

# **ITI Docker Lab1**

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What is the difference between:

CMD & ENTRYPOINT

COPY & ADD

**CMD:**

Specifies the default command that will run when a container starts. This command can be overridden by passing a different command at runtime. It's primarily used to provide default arguments for ENTRYPOINT or to specify a default command for the container.

**ENTRYPOINT:**

Defines the main command that will always run in the container. Unlike CMD, ENTRYPOINT is not overridden by commands passed at runtime. Instead, any additional commands are passed as arguments to ENTRYPOINT. It's commonly used to set the container's primary executable, making it behave like a dedicated service or application.

**COPY:**

Copies files and directories from the host filesystem into the container's filesystem. Simple and explicit—used for straightforward copying of local files.

**ADD:**

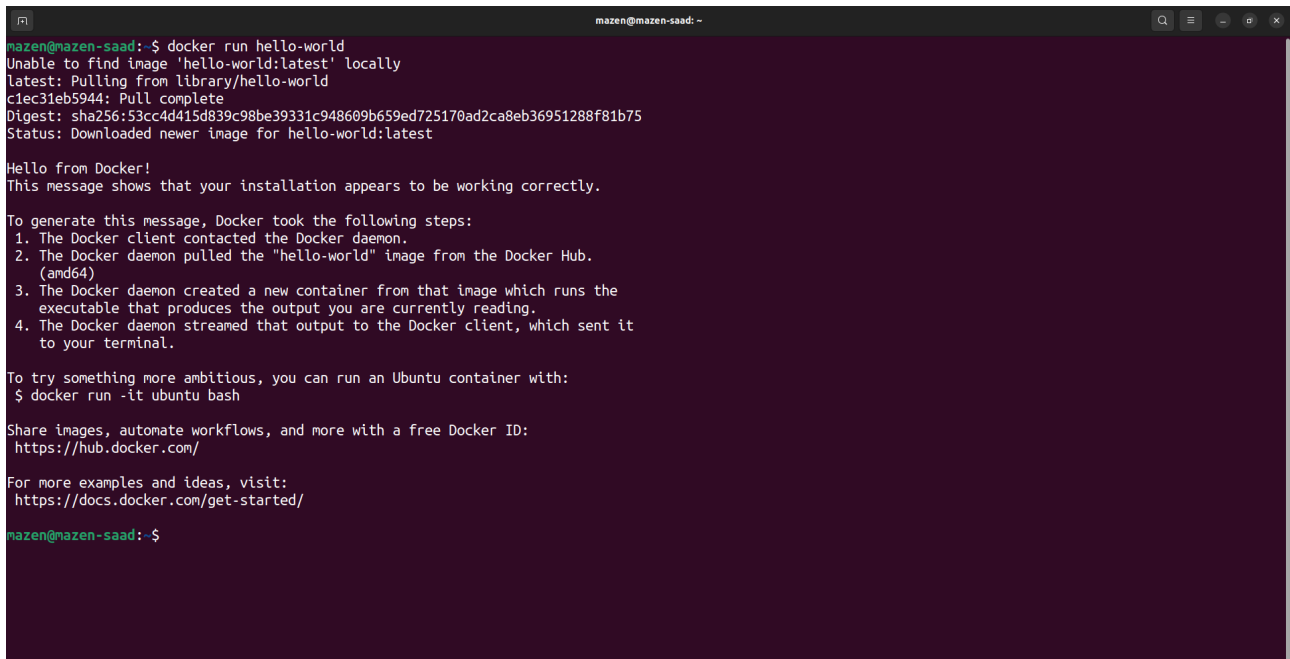
Also copies files and directories, but with additional functionality such as automatic extraction of compressed files (e.g., .tar) and the ability to download files from remote URLs. It is more powerful but can be less predictable than COPY.

## Problem 1:

1 - Run the container hello-world:-

|

docker run hello-world

A terminal window with a dark background and light green text. The window title is 'mazen@mazen-saad: ~'. The user has entered the command 'docker run hello-world'. The output shows that Docker pulled the 'hello-world:latest' image from the Docker Hub. It then displays a 'Hello from Docker!' message and explains the steps Docker took to run the container. Finally, it provides links to Docker Hub and Docker documentation.

```
mazen@mazen-saad:~$ docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:53cc4d415d839c98be39331c948609b659ed725170ad2ca8eb36951288f81b75
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

mazen@mazen-saad:~$
```

