

Assignment -4

Assignment Date	19 September 2022
Student Name	Rakesh M
Student Roll Number	211219104009
Maximum Marks	2 Marks

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

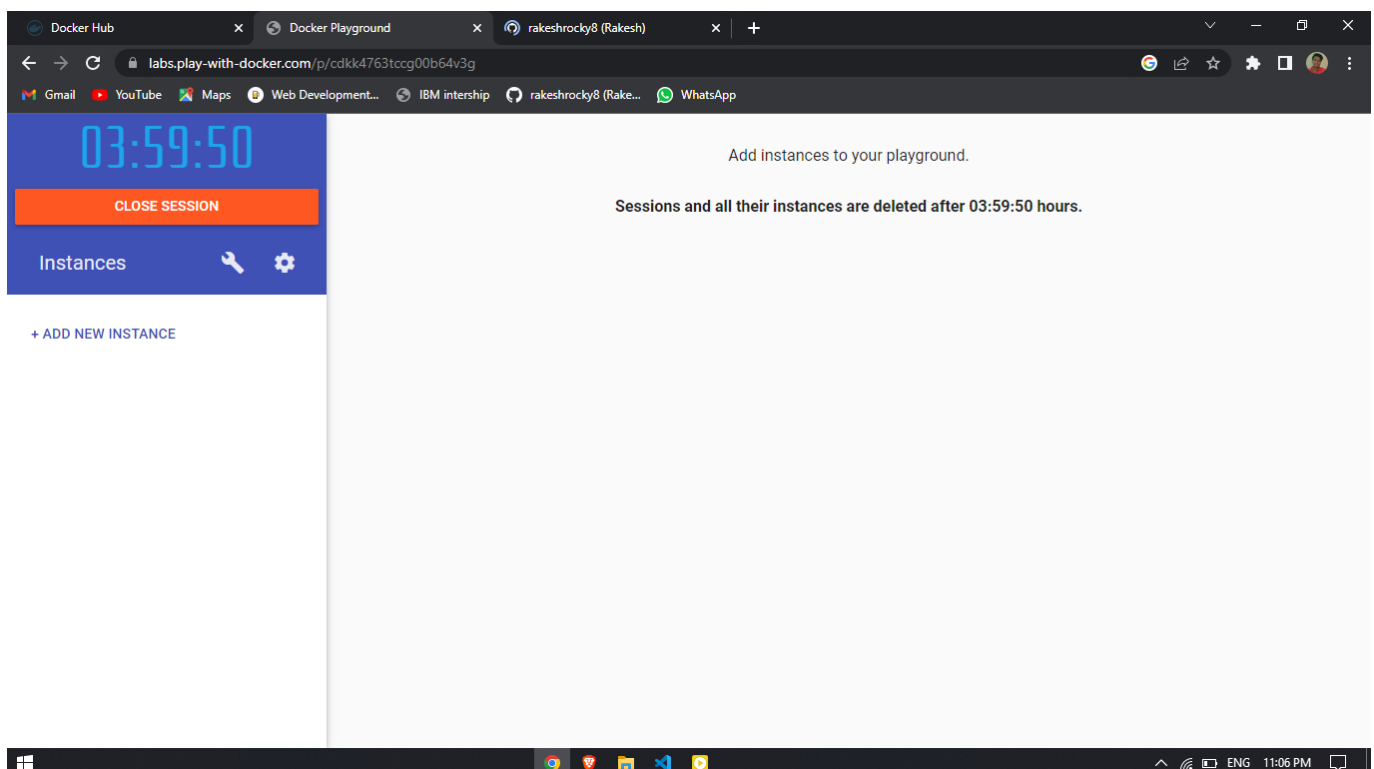
```
Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine     latest    9c6f07244728   3 months ago   5.54MB
alpine         latest    9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
994393dc58e7: Preparing
denied: requested access to the resource is denied
PS C:\Users\Rakesh> docker tag alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
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
PS C:\Users\Rakesh> docker push saravanan0310/alpine
Using default tag: latest
The push refers to repository [docker.io/saravanan0310/alpine]
994393dc58e7: Pushed
```



