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POD Lab 3:

1. What is the command to download an image?

Ans: docker pull <image name>

2. What is the command to get a list of downloaded images?

Ans: docker images

```
ubuntu@ip-172-31-1-98:~$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
bharg4vi/ubuntu-2	v1	87381942d1e1	39 minutes ago	77.8MB
jenkins/jenkins	latest	7ca43df5c70c	4 hours ago	471MB
ubuntu	latest	58db3edaf2be	6 days ago	77.8MB
nginx	stable-perl	3aeda1b0ec6a	3 weeks ago	188MB
nginx	latest	a99a39d070bf	3 weeks ago	142MB
hello-world	latest	feb5d9fea6a5	16 months ago	13.3kB

3. What is the command to get a list of ALL containers?

Ans: docker ps -a

```
ubuntu@ip-172-31-1-98:~$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
d0b2619960ce	ubuntu	"/bin/bash"	41 minutes ago	Exited (0) 41 minutes ago		sleepy_lalande
30e84b7498d2	jenkins/jenkins	"/usr/bin/tini -- /u..."	53 minutes ago	Up 53 minutes	8080/tcp, 50000/tcp	ugboat_hawking
62a238b08955	ubuntu	"bash"	About an hour ago	Exited (127) 55 minutes ago		kind_cray
c68c7263e5db	ubuntu	"bash"	About an hour ago	Exited (0) About an hour ago		nifty_bardeen
d223a02ce27a	ubuntu	"ls"	About an hour ago	Exited (0) About an hour ago		quizzical_shannon
78f397a425f7	ubuntu	"/bin/bash"	About an hour ago	Exited (0) About an hour ago		happy_curran
2b97942bb8c9	hello-world	"/hello"	About an hour ago	Exited (0) About an hour ago		youthful_hellman
672cf46e8645	nginx	"/docker-entrypoint..."	2 hours ago	Up 2 hours	0.0.0.0:7090->80/tcp, :::7090->80/tcp	bharg4vi_202051048
c8b58d4ac581	nginx	"/docker-entrypoint..."	2 hours ago	Up 2 hours	80/tcp	
bf8959d59d13	hello-world	"/hello"	2 hours ago	Exited (0) 2 hours ago		optimistic_heyrovsky
9a9c3d9a452f	hello-world	"/hello"	7 days ago	Exited (0) 7 days ago		elegant_gagarin
fdb23b34dc0	hello-world	"/hello"	7 days ago	Exited (0) 7 days ago		reverent_elion

4. What is the command to run a container from an image in an interactive mode?

Ans: docker run -it <image> bash

```
ubuntu@ip-172-31-1-98:~$ docker run -it ubuntu bash
root@acc7e68f6ebc:/#
```

5. What is the command to run a container from an image in detach mode?

Ans: docker run -dt <image>

```
ubuntu@ip-172-31-1-98:~$ docker run -dt ubuntu
9b36fef1971ff95cd961df673e10df7e7add85d049ee8cd479f3ad16e80d5ab3
```

6. What is the command to re-run an "EXITED" container in an interactive mode?

Ans: docker exec -it <container id> bash

```
ubuntu@ip-172-31-1-98:~$ docker exec -it 30e84b7498d2 bash
jenkins@30e84b7498d2:/#
```

7. What is the command to only create a container?

Ans: docker create <image name>

```
ubuntu@ip-172-31-1-98:~$ docker create busybox
Unable to find image 'busybox:latest' locally
latest: Pulling from library/busybox
205dae5015e7: Pull complete
Digest: sha256:7b3ccabfffc97de872a30dfd234fd972a66d247c8cfc69b0550f276481852627c
Status: Downloaded newer image for busybox:latest
27e363e5245cf7ddab065625b867878c3f3e234f7eb323e720dce0d833c8628d
ubuntu@ip-172-31-1-98:~$
```

8. What is the command to only re-run an “EXITED” container?

Ans: docker exec <container id>

```
ubuntu@ip-172-31-1-98:~$ docker exec 30e84b7498d2 bash
ubuntu@ip-172-31-1-98:~$
```

```
27e363e5245cf7ddab065625b867878c3f3e234f7eb323e720dce0d833c8628d
ubuntu@ip-172-31-1-98:~$ docker exec 30e84b7498d2 bash
ubuntu@ip-172-31-1-98:~$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
27e363e5245c	busybox	"sh"	3 minutes ago	Created
9b36fef1971f	ubuntu	"/bin/bash"	14 minutes ago	Up 14 minutes
acc7e68f6ebc	ubuntu	"bash"	18 minutes ago	Exited (0) 17 minutes ago
d0b2619960ce	ubuntu	"/bin/bash"	About an hour ago	Exited (0) About an hour ago
30e84b7498d2	jenkins/jenkins	"/usr/bin/tini -- /u..."	About an hour ago	Up About an hour
632a38b09585	ubuntu	"bash"	About an hour ago	Exited (127) About an hour ago
c68c7263e5db	ubuntu	"bash"	2 hours ago	Exited (0) 2 hours ago
d223a02ce27a	ubuntu	"ls"	2 hours ago	Exited (0) 2 hours ago
78f397a425f7	ubuntu	"/bin/bash"	2 hours ago	Exited (0) 2 hours ago
2b97942bb8c9	hello-world	"/hello"	2 hours ago	Exited (0) 2 hours ago
672cf46e8645	nginx	"/docker-entrypoint..."	2 hours ago	Up 2 hours
c8b58d4ac581	nginx	"/docker-entrypoint..."	2 hours ago	Up 2 hours
bf8959d59d13	hello-world	"/hello"	3 hours ago	Exited (0) 3 hours ago
9a9c3d9a452f	hello-world	"/hello"	7 days ago	Exited (0) 7 days ago
fdb23b34dc0	hello-world	"/hello"	7 days ago	Exited (0) 7 days ago

9. What is the command to rename a container from an image?

Ans: docker rename <current name/id> <new name/id>

