- **Amazon Elastic Compute Cloud (EC2)** is a web service provided by Amazon Web Services (AWS) that allows users to rent virtual computers, commonly referred to as "instances," on which they can run their own applications. EC2 provides a scalable computing capacity in the cloud, allowing users to easily launch and manage virtual machines (VMs) on-demand, based on their computing needs.

- When we Launch an instance with Amazon Linux then it gives us facility to connect through browser directly.
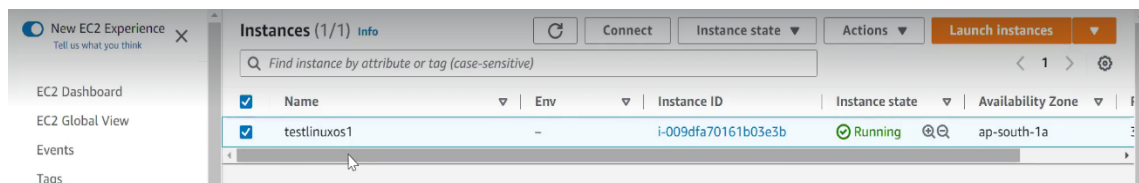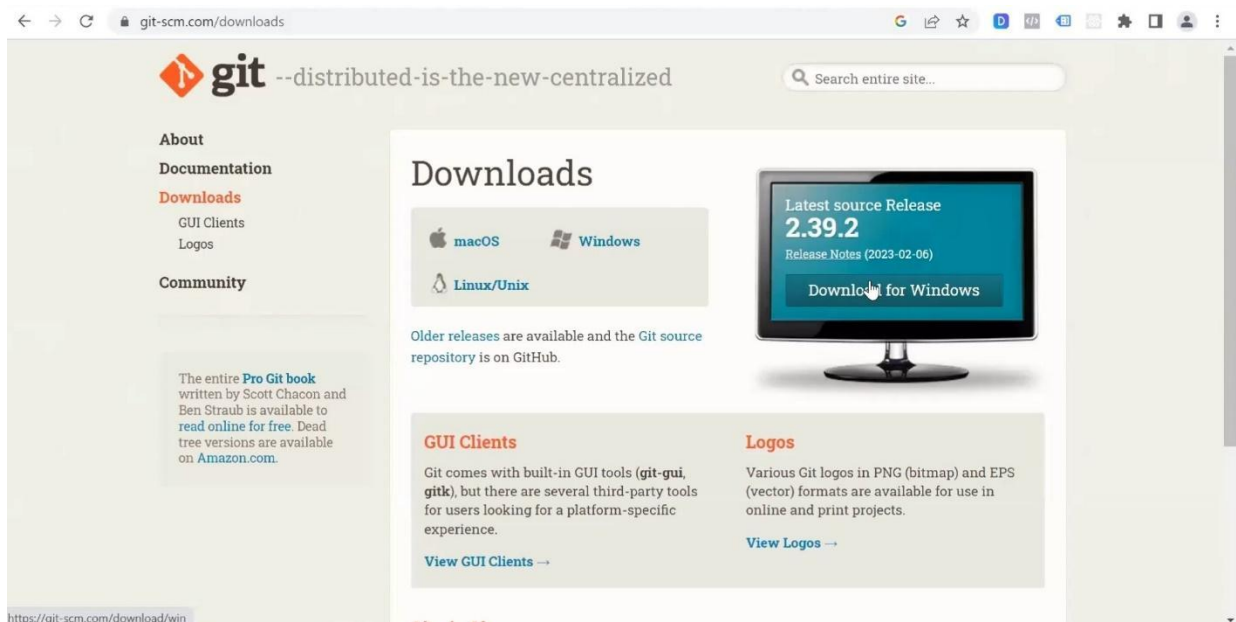

