Module 3: Docker Part 1 Assignment-2

1. Save the image created in assignment 1 as a Docker image
   - The container created previously is saved as a image naming venkat/ubuntu

```
ubuntu@ip-172-31-45-255:~$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS          PORTS                                   NAMES
2c9841a7b910   ubuntu         "/bin/bash"              15 hours ago     Up 15 hours     0.0.0.0:80->80/tcp, :::80->80/tcp       jolly_noyce
c1efa4aa3f15   kevin/custom   "/bin/sh -c 'apachec…"   2 weeks ago      Up 2 weeks      0.0.0.0:81->80/tcp, :::81->80/tcp       exciting_saha
de8071d4baef   18c42ccf14b9   "/bin/sh -c 'apachec…"   2 weeks ago      Up 2 weeks                                              awesome_haibt
```

```
ubuntu@ip-172-31-45-255:~$ docker commit 2c9841a7b910  venkat/ubuntu
sha256:4588260aa3e7983e74c907b2efe08ba3ce78ec9c5f3178d779647cf743bac2a1
ubuntu@ip-172-31-45-255:~$ docker images
REPOSITORY       TAG       IMAGE ID       CREATED          SIZE
venkat/ubuntu    latest    4588260aa3e7   44 seconds ago   233MB
ubuntu           latest    174c8c134b2a   8 days ago       77.9MB
kevin/custom     latest    aca5d3f07411   2 weeks ago      240MB
venkat/custom    latest    18c42ccf14b9   2 weeks ago      240MB
hello-world      latest    9c7a54a9a43c   7 months ago     13.3kB
```

2. Launch container from this new image and map the port to 81
   - a container named assignment2 is launched with the image created in previous step

```
ubuntu@ip-172-31-45-255:~$ docker run --name assignment2 -it -p 81:80 -d 4588260aa3e7
37d449372f4e3af70f1545ac538298492ae227f2122db3735597161993766611
ubuntu@ip-172-31-45-255:~$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS          PORTS                                   NAMES
37d449372f4e   4588260aa3e7   "/bin/bash"              37 seconds ago   Up 35 seconds   0.0.0.0:81->80/tcp, :::81->80/tcp       assignment2
2c9841a7b910   ubuntu         "/bin/bash"              15 hours ago     Up 15 hours     0.0.0.0:80->80/tcp, :::80->80/tcp       jolly_noyce
de8071d4baef   18c42ccf14b9   "/bin/sh -c 'apachec…"   2 weeks ago      Up 2 weeks                                              awesome_haibt
ubuntu@ip-172-31-45-255:~$
```

3. Go inside the container and start the Apache2 service
   - Navigated inside the containe and packages are updated and apache2 service is installed using “apt get install apache2”

```
ubuntu@ip-172-31-45-255:~$ docker exec -it 37d449372f4e /bin/bash
root@37d449372f4e:/# apt get update
E: Invalid operation get
root@37d449372f4e:/# apt update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Fetched 229 kB in 1s (336 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

   - Apache 2 service is started inside the container

```
root@37d449372f4e:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.4. Set the 'ServerName' directive glo
bally to suppress this message
 *
root@37d449372f4e:/# service apache2 status
 * apache2 is running
root@37d449372f4e:/#
```

4. Check if you are able to access it on the browser
    - Accessing apache2 from local browser is successful.