Module - 1 AWS Cloud

Assignment - 1

Date of submission -

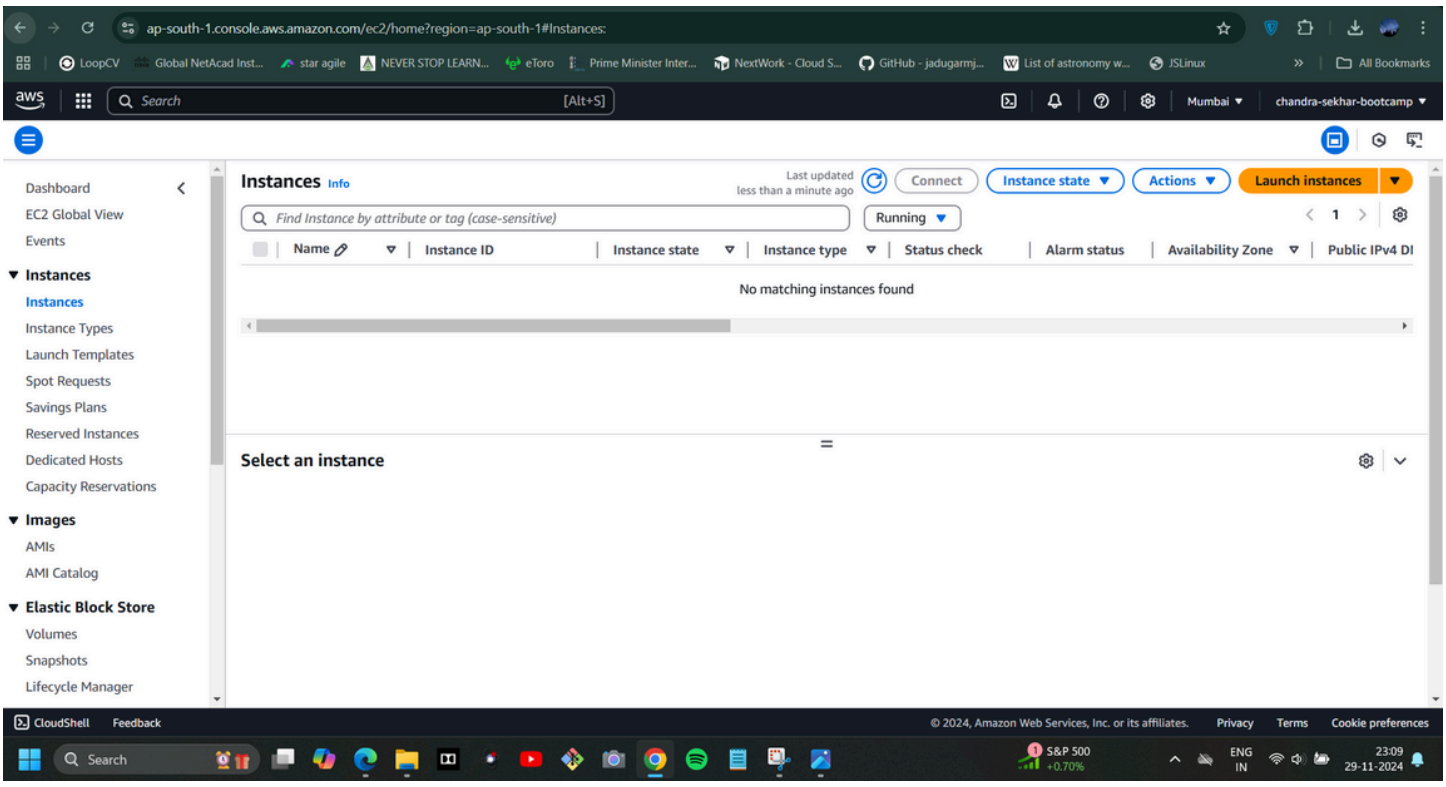
Submitted by - Chandra Sekhar

L1 -

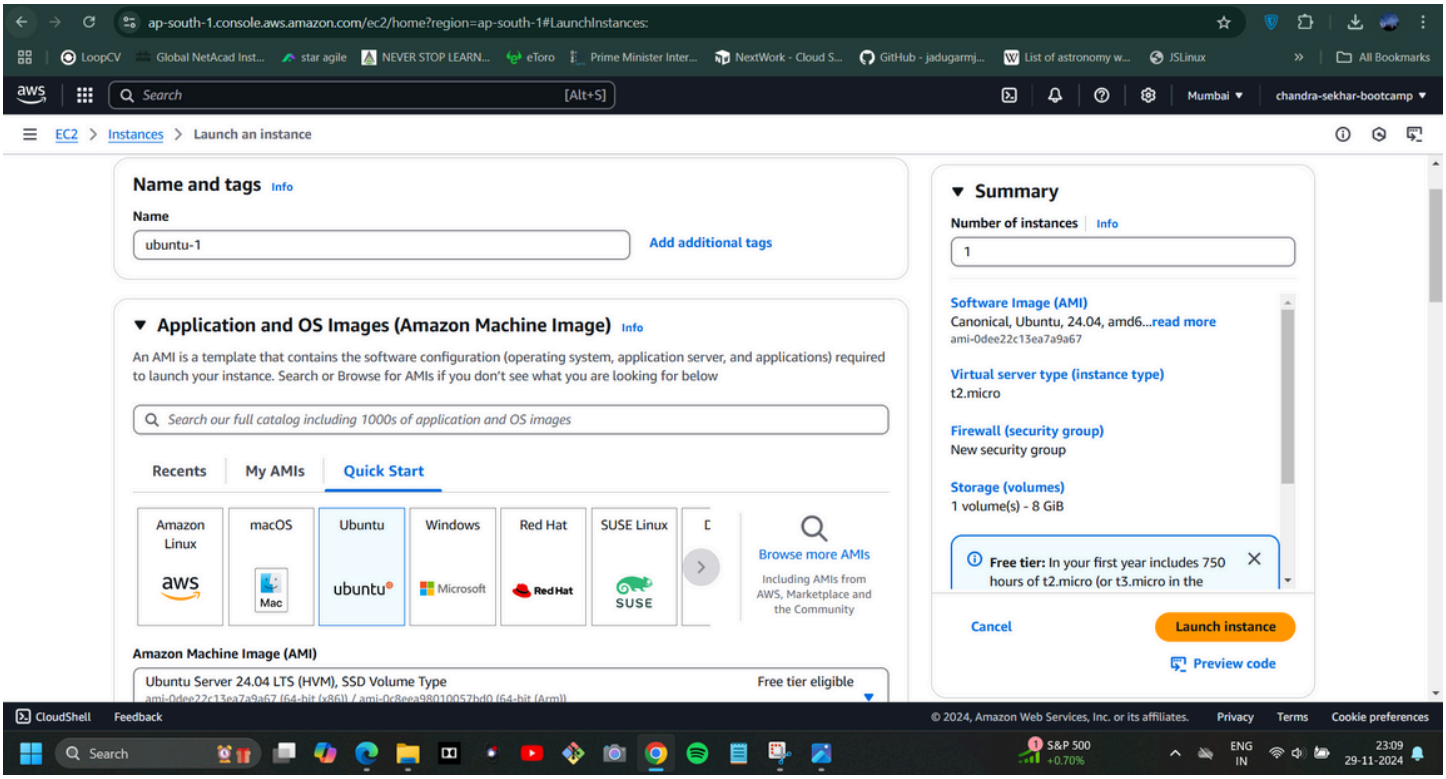
Demonstrate the AWS EC2 Ubuntu Instance Creation steps and connect to EC2 Instance using Mobaxterm/putty agent

Step - 1

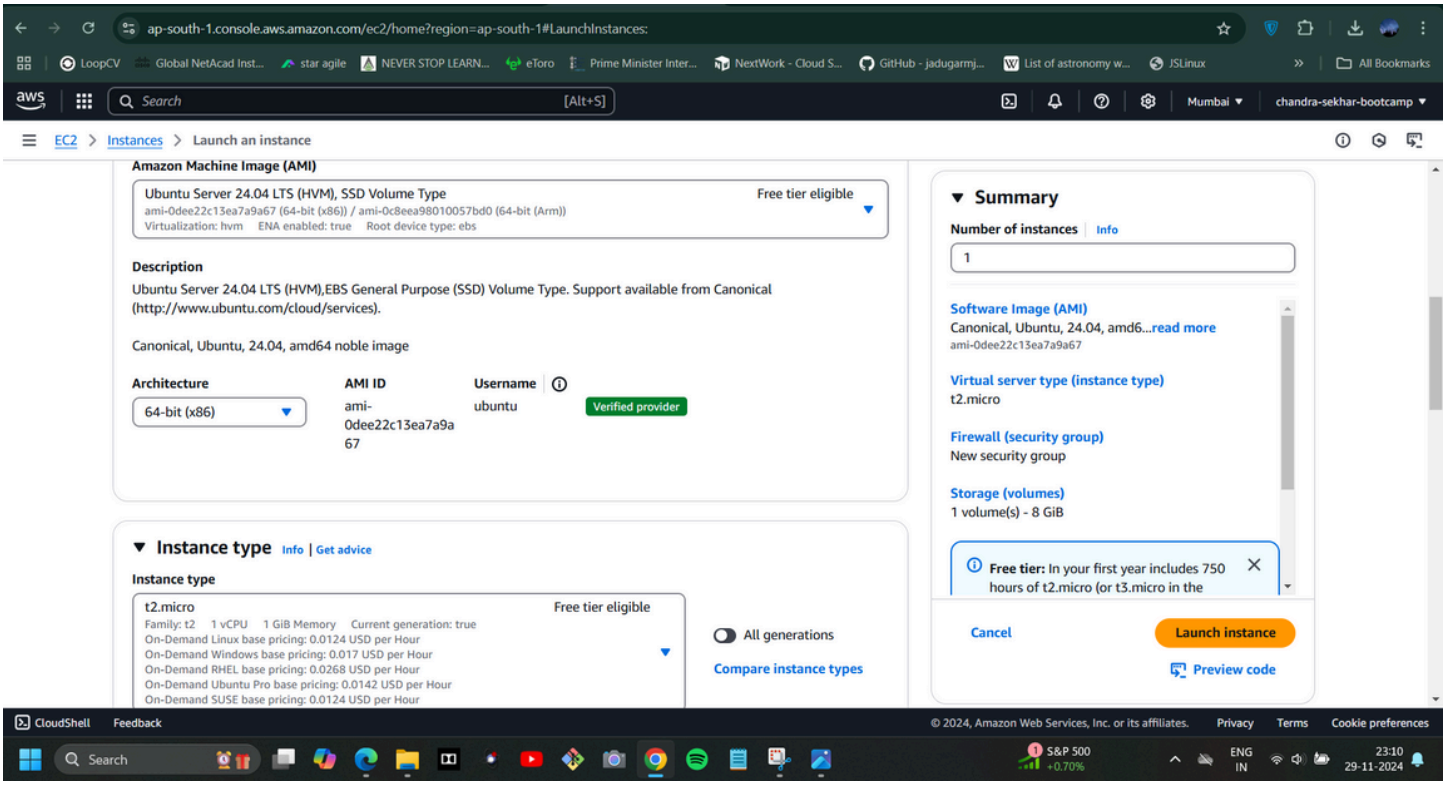
creating ubuntu EC2 instance(sever)



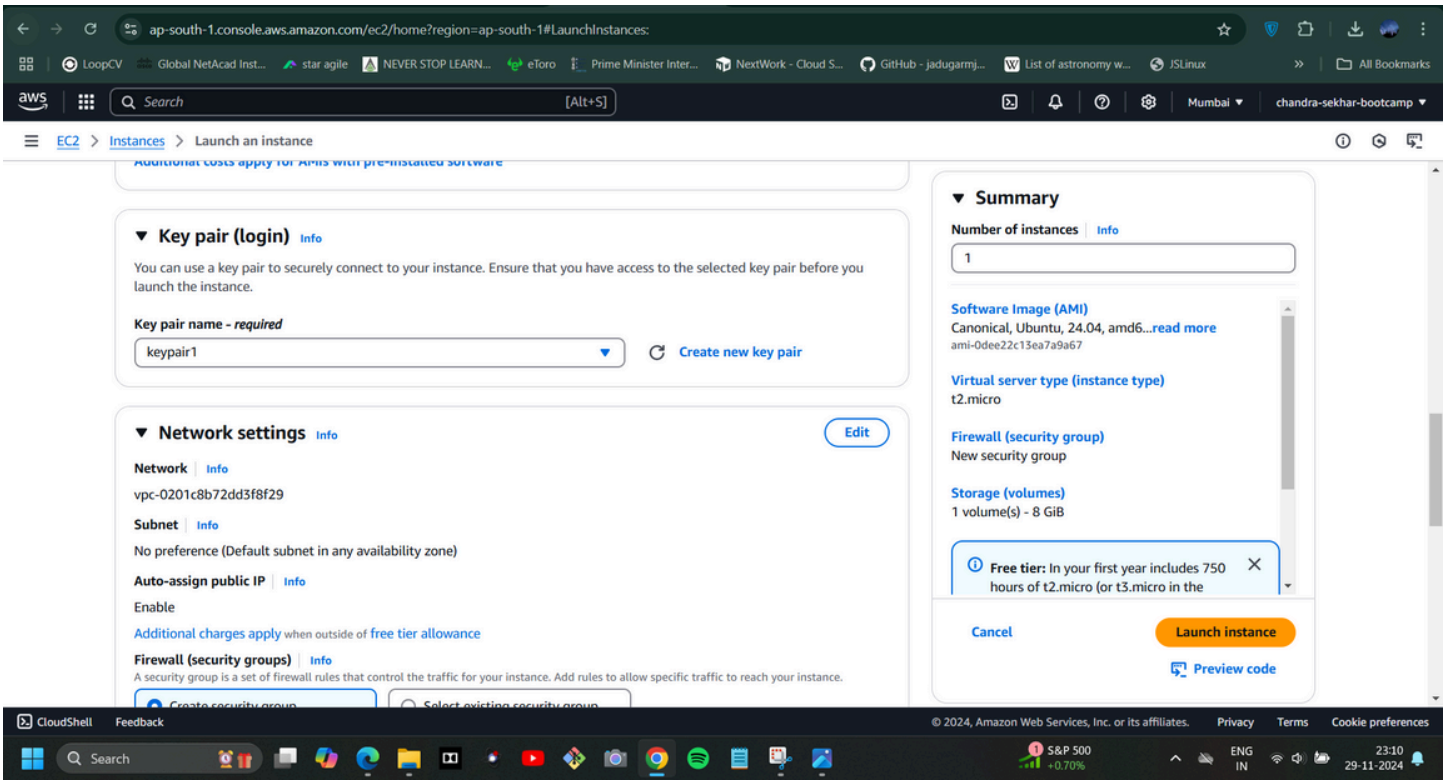
naming the instance and selecting the operating system as ubuntu