```
2b97942bb8c9 hello-world /hello 2 hours ago Exited (0) 2 hours ago
672cf46e8645 nginx "/docker-entrypoint..." 2 hours ago Up 2 hours 0.0.0.0:7090->80/tcp, :::7090->80/tcp
c8b58d4ac581 nginx "/docker-entrypoint..." 2 hours ago Up 2 hours 80/tcp
```

10. What is the command to stop the “UP”(running) container?

Ans: docker stop <name/id of container>

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
27e363e5245c	busybox	"sh"	8 minutes ago	Created		wizardly_jackson
9b36fef1971f	ubuntu	"/bin/bash"	19 minutes ago	Exited (137) 7 seconds ago		blissful_jennings
acc7e68f6ebc	ubuntu	"bash"	23 minutes ago	Exited (0) 21 minutes ago		thirsty_torvalds
d0b2619960ce	ubuntu	"/bin/bash"	About an hour ago	Exited (0) About an hour ago		sleepy_lalande
30e84b7498d2	jenkins/jenkins	"/usr/bin/tini -- /u..."	About an hour ago	Up About an hour	8080/tcp, 50000/tcp	upbeat_hawking
632a38b09585	ubuntu	"bash"	2 hours ago	Exited (127) About an hour ago		kind_cray

11. What is the command to run a container which can be accessed from outside using port 81 and it will redirect to port 80 inside a container?

Ans: docker run -p 81:80 --name

```
ubuntu@ip-172-31-1-98:~$ docker run -p 81:80 nginx
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/02/01 11:52:00 [notice] 1#1: using the "epoll" event method
2023/02/01 11:52:00 [notice] 1#1: nginx/1.23.3
2023/02/01 11:52:00 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/02/01 11:52:00 [notice] 1#1: OS: Linux 5.15.0-1028-aws
2023/02/01 11:52:00 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/02/01 11:52:00 [notice] 1#1: start worker processes
2023/02/01 11:52:00 [notice] 1#1: start worker process 29
```

12. What is the command to get log details of a particular container?

Ans: docker logs --details <container id/name>

```
ubuntu@ip-172-31-1-98:~$ docker logs --details wizardly_jackson
ubuntu@ip-172-31-1-98:~$
```

13. What is the command to create an image out of a container?

Ans: docker commit <container name> <new name> :latest

```
ubuntu@ip-172-31-1-98:~$ docker commit bharg4vi new:latest
sha256:b45f9e25fae52ac5770c80043f8f6f0b4ea76eb9c80cb4841e2aa600dfc1dbaa
```

14. What is the command to upload an image to dockerhub?

Ans: docker tag my_image:latest username/repo:tag

docker push username/repo:tag

```
ubuntu@ip-172-31-1-98:~$ docker tag busybox:latest bharg4vi/forlab:tag
ubuntu@ip-172-31-1-98:~$ docker push bharg4vi/forlab:tag
The push refers to repository [docker.io/bharg4vi/forlab]
b64792c17e4a: Mounted from library/busybox
tag: digest: sha256:907ca53d7e2947e849b839b1cd258c98fd3916c60f2e6e70c30edbf741ab6754 size: 528
```

15. What is the command to remove an image?

Ans: docker rmi my_image

```
ubuntu@ip-172-31-1-98:~$ docker rmi busybox
Untagged: busybox:latest
Untagged: busybox@sha256:7b3ccabffc97de872a30dfd234fd972a66d247c8cfc69b0550f276481852627c
```

16. What is the command to remove a container?

Ans: docker rm my_container

```
ubuntu@ip-172-31-1-98:~$ docker rm fdbc23b34dc0
fdbc23b34dc0
```

17. What is the command get a list of only RUNNING containers?

Ans: docker ps

```
ubuntu@ip-172-31-1-98:~$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
30e84b7498d2	jenkins/jenkins	"/usr/bin/tini -- /u..."	2 hours ago	Up 2 hours	8080/tcp, 50000/tcp	upbeat_hawking
672cf46e8645	nginx	"/docker-entrypoint..."	3 hours ago	Up 3 hours	0.0.0.0:7090->80/tcp, :::7090->80/tcp	bharg4vi
c8b58d4ac581	nginx	"/docker-entrypoint..."	3 hours ago	Up 3 hours	80/tcp	newname