

Assignment Kubernetes/Docker

Date	17 November 2022
Team ID	PNT2022TMID32587
Project Name	Nutrition Assistant Application
Maximum Marks	4 marks

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

The screenshot shows the Docker Labs 'Getting Started' tutorial page. The page has a dark theme with a blue header. The header includes the Docker Labs logo, the title 'Getting Started', a search bar, and a GitHub repository link for 'docker/getting-started' with 2.3k stars and 5.8k forks. The main content area is divided into three sections: a left sidebar with a table of contents, a central main content area, and a right sidebar with a 'Table of contents' section. The main content area is titled 'Getting Started' and 'The command you just ran'. It explains that the user has started a container and provides the command: `docker run -d -p 80:80 docker/getting-started`. It also lists some flags: `-d` for detached mode, `-p 80:80` for port mapping, and `docker/getting-started` for the image. A 'Pro tip' section suggests combining flags to shorten the command to `docker run -dp 80:80 docker/getting-started`. The right sidebar contains a 'Table of contents' section with links to 'The command you just ran', 'The Docker Dashboard', 'What is a container?', and 'What is a container image?'. The bottom section is titled 'The Docker Dashboard' and mentions that it gives a quick view of containers running on the machine.

Getting Started

The command you just ran

Congratulations! You have started the container for this tutorial! Let's first explain the command that you just ran. In case you forgot, here's the command:

```
docker run -d -p 80:80 docker/getting-started
```

You'll notice a few flags being used. Here's some more info on them:

- `-d` - run the container in detached mode (in the background)
- `-p 80:80` - map port 80 of the host to port 80 in the container
- `docker/getting-started` - the image to use

Pro tip

You can combine single character flags to shorten the full command. As an example, the command above could be written as:

```
docker run -dp 80:80 docker/getting-started
```

The Docker Dashboard

Before going too far, we want to highlight the Docker Dashboard, which gives you a quick view of the containers running on your machine. It gives you quick access to container logs. Let's you get

cdpr9360_cdpr9n791rrg00bv670g

IP

192.168.0.28

OPEN PORT

80

Memory

2.46% (98.31MiB / 3.90GiB)

