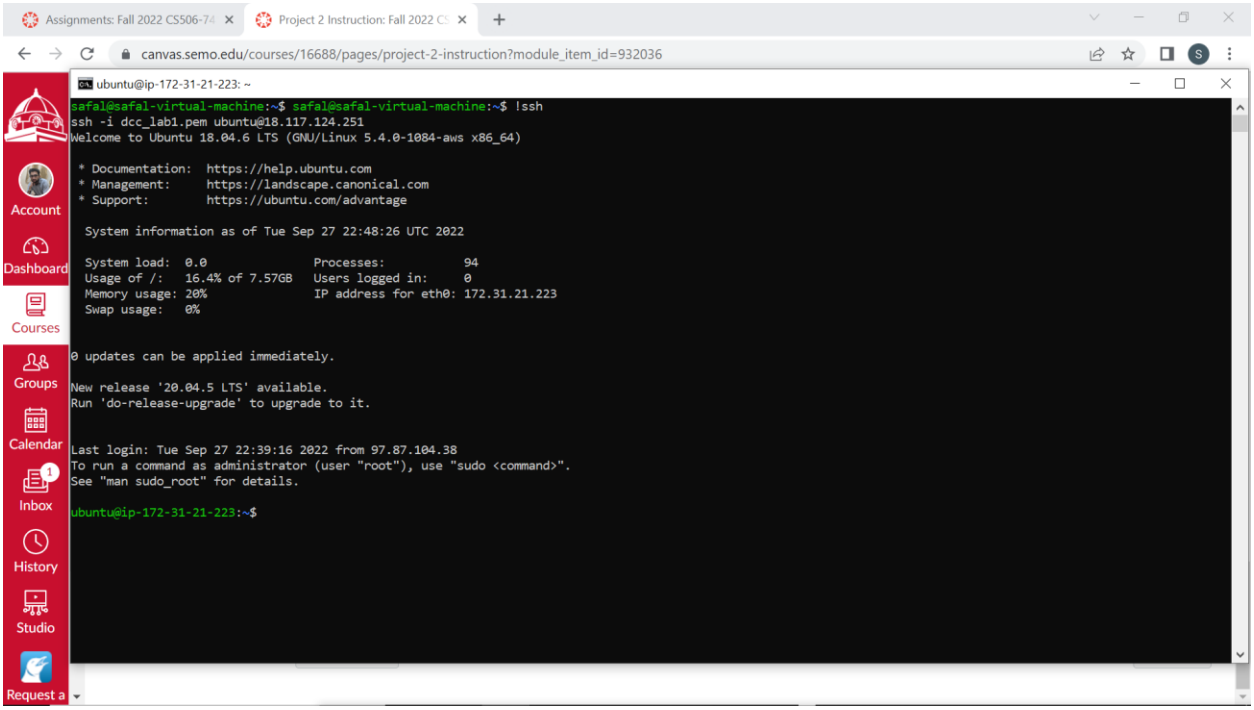
Install a Web Server on Your EC2 Instance

This hands-on project is based on the work from, https://github.com/RyanFitzgerald/devportfolio. You can find more information from this link.

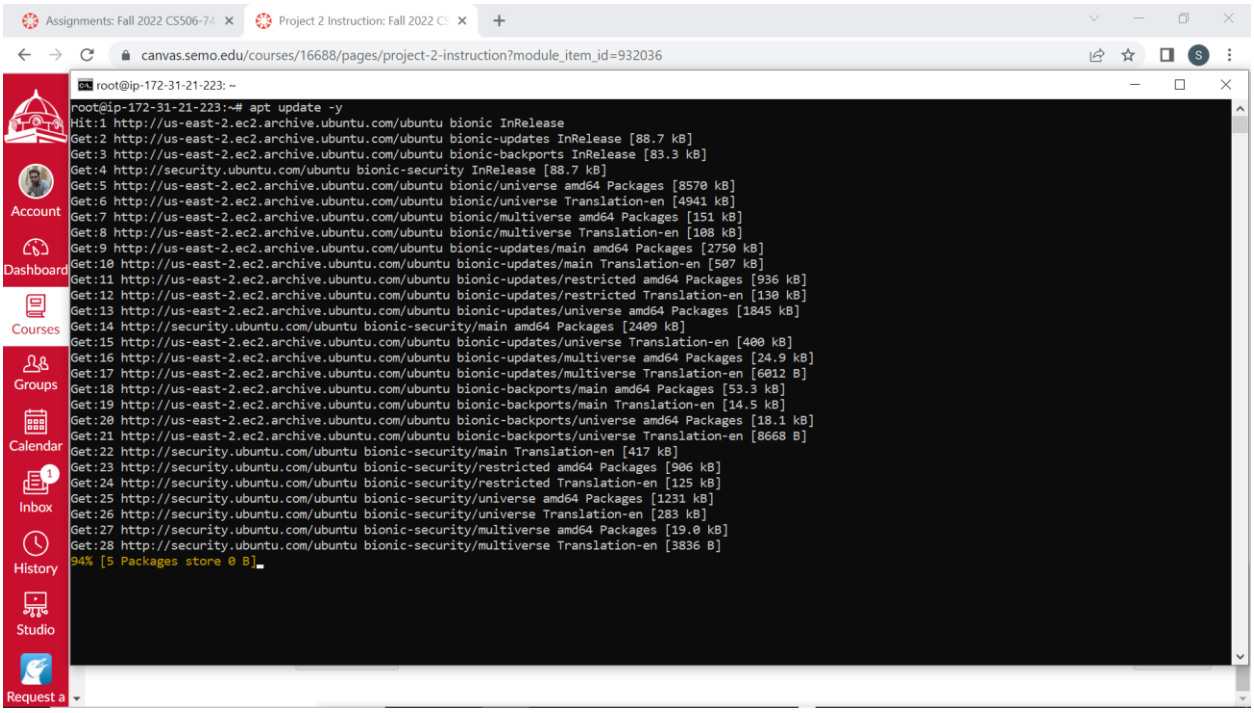
1. Use your local ubuntu VM to ssh your EC2 instance.



2. Install Apache, MySQL & PHP on your EC2 instance.

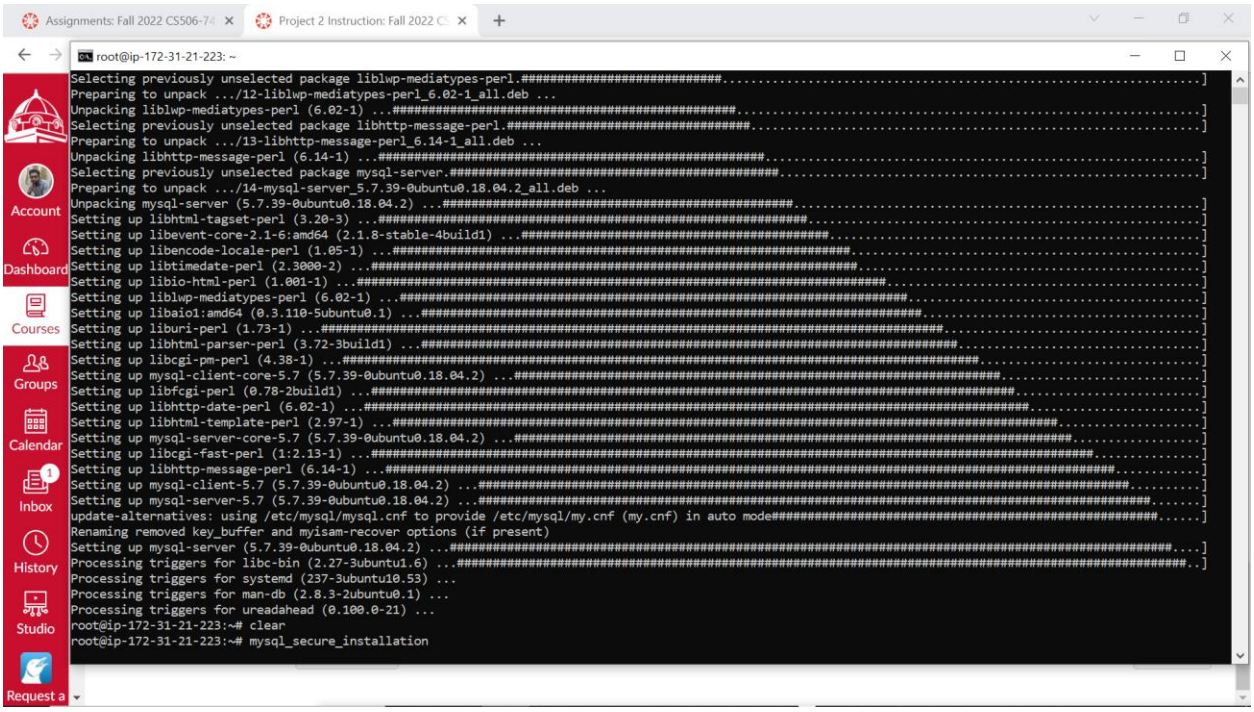
https://hostadvice.com/how-to/how-to-install-apache-mysql-php-on-an-ubuntu-18-04-vps/