## 2- Check the container status

|  
docker ps -a

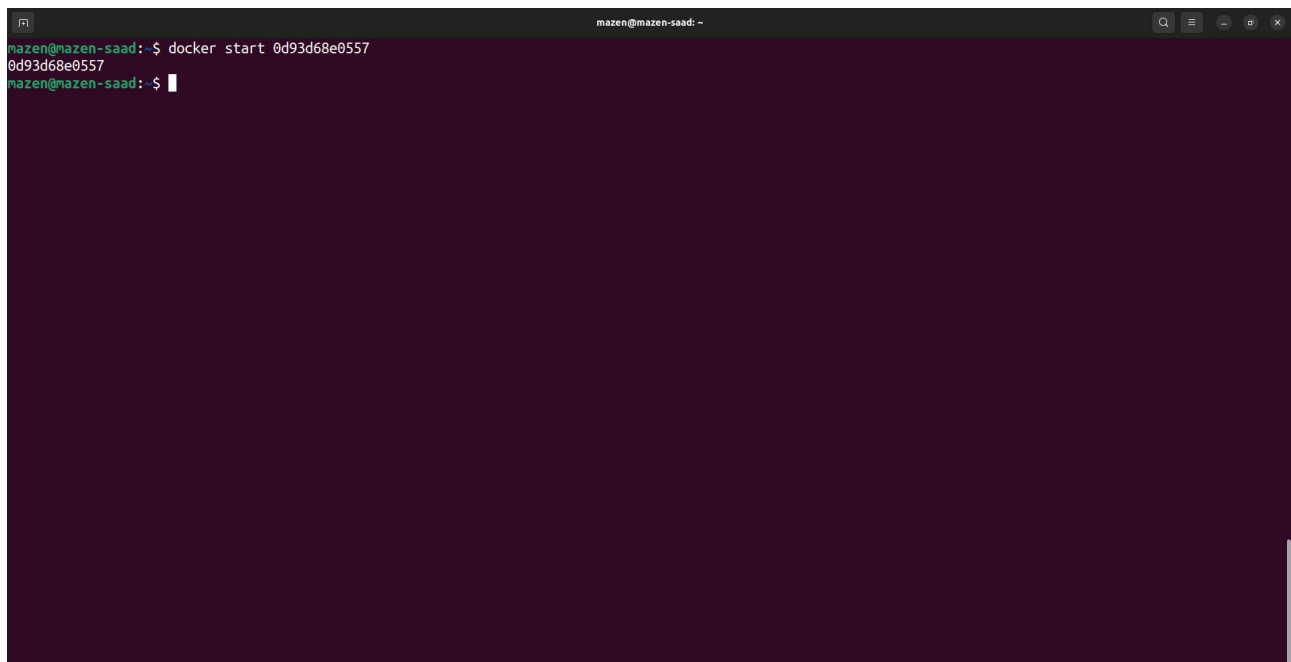
```
mazen@mazen-saad: ~$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
0d93d68e0557	hello-world	"/hello"	33 seconds ago	Exited (0) 27 seconds ago		upbeat_kapitsa
afc1fe7d5d2a	iti-docker-day1-5	"/docker-entrypoint...."	39 minutes ago	Exited (0) 24 minutes ago		bold_goldwasser
d2953a952e43	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		amazing_thompson
4f699003b171	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		romantic_gates
9a5811203ae9	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		vigilant_northcutt
3d36df5780e2	iti-docker-day1-2	"python3 app.py bash"	11 hours ago	Exited (130) 11 hours ago		great_moser
eb254c6f16fe	iti-docker-day1-2	"python3 app.py"	11 hours ago	Exited (255) 11 hours ago		heuristic_hermann
3d0d6c990818	iti-docker-day1-2	"python3 app.py bash"	11 hours ago	Exited (130) 11 hours ago		serene_mirzakhani
3109c786a9db	iti-docker-day1-1	"python3 app.py bash"	11 hours ago	Exited (0) 11 hours ago		admiring_roentgen
084926ea0a55	iti-docker-day1-1	"python3 app.py bash"	11 hours ago	Exited (0) 11 hours ago		festive_shamir
f2b7baa43af0	myimage	"/docker-entrypoint...."	13 hours ago	Exited (255) 11 hours ago	80/tcp	dreamy_greider
13ab8676b2f5	nginx	"/docker-entrypoint...."	13 hours ago	Exited (255) 11 hours ago	80/tcp	reverent_bell
5abd979abcc1	mysql	"docker-entrypoint.s..."	14 hours ago	Exited (255) 11 hours ago	3306/tcp, 33060/tcp	some-mysql
6edb49b93c23	python	"python3"	16 hours ago	Exited (0) 16 hours ago		tender_williams

```
mazen@mazen-saad: ~$
```

### 3- Start the stopped container

|  
docker start 0d93d68e0557

A terminal window with a dark background and light green text. The window title is 'mazen@mazen-saad: ~'. The prompt is 'mazen@mazen-saad:~\$'. The command 'docker start 0d93d68e0557' has been entered and executed. The output shows the container ID '0d93d68e0557' on the next line. The prompt is now 'mazen@mazen-saad:~\$' with a cursor. The terminal window has standard Linux window controls (minimize, maximize, close) in the top right corner.

```
mazen@mazen-saad:~$ docker start 0d93d68e0557
0d93d68e0557
mazen@mazen-saad:~$
```

#### 4- Remove the container

```
docker rm 0d93d68e0557
```

```
mazen@mazen-saad: ~$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
0d93d68e0557	hello-world	"/hello"	2 minutes ago	Exited (0) 32 seconds ago		upbeat_kapitsa
afc1fe7d5d2a	iti-docker-day1-5	"/docker-entrypoint...."	40 minutes ago	Exited (0) 26 minutes ago		bold_goldwasser
d2953a952e43	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		amazing_thompson
4f699003b171	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		romantic_gates
9a5811203ae9	iti-docker-day1-4	"python3 app.py bash"	10 hours ago	Exited (0) 10 hours ago		vigilant_northcutt
3d36df5780e2	iti-docker-day1-2	"python3 app.py bash"	11 hours ago	Exited (130) 11 hours ago		great_moser
eb254c6f16fe	iti-docker-day1-2	"python3 app.py"	11 hours ago	Exited (255) 11 hours ago		heuristic_hermann
3d0d6c990818	iti-docker-day1-2	"python3 app.py bash"	11 hours ago	Exited (130) 11 hours ago		serene_mirzakhani
3109c786a9db	iti-docker-day1-1	"python3 app.py bash"	12 hours ago	Exited (0) 12 hours ago		admiring_roentgen
084926ea0a55	iti-docker-day1-1	"python3 app.py bash"	12 hours ago	Exited (0) 12 hours ago		festive_shamir
f2b7baa43af0	myimage	"/docker-entrypoint...."	13 hours ago	Exited (255) 11 hours ago	80/tcp	dreamy_greider
13ab8676b2f5	nginx	"/docker-entrypoint...."	13 hours ago	Exited (255) 11 hours ago	80/tcp	reverent_bell
5abd979abcc1	mysql	"docker-entrypoint.s..."	14 hours ago	Exited (255) 11 hours ago	3306/tcp, 33060/tcp	some-mysql
6edb49b93c23	python	"python3"	16 hours ago	Exited (0) 16 hours ago		tender_williams

```
mazen@mazen-saad: ~$ docker rm 0d93d68e0557
0d93d68e0557
mazen@mazen-saad: ~$
```

