

## Assignment -4

Assignment Date	19 November 2022
Student Name	R.A.Abinaya
Student Roll Number	960319205001
Team ID	PNT2022TMID51358
Maximum Marks	2 Marks

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

```
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 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
```

03:59:50

CLOSE SESSION

Instances 🔑 ⚙️

+ ADD NEW INSTANCE

Add instances to your playground.

Sessions and all their instances are deleted after 03:59:50 hours.

03:52:14

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28  
node1

cdkk9m79\_cdkkd5n91rrg00fsv1ng

IP

192.168.0.28

OPEN PORT

Memory

0.92% (37MiB / 3.906GiB)

CPU

0.80%

SSH

ssh ip172-18-0-5-cdkk9m791rrg00fsv1d0@direct.labs.play-

DELETE

EDITOR

```
#####
#                               #
#      WARNING!!!!             #
#  This is a sandbox environment. Using personal credentials   #
#  is HIGHLY! discouraged. Any consequences of doing so are   #
#  completely the user's responsibilites.                      #
#                                                                #
#  The PWD team.                                                #
#####
[node1] (local) root@192.168.0.28 ~
$
```

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

```
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'.

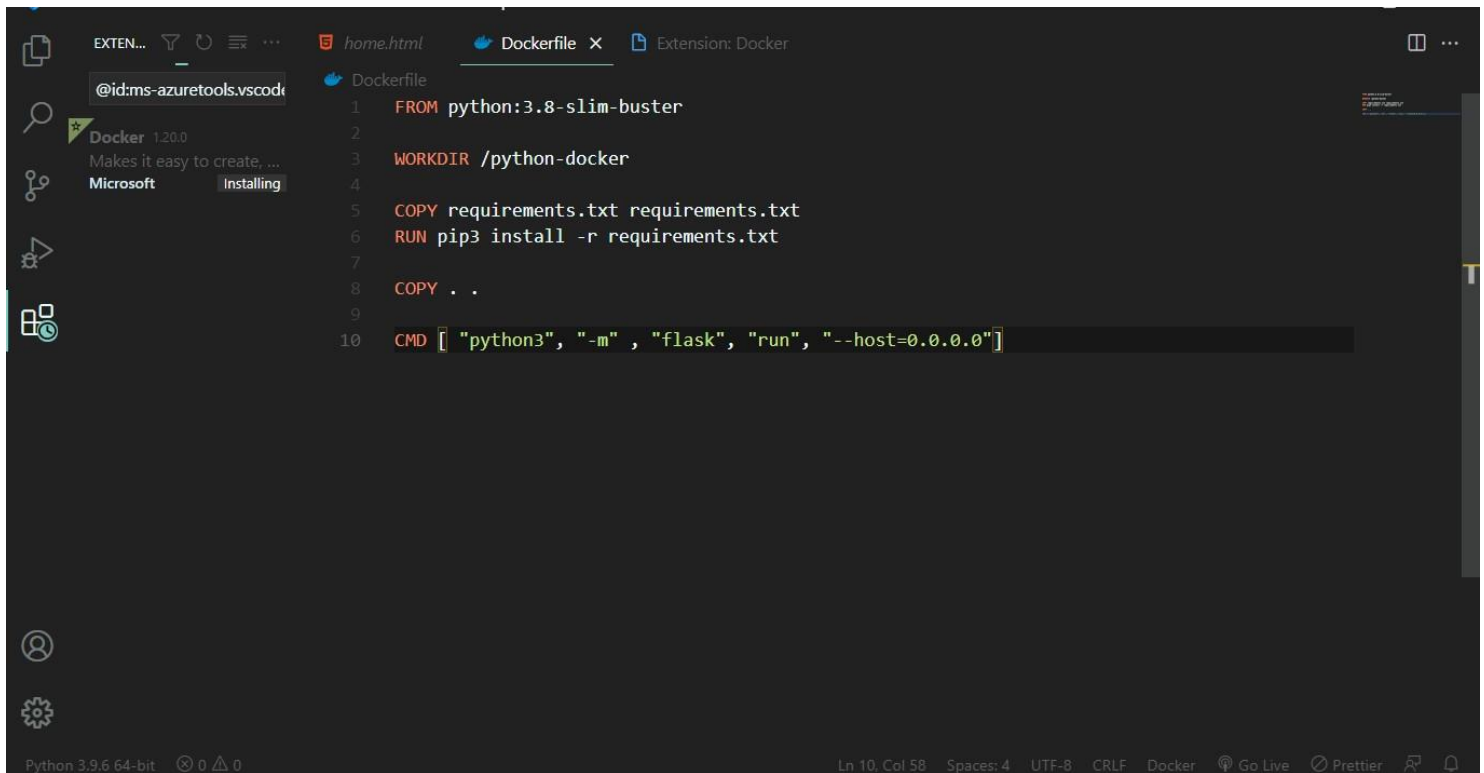
Usage:  docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

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 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. The left sidebar displays the 'EXTENSIONS' view with the 'Docker' extension (version 1.20.0) by Microsoft, which is currently being installed. The main editor area has two tabs: 'home.html' and 'Dockerfile'. The 'Dockerfile' tab is active, showing the Dockerfile content. The Dockerfile is a text file with 10 lines of instructions. The first line is 'FROM python:3.8-slim-buster'. The second line is empty. The third line is 'WORKDIR /python-docker'. The fourth line is empty. The fifth line is 'COPY requirements.txt requirements.txt'. The sixth line is 'RUN pip3 install -r requirements.txt'. The seventh line is empty. The eighth line is 'COPY . .'. The ninth line is empty. The tenth line is 'CMD ["python3", "-m", "flask", "run", "--host=0.0.0.0"]'. The status bar at the bottom indicates 'Python 3.9.6 64-bit', '0 errors, 0 warnings', 'Ln 10, Col 58', 'Spaces: 4', 'UTF-8', 'CRLF', 'Docker', 'Go Live', 'Prettier', and a search icon.

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](#)



## JOB FINDER

# Latest job searching

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

