Name :- Samartha Santosh Lasure

Batch :- B-56

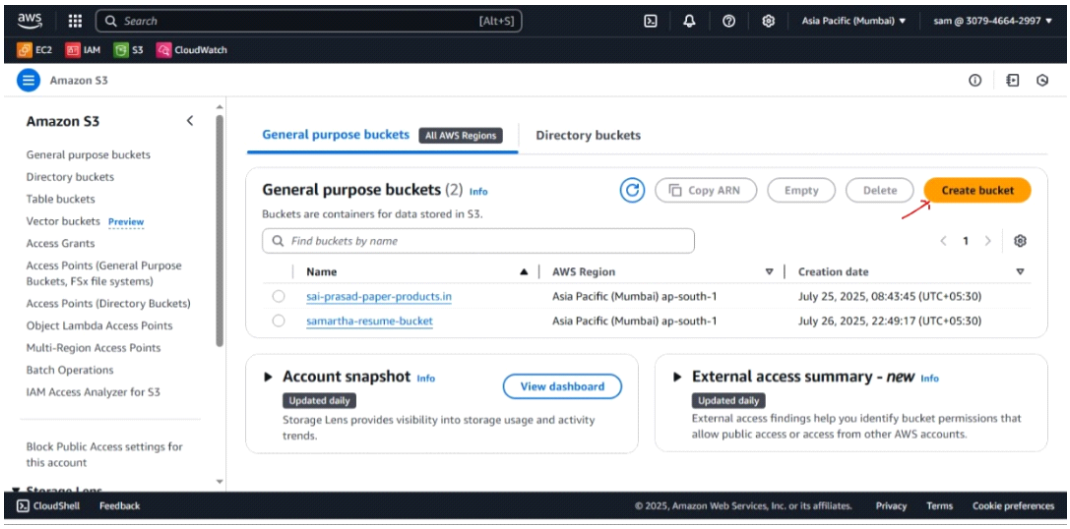
Task :- 25/07/2025

Task 1 :- 1️⃣ S3 Bucket Replication (CRR)

- Create a second bucket in another region
- Enable Cross-Region Replication to replicate files automatically

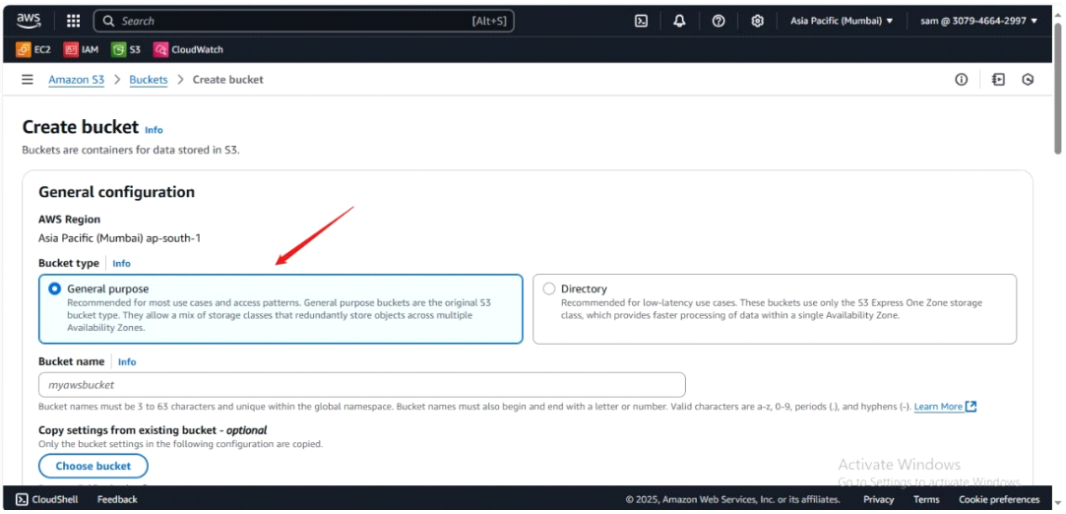
➡️

1) Open the AWS console
Then
sign in
Then
Search in bar **S3**
Then
Click on **Create bucket** button

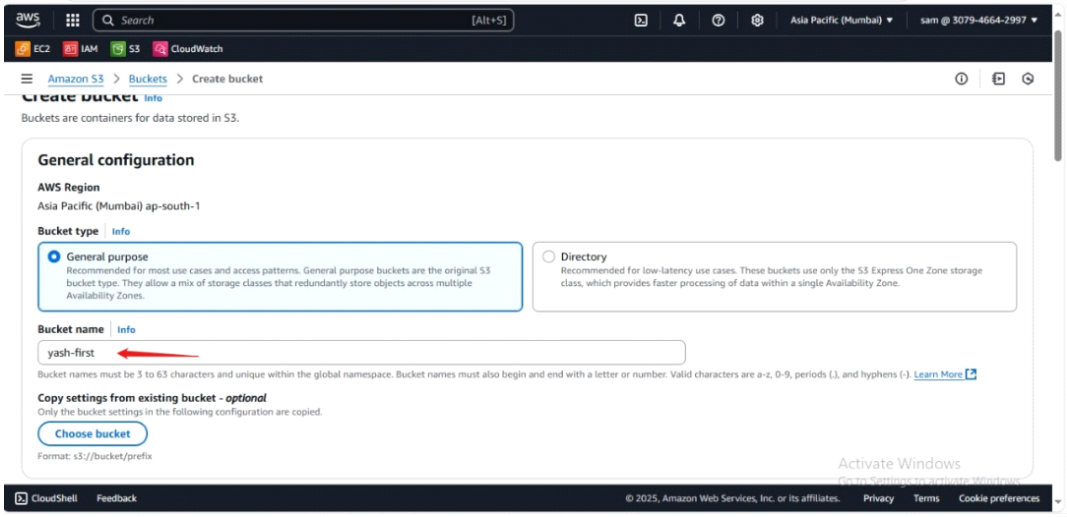


Then
In **General configuration at**
AWS region :- **Asia Pacific (Mumbai) ap-south-1**

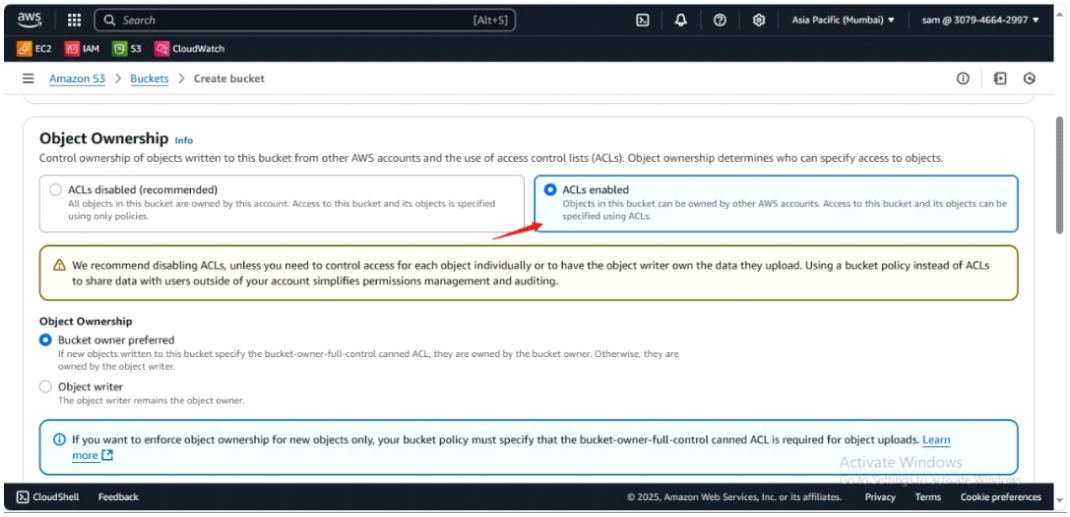
In **<u>Bucket type</u>**
Select the **General Purpose** option



Then
In **<u>Bucket name</u>** :- Type name of Bucket
Name = **<u>yash-first</u>**

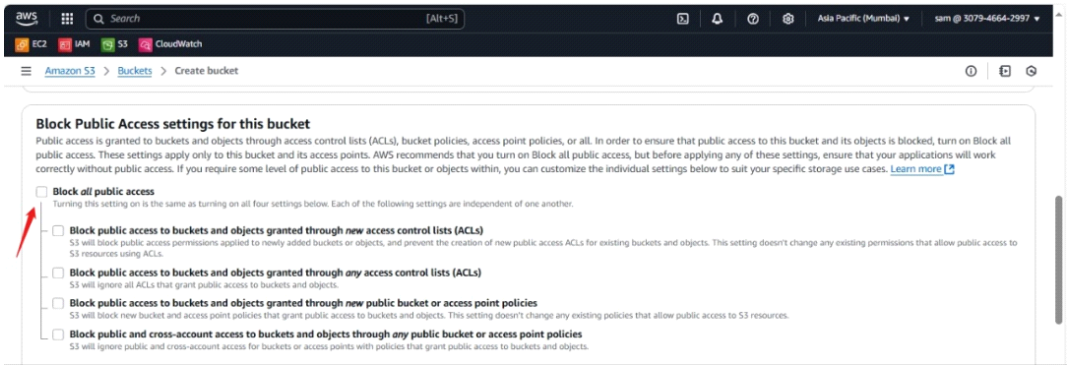


Then
In **<u>Object Ownership</u>** select the option **ACLs enabled**



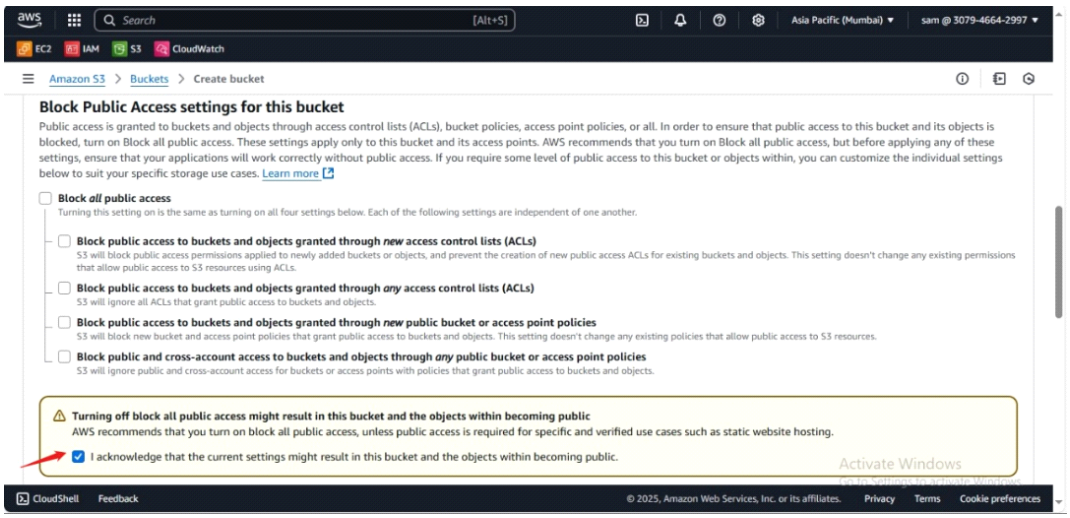
Then

In **Block Public Access setting for this bucket** untick the option **Block all public access**

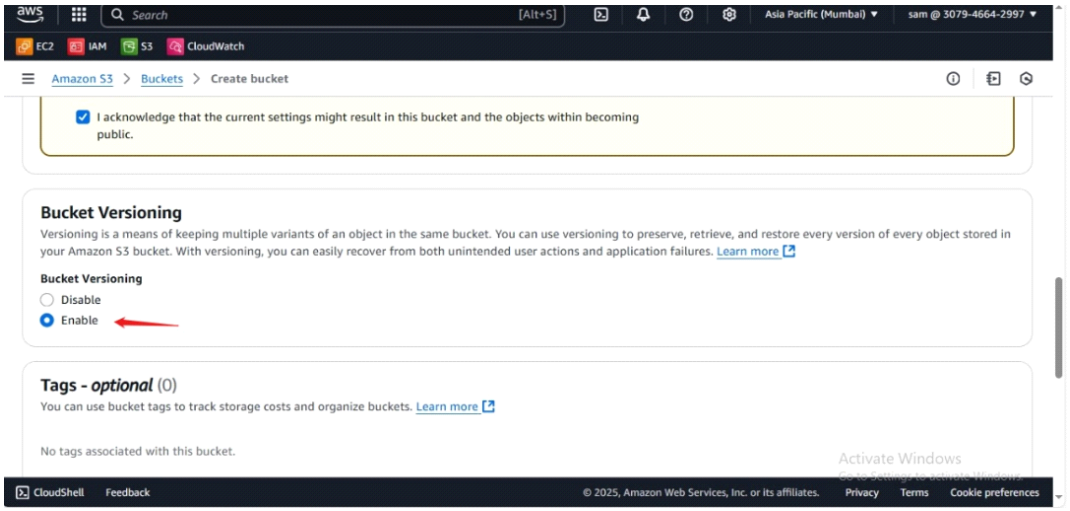


Then

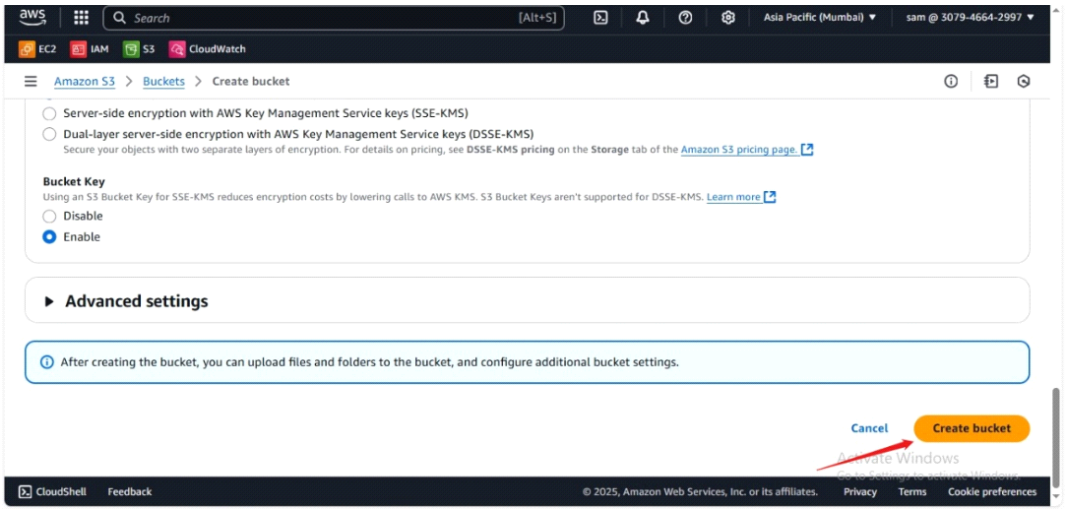
When we untick the option there below one message come , ticket that block.



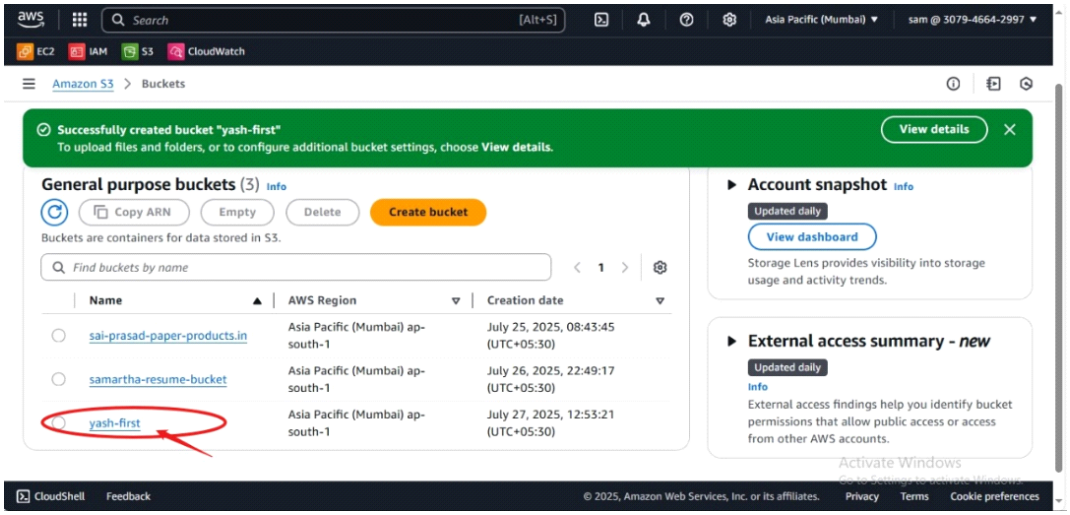
Then
In **Bucket Versioning** select the option **Enable**



Then
Click on **Create Bucket** button



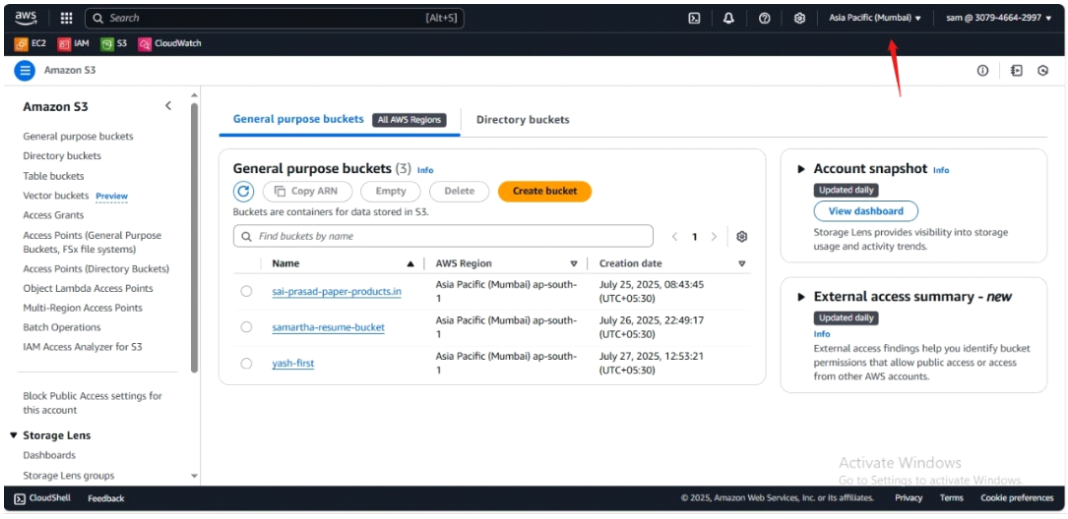
Then
See in
Bucket created successfully
yash-first



Now we will create a **new bucket** in **new region**.