## 5- Remove the image

|  
docker rmi hello-world

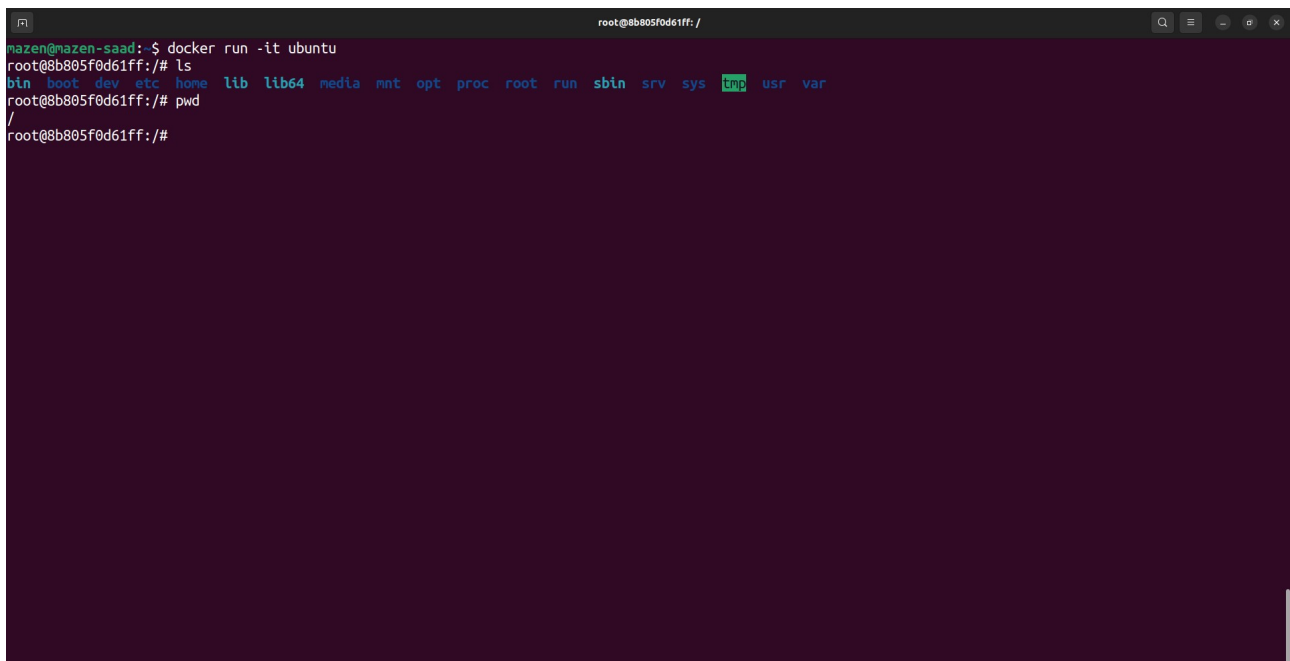
```
mazen@mazen-saad: ~$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
itti-docker-day1-4   latest             95555555ce0bb      10 hours ago       165MB
ma7en/itti-docker-day1-4   v1                 95555555ce0bb      10 hours ago       165MB
itti-docker-day1-2     latest             244a8a359dbd       11 hours ago       1.02GB
itti-docker-day1-3     latest             244a8a359dbd       11 hours ago       1.02GB
itti-docker-day1-1     latest             fb2568ea92dc       12 hours ago       1.02GB
myimage               latest             8b749bcf89d0       13 hours ago       188MB
nginx                 latest             5ef79149e0ec       2 weeks ago        188MB
<none>                <none>             3b3566db4c87       2 weeks ago        188MB
itti-docker-day1-5     latest             6f5010c61ed1       2 weeks ago        188MB
python                latest             0218518c77be       3 weeks ago        1.02GB
ubuntu                latest             edbfe74c41f8       4 weeks ago        78.1MB
mysql                 latest             a82a8f162e18       6 weeks ago        586MB
hello-world           latest             d2c94e258dcb       16 months ago      13.3kB
mazen@mazen-saad: ~$ docker rmi hello-world
Untagged: hello-world:latest
Untagged: hello-world@sha256:53cc4d415d839c98be39331c948609b659ed725170ad2ca8eb36951288f81b75
Deleted: sha256:d2c94e258dcb3c5ac2798d32e1249e42ef01cba4841c2234249495f87264ac5a
Deleted: sha256:ac28800ec8bb38d5c35b49d45a6ac4777544941199075dff8c4eb63e093aa81e
mazen@mazen-saad: ~$
```

## Problem 2:

1- Run container centos or ubuntu in an interactive mode

|

`docker run -it ubuntu`

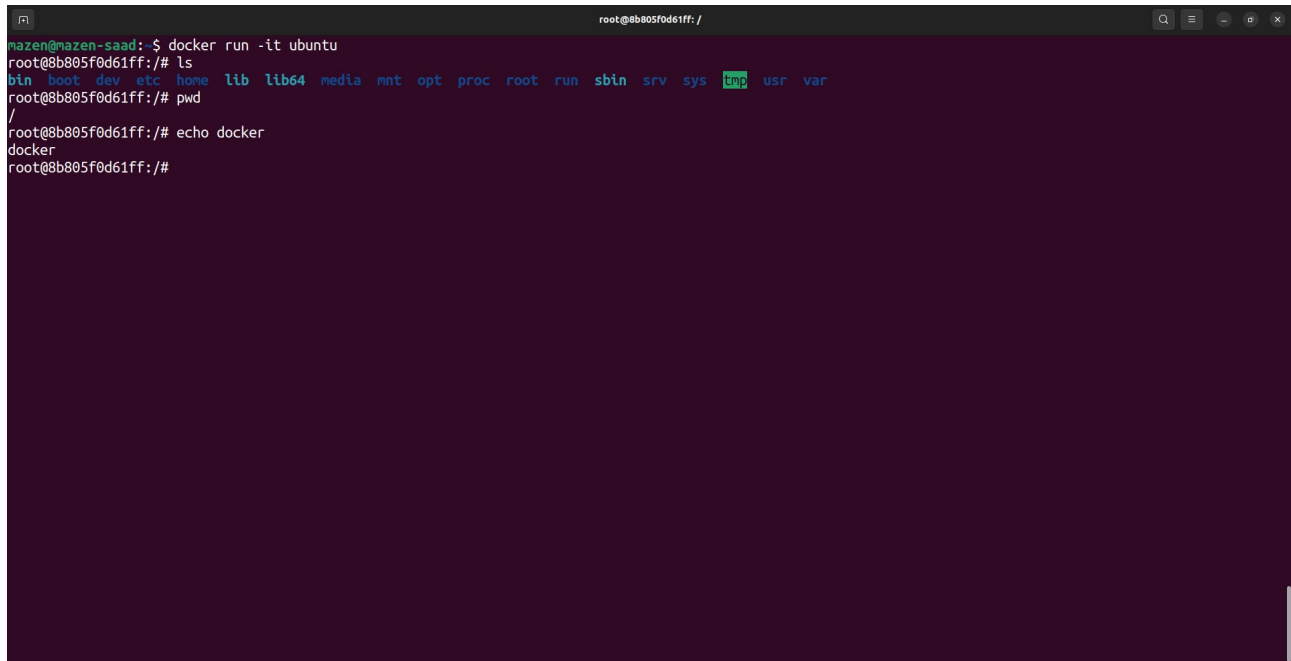


```
mazen@mazen-saad:~$ docker run -it ubuntu
root@8b805f0d61ff:/# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@8b805f0d61ff:/# pwd
/
root@8b805f0d61ff:/#
```



