

Assignment -4

Assignment Date	19 October 2022
Student Name	Salady Sri Raman
Student Roll Number	311019104075
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: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
```

Docker Hub

Docker Playground

labs.play-with-docker.com/p/cdkk4763tccg00b64v3g

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.

The screenshot shows the Docker Playground interface in a web browser. On the left, there's a sidebar with a digital clock showing 03:52:14, a 'CLOSE SESSION' button, and an 'Instances' section with a '+ ADD NEW INSTANCE' button. Below that, a list of instances shows '192.168.0.28 node1'. The main area displays details for the container 'cdkk9m79_cdkkd5n91rrg00fsv1ng', including its IP (192.168.0.28), memory usage (0.92% / 37MiB / 3.906GiB), and CPU usage (0.80%). There are buttons for 'OPEN PORT', 'DELETE', and 'EDITOR'. Below these, a terminal window shows 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@192.168.0.28 ~
$
```

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'.

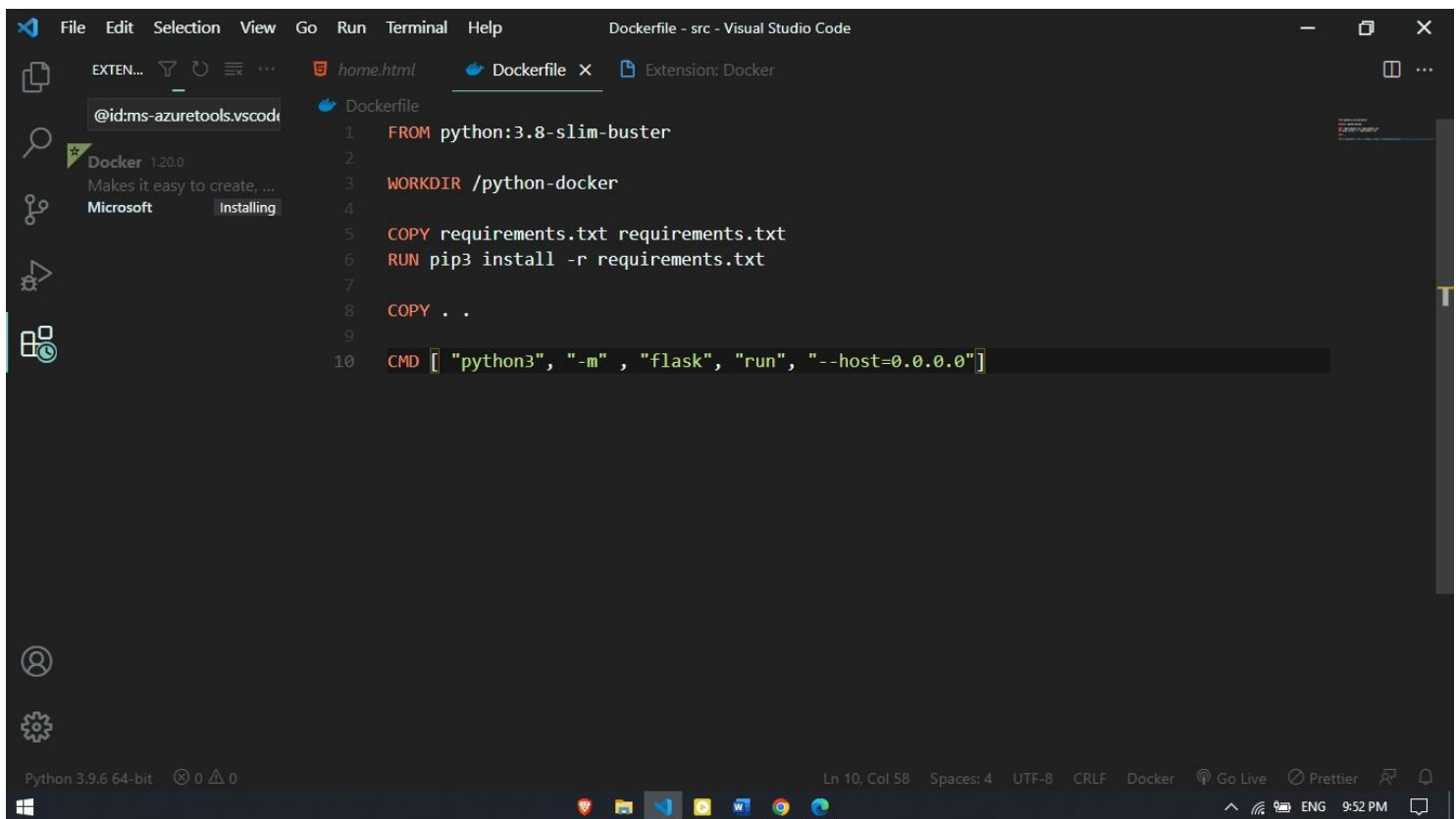
Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