- AWS does not give facility for every AMI to connect through browser. If we launch RedHat linux is does not give us facility to connect through browser.
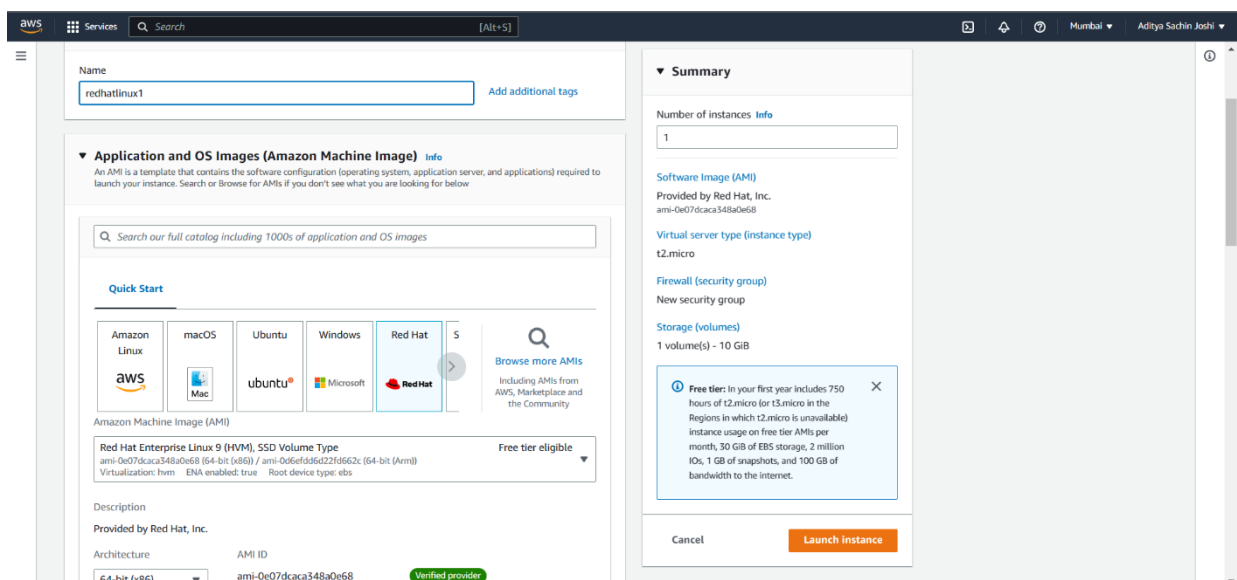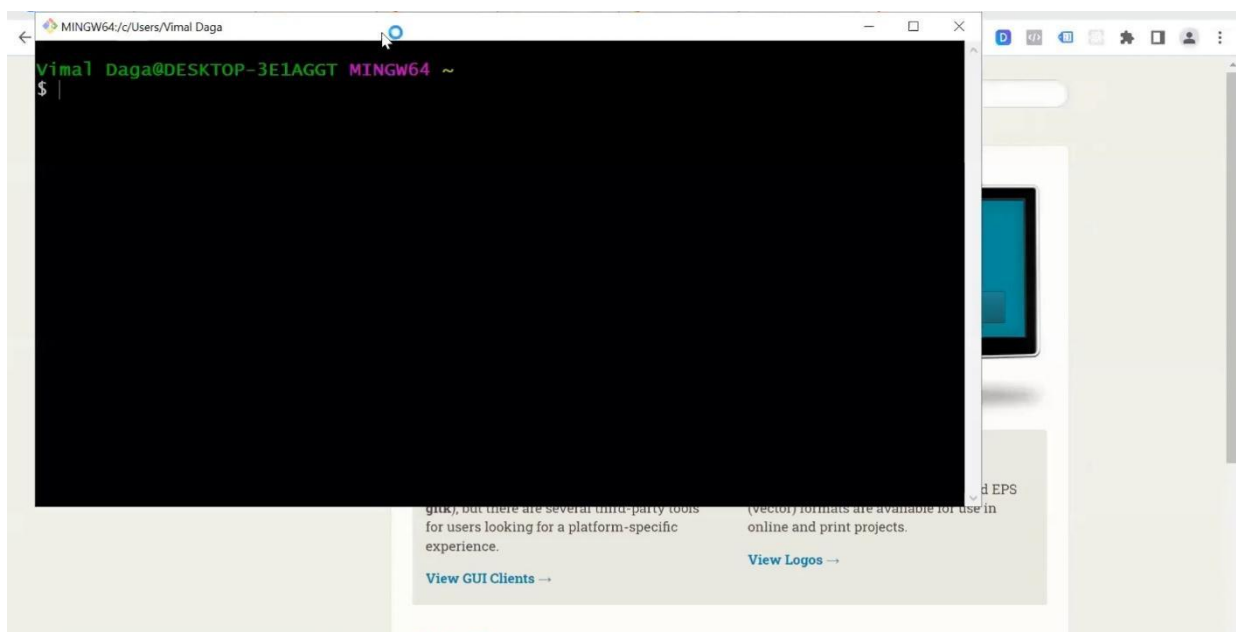