2-Run the following command in the container “echo docker ”

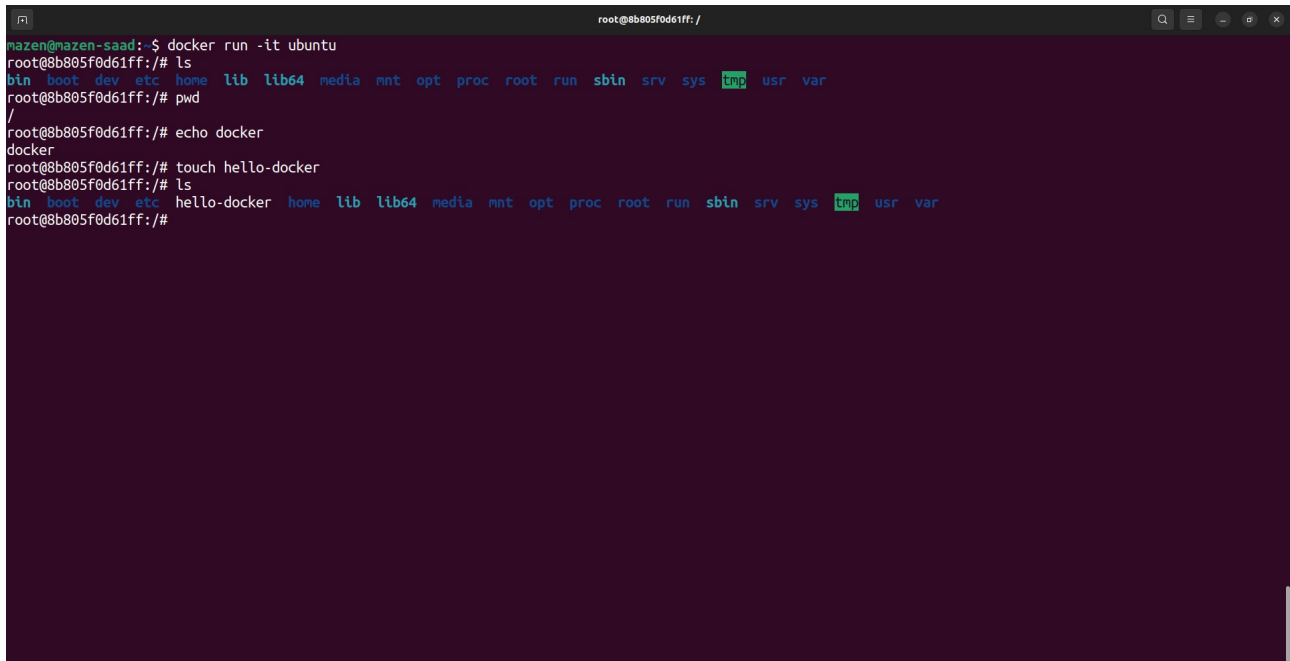
|  
echo docker

A terminal window with a dark background and light-colored text. The window title is 'root@8b805f0d61ff: /'. The terminal shows a sequence of commands and their outputs. First, 'mazen@mazen-saad:~\$ docker run -it ubuntu' is entered. Then, the prompt changes to 'root@8b805f0d61ff: /#'. The user runs 'ls', and the output lists various system directories like 'bin', 'boot', 'dev', etc. Next, the user runs 'pwd', and the output is '/'. Finally, the user runs 'echo docker', and the output is 'docker'. The terminal window has standard Linux window controls at the top right.

```
mazen@mazen-saad:~$ docker run -it ubuntu
root@8b805f0d61ff: /# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@8b805f0d61ff: /# pwd
/
root@8b805f0d61ff: /# echo docker
docker
root@8b805f0d61ff: /#
```

3-Open a bash shell in the container and touch a file named hello-docker

touch hello-docker

A terminal window titled 'root@8b805f0d61ff: /' with standard Ubuntu window controls. The terminal shows a sequence of commands and their outputs. First, 'mazen@mazen-saad:~\$ docker run -it ubuntu' is entered. The prompt changes to 'root@8b805f0d61ff: /#'. Then 'ls' is run, listing system directories. Next, 'pwd' is run, outputting '/'. Then 'echo docker' is run, outputting 'docker'. Then 'touch hello-docker' is run. Finally, 'ls' is run again, showing 'hello-docker' in the directory listing. The terminal text is as follows:

```
mazen@mazen-saad:~$ docker run -it ubuntu
root@8b805f0d61ff: /# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@8b805f0d61ff: /# pwd
/
root@8b805f0d61ff: /# echo docker
docker
root@8b805f0d61ff: /# touch hello-docker
root@8b805f0d61ff: /# ls
bin  boot  dev  etc  hello-docker  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@8b805f0d61ff: /#
```

