

Assignment -4

Assignment Date	19 November 2022
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Student Roll Number	960319205011
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'.

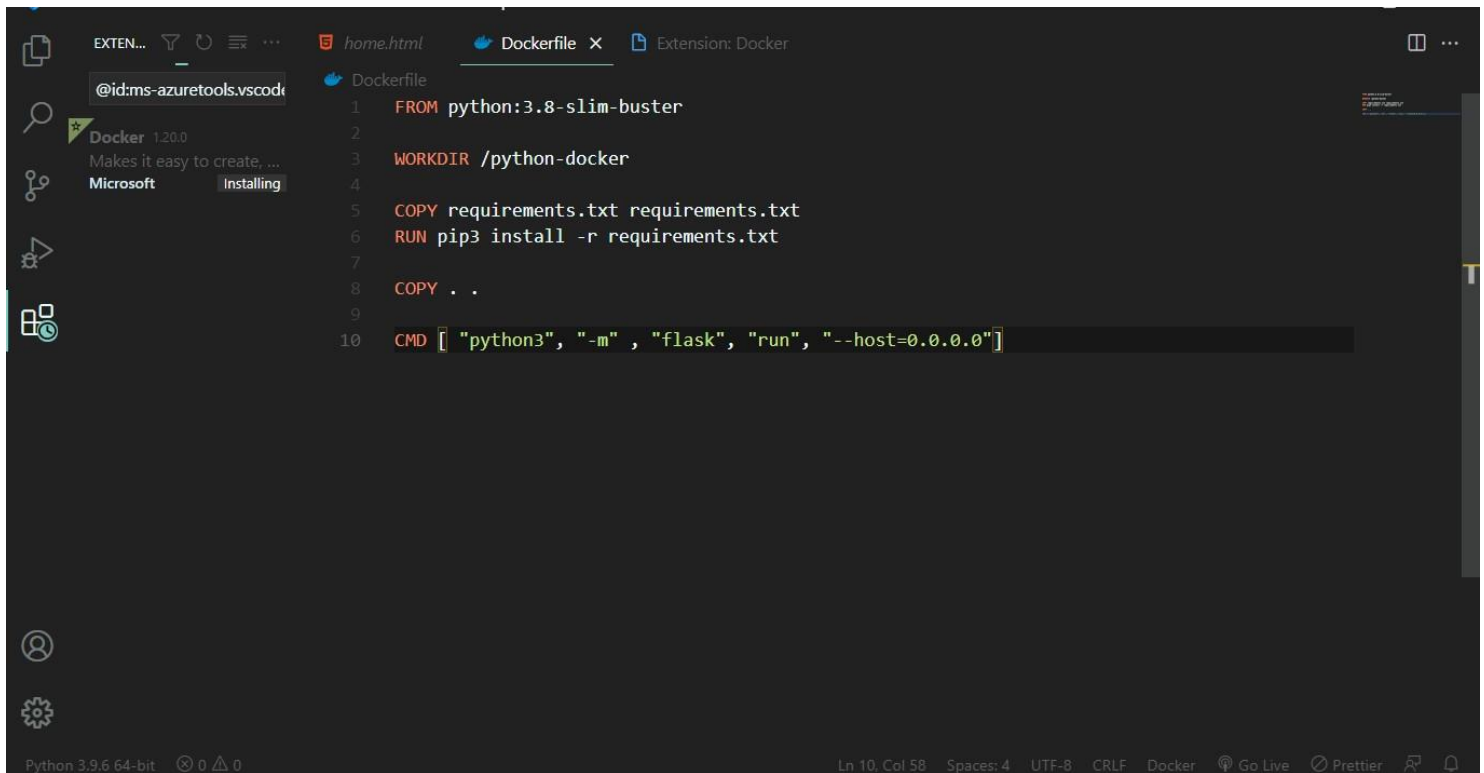
Usage:  docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

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. On the left, the Explorer sidebar shows the file structure with 'home.html', 'Dockerfile', and 'Extension: Docker'. The Docker extension is listed as version 1.20.0 and is currently installing. The main editor area displays the 'Dockerfile' with the following content:

```
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 editor is using Python 3.9.6 64-bit, with 0 errors and 0 warnings. It also shows the current line and column (Ln 10, Col 58), the file encoding (UTF-8), the line ending (CRLF), and the Docker extension is active. Other icons for Go Live, Prettier, and a search icon are also visible.

Email address

Password

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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@sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 30.4s
-> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 0.6s
-> => sha256:6e24a81708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB 0.0s
-> => sha256:c7f521e75ec40f0200cb22ee08c13d0337a1aafefb724e015c4629347152c01bf 1.37kB / 1.37kB 0.0s
-> => sha256:caace8aee014d1c9f31120c0a96a2ee9bbb257daab07791c06700712ed7e30948 7.71kB / 7.71kB 0.0s
-> => sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60 673.19kB / 673.19kB 2.7s
-> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB 16.8s
-> => sha256:17ac4101fac6ced0416dec3e04584d013e58bfd5a585dff62f684807d10ac77e 2300 / 2300 3.1s
-> => extracting sha256:47858aee13bf9c7c2b62cfacdc9ce2524efef339df0c0ed8935c6587a376d60 5.4s
-> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08fd08abe21971d18b 2.09MB / 2.09MB 0.5s
-> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 2.6s
-> => extracting sha256:17ac4101fac6ced0416dec3e04584d013e58bfd5a585dff62f684807d10ac77e 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
```


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. A sidebar on the right provides a "Summary" of the cluster configuration, showing "Kubernetes cluster" and "3 Worker nodes". Below the summary, the "Total estimated cost" is displayed as "--/mo". The main content area also includes a "Plan details" section with a "Pricing plan" dropdown set to "Standard". A banner for Red Hat OpenShift is visible at the top of the main content area.

IBM Cloud

Search resources and products...

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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

Infrastructure

Waiting for 684d0d4b.akstat.io...

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

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?

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

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?

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

