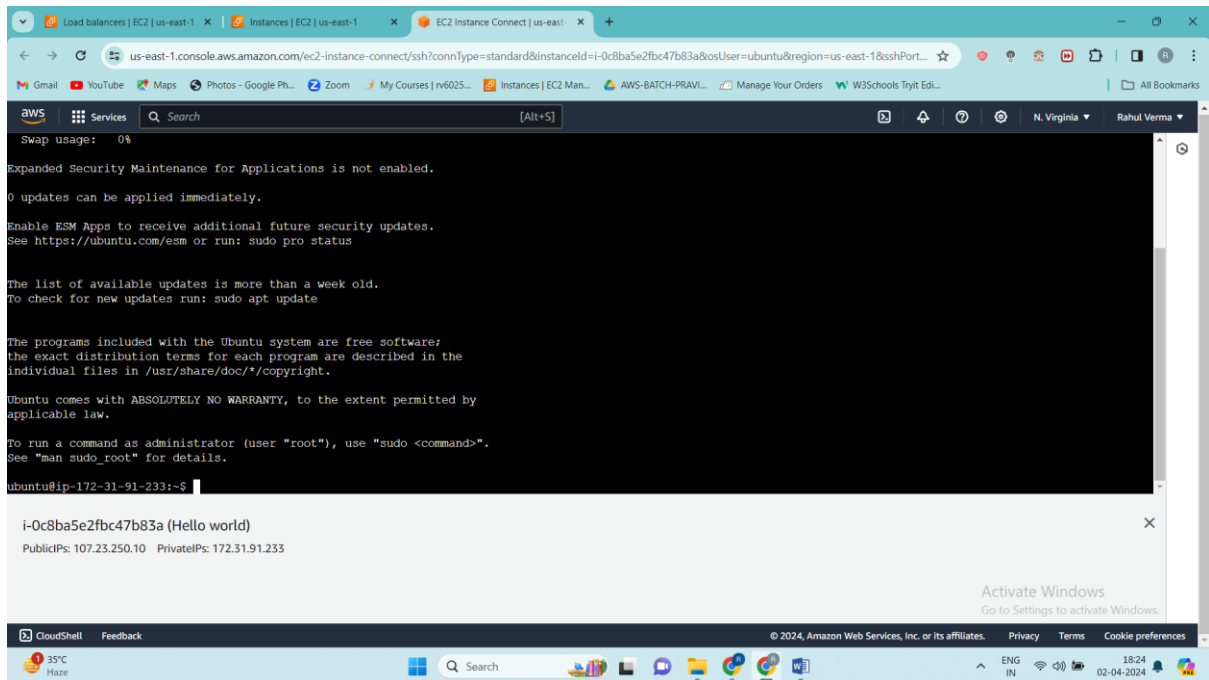


In this Hands-on we will demonstrate how to use **Load balancer** works, so for that we need 3 EC2 instances with different web pages running in them.

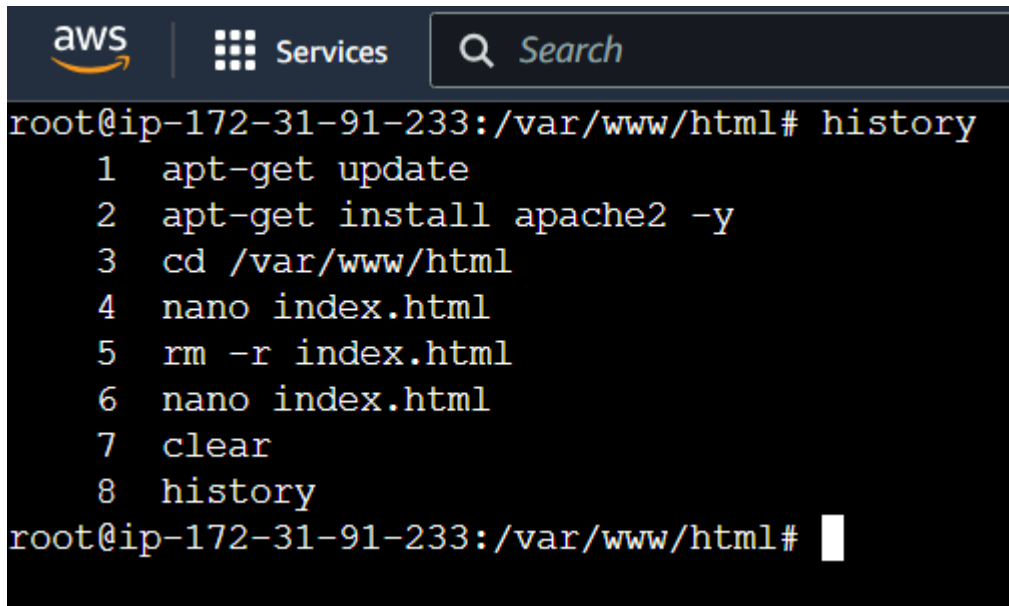
**Prerequisite:**

- 1) Create one instance with Hello world page
- 2) Create one instance with Hello AI page
- 3) Create one instance with Hello cloud