- If we try to connect an Instance based on Redhat Linux AMI through browser, then it will fail to connect to our instance.
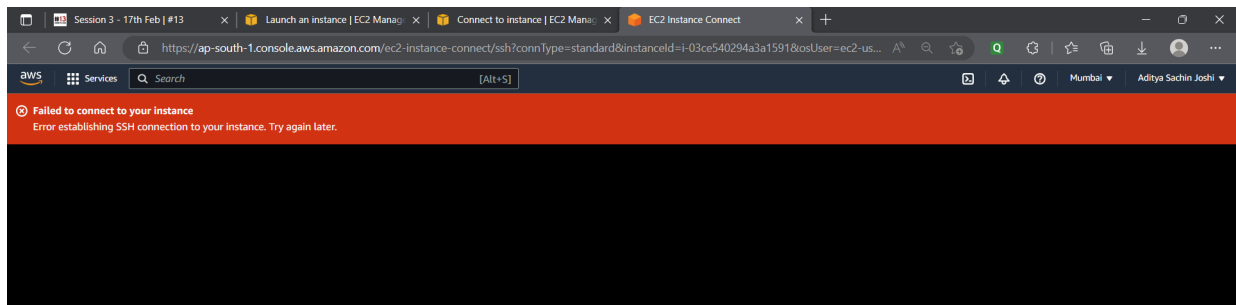
- To solve this, we will download GIT BASH

- After downloading and installing it, We can open Gitbas, which will give us a terminal.

☐ Whenever we want to connect to any instance via ssh we need 3 things.

1) IP Address of the computer you want to connect.
2) Account name or User Name
3) Key or Password

- To connect to the target computer you need the following command.
  ssh IpAddress -l ec2-user -i key(which you downloaded while launching instance).

- **SOCKS PROXY:-**
- Launch an Instance in AWS Virginia region :

- Connecting to the Instance launched in Virginia region from your device(windows) by entering the following command.
  ssh   IPAddress(Virginia instance)   ec2-user -i key(**which you downloaded while launching instance   -N   -D 9090**
  This command created the tunnel between Instance in virginia and your device. This is also know as **Socks Proxy**

- If you tried to search your current location via your direct internet connection it will show your location .

- So to use above Proxy use the following command in your windows CLI :-
  C:\Program Files (x86)\Google\Chrome\Application\chrome.exe"
  --user-data-dir="%USERPROFILE%\proxy-profile
  --proxy-server="socks5://localhost:9090

After using this command you can see the location from browser it will show you different location.
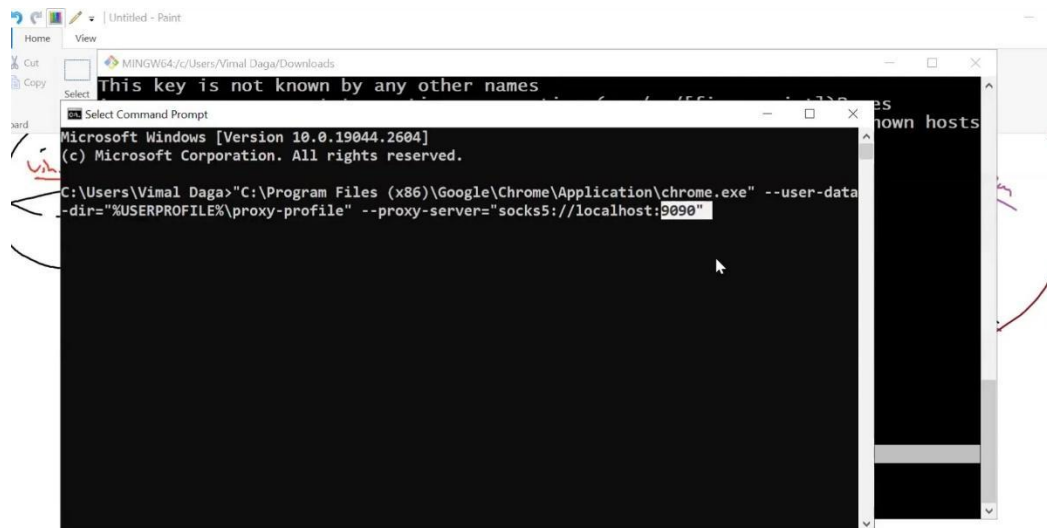
- **AWS global infrastructure** gives you capability to reduce the latency.
  For eg:- if you have hosted your website in Mumbai and your customers are from California it will take a lot of time and there will be increase in the latency issues.
  So, AWS provides the global infrastructure in which you can host your website on AZ's directly near to your customers.