The screenshot shows the Docker Playground interface in a web browser. The top navigation bar includes links to Docker Hub, Docker Playground, and a user profile for 'rakeshrocky8 (Rakesh)'. The main content area displays the details of a container named 'cdkk9m79_cdkkd5n91rrg00fsv1ng'. The container's IP is 192.168.0.28, and it has a button to 'OPEN PORT'. The memory usage is 0.92% (37MiB / 3.906GiB) and the CPU usage is 0.80%. The SSH command is 'ssh ip172-18-0-5-cdkk9m791rrg00fsv1d0@direct.labs.play-'. Below the container details, there is a terminal window showing a warning message and the prompt '[node1] (local) root@192.168.0.28 ~\$'. The left sidebar shows a list of instances, with one instance named 'node1' at IP 192.168.0.28. The bottom status bar shows the system time as 11:25 PM and the language as ENG.

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

```

Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
994393dc58e7: Preparing
denied: requested access to the resource is denied
PS C:\Users\Rakesh> docker tag alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

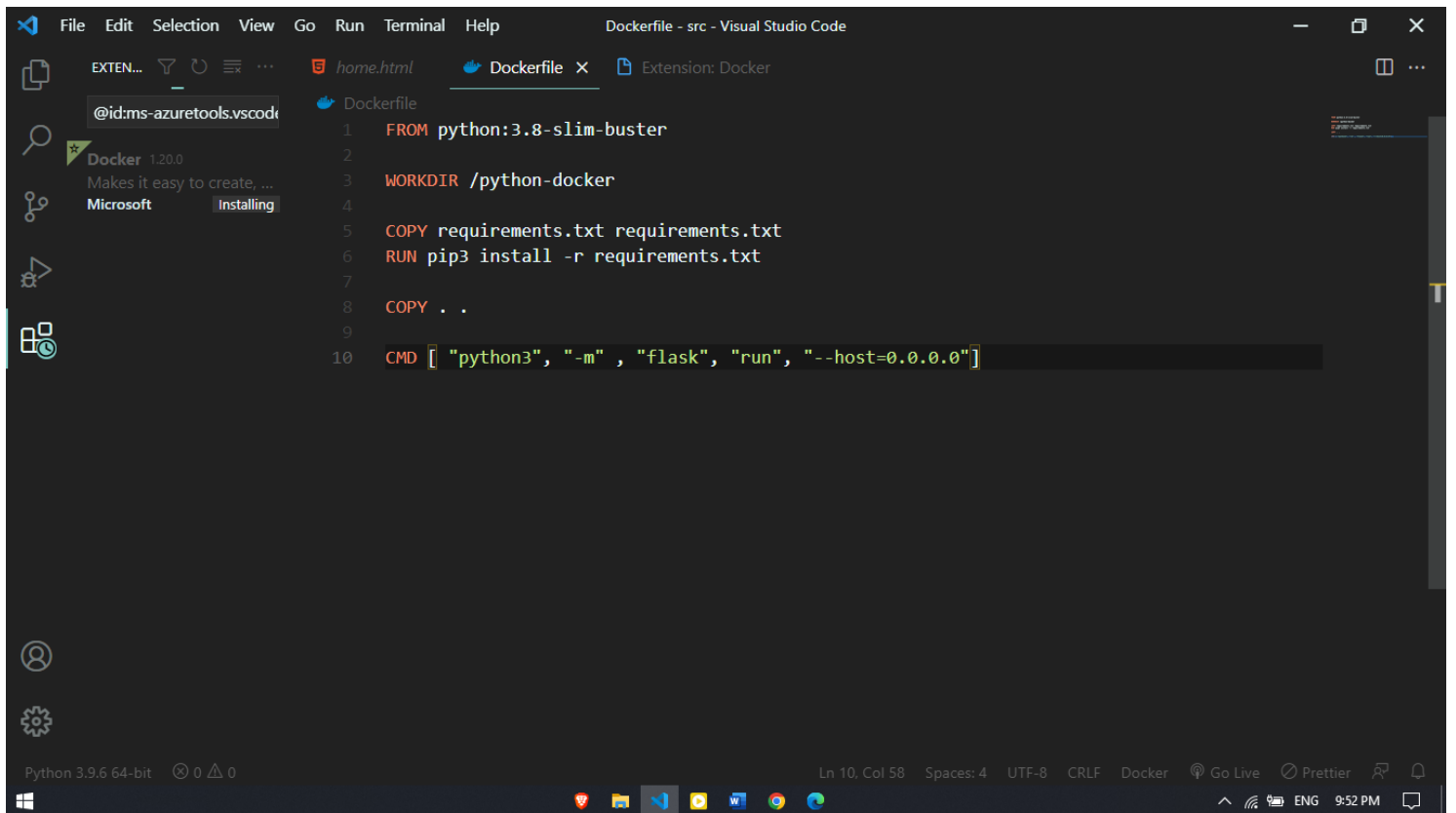
Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
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
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker push saravanan0310/alpine
Using default tag: latest
The push refers to repository [docker.io/saravanan0310/alpine]
994393dc58e7: Pushed
  