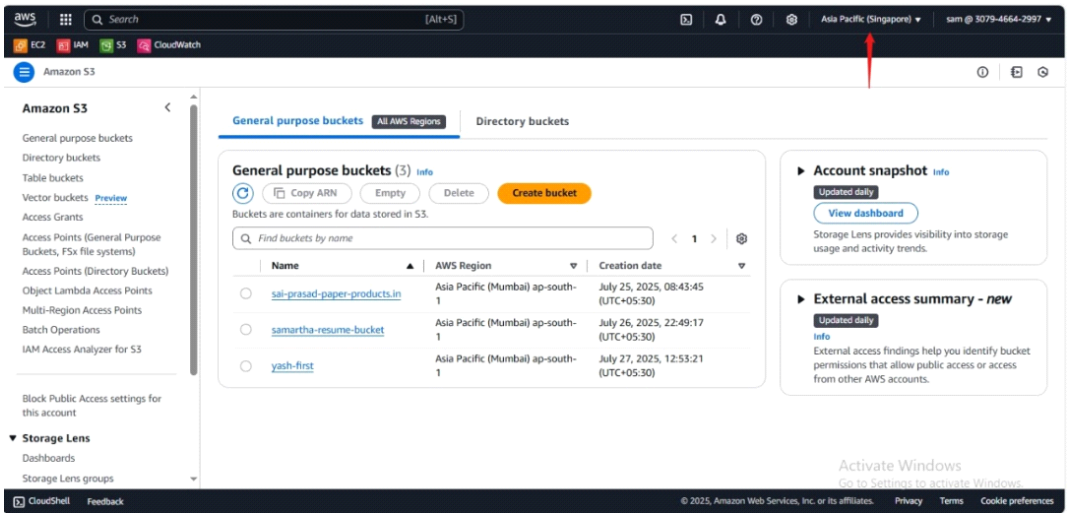
So

First Click on **Region** and select **new region**
Old region :- **Asia Pacific (Mumbai) ap-south-1**

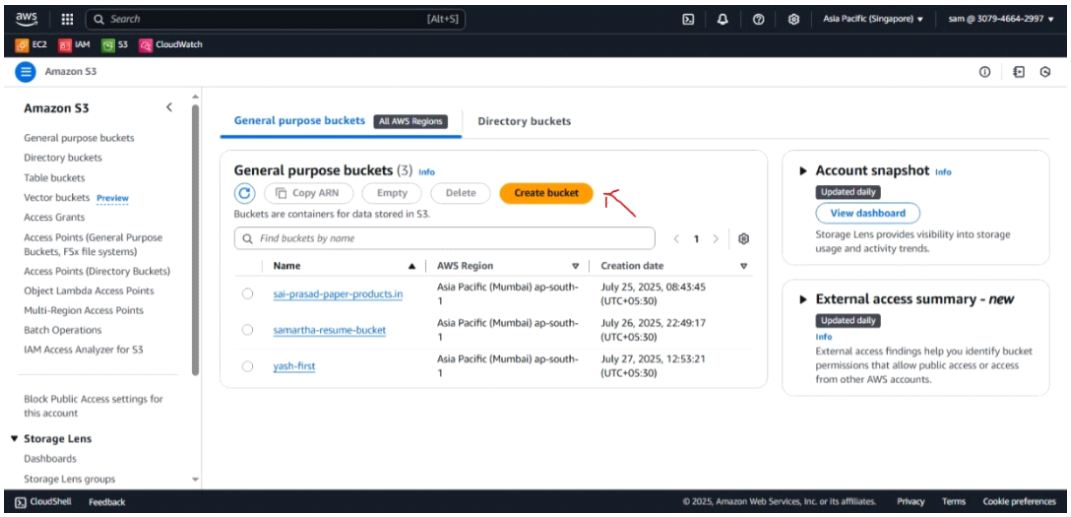


Selected **new region**

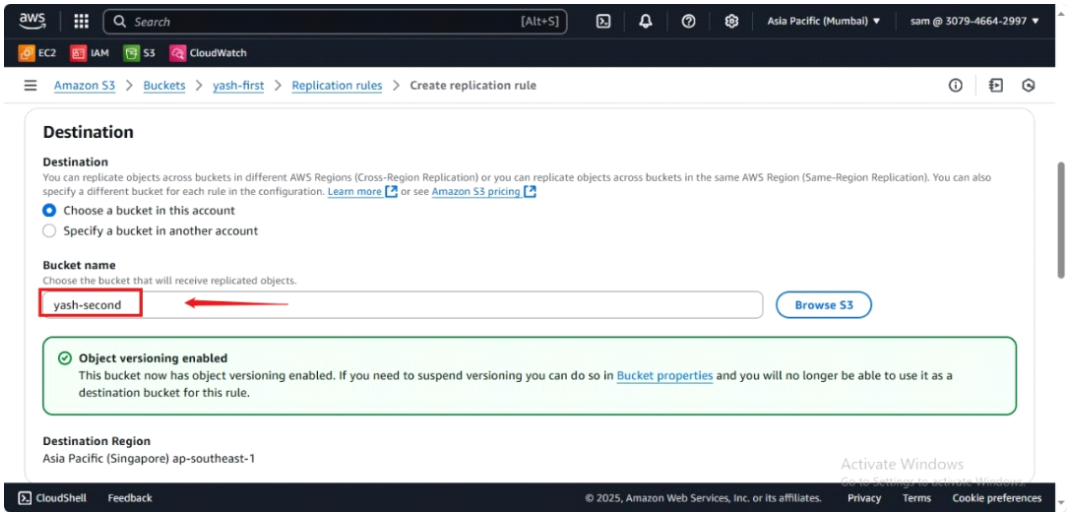
Changed to new region :- **Asia Pacific (Singapore) ap-southeast-1**



Then
Create bucket click button

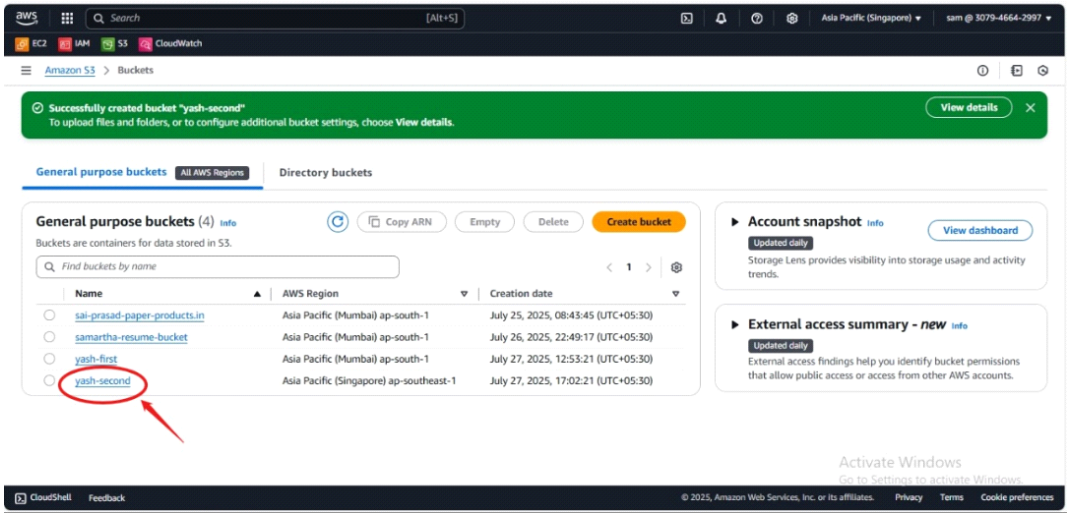


Then
Do same process as done first bucket.
Also do enable to the Bucket Versioning keep it enable.
I forgot to do enable done after so added this image for reference



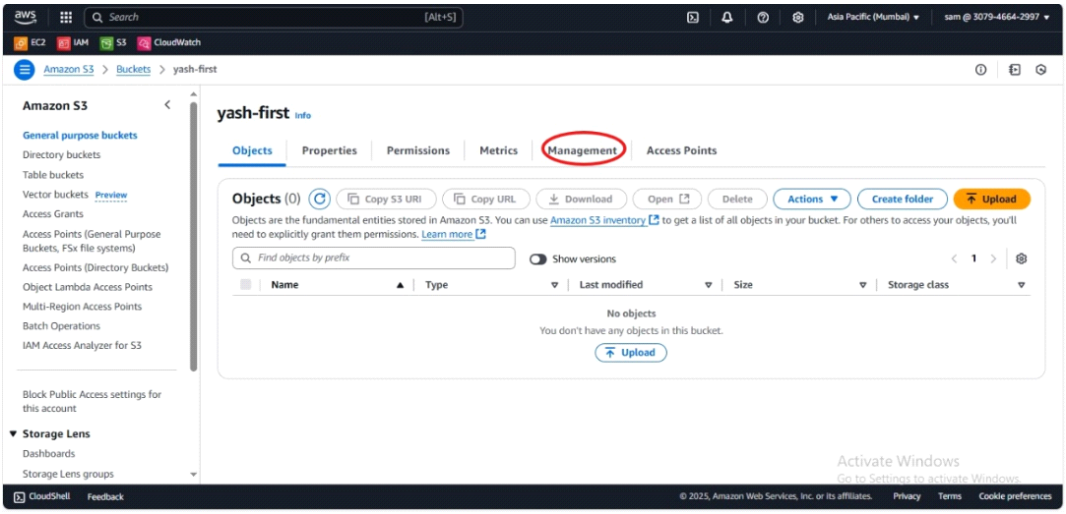
Then

Second Bucket created successfully

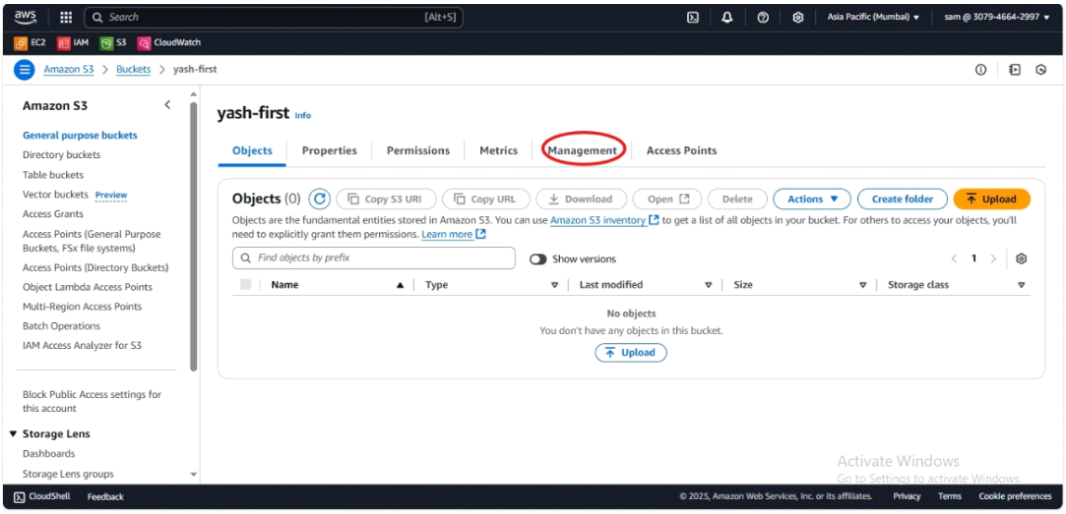


Then

Click on first bucket (**yash-first**)

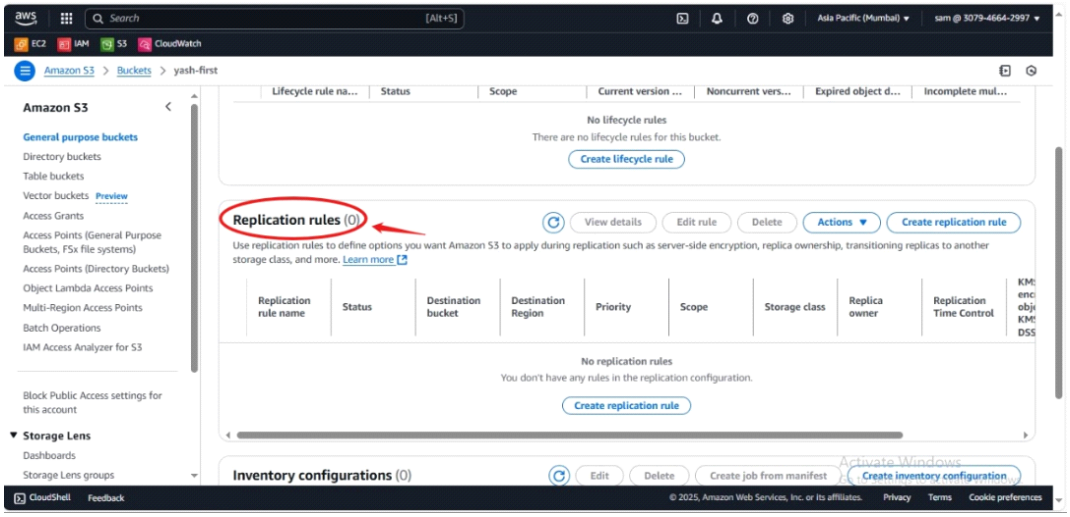


Then go to **Management** option & click it

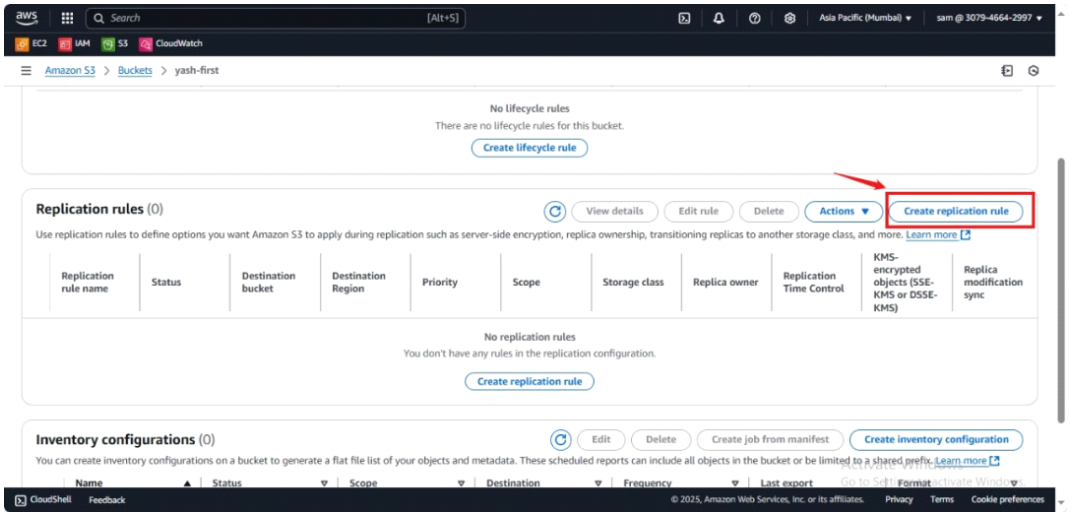


Then

Scroll down & go to **Replication rules**

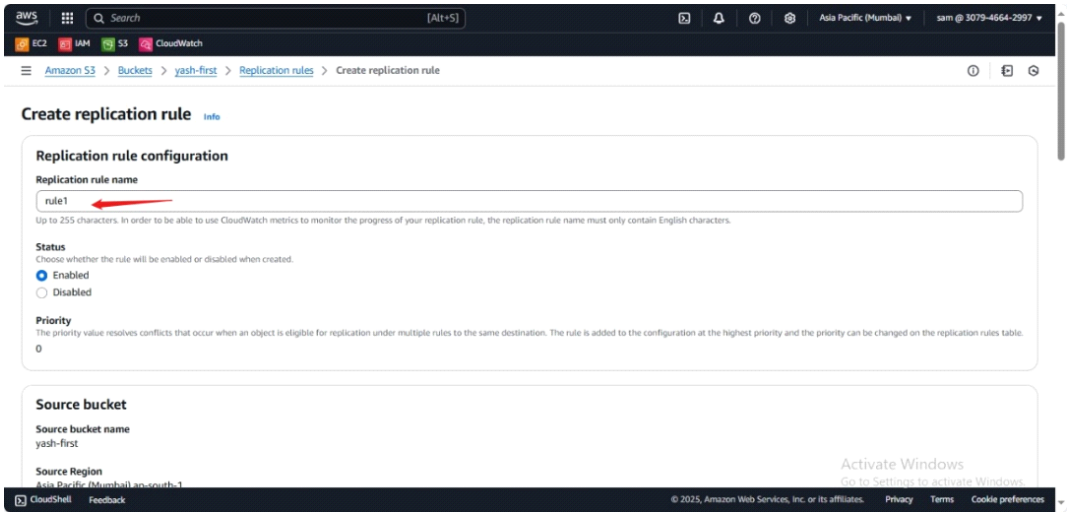


Then click on option **Create replication rule**



Then In **Replication rule configuration at Replication rule name**

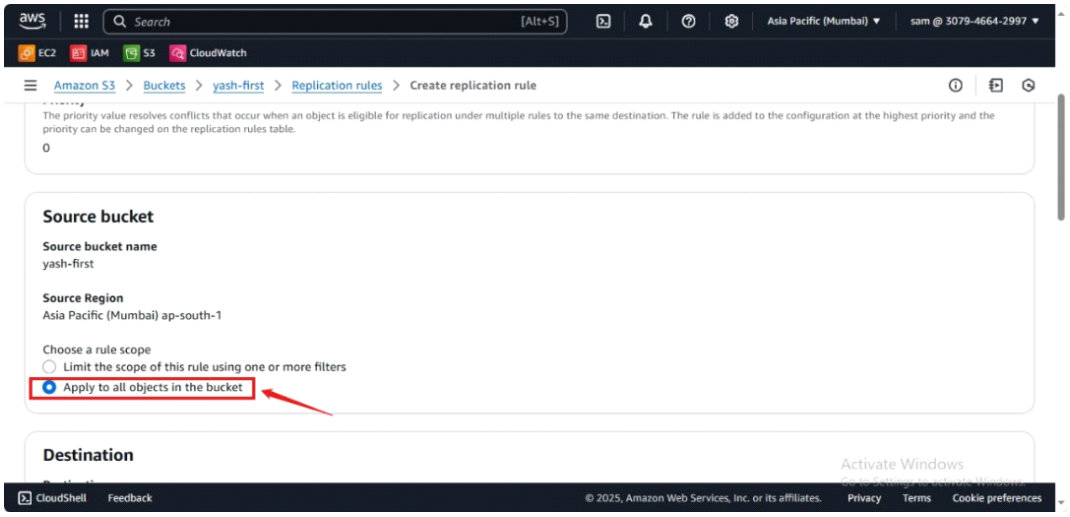
Write name :- **rule1**



Then

In **Source bucket** at **Choose a rule scope** in their

Select option 2nd option **apply to all object in the bucket** click it



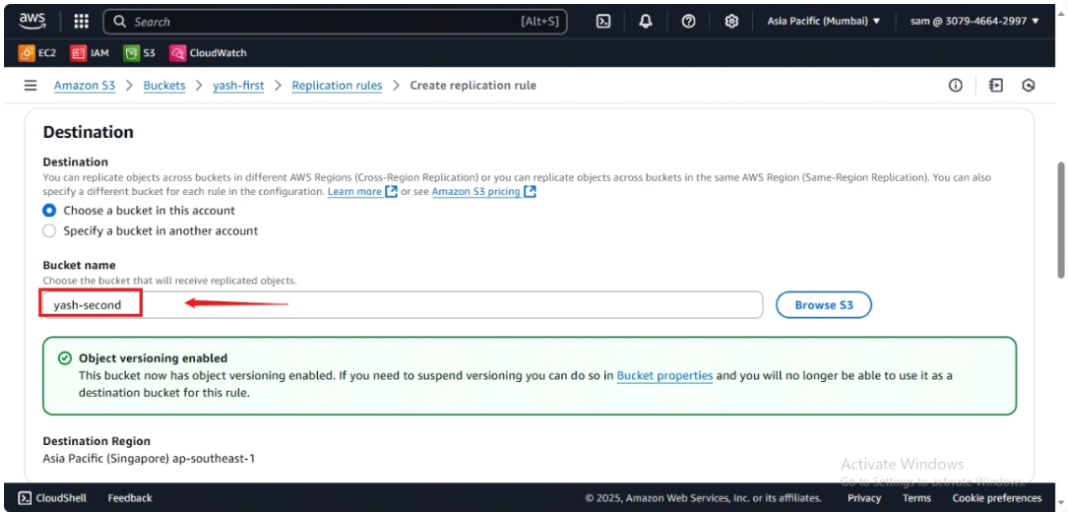
Then

In **Destination** at Choose 1st option **Choose a bucket in account**

Then

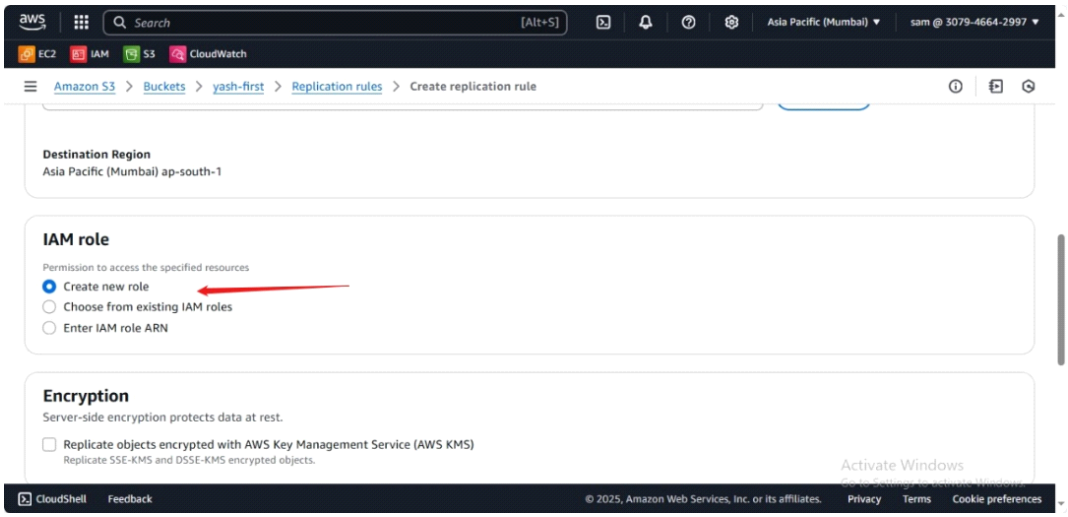
In **Bucket name**

Search second bucket name :- **yash-second**



Then

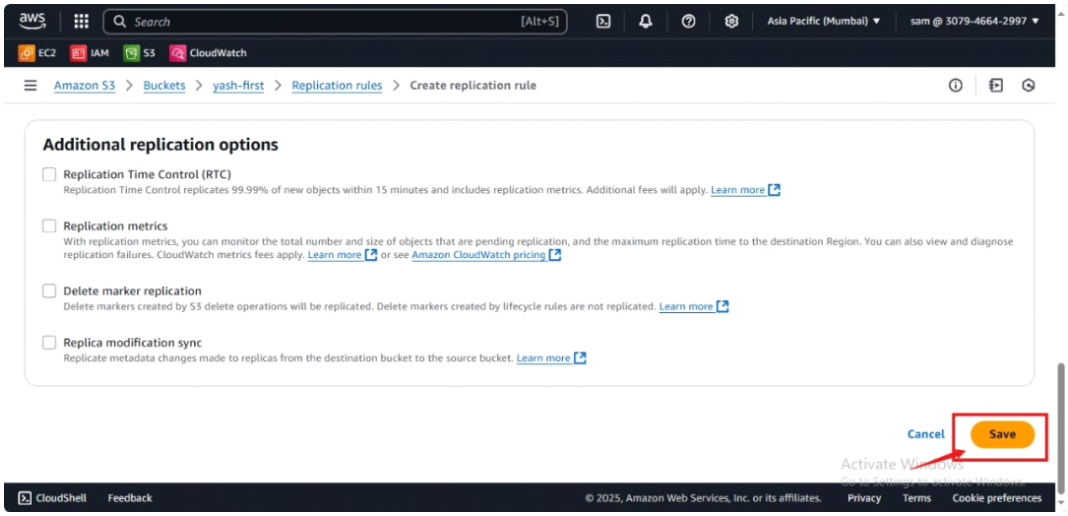
In **IAM role** at Select 1st option **Create new role**



Then keep all as it is

Then

Click on **Save** button



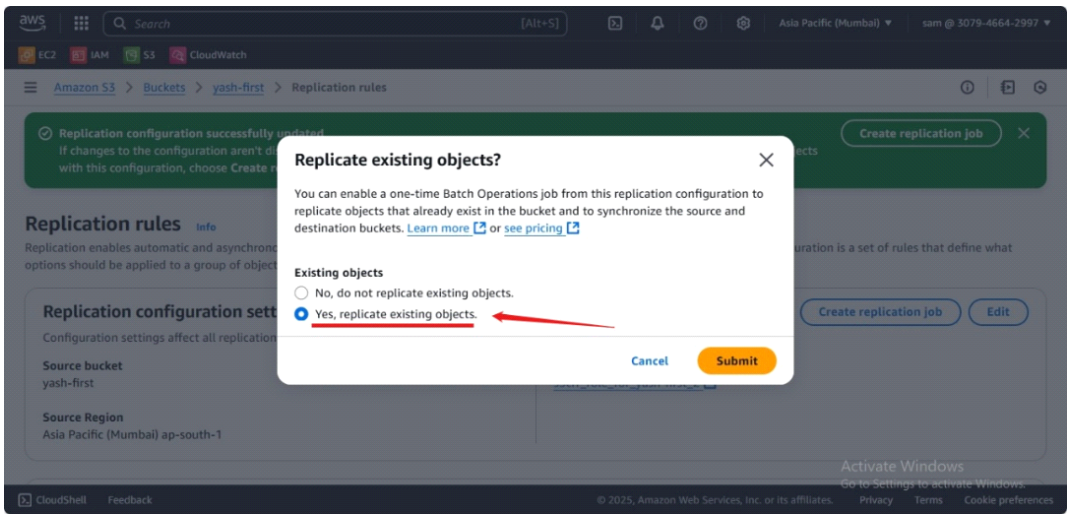
Then

Replicate exitising object new screen will open Choose their the option 2nd **Yes, replicate existing objects**

This will do works as if in bucket their already exit old file then that file will also save in another bucket.

