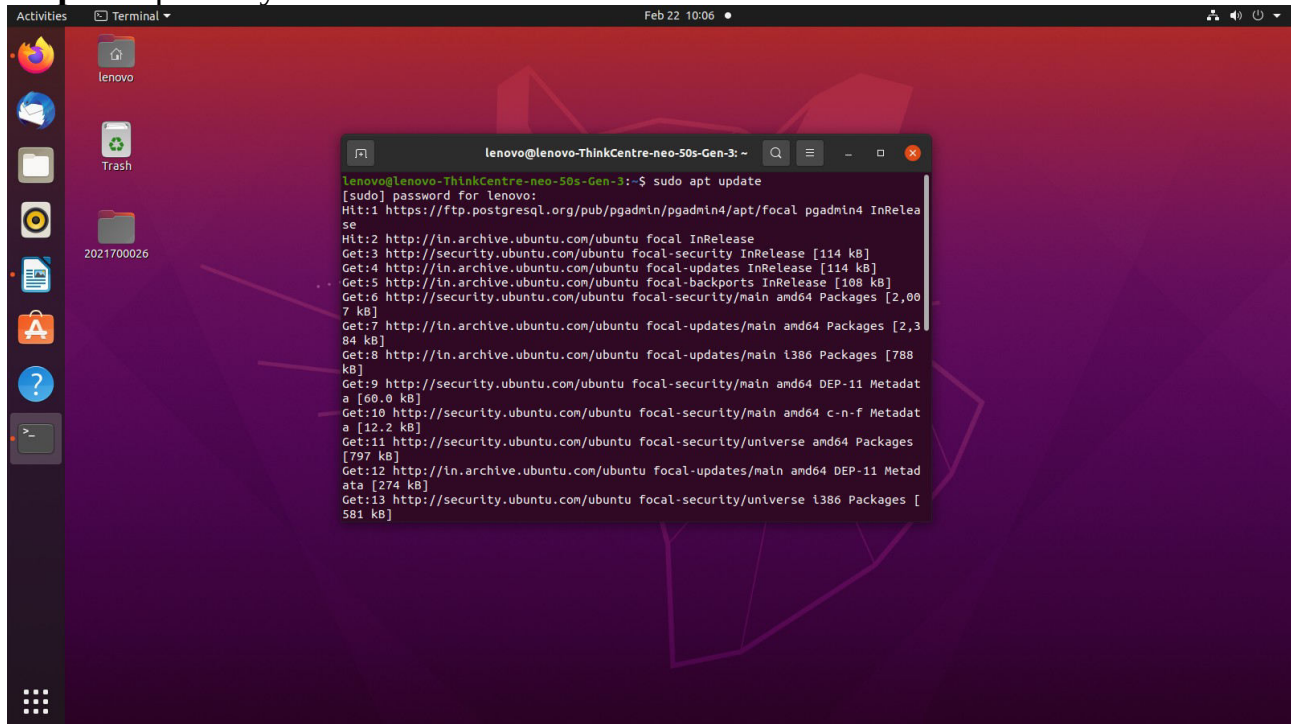


Name:	Bodhisatya Ghosh
Class:	CSE DS
Batch:	B
UID:	2021700026
Experiment:	5

Aim: To install apache server on system

Step 1: Update system

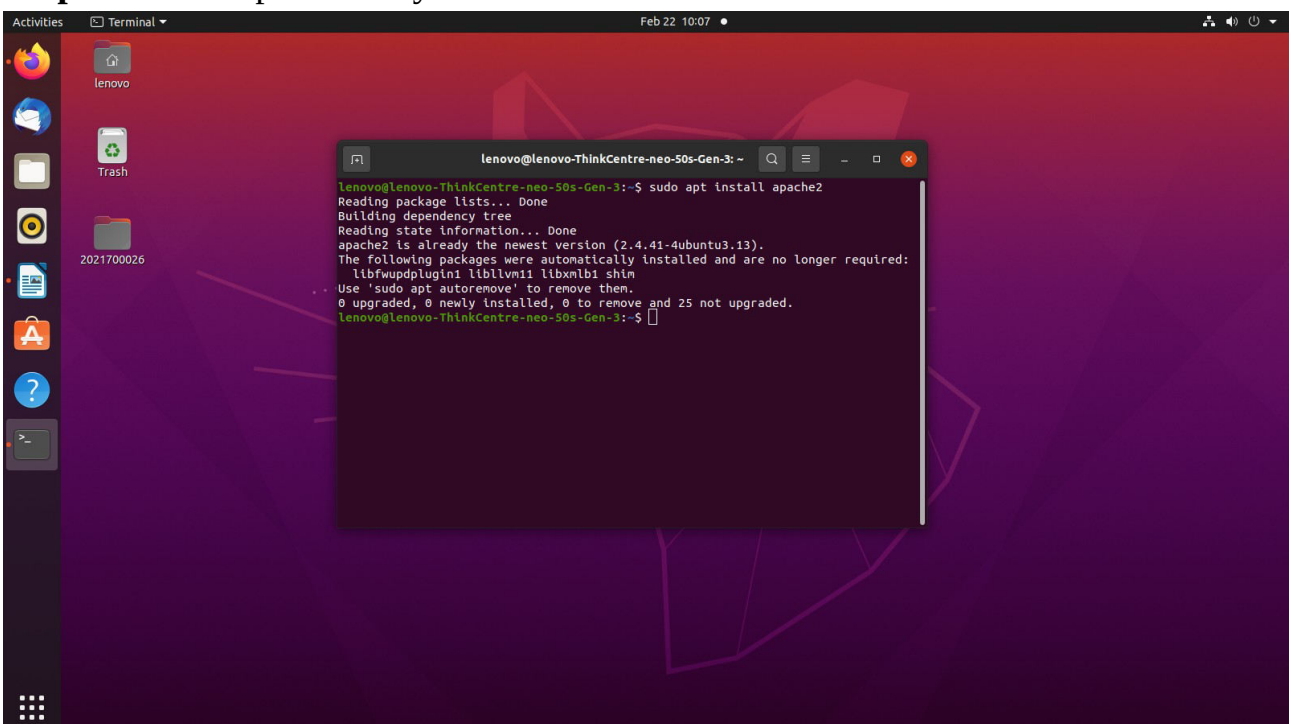


```

lenovo@lenovo-ThinkCentre-neo-50s-Gen-3:~$ sudo apt update
[sudo] password for lenovo:
Hit:1 https://ftp.postgresql.org/pub/pgadmin4/apt/focal pgadmin4 InRelease
Hit:2 http://in.archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:6 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [2,007 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,384 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [788 kB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [60.0 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [12.2 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [797 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [274 kB]
Get:13 http://security.ubuntu.com/ubuntu focal-security/universe i386 Packages [581 kB]