$ sudo apt update



install mysql server

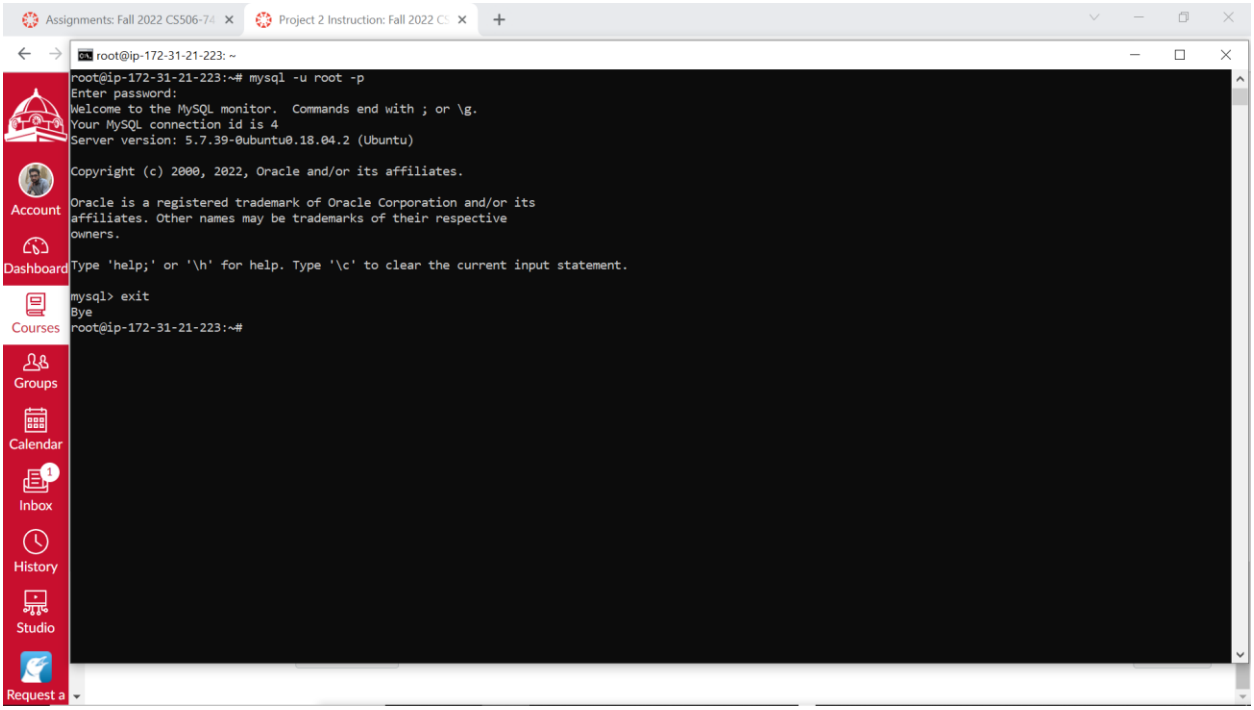
$ sudo apt install mysql-server



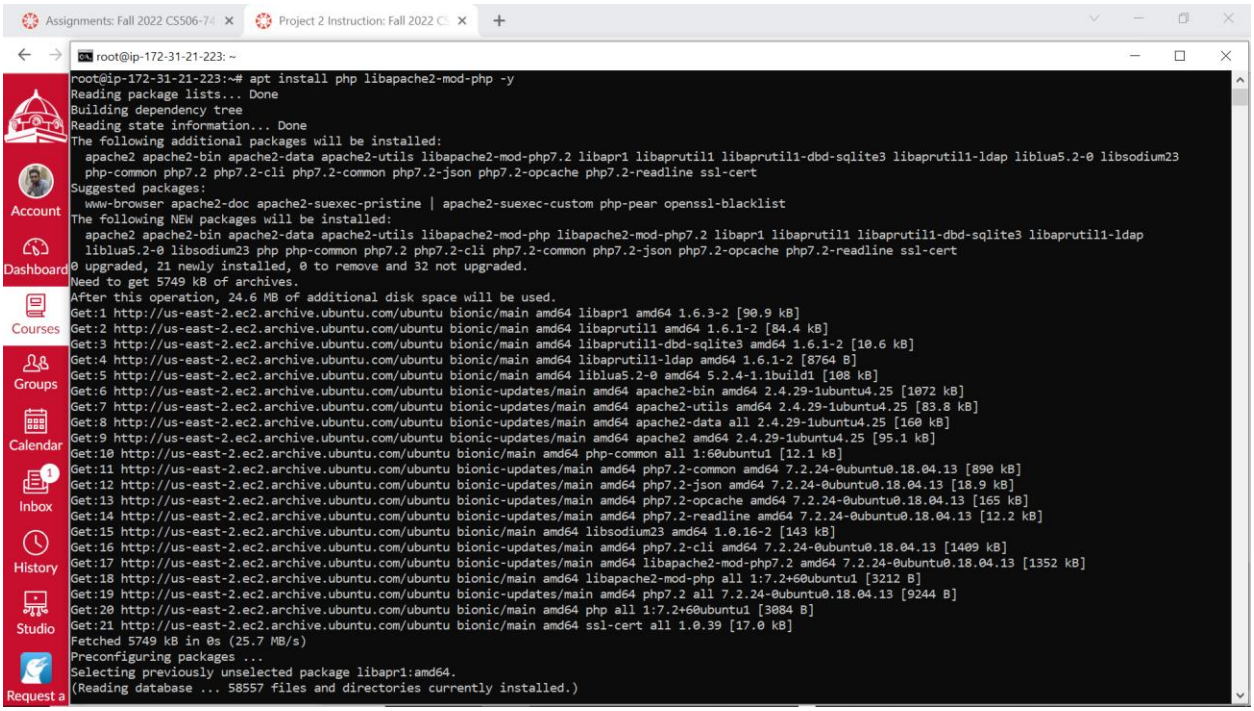
test your mysql server, password is your EC2 instance's password

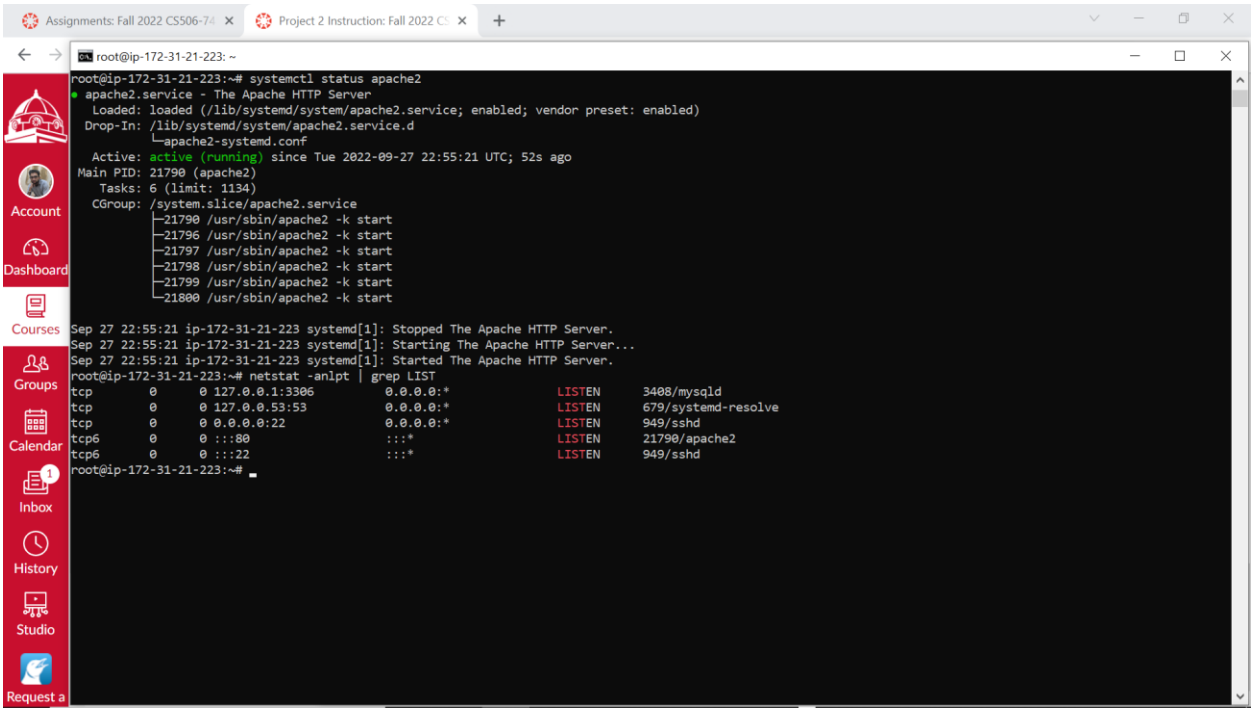
$ sudo mysql -u root -p

mysql> quit



$ sudo apt install php libapache2-mod-php





$ sudo nano /var/www/html/info.php

<?php

phpinfo();

