

# Dockerfile Assignment

## Instructions:

- This assignment consists of 2 Questions and both of them are mandatory.
- You will get 30 minutes to attempt the assignment.
- Both the questions will demand you to write Dockerfiles for appropriate situations.
- Hints are provided wherever necessary.
- We highly encourage you to revisit the Dockerfile lectures and labs if you have any confusions or difficulties.
- You can message us or ask your questions in Q&A Section if you need any assistance for interpreting the question or have doubts about the answer.

## Question 1

Write a Dockerfile to create a new file called "Answer\_1.txt" in an Ubuntu 16.04 Container under "/new" directory. When we open the file it should show the text "Hi! I am a container and I wrote this file... Cool right?".

## Question 2

Write a Dockerfile that sets up an Apache2 Docker image. follow the hints given below for better understanding of the question.

### Hints:

- *For this example, use Ubuntu 14.04*
- *You can use the internet to find proper commands to install Apache2 on Ubuntu (14.04)*
- *Set the log directory environment variable APACHE\_LOG\_DIR=/var/log/apache2*
- *Make sure the container would trigger the Apache Server Control interface which can be located at /usr/sbin/apache2ctl if the installation is successful.*

# Solutions

## Question 1

Write a Dockerfile to create a new file called "**Answer\_1.txt**" in an Ubuntu 16.04 Container under **"/new"** directory. When we open the file it should show the text **"Hi! I am a container and I wrote this file... Cool right?"**.

**Answer:**

*// Set **Ubuntu 14.04** as the base image*

```
FROM ubuntu:14.04
```

*// create **new** directory and **Answer\_1.txt** file*

```
RUN mkdir new
```

```
RUN touch /new/Answer_1.txt
```

*// Write the message in file*

```
RUN echo 'Hi! I am a container and I wrote this file... Cool right?' >/new/Answer_1.txt
```

## Question 2

Write a Dockerfile that sets up an Apache2 Docker image. follow the hints given below for better understanding of the question.

**Hints:**

- For this example, use Ubuntu 14.04
- You can use the internet to find proper commands to install Apache2 on Ubuntu (14.04)
- Set the log directory environment variable `APACHE_LOG_DIR=/var/log/apache2`
- Make sure the container would trigger the Apache Server Control interface which can be located at `/usr/sbin/apache2ctl` if the installation is successful.

**Answer:**

*// Set **Ubuntu 14.04** as the base Image*

```
FROM ubuntu:14.04
```

*// Install **apache2** package using Ubuntu's apt-get package manager*

```
1. RUN apt-get update && \  
2. apt-get install -y apache2 && \  
3. apt-get clean
```

*// Set the log directory **PATH***

```
ENV APACHE_LOG_DIR /var/log/apache2
```

*// Launch **apache2 server** as the foreground process*

```
ENTRYPOINT ["/usr/sbin/apache2ctl", "-D", "FOREGROUND"]
```