```

Step 2: Install Apache on system

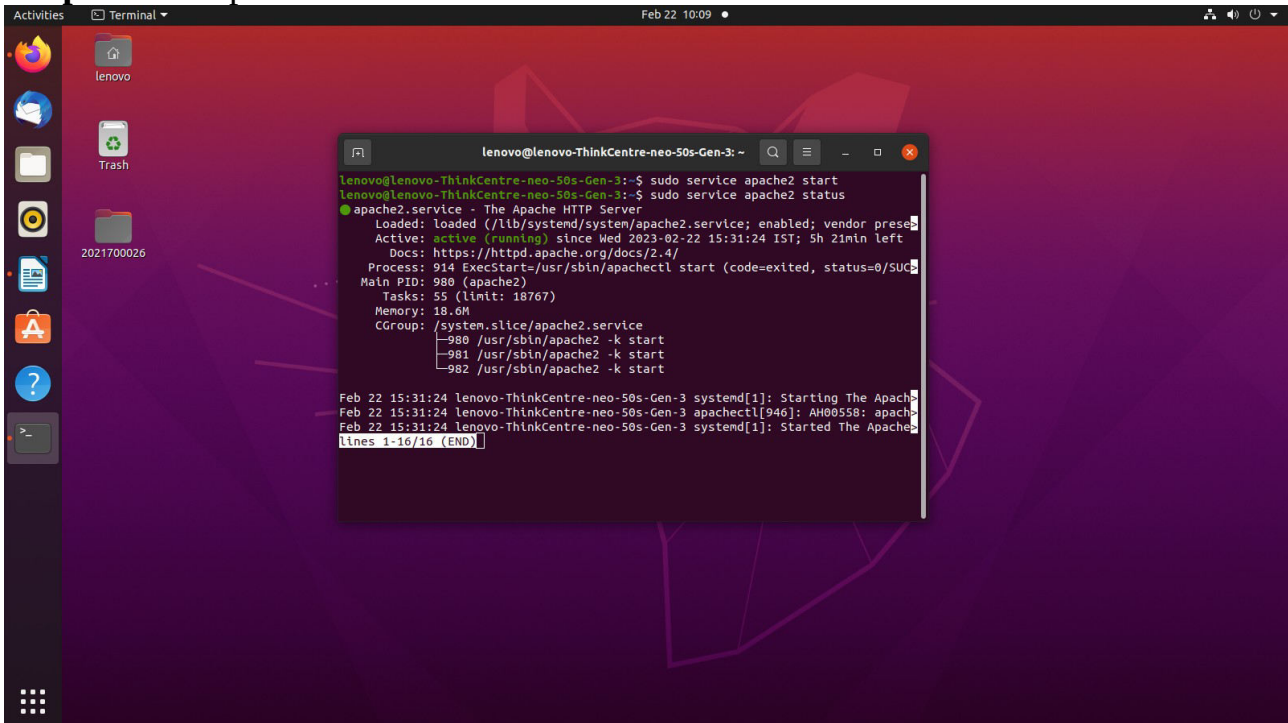


```

lenovo@lenovo-ThinkCentre-neo-50s-Gen-3:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
apache2 is already the newest version (2.4.41-4ubuntu3.13).
The following packages were automatically installed and are no longer required:
  libfwupdplugin1 liblvm1 libxmb1 shin
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 25 not upgraded.
lenovo@lenovo-ThinkCentre-neo-50s-Gen-3:~$