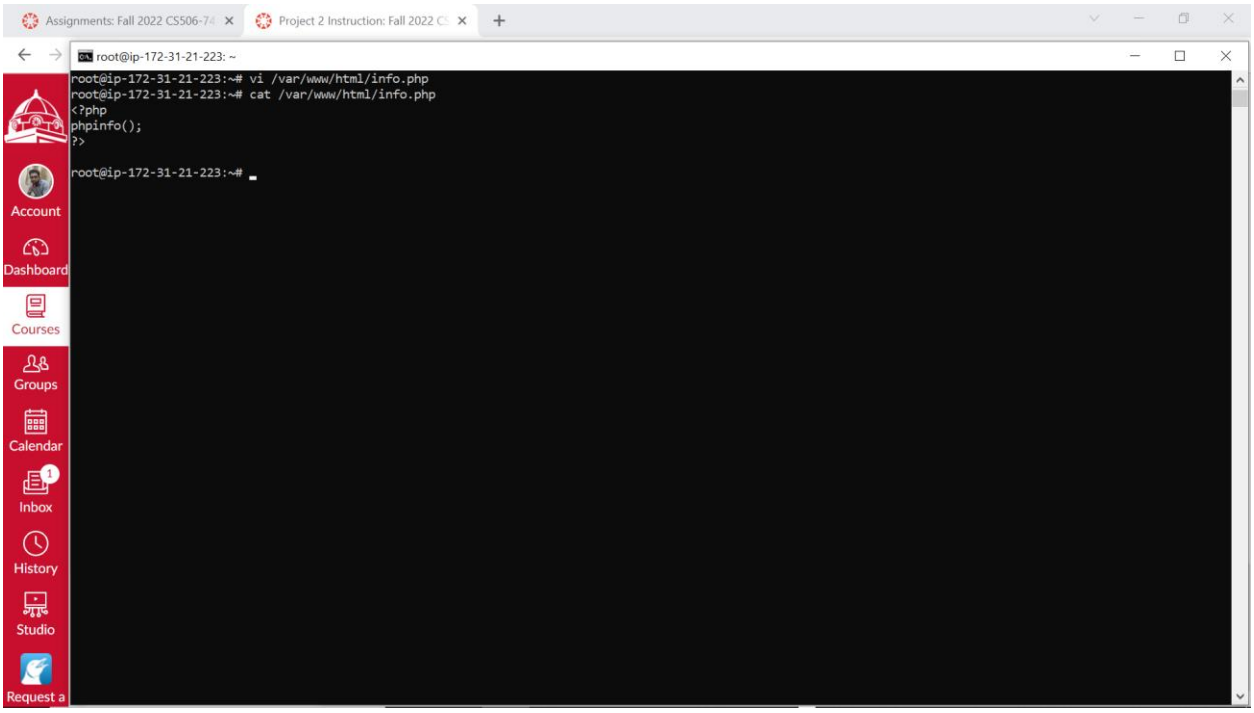
?>

Save file

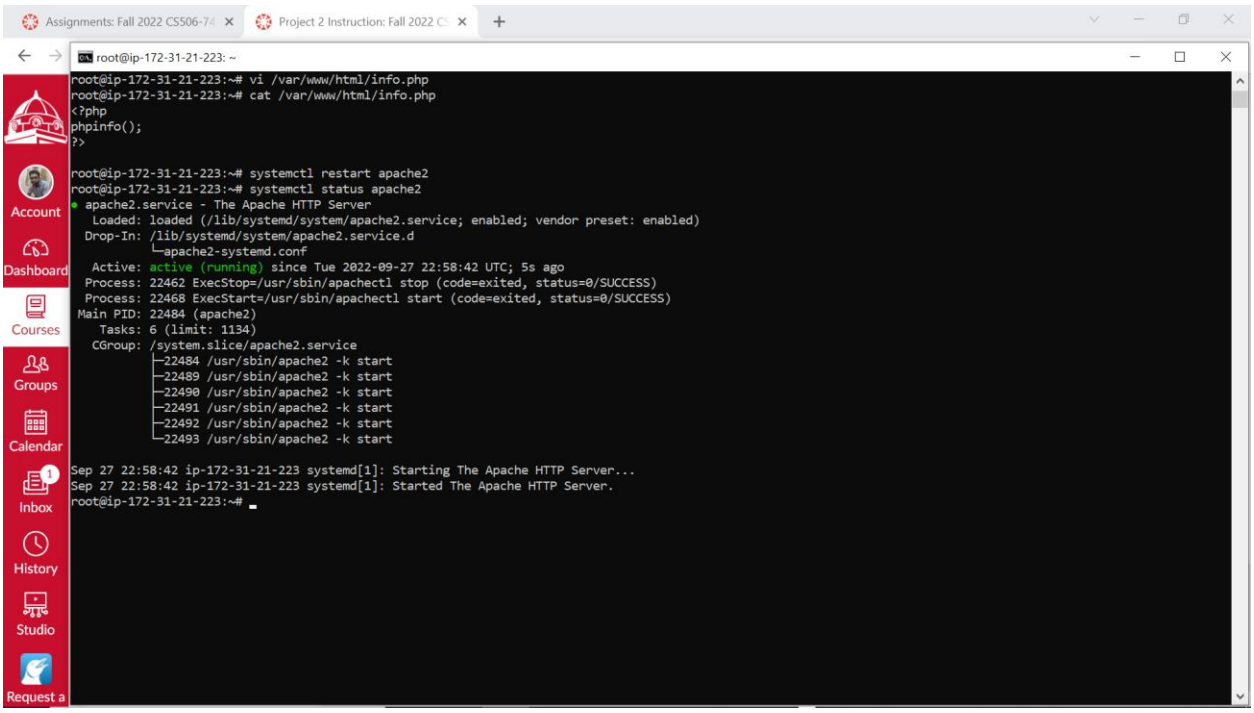
CTRL+o

Exit nano

CTRL+x



$ sudo systemctl restart apache2



3. Set file permissions for the Apache web server

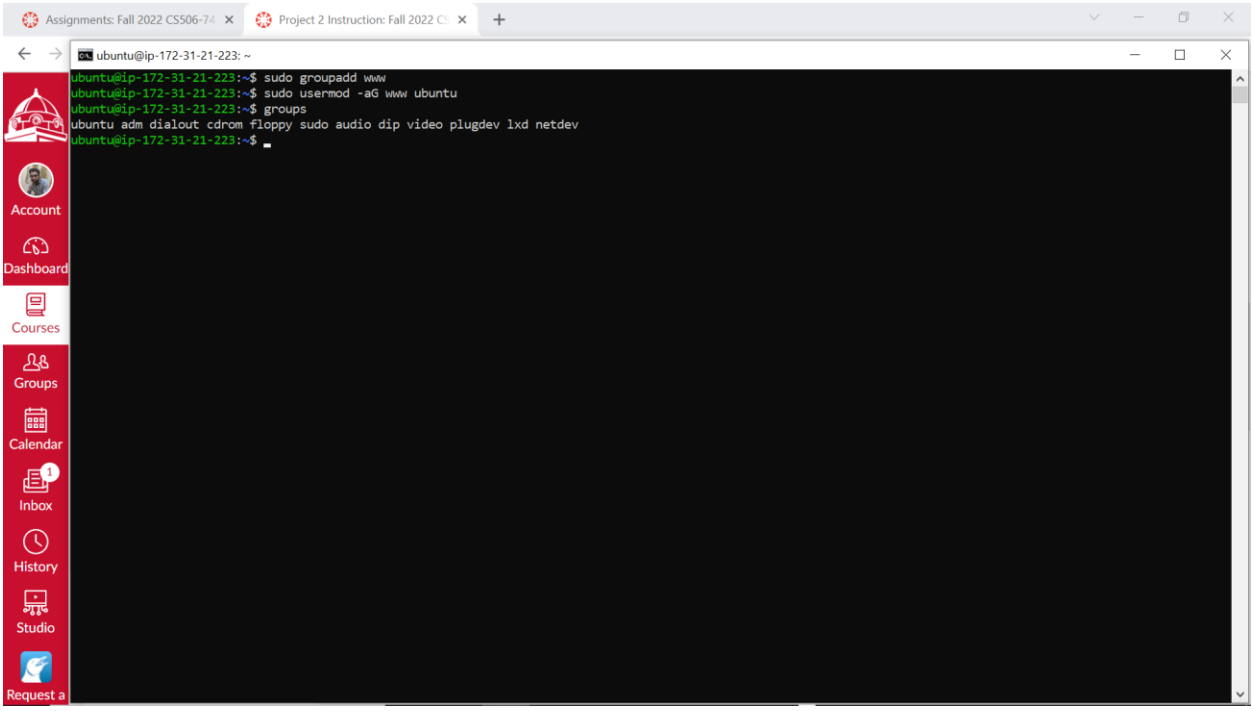
https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Tutorials.WebServerDB.CreateWebServer.html (Links to an external site.)

Add a new group www

$ sudo groupadd www

Add the ec2-user "ubuntu" to the "www" group.

$ sudo usermod -a -G www Ubuntu



Log out to refresh your permissions and include the new `apache` group.

$ exit

ssh your EC2 instance again.

Log back in again and verify that the `apache` group exists with the `groups` command.

$ groups

Change the group ownership of the `/var/www` directory and its contents to the `apache` group.

$ sudo chgrp -R www /var/www