1) It is an Ubuntu instances which consist of Hello world page



Commands to install webpage-

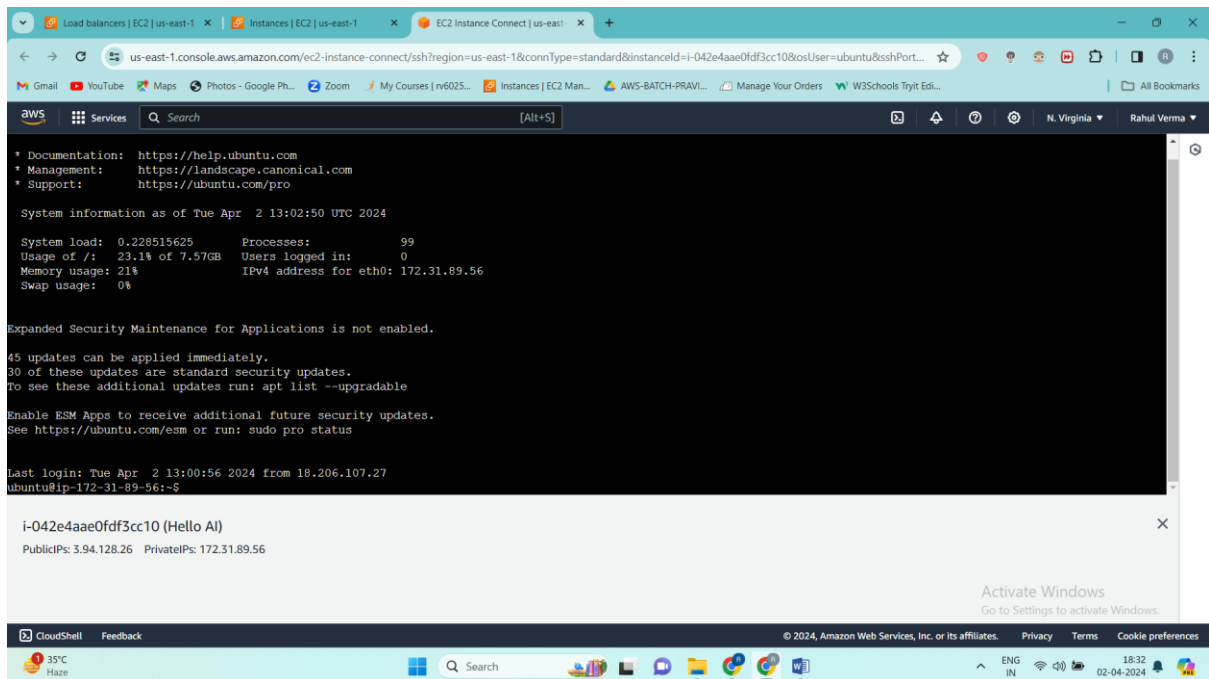


After writing nano index.html command

Nano editor will open write “This is a Hello World web page”

Press ctrl+s & ctrl+x (to come out of nano editor)

2) It is an Ubuntu instance which consist of Hello AI web page



```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Apr 2 13:02:50 UTC 2024

System load: 0.228515625      Processes:           99
Usage of /: 23.1% of 7.57GB    Users logged in:    0
Memory usage: 21%             IPv4 address for eth0: 172.31.89.56
Swap usage: 0%

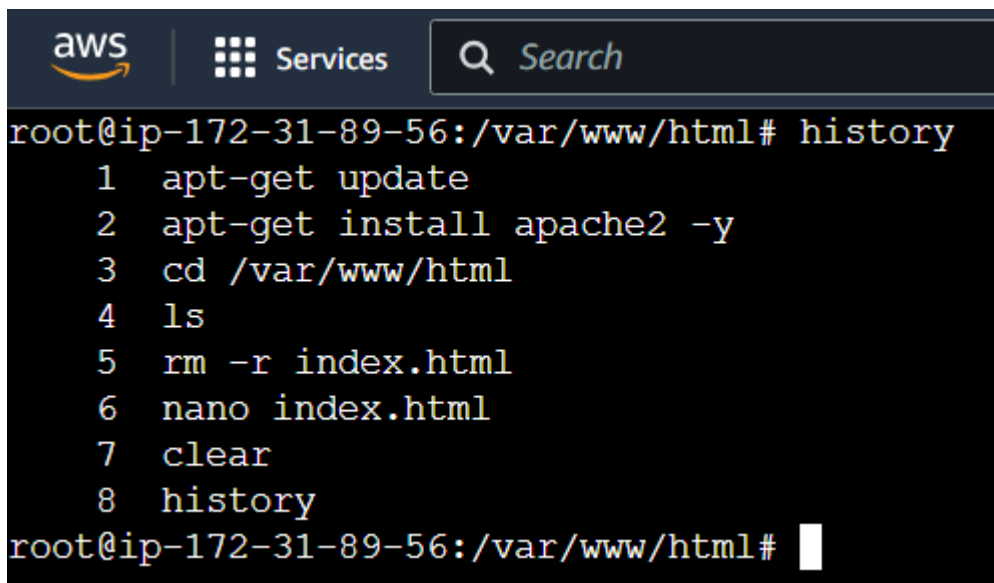
Expanded Security Maintenance for Applications is not enabled.

45 updates can be applied immediately.
30 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Tue Apr 2 13:00:56 2024 from 18.206.107.27
ubuntu@ip-172-31-89-56:~$
```