- Launch the instance in the California region
- Login to root user. Root is the admin user in linux.
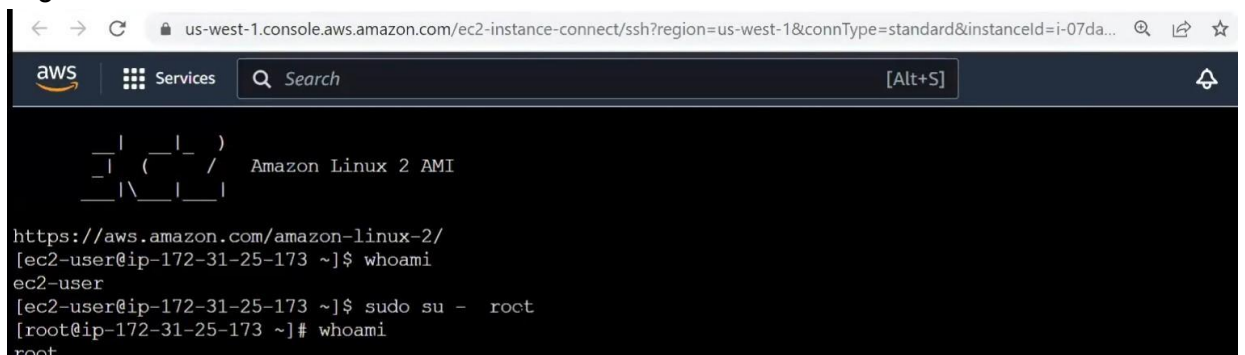
- Installing the webserver (httpd is the software from Apache)
  Command :- **yum install httpd**

- Create or Copy the html folder in /var/www/html/ directory
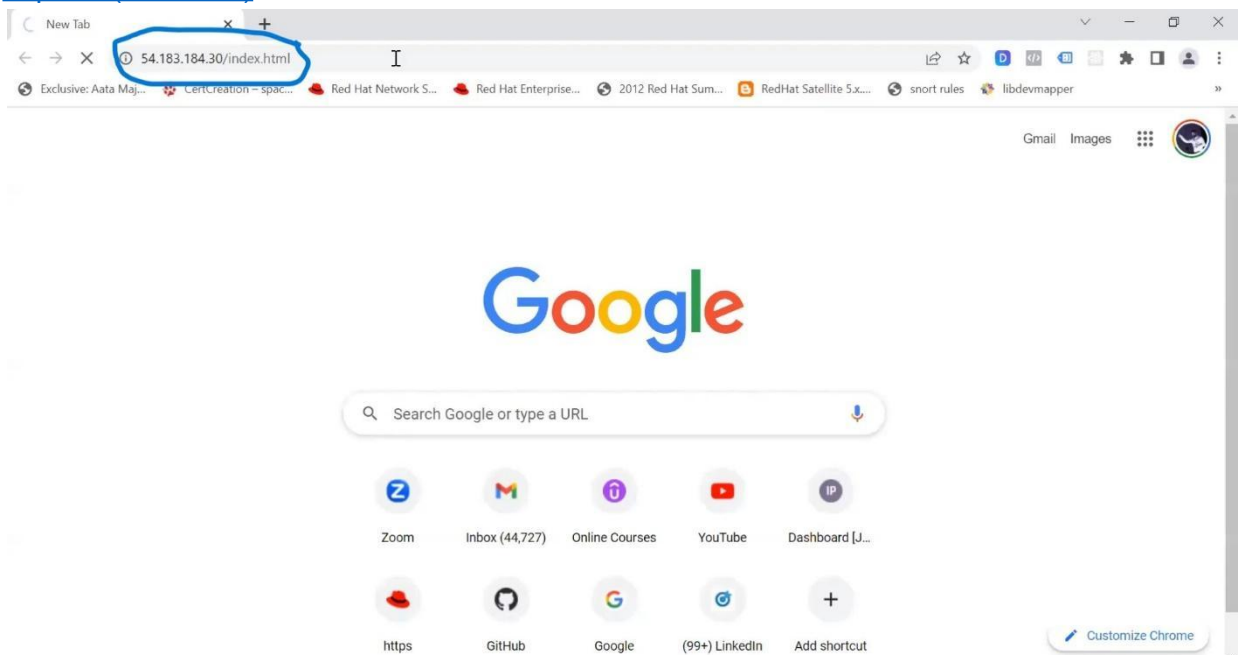- Command :- **cat > index.html**