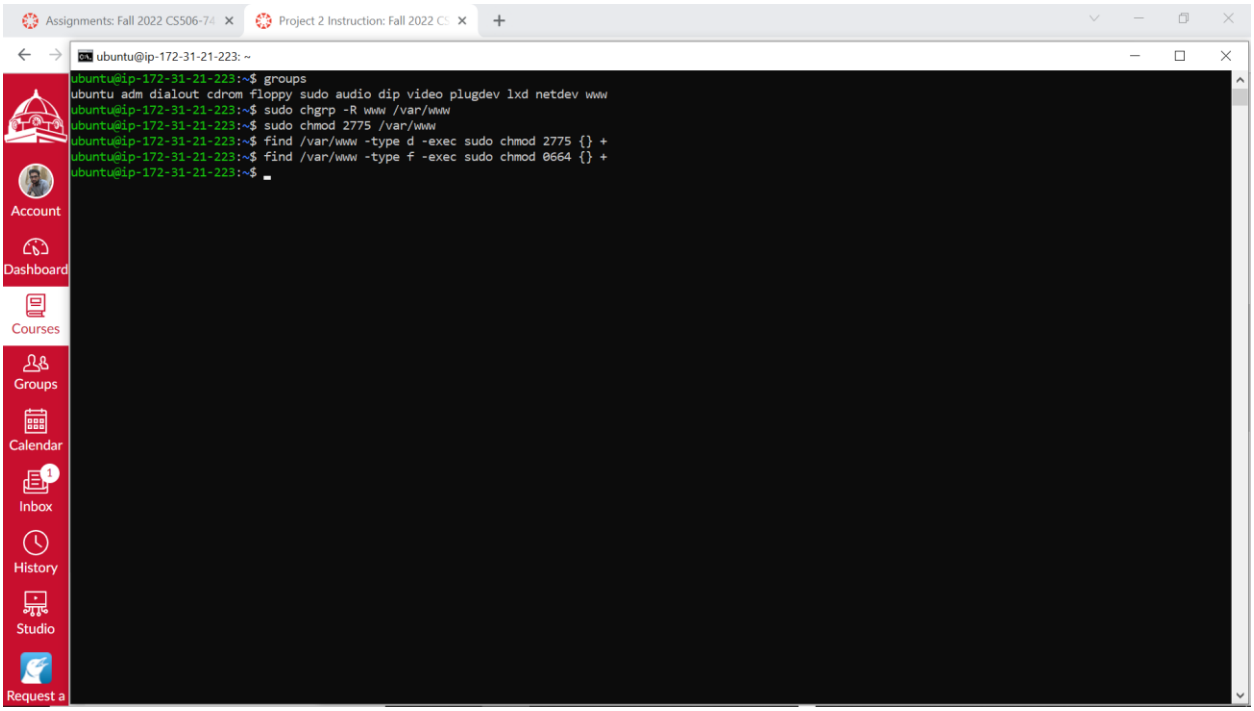
Change the directory permissions of `/var/www` and its subdirectories to add group write permissions and set the group ID on subdirectories created in the future.

$ sudo chmod 2775 /var/www

$ find /var/www -type d -exec sudo chmod 2775 {} +

Recursively change the permissions for files in the `/var/www` directory and its subdirectories to add group write permissions

$ find /var/www -type f -exec sudo chmod 0664 {} +



Now, `ec2-user` "ubuntu" (and any future members of the `apache` group) can add, delete, and edit files in the Apache document root, enabling you to add content, such as a static website or a PHP application.

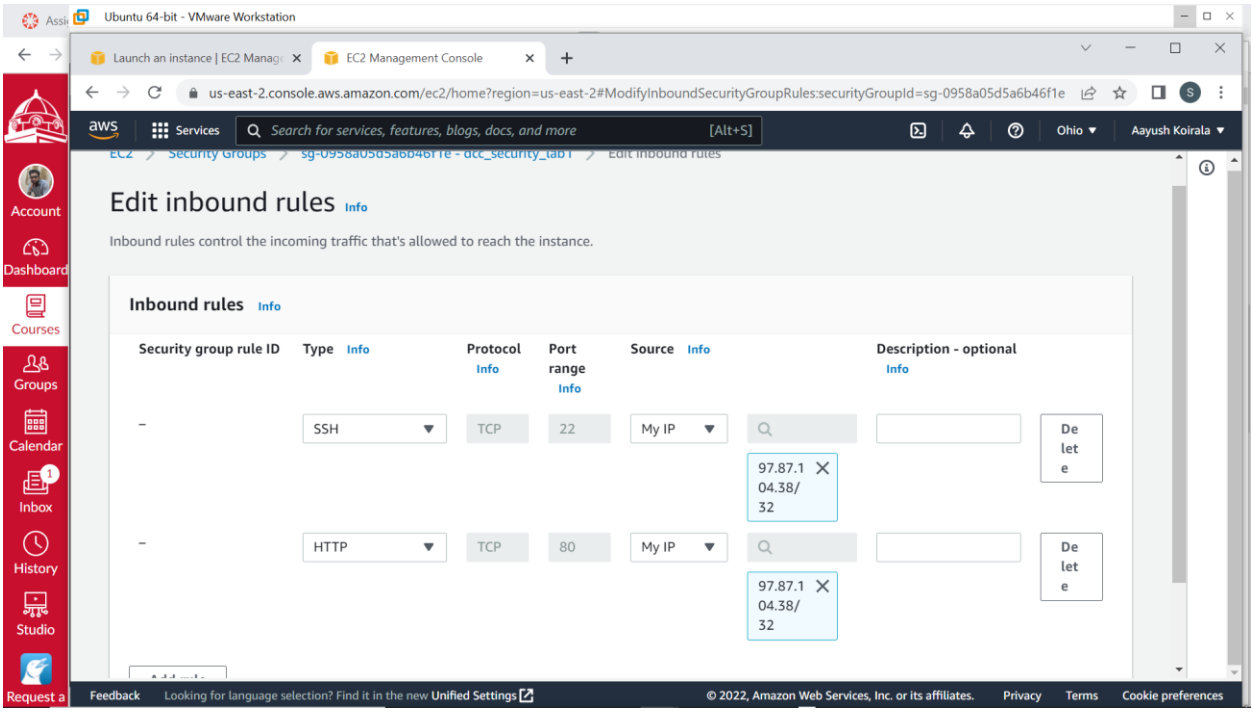
4. Edit inbound rules of your EC2 instance.

Add a new rule to enabling Port 80 for the HTTP traffic on your EC2 instance.

