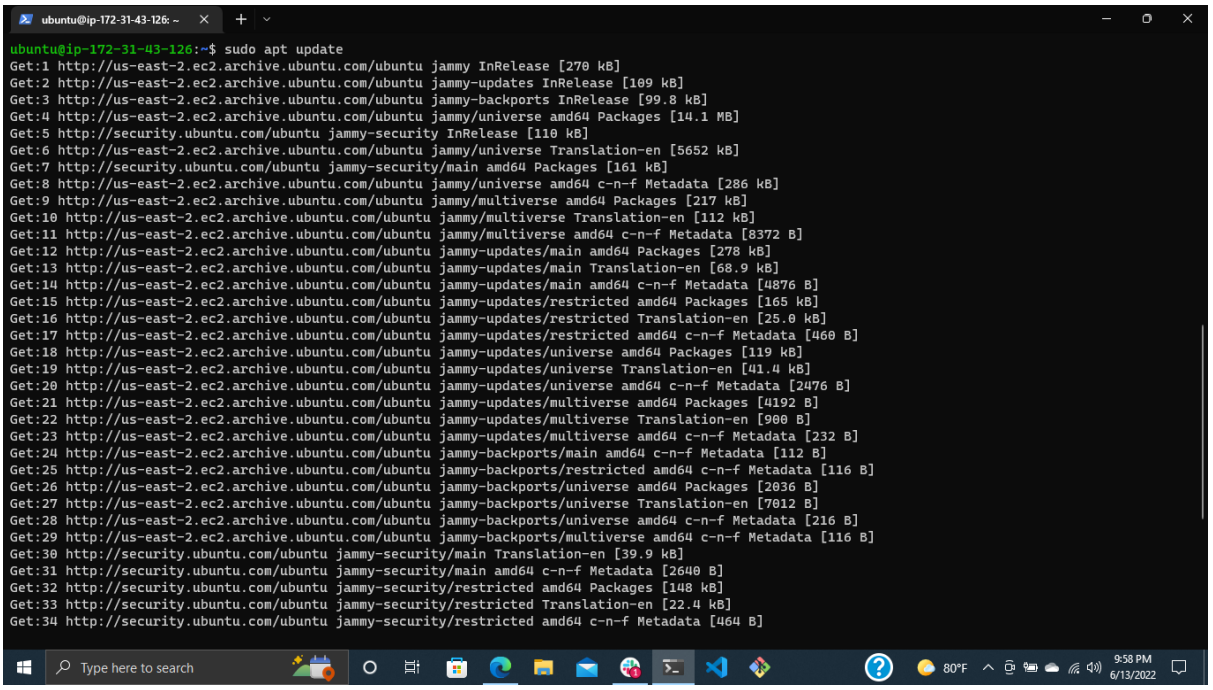
WEB STACK IMPLEMENTATION (LAMP STACK) IN AWS

PROJECT 1

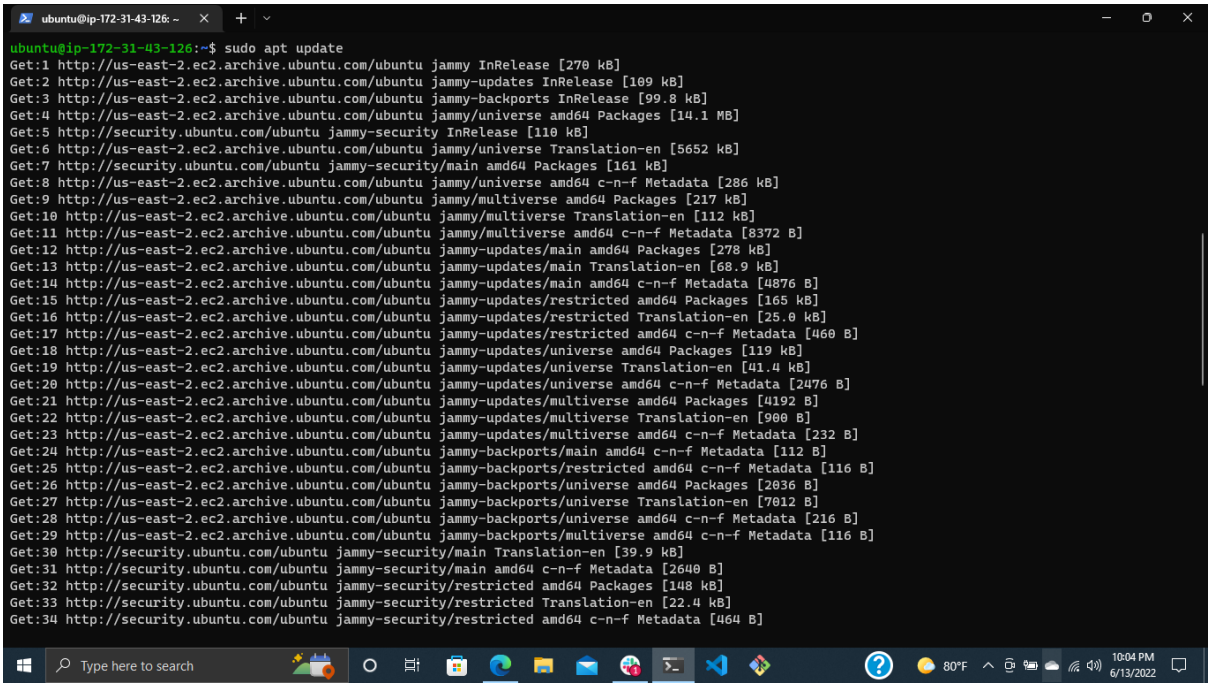
Login to AWS .amazon.com
Click on EC 2
Click on Instances (AMI)
Free tier eligible (t2.micro)
Review and Launch
Click on Launch
Create a new key pair and Download
Set up Security
Connect
Open terminal
Type cd Downloads and press enter
Copy the ssh example on connecting the Instance and paste on the Terminal command.