```

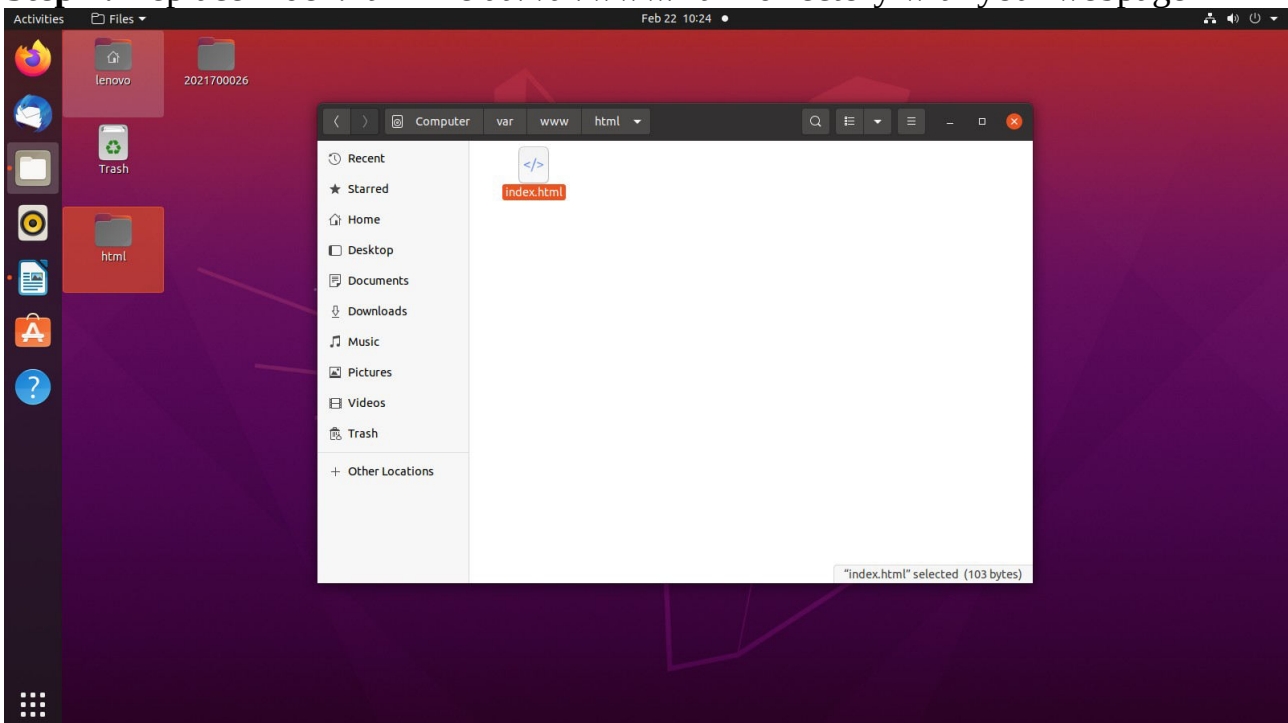
Step 3: Start apache2 services and check status