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



The screenshot shows the Visual Studio Code interface with a Dockerfile open. The file explorer on the left shows the Docker extension being installed. The Dockerfile content is as follows:

```
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 status bar at the bottom indicates the Python 3.9.6 64-bit environment, 0 errors/warnings, and the current file is Dockerfile at line 10, column 58, using UTF-8 encoding and CRLF line endings.

Email address

Password

Sign in

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Sign up

Your Name

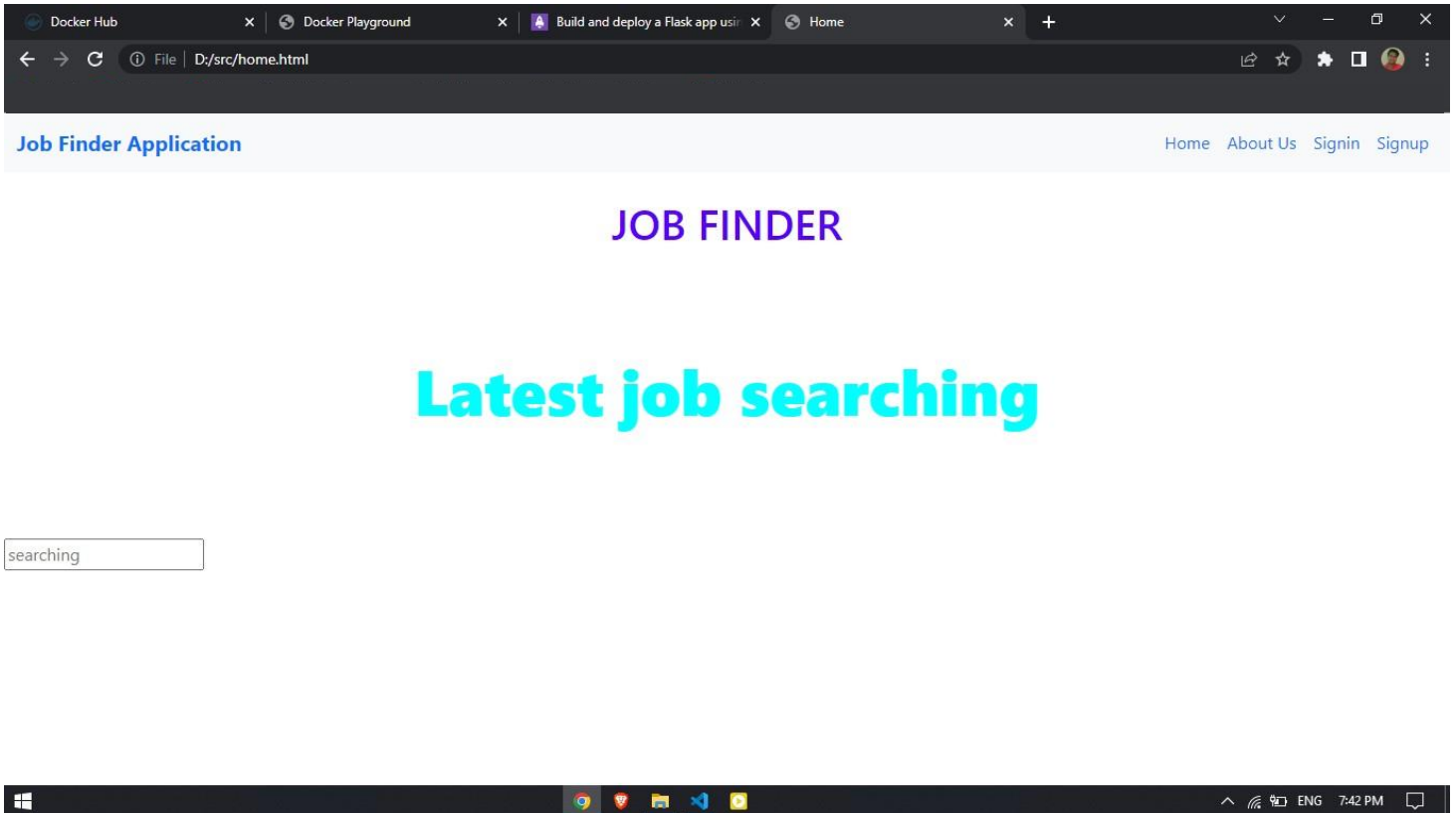
Your Email

Password

Repeat your password

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





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