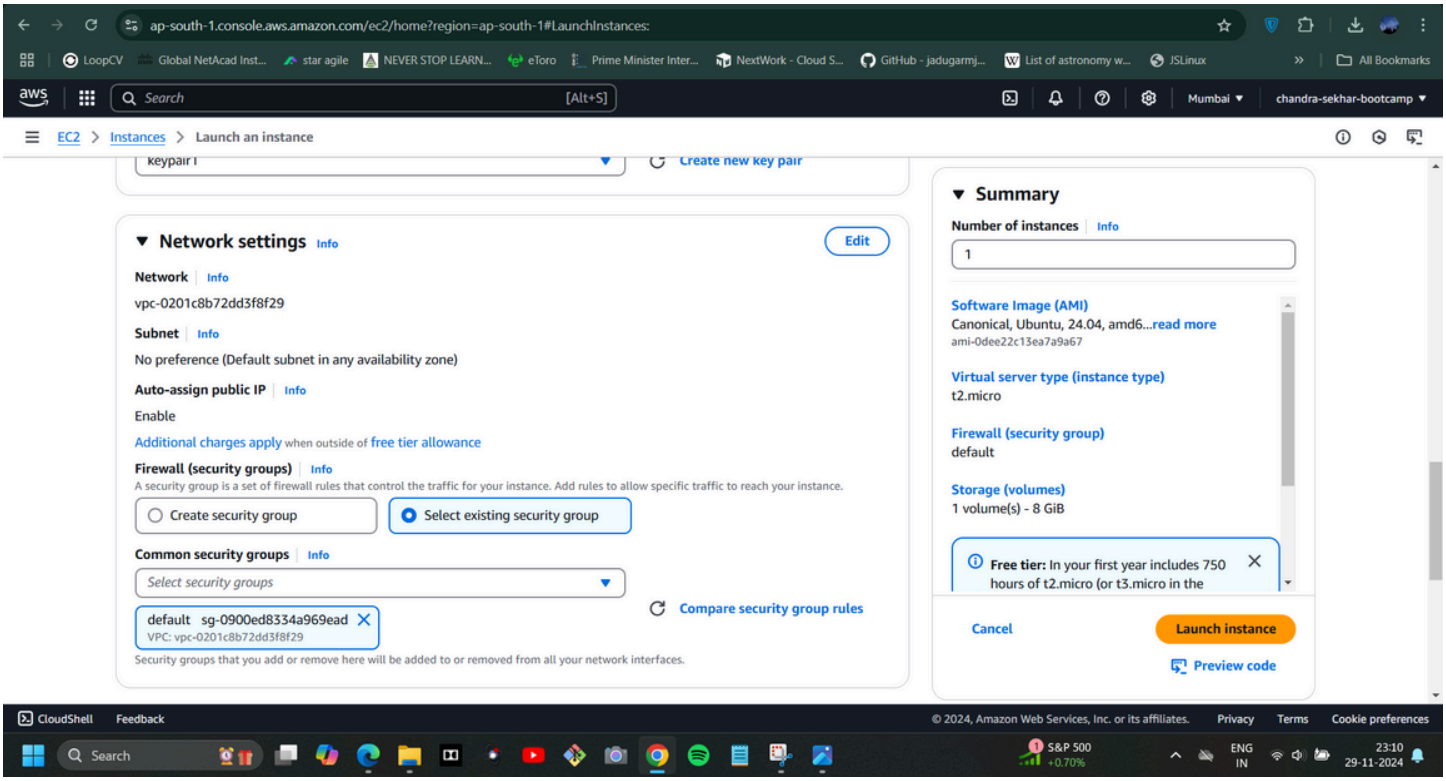
selecting the t2 micro cpu



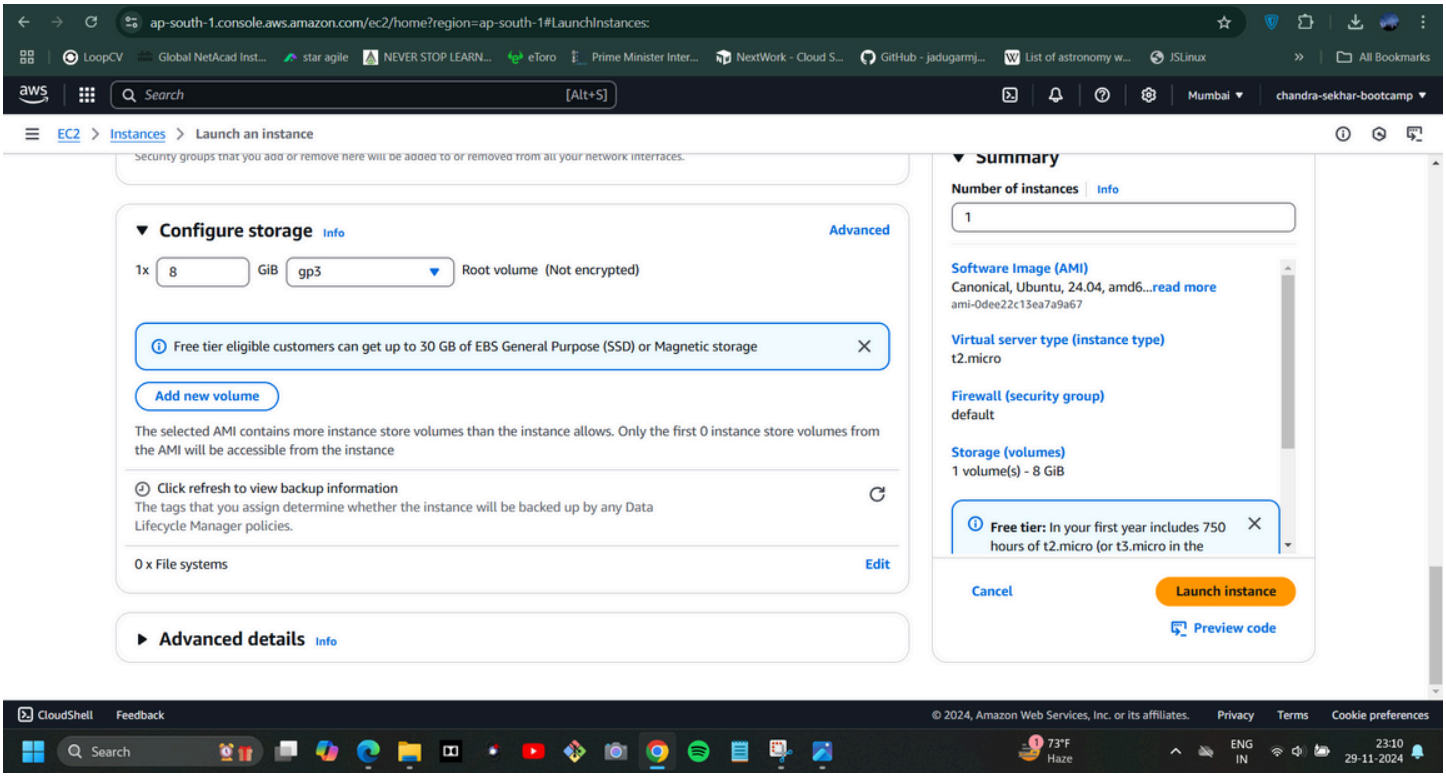
selecting the key-pair

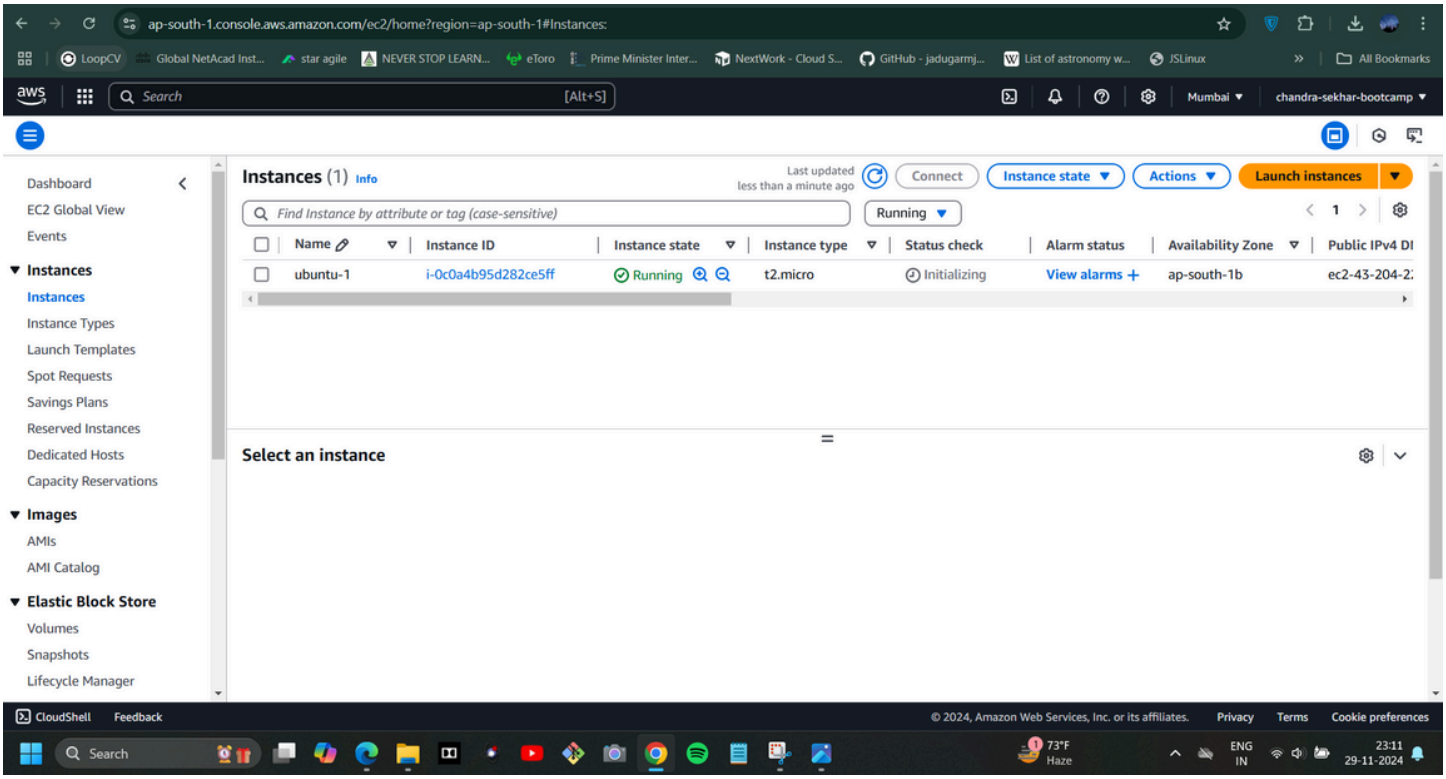


selecting the securty group as default

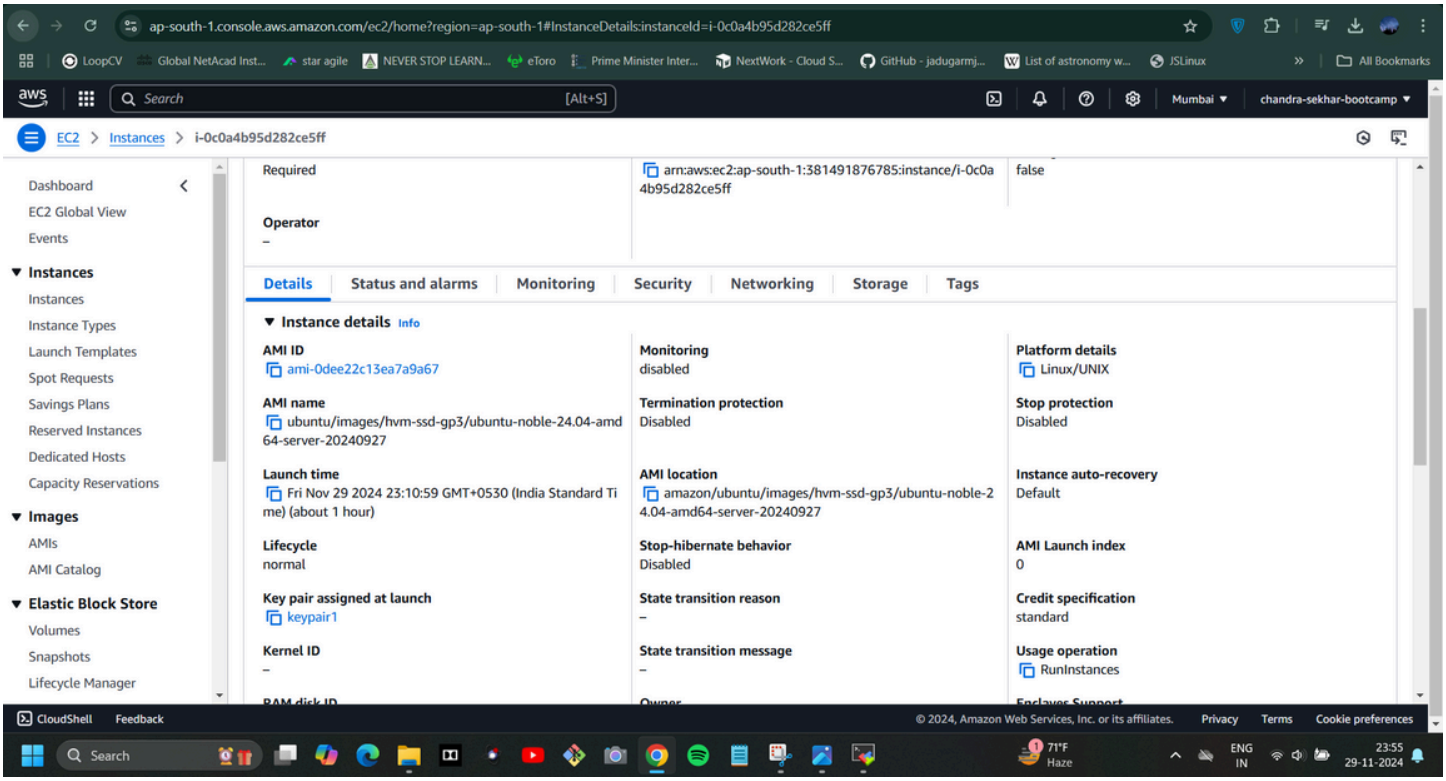


launching the instance

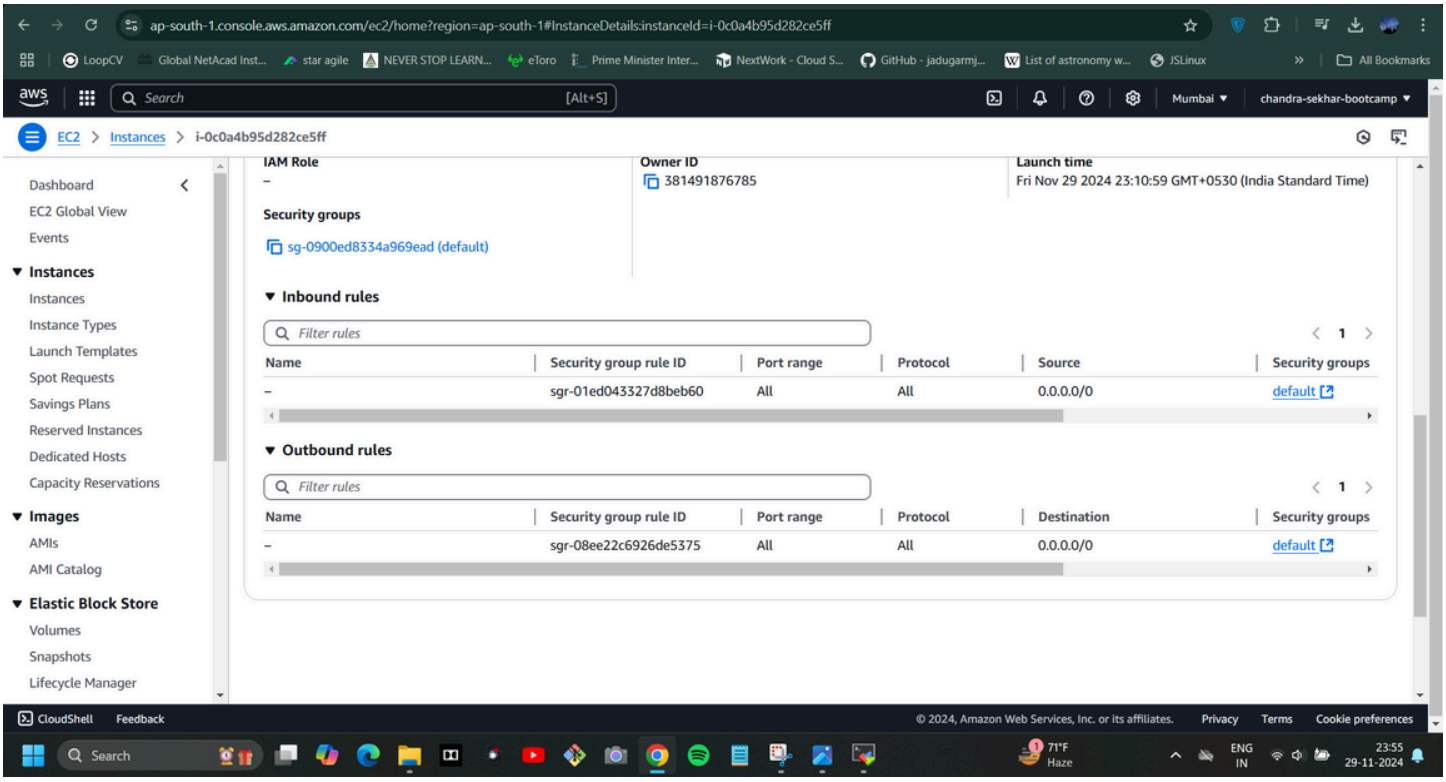




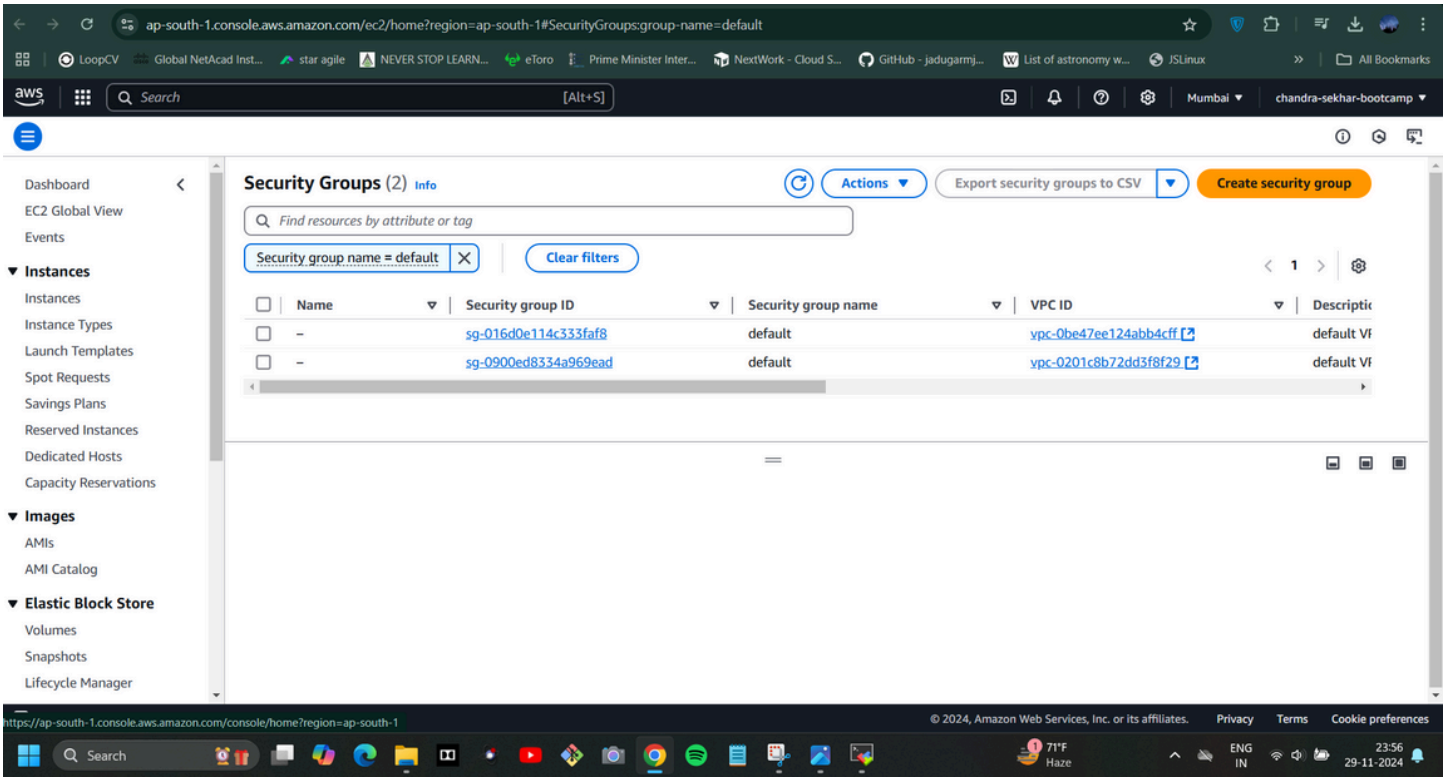
In the instance select security group and edit the inbound rules to allow traffic from everywhere.