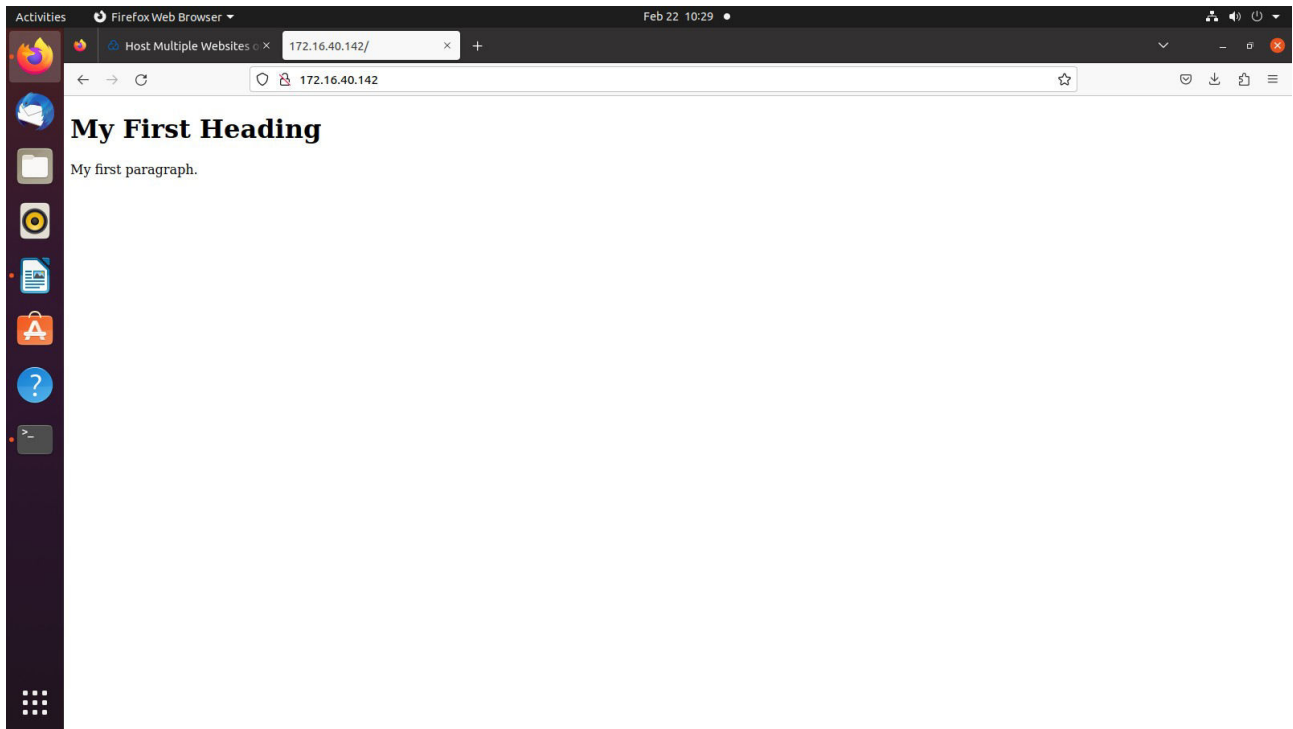
A terminal window on a Linux desktop. The user runs `sudo service apache2 start` and then `sudo service apache2 status`. The output shows that the service is active and running. The status information includes the loaded path, active state, docs, process details, main PID, tasks, memory, and cgroup.

```
lenovo@lenovo-ThinkCentre-neo-50s-Gen-3: ~  
lenovo@lenovo-ThinkCentre-neo-50s-Gen-3:~$ sudo service apache2 start  
lenovo@lenovo-ThinkCentre-neo-50s-Gen-3:~$ sudo service apache2 status  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)  
   Active: active (running) since Wed 2023-02-22 15:31:24 IST; 5h 21min left  
     Docs: https://httpd.apache.org/docs/2.4/  
   Process: 914 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)  
 Main PID: 980 (apache2)  
    Tasks: 55 (limit: 18767)  
   Memory: 18.6M  
    CGroup: /system.slice/apache2.service  
           └─980 /usr/sbin/apache2 -k start  
             └─981 /usr/sbin/apache2 -k start  
               └─982 /usr/sbin/apache2 -k start  
  
Feb 22 15:31:24 lenovo-ThinkCentre-neo-50s-Gen-3 systemd[1]: Starting The Apache  
Feb 22 15:31:24 lenovo-ThinkCentre-neo-50s-Gen-3 apachectl[946]: AH00558: apache  
Feb 22 15:31:24 lenovo-ThinkCentre-neo-50s-Gen-3 systemd[1]: Started The Apache  
lines 1-16/16 (END)
```