&

If we keep the 1st option as it is then the old file will transfer or show in new bucket which we will replicate, only new file will transfer & show.



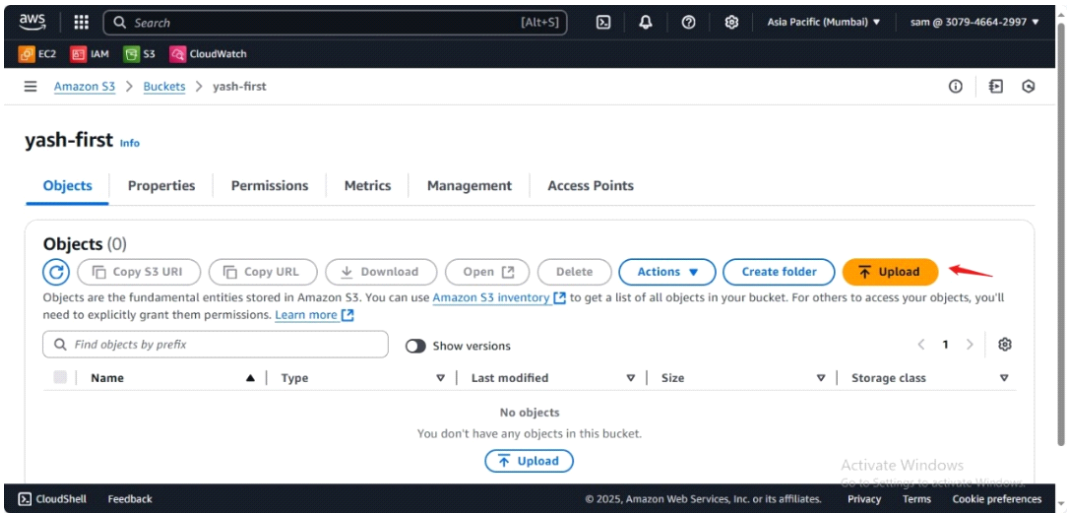
Then

Click on **submit** button

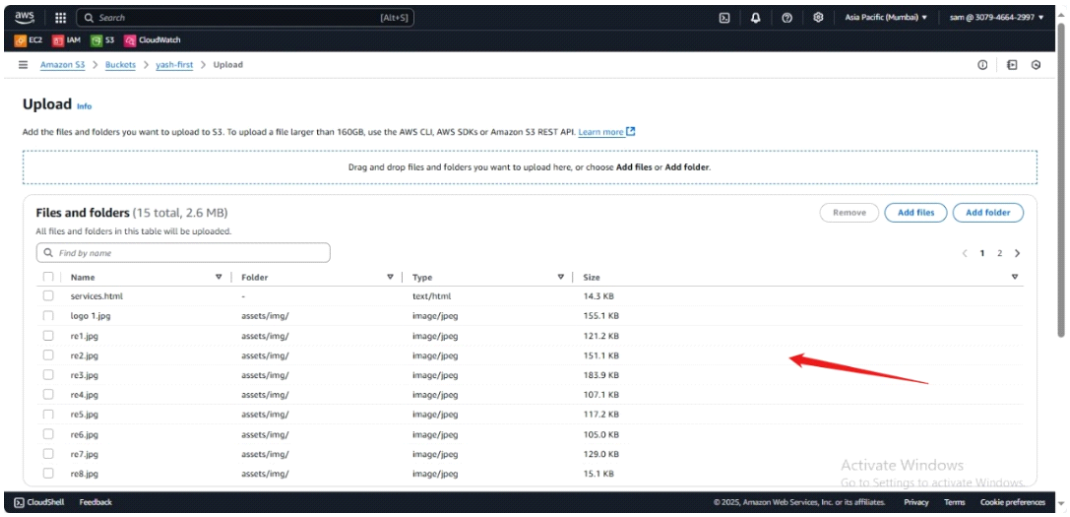
Then

Go to **yash-first**

Then go to option **Upload** and now upload the files of the website

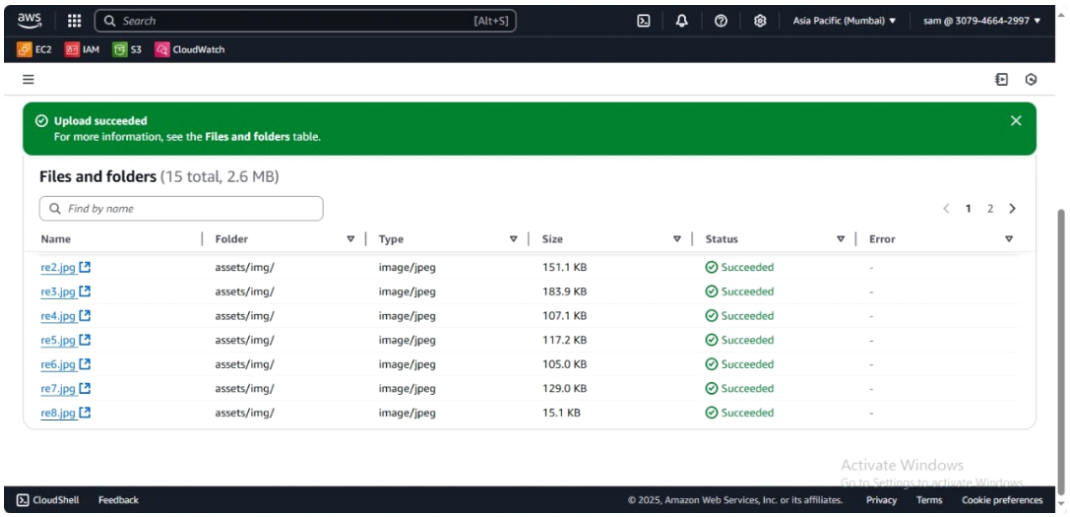


Then



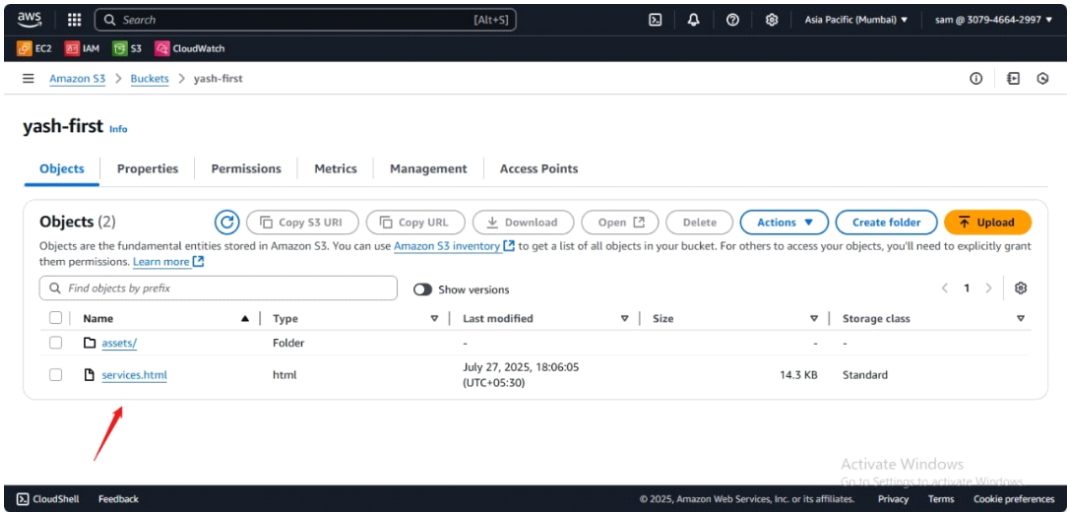
Then

Click on **upload** button



Then

In **Object** you can see that the **files are uploaded and save**.



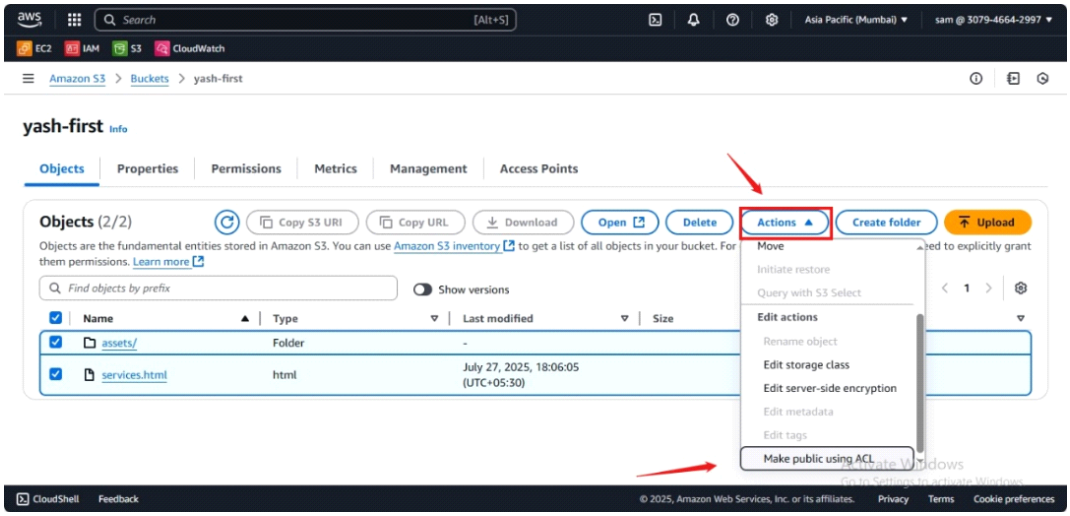
Then

Go to **Action** option

Then

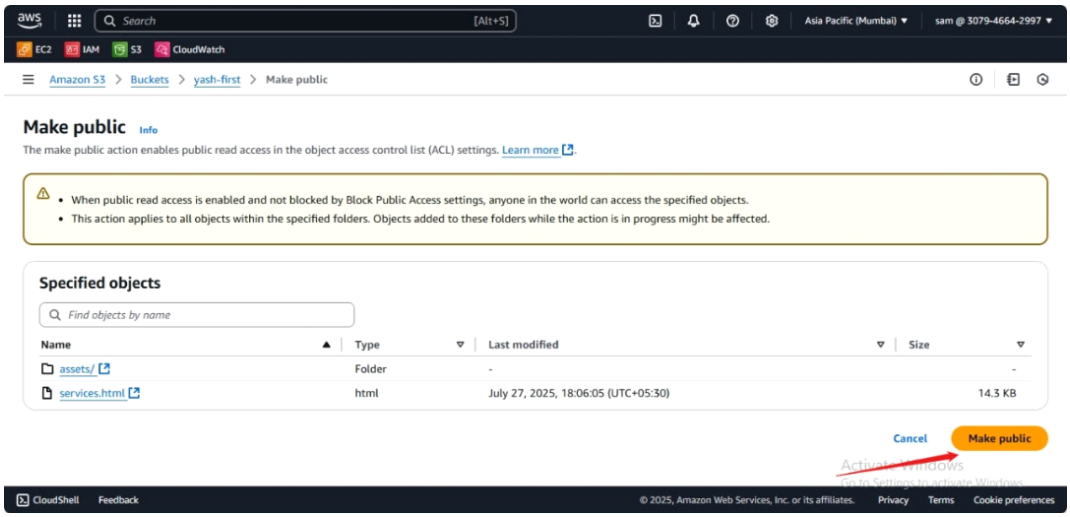
Click on **Action** button, their scroll down & click on option on **Make public using ACL**

Click it



Then

Click on **Make public** button

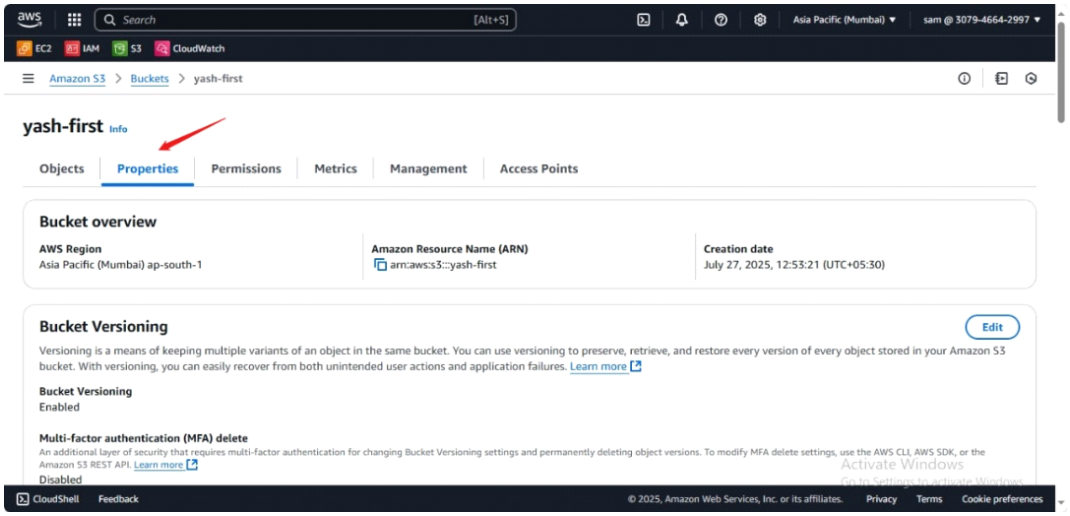


Then

It will successfully be public now.

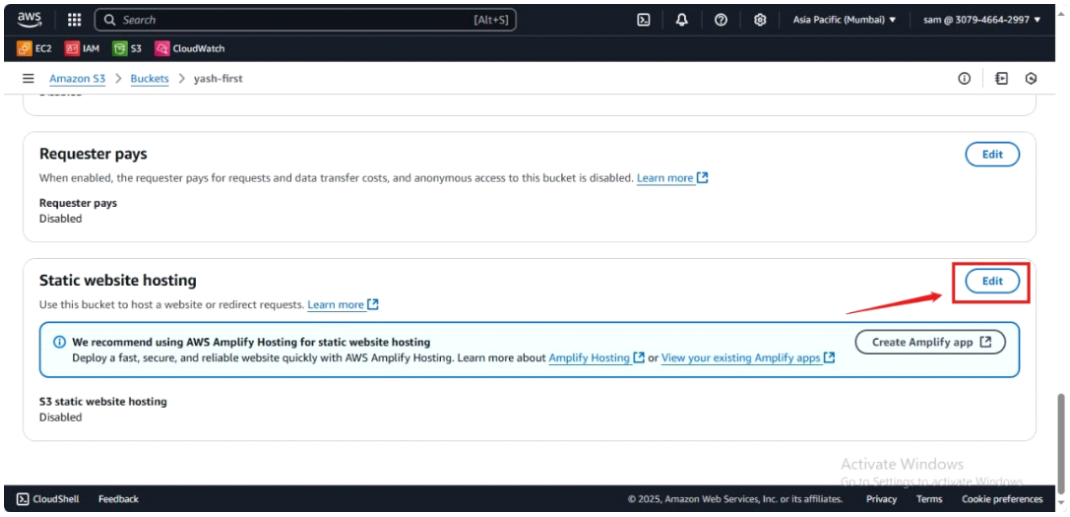
Then go to **Properties** option

Click it



Then scroll down & go to last option **Static website hosting**.

Their the **Edit** button is click it

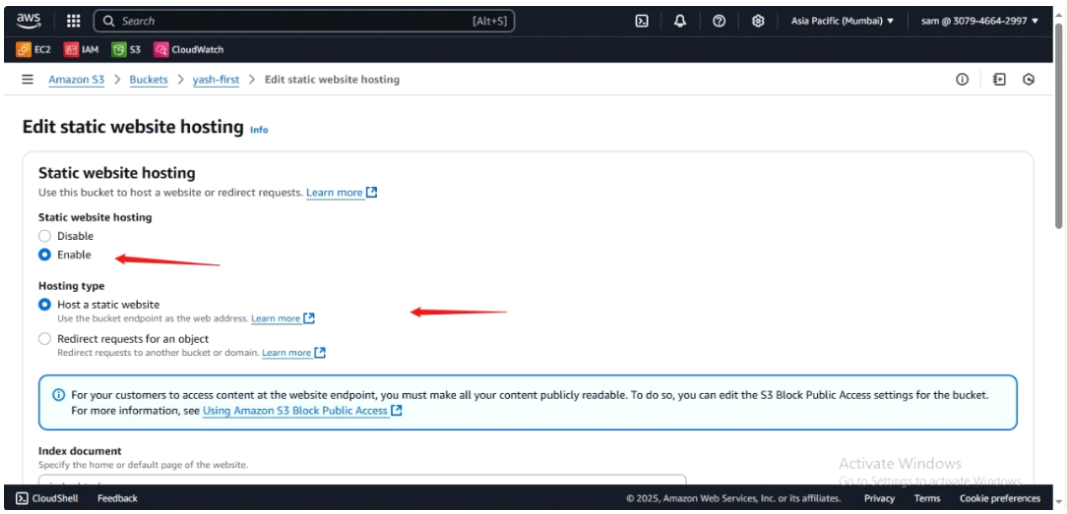


Then

In **Static website hosting** select **Enable** option.

Then

In **Hosting type** select first option **Host a static website**



Then

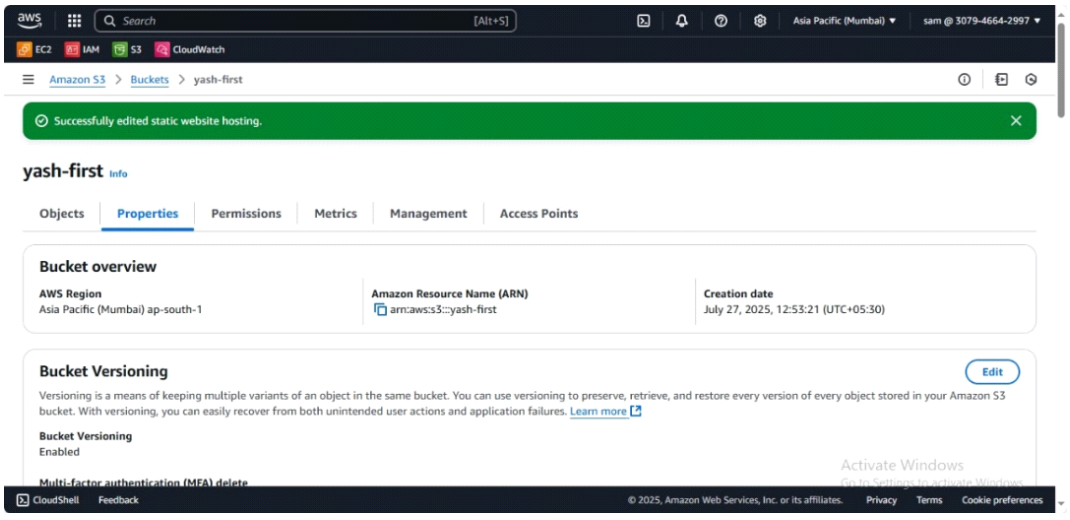
In **Index document** add the file name which is main file .