- Starting the webserver
  Command:- *systemctl start httpd*

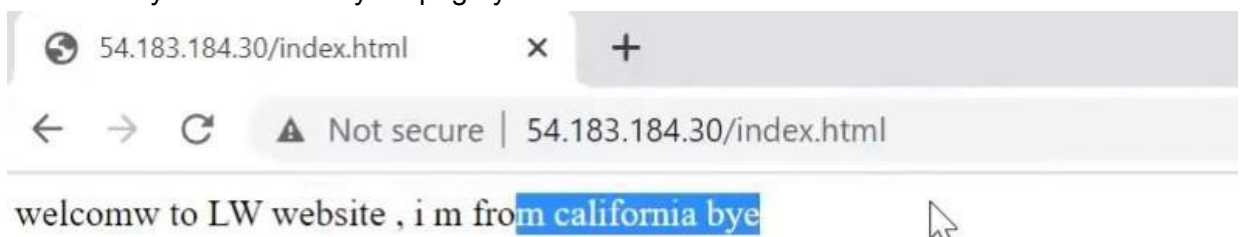- Check your website by entering the url in your browser
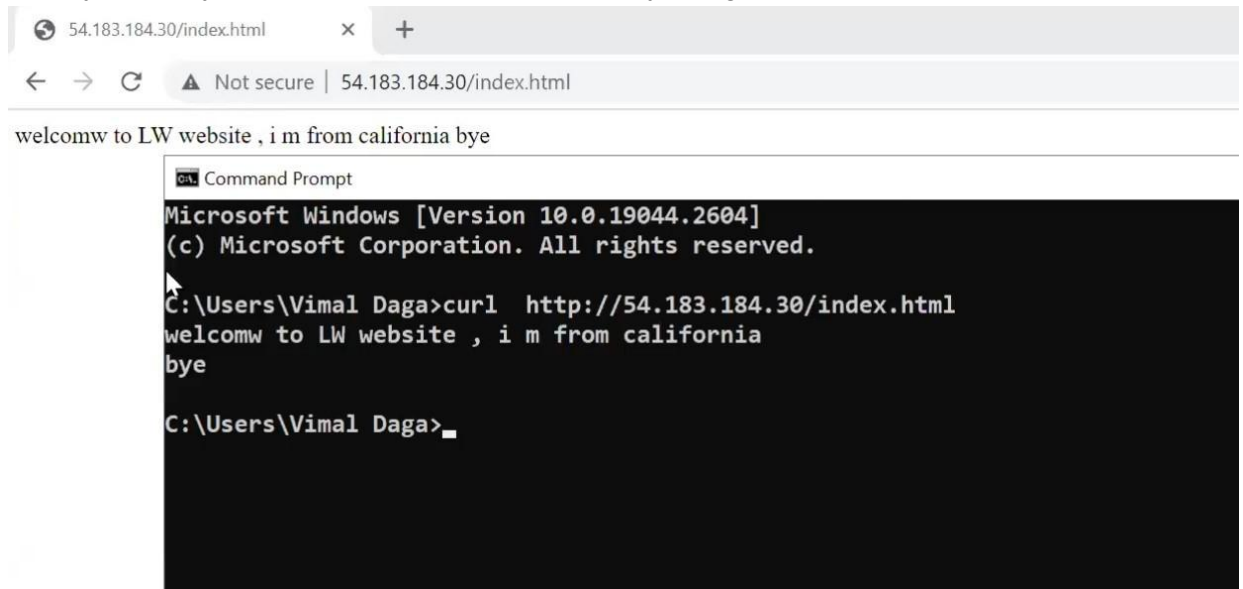 http://IP/(Filename)