Your AWS console -> Network & Security -> Security Groups -> -> Inbound rules -> Edit inbound rules -> Add rule -> Type -> HTTP -> Source type -> My IP -> Save rules

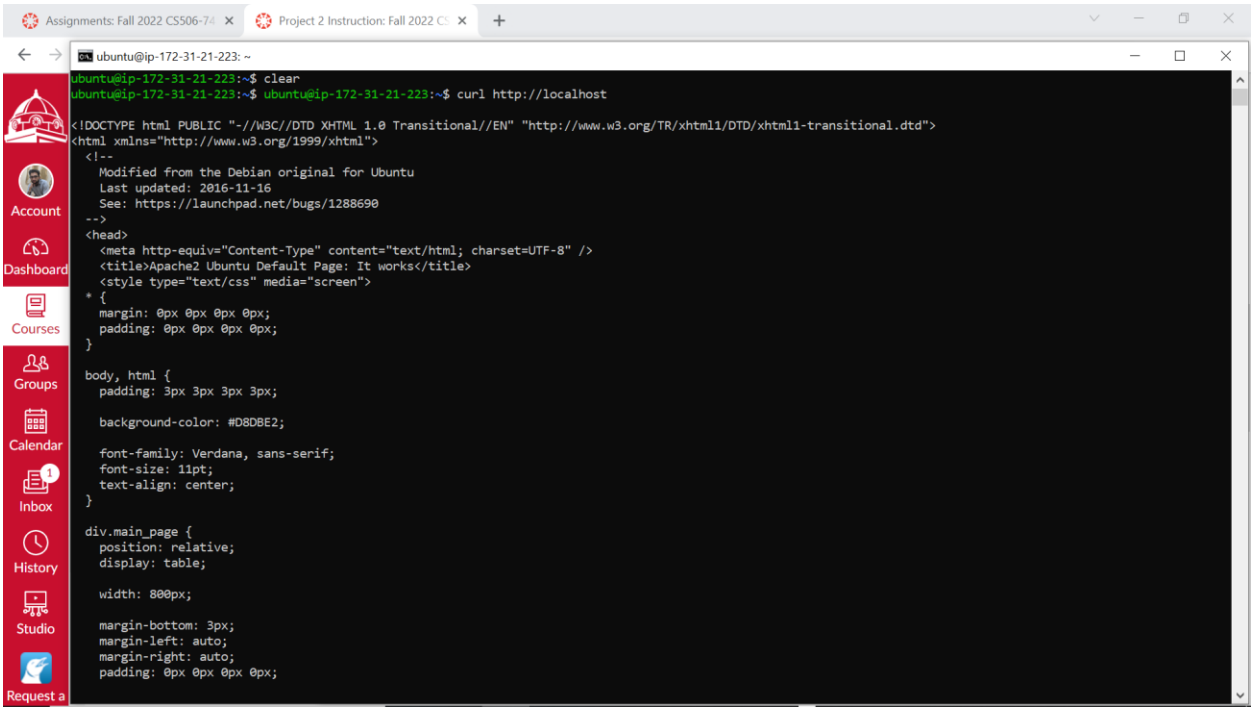
* If you can not ssh to your EC2 instance, you may need to create a new rule for your ssh traffic

Your AWS console -> Network & Security -> Security Groups -> -> Inbound rules -> Edit inbound rules -> Add rule -> Type -> SSH -> Source type -> My IP -> Save rules

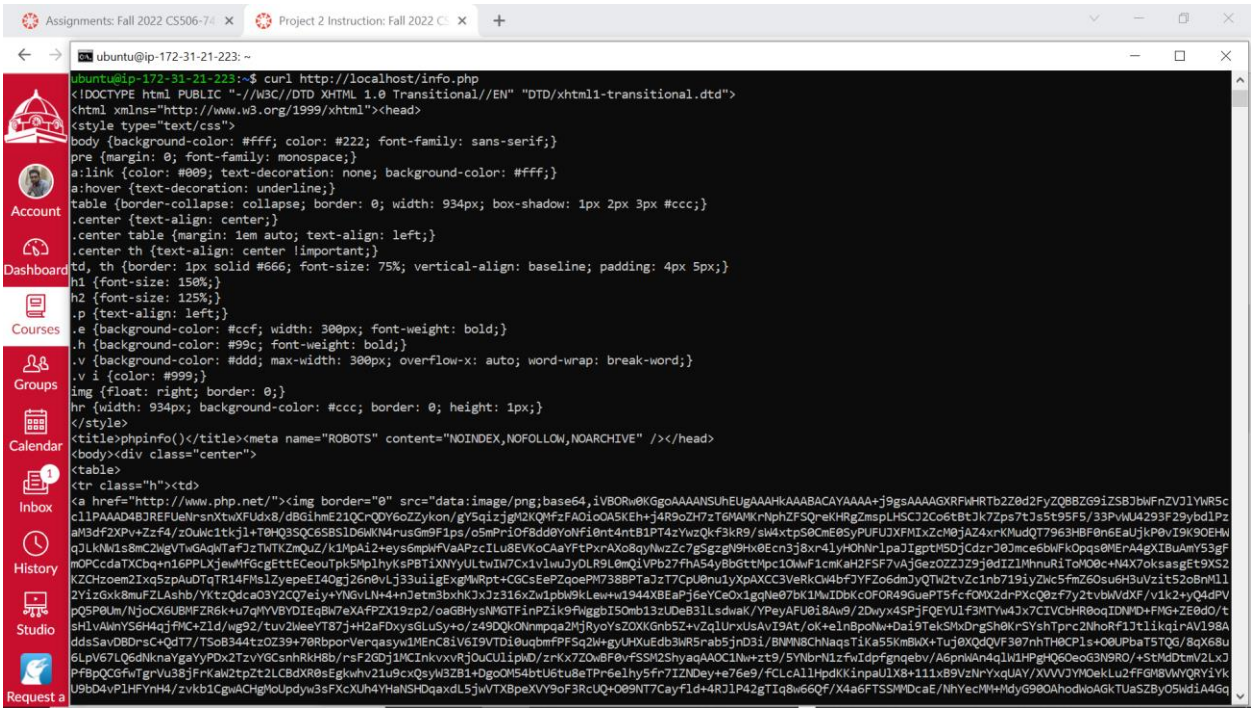


5. Test your Apache Web server and PHP Server on your EC2 Instance.

curl http://localhost



curl http://localhost/info.php

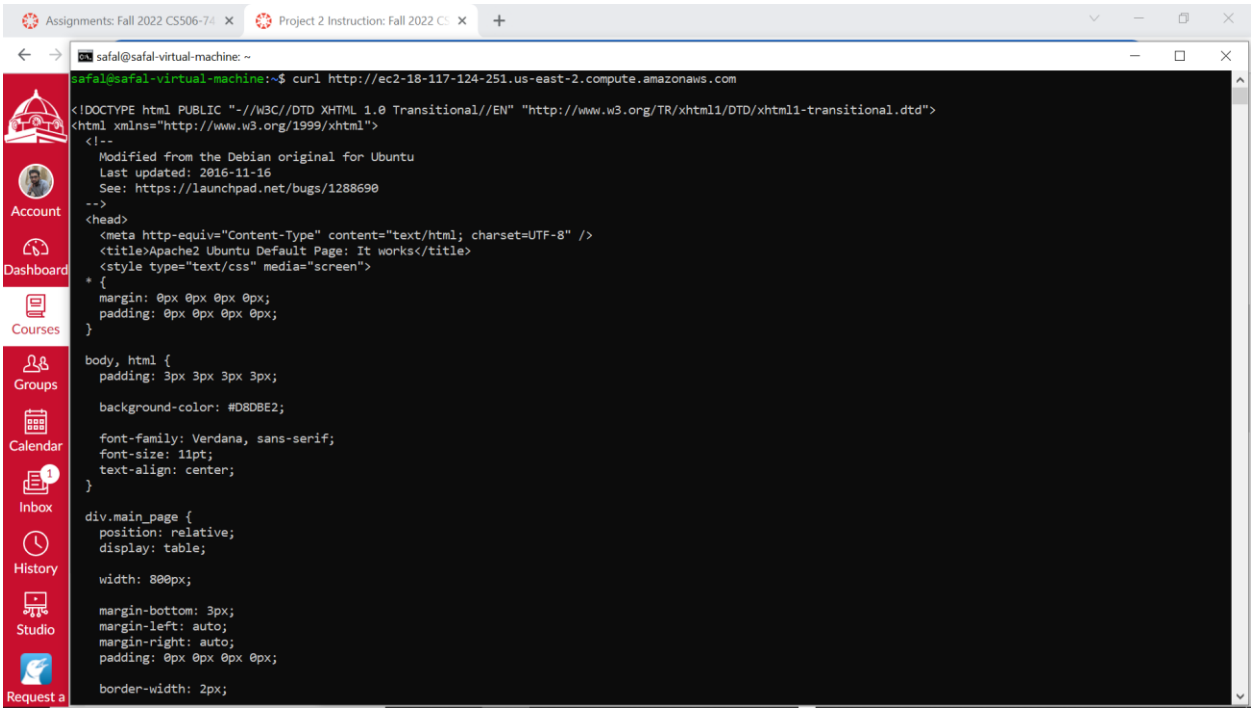


You should have some feedback from your web server.

