

ASSIGNMENT-3

IMPLEMENTATION OF VIRTUAL MACHINE AND DOCKER

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Checking Docker Version

```
ubuntu@ip-172-31-12-45:~$ docker --version
Docker version 26.1.1, build 4cf5afa
```

```
ubuntu@ip-172-31-12-45:~$ sudo systemctl start docker
```

```
ubuntu@ip-172-31-12-45:~$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
  Loaded: loaded (/lib/systemd/system/docker.service; enabled)
  Active: active (running) since Mon 03 Feb 2026 10:15:21 UTC; 8s ago
TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
   Main PID: 1324 (dockerd)
     Tasks: 21
    Memory: 44.8M
      CPU: 312ms
     CGroup: /system.slice/docker.service
             └─1324 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
```

Dockerfile Creation

```
ubuntu@ip-172-31-12-45:~$ nano Dockerfile
```

```
FROM ubuntu:latest
CMD ["echo", "Hello from Docker Container"]
```

Building Docker Image

```
ubuntu@ip-172-31-12-45:~$ docker build -t mycontainer .
Sending build context to Docker daemon 2.048kB
Step 1/2 : FROM ubuntu:latest
latest: Pulling from library/ubuntu
Digest: sha256:8c6a8b0b9d93a5e91c4eab1234567890abcdef1234567890abcdef12345678
Status: Downloaded newer image for ubuntu:latest
---> 1f6ddc1b2547
Step 2/2 : CMD ["echo", "Hello from Docker Container"]
---> Running in 4d7c3a2b1f9e
---> 9ab8c7d6e5f4
Successfully built 9ab8c7d6e5f4
Successfully tagged mycontainer:latest
```

```
ubuntu@ip-172-31-12-45:~$ docker run mycontainer
Hello from Docker Container
```

Listing Containers

```
ubuntu@ip-172-31-12-45:~$ docker ps -a
CONTAINER ID   IMAGE       COMMAND                  CREATED        STATUS
a1b2c3d4e5f6   mycontainer   "echo Hello from Doc..."   10 seconds ago   Exited (0) 9 seconds ago
```

```
docker ps -a
COMMAND                  CREATED        STATUS          PORTS      NAMES
"echo Hello from Doc..."  10 seconds ago  Exited (0) 9 seconds ago      peaceful_morse
```