```
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 14.9s
-> [auth] library/python:pull token for registry-1.docker.io 0.0s
-> [1/5] FROM docker.io/library/python:3.7-alpine@sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb0f 30.4s
-> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb0f 0.6s
-> => sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb0f 1.65kB / 1.65kB 0.0s
-> => sha256:c7f521e75ec40f0200cb22ee08c13d0337a1aafefb724e015c4629347152c01bf 1.37kB / 1.37kB 0.0s
-> => sha256:caace8aee014d1c9f31120c0a96a2ee9bbb257daab07791c06700712ed7e30948 7.71kB / 7.71kB 0.0s
-> => sha256:47858aee13bf9c7c2b62cfaccd9ce2524efef339df0c0ed8935c6587a376d60 673.19kB / 673.19kB 2.7s
-> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB 16.8s
-> => sha256:17ac4101fac6ced0416dec3e04584d013e58bdf5a585dff62f684807d10ac77e 2300 / 2300 3.1s
-> => extracting sha256:47858aee13bf9c7c2b62cfaccd9ce2524efef339df0c0ed8935c6587a376d60 5.4s
-> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 2.09MB / 2.09MB 0.5s
-> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 2.6s
-> => extracting sha256:17ac4101fac6ced0416dec3e04584d013e58bdf5a585dff62f684807d10ac77e 0.0s
-> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 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
```

```

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

```

[illegible]

#### 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 displays the IBM Cloud console interface for creating a Kubernetes cluster. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information (Rakesh M's Account). The main content area is titled "Kubernetes cluster" and features a "Create" button. Below this, there is a section for "Plan details" with a "Pricing plan" dropdown menu set to "Standard". A banner for Red Hat OpenShift is visible. On the right side, a "Summary" panel shows the cluster configuration, including "Worker nodes" and a "Total estimated cost" of "--/mo". A "Create" button is located at the bottom right of the summary panel. The bottom status bar indicates the infrastructure is waiting for a specific ID.

IBM Cloud Search resources and products... Catalog Manage Rakesh M's Account

Catalog /

## Kubernetes cluster

Author: IBM • Docs • API docs

Create About

Deliver your apps quicker across clouds with Red Hat OpenShift

### Plan details

Learn more about the differences between plans in our docs.

Pricing plan

Standard

### Summary

Kubernetes cluster

3 Worker nodes

Total estimated cost --/mo

Additional charges for networking and bandwidth might apply.  
Actual monthly total will vary with tiered pricing.  
Estimate does not include costs for integrations.

Create

Infrastructure Waiting for 684d0d4b.akstat.io...

IBM Cloud

Search resources and products...

Catalog

Manage

Rakesh M's Account

?

Clusters / mycluster 

Preparing master, workers... Expires in 30 days Add tags

Help

Kubernetes dashboard

Actions...

Overview

Worker nodes

Worker pools

DevOps New

Expires in 30 days:

Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status

1 of 1

Pending

Details

Add-on status

0 of 0

Normal

Details

Master status

Deploying

Docs

Ingress status

Pending

Docs

Details

Cluster ID

cdlocfmf0p7m891r5cu0

Version

1.24.7\_1542

Infrastructure

Classic

Zones

Milan 01

Created

11/9/2022, 4:21 PM

Resource group

Image security enforcement

Enable

IBM Cloud

Search resources and products...

Catalog

Manage

Rakesh M's Account

?

Container Registry

Quick start

Namespaces 1

Repositories 0

Images 0

Trash 0

Settings

Namespaces

Location

Global

Resource group: Filter... Search

Create

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

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