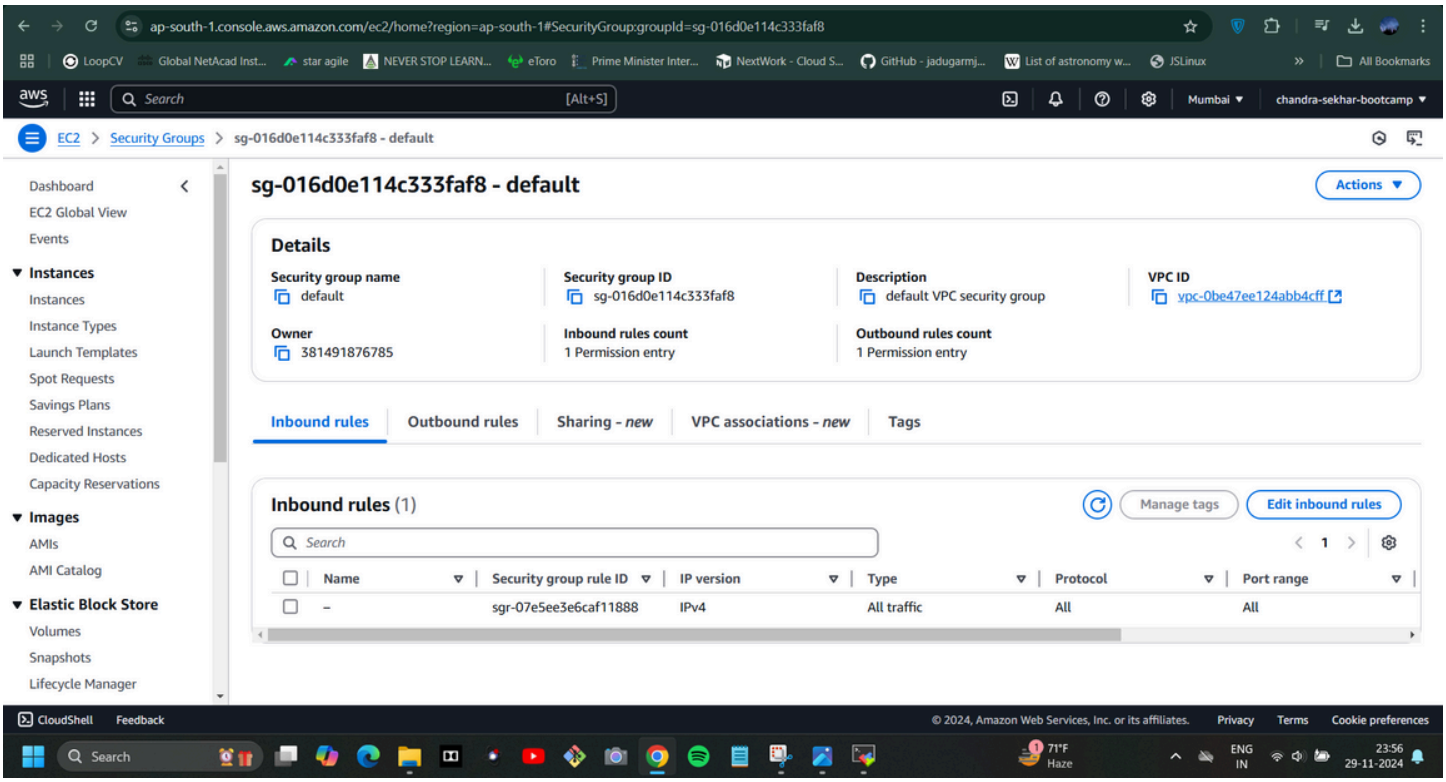
select inbound rules



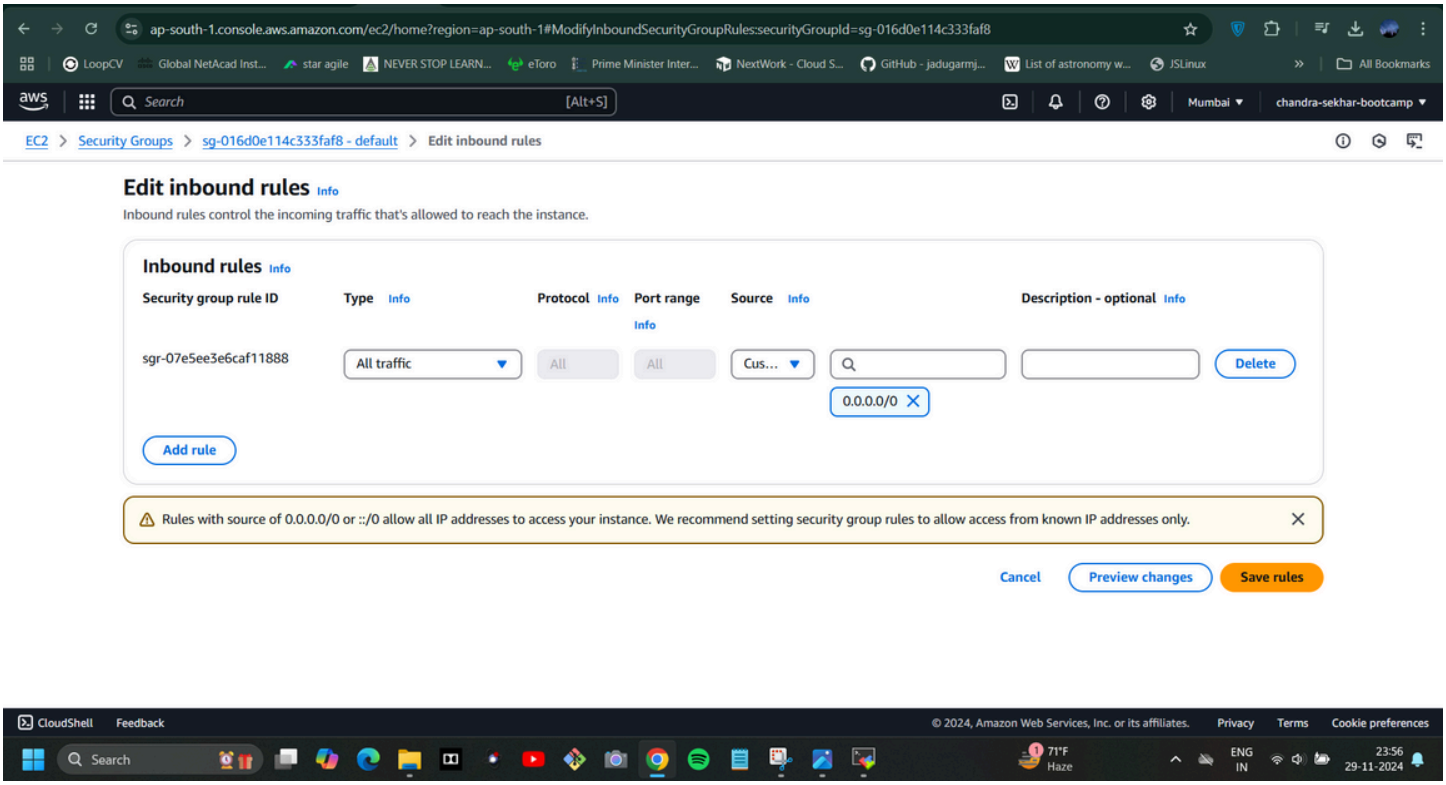
select the first one



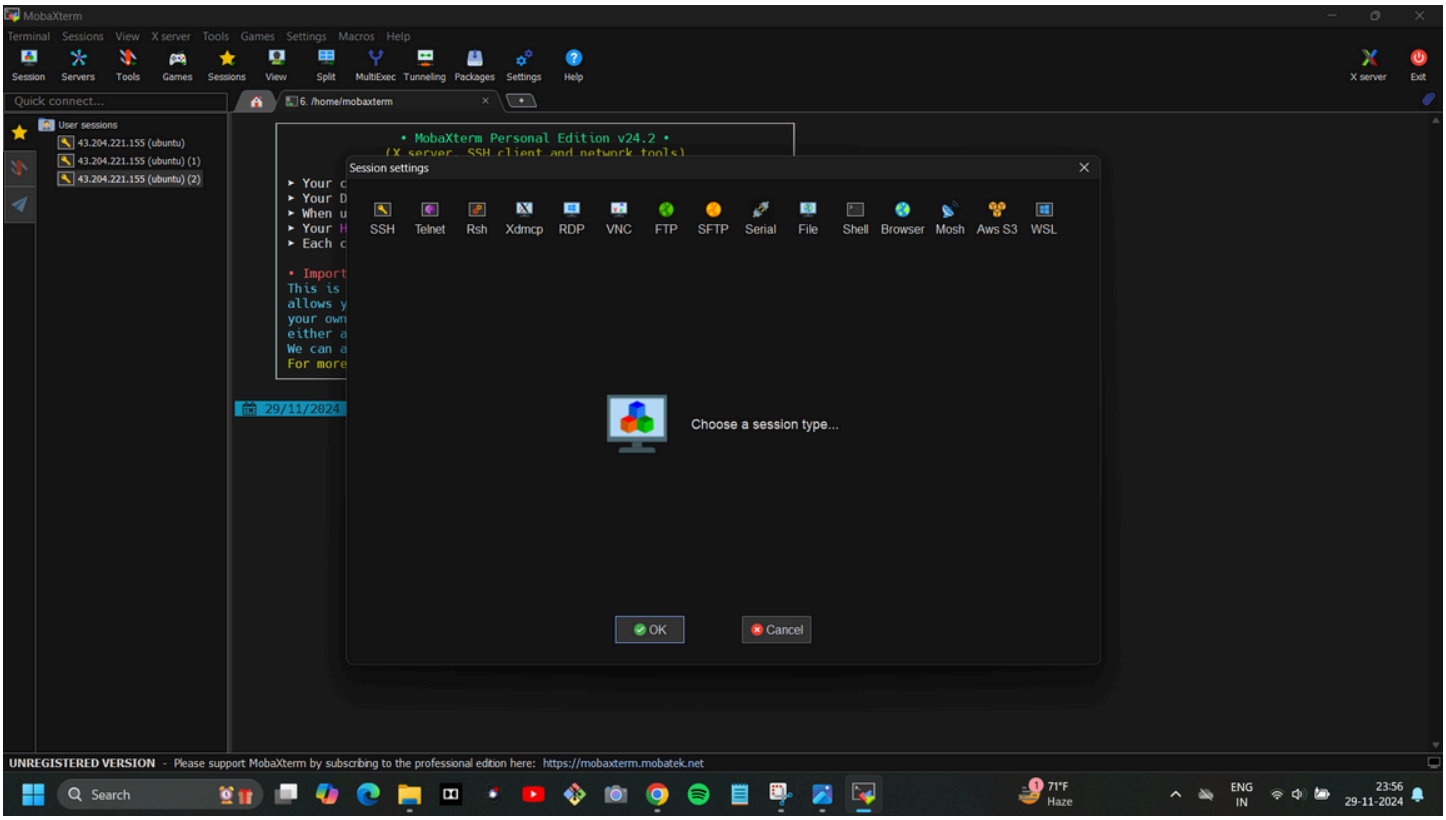
select edit inbound rules



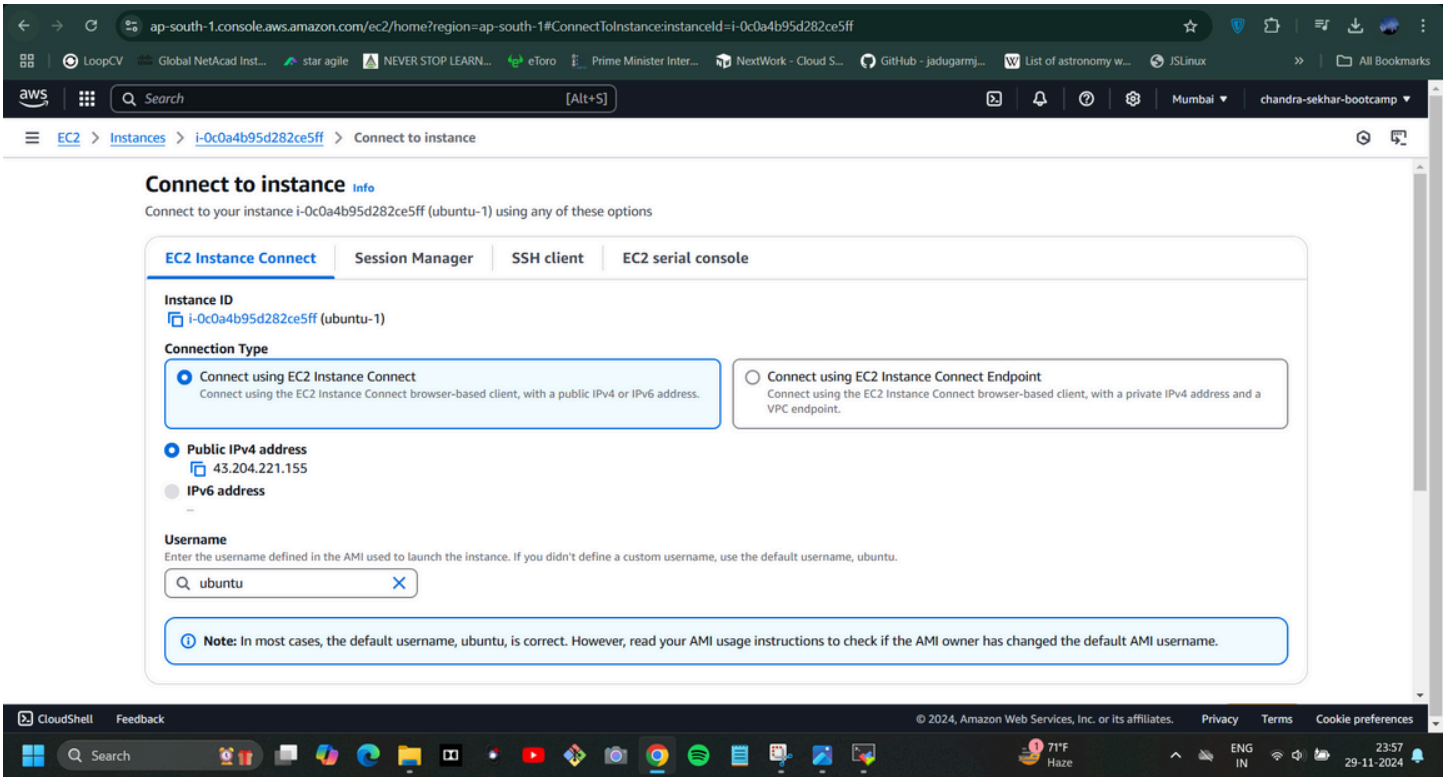
here we need to select Type - All trafiic(to allow all the traffic) and sourse - custom ipv4