4-Stop the container and remove it. Write your comment about the file hello-docker

|  
exit

docker ps -a

docker stop <CONTAINER\_ID>

docker rm <CONTAINER\_ID>

```
mazen@mazen-saad: ~  
root@8b805f0d61ff:/# exit  
exit  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES  
8b805f0d61ff   ubuntu        "/bin/bash"             About a minute ago    Exited (0) 5 seconds ago           nostalgic_bartik  
afc1fe7d5d2a   iti-docker-day1-5 "/docker-entrypoint..." 43 minutes ago      Exited (0) 29 minutes ago           bold_goldwasser  
d2953a952e43   iti-docker-day1-4 "python3 app.py bash"    10 hours ago        Exited (0) 10 hours ago           amazing_thompson  
4f699003b171   iti-docker-day1-4 "python3 app.py bash"    10 hours ago        Exited (0) 10 hours ago           romantic_gates  
9a5811203ae9   iti-docker-day1-4 "python3 app.py bash"    10 hours ago        Exited (0) 10 hours ago           vigilant_northcutt  
3d36df5780e2   iti-docker-day1-2 "python3 app.py bash"    11 hours ago        Exited (130) 11 hours ago          great_moser  
eb254c6f16fe   iti-docker-day1-2 "python3 app.py"         11 hours ago        Exited (255) 11 hours ago          heuristic_hermann  
3d0d6c990818   iti-docker-day1-2 "python3 app.py bash"    11 hours ago        Exited (130) 11 hours ago          serene_mirzakhani  
3109c786a9db   iti-docker-day1-1 "python3 app.py bash"    12 hours ago        Exited (0) 12 hours ago           admiring_roentgen  
084926ea0a55   iti-docker-day1-1 "python3 app.py bash"    12 hours ago        Exited (0) 12 hours ago           festive_shamir  
f2b7baa43af0   myinage       "/docker-entrypoint..." 13 hours ago        Exited (255) 11 hours ago          dreamy_greider  
13ab8676b2f5   nginx         "/docker-entrypoint..." 13 hours ago        Exited (255) 11 hours ago          reverent_bell  
5abd979abcc1   mysql         "docker-entrypoint.s..." 14 hours ago        Exited (255) 11 hours ago          some-mysql  
6edb49b93c23   python        "python3"                16 hours ago        Exited (0) 16 hours ago           tender_williams  
mazen@mazen-saad:~$ docker stop 8b805f0d61ff  
8b805f0d61ff  
mazen@mazen-saad:~$ docker rm 8b805f0d61ff  
8b805f0d61ff  
mazen@mazen-saad:~$
```

## 5-Remove all stopped containers

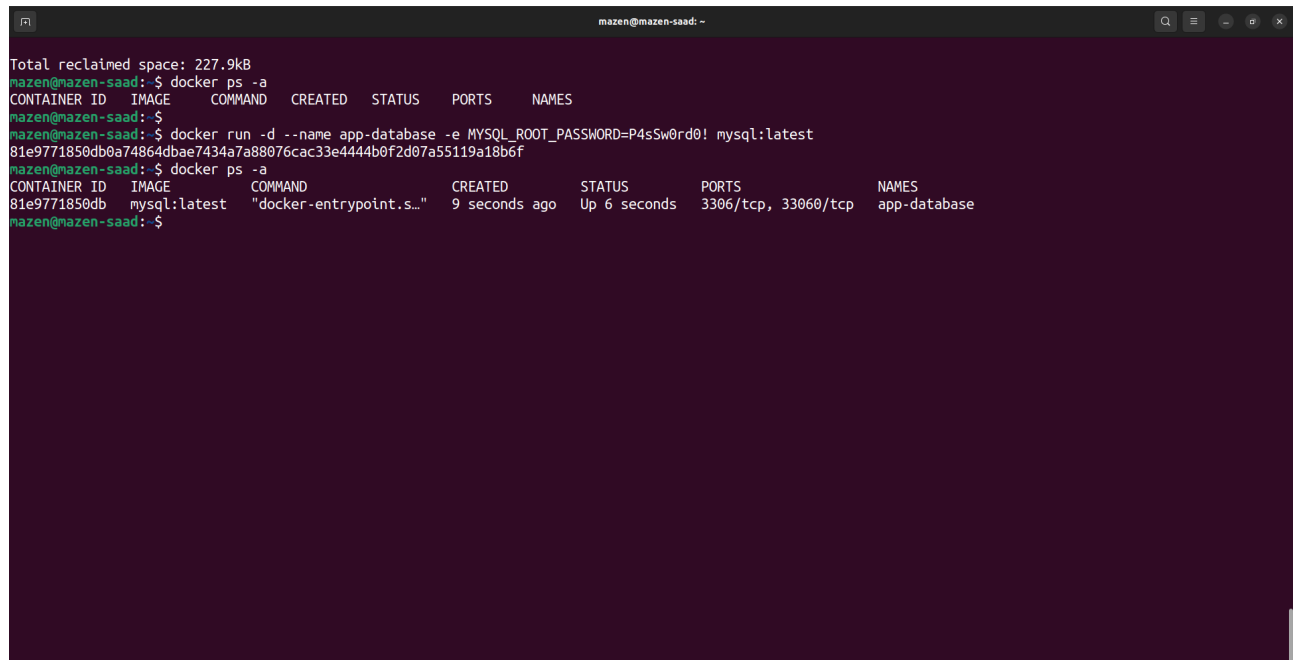
```
docker ps -a  
docker container prune
```

```
mazen@mazen-saad: ~  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES  
afc1fe7d5d2a   itti-docker-day1-5  "/docker-entrypoint..." 44 minutes ago Exited (0) 30 minutes ago          bold_goldwasser  
d2953a952e43   itti-docker-day1-4  "python3 app.py bash"    10 hours ago  Exited (0) 10 hours ago          amazing_thompson  
4f699003b171   itti-docker-day1-4  "python3 app.py bash"    10 hours ago  Exited (0) 10 hours ago          romantic_gates  
9a5811203ae9   itti-docker-day1-4  "python3 app.py bash"    10 hours ago  Exited (0) 10 hours ago          vigilant_northcutt  
3d36df5780e2   itti-docker-day1-2  "python3 app.py bash"    11 hours ago  Exited (130) 11 hours ago         great_moser  
eb254c6f16fe   itti-docker-day1-2  "python3 app.py"         11 hours ago  Exited (255) 11 hours ago         heuristic_hernann  
3d0d6c990818   itti-docker-day1-2  "python3 app.py bash"    11 hours ago  Exited (130) 11 hours ago         serene_mirzakhani  
3109c786a9db   itti-docker-day1-1  "python3 app.py bash"    12 hours ago  Exited (0) 12 hours ago          admiring_roentgen  
084926ea0a55   itti-docker-day1-1  "python3 app.py bash"    12 hours ago  Exited (0) 12 hours ago          festive_shamir  
f2b7baa43af0   myImage         "/docker-entrypoint..." 13 hours ago  Exited (255) 11 hours ago         dreamy_greider  
13ab8676b2f5   nginx          "/docker-entrypoint..." 13 hours ago  Exited (255) 11 hours ago         reverent_bell  
5ab979abcc1    mysql           "docker-entrypoint.s..." 14 hours ago  Exited (255) 11 hours ago         some-mysql  
6edb49b93c23   python         "python3"                16 hours ago  Exited (0) 16 hours ago          tender_williams  
mazen@mazen-saad:~$ docker container prune  
WARNING! This will remove all stopped containers.  
Are you sure you want to continue? [y/N] y  
Deleted Containers:  
afc1fe7d5d2a3dd4b369332a8194b19c2b2d90cc896947ee372da704876dbdef  
d2953a952e43bffb143e0a2ed76b8c087cd0e1b31ddc1402546b3b22cd727f78  
4f699003b171a43cd16b234295f7ea7152cceeclad167c82d37680f2482cd91ff  
9a5811203ae93b9c74a50244ecad436e883620dce9521c6de5315367a801a118  
3d36df5780e2a36edcccc4c1668ecb0bd32e0809e01d2dfc42312ae7ab2b351  
eb254c6f16fe742e1aa308ff5319bb40c06d753739a119bbbe2408d7354a4913  
3d0d6c9908186251f5d2b7074513292b008ab6a277a5d5da5a31bcea0fd63d49  
3109c786a9db17e4df7d44860c3683e93a12cc1b99a2b5d36c01370f38eb1de1  
084926ea0a5574385dbd79a38f362f425b2439aea151534a71f1855045f9b274  
f2b7baa43af02615644e8ab9be279edad48afd5c5f67c8a4fcb743b31318af44  
13ab8676b2f5baa8d7e8e4e48b1dac841dcd79bfa7f3197298319c0dddeb9617  
5ab979abcc119a9844a08c0ec88a533bfdbdb4c7319dc6a1d0125ed57dda8a5  
6edb49b93c23ff251525c908ddedcb4b357c838e257afe3a80f40dce0e83f77a  
Total reclaimed space: 227.9kB  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES  
mazen@mazen-saad:~$
```