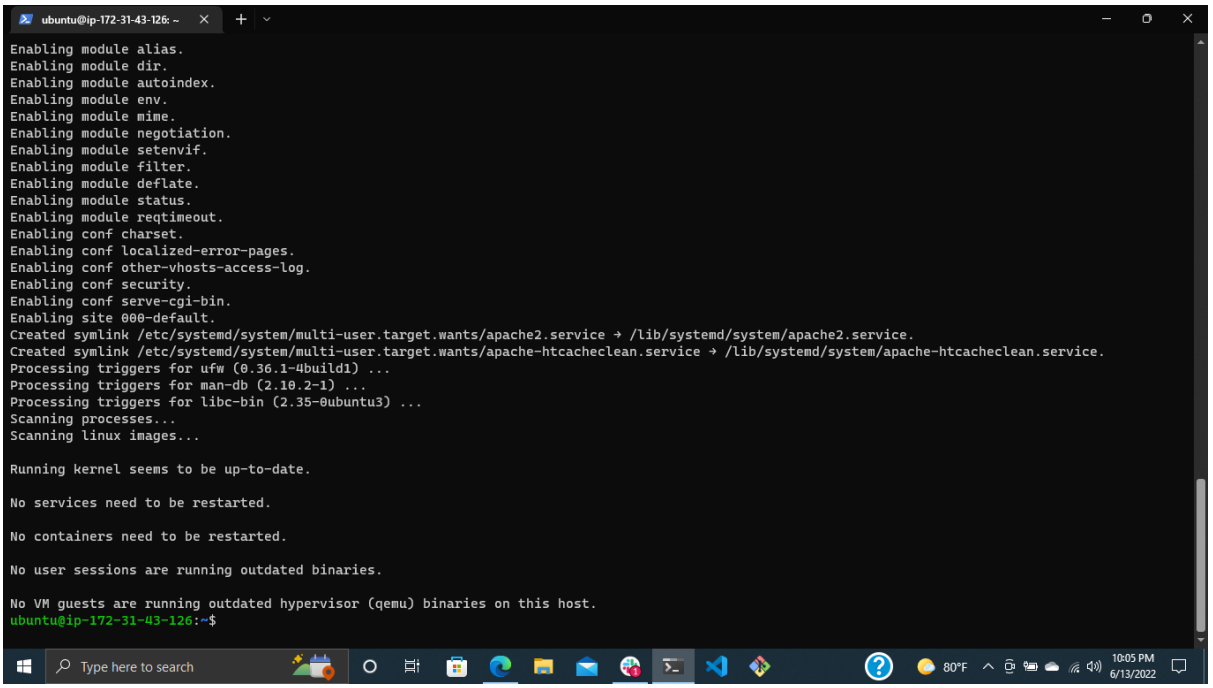
Step 1: Install Apache

Type: **sudo apt update**
This will update the package list for upgrades and new packages.

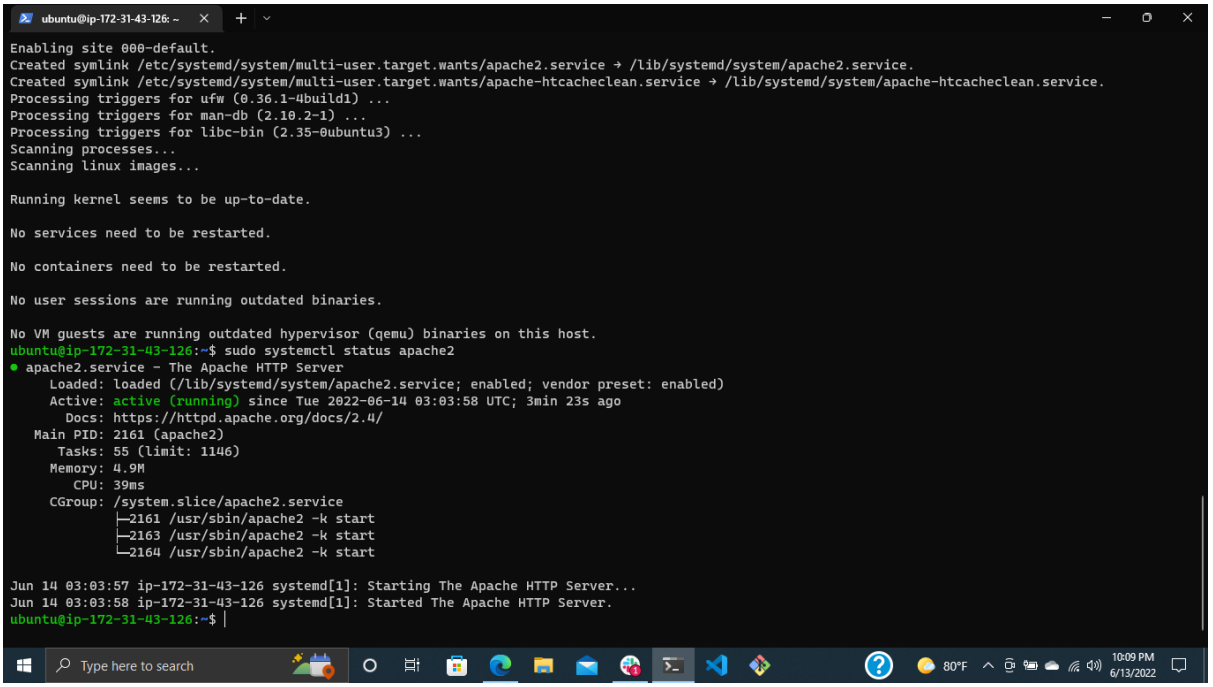


Install Apache2 by typing this command on the Terminal: **sudo apt install apache2**

