

## 1) 도커 실행하기

```
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C:\Users\Husep>docker --version
Docker version 20.10.11, build dea939c

C:\Users\Husep>docker run hello-world

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/

C:\Users\Husep>
```

## 2) container 생성하기

```
Hello from Docker!
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To try something more ambitious, you can run an Ubuntu container with:
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C:\Users\Husep>docker pull ubuntu:20.04
20.04: Pulling from library/ubuntu
Digest: sha256:b3c11e810e73060024a638e7e013b11d4da2675088f4781e50ae288f3322
Status: Image is up to date for ubuntu:20.04
docker.io/library/ubuntu:20.04

C:\Users\Husep>
```

## 3) container 실행하기

```
root@d0c9b037d0b:/
$ docker run -it ubuntu bash

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Status: Image is up to date for ubuntu:20.04
docker.io/library/ubuntu:20.04

C:\Users\Husep>docker images
REPOSITORY          TAG             IMAGE ID          SIZE
docker.io/tutorial  latest          e01315d92ead     20.8MB
eyj9h/docker.io/tutorial  latest          e01315d92ead     20.8MB
alpine/git          latest          ab970b44a344     22.7MB
ubuntu              20.04          ba8acccc929      22.0MB
hello-world         latest         feb5d976a8a5     13.3KB

C:\Users\Husep>docker run -it --name ubuntu-00 ubuntu:20.04 /bin/bash
root@d0c9b037d0b:/# ls
bin boot dev etc home lib lib32 lib64 libx32 media mnt opt proc root run sbin src sys usr var
root@d0c9b037d0b:/#
```

#### 4) container, image 삭제하기

```

Microsoft Windows [Version 10.0.19043.1348]
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C:\Users\User>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
d0c9b6361d0b   ubuntu:20.04   "/bin/bash"             2 minutes ago Exited (0) 24 seconds ago
4ba969adfd8b   hello-world    "/hello"                 6 minutes ago Exited (0) 6 minutes ago
affectionate_herschel
b6df209ed9e7   hello-world    "/hello"                 18 hours ago  Exited (0) 18 hours ago
relaxed_pike
d96f630ac330   docker101/tutorial
tcp_docker-tutorial
ea0194553b0a   alpine/git     "git clone https://g-    18 hours ago  Exited (0) 18 hours ago
repo

C:\Users\User>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
docker101/tutorial   latest    a0131a052aa4   18 hours ago   23.5MB
kyj98/docker101/tutorial   latest    a0131a052aa4   18 hours ago   23.5MB
alpine/git          latest    c6b70534b534   2 weeks ago    27.4MB
ubuntu              20.04    ba6acccead29   7 weeks ago    72.8MB
hello-world         latest    feb5d9fea6a5   2 months ago   13.3kB

C:\Users\User>

```

```

Microsoft Windows [Version 10.0.19043.1348]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User>docker rm d0c9b6361d0b
d0c9b6361d0b

C:\Users\User>docker rmi ba6acccead29
Unlegged: ubuntu:20.04
Deleted: sha256:ba6acccead2923ace4c2acc6a2378cb14cd4b8a51a4e14a252a23b846d19b6c1
Deleted: sha256:11f4ee41275804bc8091ac465d4854a342706c00f11b5f12a1641c0d1bb78b

C:\Users\User>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
4ba969adfd8b   hello-world    "/hello"                 8 minutes ago Exited (0) 8 minutes ago
affectionate_herschel
b6df209ed9e7   hello-world    "/hello"                 18 hours ago  Exited (0) 18 hours ago
relaxed_pike
d96f630ac330   docker101/tutorial
tcp_docker-tutorial
ea0194553b0a   alpine/git     "git clone https://g-    18 hours ago  Exited (0) 18 hours ago
repo

C:\Users\User>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
kyj98/docker101/tutorial   latest    a0131a052aa4   18 hours ago   23.5MB
docker101/tutorial   latest    a0131a052aa4   18 hours ago   23.5MB
alpine/git          latest    c6b70534b534   2 weeks ago    27.4MB
hello-world         latest    feb5d9fea6a5   2 months ago   13.3kB

C:\Users\User>