```
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>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@sha256:6a24a81708ff08a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 30.4s
-> == resolve docker.io/library/python:3.7-alpine@sha256:6a24a81708ff08a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 0.6s
-> == sha256:6a24a81708ff08a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB 0.0s
-> == sha256:c7f521e75ec40f0260cb22ee68c13d0337a1aafef724e015c4620347152c01bf 1.37kB / 1.37kB 0.0s
-> == sha256:caace8ae014d1c9f31128c0a96a2ee9bbb257daab97791c86780712ed7e30948 7.71kB / 7.71kB 0.0s
-> == sha256:47858aee13bf9c7c2b62cfaccdc9ce2524efef339df0c0ed8935c6587a376d60 673.19kB / 673.19kB 2.7s
-> == sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB 16.8s
-> == sha256:17ac4101fac6ced0416der3e04584d913e58bdf5a585dff62f684807d10ac77e 230B / 230B 3.1s
-> == extracting sha256:47858aee13bf9c7c2b62cfaccdc9ce2524efef339df0c0ed8935c6587a376d60 5.8s
-> == sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08f0d08abe21971d18b 2.89MB / 2.89MB 9.5s
-> == extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 2.6s
-> == extracting sha256:17ac4101fac6ced0416der3e04584d913e58bdf5a585dff62f684807d10ac77e 0.8s
-> == extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08f0d08abe21971d18b 1.8s
-> [internal] load build context 1.3s
-> == 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