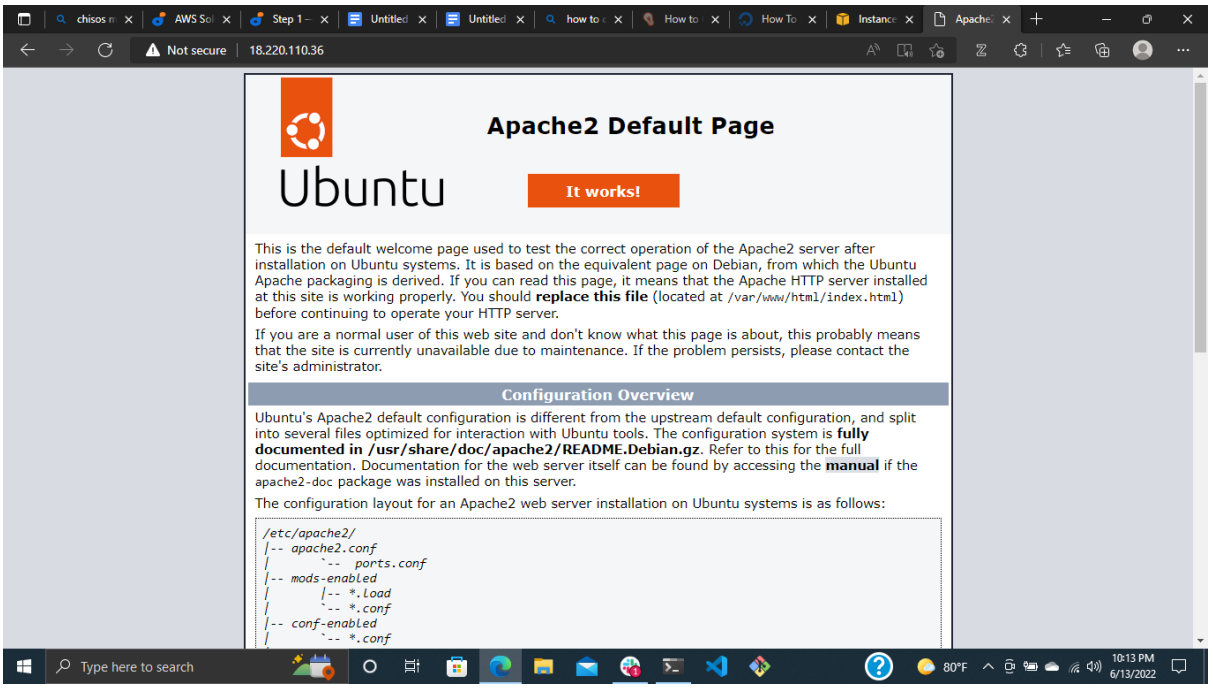




Verify Apache2 is running as a service in the OS by typing: **sudo systemctl status apache2** Then press Enter.

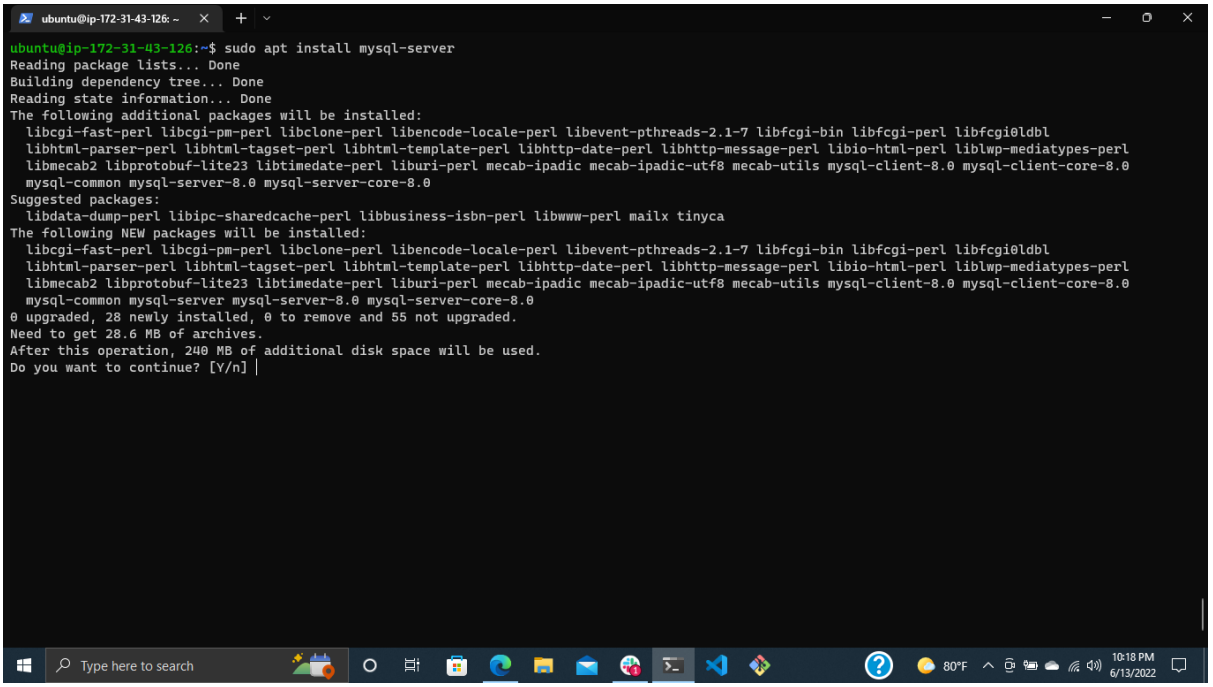


Copy the IPv4 Public IP from AWS EC2 and paste on your browser to open the Apache2 welcome page.



