Common docker commands

1: This command helps you to know the installed version of the docker software on your system

docker –version

```
ubuntu@ip-172-31-83-79:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~20.04.1
ubuntu@ip-172-31-83-79:~$
```

2: This command helps you to pull the images

sudo docker pull <image_name>

```
ubuntu@ip-172-31-83-79:~$ sudo docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
3c645031de29: Pull complete
Digest: sha256:1b8d8ff4777f36f19bfe73ee4df61e3a0b789caeff29caa019539ec7c9a57f95
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
ubuntu@ip-172-31-83-79:~$
```

3: This command helps you in listing all the docker images downloaded on your system.(#it will show all the images we have)

sudo docker images

```
ubuntu@ip-172-31-83-79:~$ sudo docker images
REPOSITORY     TAG         IMAGE ID       CREATED        SIZE
ubuntu         latest      7af9ba4f0a47   12 days ago    77.9MB
ubuntu@ip-172-31-83-79:~$
```

4: This command helps in running containers from their image name. or in simple words will create a container using our image.

sudo docker run -it -d <image_name>

```
ubuntu@ip-172-31-83-79:~$ sudo docker run -it -d ubuntu
4b3b0cd7df71f236540058e42a918a4644d36dd8d33f0feb8d746272989863be
ubuntu@ip-172-31-83-79:~$
```

5: This command helps in listing all the containers which are running in the system. (#it will show all the containers we have)

sudo docker ps

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps
CONTAINER ID    IMAGE      COMMAND        CREATED        STATUS         PORTS      NAMES
4b3b0cd7df71    ubuntu     "/bin/bash"    3 minutes ago  Up 3 minutes              optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

6: in the above image you can see it has given some random name (**optimistic_napier**) to our container, so If you want to give some name to your container you can initialize it while creating it.

sudo docker run -it -d –name <Container_name> <image_name>

```
ubuntu@ip-172-31-83-79:~$ sudo docker run -it -d --name my-docker ubuntu
ac6e68cdb0266794c107cef055c73e121e156a510a094bb79307a0ab2a59602e
ubuntu@ip-172-31-83-79:~$ sudo docker ps
CONTAINER ID    IMAGE      COMMAND        CREATED        STATUS         PORTS      NAMES
ac6e68cdb026    ubuntu     "/bin/bash"    7 seconds ago  Up 6 seconds              my-docker
4b3b0cd7df71    ubuntu     "/bin/bash"    9 minutes ago  Up 9 minutes              optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

7: If there are any stopped containers, they can be seen by adding the **-a** flag in the 5 command.

sudo docker ps –a
As of now I don't have any stopped container so it's showing only these containers

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps -a
CONTAINER ID    IMAGE      COMMAND        CREATED         STATUS          PORTS      NAMES
ac6e68cdb026    ubuntu     "/bin/bash"    5 minutes ago   Up 5 minutes               my-docker
4b3b0cd7df71    ubuntu     "/bin/bash"    14 minutes ago  Up 14 minutes              optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

8: For stopping a running container, we use the **stop** command.

sudo docker stop <container_id>

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps -a
CONTAINER ID   IMAGE     COMMAND       CREATED          STATUS          PORTS        NAMES
ac6e68cdb026   ubuntu    "/bin/bash"   5 minutes ago    Up 5 minutes                 my-docker
4b3b0cd7df71   ubuntu    "/bin/bash"   14 minutes ago   Up 14 minutes                optimistic_napier
ubuntu@ip-172-31-83-79:~$ sudo docker stop 4b3b0cd7df71
4b3b0cd7df71
ubuntu@ip-172-31-83-79:~$
```

And now if will do sudo docker ps
It is showing only running container

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND       CREATED          STATUS          PORTS        NAMES
ac6e68cdb026   ubuntu    "/bin/bash"   10 minutes ago   Up 10 minutes                my-docker
ubuntu@ip-172-31-83-79:~$
```

Let's check with sudo docker ps -a it should show us both the
container

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps -a
CONTAINER ID   IMAGE     COMMAND       CREATED          STATUS                      PORTS        NAMES
ac6e68cdb026   ubuntu    "/bin/bash"   11 minutes ago   Up 11 minutes                            my-docker
4b3b0cd7df71   ubuntu    "/bin/bash"   20 minutes ago   Exited (137) 2 minutes ago               optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

9: This command kills the container by stopping its execution immediately.

sudo docker kill <container_id>

