Module-3: Docker – I Assignment – 4

You have been asked to:

Create a dockerfile with the following specs:
- Ubuntu container
- Apache2 installed
- Apache2 should automatically run once the container starts

Submit the dockerfile, for assignment completion

Solution:

1) **Create an EC2 and connect to it. Update the packages** ================
    sudo apt update && sudo apt upgrade -y
2) **Install docker** =============== sudo apt install -y docker.io
3) **Start and enable docker** ================ sudo systemctl start docker
    sudo systemctl enable docker

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-10-158:~$ sudo systemctl start docker
sudo systemctl enable docker
ubuntu@ip-172-31-10-158:~$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
     Active: active (running) since Sun 2025-02-09 17:24:42 UTC; 59s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 9092 (dockerd)
      Tasks: 8
     Memory: 38.3M (peak: 38.4M)
        CPU: 249ms
     CGroup: /system.slice/docker.service
             └─9092 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
```

4) **Create a Dockerfile**: Create a new directory========= mkdir my-docker-project
5) **Navigate to the Project Directory** ============= cd my-docker-project

```
~
ubuntu@ip-172-31-10-158:~$ mkdir my-docker-project
ubuntu@ip-172-31-10-158:~$ cd my-docker-project
ubuntu@ip-172-31-10-158:~/my-docker-project$
```

6) **Use a text editor of your choice to create the Dockerfile** ========= nano Dockerfile
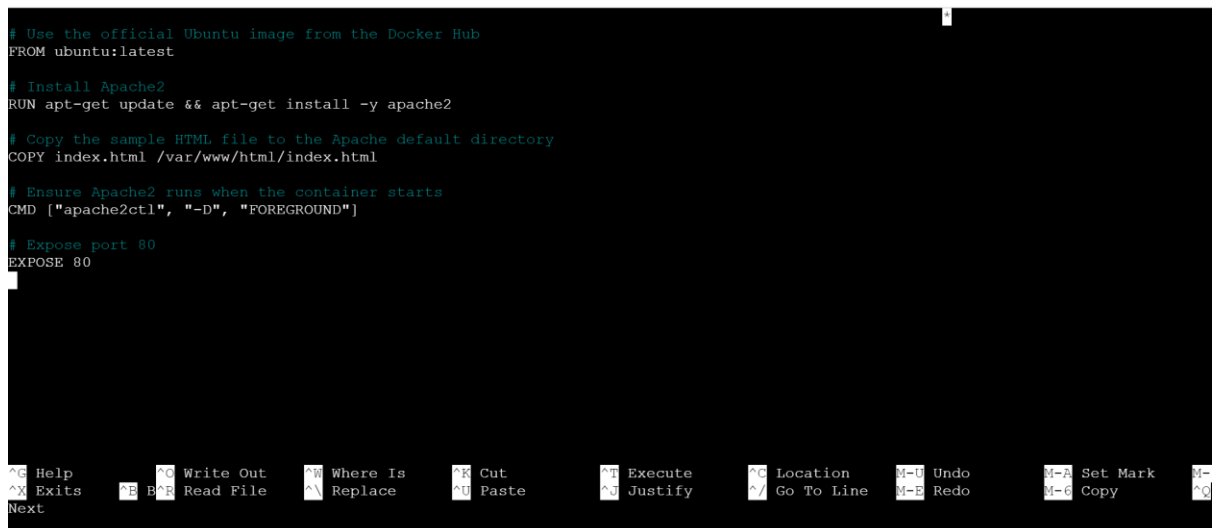7) Write the Dockerfile Content===========

```
# Use the official Ubuntu image from the Docker Hub
FROM ubuntu:latest

# Install Apache2
RUN apt-get update && apt-get install -y apache2

# Copy the sample HTML file to the Apache default directory
COPY index.html /var/www/html/index.html

# Ensure Apache2 runs when the container starts
CMD ["apache2ctl", "-D", "FOREGROUND"]

# Expose port 80
EXPOSE 80
```

```
^G Help       ^O Write Out   ^W Where Is   ^K Cut       ^T Execute   ^C Location   M-U Undo   M-A Set Mark   M-
^X Exits    ^B B^R Read File  ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line M-E Redo   M-6 Copy       ^Q
Next
```

Dockerfile

FROM ubuntu:latest

RUN apt-get update && apt-get install -y apache2

CMD ["apache2ctl", "-D", "FOREGROUND"]

EXPOSE 80

==

Explanation:

a) **Base Image**: The first line specifies the base image for the container, which is Ubuntu. The `latest` tag ensures that the most recent version of Ubuntu is used.
b) **Install Apache2**: The `RUN` command is used to update the package lists and install Apache2.
c) **Start Apache2**: The `CMD` command ensures that Apache2 runs in the foreground when the container starts.
d) **Expose Port 80**: The `EXPOSE` command specifies that the container listens on port 80 at runtime.

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Submit the dockerfile, for assignment completion: Follow the link

 https://github.com/poulomi-design999/Devops/blob/main/Dockerfile.txt