Add the file that which is your website main file

Main File name :- **services html**

Then

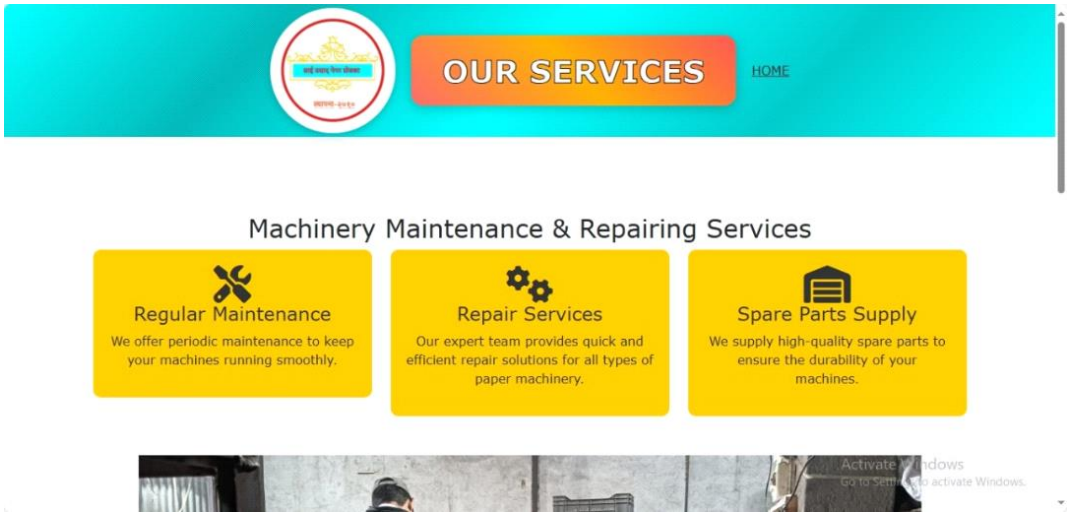
Click on **Save changes** button



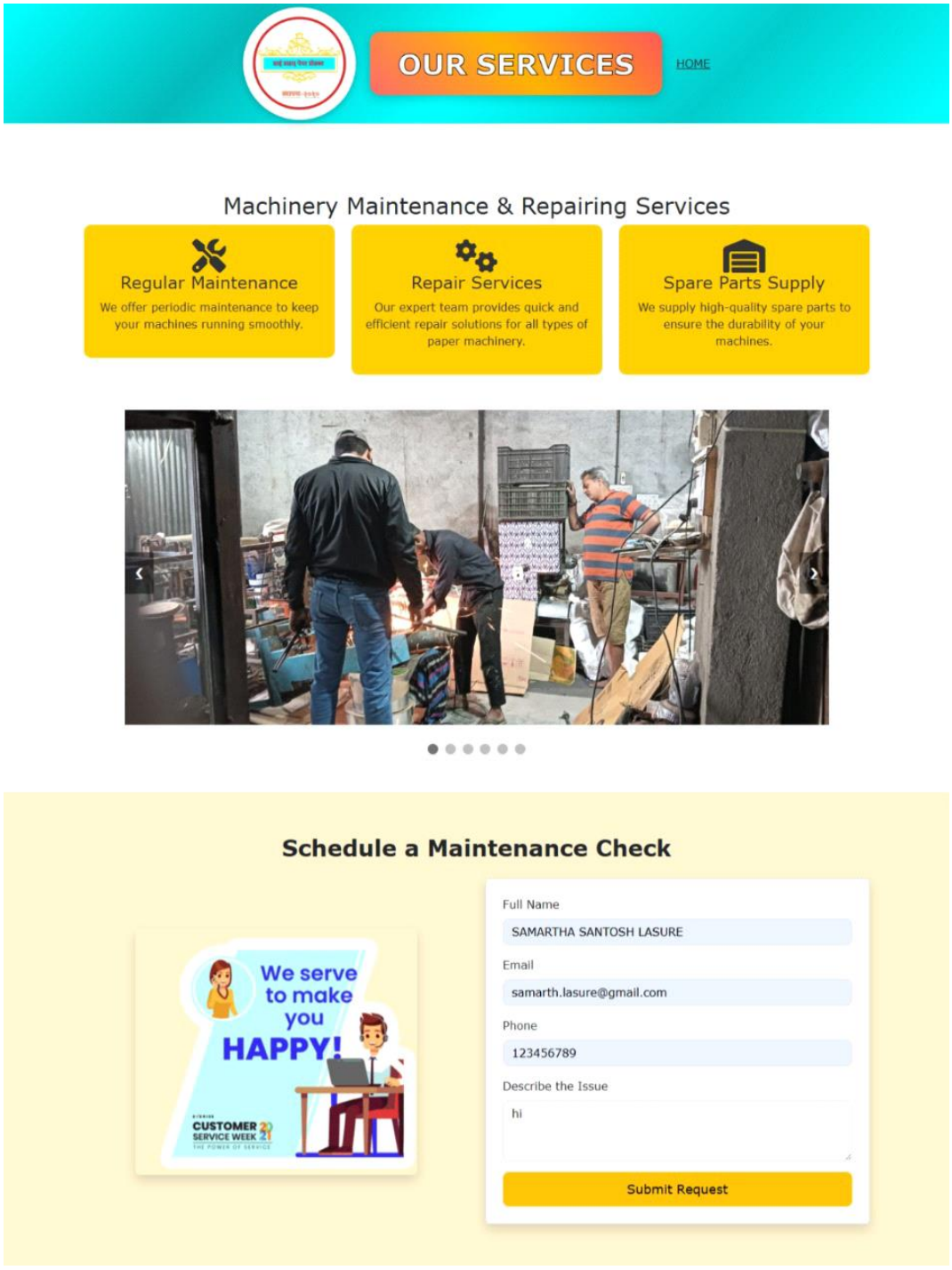
Then go to **properties** option & scroll down till **static website hosting** we will get the **link of website,** click on it then new browser will open and our **website will display** .

Output of website :-

Screenhot of page :-



Full page screenshot :-



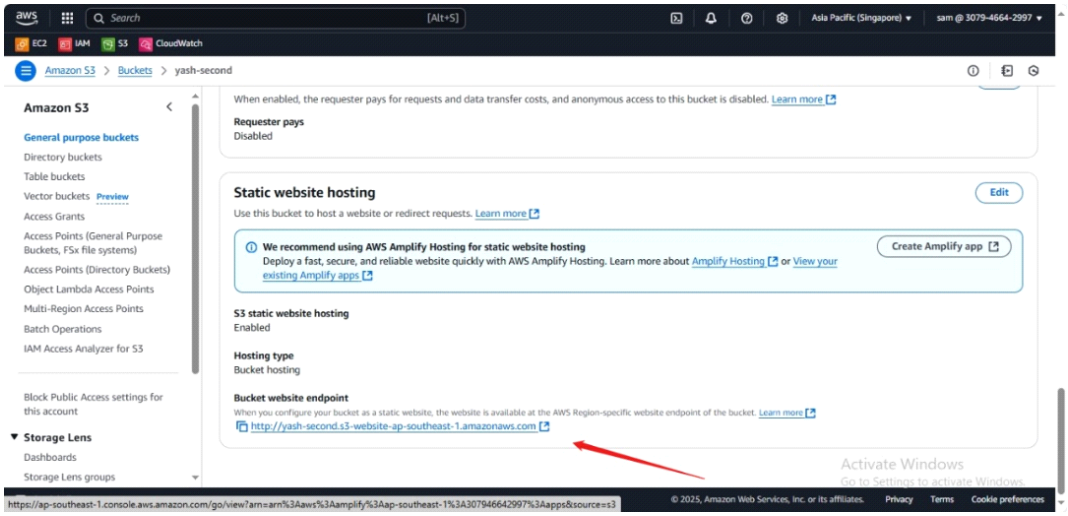
Then

Go back and click On second bucket:- **yash-second**

Their we can see that in **object the files** are already there.

Then

Go to **Properties** & scroll down at bottom till **static website hosting** we can see that the **website link** is showing.



It means we have successfully done CRR.

Task 2 :- S3 Cross-Account Access

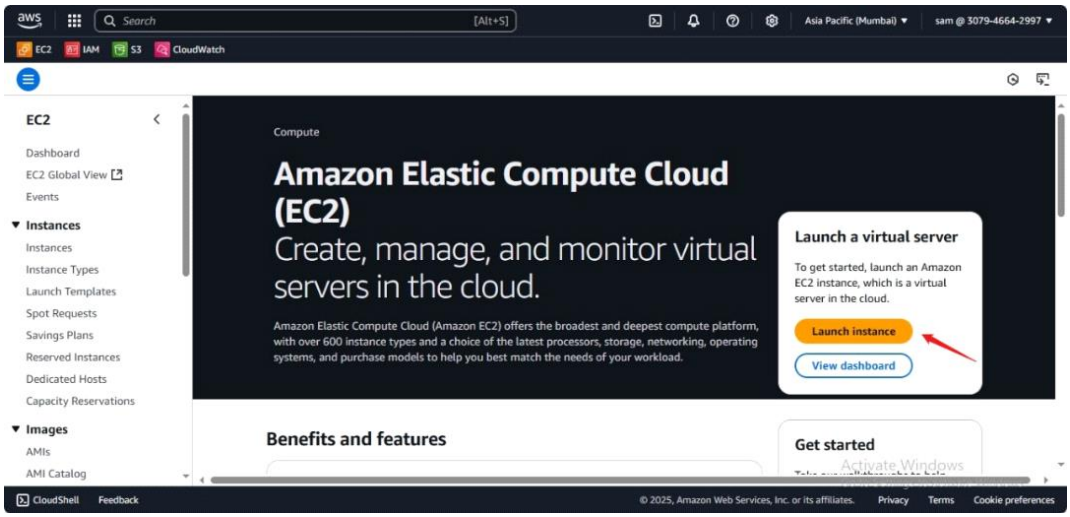
- **Create a bucket in one AWS account**
- **Grant access to another account using a bucket policy**

Task 2 :- Can't do because new / another account is not opening problem perist.

Task 3:- ◆ Auto scaling with Load Balancer

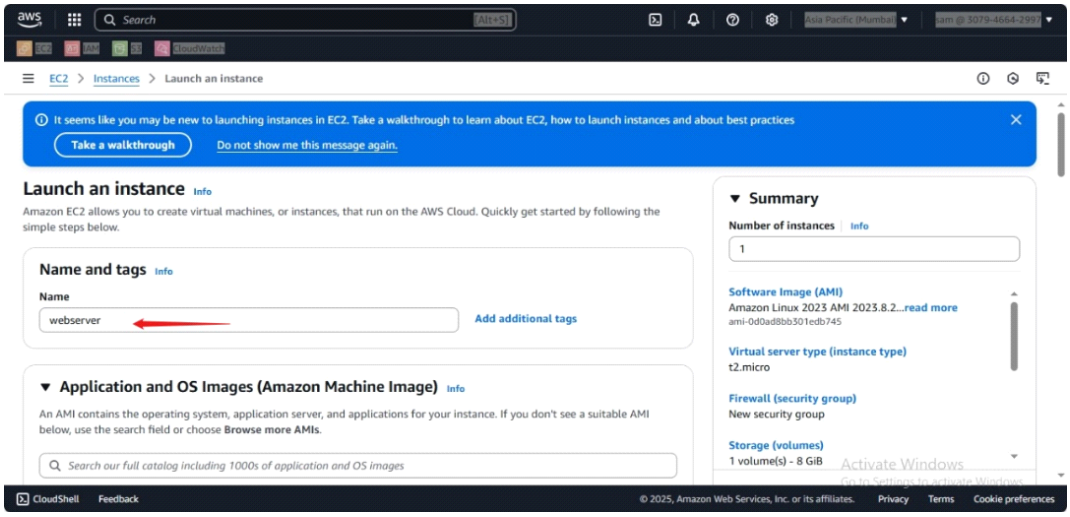
Go to **AWS console**

Then
Search **Ec2**
Then click it
Then
Click on **Launch Instances**



Then

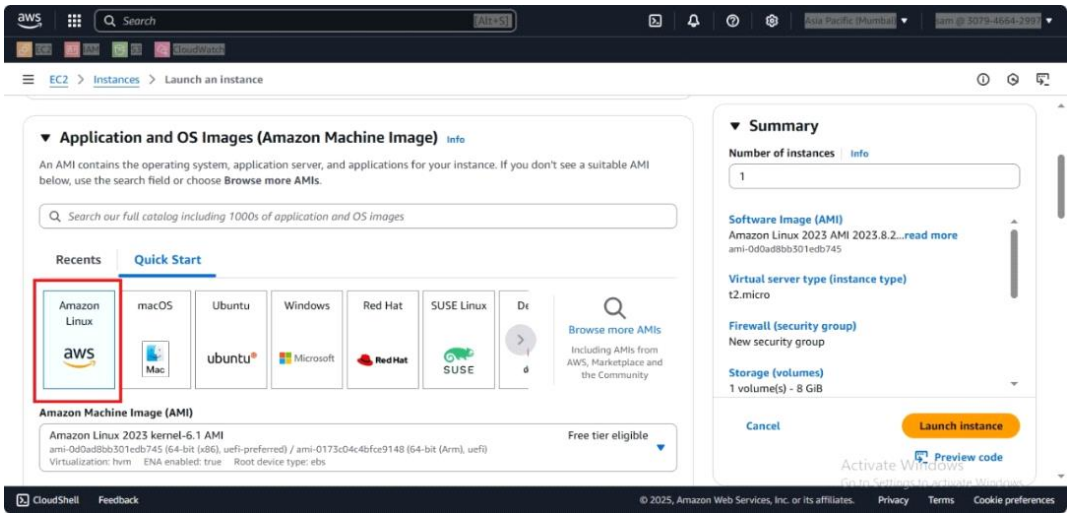
Instances name :- **webserver**



Then

In **Application &OS Images (AMI)** in this Select

Amazon Linux



Then

In **Instance type** keep as it is

because it defaultly select the free tier

So **t2.micro**

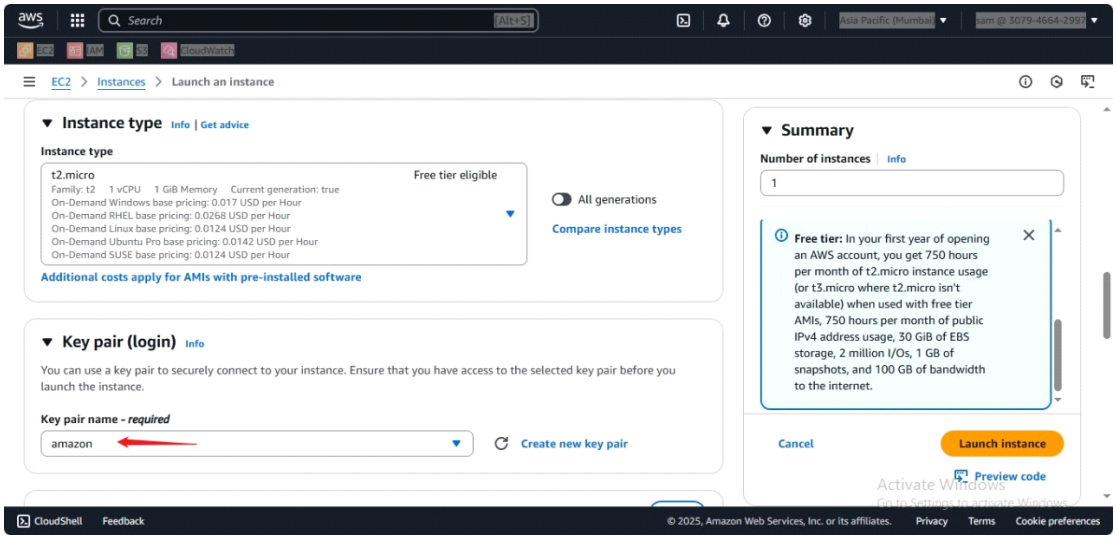
Then

In **Key pair**

Keypair name in drop-down select the key or make new key

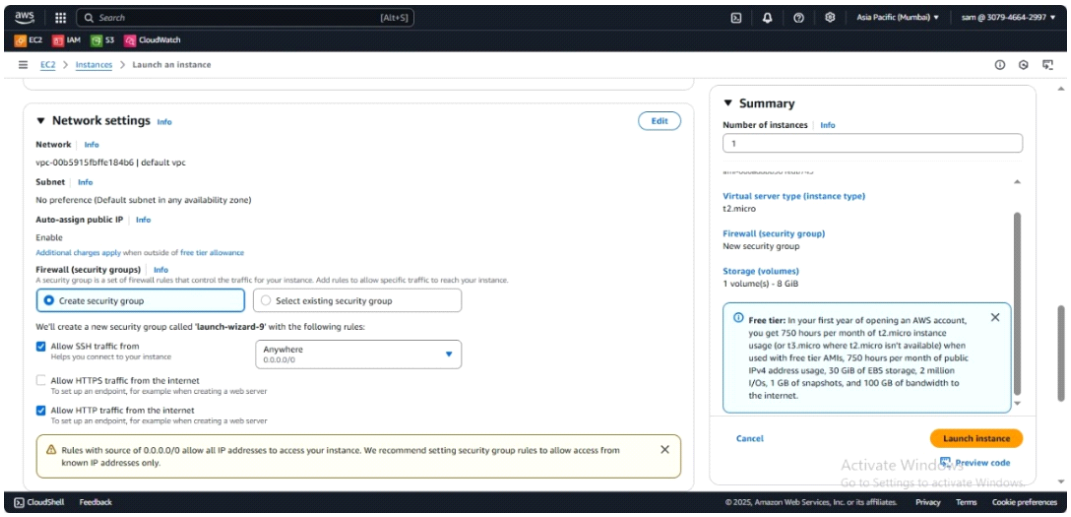
I will select the old one key, i have already.

Name :- **amazon.pem**



Then

In **Network setting** at firewall (security group) select the option of **Create security group** & allow/tick the option of **SSH & HTTP**



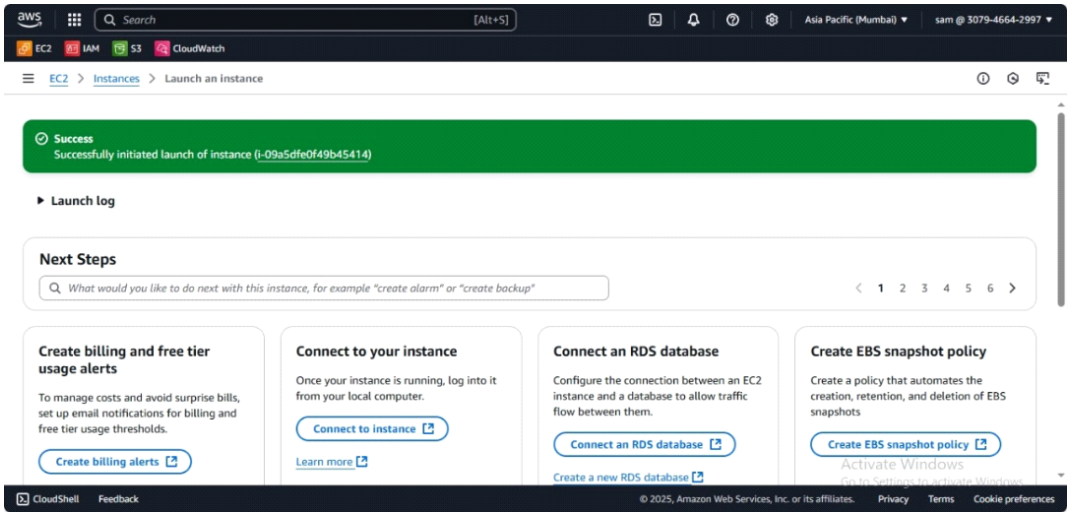
Then

Added the code / script

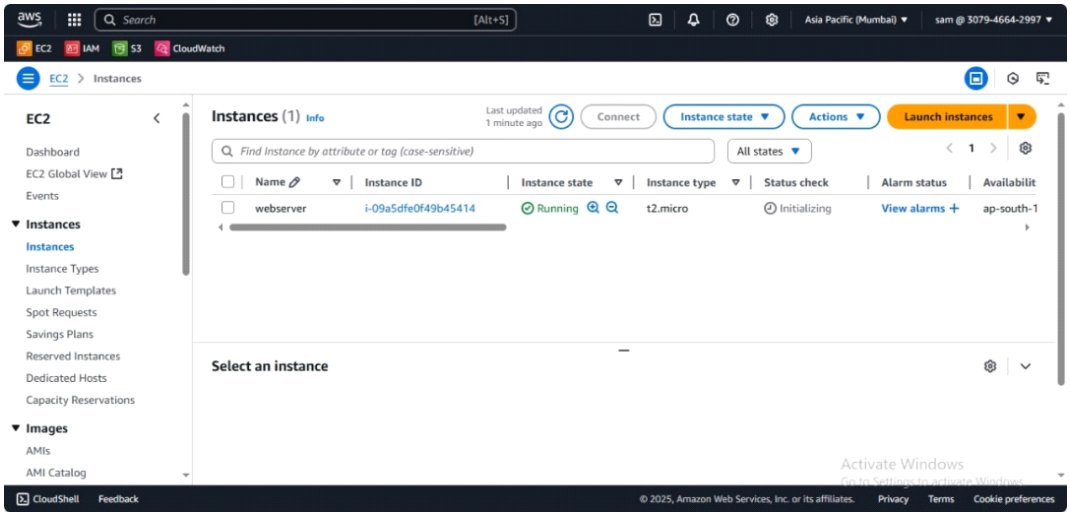
```
  #!/bin/bash
yum update -y
yum install -y httpd
echo " hellow from auto scaling "> / var/www/html/index.html
```