Step 2: Installing MySql

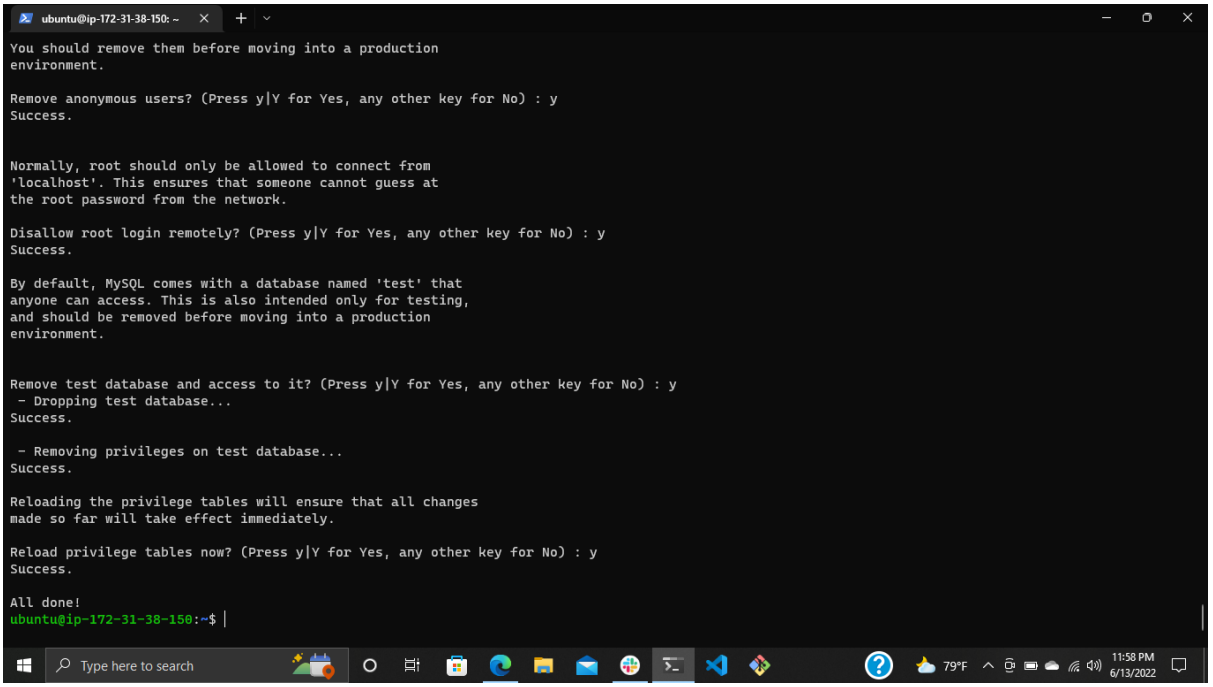
Type: **sudo apt install mysql-server**



Type: **Y**
And press Enter.
Login to your MySql console by typing: **sudo mysql** and then press enter.
Type: **ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'PassWord.1'**
Then exit MySql shell by typing: **exit**
Press Enter

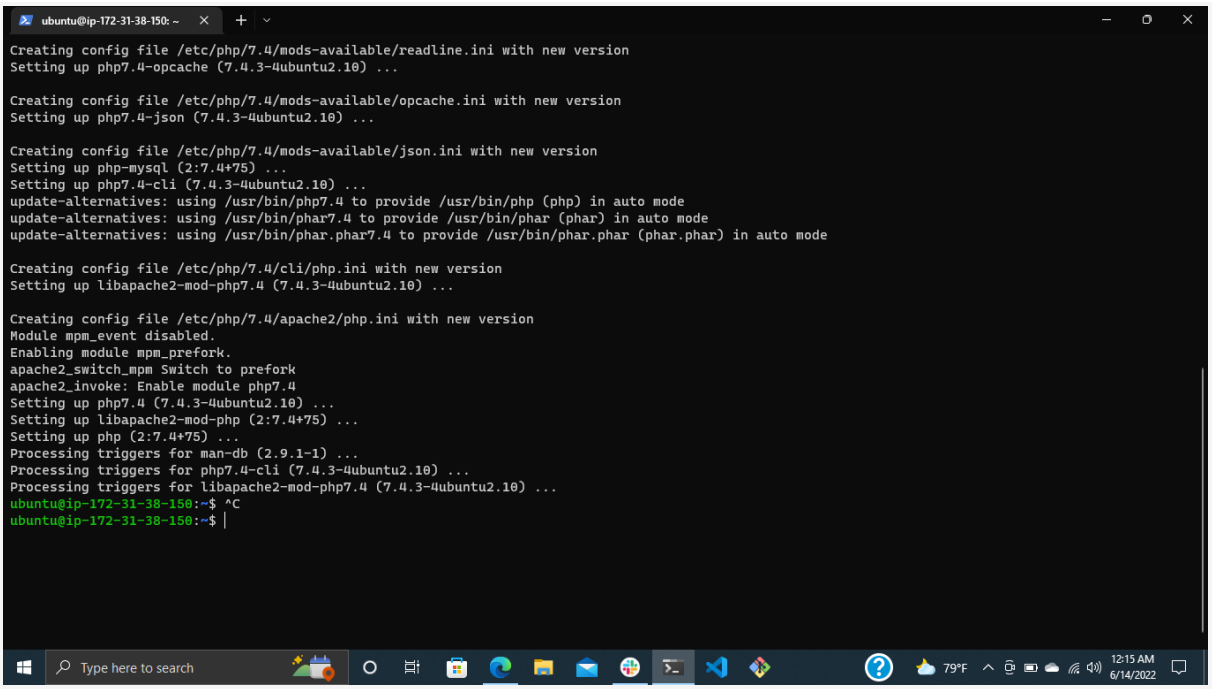
Note that after MySql has been installed, you will need to set the root password of the database and secure it using the following command:
Sudo mysql_secure_installation

This will take you to a command line for you to enter your password.
Enter the initial password: **PassWord.1**
Answer the proceeding questions with either a Y or N. But don't change the password.