Commands to install webpage-



```
aws | Services | Search

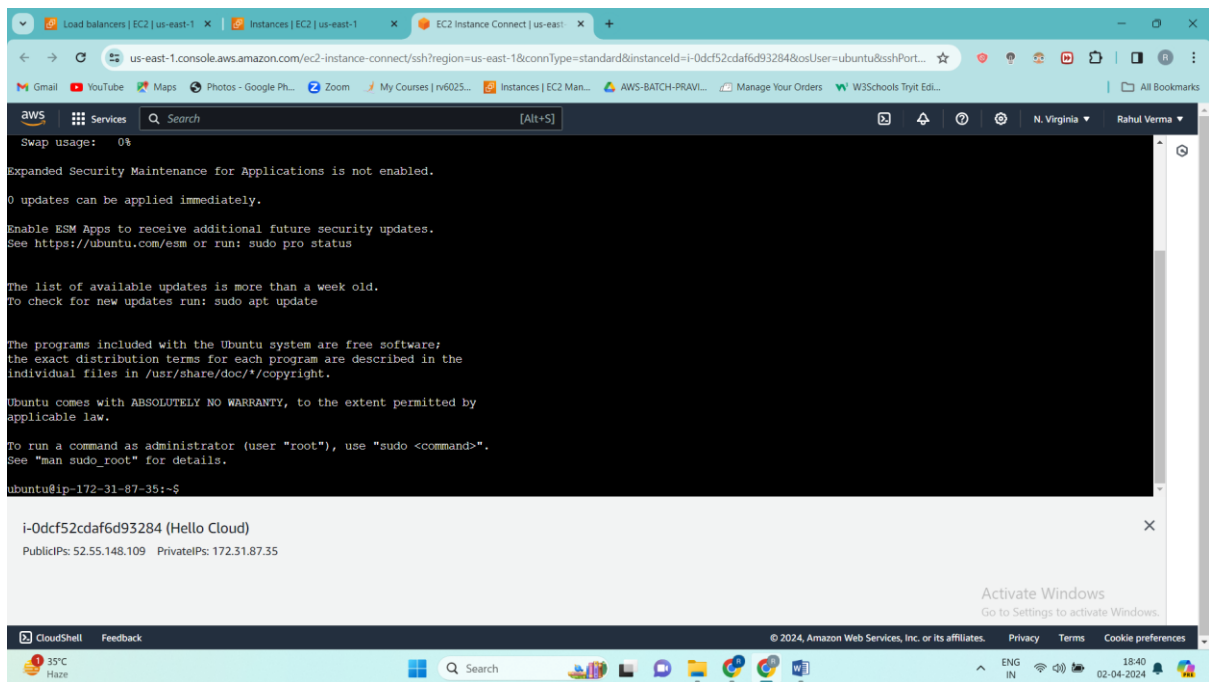
root@ip-172-31-89-56:/var/www/html# history
 1 apt-get update
 2 apt-get install apache2 -y
 3 cd /var/www/html
 4 ls
 5 rm -r index.html
 6 nano index.html
 7 clear
 8 history
root@ip-172-31-89-56:/var/www/html#
```

After writing nano index.html command

Nano editor will open write “This is a Hello World AI page”

Press ctrl+s & ctrl+x (to come out of nano editor)

3) It is an Ubuntu instance which consist of Hello Cloud web page.



Commands to install webpage-

```
aws | Services | Search

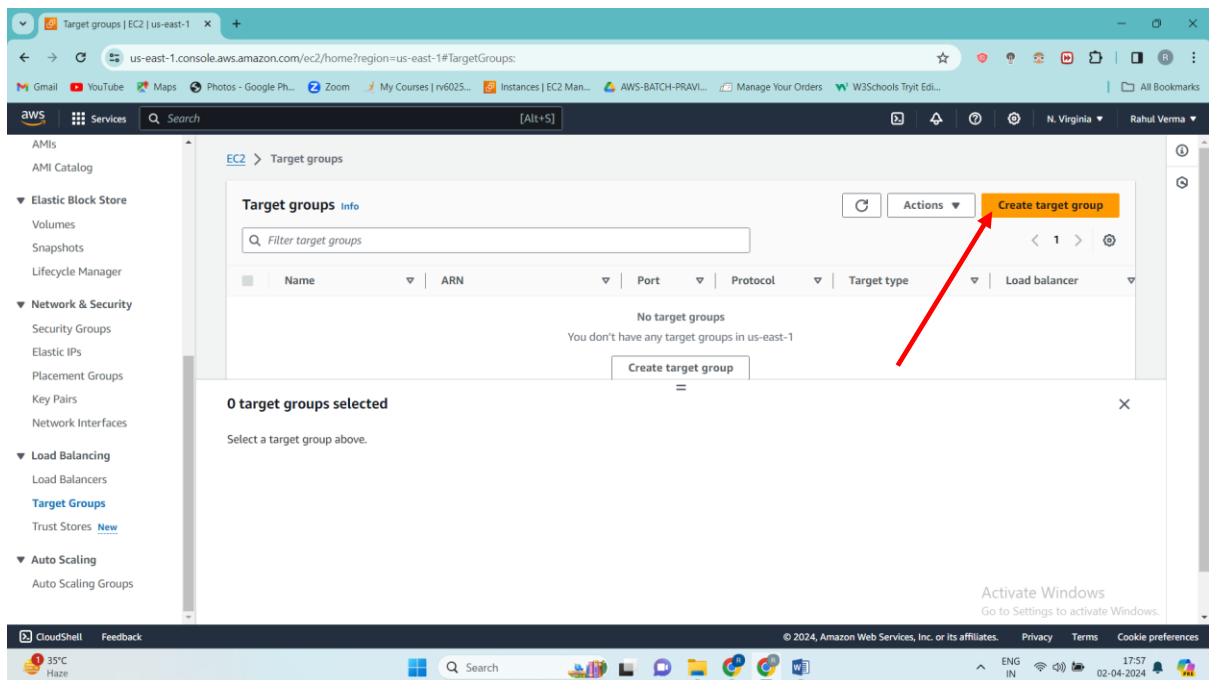
root@ip-172-31-87-35:/var/www/html# history
 1 apt-get update
 2 apt-get install apache2 -y
 3 cd /var/www/html
 4 ls
 5 rm -r index.html
 6 nano index.html
 7 clear
 8 history
root@ip-172-31-87-35:/var/www/html#
```