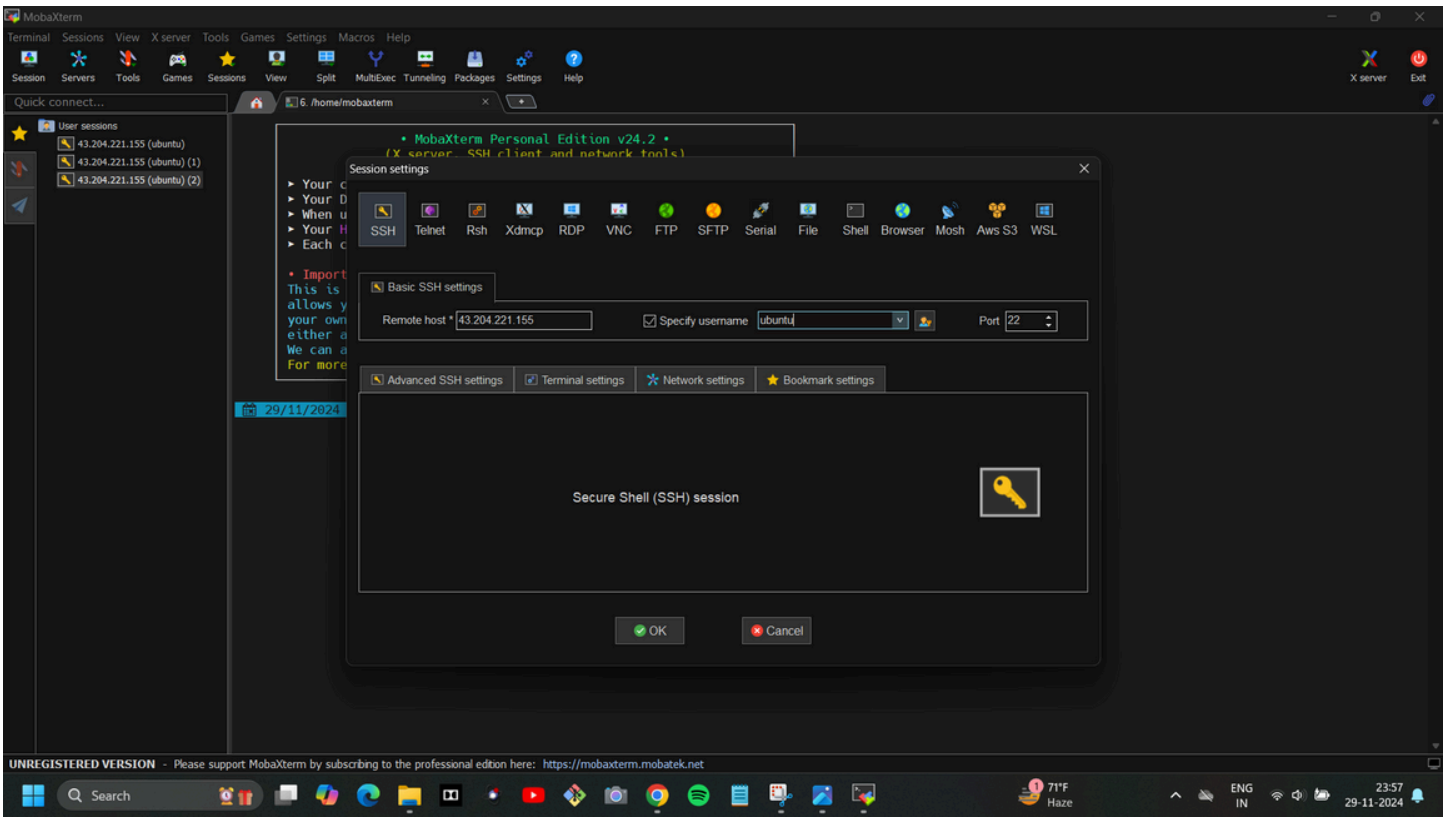
now open mobaXterm and select sessions then select ssh client to connet



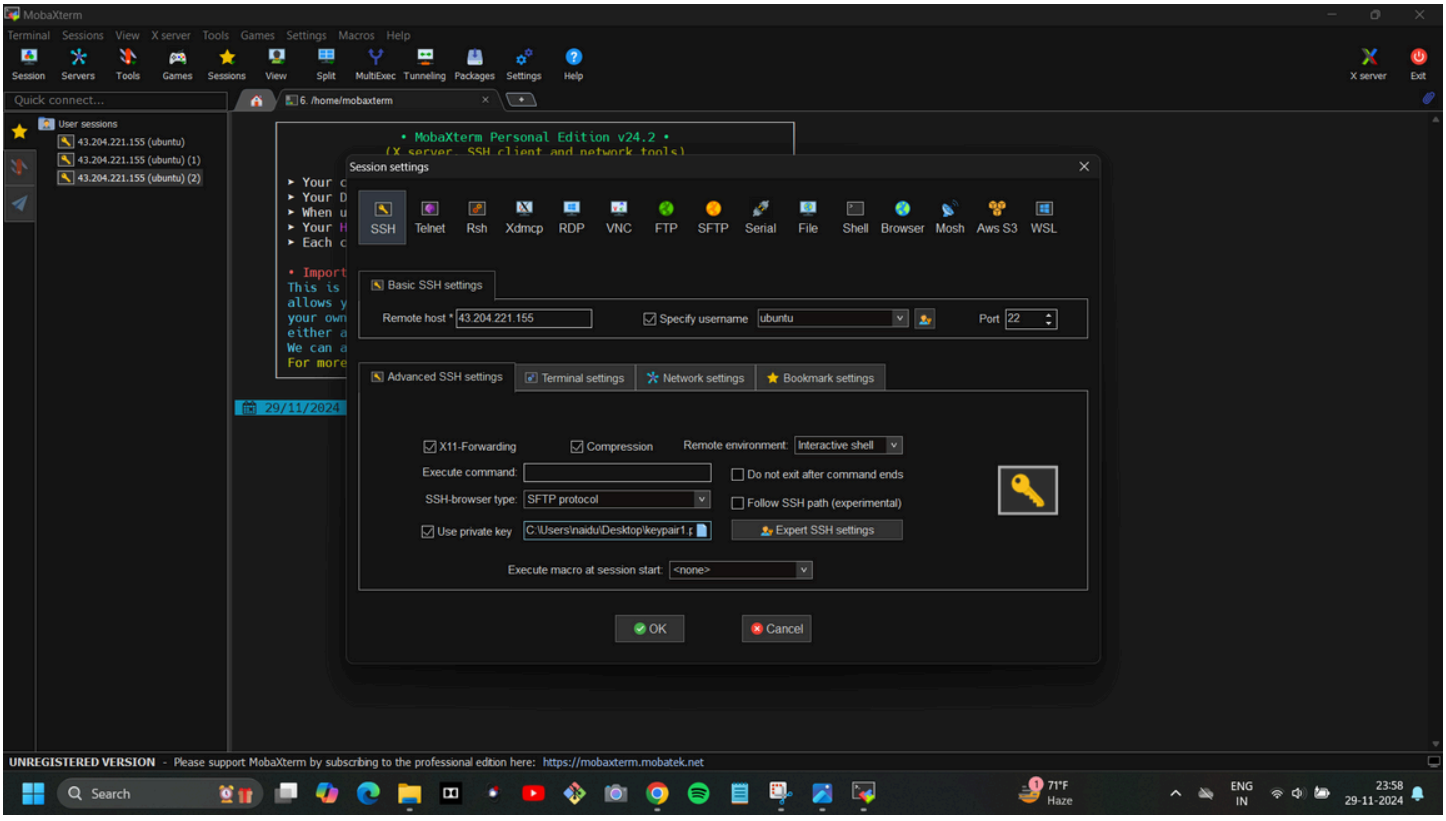
since we need public ip address and username to connect from mobaxterm we copy them from here



