DOCKER

Ques 1. Set the base image to Ubuntu
- Add File Author / Maintainer
- Install Nginx
- Install necessary tools: vim wget curl net-tools
- Remove the default Nginx configuration file
- Copy a configuration file from the current directory
- Expose ports (80)
- Set the default command to execute Nginx when creating a new container

Ans 1. First i created a docker file

```
FROM ubuntu

MAINTAINER kaushlendra singh <kaushlendra.singh@tothenew.com>

RUN apt-get -y update

RUN apt-get install -y nginx

RUN apt-get install -y vim wget curl net-tools

RUN rm -rf /etc/nginx/conf.d/default.conf

RUN rm -rf /etc/nginx/sites-enabled/default

COPY abc.com /etc/nginx/sites-enabled/

EXPOSE 80

CMD ["nginx" , "-g" , "daemon off;"]
```

Docker file executed successfully

```
kaushlendra@kaushlendra:dockerfile $ sudo nano dockerfile
kaushlendra@kaushlendra:dockerfile $ sudo docker build .
Sending build context to Docker daemon  4.096kB
Step 1/10 : FROM ubuntu
 ---> 72300a873c2c
Step 2/10 : MAINTAINER kaushlendra singh <kaushlendra.singh@tothenew.com>
 ---> Using cache
 ---> 264d0063e5fb
Step 3/10 : RUN apt-get -y update
 ---> Using cache
 ---> 95dfaeea08de
Step 4/10 : RUN apt-get install -y nginx
 ---> Using cache
 ---> 2d53239cb169
Step 5/10 : RUN apt-get install -y vim wget curl net-tools
 ---> Using cache
 ---> edd84176533a
Step 6/10 : RUN rm -rf /etc/nginx/conf.d/default.conf
 ---> Using cache
 ---> ab725dfd71e5
Step 7/10 : RUN rm -rf /etc/nginx/sites-enabled/default
 ---> Running in 048f0b681914
Removing intermediate container 048f0b681914
 ---> 1f4e6fbc8060
Step 8/10 : COPY abc.com /etc/nginx/sites-enabled/
 ---> 72f8dc4062e2
Step 9/10 : EXPOSE 80
 ---> Running in 2287c0e487f2
Removing intermediate container 2287c0e487f2
 ---> f5e0ad3a2788
Step 10/10 : CMD ["nginx" , "-g" , "daemon off;"]
 ---> Running in a92ce5111e82
Removing intermediate container a92ce5111e82
 ---> c5d240764601
Successfully built c5d240764601
kaushlendra@kaushlendra:dockerfile $ 
```

Image of dockerfile has been created

```
kaushlendra@kaushlendra:dockerfile $ sudo docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
kaushu              latest              9a1179459365        10 seconds ago      218MB
ubuntu              latest              72300a873c2c        8 days ago          64.2MB
```

After this create the container

```
kaushlendra@kaushlendra:dockerfile $ sudo docker run -itd --name kaushu1 -p 90:80 kaushu
99f3387bcc555066cb38414572f663170886ae634768d41b82188950e614dead
kaushlendra@kaushlendra:dockerfile $ sudo docker ps
CONTAINER ID       IMAGE            COMMAND              CREATED          STATUS          PORTS                    NAMES
99f3387bcc55       kaushu           "nginx -g 'daemon of…"  20 seconds ago   Up 18 seconds   0.0.0.0:90->80/tcp   kaushu1
kaushlendra@kaushlendra:dockerfile $ sudo docker exec -it kaushu1 bash
root@99f3387bcc55:/# service nginx status
 * nginx is running
root@99f3387bcc55:/# cat /etc/nginx/sites-enabled/
cat: /etc/nginx/sites-enabled/: Is a directory
root@99f3387bcc55:/# cat /etc/nginx/sites-enabled/abc.com
```

Configure the abc.com in dockerfile

```
kaushlendra@kaushlendra:dockerfile $ cat abc.com


        server
{

        listen 80;
        root /etc/var/www/html;
        index index.html;

}
kaushlendra@kaushlendra:dockerfile $
```

```
kaushlendra@kaushlendra:dockerfile $ ls
abc.com   dockerfile   index.html
kaushlendra@kaushlendra:dockerfile $
```

Checked ob browser image working properly

Not secure | 172.17.0.1:90

this is ankur site
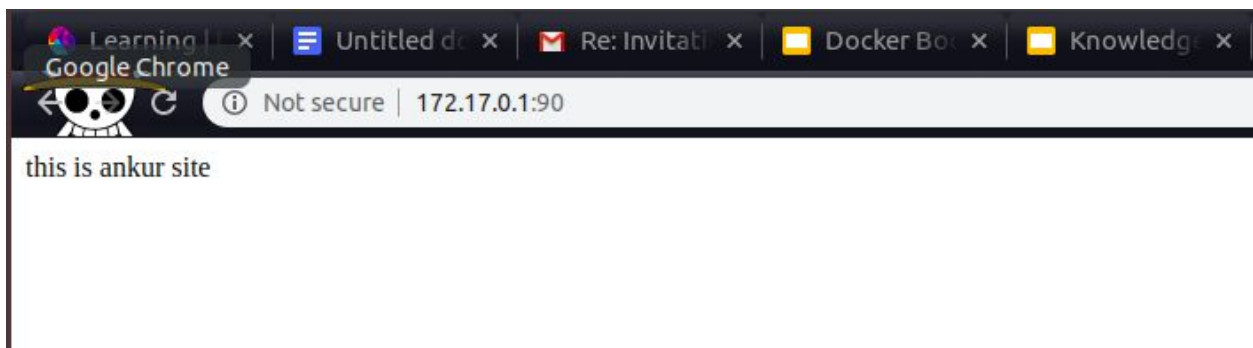
Ques 2. What is the difference between 'RUN', 'CMD', & 'ENTRYPOINT' in dockerfile?

Ans 2.

RUN executes the command(s) that you give in a new layer and creates a new image. This is mainly used for installing a new package.

CMD sets default command and/or parameters, however, we can overwrite those commands or pass in and bypass the default parameters from the command line when docker runs

ENTRYPOINT is used when you want to run a container as an executable.I might look similar to CMD, but in fact, it is different and should be used in a different context

The difference is ENTRYPOINT is that unlike CMD, the command and parameters are not ignored when Docker container runs with command line parameters. (There is a way to ignore ENTRYPOINT, but it is unlikely that you will do it.)

Ques 3. How to connect docker client to docker daemon running on another host?

 Ans 3.