After writing nano index.html command

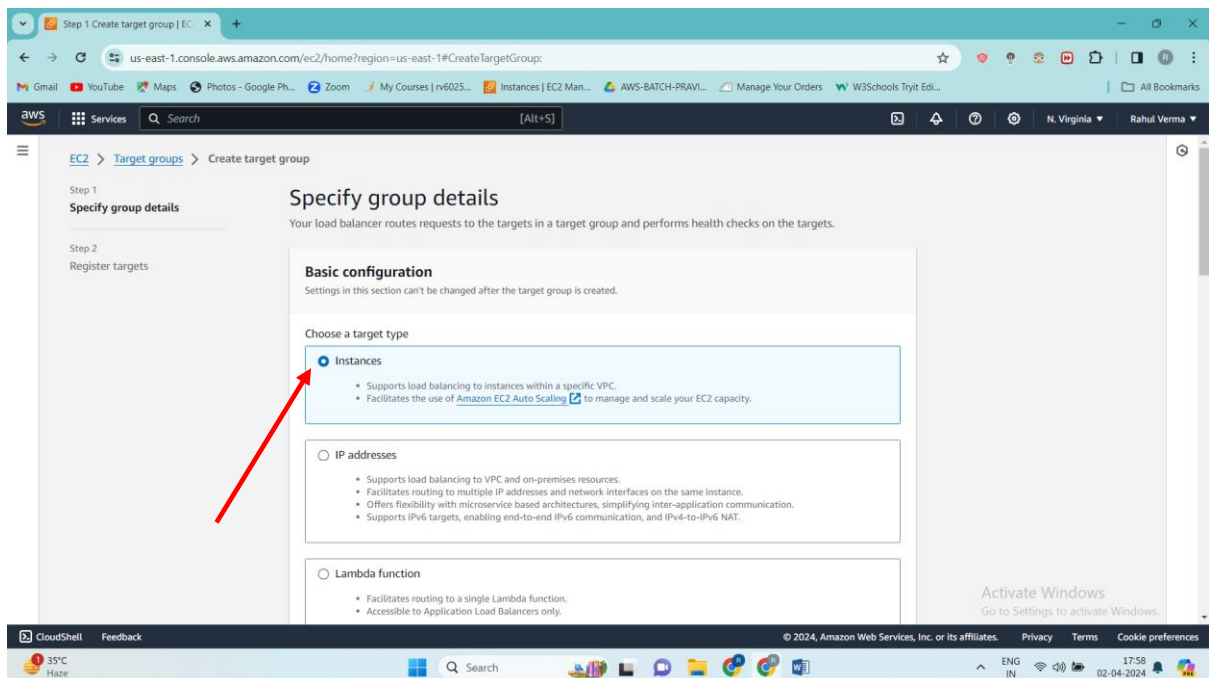
Nano editor will open write “This is a Hello World cloud page”

Press ctrl+s & ctrl+x (to come out of nano editor)

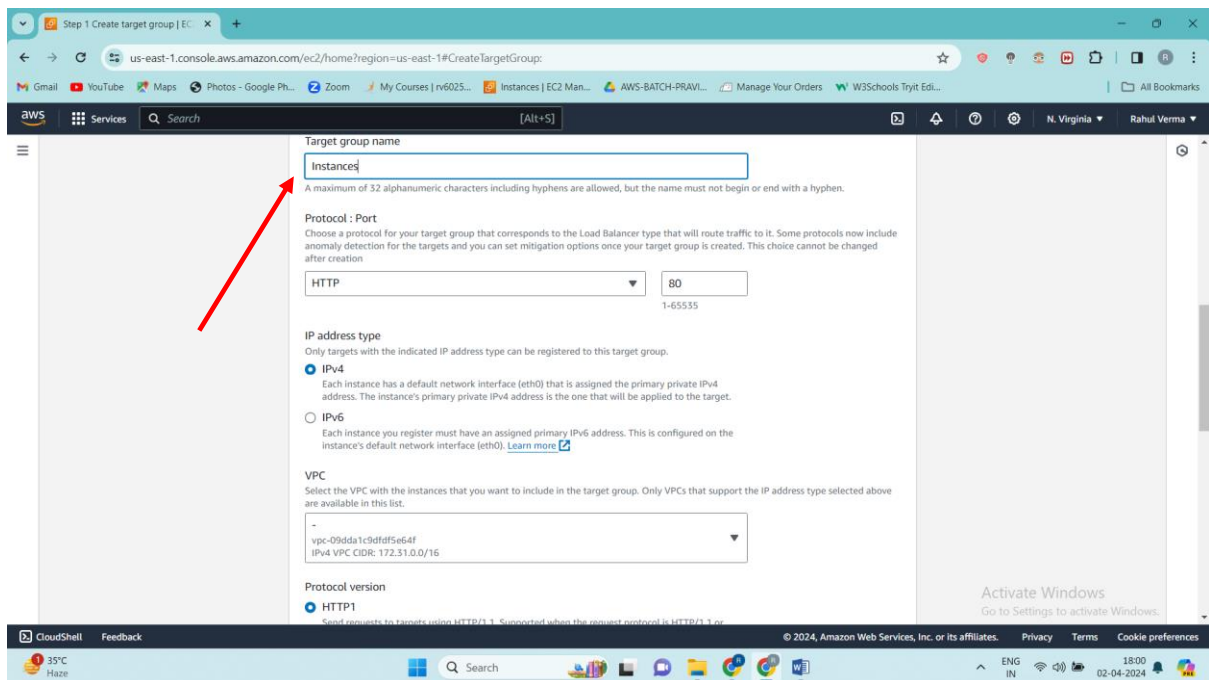
## Step 1: Create Target group before creating load balancer