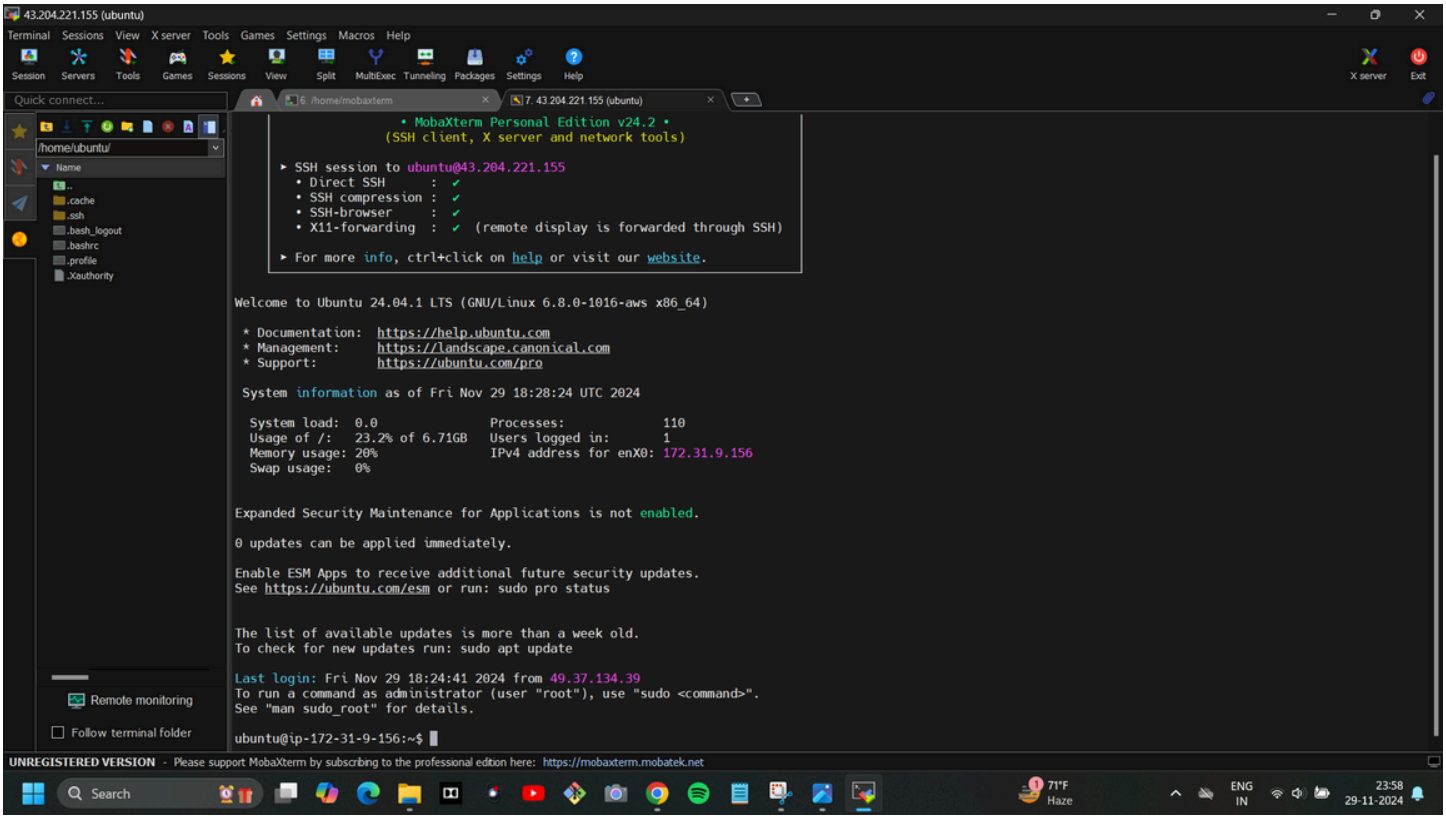
paste public ip adress at remote host and username



select the private key



here’s the output we dont need to any commands to connect in mobaxterm

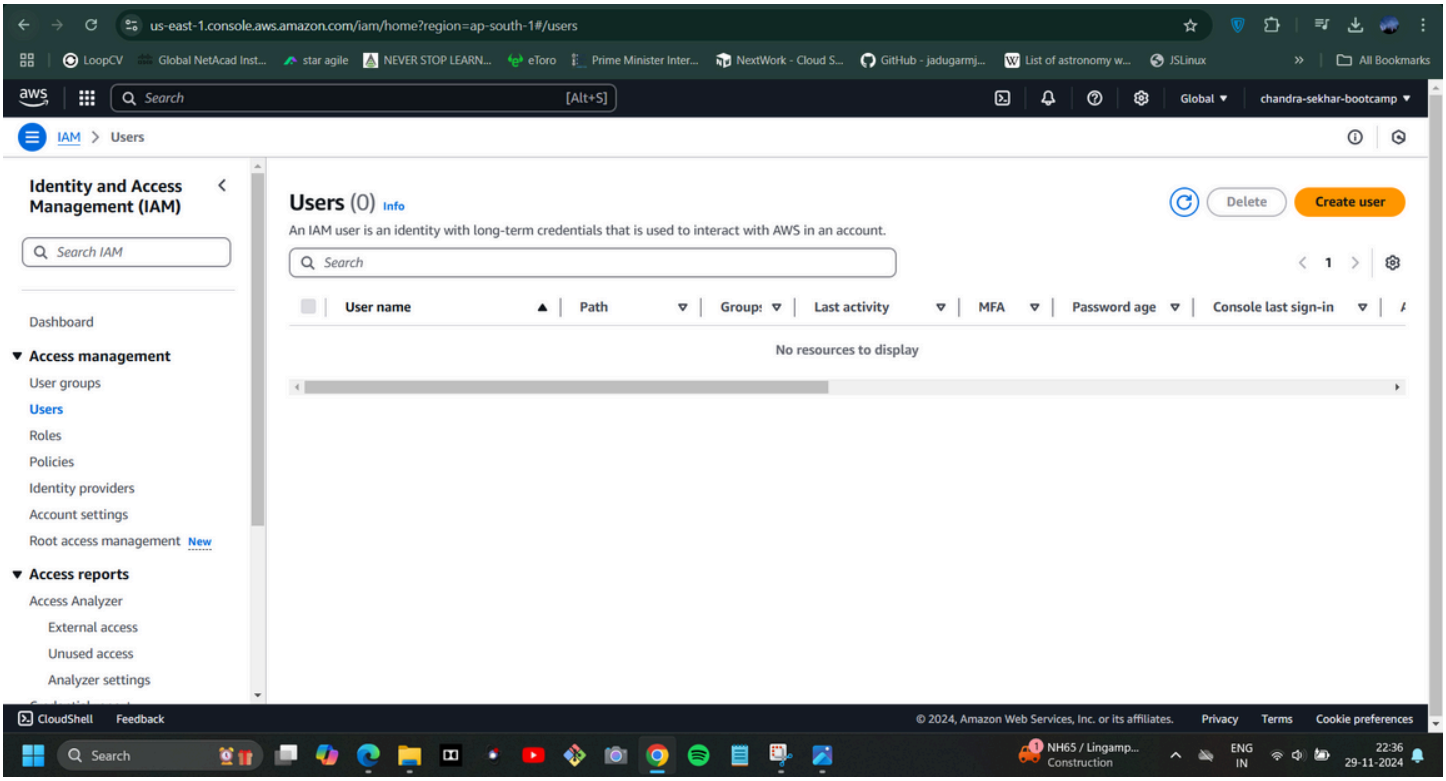


L2 -

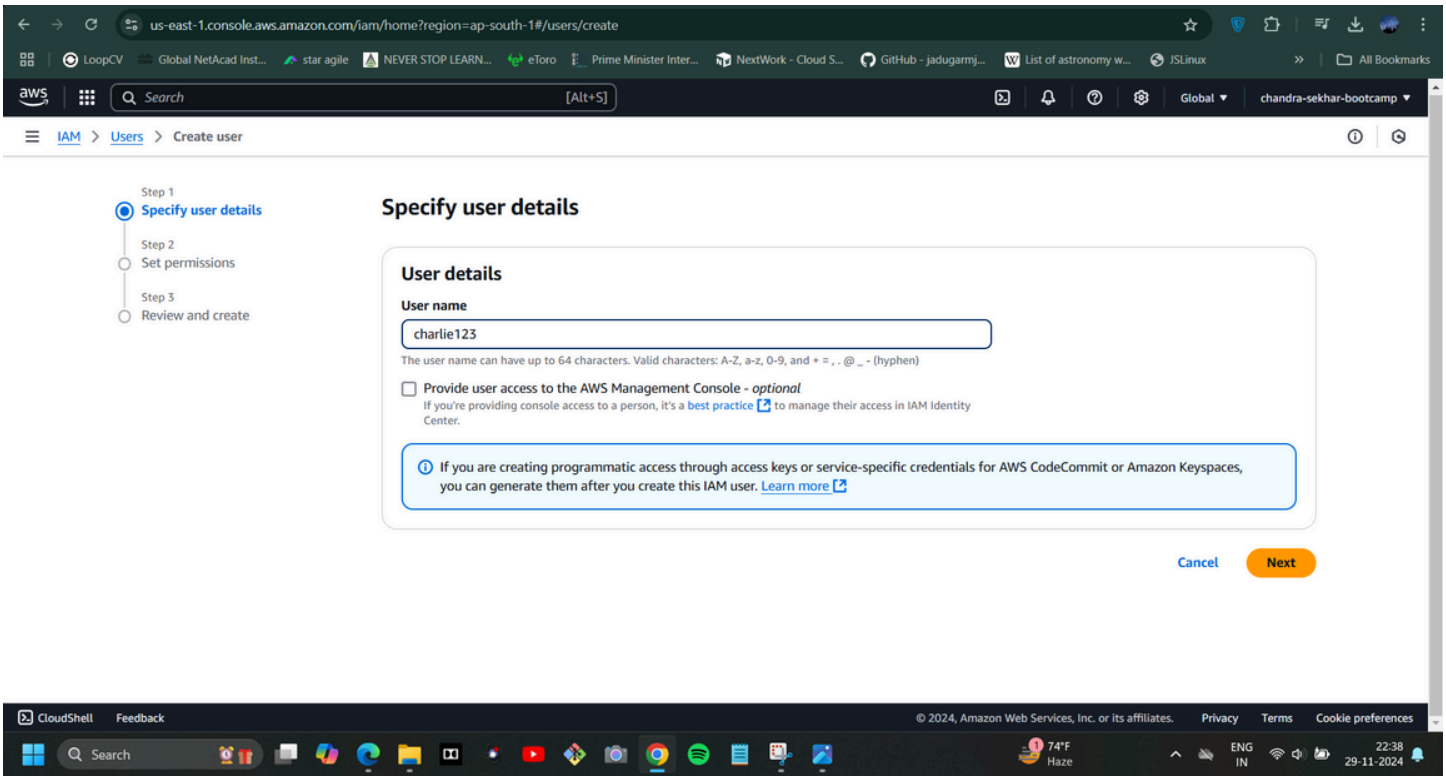
Login to AWS Console and Create IAM User, Role, and Group.