- AWS instances has the internal firewall which means no one can access your website through the internet .
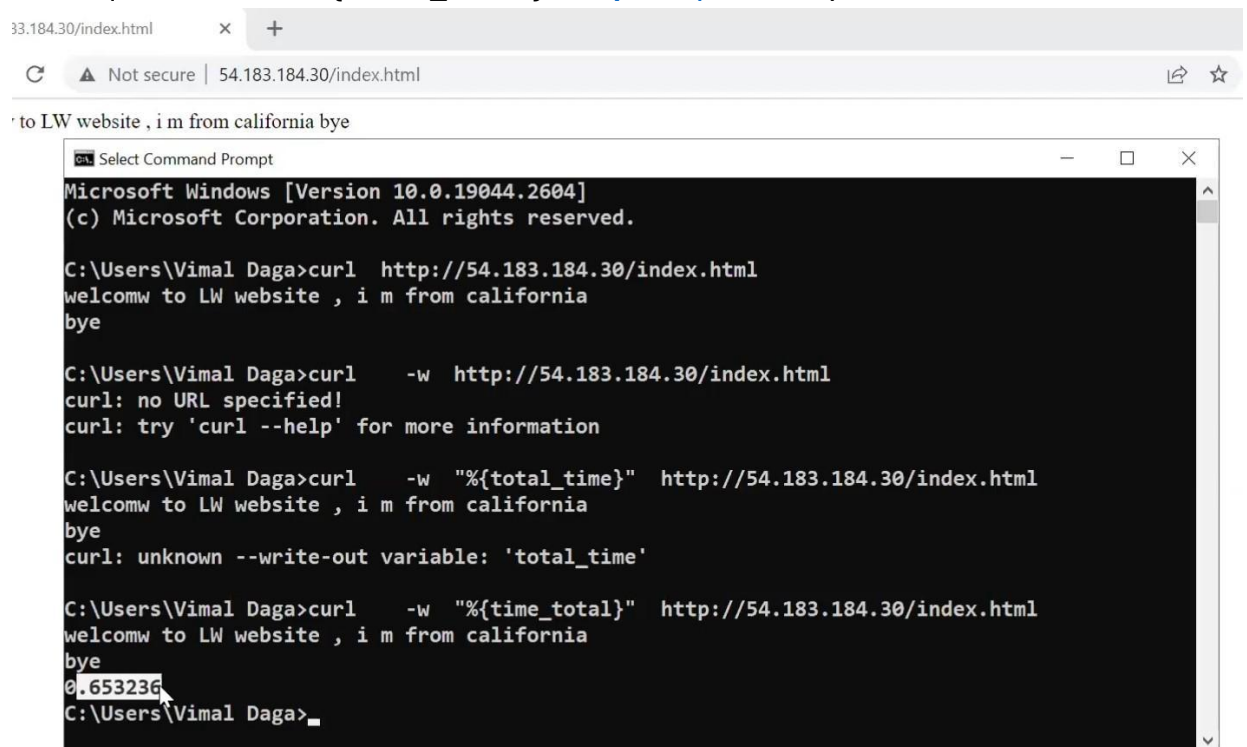- Go to your security groups > edit inbound rules
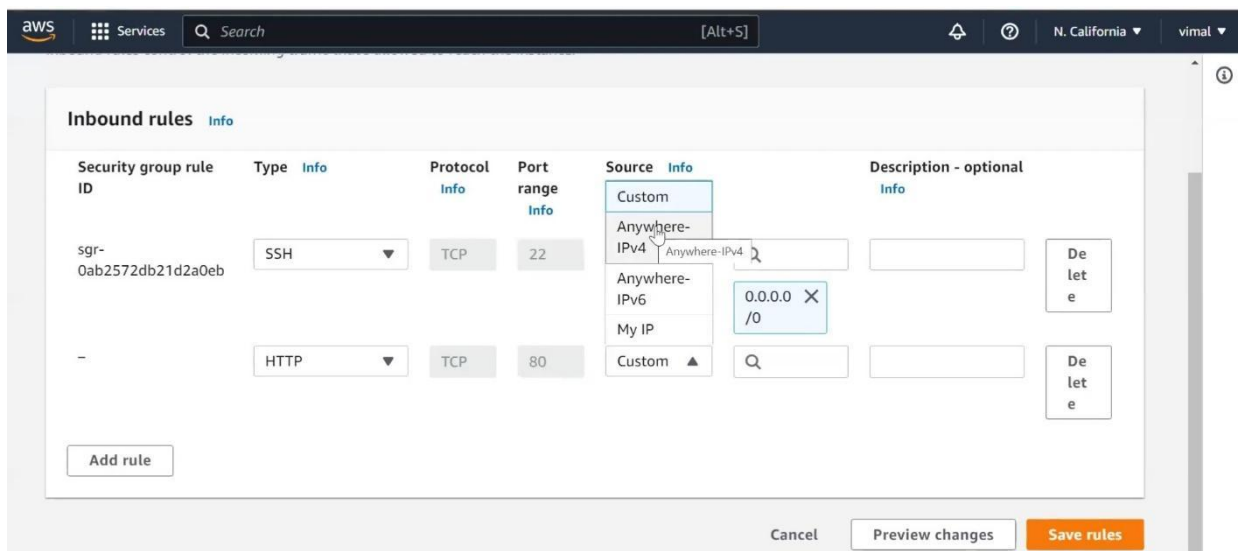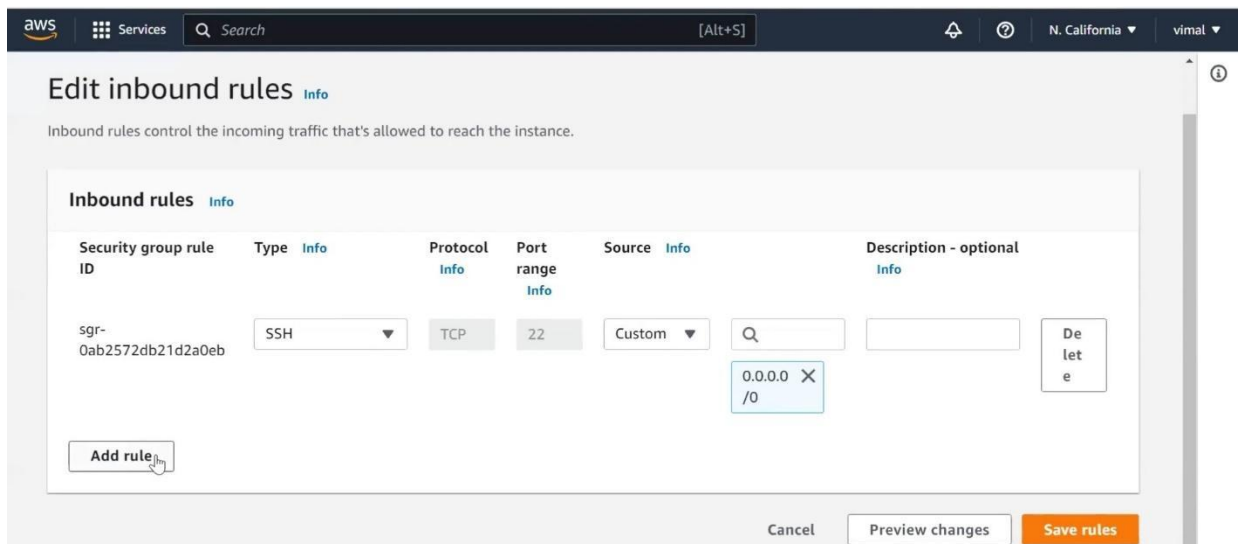
- Now when you will refresh your page you can see the website.

welcomw to LW website , i m from california bye

- From your CLI you can also access the website by using **curl http://IP/(file name)**

- From curl and by using the options available with curl command you can also see the time required. **curl -w "{%total_time%}" http://IP/(file name)**

- To decrease the latency , from AWS we have service called **GLOBAL ACCELERATOR**
- AWS has created own infrastructure by putting the wires all over the world
- Even if there is any disaster in any region in between the route of the wires it can reroute itself. If any fault happened they know how to tolerate the fault it is know as fault tolerance.

- This infrastructure will give us high security and high speed connections.