### Problem 3:

Deploy a MySQL database called app-database. Use the mysql latest image, and use the -e flag to set MYSQL\_ROOT\_PASSWORD to P4sSw0rd0!. The container should run in the background.

```
|  
docker run -d --name app-database -e MYSQL_ROOT_PASSWORD=P4sSw0rd0!  
mysql:latest  
docker ps -a
```



```
mazen@mazen-saad: ~  
Total reclaimed space: 227.9kB  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES  
mazen@mazen-saad:~$  
mazen@mazen-saad:~$ docker run -d --name app-database -e MYSQL_ROOT_PASSWORD=P4sSw0rd0! mysql:latest  
81e9771850db0a74864dbae7434a7a88076cac33e4444b0f2d07a55119a18b6f  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES  
81e9771850db   mysql:latest  "docker-entrypoint.s..."  9 seconds ago  Up 6 seconds    3306/tcp, 33060/tcp  app-database  
mazen@mazen-saad:~$
```

#### Problem 4:

1- Run the image Nginx

|

`docker run -d --name my-nginx -p 8080:80 nginx`

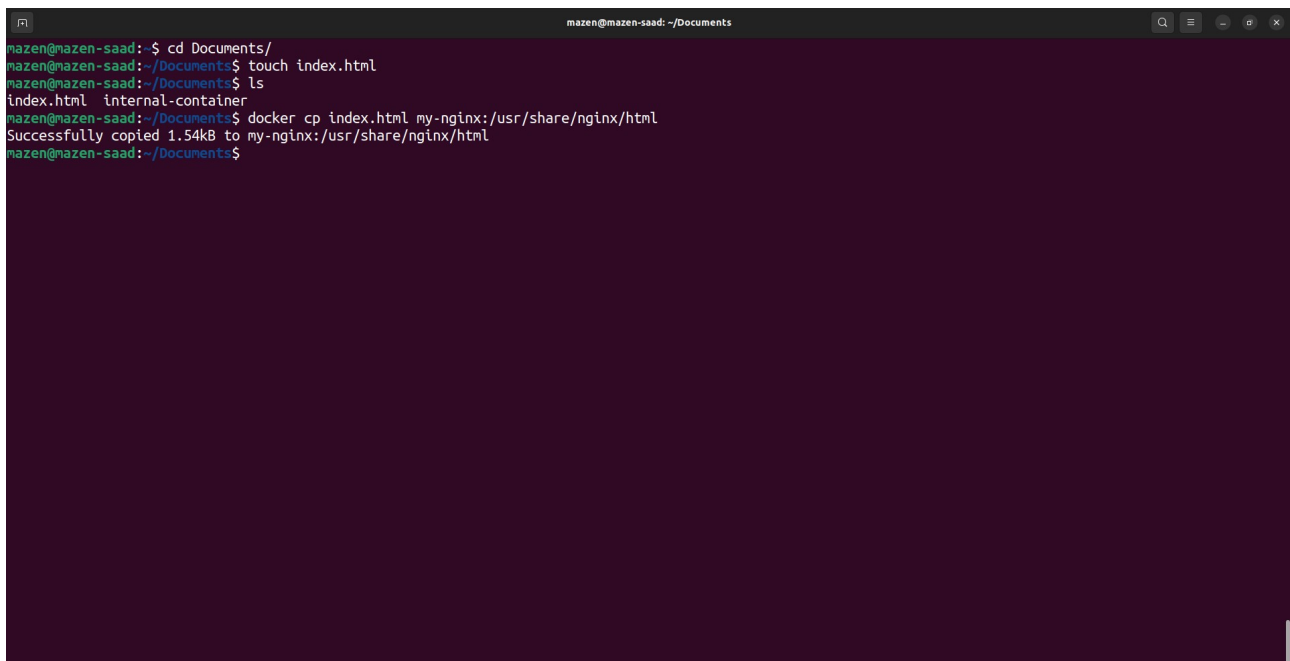
```
mazen@mazen-saad: ~  
mazen@mazen-saad:~$ docker run -d --name my-nginx -p 8080:80 nginx  
759f6b105c4c45ac9b88d34b5b9f2fc0393ca4514fea8d9c34ed6c8b885227e1  
mazen@mazen-saad:~$ docker ps -a  
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES  
759f6b105c4c   nginx     "/docker-entrypoint..." 7 seconds ago  Up 2 seconds  0.0.0.0:8080->80/tcp, [::]:8080->80/tcp  my-nginx  
81e9771850db   mysql:latest "docker-entrypoint.s..." 46 seconds ago Up 44 seconds  3306/tcp, 33060/tcp                app-database  
mazen@mazen-saad:~$
```