CPU

0.63%

SSH

ssh ip172-18-0-122-cdpr9360qau000db46tg@direct.labs.plc

DELETE

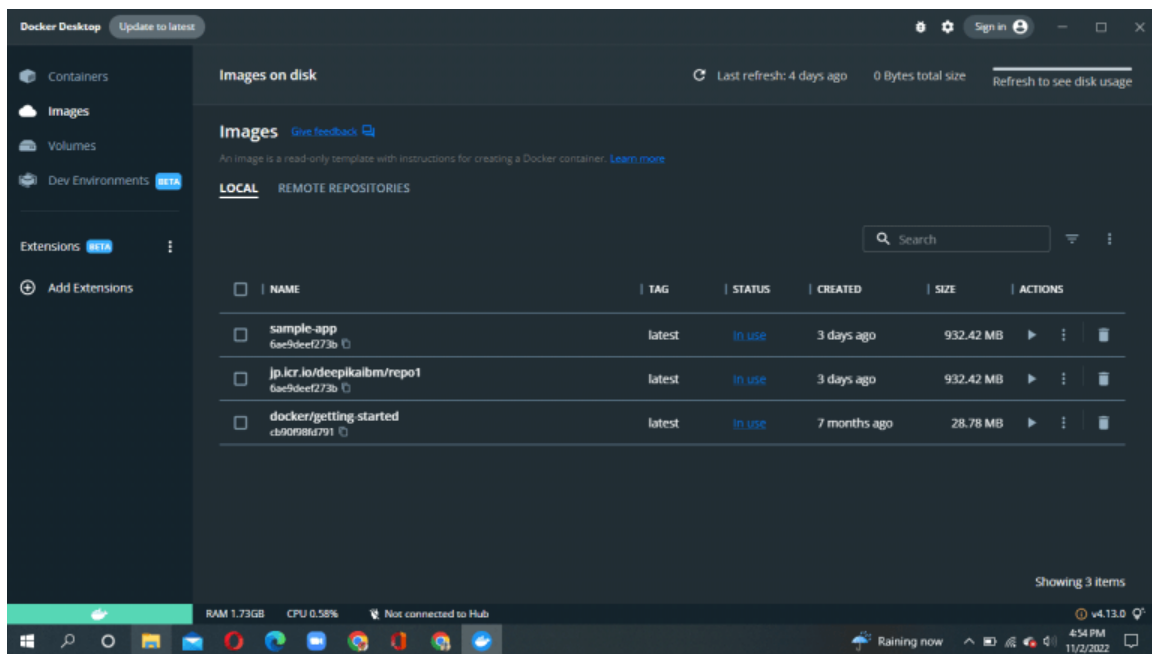
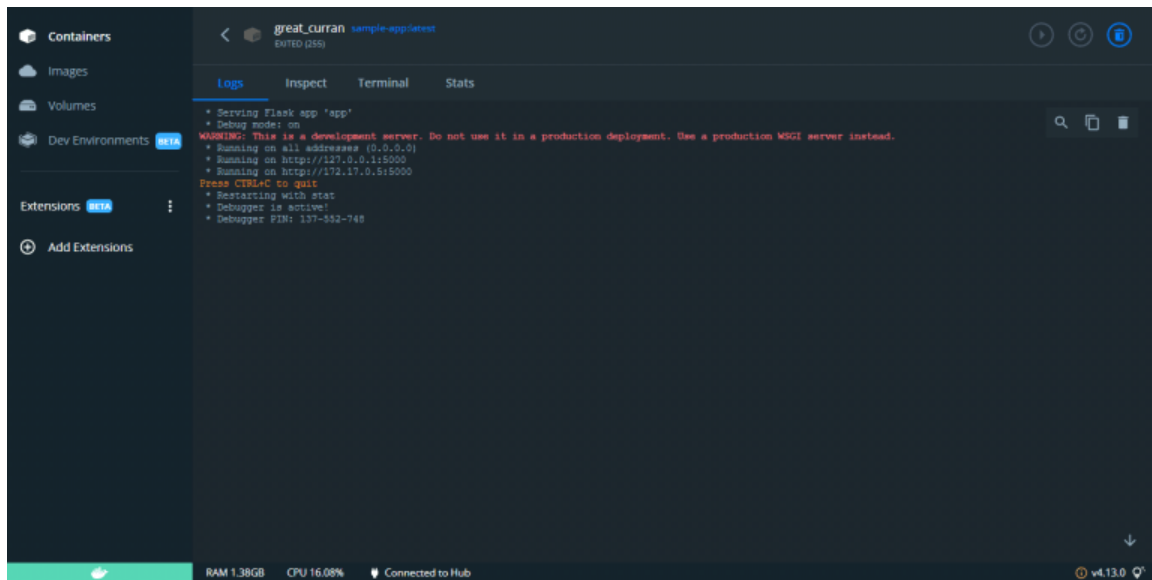
EDITOR

```

#####
# WARNING!!!!                                     #
# This is a sandbox environment. Using personal credentials #
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilities.                  #
#                                                         #
# The FWD team.                                           #
#####
[node1] (local) root@192.168.0.28 ~
$ docker run -d -p 80:80 docker/getting-started
Unable to find image 'docker/getting-started:latest' locally
latest: Pulling from docker/getting-started
df9b9388f04a: Pull complete
5867cba5fcbd: Pull complete
4b639e65cb3b: Pull complete
061ed9e2b976: Pull complete
bc19f3e8eeb1: Pull complete
4071be97c256: Pull complete
79b586f1a54b: Pull complete
0c9732f525d6: Pull complete
Digest: sha256:b558be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aae
Status: Downloaded newer image for docker/getting-started:latest
af8a5f18e940b3d26215565d962a2ea9fdd62e8ff65f28cb5d405e2fcdac008ec
[node1] (local) root@192.168.0.28 ~
$