Step 4: Replace index.html file at /var/www/html directory with your webpage

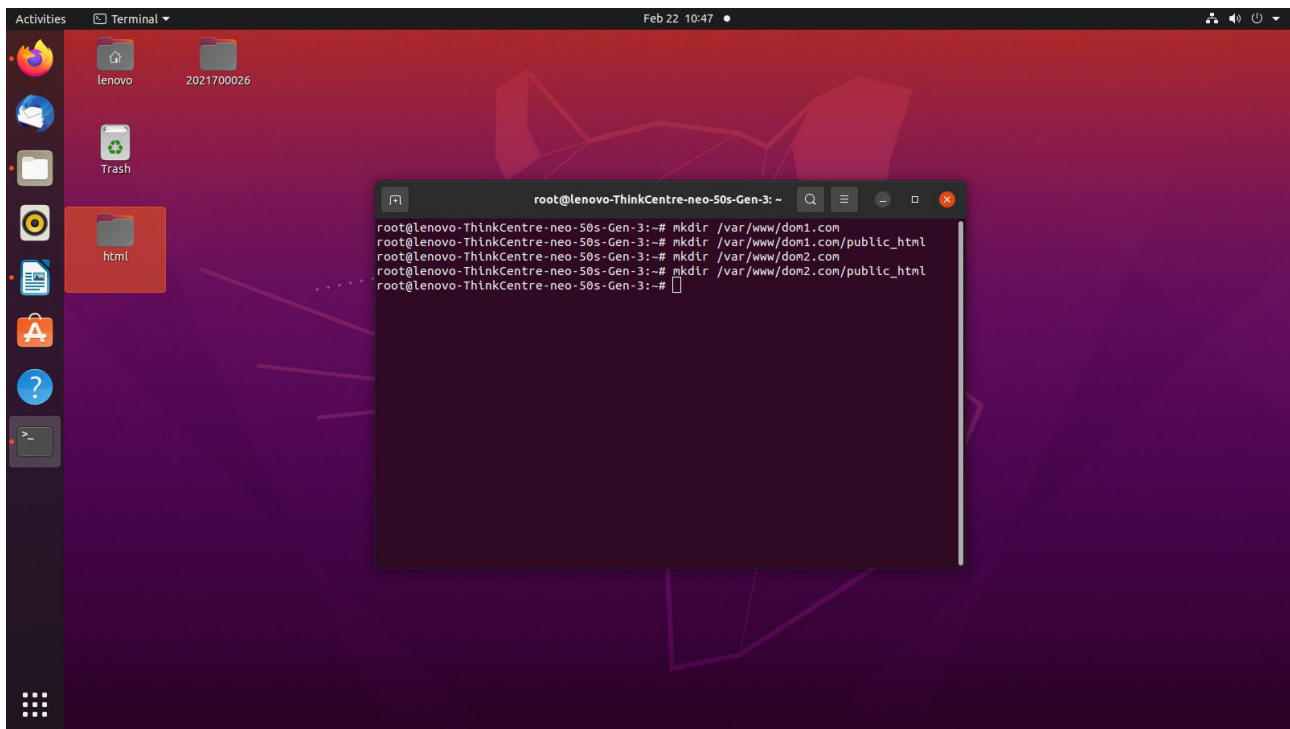


Step 5: Web page on ip address of device

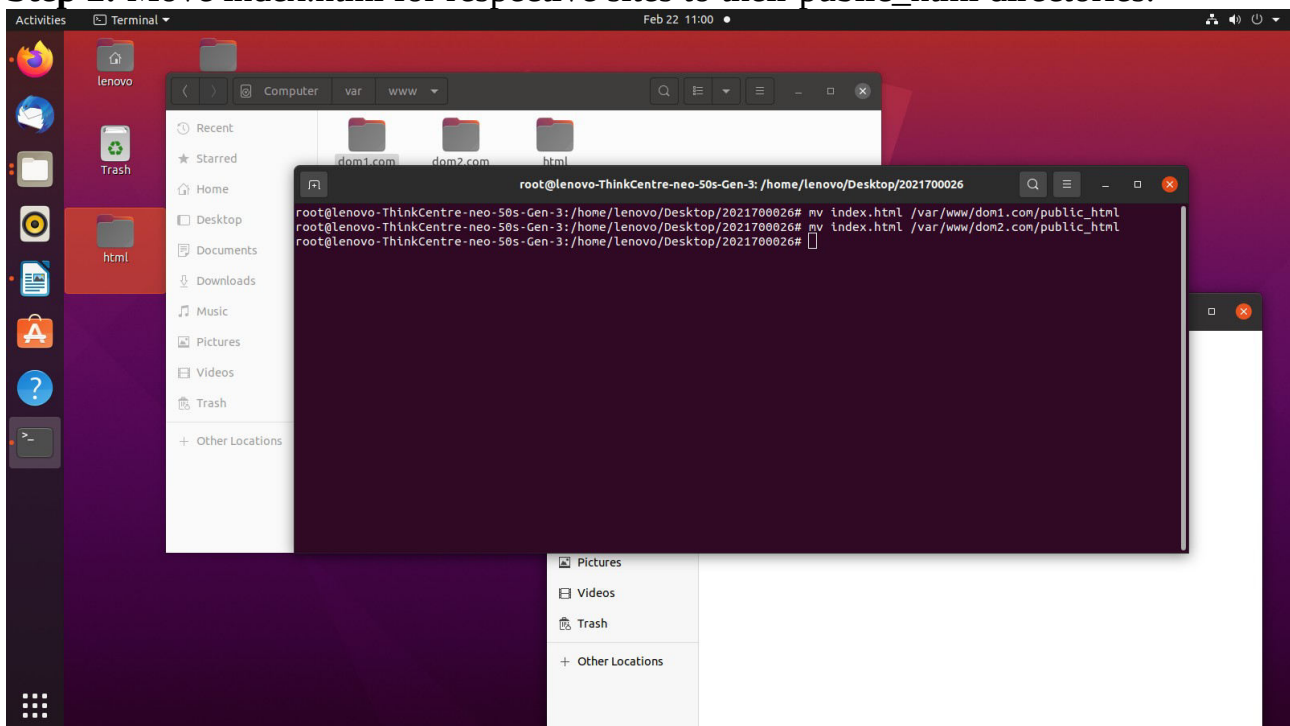


To create multiple domains on virtual hosts