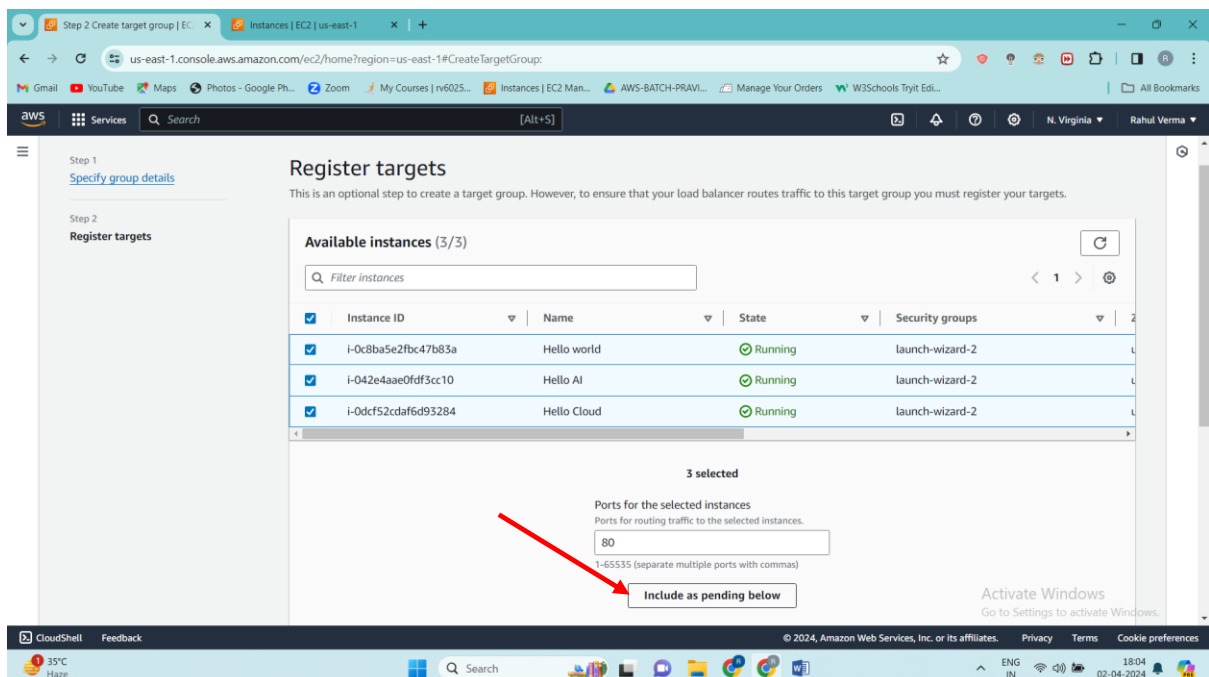
## Select instances



## Define target group name- “Instances” rest default settings



**Step 2:** Now select instances which you want to use for your load balancer. After selecting click on include as pending below.



Now click on Create target group

Step 2 Create target group | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:

80  
1-65535 (separate multiple ports with commas)  
Include as pending below  
3 selections are now pending below. Include more or register targets when ready.

**Review targets**

Targets (3) Remove all pending

Filter targets Show only pending

Instance ID	Name	Port	State	Security groups	Zone	Private IPv4 address	Subnet ID
i-0c8ba5e2fbc47b83a	Hello world	80	Running	launch-wizard-2	us-east-1c	172.31.91.233	subnet-0b8fe...
i-042e4aae0fdf3cc10	Hello AI	80	Running	launch-wizard-2	us-east-1c	172.31.89.56	subnet-0b8fe...
i-0dcf52cda6d93284	Hello Cloud	80	Running	launch-wizard-2	us-east-1c	172.31.87.45	subnet-0b8fe...

3 pending Cancel Previous Create target group

Step 3: Now let's create Application Load balancer

Compare and select load balancer | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SelectCreateELBWizard:

**Compare and select load balancer type**  
A complete feature-by-feature comparison along with detailed highlights is also available. [Learn more](#)

**Load balancer types**

**Application Load Balancer** [Info](#)

Choose an Application Load

**Network Load Balancer** [Info](#)

Choose a Network Load Balancer

**Gateway Load Balancer** [Info](#)

Choose a Gateway Load Balancer

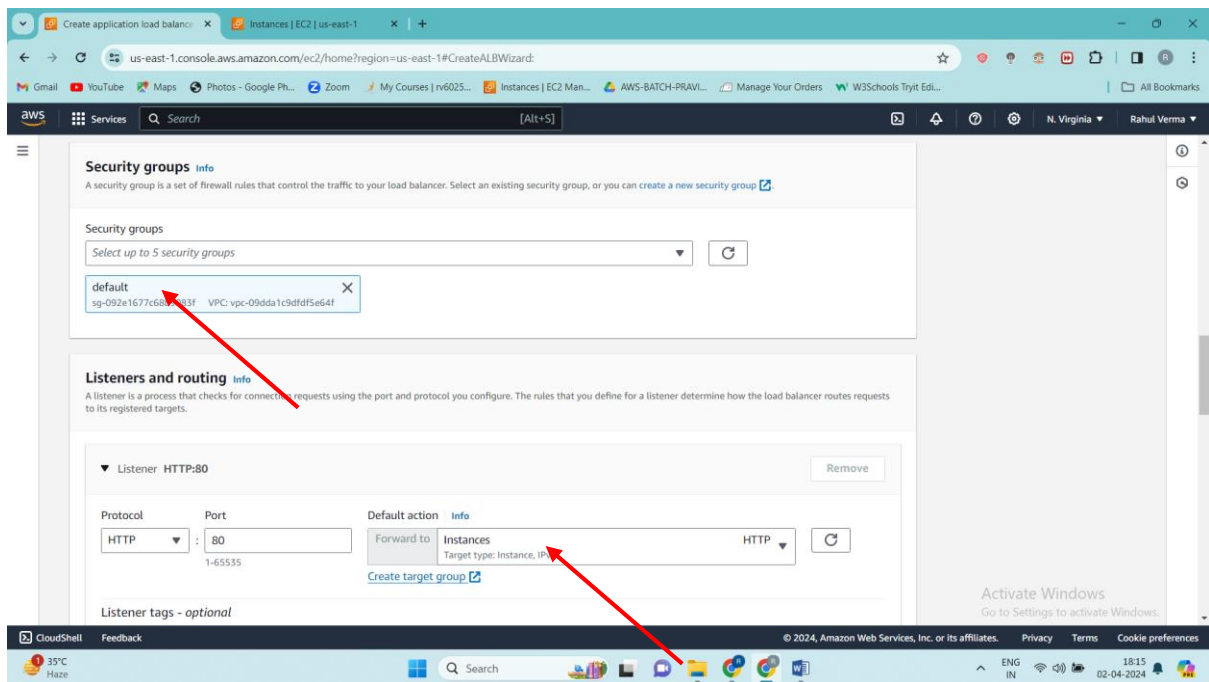
Activate Windows  
Go to Settings to activate Windows.