```

[illegible]



Containers

Images

Volumes

Dev Environments beta

Extensions beta

Add Extensions

Containers Give feedback

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. [Learn more](#)

Only show running containers

Search

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	priceless_johnson 90e8ca7344bd	sample-app:latest	Running		1 minute ago	
<input type="checkbox"/>	recurring_feistel d20feb6aa6d5	sample-app:latest	Running		1 minute ago	
<input type="checkbox"/>	elegant_bassi 0ae5532bbc03	docker/getting-started:latest	Running	80:80	1 minute ago	

Showing 3 items

RAM 2.64GB

CPU 0.60%

Connected to Hub

v4.13.0

← → ↺

127.0.0.1:5000

FLASKAPP

CREATE

ABOUT

Blog Page

Messages

Message One

Message One Content

Message Two

Message Two Content

Message 3

Message 3 Content

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

Container Registry

Quick start

Namespaces

Repositories

Images

Trash

Settings

Repositories

LocationTokyo

Search

Create

<input type="checkbox"/>	Name	Image count	Namespace	Last updated	
<input checked="" type="checkbox"/>	sample-app jp.cc.ko/ibmtraining/sample-app	1	ibmtraining	1 day ago	

Items per page: 251-1 of 1 item

11 of 1 page

Type here to search30°C100026-10-2022

Container Registry

Quick start

Namespaces

Repositories

Images

Trash

Settings

Namespaces

LocationTokyo

Resource group: Filter...

Search

Create

<input type="checkbox"/>	Name	Resource group	Repository count	Image count	Retention policy	
<input checked="" type="checkbox"/>	ibmtraining	Default	1	1	Retain all images	

Items per page: 251-1 of 1 item

11 of 1 page

Type here to search30°C100026-10-2022

Container Registry

Quick start

Namespaces

Repositories

Images

Trash

Settings

Images

LocationTokyo

View by: Digest

Search

Create

<input type="checkbox"/>	Repository@digest	Tags	Manifest type	Created	Size	Security status	
<input checked="" type="checkbox"/>	ibmtraining/sample-app@sha256:6196757e28ca...	latest	Docker	1 day ago	356 MB	23 issues	

