] library/python:pull token for registry-1.docker.io 0.8s
=> [1/5] FROM docker.io/library/python:3.7-alpine@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 30.4s
=> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 0.6s
=> => sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB 0.0s
=> => sha256:c7f521e75er40f0260cb22ee68c13d0337a1aafeb724e015c4629347152c01bf 1.37kB / 1.37kB 0.0s
=> => sha256:caace8a014d1c9f31120c0a96a2ee9bbb257daab97791c86780712ed7e30948 7.71kB / 7.71kB 0.0s
=> => sha256:47858ae13bf9c7c2b62cfacdc9ce2524afe339d0f0c0ed8935c6507a376d60 673.19kB / 673.19kB 2.7s
=> => sha256:21d1eb95d7874516e0447cc3067020ef40c4fb512abc36162c174c0d0c22bf50 11.10MB / 11.10MB 16.8s
=> => sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 230B / 230B 3.1s
=> => extracting sha256:47858ae13bf9c7c2b62cfacdc9ce2524afe339d0f0c0ed8935c6507a376d60 5.8s
=> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a06d9fbd00d0f08abe21971d18b 2.89MB / 2.89MB 9.5s
=> => extracting sha256:21d1eb95d7874516e0447cc3067020ef40c4fb512abc36162c174c0d0c22bf50 2.6s
=> => extracting sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 0.0s
=> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a06d9fbd00d0f08abe21971d18b 1.0s
=> [internal] load build context 1.9s
=> => transferring context: 5.65kB 0.3s
=> [2/5] WORKDIR /app 2.5s
=> [3/5] RUN pip install pipenv 13.7s
```

```
C:\Windows\System32\cmd.exe - docker push icr.io/smartfashionapp/ibm
Space:

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
myapp                1.0-recovere       95232a1151f8       18 minutes ago     97.9MB
myapp                1.0-recovered      95232a1151f8       18 minutes ago     97.9MB
icr.io/smartfashionapp/app  ibm                95232a1151f8       18 minutes ago     97.9MB
saravanan0310/alpine  latest             9c6f07244728       3 months ago       5.54MB
ibm/alpine            latest             9c6f07244728       3 months ago       5.54MB
alpine                latest             9c6f07244728       3 months ago       5.54MB
saravanan/alpine      latest             9c6f07244728       3 months ago       5.54MB

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm:
Error parsing reference: "icr.io/smartfashionapp/ibm:" is not a valid repository/tag: invalid reference format

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm
Error response from daemon: No such image: myapp:latest

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag 95232a1151f8 icr.io/smartfashionapp/ibm

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker push icr.io/smartfashionapp/ibm
Using default tag: latest
The push refers to repository [icr.io/smartfashionapp/ibm]
879dc0a7d13a: Preparing
45ca0a7778a1: Preparing
420a6604882f: Preparing
c49c12d42c1e: Preparing
ed37f306c964: Preparing
31e0f81c5bec: Waiting
b3aede2981e3: Waiting
066686122fd: Waiting
994393dc58e7: Waiting
```

#### 4. Create a Kubernetes cluster in IBM cloud and deploy hello world image or job portal image and also expose the same app to run in node port.

The screenshot shows the IBM Cloud Container Registry interface. The left sidebar contains a navigation menu with 'Namespaces' selected, showing a count of 1. The main area is titled 'Namespaces' and shows a table with one namespace named 'sfrs05' in the 'Default' resource group. The table has columns for Name, Resource group, Repository count, Image count, and Retention policy. A 'Create' button is visible in the top right corner of the namespace list.

Name	Resource group	Repository count	Image count	Retention policy
sfrs05	Default	0	0	

The screenshot shows the IBM Cloud Kubernetes Clusters overview page for a cluster named 'mycluster'. The cluster is in a 'Normal' state and expires in 18 days. The page displays various status metrics for the cluster, including Node status (1 of 1 Normal), Add-on status (0 of 0 Normal), Master status (Normal), and Ingress status (Healthy). A 'Kubernetes dashboard' button is available. The 'Details' section shows the Cluster ID, Version (1.24.7\_1542), Infrastructure (Classic), and Zones (Milan 01).

**Expires in 18 days:** Be sure to back up your data, your cluster will be deleted in 18 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status	Add-on status	Master status	Ingress status
1 of 1 Normal	0 of 0 Normal	Normal	Healthy

Cluster ID	Version	Infrastructure	Zones
cdkachmf0em2vcdfjphg	1.24.7_1542	Classic	Milan 01