systemctl start httpd
systemctl enable httpd

Then click on **Launch Instances** button

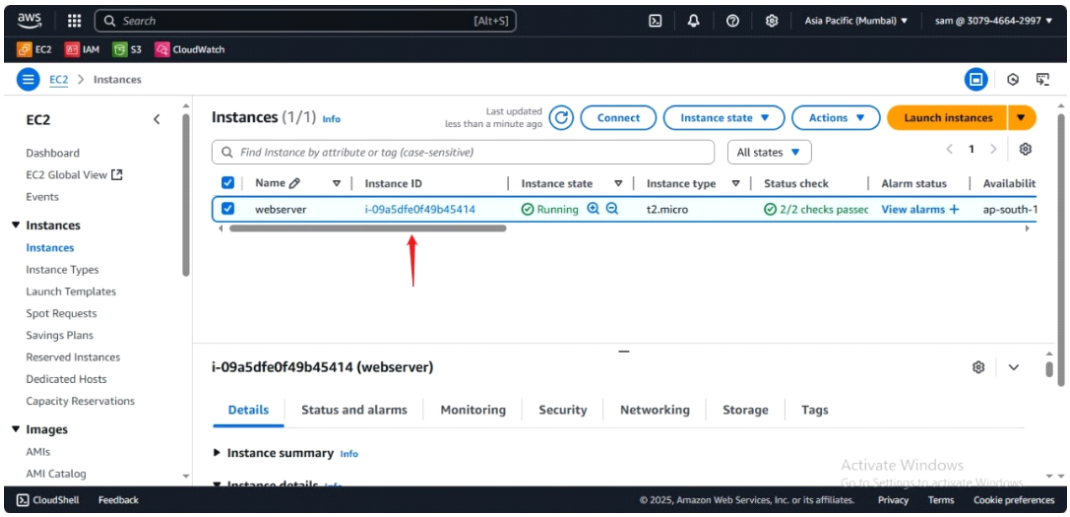


Then
Wait for **instance state** to be in **running** state
Then



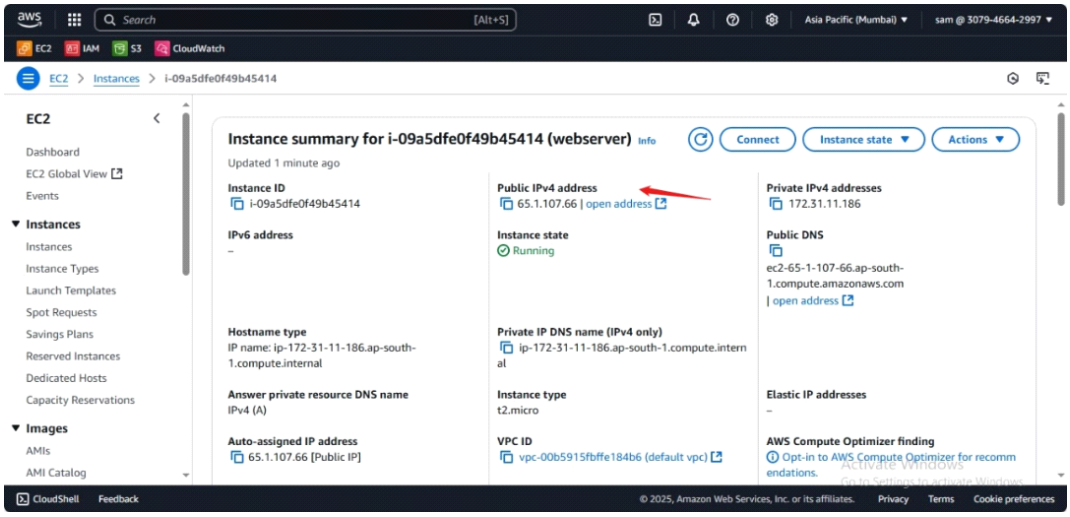
Then

Click on **instance id**



Then

Copy the **Public IPv4 address**

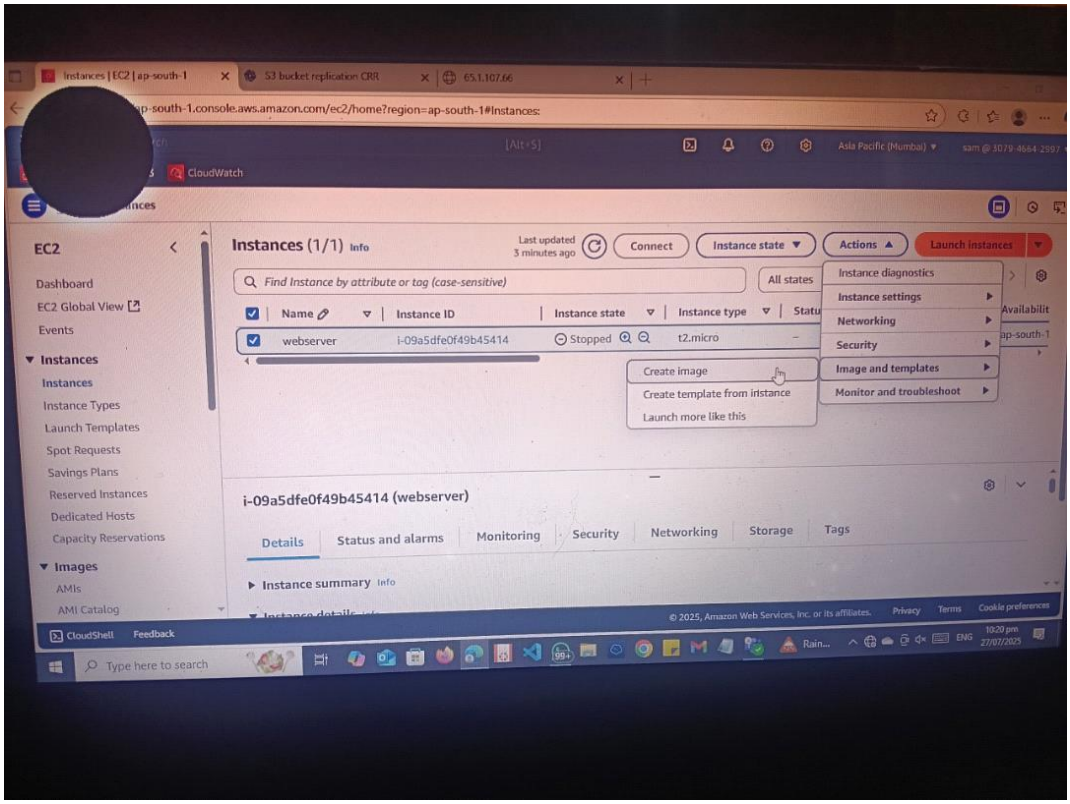


Then copy the **Public IPv4 address** paste it to browser & see the File output

Then we can see the **output of the file**.

Now we want to create an AMI (Amazon Machine Image) :-

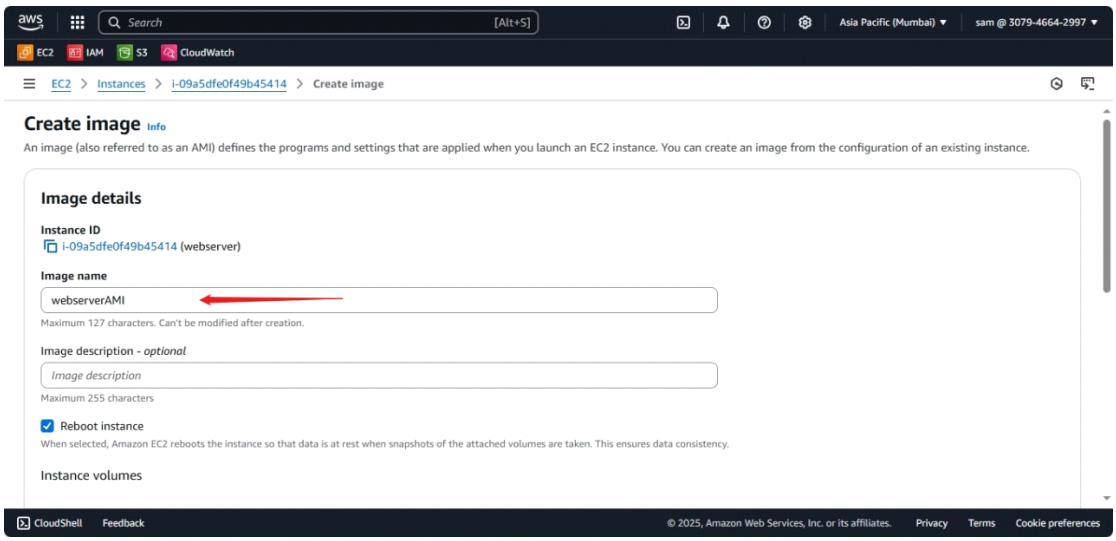
Go to **EC2** & select the created **instances** & click on it (**webserver**)
Then
Go to **Action** button click it
Then
In this go to option **Image & template** click it
Then
In this **Create image** option click



Then

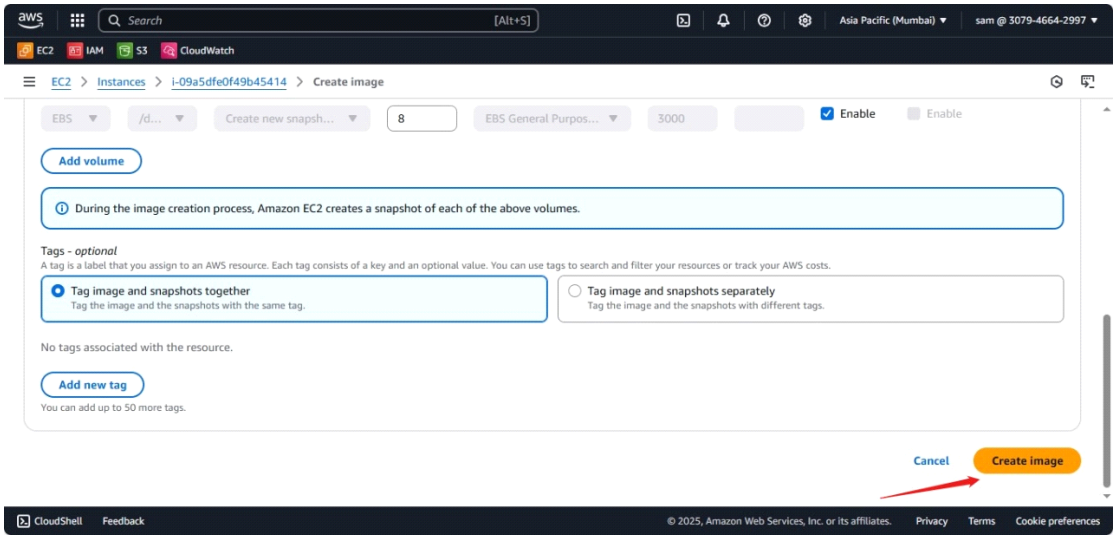
In Create image at **Image details , Instance ID** below is **Image name** at there name it

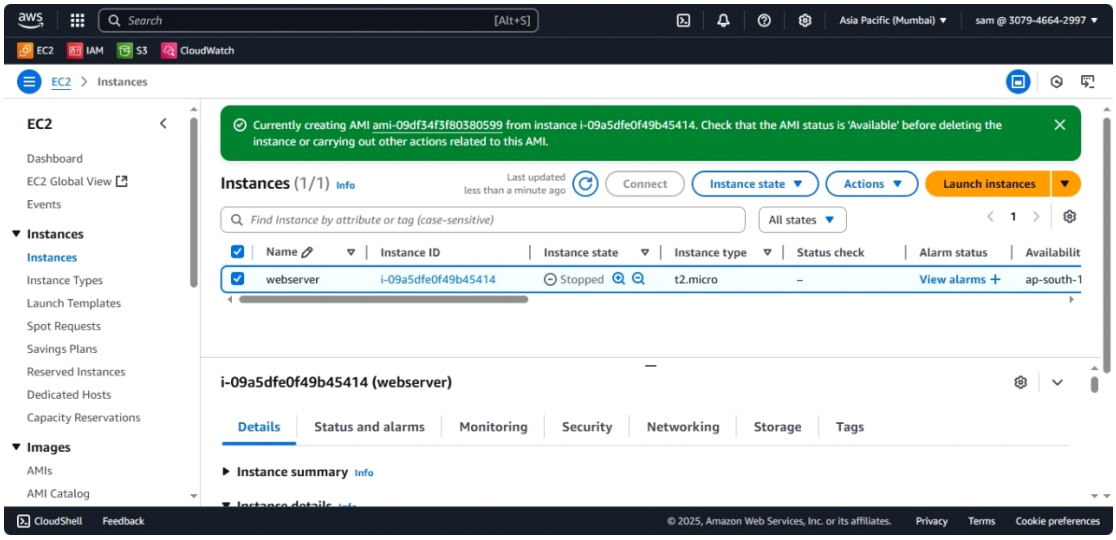
Name :- **webserverAMI**



Then

Scroll down till bottom & click on button of **Create image**



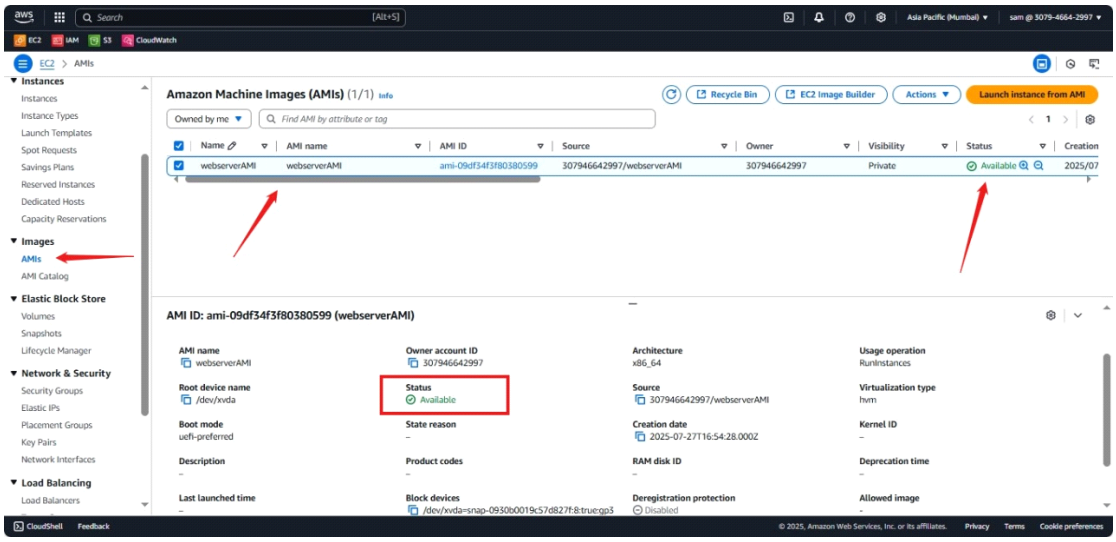


Then

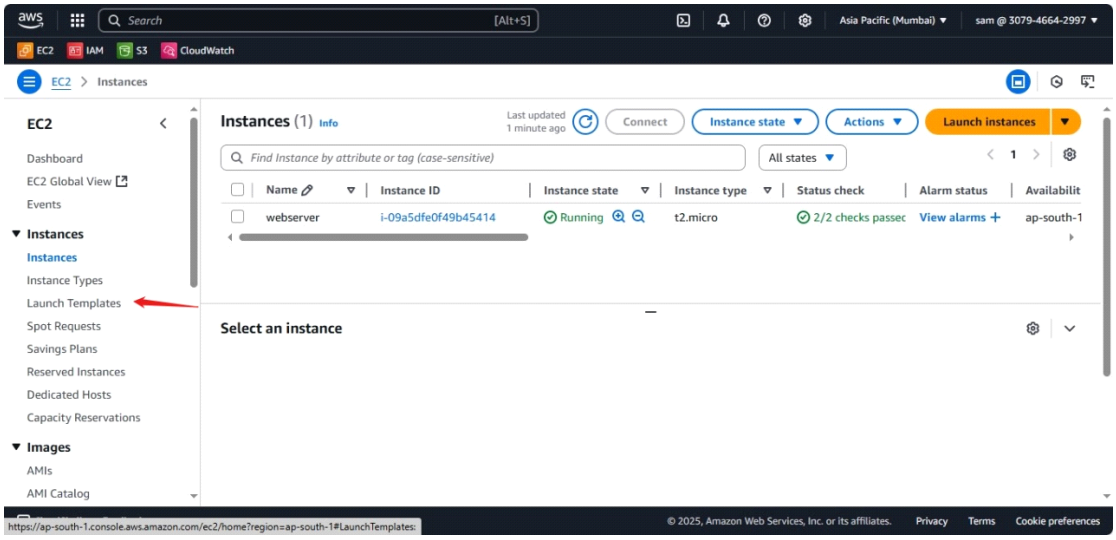
our AMI Image is created successfully

&

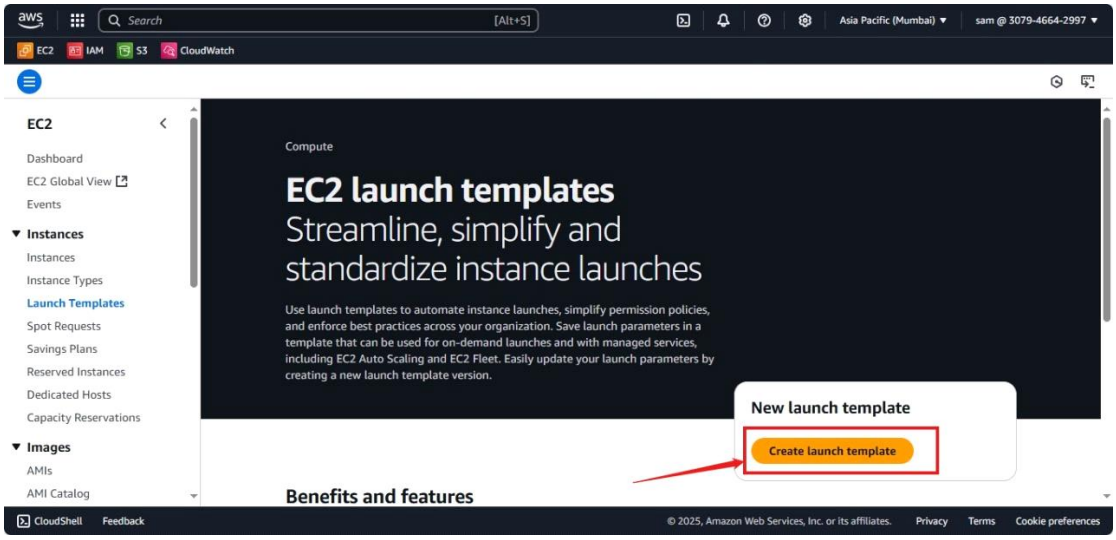
*Wait till the status of AMI image is **Available***



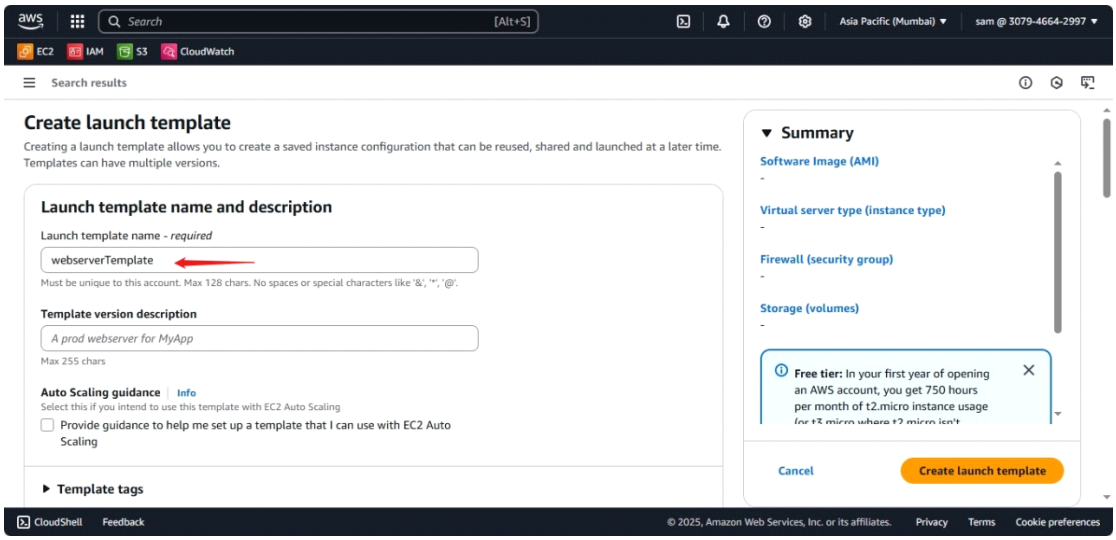
Then
Go to **EC2** in their at left side see **Launch Templates** is there click it



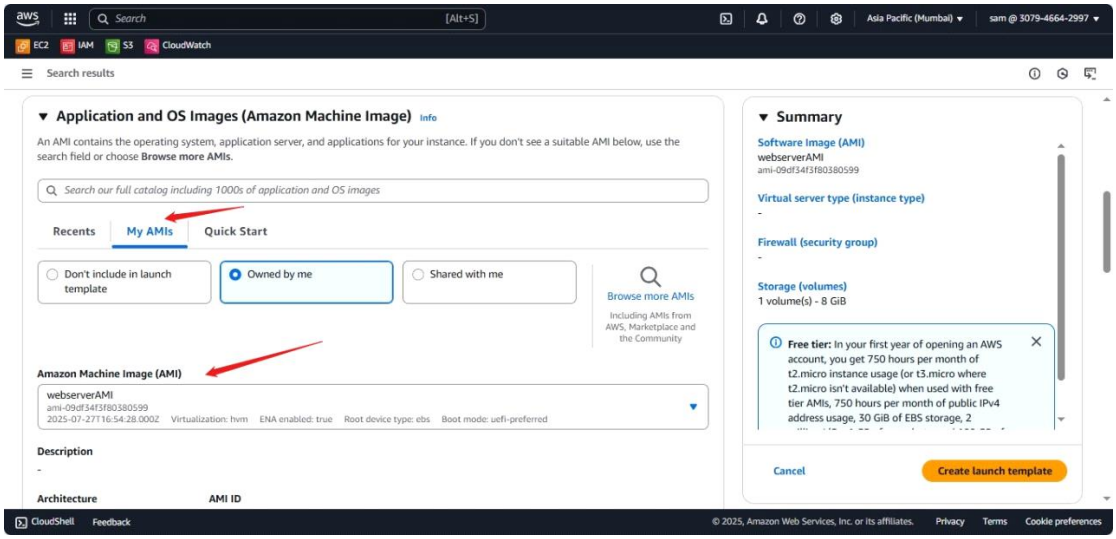
Then
Click on **Create Launch Templates** button