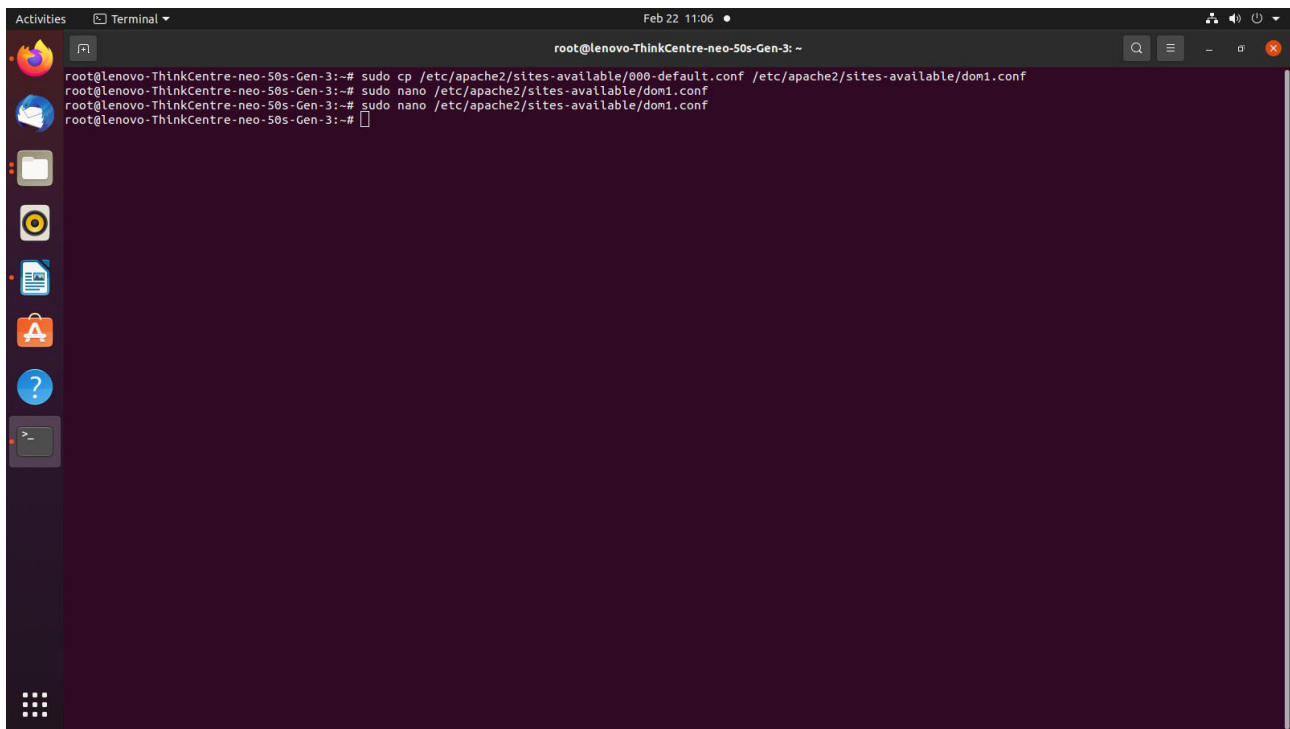
Step 1: Create different directories for all virtual hosts you want to create



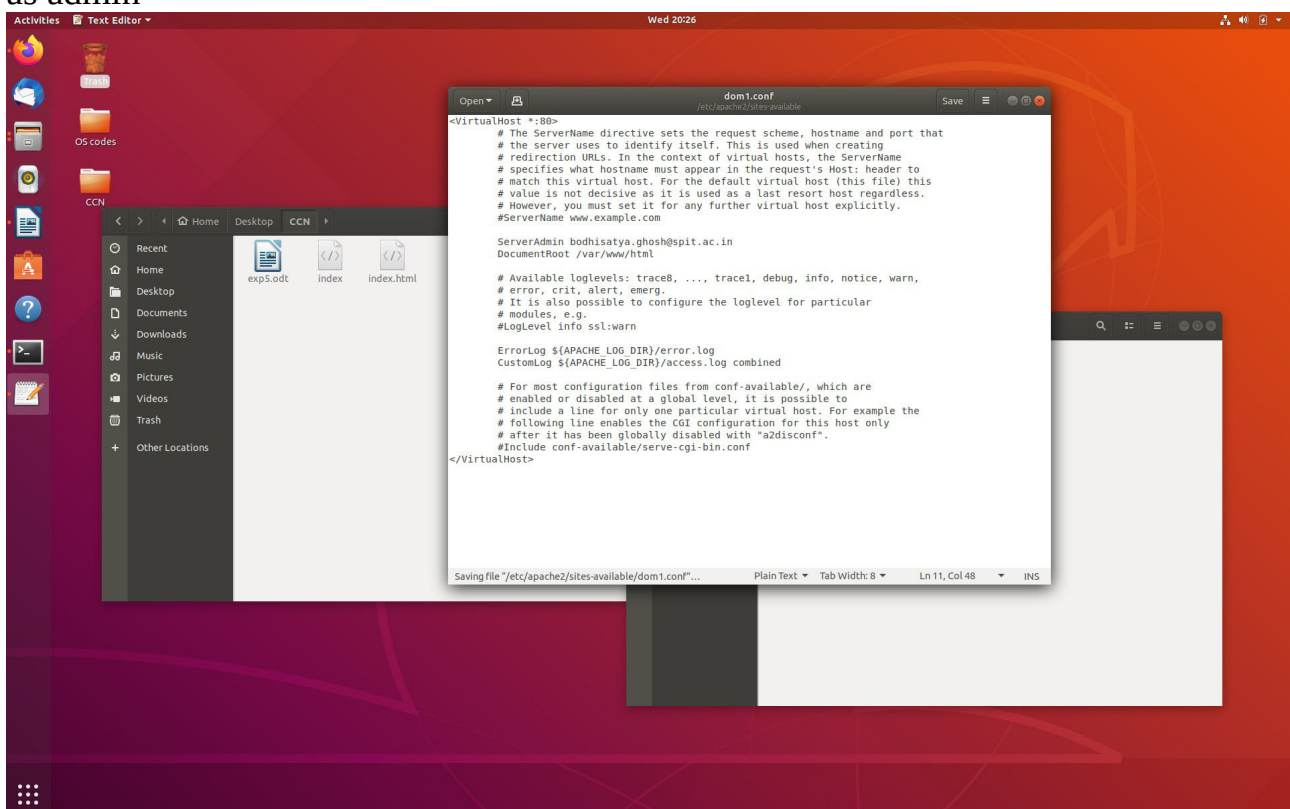
Step 2: Move index.html for respective sites to their public_html directories.