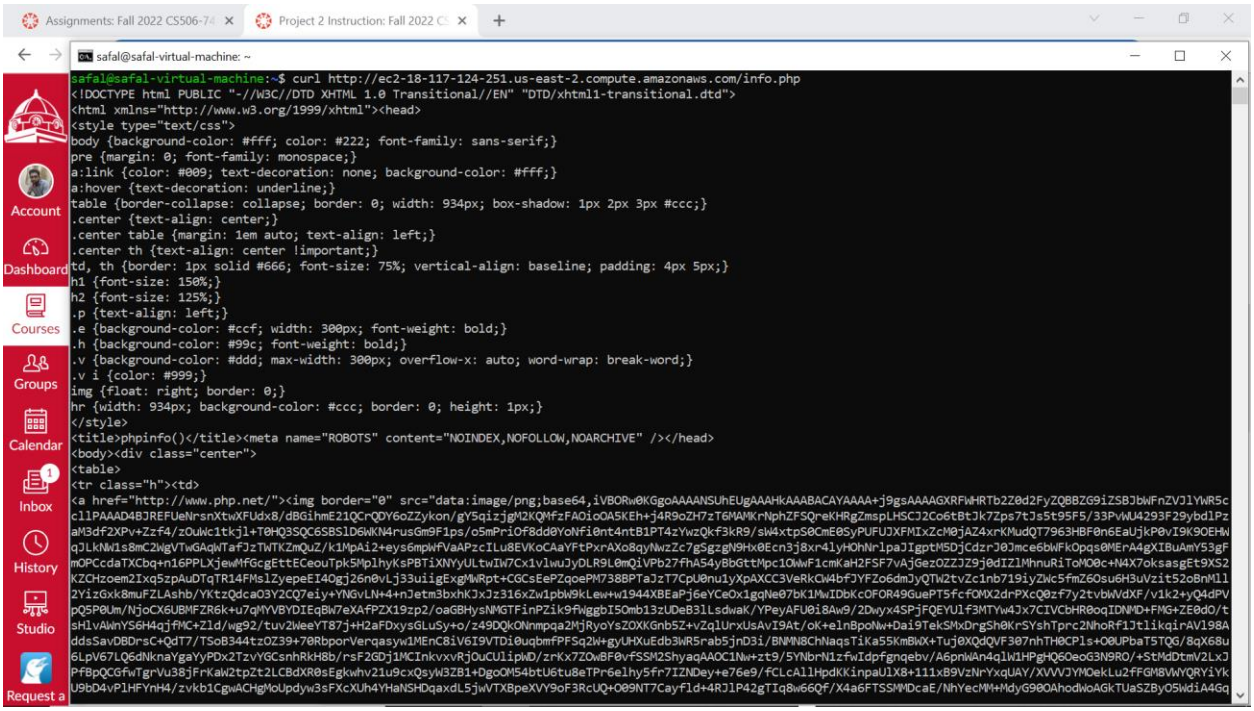
6. Test your Apache Web server and PHP Server on your EC2 Instance from your Local Computer

Test your Apache Web server and PHP Server on your EC2 Instance from your Local ubuntu VM.

curl http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com

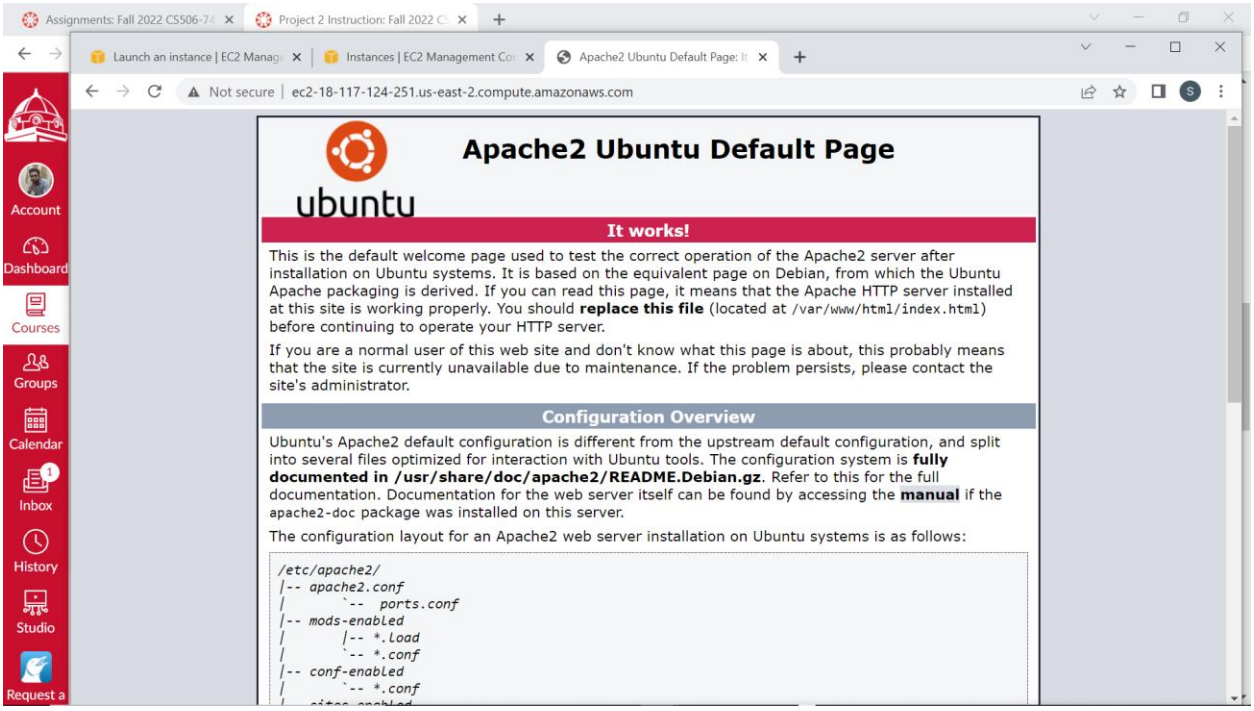


curl [http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com/info.php (Links to an external site.)](http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com/info.php)

