Assignment - 1

ubuntu@ip-172-31-88-70:~$ sudo apt update
ubuntu@ip-172-31-88-70:~$ sudo apt install docker.io -y
ubuntu@ip-172-31-88-70:~$ sudo docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
b71466b94f26: Pull complete
Digest: sha256:7c06e91f61fa88c08cc74f7e1b7c69ae24910d745357e0dfe1d2c0322aaf20f9
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
ubuntu@ip-172-31-88-70:~$ sudo docker images
REPOSITORY   TAG   IMAGE ID   CREATED   SIZE
ubuntu   latest e0f16e6366fe 3 weeks ago 78.1MB
ubuntu@ip-172-31-88-70:~$ sudo docker run -itd -p 80:80 --name=a1container ubuntu
f5bd6d19e7a7354028c90d5b28ca1b5243ca8a2634f3d62f0f35bf4854347fe3
ubuntu@ip-172-31-88-70:~$ sudo docker ps
CONTAINER ID IMAGE   COMMAND   CREATED   STATUS   PORTS
NAMES
f5bd6d19e7a7   ubuntu   "/bin/bash" 13 seconds ago   Up 12 seconds   0.0.0.0:80->80/tcp,
:::80->80/tcp   a1container
ubuntu@ip-172-31-88-70:~$ sudo docker exec -it a1container bash
root@f5bd6d19e7a7:/# apt update
root@f5bd6d19e7a7:/# apt install apache2
root@f5bd6d19e7a7:/# service apache2 status
 * apache2 is not running
root@f5bd6d19e7a7:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using
172.17.0.2. Set the 'ServerName' directive globally to suppress this message
 *
root@f5bd6d19e7a7:/# service apache2 status
 * apache2 is running
root@f5bd6d19e7a7:/# exit
exit

History

   1 sudo apt update
   2 sudo apt install docker.io -y
   3 sudo docker pull ubuntu
   4 sudo docker images
   5 sudo docker run -itd -p 80:80 --name=a1container ubuntu

6 sudo docker ps
    7 sudo docker exec -it a1container bash

Assignment - 2

CONTAINER ID IMAGE   COMMAND   CREATED   STATUS   PORTS
NAMES
f5bd6d19e7a7 ubuntu   "/bin/bash" 25 minutes ago Up 25 minutes 0.0.0.0:80->80/tcp,
:::80->80/tcp a1container
ubuntu@ip-172-31-88-70:~$ sudo docker commit
"docker commit" requires at least 1 and at most 2 arguments.
See 'docker commit --help'.

Usage: docker commit [OPTIONS] CONTAINER [REPOSITORY[:TAG]]

Create a new image from a container's changes
ubuntu@ip-172-31-88-70:~$ sudo docker commit a1container a2image:v1
sha256:1dfca9c8483395dffac20e1a50bc33bbba62064bf711ee1cb8602c8ad4af9eb8
ubuntu@ip-172-31-88-70:~$ sudo docker images
REPOSITORY   TAG   IMAGE ID   CREATED   SIZE
a2image   v1   1dfca9c84833 58 seconds ago 237MB
ubuntu   latest e0f16e6366fe 3 weeks ago   78.1MB
ubuntu@ip-172-31-88-70:~$ sudo docker run -itd -p 81:80 --name=a2container a2image:v1
cca5505aa718700c46240d9348a60576275a9259d555b99deda58cb5fd2738c2
ubuntu@ip-172-31-88-70:~$ sudo docker ps -a
CONTAINER ID IMAGE   COMMAND   CREATED   STATUS   PORTS
NAMES
cca5505aa718 a2image:v1 "/bin/bash" 9 seconds ago   Up 8 seconds   0.0.0.0:81->80/tcp,
[::]:81->80/tcp a2container
f5bd6d19e7a7 ubuntu   "/bin/bash" 41 minutes ago Up 41 minutes 0.0.0.0:80->80/tcp,
:::80->80/tcp   a1container
ubuntu@ip-172-31-88-70:~$ sudo docker exec -it a2container bash
root@cca5505aa718:/# apache2 --version
[Sun Aug 24 05:37:53.064584 2025] [core:warn] [pid 17] AH00111: Config variable
${APACHE_RUN_DIR} is not defined
apache2: Syntax error on line 80 of /etc/apache2/apache2.conf: DefaultRuntimeDir must be a
valid directory, absolute or relative to ServerRoot
root@cca5505aa718:/# service apache2 status
 * apache2 is not running
root@cca5505aa718:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using
172.17.0.3. Set the 'ServerName' directive globally to suppress this message

```
 *
root@cca5505aa718:/# service apache2 status
 * apache2 is running
root@cca5505aa718:/# exit
exit


  10  sudo docker ps
  11  sudo docker commit
  12  sudo docker commit a1container a2image:v1
  19  sudo docker run -itd -p 81:80 --name=a2container a2image:v1
  20  sudo docker ps -a
  21  sudo docker exec -it a2container bash
```

Assignment - 3

Machine - 1

```
ubuntu@ip-172-31-88-70:~$ sudo docker images
REPOSITORY   TAG      IMAGE ID     CREATED       SIZE
a2image      v1       1dfca9c84833  36 minutes ago  237MB
ubuntu       latest   e0f16e6366fe  3 weeks ago     78.1MB
ubuntu@ip-172-31-88-70:~$ sudo docker tag
"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
ubuntu@ip-172-31-88-70:~$ sudo docker tag a2image:v1 intellipaatsai/a3image
ubuntu@ip-172-31-88-70:~$ sudo docker tag
"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
ubuntu@ip-172-31-88-70:~$ sudo docker images
REPOSITORY            TAG     IMAGE ID     CREATED       SIZE
a2image               v1      1dfca9c84833  38 minutes ago  237MB
intellipaatsai/a3image  latest  1dfca9c84833  38 minutes ago  237MB
ubuntu                latest  e0f16e6366fe  3 weeks ago     78.1MB
ubuntu@ip-172-31-88-70:~$ sudo docker login
```