2-Add html static files to the container and make sure they are accessible

|

touch index.html

docker cp index.html my-nginx:/usr/share/nginx/html

A terminal window with a dark background and light green text. The window title is "mazen@mazen-saad: ~/Documents". The terminal shows the following commands and output:

```
mazen@mazen-saad:~$ cd Documents/  
mazen@mazen-saad:~/Documents$ touch index.html  
mazen@mazen-saad:~/Documents$ ls  
index.html  internal-container  
mazen@mazen-saad:~/Documents$ docker cp index.html my-nginx:/usr/share/nginx/html  
Successfully copied 1.54kB to my-nginx:/usr/share/nginx/html  
mazen@mazen-saad:~/Documents$
```

### 3-Commit the container with image name IMAGE\_NAME

|  
docker commit my-nginx IMAGE\_NAME

```
mazen@mazen-saad: ~/Documents
mazen@mazen-saad:~/Documents$ docker commit my-nginx IMAGE_NAME
invalid reference format: repository name (library/IMAGE_NAME) must be lowercase
mazen@mazen-saad:~/Documents$ docker commit my-nginx image_name
sha256:844c428529b422dbb67feb836449d31079dcc23237c96e672537b9270bbc9ea6
mazen@mazen-saad:~/Documents$ docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
image_name          latest      844c428529b4  38 seconds ago 188MB
iti-docker-day1-4   latest      9555555ce0bb  10 hours ago  165MB
mazen/iti-docker-day1-4 v1         9555555ce0bb  10 hours ago  165MB
iti-docker-day1-2   latest      244a8a359dbd  11 hours ago  1.02GB
iti-docker-day1-3   latest      244a8a359dbd  11 hours ago  1.02GB
iti-docker-day1-1   latest      fb2568ea92dc  12 hours ago  1.02GB
myimage             latest      8b749bcf89d0  13 hours ago  188MB
nginx               latest      5ef79149e0ec  2 weeks ago   188MB
iti-docker-day1-5   latest      6f5010c61ed1  2 weeks ago   188MB
<none>              <none>      3b3566db4c87  2 weeks ago   188MB
python              latest      0218518c77be  3 weeks ago   1.02GB
ubuntu              latest      edbfe74c41f8  4 weeks ago   78.1MB
mysql               latest      a82a8f162e18  6 weeks ago   586MB
mazen@mazen-saad:~/Documents$
```



## Problem 5:

1-Create a python simple app

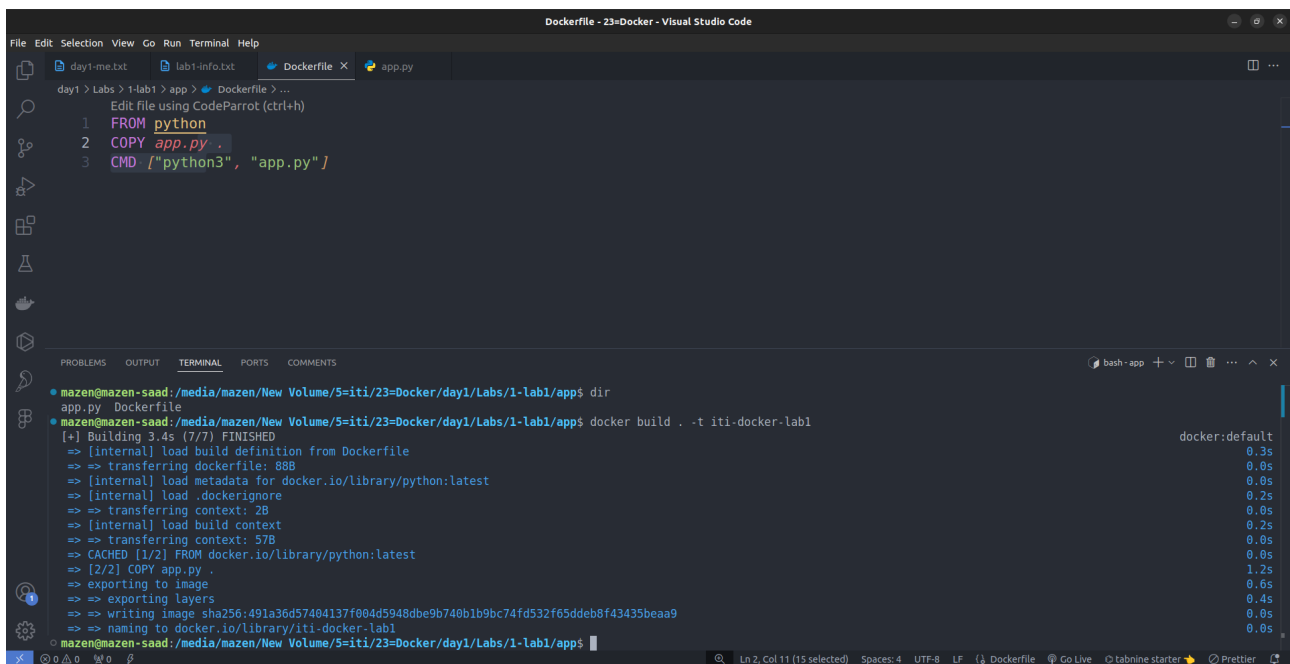
```
|  
print("Hello, Docker!")
```

Create a dockerfile to containerize the python app

```
|  
FROM python  
COPY app.py .  
CMD ["python3", "app.py"]
```

Build the image and test it

```
|  
docker build . -t iti-docker-lab1  
docker run -it iti-docker-lab1 bash
```