The screenshot displays the AWS Management Console interface for creating a new Application Load Balancer. The browser's address bar shows the URL 'us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:'. The console's top navigation bar includes the AWS logo, a search bar, and the user's profile information 'N. Virginia' and 'Rahul Verma'. The main content area features a breadcrumb trail 'EC2 > Load balancers > Create Application Load Balancer'. The title 'Create Application Load Balancer' is followed by an 'Info' icon. A descriptive paragraph explains that the Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets. Below this, a section titled 'How Application Load Balancers work' is partially visible. The 'Basic configuration' section is the primary focus, containing a 'Load balancer name' field with the value 'DEMO' and a note that the name must be unique and cannot be changed. A 'Scheme' dropdown is set to 'Internet-facing', with a note that the scheme cannot be changed after creation. The 'Internet-facing' option is selected, indicating that the load balancer will route requests from clients over the internet. A 'Learn more' link is provided for further details. The bottom of the console shows a taskbar with various application icons and a system clock indicating the time is 18:11 on 02-04-2024.

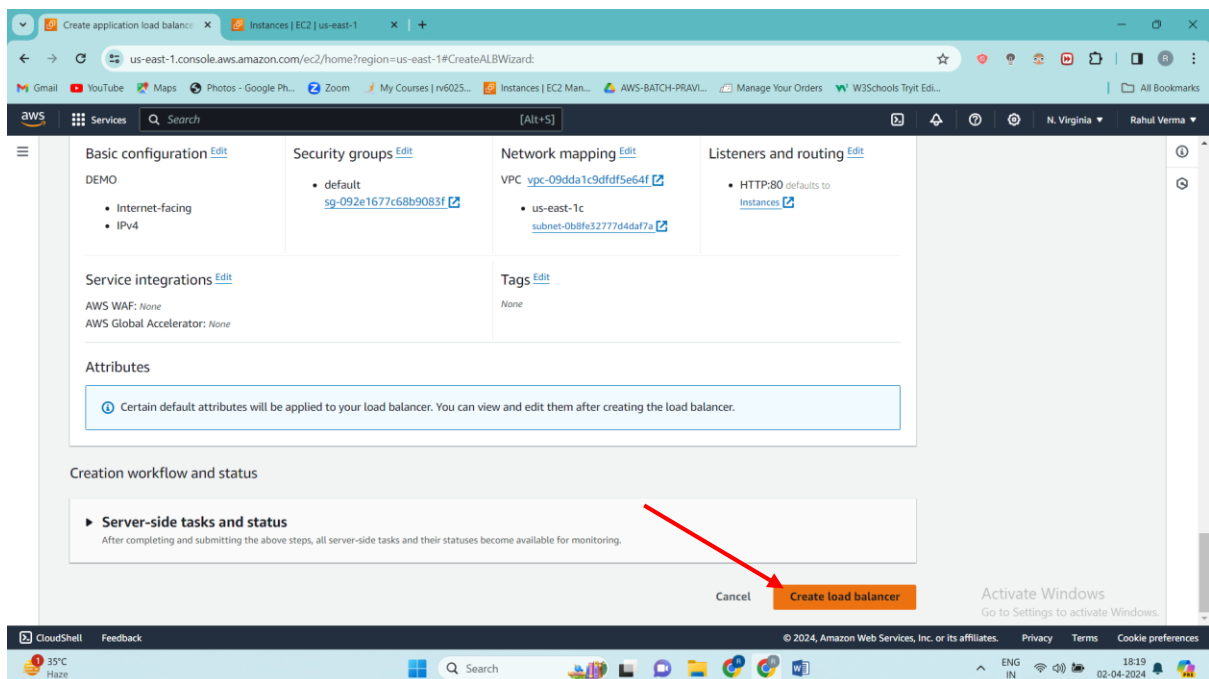
[illegible]



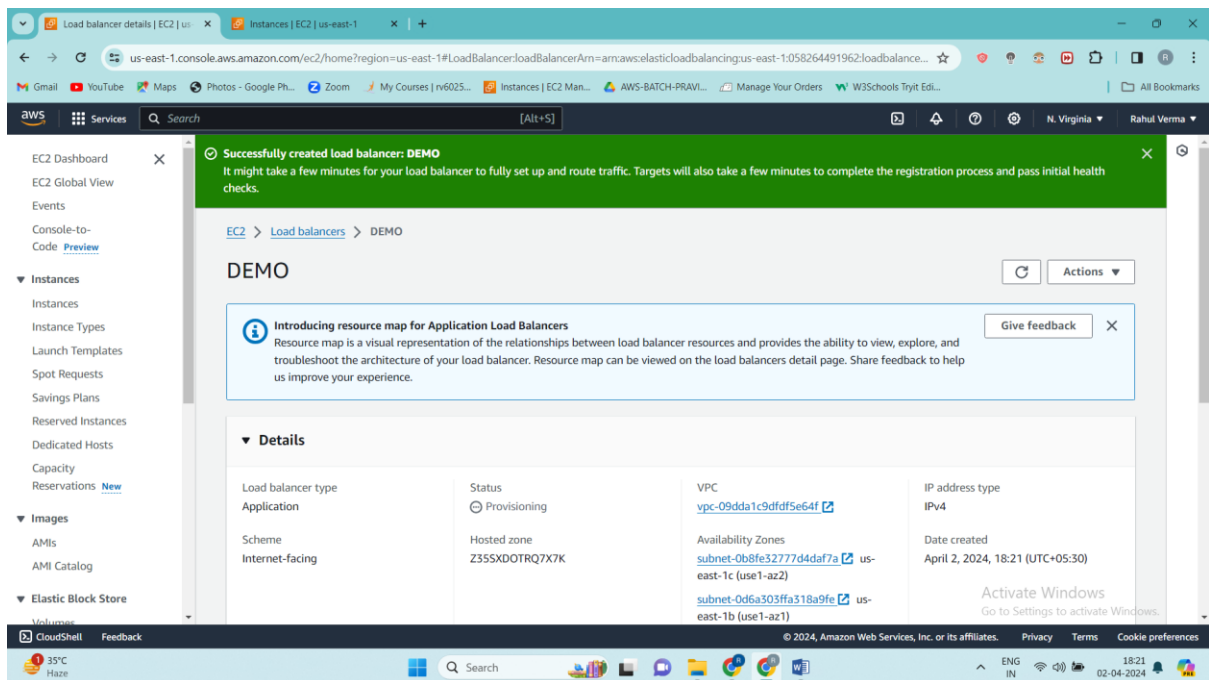
**Step 4:** Now select security group I'm going with default one and select Target group which you have created.