```

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"]
```

The screenshot shows the Visual Studio Code interface with the Dockerfile open. The left sidebar displays the Docker extension (version 1.20.0) and the file explorer. The bottom status bar indicates the Python 3.9.6 64-bit environment and the current file is Dockerfile - src - Visual Studio Code. The system tray at the bottom shows the time as 9:52 PM and the language as ENG.

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Your Name

Your Email

Password

Repeat your password

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




```
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

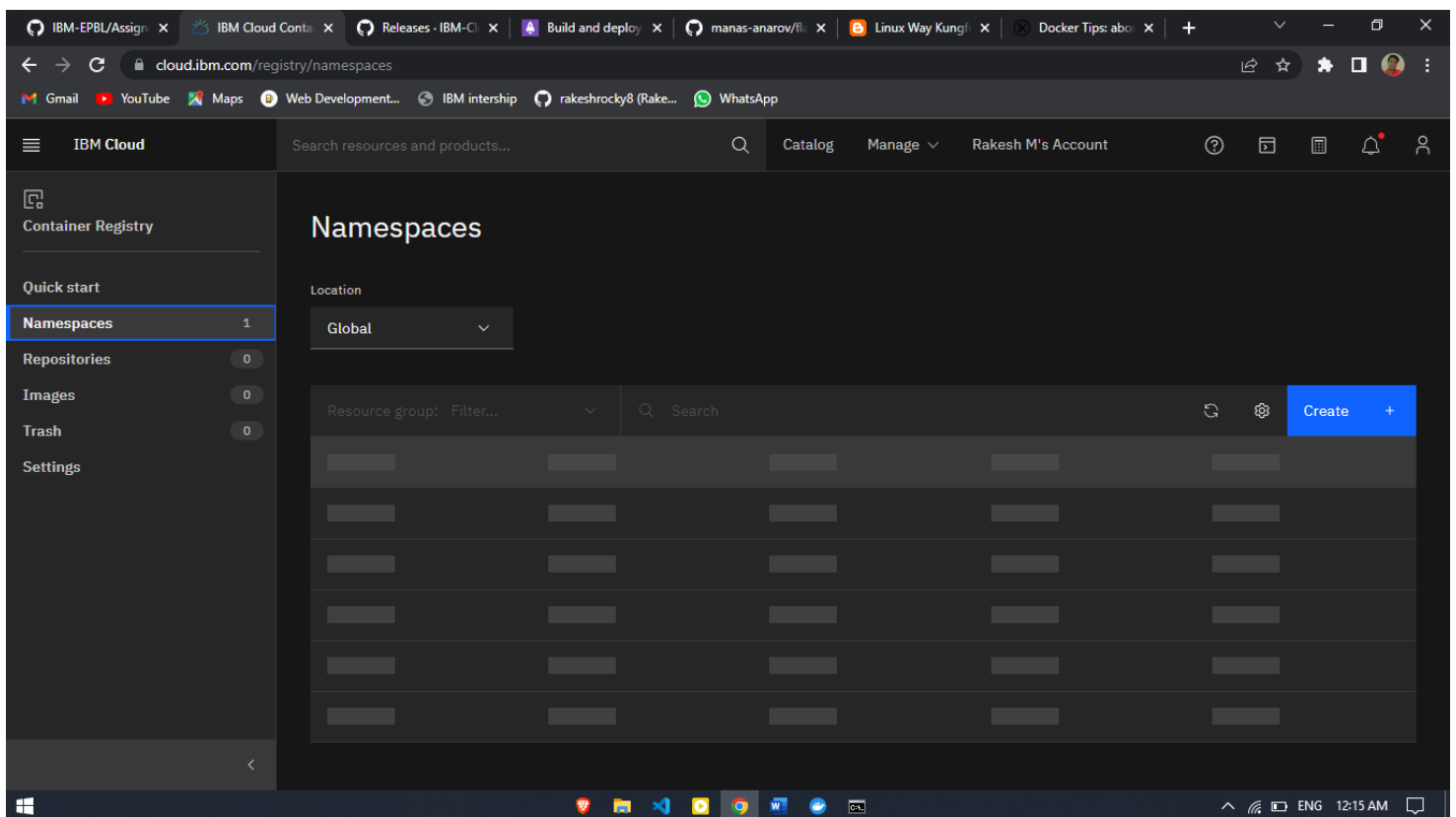
C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
myapp                1.0-recovere       95232a1151f8       18 minutes ago     97.9MB
myapp                1.0-recovered      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
6666686122fd: Waiting
994393dc58e7: Waiting
```



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.

The screenshot shows the IBM Cloud 'Create a Kubernetes cluster' page. The browser's address bar displays 'cloud.ibm.com/kubernetes/catalog/create'. The page header includes the IBM Cloud logo, a search bar, and navigation links for 'Catalog', 'Manage', and 'Rakesh M's Account'. The main content area is titled 'Kubernetes cluster' with 'Author: IBM' and links to 'Docs' and 'API docs'. There are 'Create' and 'About' tabs. A promotional banner for Red Hat OpenShift is visible. Under 'Plan details', there is a link to learn more about plan differences and