USING WEB-BASED LOGIN
To sign in with credentials on the command line, use 'docker login -u <username>'

Your one-time device confirmation code is: VDXW-WCZN
Press ENTER to open your browser or submit your device code here:
https://login.docker.com/activate

Waiting for authentication in the browser…
^Clogin canceled
ubuntu@ip-172-31-88-70:~$ sudo docker login -u intellipaatsai
Password:
Error response from daemon: Get "https://registry-1.docker.io/v2/": unauthorized: incorrect
username or password
ubuntu@ip-172-31-88-70:~$ sudo docker login -u intellipaatsai
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
ubuntu@ip-172-31-88-70:~$ sudo docker push a2image:v1
The push refers to repository [docker.io/library/a2image]
1448ae9ea6c0: Preparing
cd9664b1462e: Preparing
denied: requested access to the resource is denied
ubuntu@ip-172-31-88-70:~$ sudo docker push intellipaatsai/a3image
Using default tag: latest
The push refers to repository [docker.io/intellipaatsai/a3image]
1448ae9ea6c0: Pushed
cd9664b1462e: Pushed
latest: digest:
sha256:4e08dd3de2975693777a0a2005742ba297b469a40593fa067516f3cbcd9f0779 size: 741

Machine - 2

  1 sudo apt update
  2 sudo apt install docker.io -y
  3 sudo docker pull intellipaatsai/a3image
  4 sudo docker images
  5 sudo docker run -itd -p 80:80 --name=m2a3container intellipaatsai/a3image
  6 sudo docker exec -it m2a3container bash

ubuntu@ip-172-31-80-213:~$ sudo apt update

ubuntu@ip-172-31-80-213:~$ sudo apt install docker.io -y
ubuntu@ip-172-31-80-213:~$ sudo docker pull intellipaatsai/a3image
Using default tag: latest
latest: Pulling from intellipaatsai/a3image
baa9e71a063a: Pull complete
14b9b455cab6: Pull complete
Digest: sha256:4e08dd3de2975693777a0a2005742ba297b469a40593fa067516f3cbcd9f0779
Status: Downloaded newer image for intellipaatsai/a3image:latest
docker.io/intellipaatsai/a3image:latest
ubuntu@ip-172-31-80-213:~$ sudo docker images
REPOSITORY   TAG   IMAGE ID   CREATED   SIZE
intellipaatsai/a3image   latest   1dfca9c84833   48 minutes ago   237MB
ubuntu@ip-172-31-80-213:~$ sudo docker run -itd -p 80:80 --name=m2a3container
intellipaatsai/a3image
1eb6e6aa90bdaf203d3539460dd4a6c7eb052d581db57e322c6a482f571f84b5
ubuntu@ip-172-31-80-213:~$ sudo docker exec -it m2a3container bash
root@1eb6e6aa90bd:/# service apache2 status
 * apache2 is not running
root@1eb6e6aa90bd:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using
172.17.0.2. Set the 'ServerName' directive globally to suppress this message
 *
root@1eb6e6aa90bd:/# service apache2 status
 * apache2 is running
root@1eb6e6aa90bd:/# exit
exit

Assignment - 5

    32 sudo nano Dockerfile
    33 sudo docker build . -t a5image
    34 sudo nano index.html
    35 sudo docker build . -t a5image
    36 sudo docker run -itd -p 90:80 --name=a5container a5image
    37 sudo docker images
    38 sudo docker ps
    39 cat Dockerfile

ubuntu@ip-172-31-88-70:~$ sudo docker run -itd -p 90:80 --name=a5container a5image
c68eb71c5ca266e7ac24e927601a3905ad72541049bb4c79b3fcf2d3910e1706
ubuntu@ip-172-31-88-70:~$ sudo docker images
REPOSITORY   TAG   IMAGE ID   CREATED   SIZE

```
a5image                latest    58a4829afe4a   2 minutes ago   237MB
intellipaatsai/a3image   latest   1dfca9c84833   2 hours ago     237MB
a2image                v1        1dfca9c84833   2 hours ago     237MB
ubuntu                 latest   e0f16e6366fe   3 weeks ago     78.1MB
ubuntu@ip-172-31-88-70:~$ sudo docker ps
CONTAINER ID   IMAGE        COMMAND                CREATED            STATUS
PORTS                      NAMES
c68eb71c5ca2   a5image      "/bin/sh -c 'apachec…"   About a minute ago   Up About a minute
0.0.0.0:90->80/tcp, [::]:90->80/tcp   a5container
cca5505aa718   a2image:v1   "/bin/bash"            About an hour ago    Up About an hour
0.0.0.0:81->80/tcp, [::]:81->80/tcp   a2container
f5bd6d19e7a7   ubuntu       "/bin/bash"            2 hours ago          Up 2 hours
0.0.0.0:80->80/tcp, :::80->80/tcp    a1container
ubuntu@ip-172-31-88-70:~$ cat Dockerfile
FROM ubuntu
RUN apt update
RUN apt install apache2 -y
COPY index.html /var/www/html/
ENTRYPOINT apachectl -D FOREGROUND
```