Lab6. Docker Container Image Lifecycle

1. Container Image를 어떻게 사용하는가?

```
$ docker search --help
$ sudo docker search nginx

$ sudo docker pull nginx:1.24
or
nginx:tagname   <---해당 이미지의 tagname은 docker hub에서 확인할 것

$ sudo docker image ls
$ sudo docker inspect nginx:1.24
$ sudo docker rmi nginx:1.24
$ sudo docker image ls
```

2. Container 실행 Lifecycle

1)Container 생성하기

```
$ sudo docker create --name webserver nginx:1.24
```

2)Container 실행하기

```
$ sudo docker start webserver
$ sudo docker ps
$ sudo docker inspect webserver
$ sudo docker stop webserver
$ sudo docker rm webserver
```

3)Container 생성 및 실행하기

```
$ sudo docker run --name webserver -d nginx:1.24
    -run은 pull > create > start
```

4)실행중인 Container 목록 확인하기

```
$ sudo docker ps
```

5)동작중인 Container 중지

```
$ docker stop webserver
```

6)Container 삭제하기

```
$ docker rm webserver
```

3. 실습하기

```
$ sudo docker search nginx
$ sudo docker pull nginx:1.24
$ sudo docker images
$ sudo docker pull mysql
$ sudo docker pull mysql:8
8: Pulling from library/mysql
Status: Downloaded newer image for mysql:8
docker.io/library/mysql:8
$ docker images  <--- mysql과 mysql:8이 서로 같은 Image ID..

$ sudo docker images --help
$ sudo docker images --no-trunc   <--- Image ID를 Full로 보여줌.

$ sudo docker ps -a
$ sudo create --name webserver nginx:1.24   <---기본적으로 background로 실행
$ sudo docker ps -a
$ sudo docker start webserver
$ sudo docker ps -a
```

```
$ sudo inspect webserver  <-- IP Address확인할 것
$ sudo docker inspect --format '{{.NetworkSettings.IPAddress}}' webserver  <--- IPAddress 만 확인
$ alias
$ alias cip="sudo docker inspect --format '{{.NetworkSettings.IPAddress}}' webserver"
$ alias
$ cip
$ unalias cip

$ curl 172.17.0.2
$ curl 172.17.0.2/aaa.html   --> Not Found
$ sudo docker logs webserver

$ sudo docker logs -f webserver
-별도의 세션에서
$ curl 172.17.0.2
$ curl 172.17.0.2/aaa.html
--> 계속 log가 쌓이는 것 확인할 것

$ sudo docker top webserver  -> 실행중인 Container의 Process 목록 확인

$ sudo docker exec -it webserver /bin/bash
root@689e289e8b6f:/# cd /usr/share/nginx/html
root@689e289e8b6f:/usr/share/nginx/html# echo "Hello, World" > index.html
root@689e289e8b6f:/usr/share/nginx/html# exit
exit
$ curl 172.17.0.2
Hello, World

$ sudo docker stop webserver
$ sudo docker ps -a
$ sudo docker start webserver
$ curl 172.17.0.2
Hello, World
$ sudo docker rm webserver
Error response from daemon: You cannot remove a running container
689e289e8b6f17b81388d5d5d7b605e0daf2d495fd0cf9837a044097473f87f5. Stop the container before
attempting removal or force remove

$ sudo docker rm -f webserver
$ sudo docker ps -a
```