STEP 3: INSTALLING PHP

Copy and run this command: **sudo apt install php libapache2-mod-php php-mysql** Enter
Type: **Y** and press Enter



Run this command to confirm PHP Installation: php -v
The command will confirm PHP installation.

STEP 4: CREATE A VIRTUAL HOST FOR THE WEBSITE USING APACHE

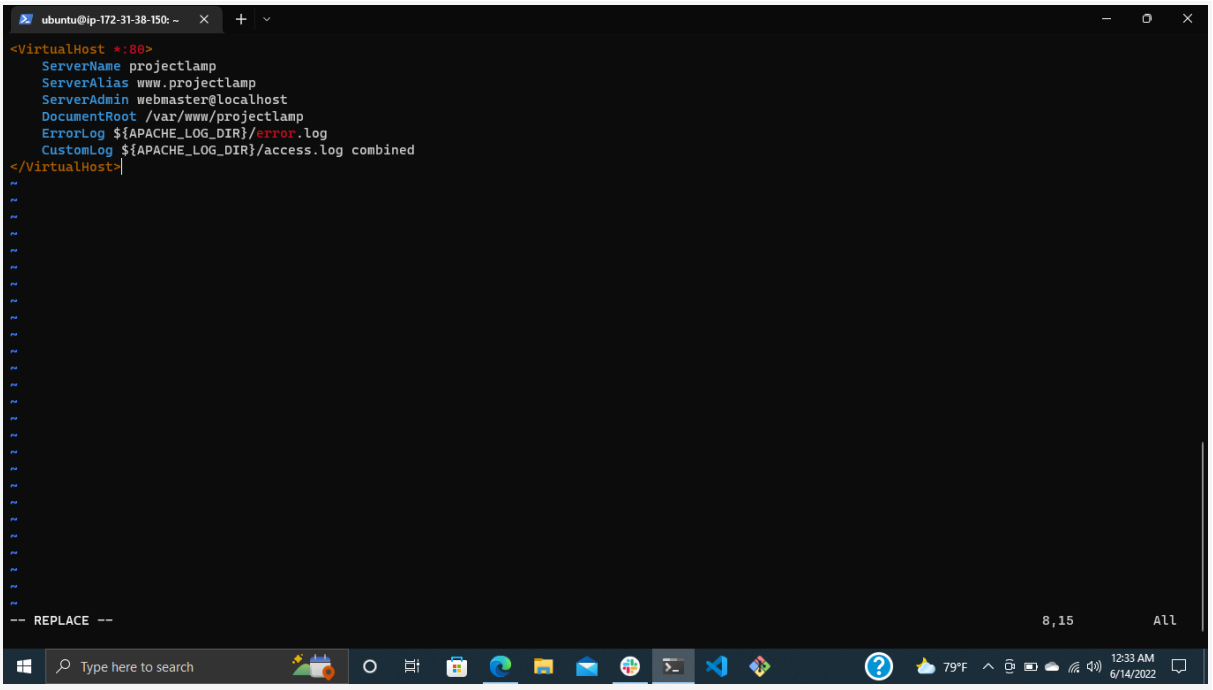
We will make use of PROJECTLAMP.

We'll create a directory by using the Make Directory command below:
sudo mkdir /var/www/projectlamp

We're going to assign ownership to Projectlamp by typing the command below:
sudo chown -R $USER:$USER /var/www/projectlamp

We will then use the vi editor command to create our Project lamp file by typing the command below:
sudo vi /etc/apache2/sites-available/projectlamp.conf

To type into the vi Editor, we have to type the letter **i** and press enter. This will take us to INSERT. You can now type or insert into this page.



Now, use the **ls** command to show that it's a directory.
sudo ls /etc/apache2/sites-available

