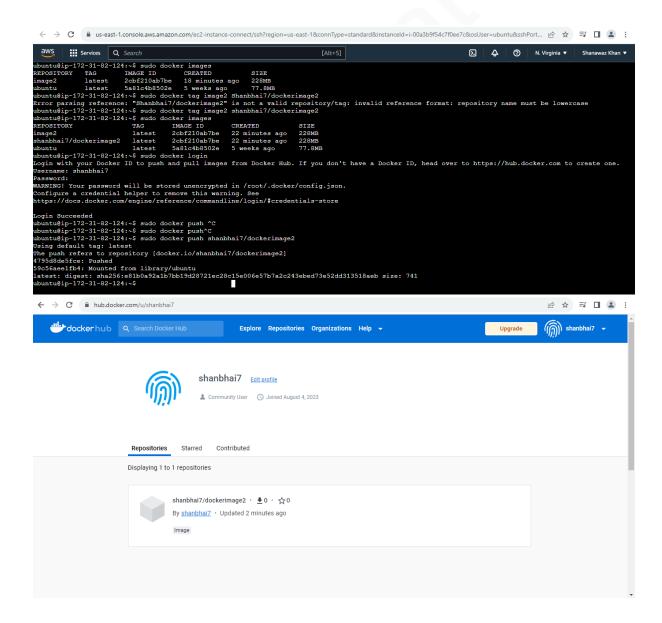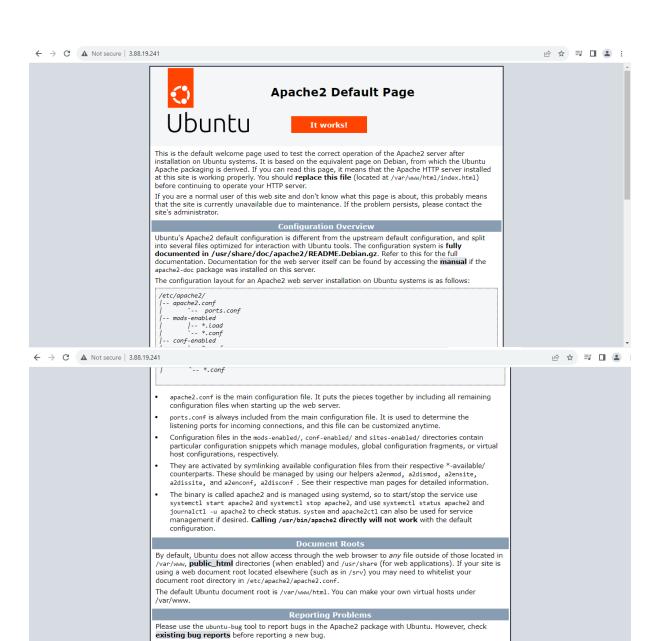# Tasks To Be Performed:

1. Use the saved image in the previous assignment
2. Upload this image on Docker Hub
3. On a separate machine pull this Docker Hub image and launch it on port 80
4. Start the Apache2 service
5. Verify if you are able to see the Apache2 service

```
ubuntu@ip-172-31-85-54:~$ sudo docker pull shanbhai7/dockerimage2
Using default tag: latest
latest: Pulling from shanbhai7/dockerimage2
3153aa388d02: Pull complete
aced4ea8e4d2: Pull complete
Digest: sha256:e81b0a92a1b7bb19d28721ec28c15e006e57b7a2c243ebed73e52dd313518aeb
Status: Downloaded newer image for shanbhai7/dockerimage2:latest
docker.io/shanbhai7/dockerimage2:latest
ubuntu@ip-172-31-85-54:~$ sudo docker images
REPOSITORY              TAG       IMAGE ID       CREATED         SIZE
shanbhai7/dockerimage2  latest    2cbf210ab7be   40 minutes ago  228MB
ubuntu@ip-172-31-85-54:~$ sudo docker run -itd -p 80:80 shanbhai7/dockerimage2
1bef7b8777dac6130e8049b433ccbd7430210fbd5c0e9ec3903a8b419dea0c14
ubuntu@ip-172-31-85-54:~$ sudo docker ps
CONTAINER ID   IMAGE                  COMMAND         CREATED         STATUS         PORTS                                         NAMES
1bef7b8777da   shanbhai7/dockerimage2 "/bin/bash"     2 minutes ago   Up 2 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp             magical_lehmann
ubuntu@ip-172-31-85-54:~$ sudo docker exec -it 1bef7b8777da bash
root@1bef7b8777da:/# apt-get update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1104 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1235 kB]
Fetched 2677 kB in 1s (4508 kB/s)
Reading package lists... Done
root@1bef7b8777da:/# service apache2 service
Usage: apache2 {start|stop|graceful-stop|restart|reload|force-reload}
root@1bef7b8777da:/# service apache2 status
 * apache2 is not running
root@1bef7b8777da:/# service apache2 start
```

```
docker.io/shanbhai7/dockerimage2:latest
ubuntu@ip-172-31-85-54:~$ sudo docker images
REPOSITORY              TAG       IMAGE ID       CREATED         SIZE
shanbhai7/dockerimage2  latest    2cbf210ab7be   40 minutes ago  228MB
ubuntu@ip-172-31-85-54:~$ sudo docker run -itd -p 80:80 shanbhai7/dockerimage2
1bef7b8777dac6130e8049b433ccbd7430210fbd5c0e9ec3903a8b419dea0c14
ubuntu@ip-172-31-85-54:~$ sudo docker ps
CONTAINER ID   IMAGE                  COMMAND         CREATED         STATUS         PORTS                                         NAMES
1bef7b8777da   shanbhai7/dockerimage2 "/bin/bash"     2 minutes ago   Up 2 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp             magical_lehmann