```
ubuntu@ip-172-31-83-79:~$ sudo docker kill ac6e68cdb026
ac6e68cdb026
ubuntu@ip-172-31-83-79:~$
```

NOTE: The difference between Docker kill and Docker stop: 'docker stop' gives the container time to shutdown gracefully; whereas, in situations when it is taking too much time for getting the container to stop, one can opt to kill it.

Important: you can not kill the container which is in stop state

10: For logging into/accessing the container, one can use the exec command.

==sudo docker exec -it <container_id> or <container_name> bash==

```
ubuntu@ip-172-31-83-79:~$ sudo docker exec -it 64f957e74b4e bash
root@64f957e74b4e:/#
```

Write ==exit== to get out of the container

```
ubuntu@ip-172-31-83-79:~$ sudo docker exec -it 64f957e74b4e bash
root@64f957e74b4e:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@64f957e74b4e:/# exit
exit
ubuntu@ip-172-31-83-79:~$
```

11: To remove a stopped container from the system, we use the **rm** command.

==sudo docker rm <container_id>==

Before using the above command there are 3 containers showing
2 containers status are in Exited

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps -a
CONTAINER ID   IMAGE    COMMAND       CREATED          STATUS                     PORTS     NAMES
64f957e74b4e   ubuntu   "/bin/bash"   10 minutes ago   Up 10 minutes                        my-demo
ac6e68cdb026   ubuntu   "/bin/bash"   26 minutes ago   Exited (137) 12 minutes ago          my-docker
4b3b0cd7df71   ubuntu   "/bin/bash"   35 minutes ago   Exited (137) 17 minutes ago          optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

Let's use the rm command to remove my-docker

```
ubuntu@ip-172-31-83-79:~$ sudo docker rm ac6e68cdb026
ac6e68cdb026
ubuntu@ip-172-31-83-79:~$
```

And we do ==sudo docker ps –a==

```
ubuntu@ip-172-31-83-79:~$ sudo docker ps -a
CONTAINER ID   IMAGE    COMMAND       CREATED          STATUS                     PORTS     NAMES
64f957e74b4e   ubuntu   "/bin/bash"   14 minutes ago   Up 13 minutes                        my-demo
4b3b0cd7df71   ubuntu   "/bin/bash"   39 minutes ago   Exited (137) 20 minutes ago          optimistic_napier
ubuntu@ip-172-31-83-79:~$
```

12: To remove an image from the system, we use the **rmi** command.

sudo docker rmi <image_name>

```
ubuntu@ip-172-31-83-79:~$ sudo docker images
REPOSITORY    TAG        IMAGE ID       CREATED       SIZE
nginx         latest     2ac752d7aeb1   6 days ago    188MB
ubuntu        latest     7af9ba4f0a47   12 days ago   77.9MB
ubuntu@ip-172-31-83-79:~$ sudo docker rmi 2ac752d7aeb1
Untagged: nginx:latest
Untagged: nginx@sha256:0463a96ac74b84a8a1b27f3d1f4ae5d1a70ea823219394e131f5bf3536674419
Deleted: sha256:2ac752d7aeb1d9281f708e7c51501c41baf90de15ffc9bca7c5d38b8da41b580
Deleted: sha256:6f48b48669b4a97eeac346e72e869c1e4c680268cca70fcdec25da738c5a7548
Deleted: sha256:64a386b3811048d74a7db8d1de097982cbef2ebbeec1dac1595bdbdf7d316328
Deleted: sha256:52a454c478bf4ba5e25a792469347a0796b520496647eca6f17dd385adbf2113
Deleted: sha256:fd16bb266cbd82f06608dfde01edef9d07b42ed0f4abbbd91c343c7764847961
Deleted: sha256:f8393e895cb6daa91475b380620c3531f4b6a1916f6c4d78f32b278d60d86d57
Deleted: sha256:6948ce15ba3e073bca22093105d3b19795b765bf4d51fbadbaff13fad0c523d7
Deleted: sha256:1f00ff20147800878a4ebc9c283f79149a1dde5cc11d659c69d3a9c0bfeb7d4f
ubuntu@ip-172-31-83-79:~$
```

Note: images which are used by a running container can not be deleted