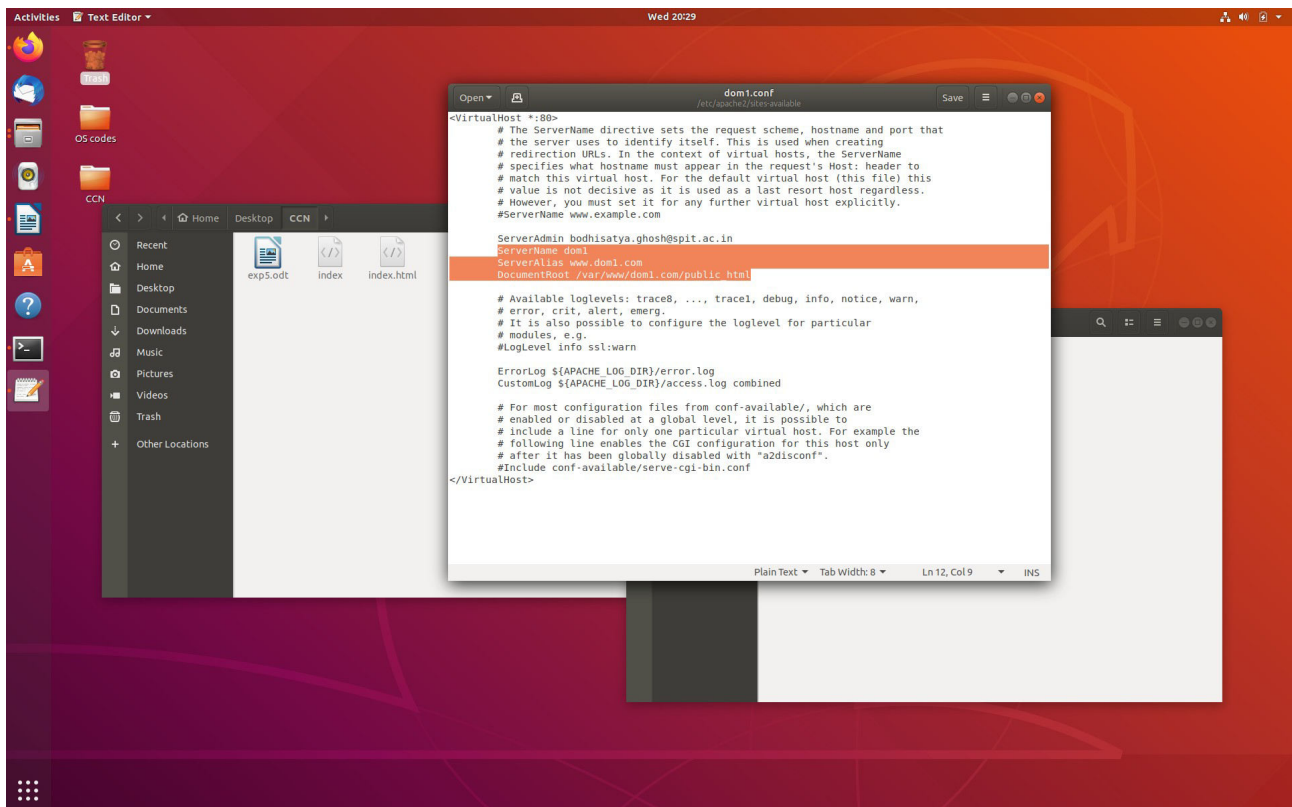
Step 3: Create new virtual host file in `/etc/apache2` directory



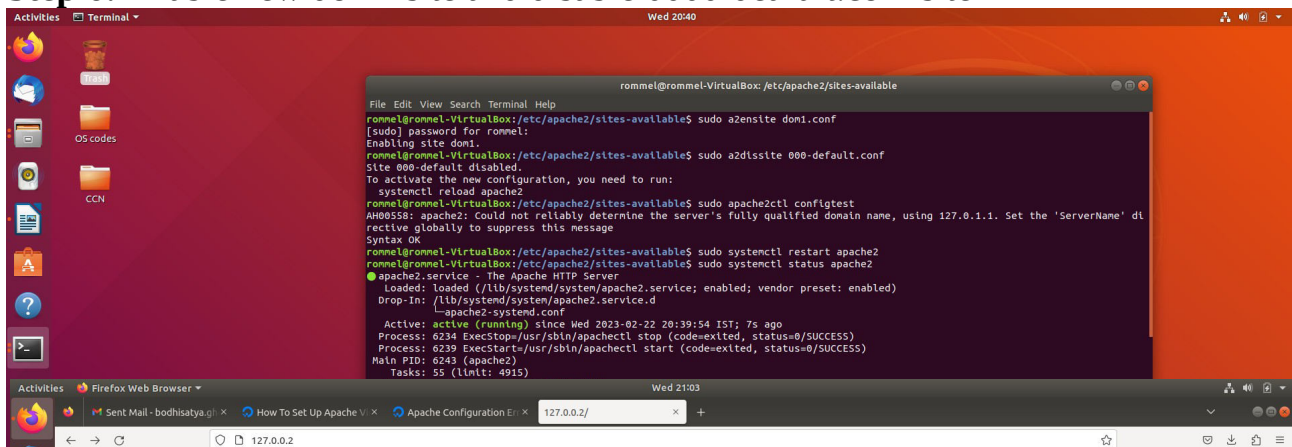
Step 4: In virtual host file, change server admin email ID to email ID you want to use as admin