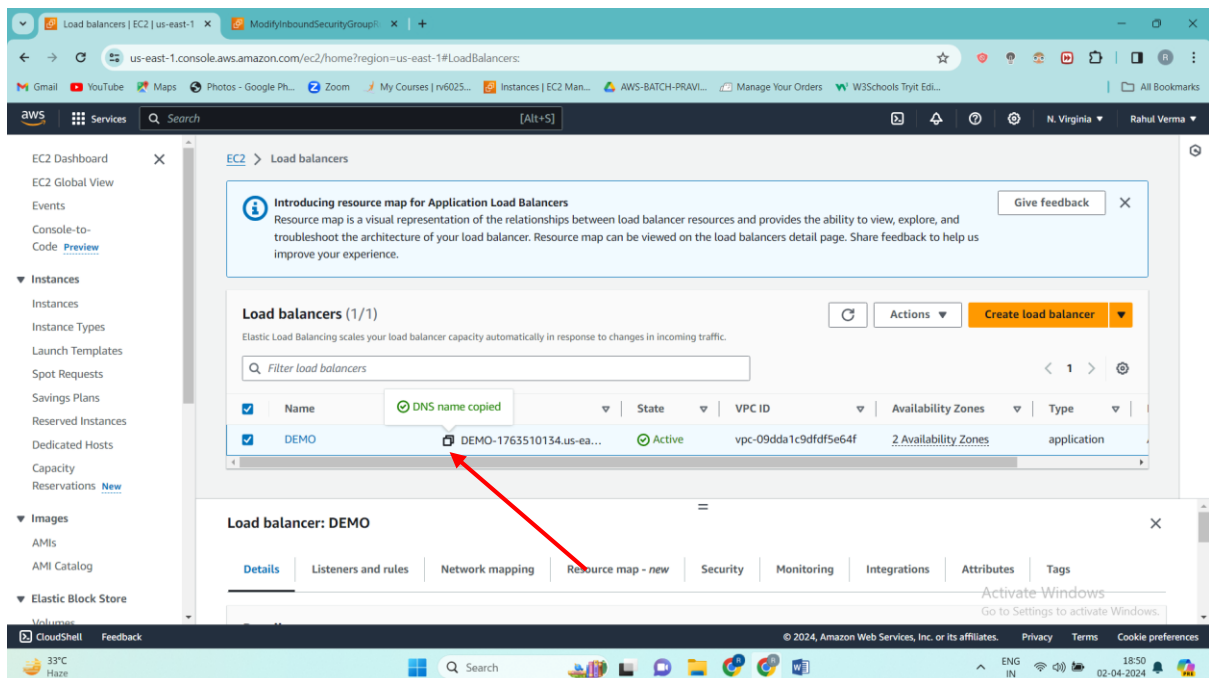
And now click on Create load balancer button



