

Docker command:

1. docker build -t "Image_Name" .

Use: Build an image from dockerfile

docker build: To build docker image

-t : Name and optionally a tag in the 'name:tag' format

Image_Name: Name of docker image

Dot(.): For current directory

```
=> [internal] load build definition from Dockerfile 0.1s
=> => transferring dockerfile: 31B 0.1s
=> [internal] load .dockerignore 0.1s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/python:3.9.12 5.2s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [internal] load build context 0.1s
=> => transferring context: 122B 0.0s
=> CACHED [1/4] FROM docker.io/library/python:3.9.12@sha256:4200eda05642eabf85b70648e17e4b433f2d7608c0130ab5dcb56cce6bc35364 0.0s
=> [2/4] COPY . /app 0.2s
=> [3/4] WORKDIR /app 0.2s
=> [4/4] RUN pip install -r requirements.txt 61.0s
=> exporting to image 2.3s
=> => exporting layers 2.3s
=> => writing image sha256:776b1ab6bc168c5d9efa56d3c48eb5b62b4e8e0c67710f87224a4ee4376692c5 0.0s
=> => naming to docker.io/library/web-helloworld 0.0s
```

2. docker images

Use: To see list of images present in docker

```
(base) PS F:\1_Inueron_course\docker_practice> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
web-helloworld       latest             776b1ab6bc16       18 minutes ago     1.08GB
```

3. docker pull image_name:tag

Use: Pull an image or a repository from a registry/docker hub

docker pull: Download image from repository

image_name: Name of docker image /repository

tag: Tag of repository default **latest**

```
F:\1_Inueron_course>docker pull docker/getting-started
Using default tag: latest
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
docker.io/docker/getting-started:latest
```

4. docker run -d -p 80:80 docker/getting-started

Use: To run an docker image

docker run: To run docker image

-d: Tag to run the it in detach mode means it will run in backend model

-p: port

80: Host port number

80: Container port number

Docker Assignment

docker/getting-started: Image name

```
(base) PS F:\1_Inueron_course\docker_practice> docker run -d -p 80:80 docker/getting-started 8bfd723a17cdddc4560698dbbe7ee00a36f6c2f9814bcfaef7d457d672df0ab6
```

5. docker ps

Use: To see which image is currently running

```
(base) PS F:\1_Inueron_course\docker_practice> docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
8bfd723a17cd	docker/getting-started	"/docker-entrypoint..."	About a minute ago	Up About a minute	0.0.0.0:80->80/tcp	upbeat_babbage

6. docker stop container_id

Use: To stop container running

```
(base) PS F:\1_Inueron_course\docker_practice> docker stop 8bfd723a17cd 8bfd723a17cd
```

7. docker rmi -f image_name/image_id

docker rmi: To remove the image

-f: to remove forcefully

```
(base) PS F:\1_Inueron_course\docker_practice> docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
web-helloworld	latest	776b1ab6bc16	2 hours ago	1.08GB
docker/getting-started	latest	cb90f98fd791	6 months ago	28.8MB

```
(base) PS F:\1_Inueron_course\docker_practice> docker rmi -f cb90f98fd791
Untagged: docker/getting-started:latest
Untagged: docker/getting-started@sha256:b558be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aae
Deleted: sha256:cb90f98fd791dd49f09903cef3eb2245646b4d76b093825ea78e0f7bb8fb3403
```

8. docker push new_repo:tagname

Use: Upload image in docker hub

```
(base) F:\1_Inueron_course\docker_practice> docker push srikantabiswal/helloworld:latest
The push refers to repository [docker.io/srikantabiswal/helloworld]
bb1f5a6ac79c: Pushed
5f70bf18a086: Pushed
9bc13045d958: Pushed
212bcd807e9a: Mounted from library/python
b4b906e64b9d: Mounted from library/python
f3283f834a86: Mounted from library/python
0c7daf9a72c8: Mounted from library/python
75ba02937496: Mounted from library/python
288cf3a46e32: Mounted from library/python
186da837555d: Mounted from library/python
955c9335e041: Mounted from library/python
8e079fee2186: Mounted from library/python
latest: digest: sha256:e9f3cc351ae6277843359c7d4750eb65ed0a3a4702e7b3a58413fd860ed61746 size: 2843
```

9. docker rm container_name/id

Use: To remove the container

```
(base) F:\1_Inueron_course\docker_practice> docker rm 5fd1958c5c53 5fd1958c5c53
```

10. docker ps -a

Use: Shows all container present in docker

```
(base) F:\1_Inueron_course\docker_practice> docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
572547606f6d	srikantabiswal/helloworld	"python app.py"	6 minutes ago	Up 6 minutes		adoring_hypatia

11. docker attach container_id

Use: To run the command in attach mode, if you run the container in attach mode, we can't run the command after that until this containers will stopped.