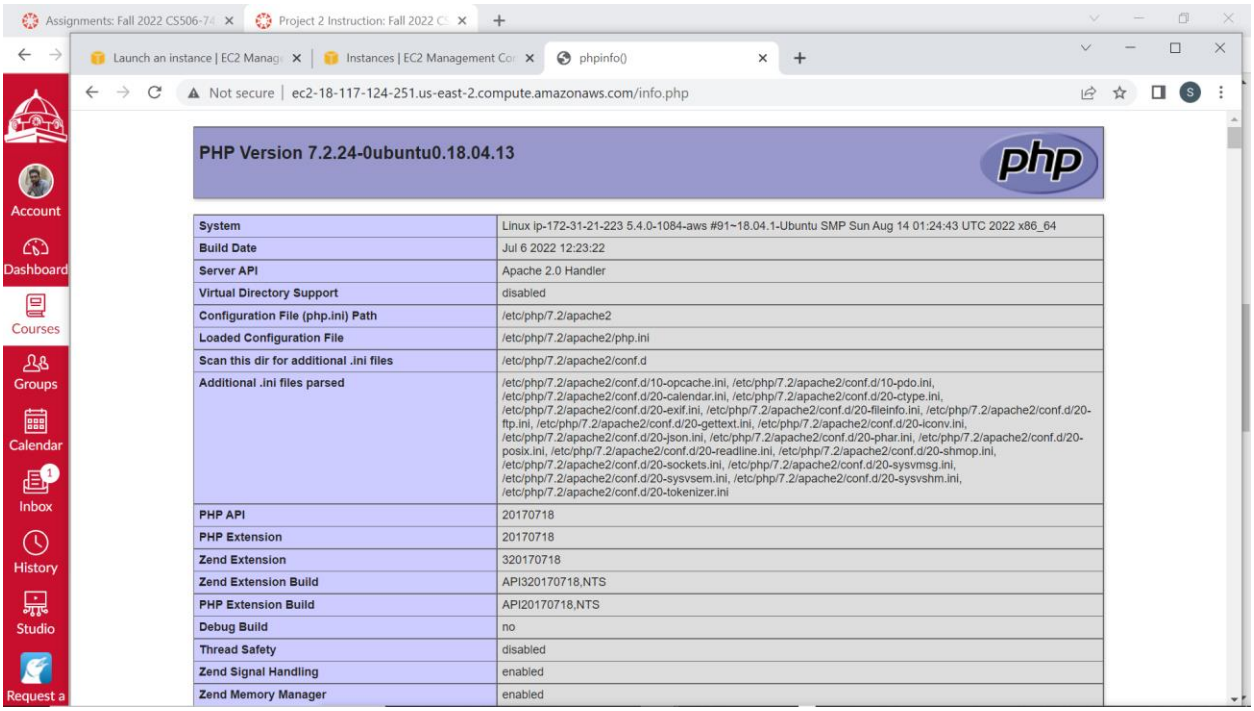


Test your Apache Web server and PHP Server on your EC2 Instance from your Local ubuntu VM.

Browser -> [http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com (Links to an external site.)](http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com)



Browser -> http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com/info.php



Please replace with your host name.

You should have some feedback from your web server.

7. Copy a web server example to your EC2 instance.

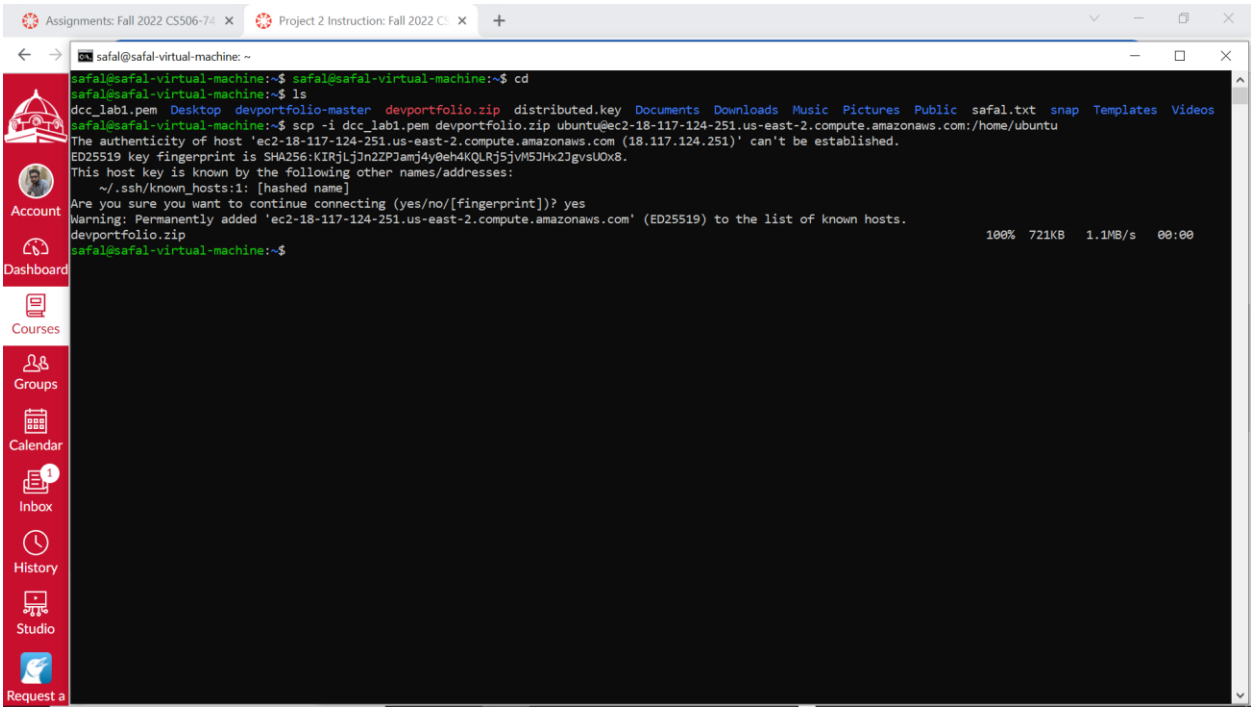
7.1 Download the file "devportfolio.zip" from Canvas to your local ubuntu VM.

7.2 scp the file to your EC2 instance.

In my case:

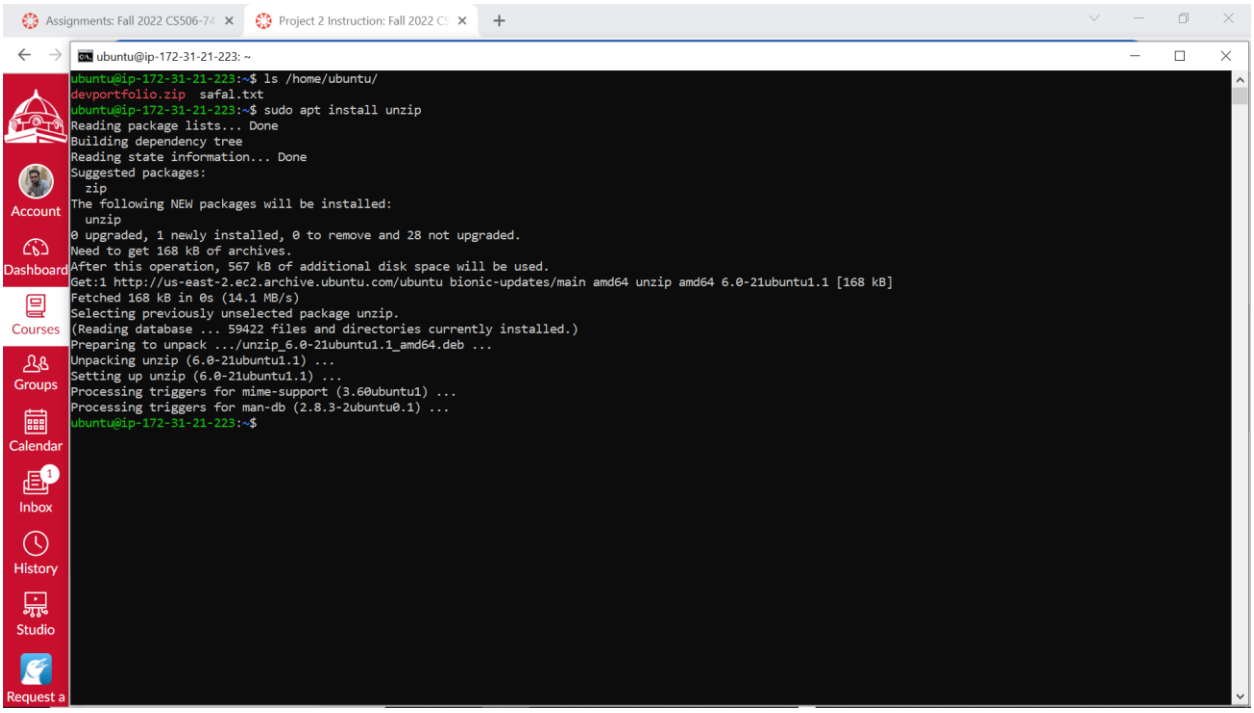
sudo scp -i ~/Downloads/cloud/aws_andy.pem ~/Downloads/cloud/devportfolio.zip ubuntu@ec2-18-216-155-172.us-east-2.compute.amazonaws.com:/var/www/html/

Please replace the pem file, the path of the zip file, and host name with yours.