Step - 1

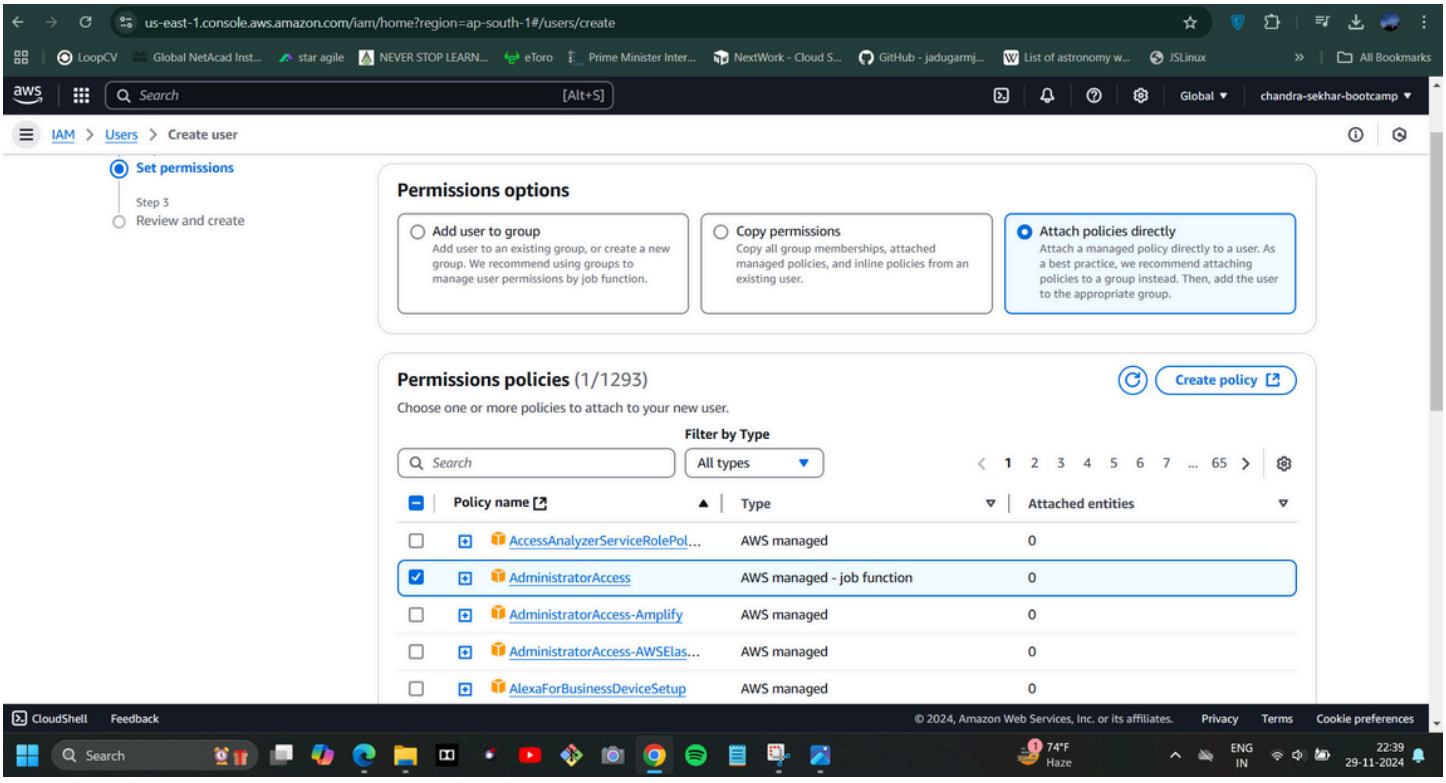
create a IAM user

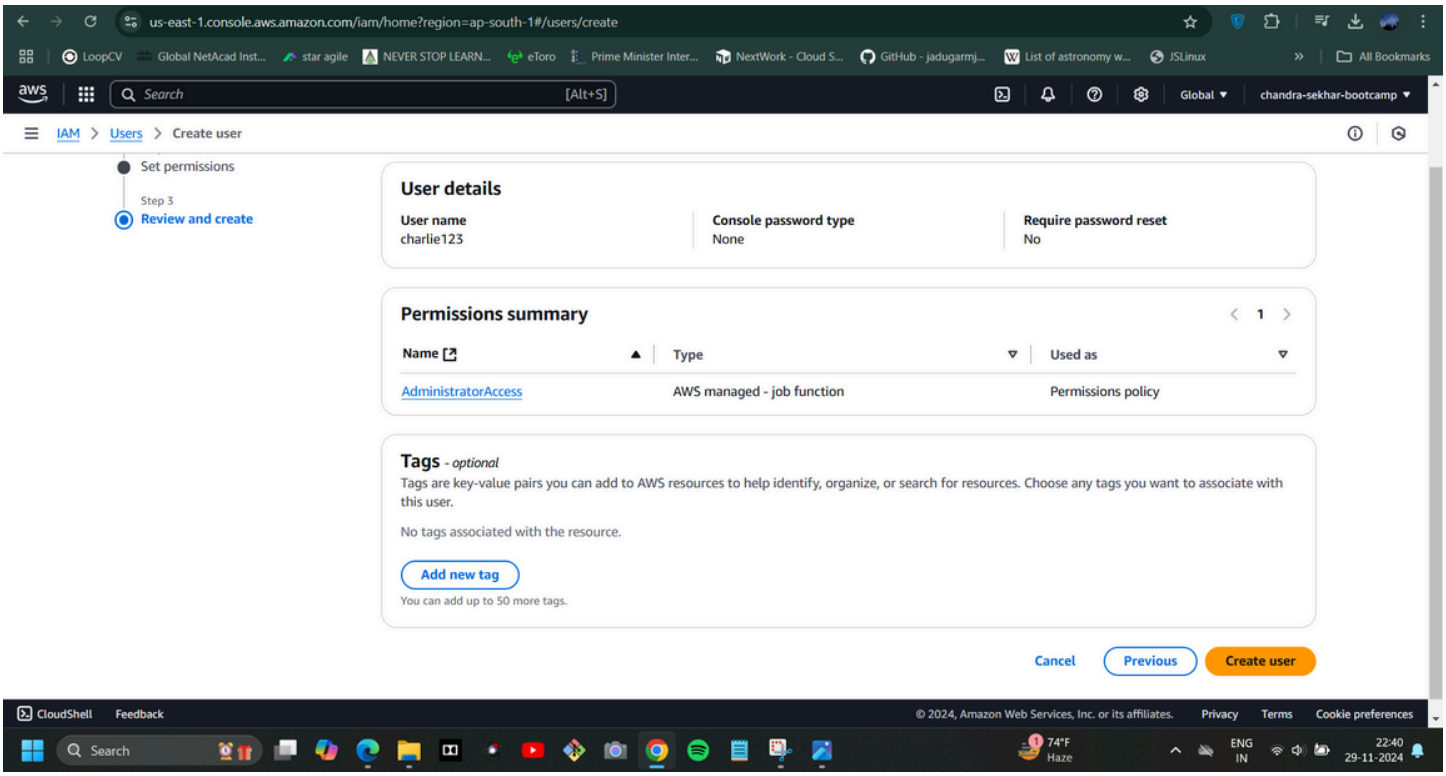


giving the user name

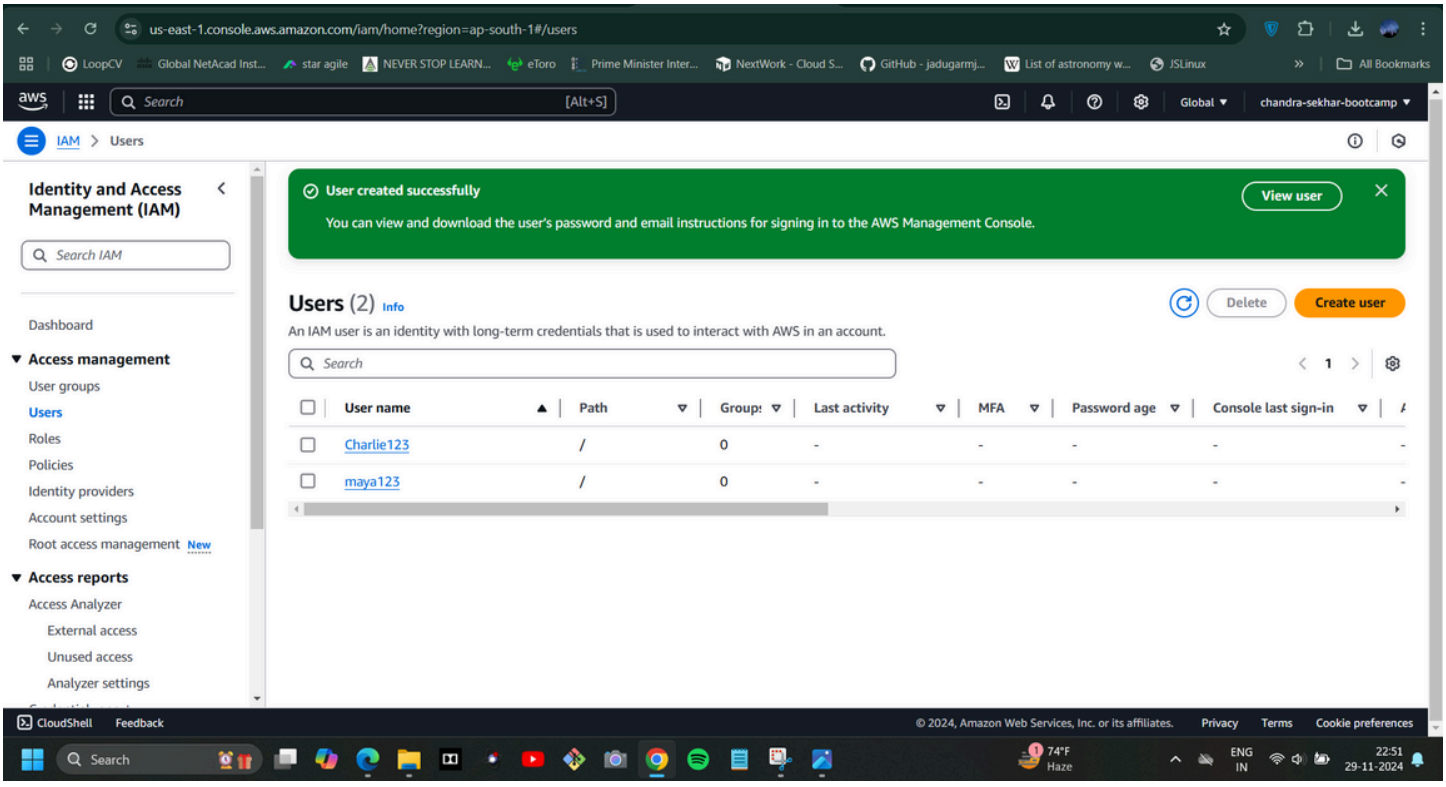


Giving Administrator acess



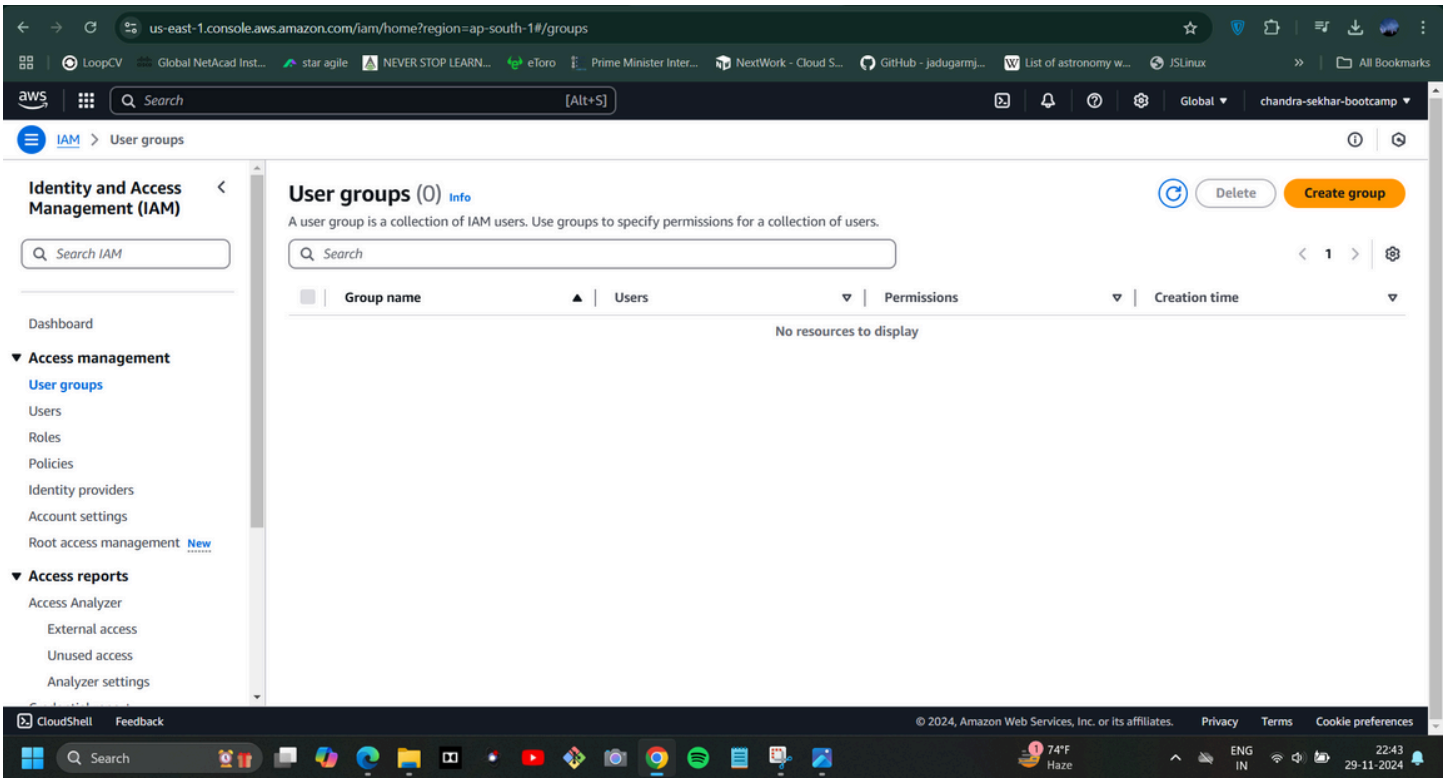


Successfully created the user

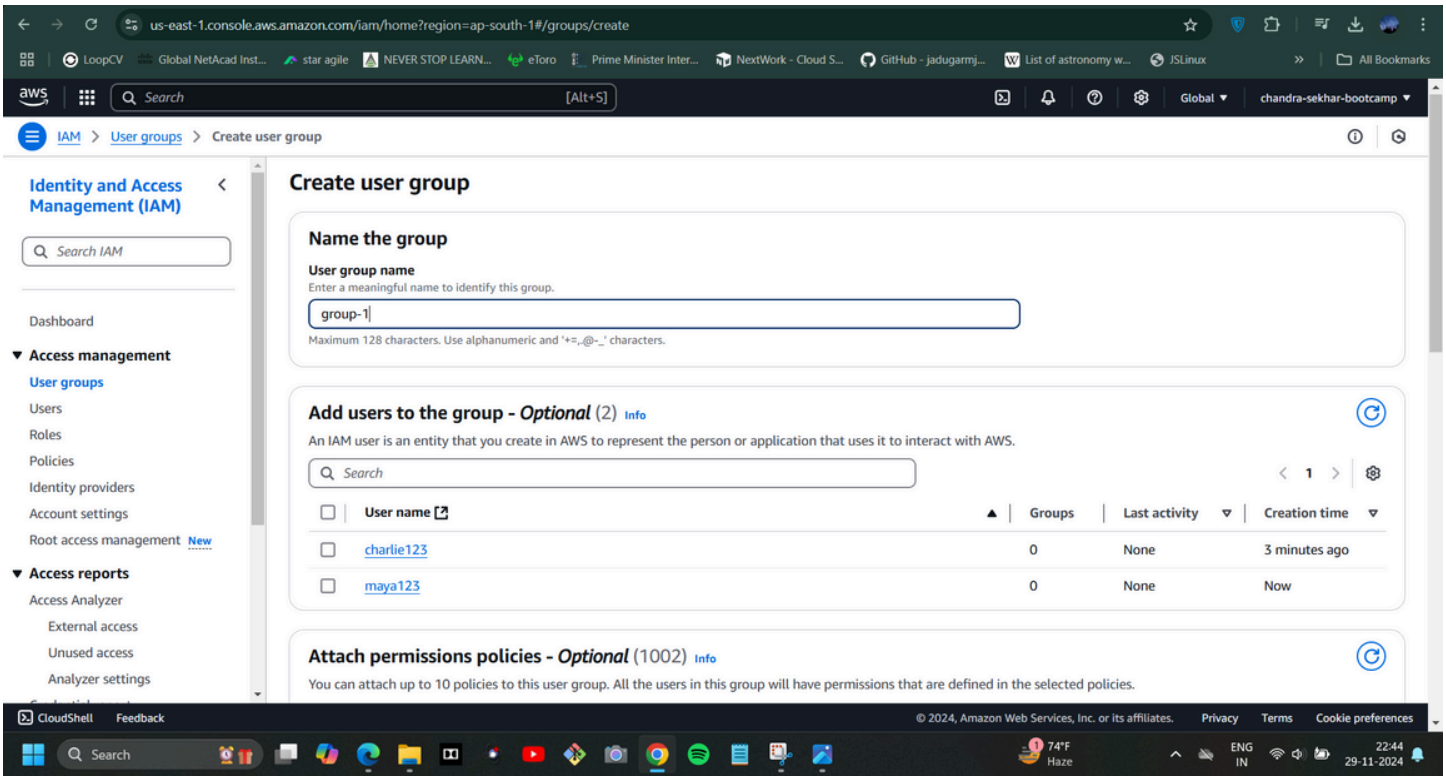