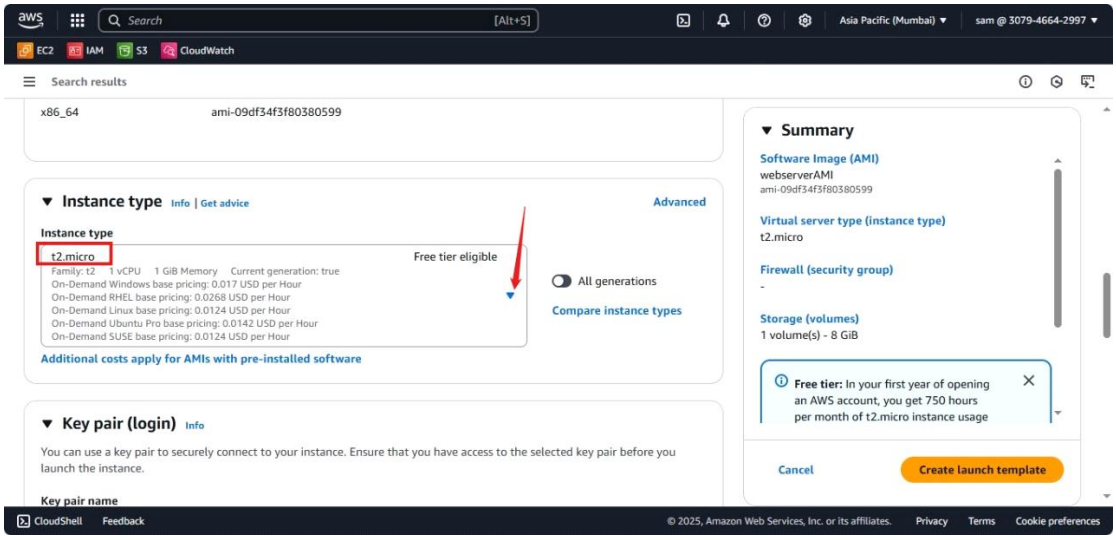
Then
In **Create launch template** at **Launch template name & description**
Name :- **webserverTemplate**



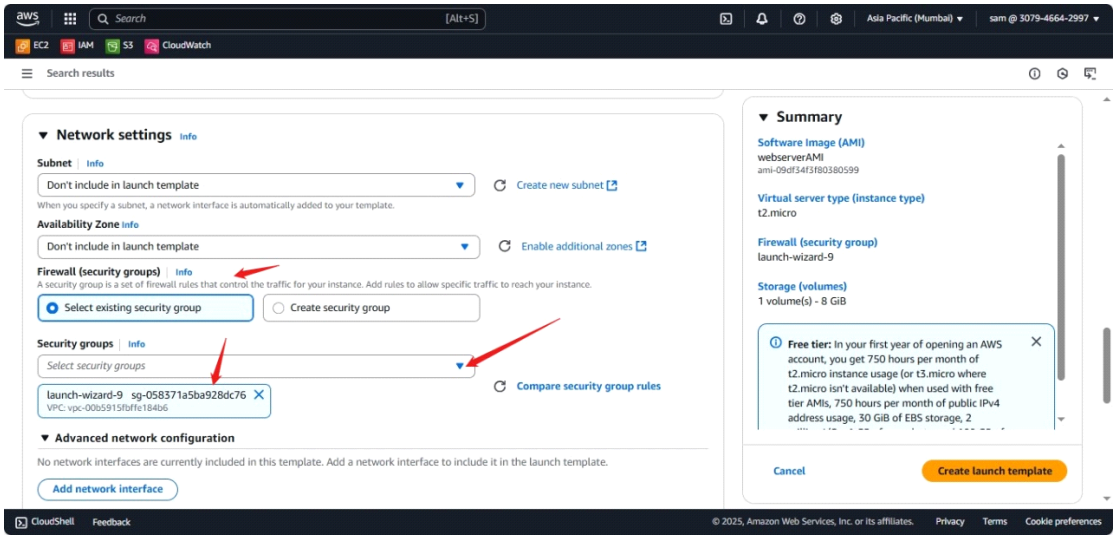
Then
In **Application & OS Images AMI** (Amazon Machine Image)
Add there our created AMI image
Name :- **webserverAMI**
click on option **My AMIs**
Then select our **AMI image** created



Then
In **Instance type** select the **t2.micro**

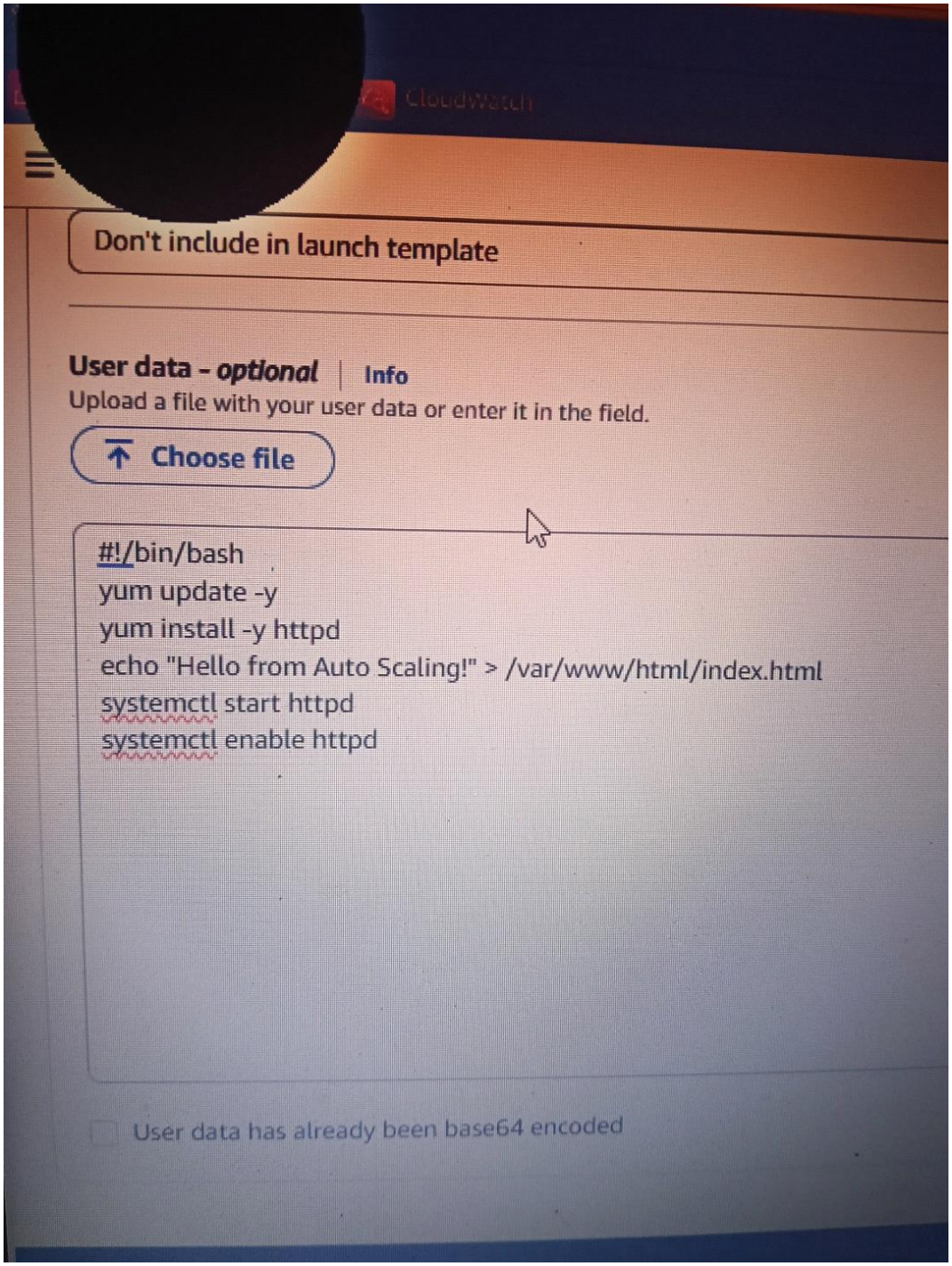


Then
In **key pair** keep as it is default
Then
In **Network setting** at **Subnet** keep as it is default , in **Availability zone** keep as it is default, in Firewall (Security group) select the **select existing security group**
Then
Click the arrow then select our **security group**
which we created on Instances time



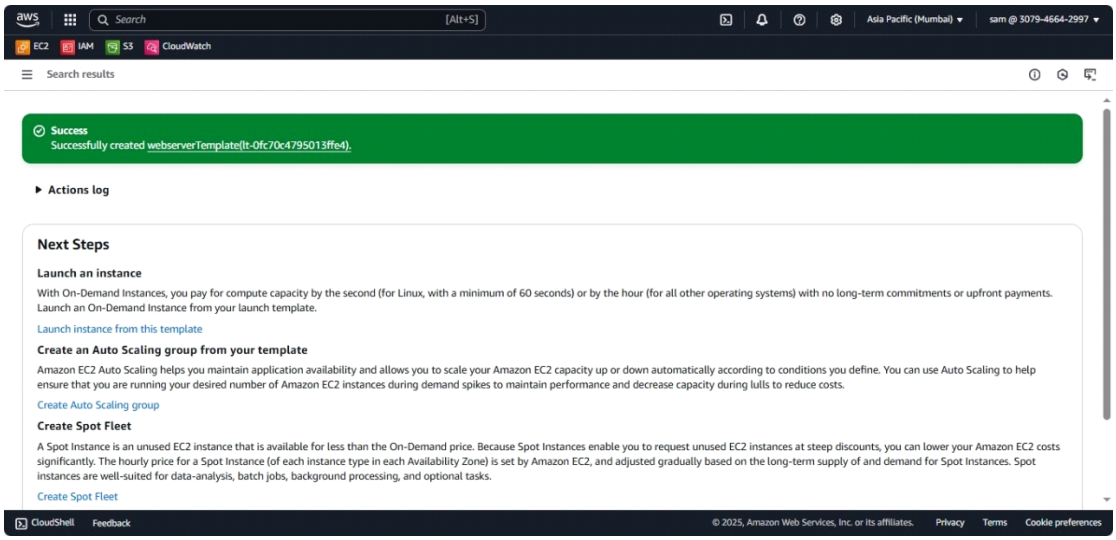
Then

As we paste one script paste same here also



Then

Click on button **Created launch template**

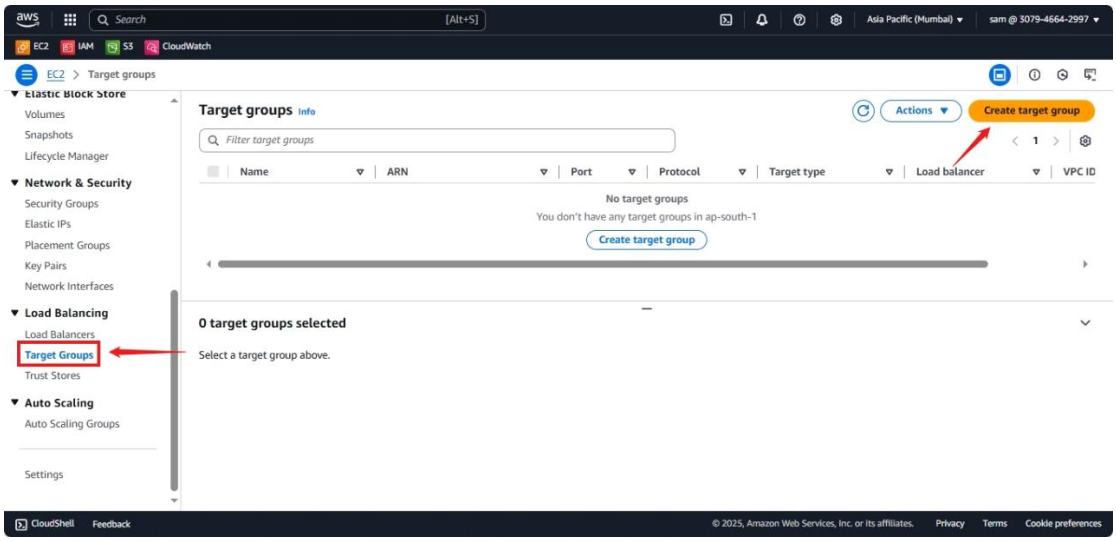


Then

launch template created successfully

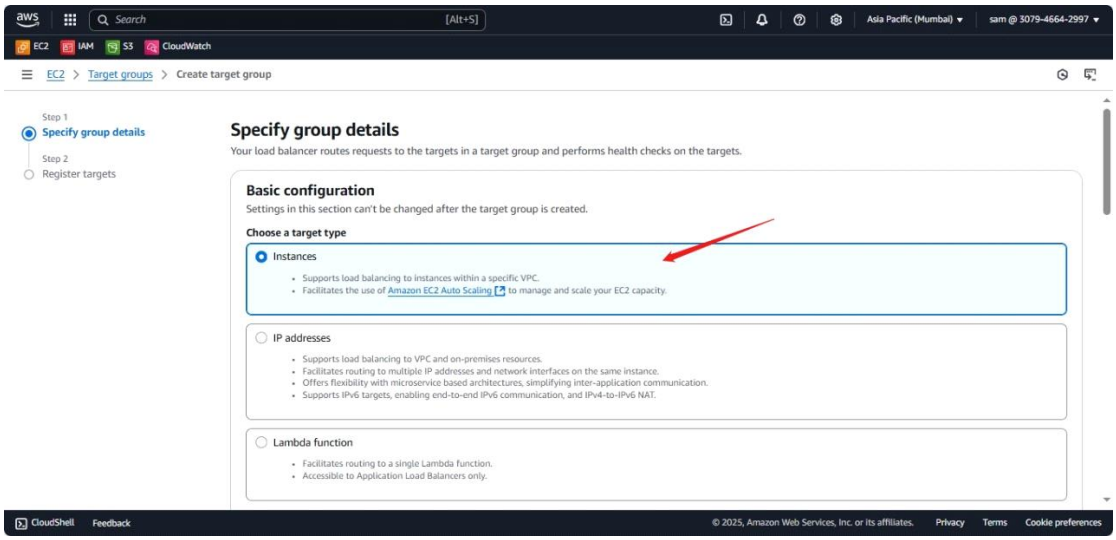
Now we will make the target group :-

Go to **EC2** on left side scroll little bit down then in **Load balancing** see in it **Target Groups**
Click it

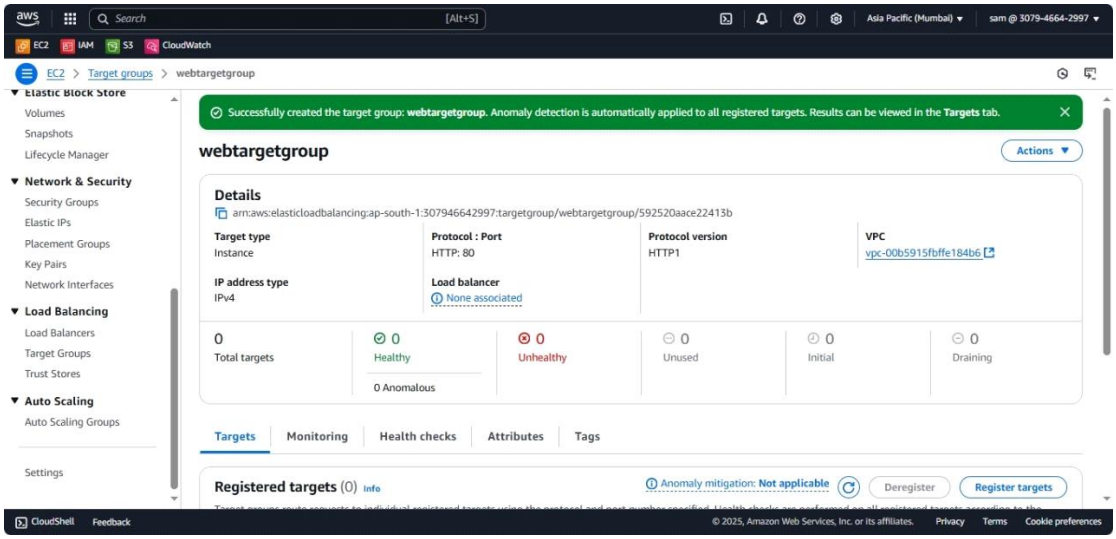


Then
In **Specify group details** at **Choose a target type** in this

Choose **Instances** option



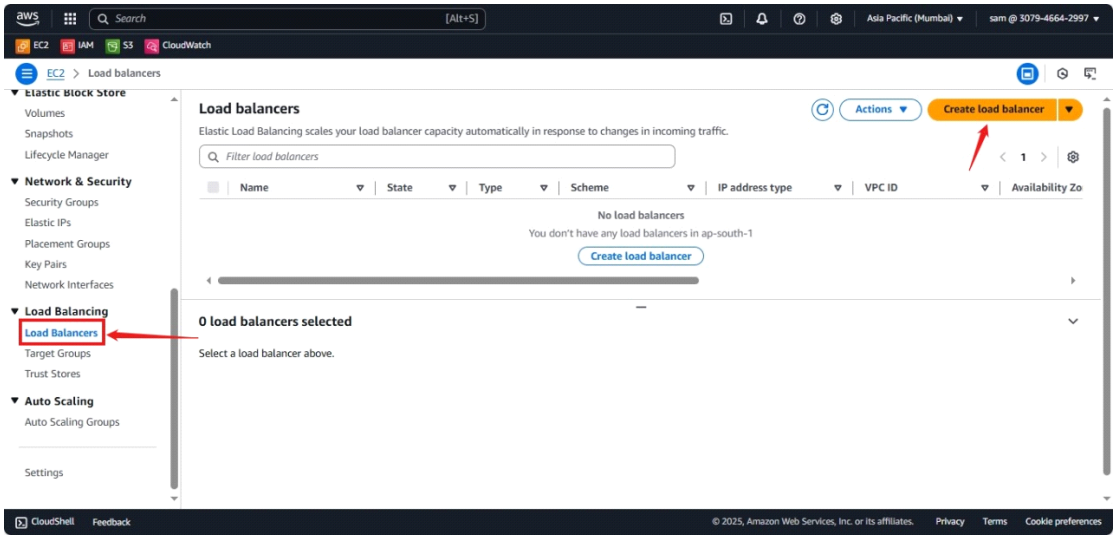
Then
In **Target group name**
Name :- **webtargetgroup**
Then
Click on **Next** button
Then in **Register targets** scroll down & click on **create target group** button



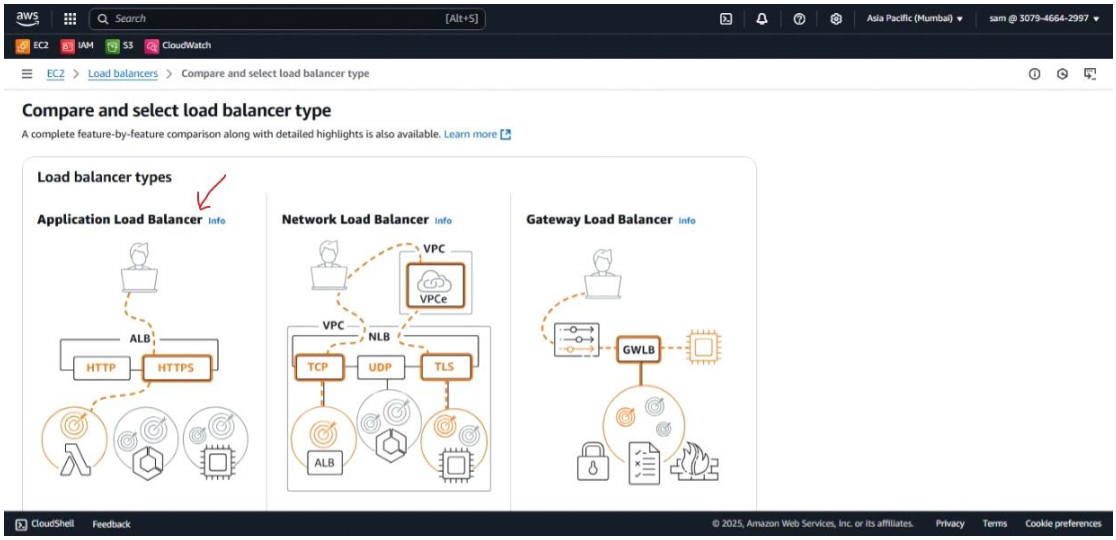
Then
Target group is successful made & ready .