Items per page: 251-1 of 1 item

11 of 1 page

Type here to search30°C100126-10-2022

```
Command Prompt
Logged in to 'jcr.io'.

C:\folders\4th year\WALAYA THIRAWI\flask_with_form_and_docker-main>docker login
The region is set to 'ap-north', the registry is 'jp.icr.io'.

C:\folders\4th year\WALAYA THIRAWI\flask_with_form_and_docker-main>docker login
Logging 'docker' in to 'jp.icr.io'...
Logged in to 'jp.icr.io'.

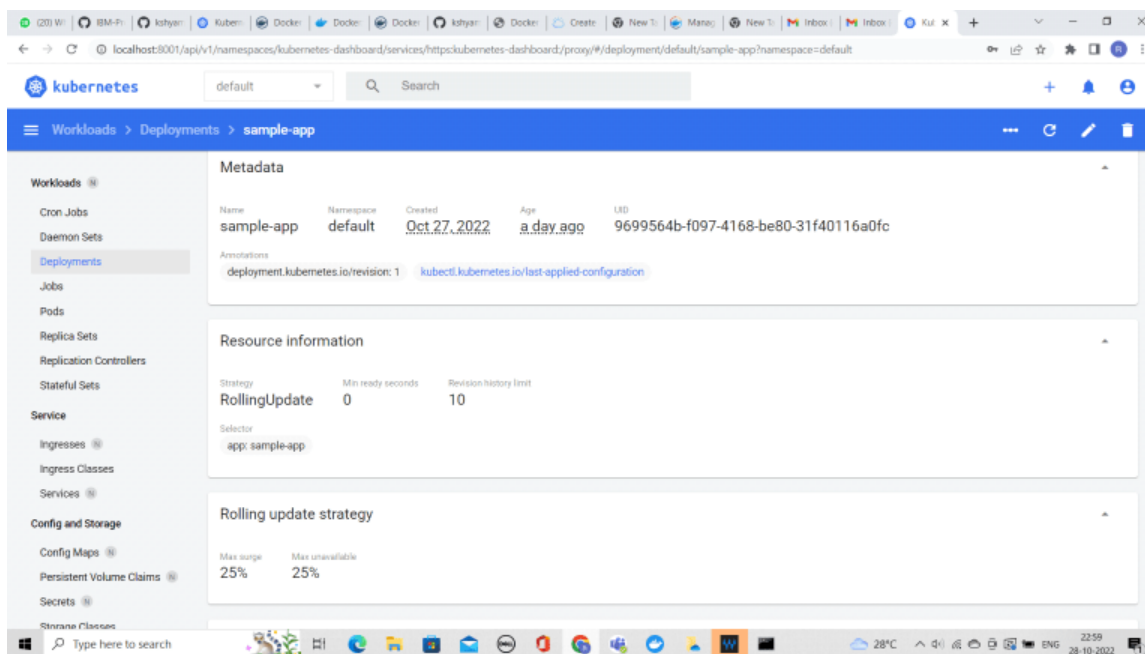
C:\folders\4th year\WALAYA THIRAWI\flask_with_form_and_docker-main>docker tag sample-app jp.icr.io/ibetraining/sample-app

C:\folders\4th year\WALAYA THIRAWI\flask_with_form_and_docker-main>docker push jp.icr.io/ibetraining/sample-app
Using default tag: latest
The push refers to repository [jp.icr.io/ibetraining/sample-app]
1b4912b5fc5: Pushed
68f55488886: Pushed
a2276707a886: Pushed
22d4fc2da18: Pushed
bf1d8b136e: Pushed
1f123186824c: Pushing [=====] 4.68MB
1d6eb1152931: Pushing [=====] 8.85MB/57.12MB
100796cdf361: Pushing [=====] 7.79MB/18.48MB
5a4c35a5f6b: Pushing [=====] 2.68MB/528.7MB
8d51c618126f: Waiting
9ff6e4d4674d: Waiting
a091d0765a1: Waiting
655ed1b7a428: Waiting

1f123186824c: Pushed
1d6eb1152931: Pushed
100796cdf361: Pushed
5a4c35a5f6b: Pushed
8d51c618126f: Pushed
9ff6e4d4674d: Pushed
a091d0765a1: Pushed
655ed1b7a428: Pushed
latest: digest: sha256:6196757e28ca629eac80d883de0901672d471e16bc89c4007f3e87ca2cbeeb size: 3851

C:\folders\4th year\WALAYA THIRAWI\flask_with_form_and_docker-main>
```

4. Create a kubernetes cluster in IBM cloud and deploy helloworld image or job portal image and also expose the same app to run it nodeport



Workloads > Pods > sample-app-d9bfd84d9-fp74z

Workloads

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses

Ingress Classes

Services

Config and Storage

Config Maps

Persistent Volume Claims

Secrets

Storage Classes

Metadata

Resource information

Conditions

Name

sample-app-d9bfd84d9-fp74z

Namespace

default

Created

Oct 27, 2022

Age

a day ago

UID

3f3b4ff6-4fa6-4f07-9454-35acb2c91631

Labels

app: sample-app pod-template-hash: d9bfd84d9

Node

docker-desktop

Status

ImagePullBackOff

IP

10.1.0.48

QoS Class

BestEffort

Restarts

0

Service Account

default

Type

Status

Last probe time

Last transition time

Reason

Message

Initialized

True

:

a day ago

-

-

Ready

False

:

a day ago

ContainersNotReady

containers with unready status: [sample-app-container]

ContainersNotReady

False

:

a day ago

ContainersNotReady

containers with unready status: [sample-app-container]

Type here to search

28°C

2300

28-10-2022