ubuntu@ip-172-31-85-54:~$ sudo docker exec -it 1bef7b8777da bash
root@1bef7b8777da:/# apt-get update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1104 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1235 kB]
Fetched 2677 kB in 1s (4508 kB/s)
Reading package lists... Done
root@1bef7b8777da:/# service apache2 service
Usage: apache2 {start|stop|graceful-stop|restart|reload|force-reload}
root@1bef7b8777da:/# service apache2 status
 * apache2 is not running
root@1bef7b8777da:/# service apache2 start
 * Starting Apache httpd web server apache2
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to
suppress this message
 *
root@1bef7b8777da:/# service apache2 status
 * apache2 is running
root@1bef7b8777da:/#
```

Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at /var/www/html/index.html) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|       `--  ports.conf
|-- mods-enabled
|       |-- *.load
|       `-- *.conf
|-- conf-enabled
|       `-- *.conf
```

- apache2.conf is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- ports.conf is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the mods-enabled/, conf-enabled/ and sites-enabled/ directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective *-available/ counterparts. These should be managed by using our helpers a2enmod, a2dismod, a2ensite, a2dissite, and a2enconf, a2disconf . See their respective man pages for detailed information.
- The binary is called apache2 and is managed using systemd, so to start/stop the service use systemctl start apache2 and systemctl stop apache2, and use systemctl status apache2 and journalctl -u apache2 to check status. system and apache2ctl can also be used for service management if desired. **Calling /usr/bin/apache2 directly will not work** with the default configuration.

Document Roots

By default, Ubuntu does not allow access through the web browser to *any* file outside of those located in /var/www, **public_html** directories (when enabled) and /usr/share (for web applications). If your site is using a web document root located elsewhere (such as in /srv) you may need to whitelist your document root directory in /etc/apache2/apache2.conf.

The default Ubuntu document root is /var/www/html. You can make your own virtual hosts under /var/www.

Reporting Problems

Please use the ubuntu-bug tool to report bugs in the Apache2 package with Ubuntu. However, check **existing bug reports** before reporting a new bug.

Please report bugs specific to modules (such as PHP and others) to their respective packages, not to the web server itself.