a 'Pricing plan' dropdown menu currently set to 'Standard'. A 'Summary' sidebar on the right lists 'Kubernetes cluster' and '3 Worker nodes'. At the bottom of the sidebar, it shows 'Total estimated cost' as '--/mo' with a note about additional charges for networking and bandwidth. A 'Create' button is at the bottom of the sidebar. The Windows taskbar at the bottom shows various application icons and the system clock at 10:24 AM on ENG.

IBM Cloud interface showing the overview of a Kubernetes cluster named 'mycluster'. The cluster is in the 'Preparing master, workers...' state and expires in 30 days. The left sidebar shows navigation options: Overview, Worker nodes, Worker pools, and DevOps (New). The main content area displays the cluster status and details.

Cluster Status:

- Node status: 1 of 1 Pending
- Add-on status: 0 of 0 Normal
- Master status: Deploying
- Ingress status: Pending

Cluster Details:

Cluster ID	Version	Infrastructure	Zones
cd1ocfmf0p7m891i5cu0	1.24.7_1542	Classic	Milan 01

Additional Details:

Created	Resource group	Image security enforcement
11/9/2022, 4:21 PM		<button>Enable</button>

IBM Cloud interface showing the 'Namespaces' section of the Container Registry. The left sidebar shows navigation options: Container Registry, Quick start, Namespaces (1), Repositories (0), Images (0), Trash (0), and Settings. The main content area displays a table of namespaces.

Namespaces Table:

Name	Resource group	Repository count	Image count	Retention policy
smartfashionapp	Default	0	0	Retain all images

Table Controls:

- Items per page: 25
- 1-1 of 1 item
- 1 of 1 page