Step - 2

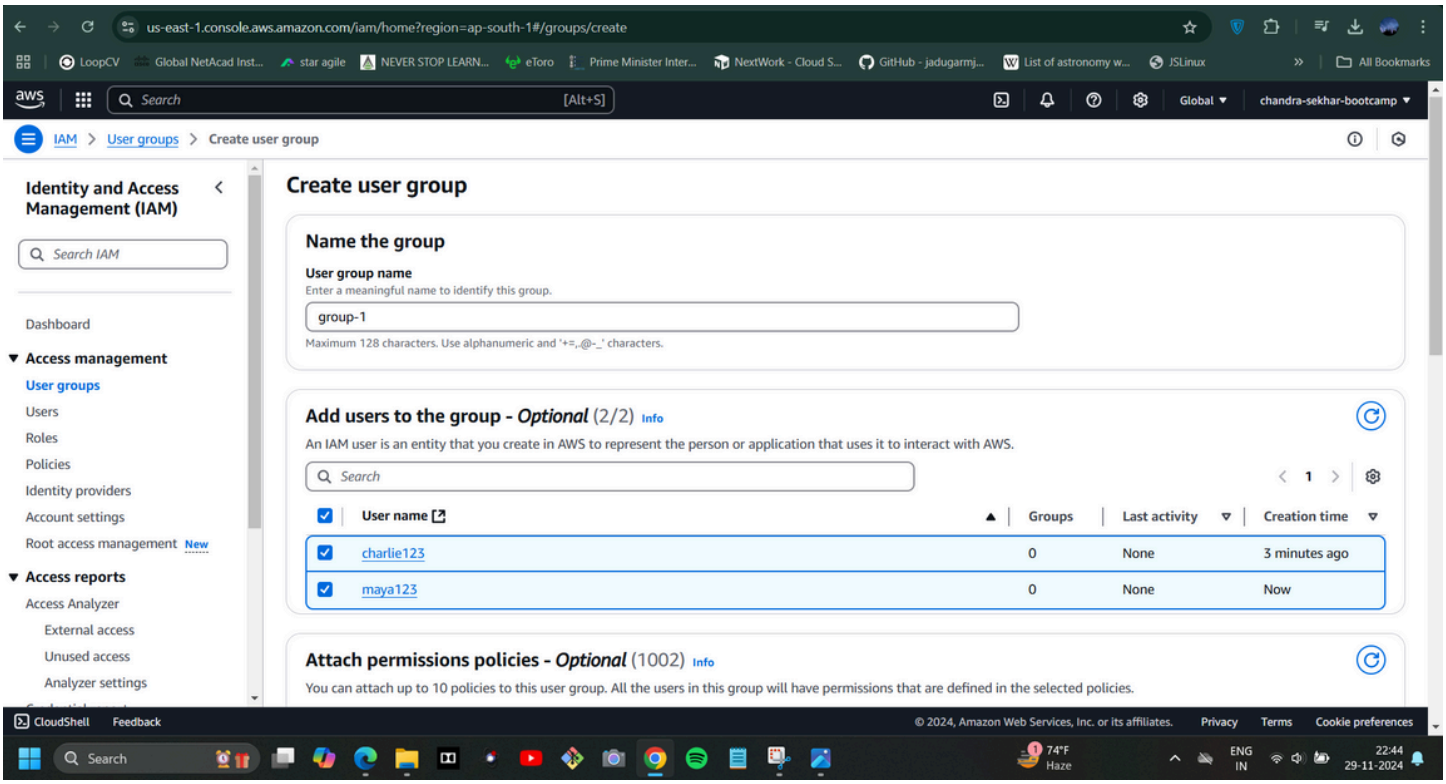
creating group for the users



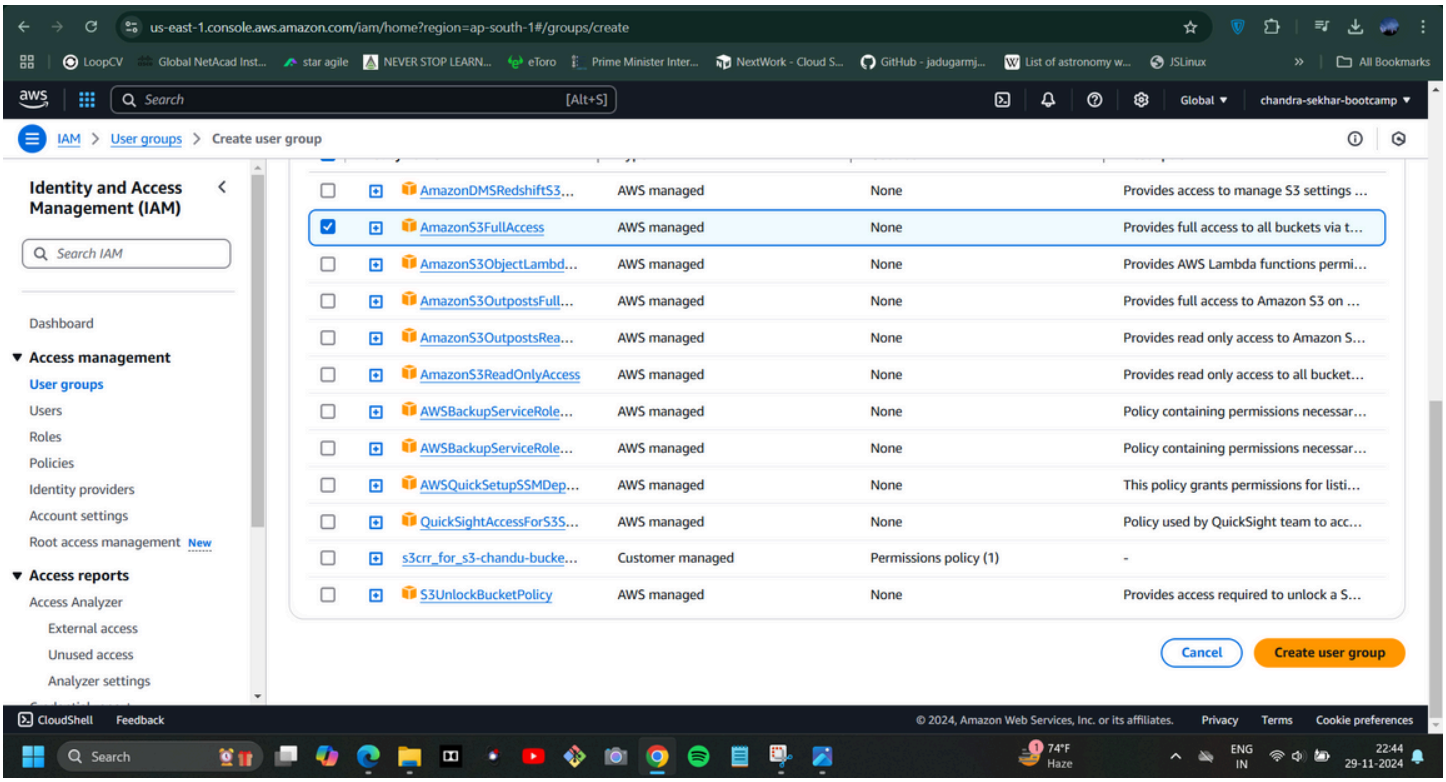
naming the group name



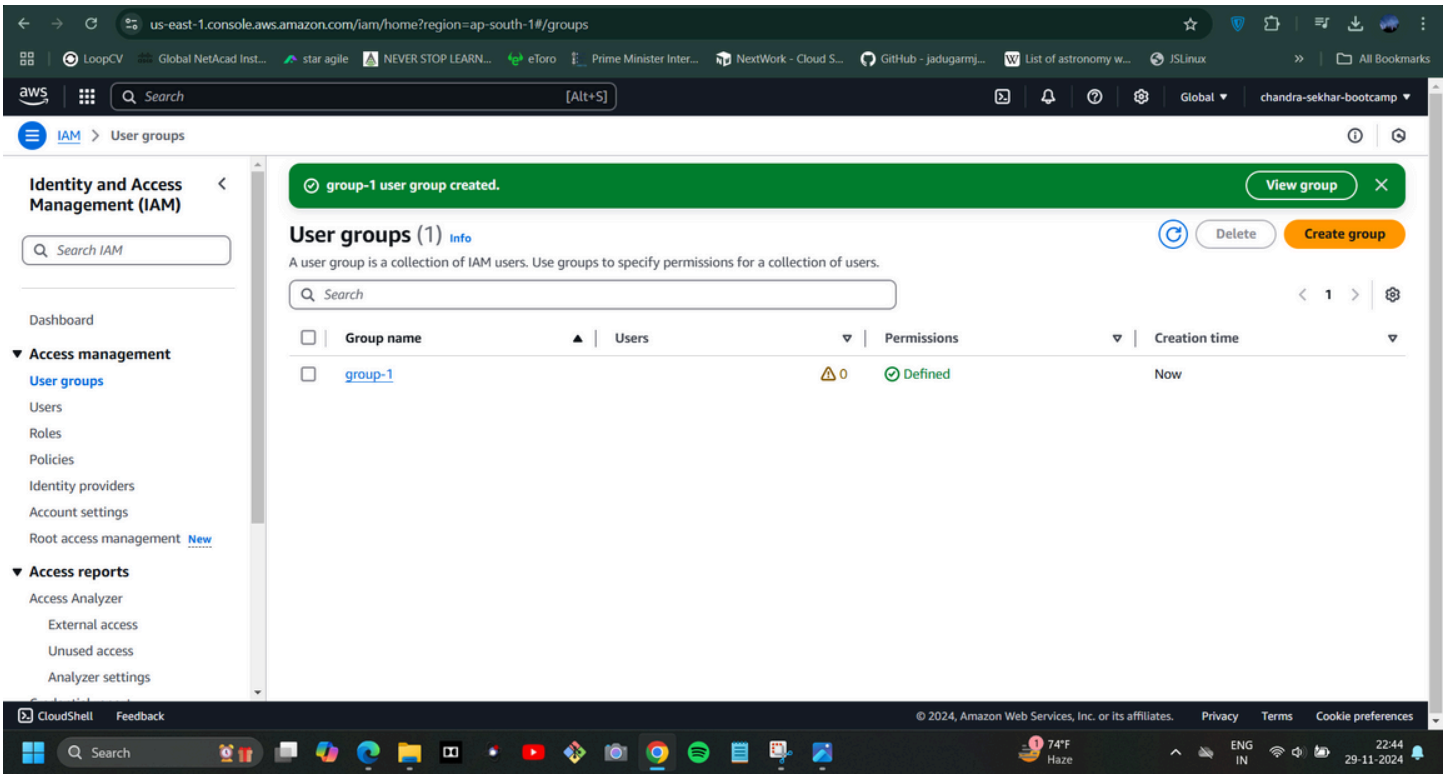
Adding the both the users



Giving them S3 Full Access

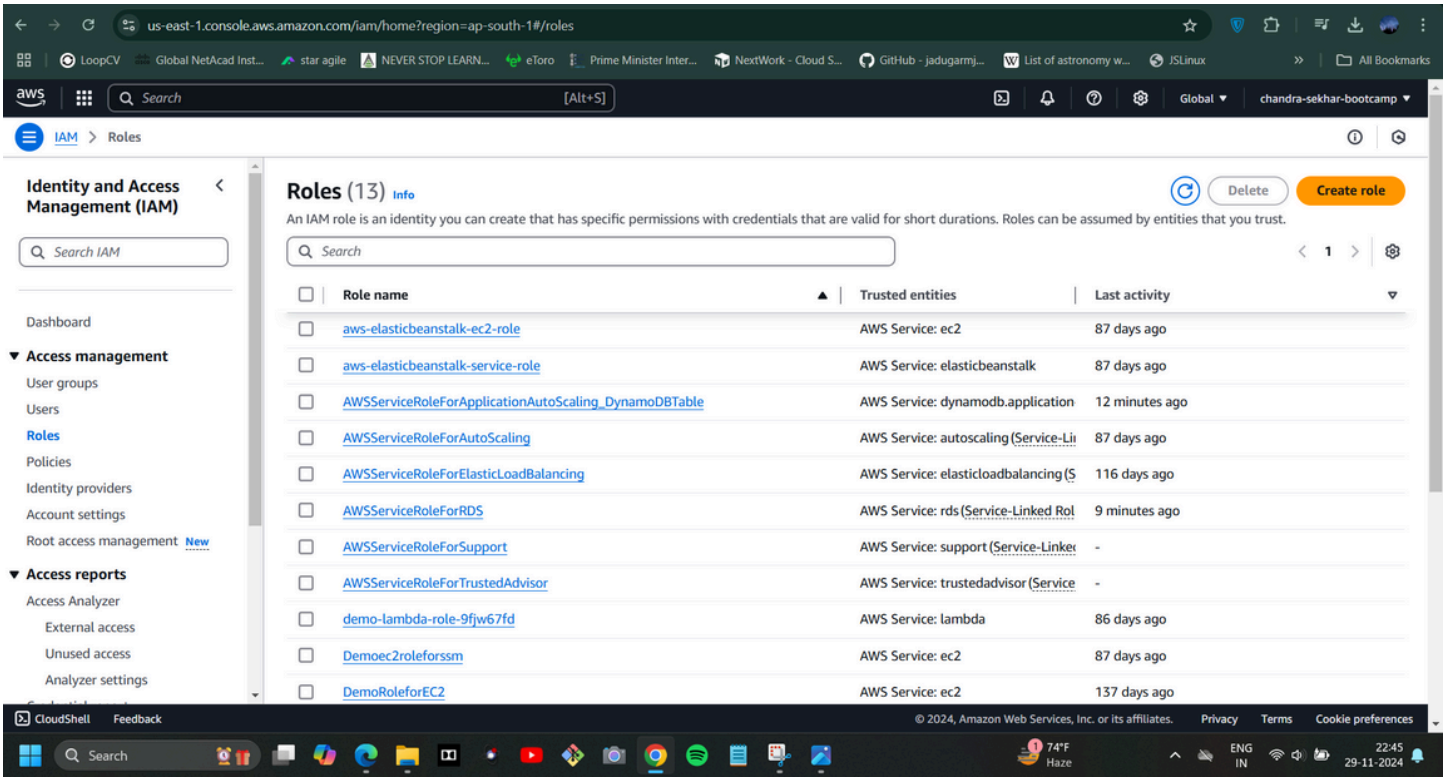