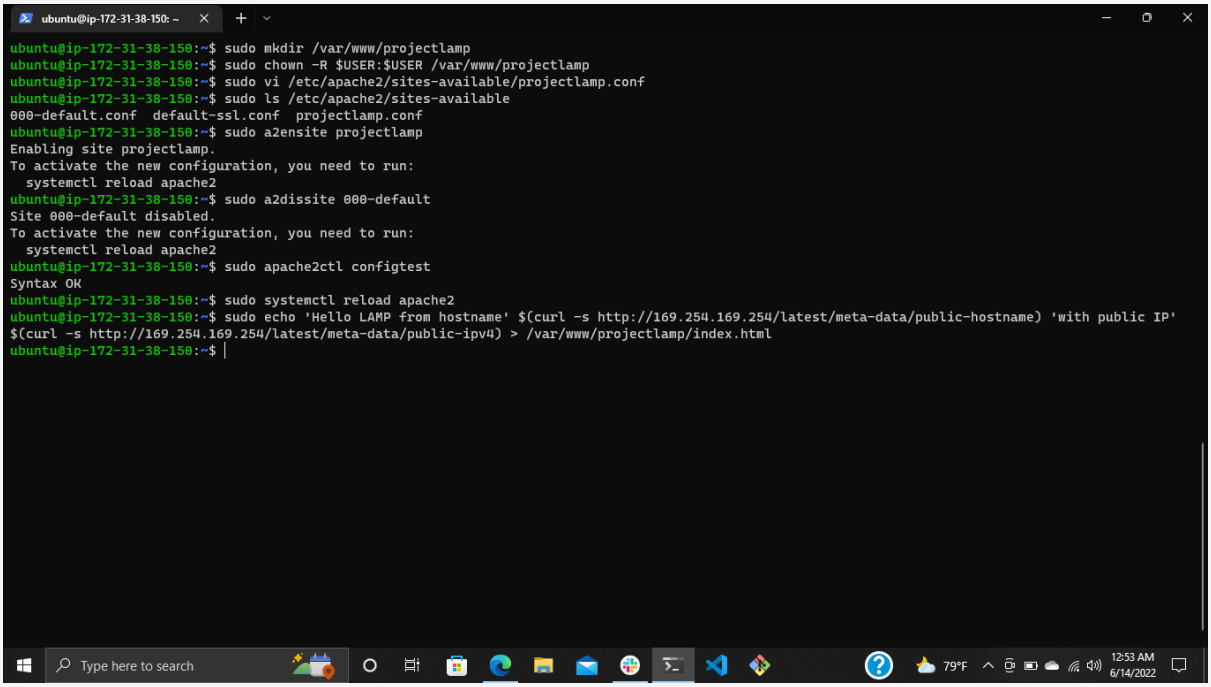
We'll then use the next two commands to enable our just created virtual host and disable the default domain by inputting the following commands:
sudo a2ensite projectlamp
sudo a2dissite 000-default

Now run the below command to confirm the validity of our file.
sudo apache2ctl configtest

Enter the next command to reload Apache2
sudo systemctl reload apache2

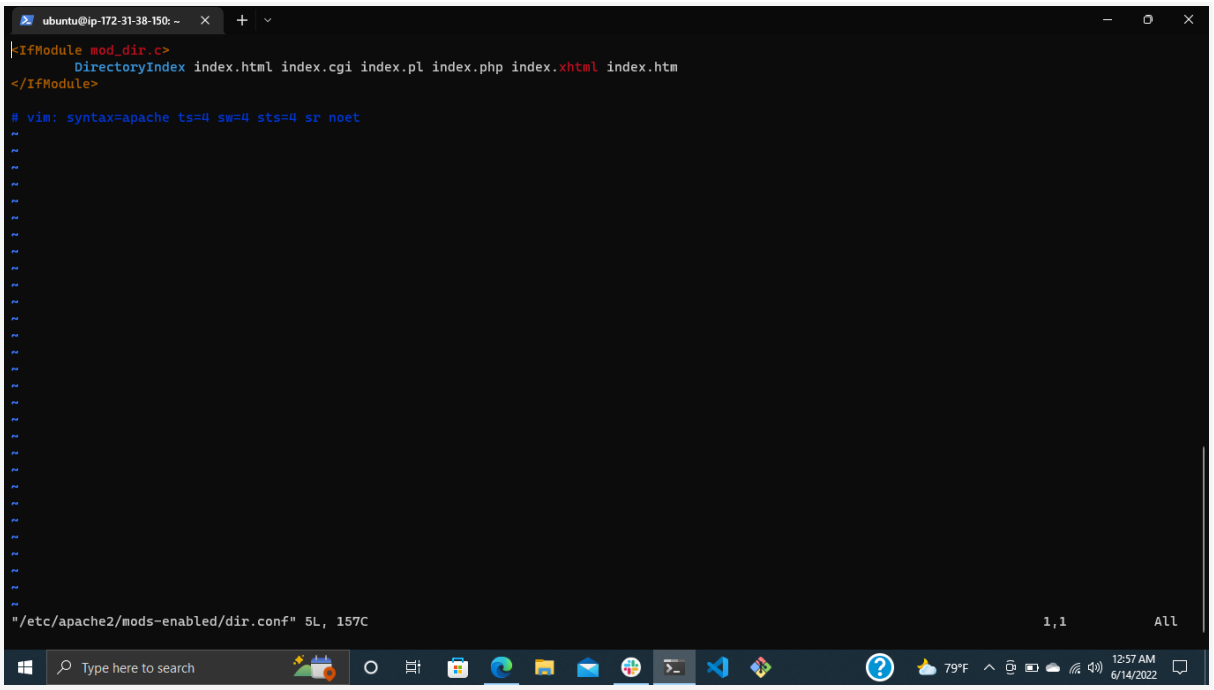
Now we have to create an index.html file by inserting the following command:

```
sudo echo 'Hello LAMP from hostname' $(curl -s
http://169.254.169.254/latest/meta-data/public-hostname) 'with public
IP' $(curl -s http://169.254.169.254/latest/meta-data/public-ipv4) >
/var/www/projectlamp/index.html
```