Now we will create a Application Load Balancer :-

Go to **Load balancer** under Load balancing
Then click on **Create load balancer**

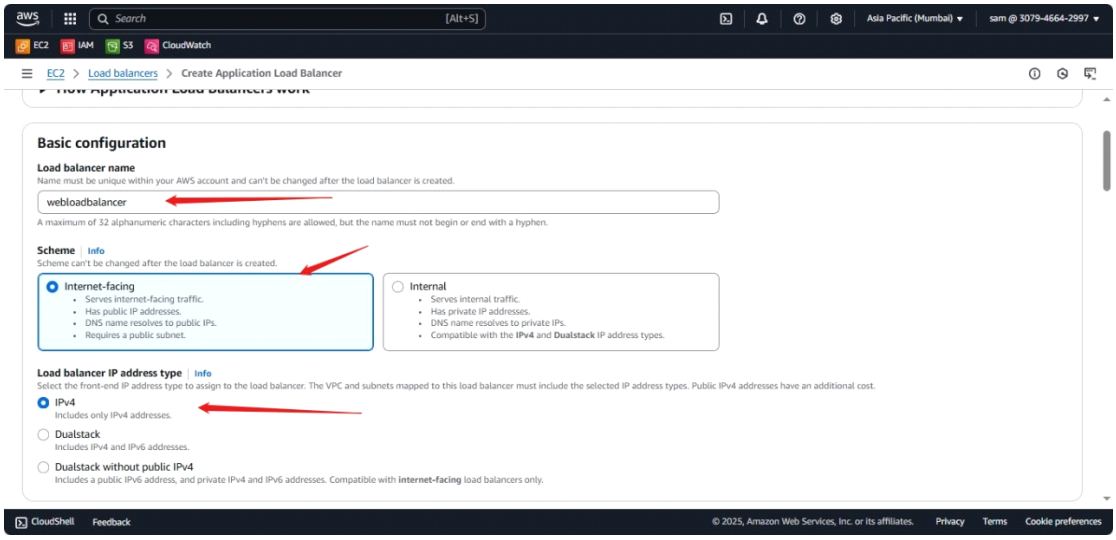


Then
In **Compare & select load balancer type**
Select the **Application Load Balancer** & click on **create button .**

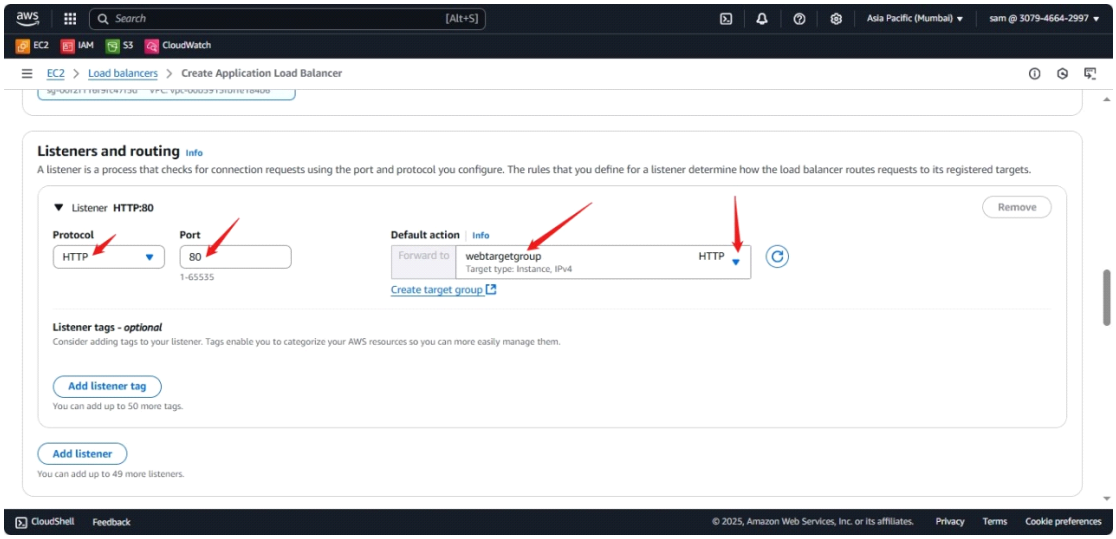


Then
Page will open **Create application load balancer**

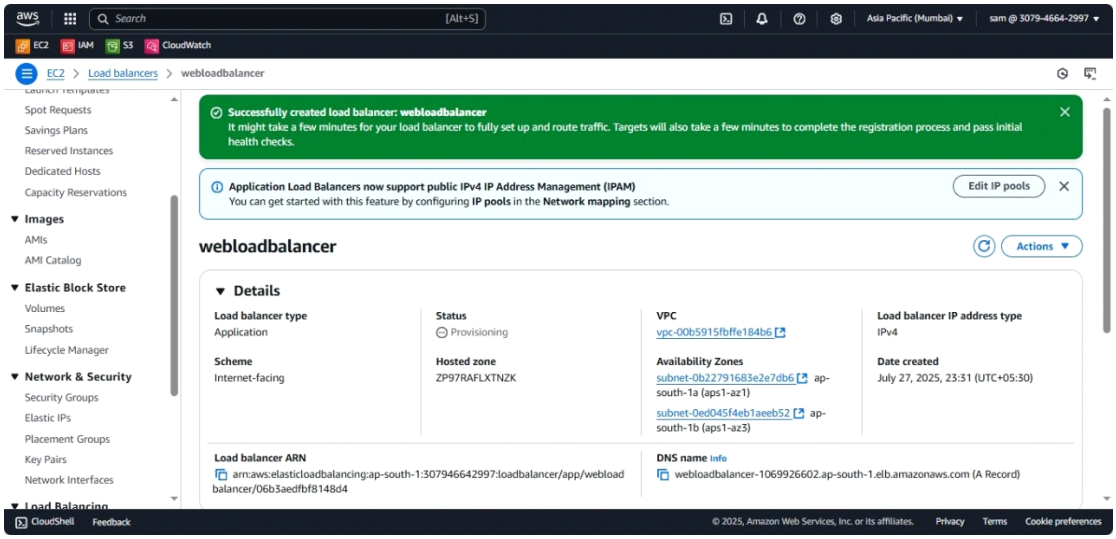
Then
In **Basic Configuration** at **Load balancer name**
Name :- **webloadbalancer**
Then below it option **Scheme** select in their **Internet-facing** select
Then
In **Load balancer IP address type** select **IPv4**



Then
In **Network mapping** at **VPC** select **default vpc** & in **Availability zone** select two zone like **ap-south-1a** **&** **ap-south-1b**
Then
In **Listeners & routing**
Protocol:- **HTTP**
Port :- **80**
Default action:- select our created target group (**webtargetgroup**)



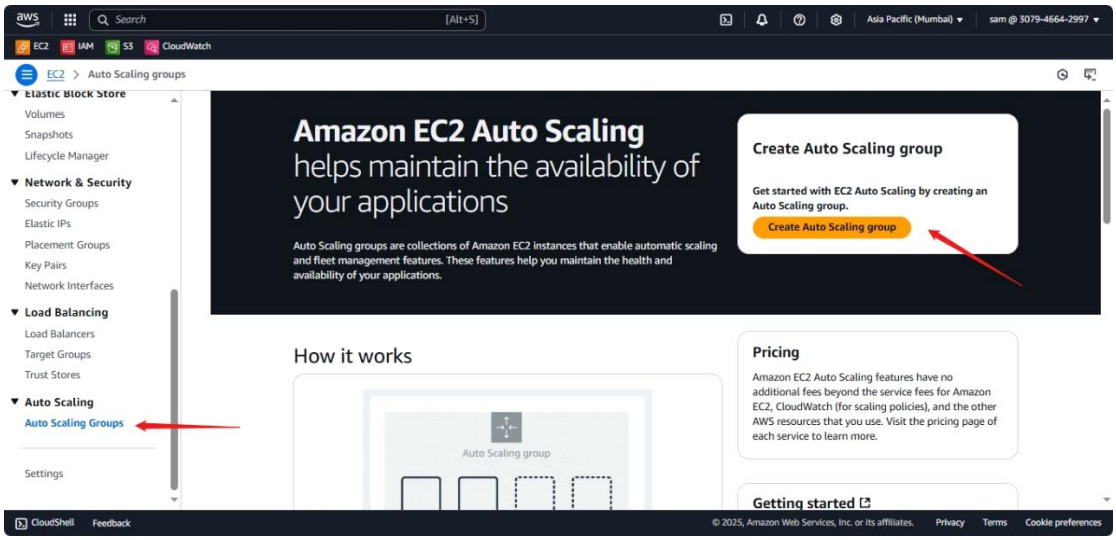
Then
Click on **Create load balancer** button



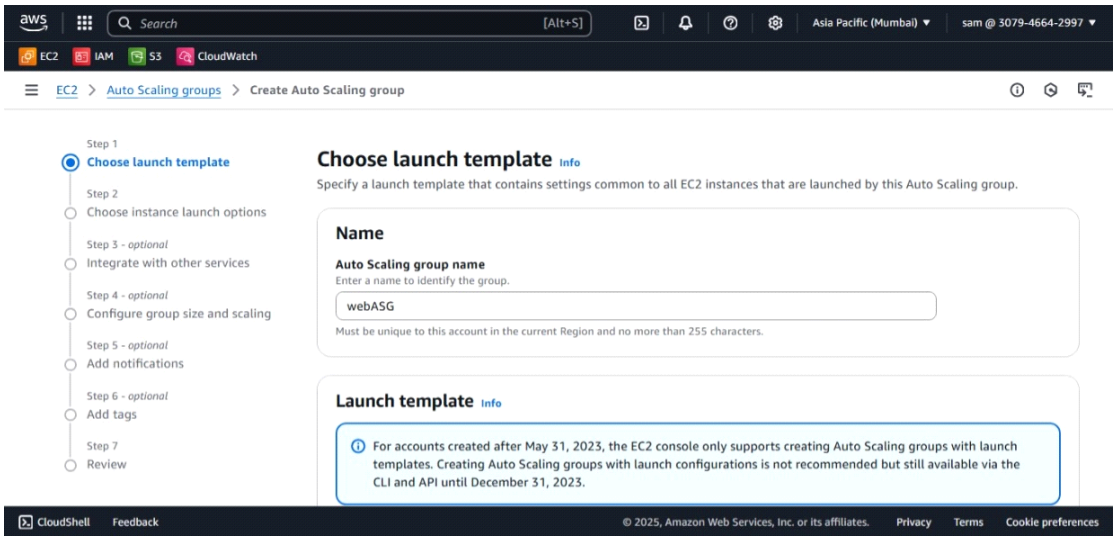
Then
Load balancer created successfully

Now we will create an Auto Scaling Group :-

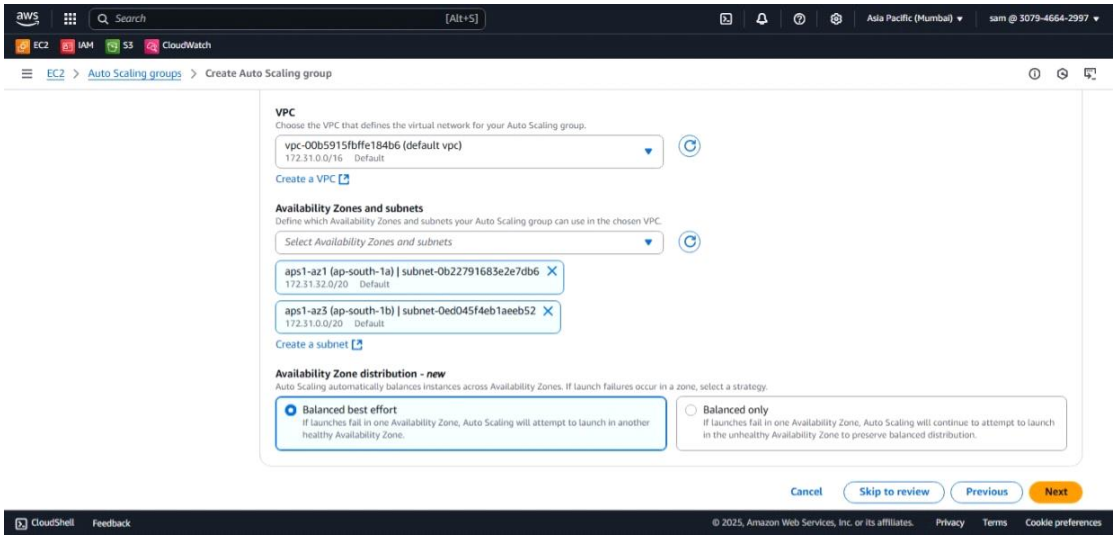
Go to **EC2** on left side scroll down till bottom there will be **Auto Scaling** below it is **Auto Scaling Group** click it .



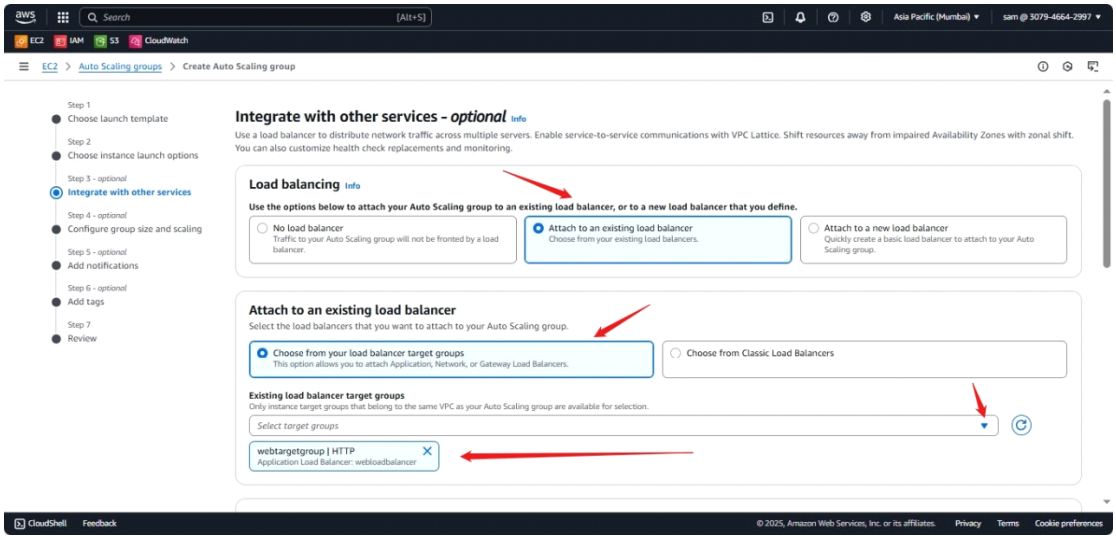
Then
Click on button **Create Auto Scaling Group**
Then
In **Auto Scaling Group name**
Name :- **webASG**
Then
In **launch template** click arrow then select our created **webserverTemplate**
Then click on **Next** button.



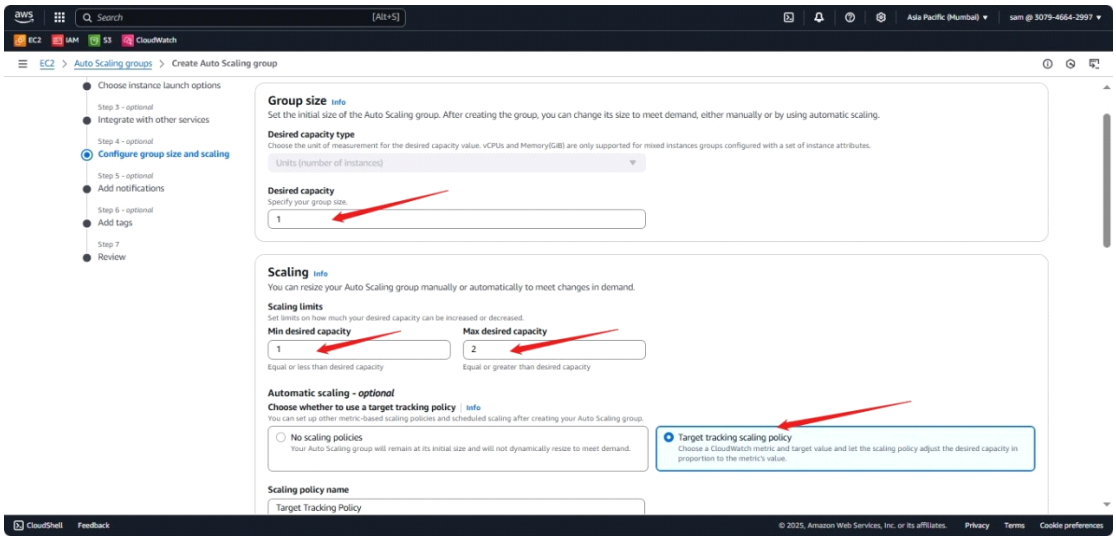
Then
In **Choose Instance launch option** at **Network** in their **VPC** select the default vpc then below it **Availability zone** select our selected zone of time load balancer i.e. **ap-south-1a & ap-south-1b**
Then
Click on **Next** button



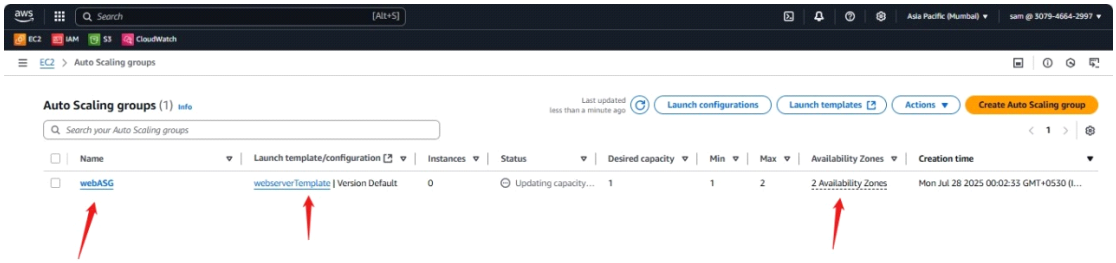
Then
In **Integrate with other services** at load balancing select the option 2nd **Attach to an existing load balancer**
Then In Attach to an existing load balancer in their at Existing load balancer target groups click on arrow & select our created target group (**webtargetgroup**).



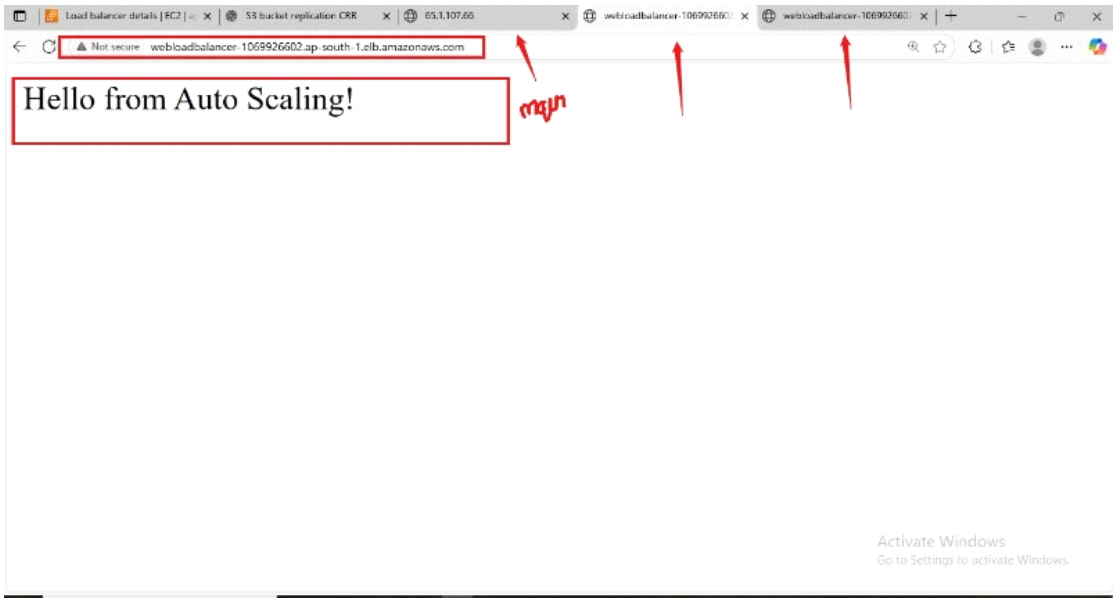
Then click on **Next** button
In **Configure Group size & scaling** at **Group size** below
Desired capacity:- 1 , **Min desired capacity:- 1** , **Max desired capacity:- 2** TThen
In **Automatic scaling** select the option **Target tracking scaling policy**



Then
In **Add notification** skip it & Click on **Next** button
Then
In **Tags** skip it & Click on **Next** button then in **Review** click on button **Create Auto Scaling Group**
you can see that the group created.