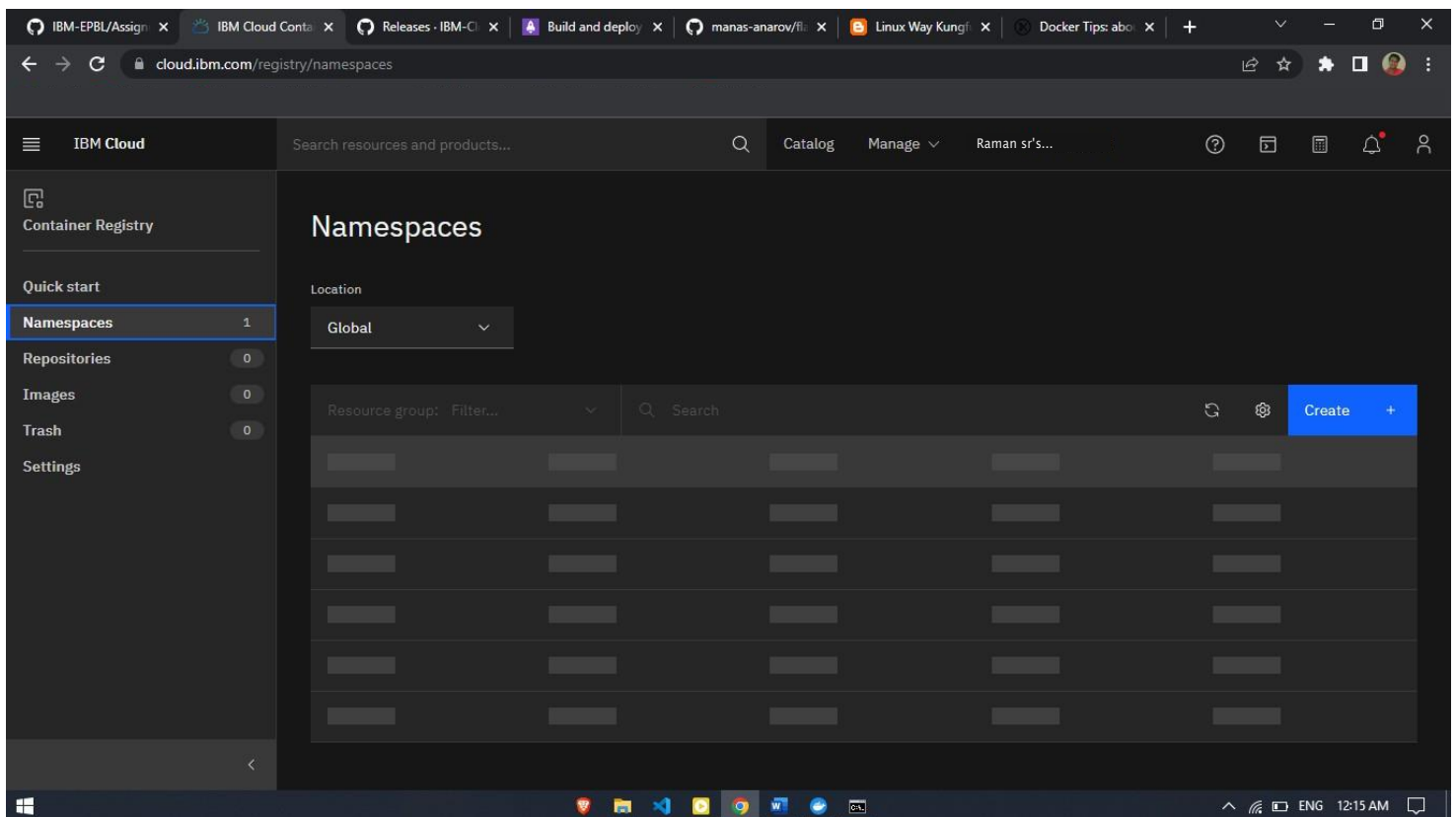
C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
myapp                1.0-recover        95232a1151f8       18 minutes ago     97.9MB
myapp                1.0-recovered      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 console interface for creating a Kubernetes cluster. The browser 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 the user account (Raman sr's Account). The main content area is titled "Kubernetes cluster" and includes tabs for "Create" and "About". A promotional banner for Red Hat OpenShift is visible. The "Plan details" section shows a "Standard" pricing plan. The right sidebar contains a "Summary" section with a "Kubernetes cluster" heading and a "Worker nodes" section. The "Total estimated cost" is displayed as "--/mo". A "Create" button is located at the bottom right of the sidebar. The Windows taskbar at the bottom shows various application icons and the system clock indicating 10:24 AM on 10/24/2023.

IBM Cloud

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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

Waiting for 684d0d4bakstatio...

10:24 AM

