Report on
Lab 1: Apache Web Server Installation & Maintenance

Initial Setup

Since I have a Windows PC, I tried running Ubuntu on WSL (Windows Subsystem for Linux) which is a compatibility layer developed by Microsoft that allows one to run a Linux environment directly on Windows — without needing a virtual machine or dual boot setup.

Checkpoint 1

I follow the tutorial from [How To Install the Apache Web Server on Ubuntu 18.04 | DigitalOcean] link and Install the Apache Web Server.

Some of the process is Shown below:

```
sowmik@LAPTOP-AS24T7P9:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.58-1ubuntu8.8).
0 upgraded, 0 newly installed, 0 to remove and 193 not upgra
ded.
```

Then this shows up as I have installed Apache before

```
sowmik@LAPTOP-AS24T7P9:~$ sudo ufw app list
Available applications:
  Apache
  Apache Full
  Apache Secure
sowmik@LAPTOP-AS24T7P9:~$ sudo ufw allow 'Apache'
Skipping adding existing rule
Skipping adding existing rule (v6)
sowmik@LAPTOP-AS24T7P9:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
Apache                     ALLOW       Anywhere
Apache (v6)                ALLOW       Anywhere (v6)
```

The next screenshot confirms that the Apache is installed and running properly

```
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/apache2.service;>
     Active: active (running) since Sat 2025-11-08 11:24:27 +>
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 207 ExecStart=/usr/sbin/apachectl start (code=ex>
   Main PID: 277 (apache2)
      Tasks: 55 (limit: 9163)
     Memory: 8.4M (peak: 9.9M)
        CPU: 139ms
     CGroup: /system.slice/apache2.service
             ├─277 /usr/sbin/apache2 -k start
             ├─281 /usr/sbin/apache2 -k start
             └─283 /usr/sbin/apache2 -k start

Nov 08 11:24:26 LAPTOP-AS24T7P9 systemd[1]: Starting apache2.>
Nov 08 11:24:27 LAPTOP-AS24T7P9 systemd[1]: Started apache2.s>
~
~
~
~
```

If I run this command,this shows up

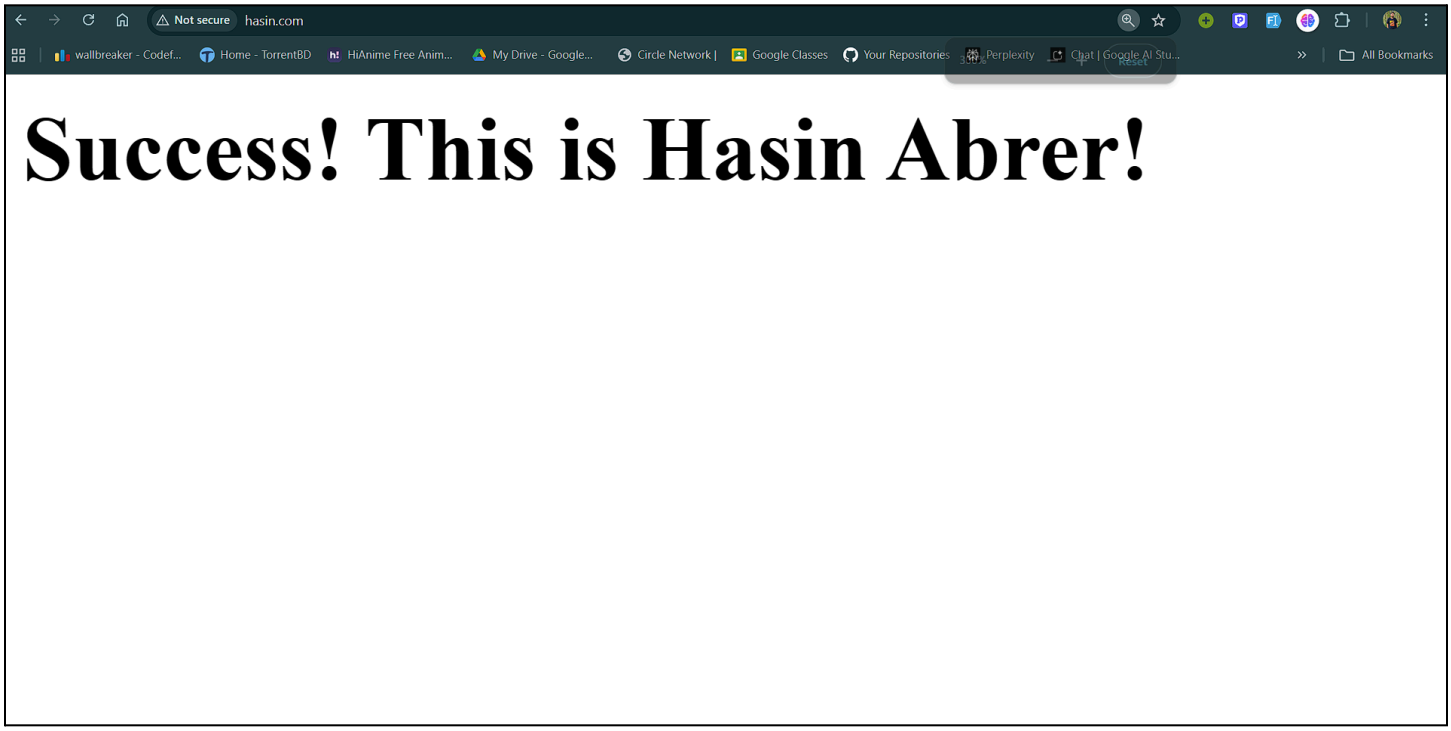
```
sowmik@LAPTOP-AS24T7P9:~$ hostname -I
172.26.66.168
```

And when I go to this IP address, this shows

This confirms that Apache is working correctly.

Checkpoint 2

Time for setting up a single virtual host. As I tried webserlab.com and example.com
I'll demonstrate it by creating a new virtual host.



Created!

Checkpoint 3

Observations

http://webserverlab.com: When accessing webserverlab.com, Apache serves the example.com virtual host because the default site (000-default.conf) was disabled. Apache uses the first available virtual host as the default when no matching ServerName or ServerAlias is found. Since example.com was the only enabled virtual host, it became the default.