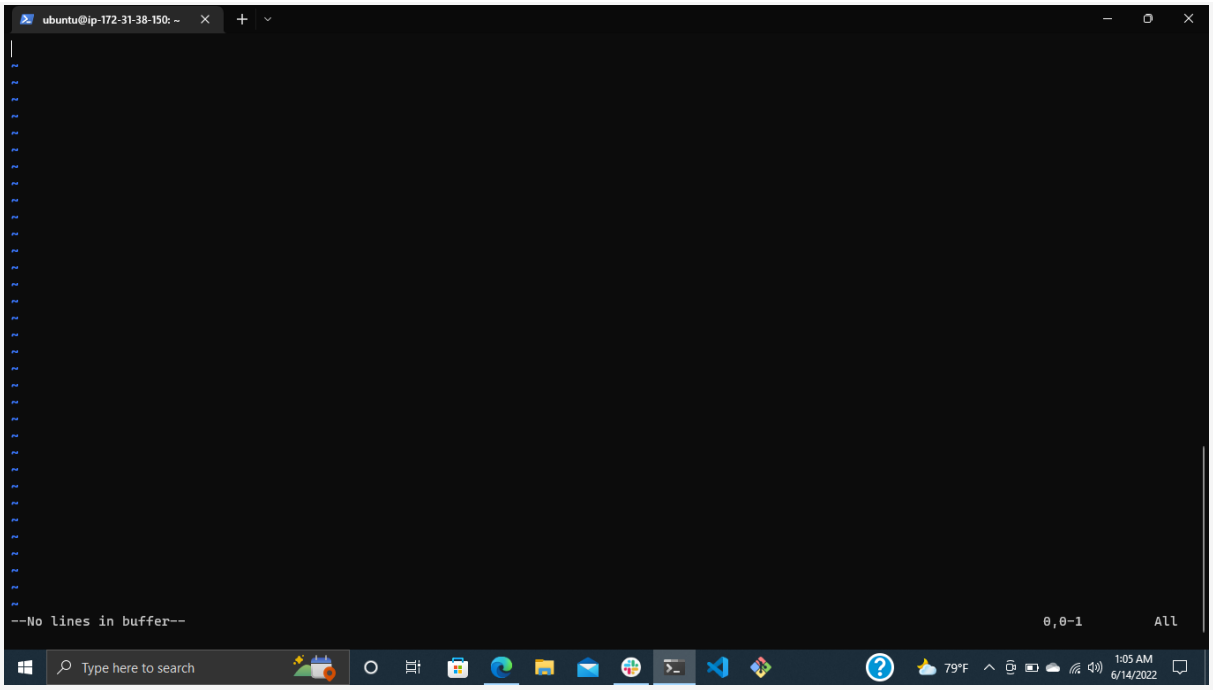


STEP 5: NOW WE'VE TO ENABLE PHP ON THE WEBSITE

We have to edit the Apache website and change the way it appears on our directory by inserting the following command:
sudo vim /etc/apache2/mods-enabled/dir.conf



Insert the text in the terminal by clicking on **i** to enter the insert mode.
Before then, let us clear the screen by following this sequence: i esc :%d
Press enter to clear the lines



Then insert the text:

```
<IfModule mod_dir.c>
        #Change this:
        #DirectoryIndex index.html index.cgi index.pl index.php
index.xhtml index.htm
        #To this:
        DirectoryIndex index.php index.html index.cgi index.pl
index.xhtml index.htm
</IfModule>
```

Reload Apache for the changes to take effect. Type this command:

```
sudo systemctl reload apache2
```

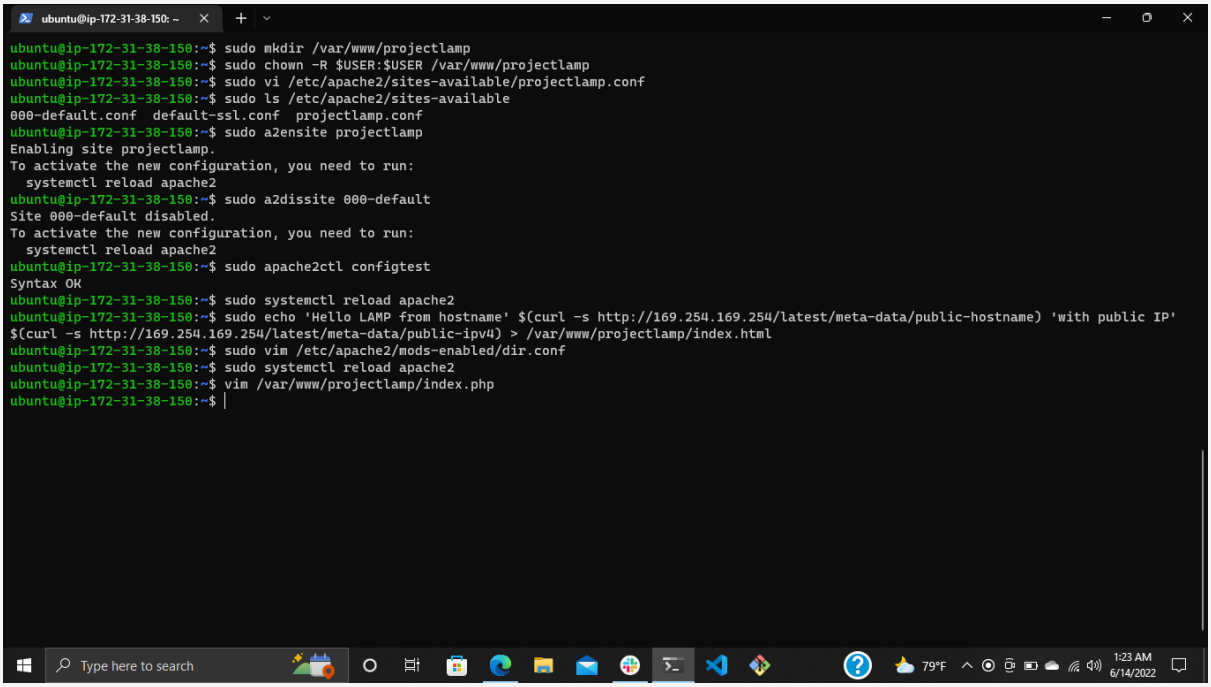
Create index.php file inside the web root folder by typing the command below:

```
vim /var/www/projectlamp/index.php
```