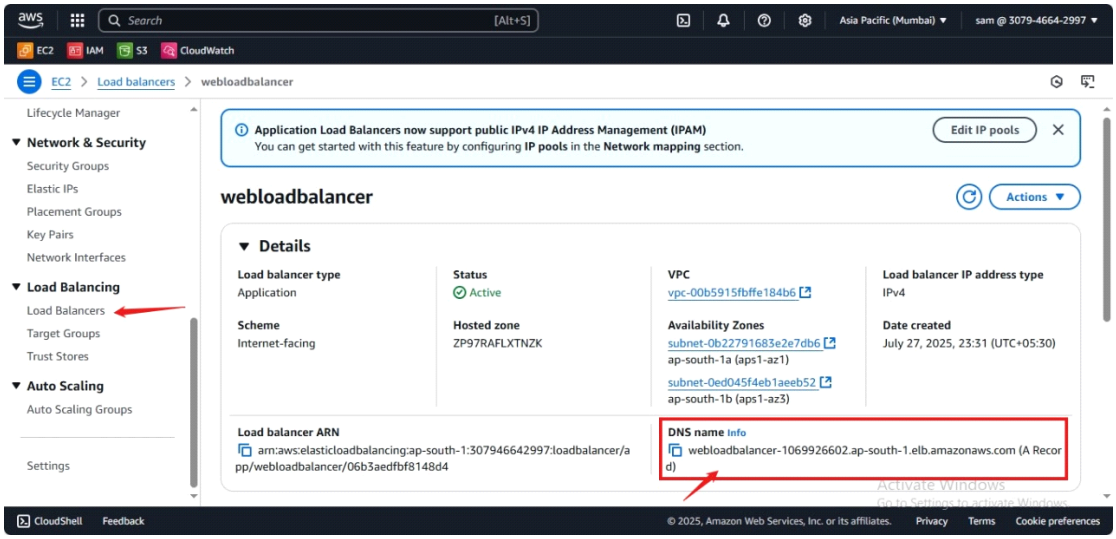
Then
Successfully done 👆



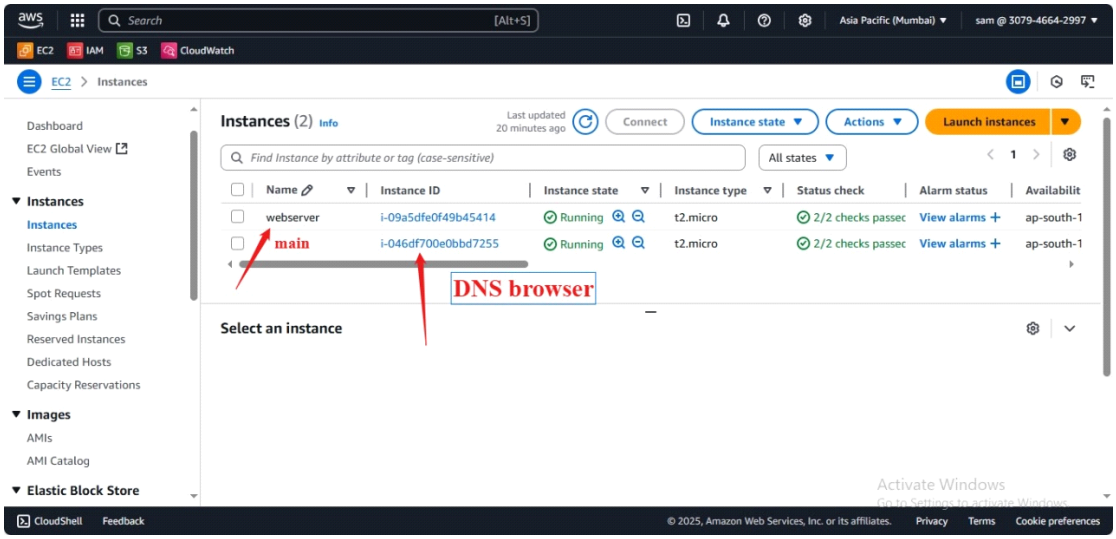
Output:-

*** To check the load balancer :-**

Go to **EC2** at left side scroll down till **Load balancer** then click created **Load Balancer** (**webloadbalancer**) then click on it , In Details see the DNS name Copy the **DNS link** and paste it to browser you can see on screen the file output.



&



Then

* **To check the Auto Scaling** :-

Go to running **instances** select it then, in instance state click it there select the option **terminated,** click it then the running & selected instances will be **deleted** .

Note :- If I delete the running instances then also the browser page run .

The website does not go down even when one server delete.

Auto scaling+ load balancer keep our application available.

To delete all instances which ASG (Auto Scaling Group)manage

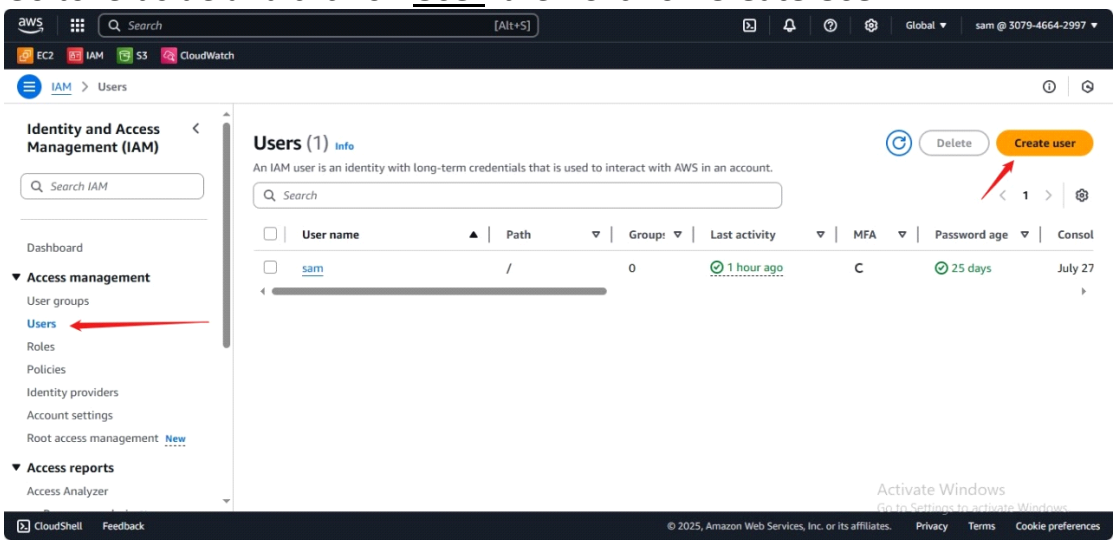
Go to auto scaling group click it then click on created webASG then go to action option select delete option and click it .

Do same for target group, load balancer, instances.

Task 4 :- ◆ IAM USER with CLI only access

Search IAM and enter
Then

Go to left side and click on **User** then Click on **Create User**

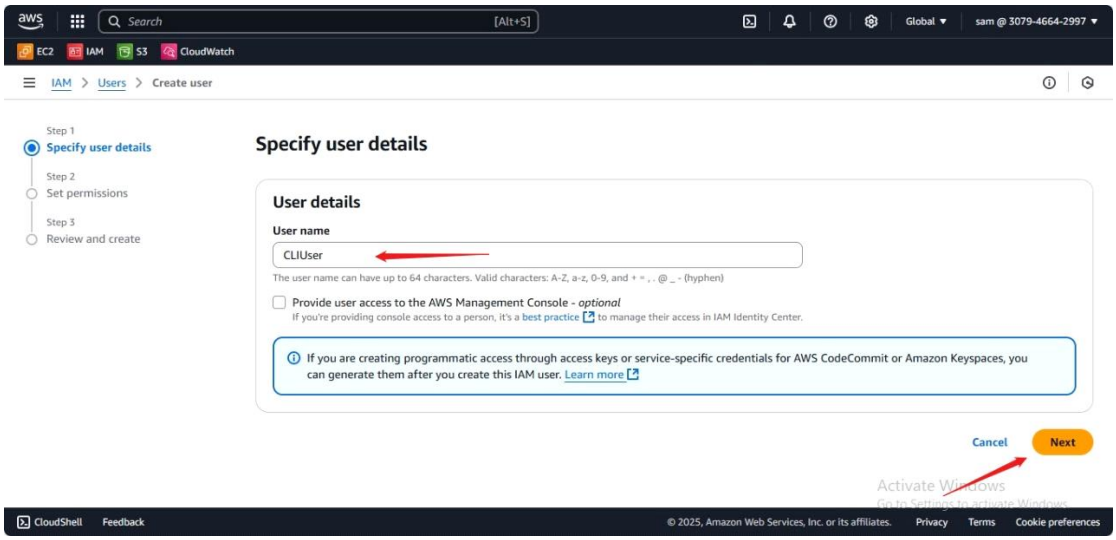


Then

In Specify user details in user details

Name :- **CLIUser**

Then click on **Next** button



Then

In Set permission

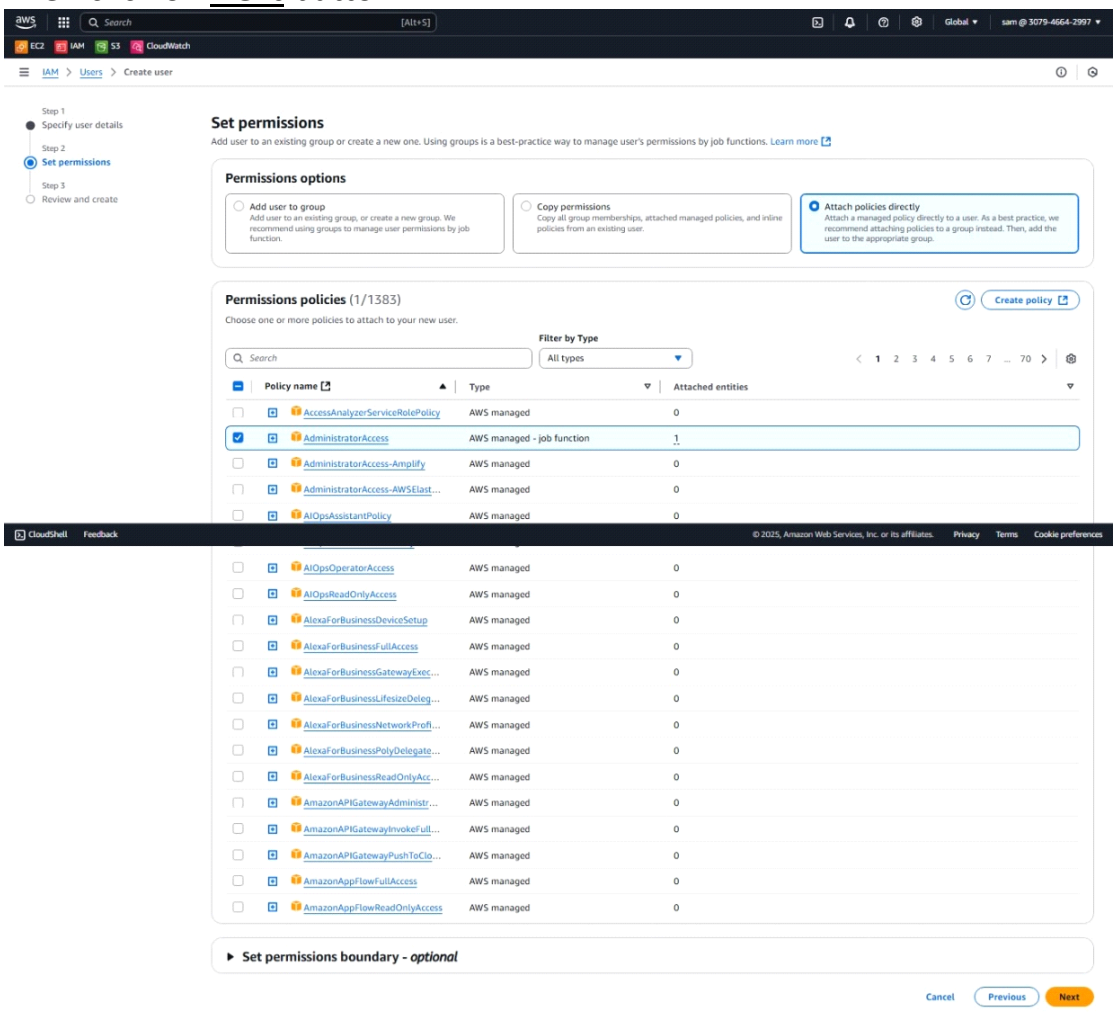
At permission option select 3rd option **Attach policies directly**

Then

In **Permission policies**

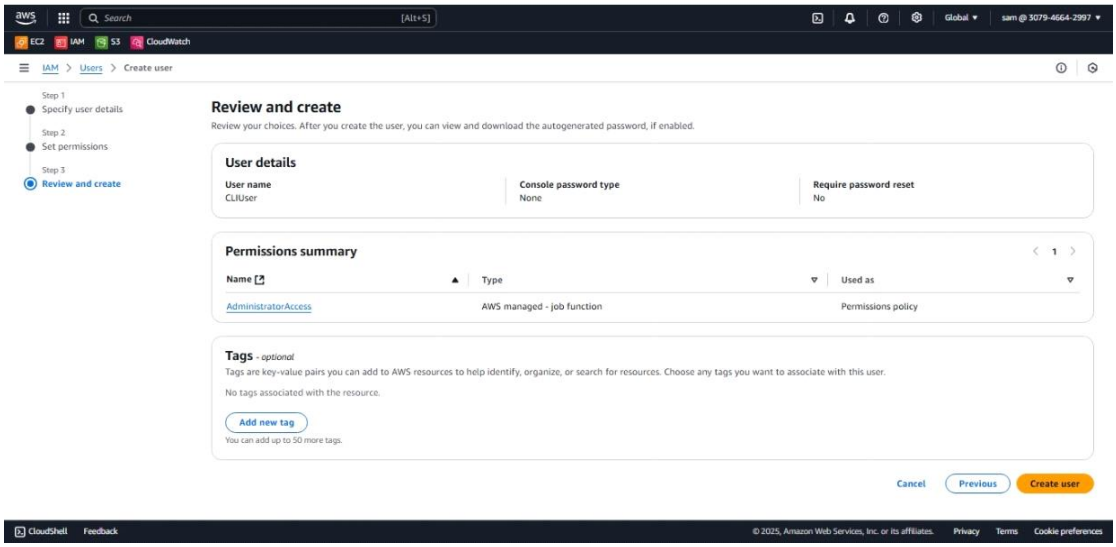
Select the option of AdministratorAccess

Then click on **Next** button

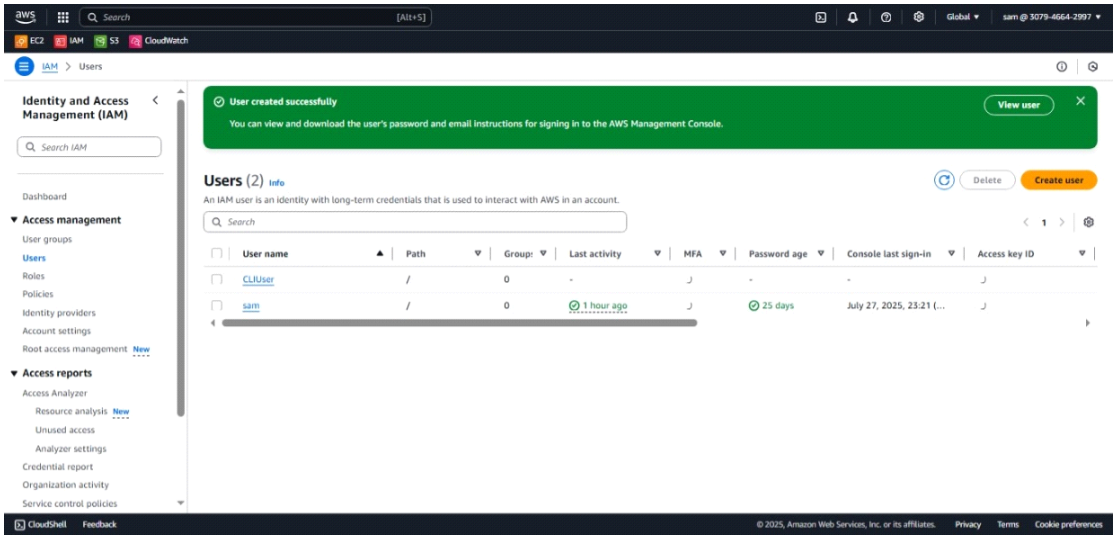


Then

In Review & create click the button at the bottom of Create user



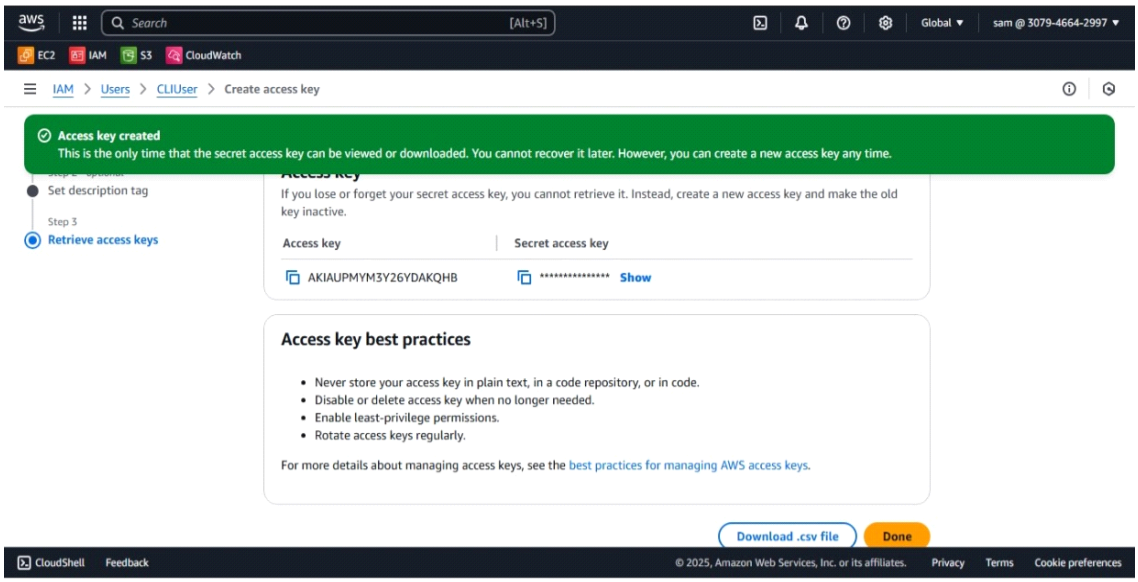
Then



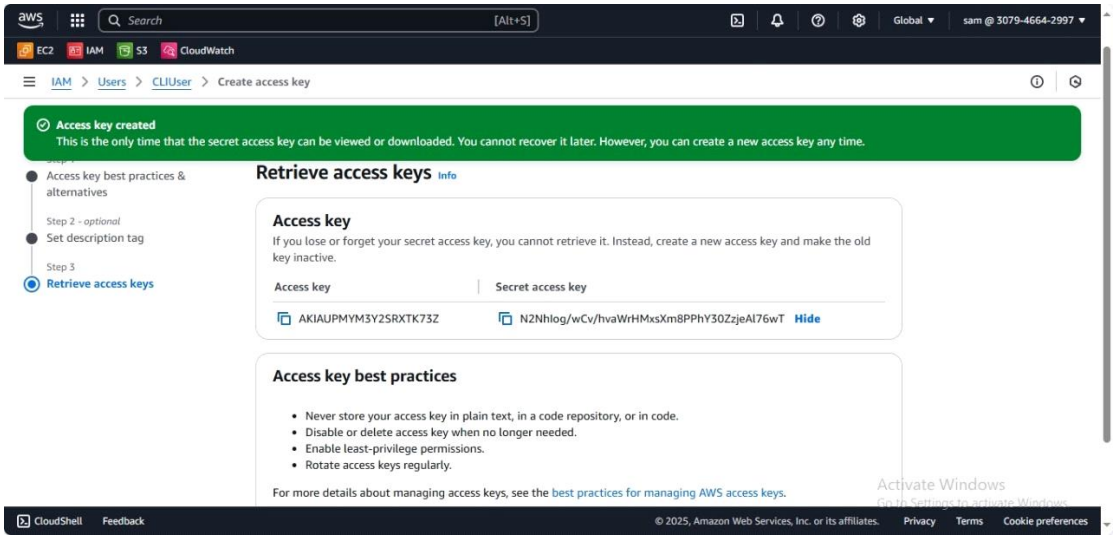
Then
Click on created user (**CLIUser**)
Then go to security credential option click it then scroll down till access key

Then click on Access key then create access key

In use case select CLI 1st option
Then at bottom select the box of understand
Then click next button
Then at set description tag skip it & click on button Create access key



Above key deleted so make new key
New access key created

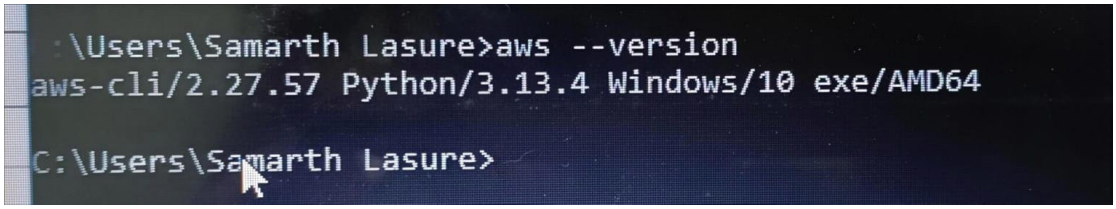


Then
Download the **.csv** file
Then click on **Done** button

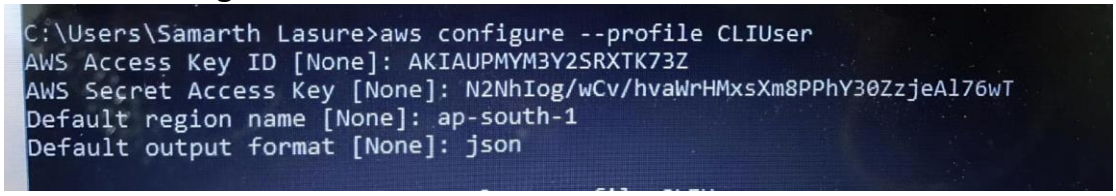
The secret key is one time show means one time only it will display after that no.

Go to cmd and open it
Then
Write command :-

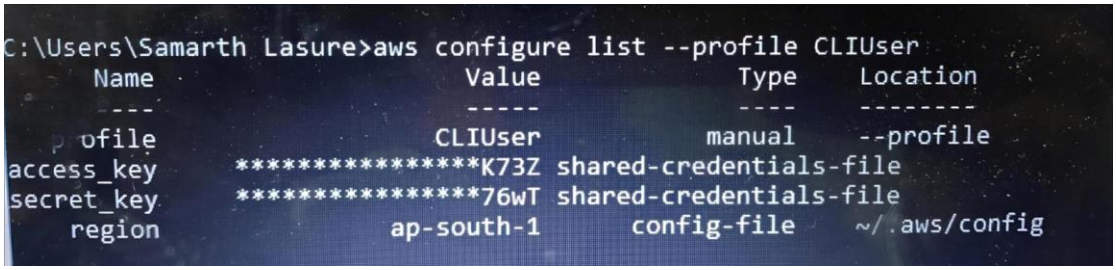
aws --version



Then
aws configure --profile CLIUser
This we will login in CLIUser



Then
aws configure list --profile CLIUser
this will list all profile details like access key, secret key, region, etc.



Now we successfully completed the 4th task :-
IAM USER using CLI access

---------- THANKYOU ----------