```

## 5) 파이썬 설치 및 실행해보기

```

C:\Users\User>docker run --name server -t ubuntu:20.04
20.04: Pulling from library/ubuntu
d17f4b64dd... Pull complete
Digest: sha256:42311a818c8a5c0c5d4d533c70b371d4d6867c014731b0a024913227
Status: Downloaded newer image for ubuntu:20.04
docker.io/ubuntu:20.04

C:\Users\User>docker run --name server -t ubuntu:20.04
root@6540ce039d21:/# apt update
Get:1 http://archive.ubuntu.com/ubuntu focal InRelease [246 kB]
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [329 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [109 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [726 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1321 kB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [30.1 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [127.6 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [786 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1747 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [33.6 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1107 kB]
Get:17 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [21.7 kB]
Get:18 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [50.0 kB]
Fetched 20.1 MB in 1min 22s (244 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@6540ce039d21:/# apt install python3
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  lib3.9-stdlib libpython3.9-minimal libpython3.9-stdlib python3.9-minimal
  python3.9 python3.9-dev python3.9-doc python3.9-venv python3.9-wheel python3.9-zip
  Suggested packages:
  python3-doc python3-dev python3-idle python3-pip python3-setuptools python3-tk
  python3-venv python3-wheel python3-zip
The following NEW packages will be installed:
  python3

```

## 6) container 작업 내용 image로 생성하기

```

C:\Users\User>docker start 540ce910021
540ce910021

C:\Users\User>docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
540ce910021   ubuntu:20.04   bash                    9 minutes ago   Up 2 minutes   0.0.0.0:80->80/tcp   funny_kepler
06c6f1856039   ubuntu:20.04   bash                    15 minutes ago   Up 56 seconds               server

C:\Users\User>docker exec server python --version
OCI runtime exec failed: exec failed: container_linux.go:380: starting container process caused: exec: "python": executable file not found in $PATH: unknown

C:\Users\User>docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
540ce910021   ubuntu:20.04   bash                    10 minutes ago   Up 9 minutes   0.0.0.0:80->80/tcp   funny_kepler
06c6f1856039   ubuntu:20.04   bash                    16 minutes ago   Up About a minute               server
06c69ad14eb     heli-o-world   /hel o*                 26 minutes ago   Exited (9) 26 minutes ago   affectionate_hersche
b6d1309c9c7     heli-o-world   /hel o*                 18 hours ago     Exited (0) 18 hours ago     relaxed_pike
06f638a330     docker/101tutorial   /docker-ortspoint -f 18 hours ago   Exited (255) 14 hours ago   docker-101tutorial
e60f455b5a     alpine/git     git clone https://g    18 hours ago     Exited (0) 18 hours ago     repo

C:\Users\User>docker start 540ce910021
540ce910021

C:\Users\User>docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
540ce910021   ubuntu:20.04   bash                    10 minutes ago   Up 3 minutes   0.0.0.0:80->80/tcp   funny_kepler
06c6f1856039   ubuntu:20.04   bash                    15 minutes ago   Up 3 minutes               server

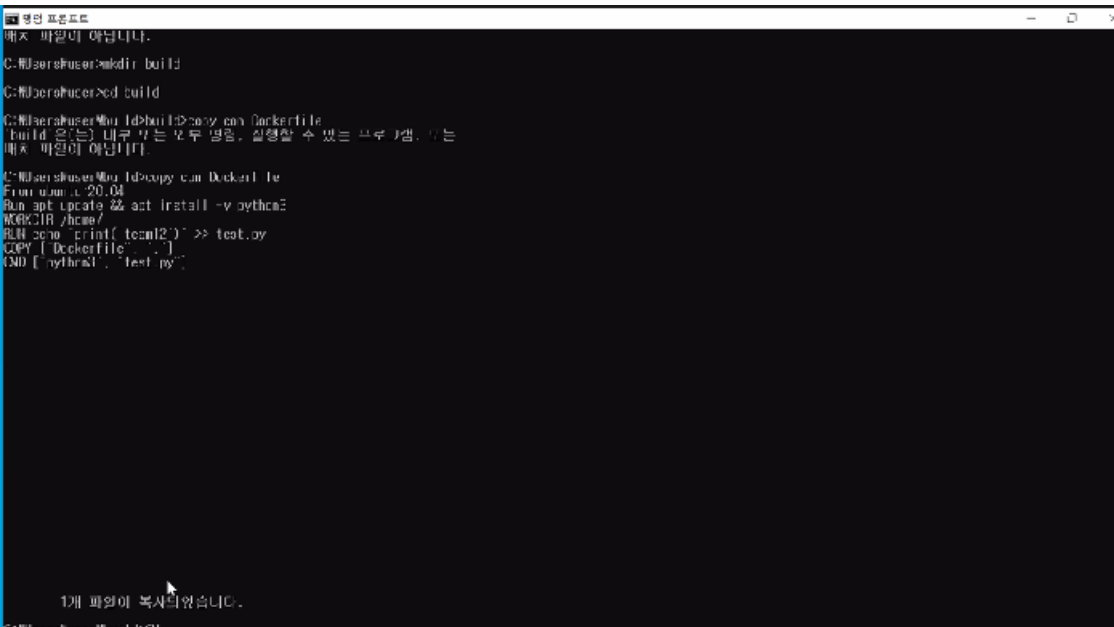
C:\Users\User>docker exec funny_kepler python --version
python 2.7.18

C:\Users\User>docker commit funny_kepler team12
sha256-00e81a12b6d6b301b6331a59c9d14c756cb73e6163519b11c79e5e1538e

C:\Users\User>docker images
REPOSITORY      TAG      IMAGE ID      CREATED        SIZE
team12          latest   00081af2b6d   7 seconds ago   14 MB
funny3/docker/101tutorial   latest   a012e052b6c   9 hours ago     20.1 MB
docker/101tutorial   latest   a3a0c24b33c   2 weeks ago     27.4 MB
alpine/git        20.04   b6b6c9cd429   7 weeks ago     12.8 MB
heli-o-world       latest   1d65de5a6d5   2 months ago    18.3 KB