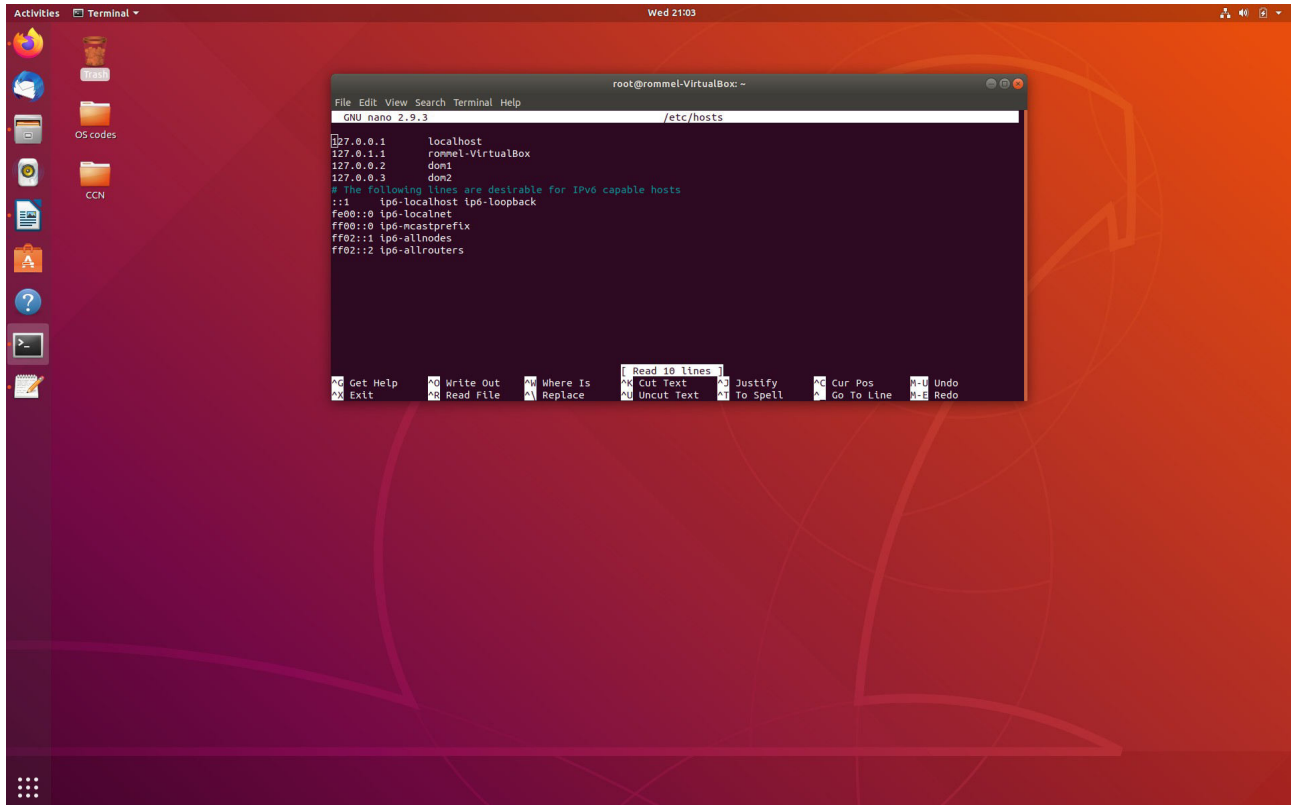
Step 5: Add ServerName and ServerAlias to this file as well along with path to document root



Step 6: Enable new dom1 site and disable 0000-deafult.conf site



Step 7: Go to IP address specified by local host file



The screenshot shows a Linux desktop with a red background. A terminal window titled 'root@rommel-VirtualBox: ~' is open, displaying the contents of the `/etc/hosts` file using the `nano` editor. The file contains the following entries:

```
127.0.0.1 localhost
127.0.1.1 rommel-VirtualBox
127.0.0.2 don1
127.0.0.3 don2
# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

The terminal window also shows the `nano` editor's menu bar at the bottom with options like 'Get Help', 'Exit', 'Write Out', 'Read File', 'Where Is', 'Replace', 'Read 10 lines', 'Cut Text', 'Uncut Text', 'Justify', 'To Spell', 'Cur Pos', 'Go To Line', 'Undo', and 'Redo'.

Conclusion: In this experiment I have learnt how to use Apache to create a website. I have also learnt how to use multiple domains from virtual host machines on a single device.