```
(base) F:\1_Inueron_course\docker_practice>docker attach 572547606f6d
[]
```

12. docker run -it ubuntu bash

Use: To make interactive ubuntu cmd

```
(base) F:\1_Inueron_course\docker_practice>docker run -it ubuntu bash
root@862fdec2801a:/# []
```

```
root@862fdec2801a:/# cat /etc/*release*
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=22.04
DISTRIB_CODENAME=jammy
DISTRIB_DESCRIPTION="Ubuntu 22.04.1 LTS"
PRETTY_NAME="Ubuntu 22.04.1 LTS"
NAME="Ubuntu"
VERSION_ID="22.04"
VERSION="22.04.1 LTS (Jammy Jellyfish)"
VERSION_CODENAME=jammy
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
```

13. docker image -help

Use: To know more information about the command, I have used for docker image but we can use it for other command also.

```
(base) F:\1_Inueron_course\docker_practice>docker images --help

Usage:  docker images [OPTIONS] [REPOSITORY[:TAG]]

List images

Options:
  -a, --all                Show all images (default hides intermediate images)
  --digests                Show digests
  -f, --filter filter      Filter output based on conditions provided
  --format string          Pretty-print images using a Go template
  --no-trunc               Don't truncate output
  -q, --quiet              Only show image IDs
```

14. docker inspect name

Use: To inspect the about container

```
(base) F:\1_Inueron_course\docker_practice>docker ps
CONTAINER ID   IMAGE          COMMAND         CREATED        STATUS        PORTS        NAMES
47d4e76b9210   ubuntu:latest  "bash"         20 seconds ago Up 16 seconds         awesome_joliot

(base) F:\1_Inueron_course\docker_practice>docker inspect awesome_joliot
[
  {
    "Id": "47d4e76b92100de0c2b71a956748d71a4d17ad9cd5e13107bf2d19bc0cd91d54",
    "Created": "2022-10-11T12:59:13.2411957Z",
    "Path": "bash",
    "Args": [],
    "State": {
      "Status": "running",
      "Running": true,
      "Paused": false,
      "Restarting": false,
```

Docker Assignment

15. docker log name

Use: To know about the logs of container

```
(base) F:\1_Inueron_course\docker_practice>docker logs peaceful_lichterman
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:4000
* Running on http://172.17.0.3:4000
Press CTRL+C to quit
```

16. docker login

Use: To login in docker hub account

```
F:\1_Inueron_course\docker_practice>docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/
```

Assignment2:

docker pull hello-world

```
F:\1_Inueron_course\Docker>docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:18a657d0cc1c7d0678a3f8ea8b7eb4918bba25968d3e1b0adebfa71caddbc346
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
```

```
F:\1_Inueron_course\Docker>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
hello-world latest feb5d9fea6a5 12 months ago 13.3kB

F:\1_Inueron_course\Docker>4.docker run -d -p 80:80 hello-world
'4.docker' is not recognized as an internal or external command,
operable program or batch file.

F:\1_Inueron_course\Docker>docker run -d -p 80:80 hello-world
42d58edb7142f153c56c97fa43de6aeb2ff746ba004b6364590d90ba25b4d4d1

F:\1_Inueron_course\Docker>docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
42d58edb7142 hello-world "/hello" 57 seconds ago Exited (0) 55 seconds ago bold_snyder

F:\1_Inueron_course\Docker>docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
42d58edb7142 hello-world "/hello" 57 seconds ago Exited (0) 55 seconds ago bold_snyder
```

Assignment 3:

https://hub.docker.com/repository/docker/srikantabiswal/fastapi_helloworld