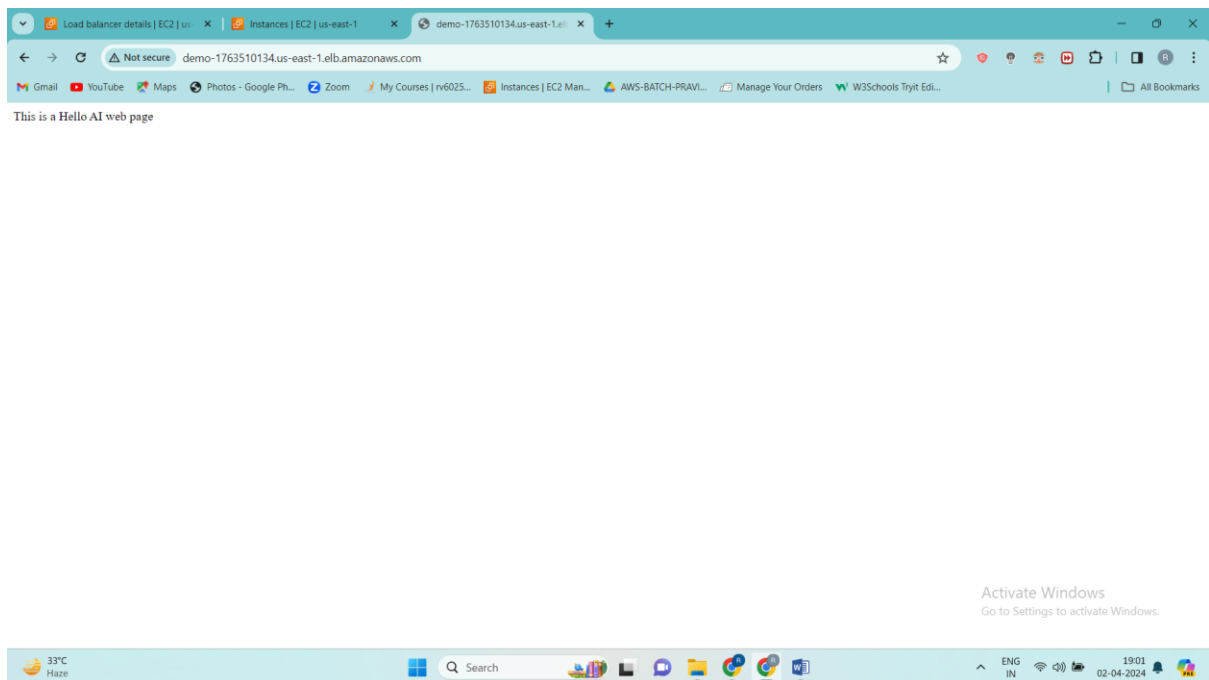
And it's created now



**Step 5:** And now let's check if it's working or not  
Will copy its DNS name and paste it in browser.

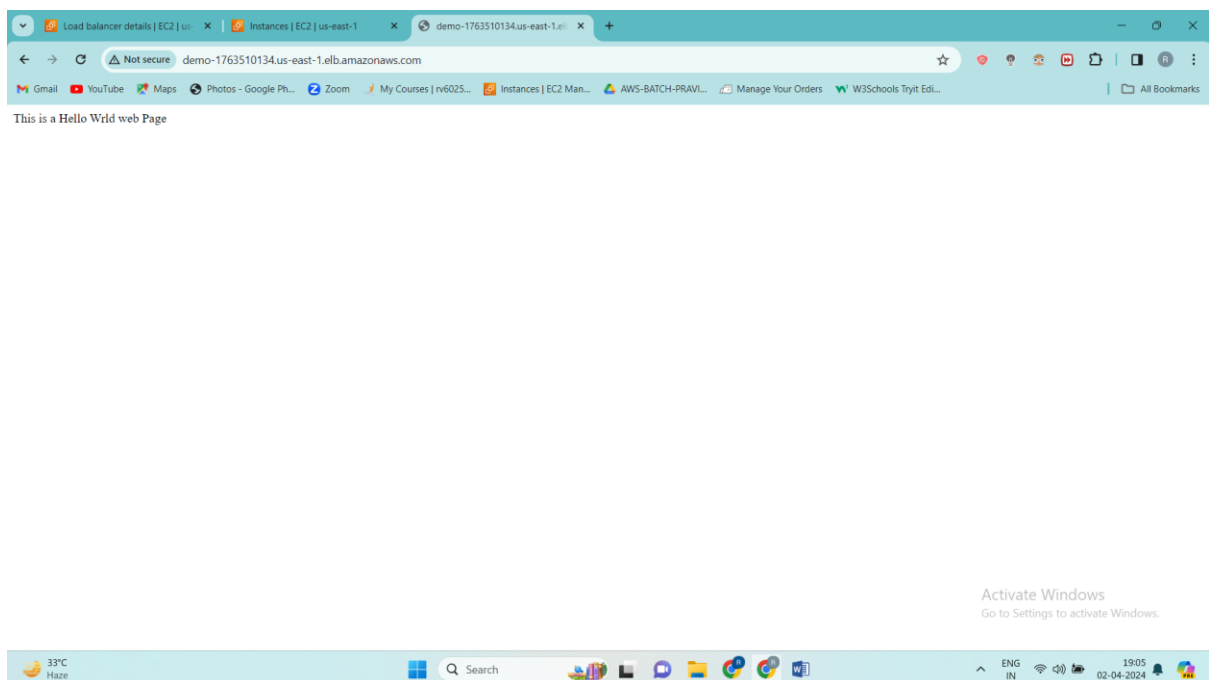


Now it's showing "This is Hello AI web page"



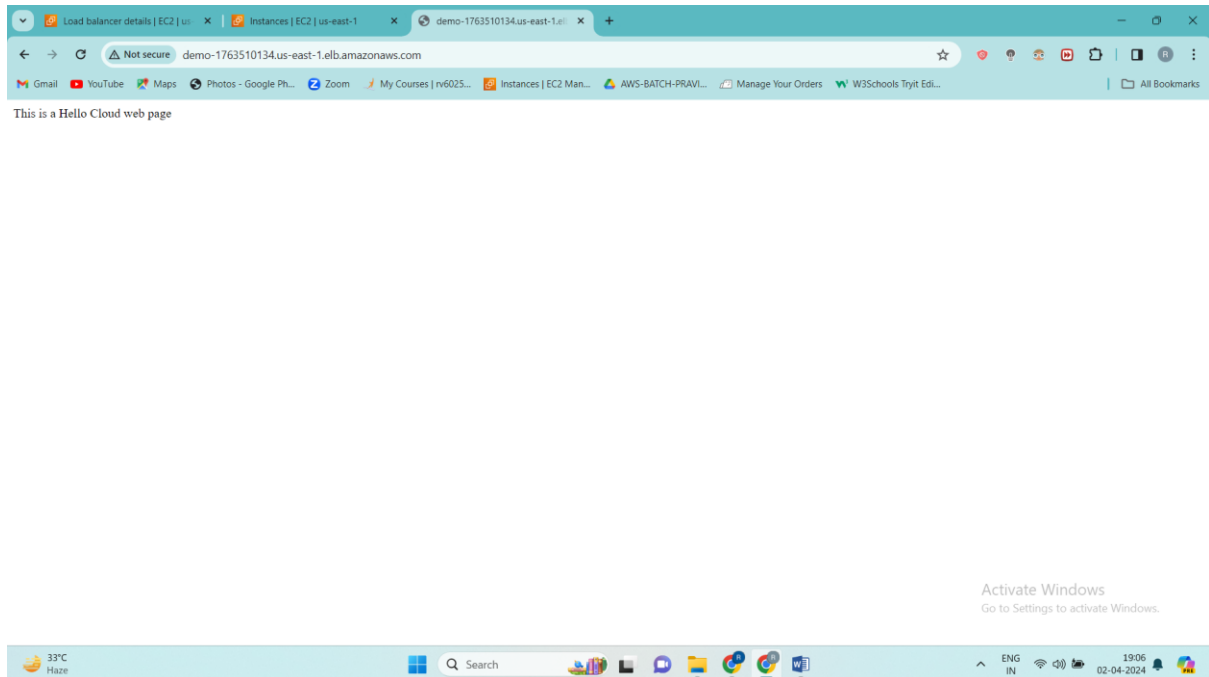
Let's refresh it continuously

And it's showing Hello world web page



Let's check if it shows Hello cloud web page or not we just need to refresh it.

So it's showing all the web pages we have installed in our instances.



So that means it's distributing the traffic very seamlessly.

Note: after using these resources please delete them to avoid charges

# Thank You