7.3 Unzip the zip file on your EC2 instance.

$ sudo apt install zip unzip

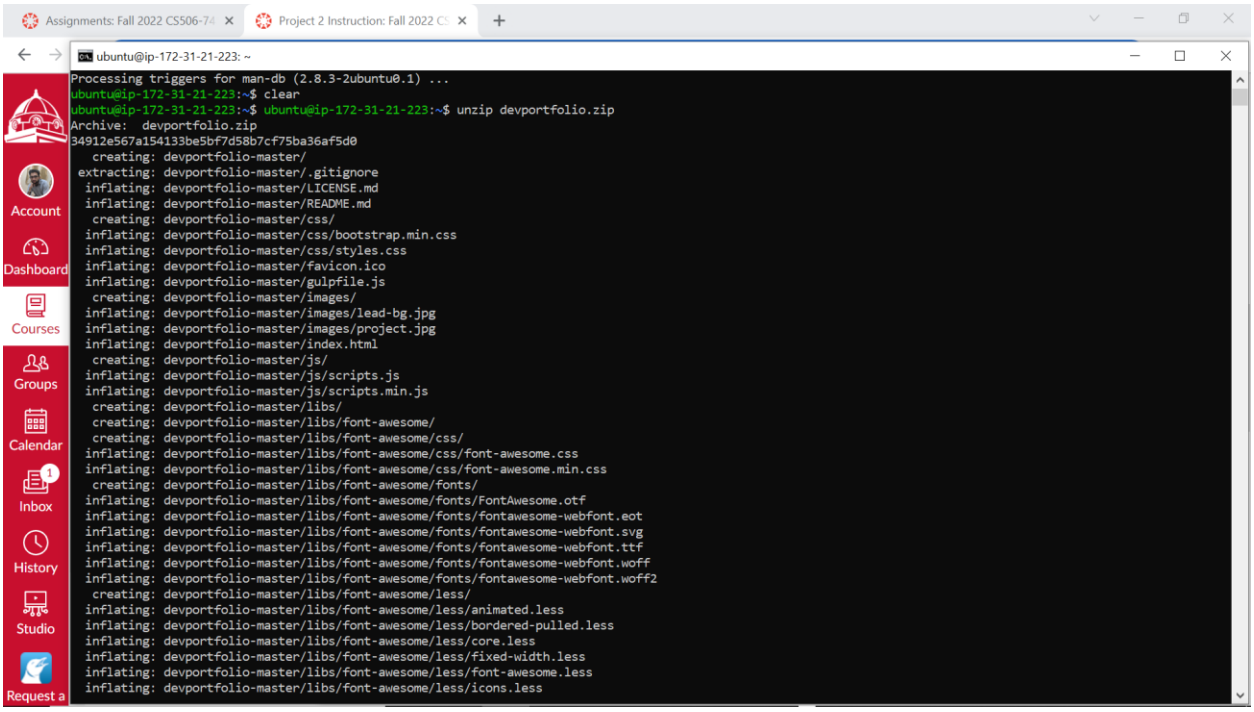


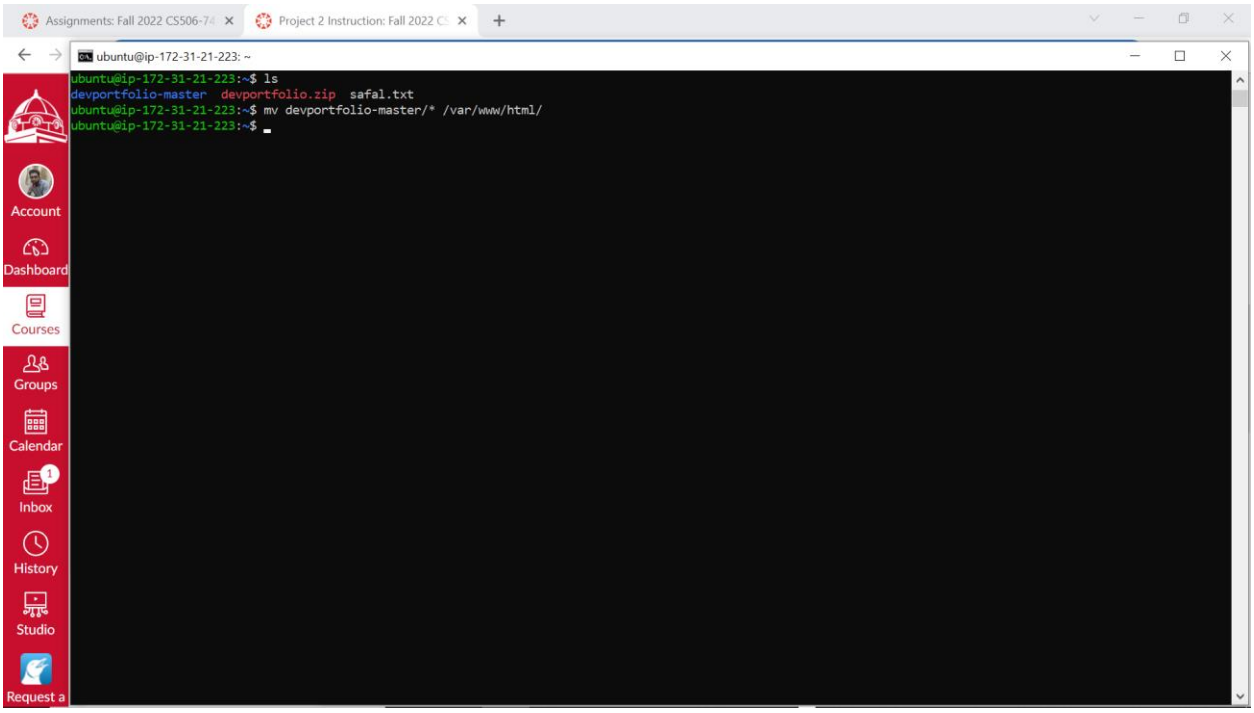
$ cd /var/www/html/

$ ls

make sure you can find the file devportfolio.zip

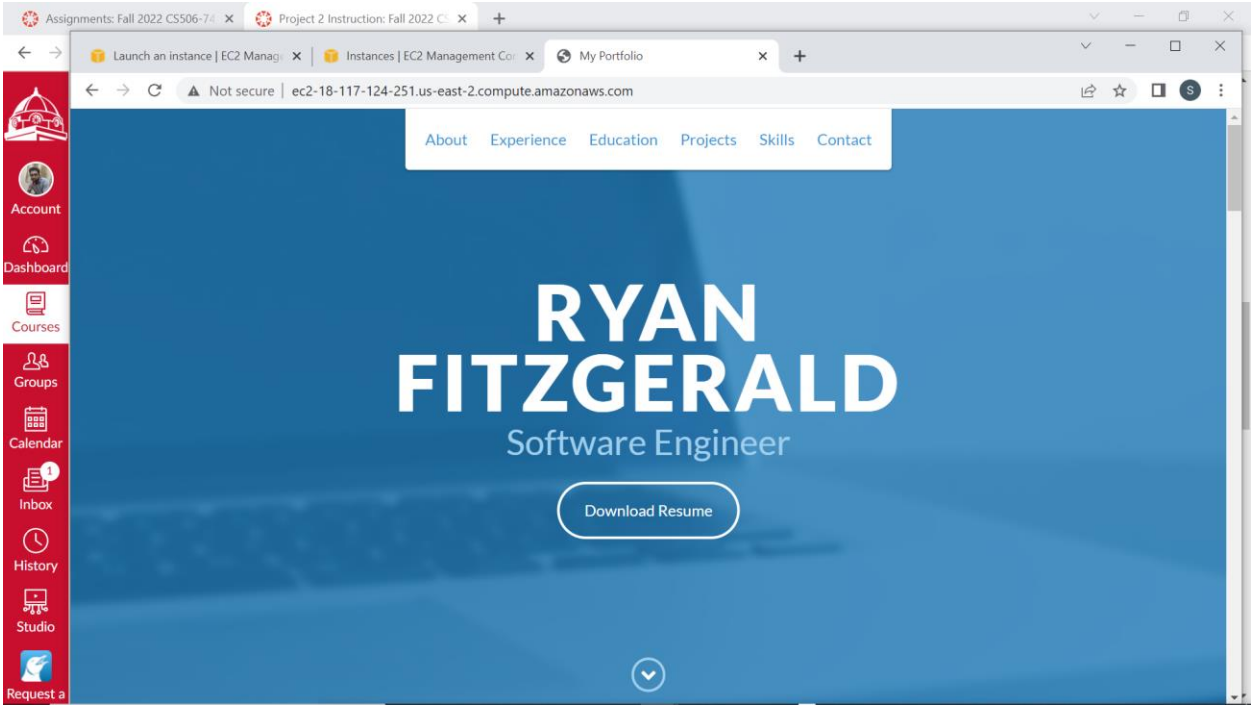
$ unzip devportfolio.zip





8. Access your web server on your EC instance from your local windows machine.

Browser -> http://ec2-18-216-155-172.us-east-2.compute.amazonaws.com/devportfolio-master/index.html



Please replace with your host name.