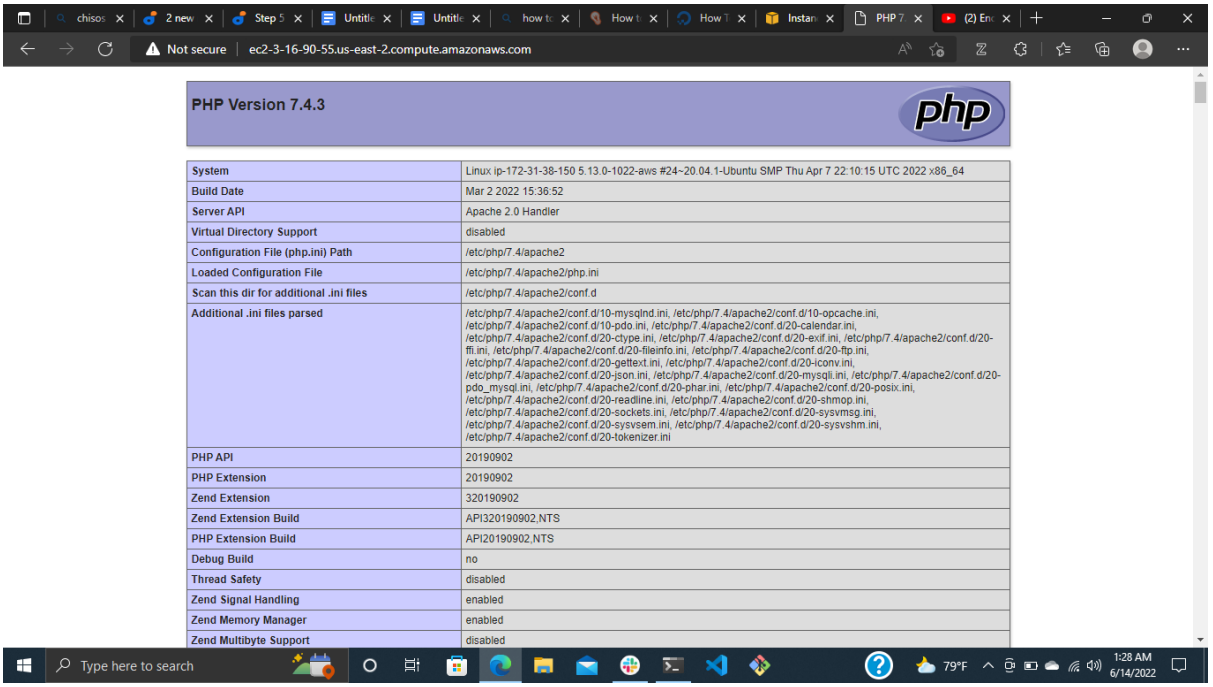
Enter the empty file text:

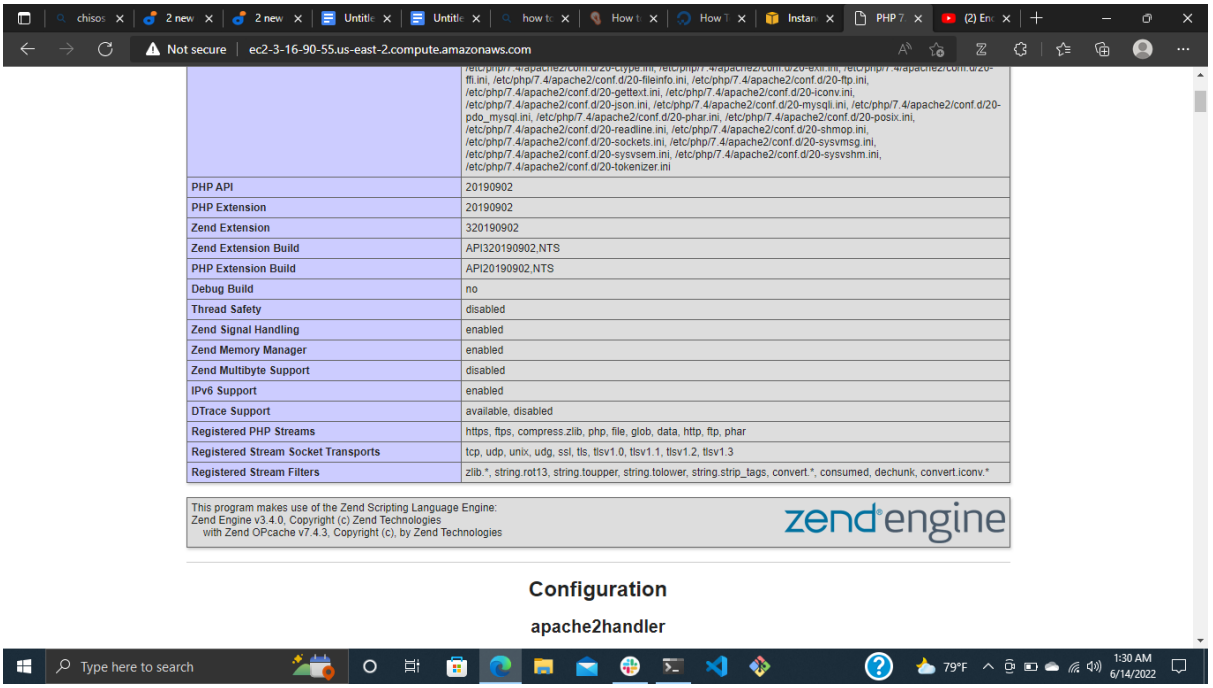
```
<?php
phpinfo();
```

Click on colon sign and type wq and press enter.



Now, refresh the page by entering the initial IPv4 Public IP on your AWS EC2 Instance to refresh the page.





Remove this information so that the company information doesn.t fall into the wrong hands by typing:

```
sudo rm /var/www/projectlamp/index.php
```