The screenshot shows the Visual Studio Code interface with a Dockerfile open in the editor. The Dockerfile contains the following content:

```
1 FROM python
2 COPY app.py .
3 CMD ["python3", "app.py"]
```

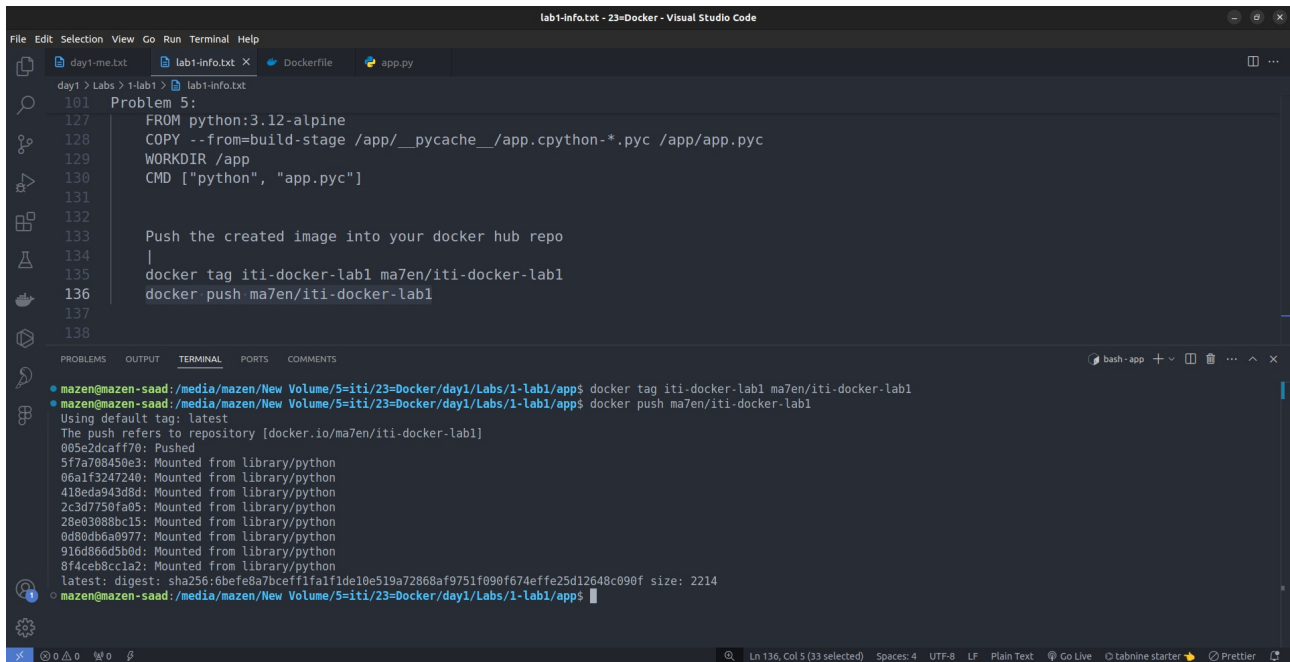
The terminal at the bottom shows the command `docker build . -t iti-docker-lab1` being executed. The output indicates that the build was successful, showing the progress of copying the Dockerfile, the context, and the application file, and finally exporting the image layers.

```
mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/apps$ dir
app.py Dockerfile
mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/apps$ docker build . -t iti-docker-lab1
[+] Building 3.4s (7/7) FINISHED
=> [internal] load build definition from Dockerfile                                docker:default
=> => transferring dockerfile: 88B                                                0.3s
=> [internal] load metadata for docker.io/library/python:latest                  0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.2s
=> [internal] load build context                                                  0.0s
=> => transferring context: 57B                                                  0.2s
=> CACHED [1/2] FROM docker.io/library/python:latest                            0.0s
=> [2/2] COPY app.py .                                                           1.2s
=> exporting to image                                                            0.0s
=> => exporting layers                                                            0.4s
=> writing image sha256:491a36d57404137f004d5948dbe9b740b1b9bc74fd532f65ddeb8f43435beaa9 0.0s
=> naming to docker.io/library/iti-docker-lab1                                  0.0s
mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/apps$
```

## 5-Push the created image into your docker hub repo

docker tag iti-docker-lab1 ma7en/iti-docker-lab1

docker push ma7en/iti-docker-lab1



The screenshot shows the Visual Studio Code editor with a Dockerfile open. The Dockerfile contains instructions to build a Python application. Below the editor, the terminal shows the execution of the Docker commands. The output indicates that the image was successfully pushed to Docker Hub.

```
lab1-info.txt - 23=Docker - Visual Studio Code
File Edit Selection View Go Run Terminal Help
day1-me.txt lab1-info.txt Dockerfile app.py
day1 > Labs > 1-lab1 > lab1-info.txt
101 Problem 5:
127 FROM python:3.12-alpine
128 COPY --from=build-stage /app/__pycache__/app.cpython-*.pyc /app/app.pyc
129 WORKDIR /app
130 CMD ["python", "app.pyc"]
131
132
133 Push the created image into your docker hub repo
134 |
135 docker tag iti-docker-lab1 ma7en/iti-docker-lab1
136 docker push ma7en/iti-docker-lab1
137
138
PROBLEMS OUTPUT TERMINAL PORTS COMMENTS
● mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/app$ docker tag iti-docker-lab1 ma7en/iti-docker-lab1
● mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/app$ docker push ma7en/iti-docker-lab1
Using default tag: latest
The push refers to repository [docker.io/ma7en/iti-docker-lab1]
005e2dcff70: Pushed
5f7a708450e3: Mounted from library/python
06a1f3247240: Mounted from library/python
418eda943d8d: Mounted from library/python
2c3d7750fa05: Mounted from library/python
28a02080bc15: Mounted from library/python
0d80db6a0977: Mounted from library/python
916d866d5b0d: Mounted from library/python
8f4ceb8ccla2: Mounted from library/python
latest: digest: sha256:0befe8a7bceff1fa1f1de10e519a72868af9751f090f674effe25d12648c090f size: 2214
○ mazen@mazen-saad:/media/mazen/New Volume/5=iti/23=Docker/day1/Labs/1-lab1/app$
```