```

## 7) docker 파일 작성하기



```

명단 프로그램
C:\Users\user>mkdir build
C:\Users\user>cd build
C:\Users\user>docker build -t my Dockerfile
[build output]
C:\Users\user>docker run --rm -it my python3
Python 3.10.0
Run apt update && apt install -y python3
WORKDIR /home/
RUN echo "print('test.py')" >> test.py
COPY ["Dockerfile", "."]
CMD ["python3", "test.py"]

```

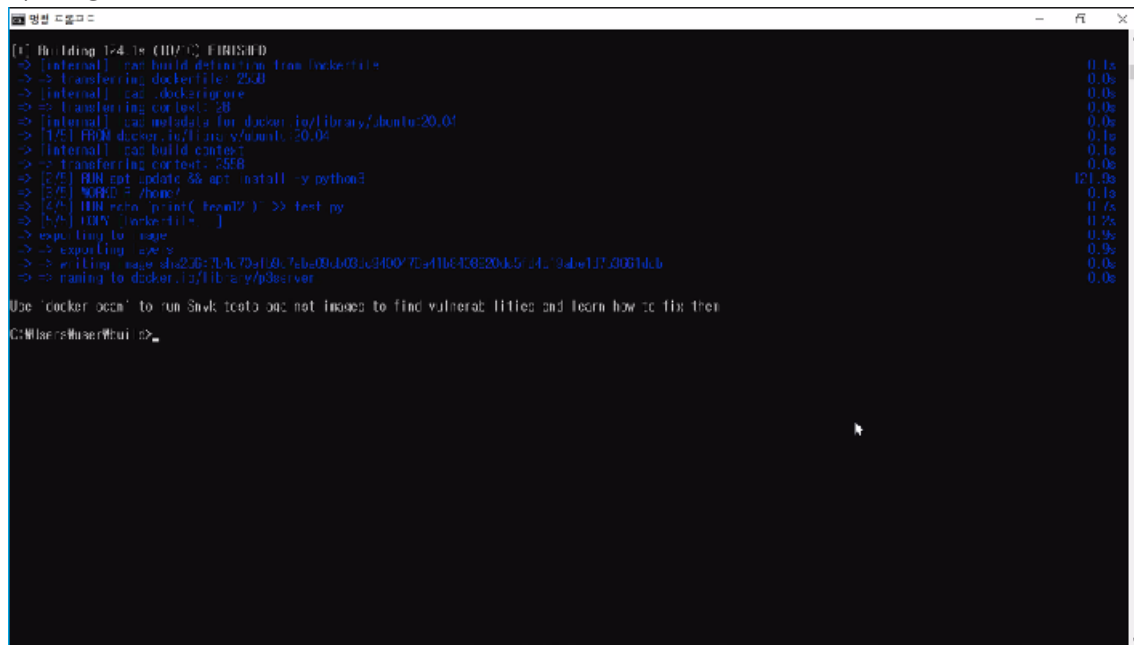
1개 파일이 복사되었습니다.

```

C:\Users\user>docker run --rm -it my python3

```

## 8) image 빌드하기



## 9) image를 container에서 실행하기