Group - 1 created

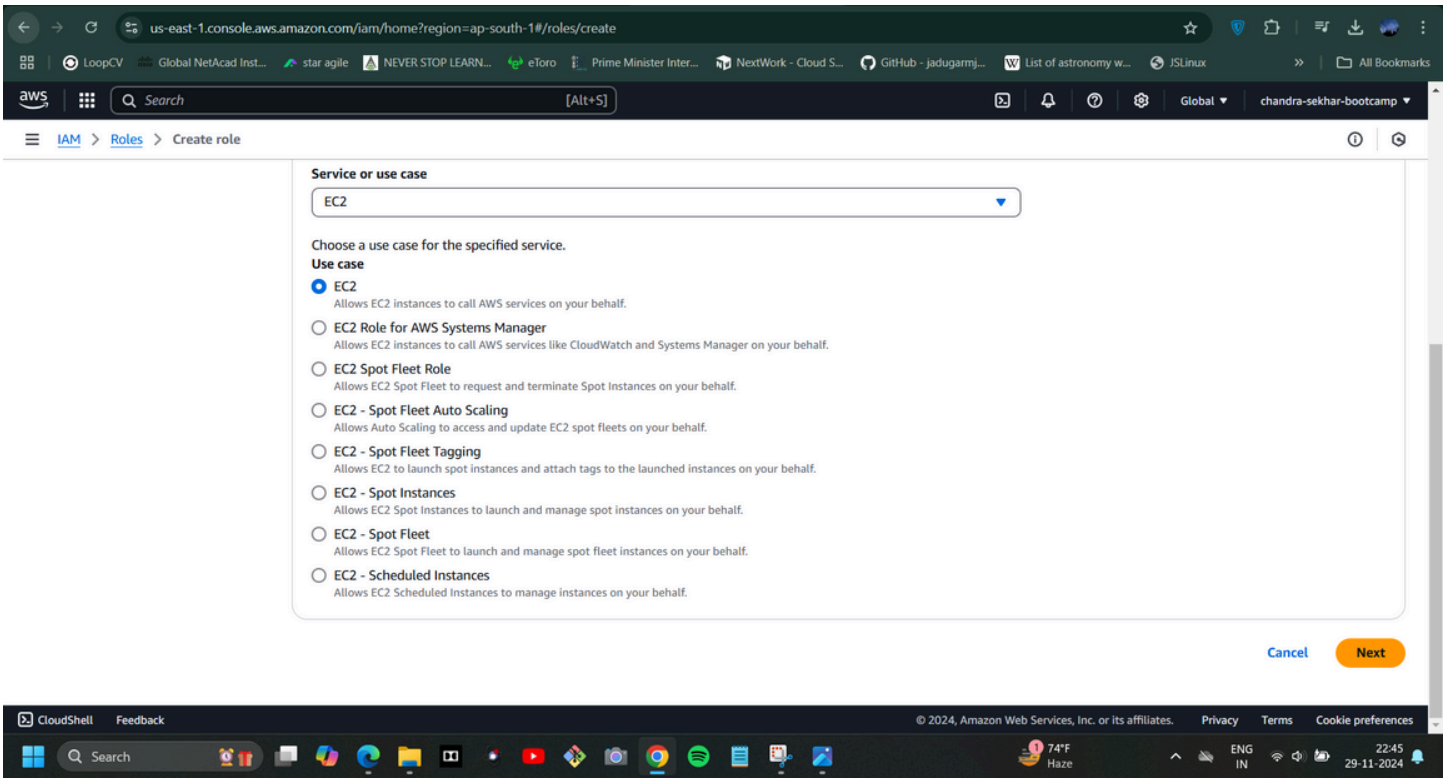


Step - 3

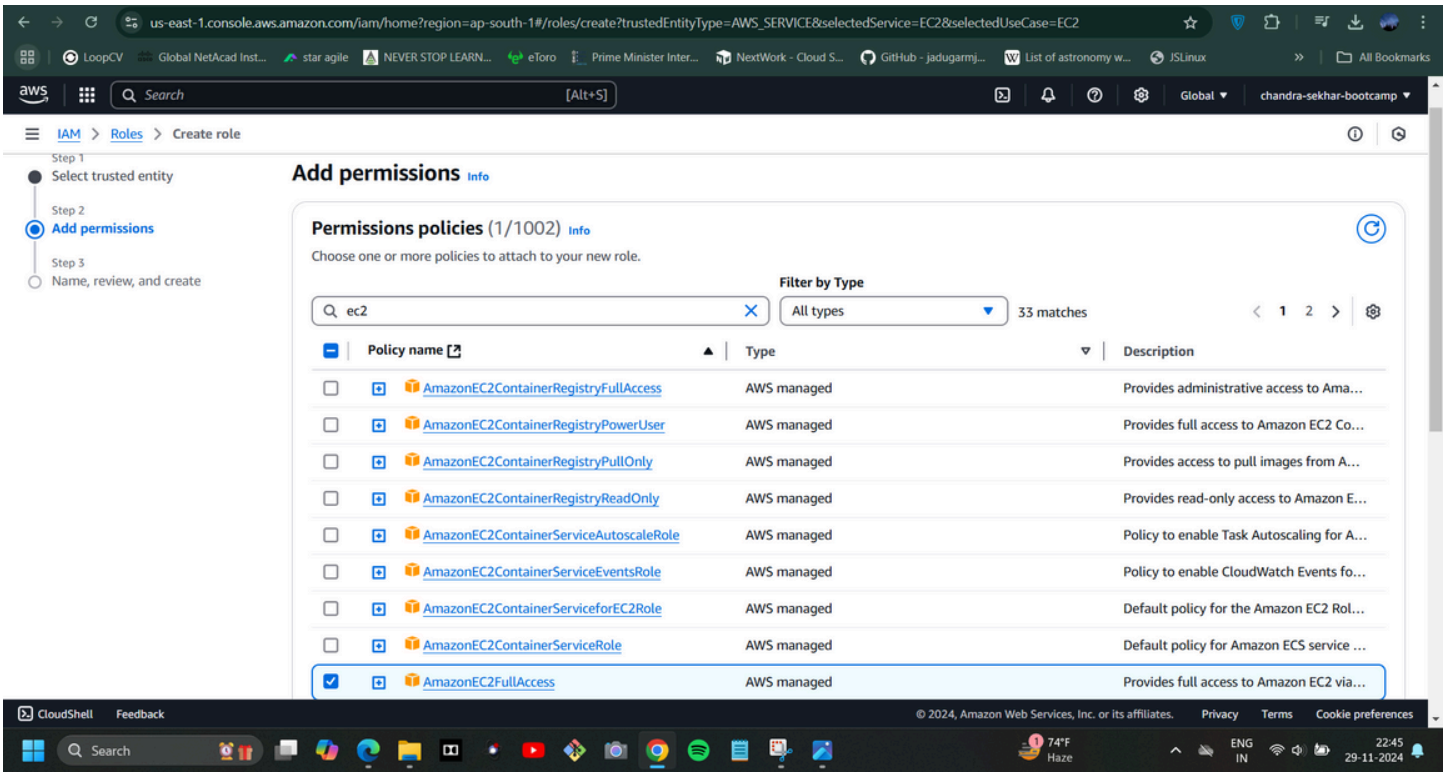
creating a role

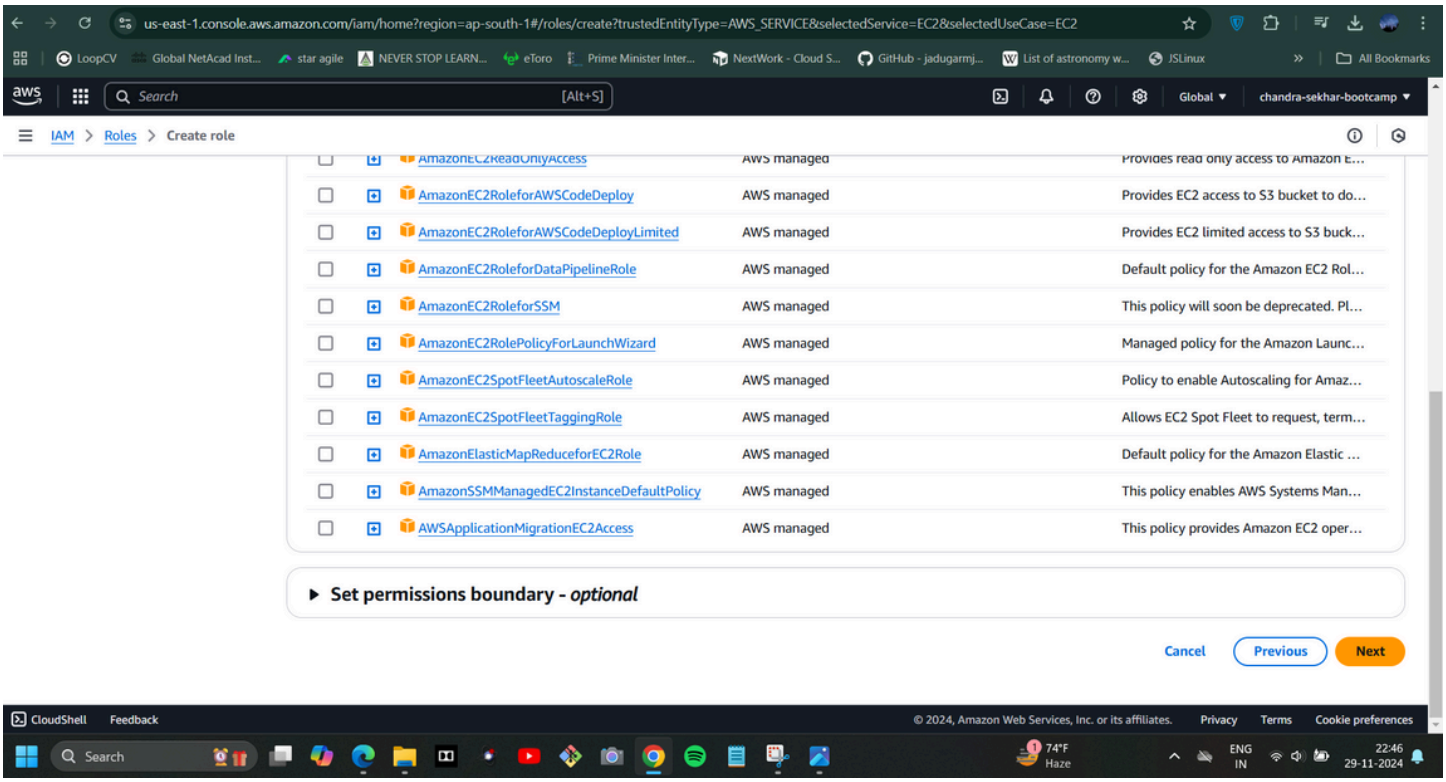


Selecting the service

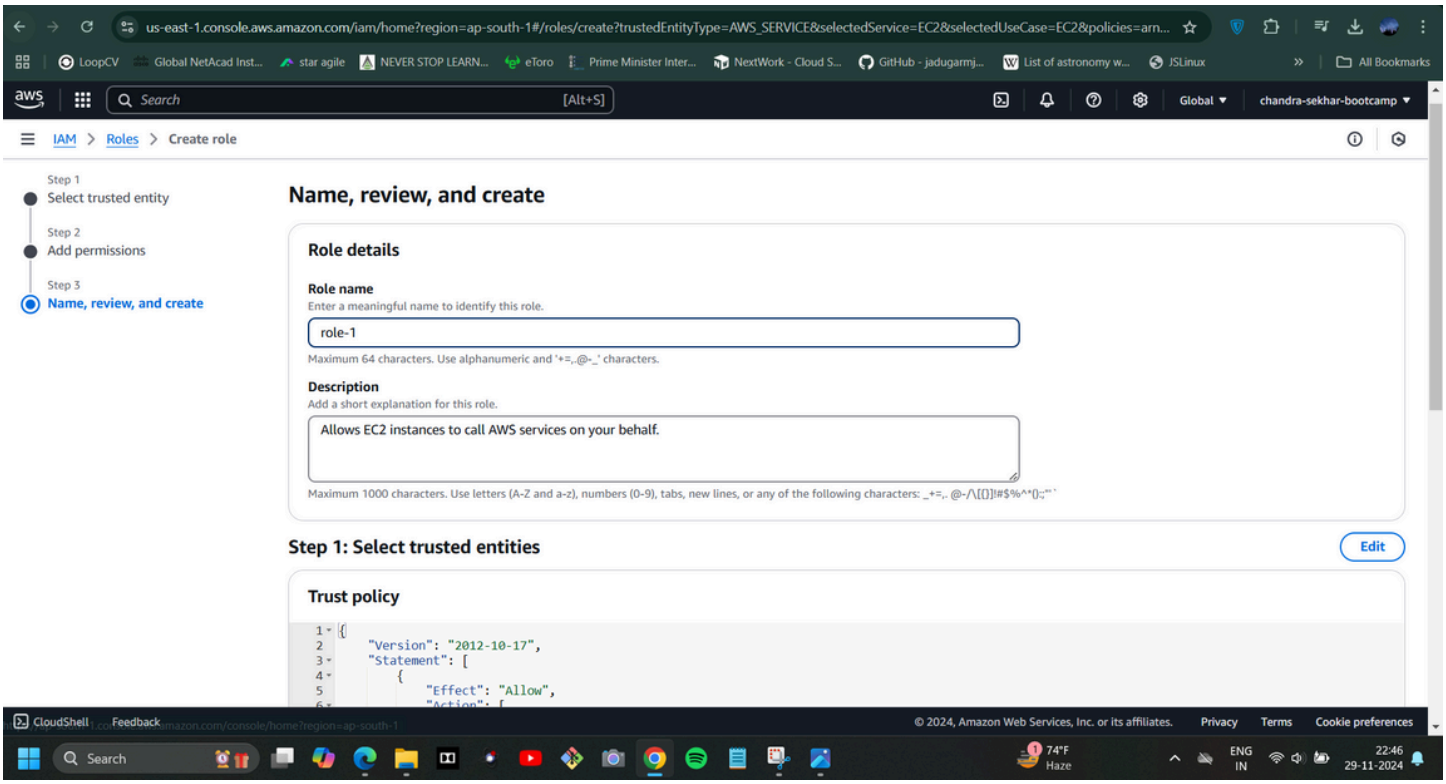


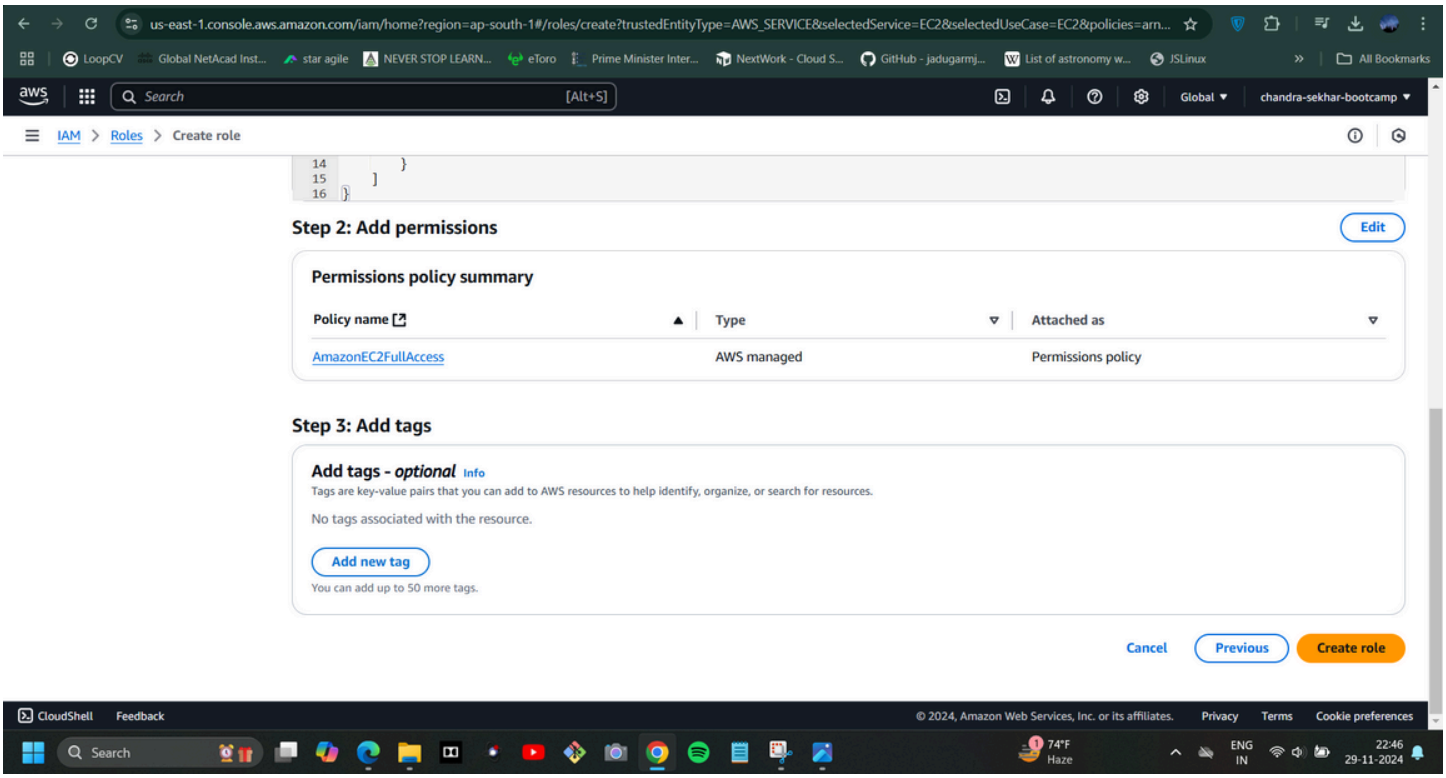
Adding permissions



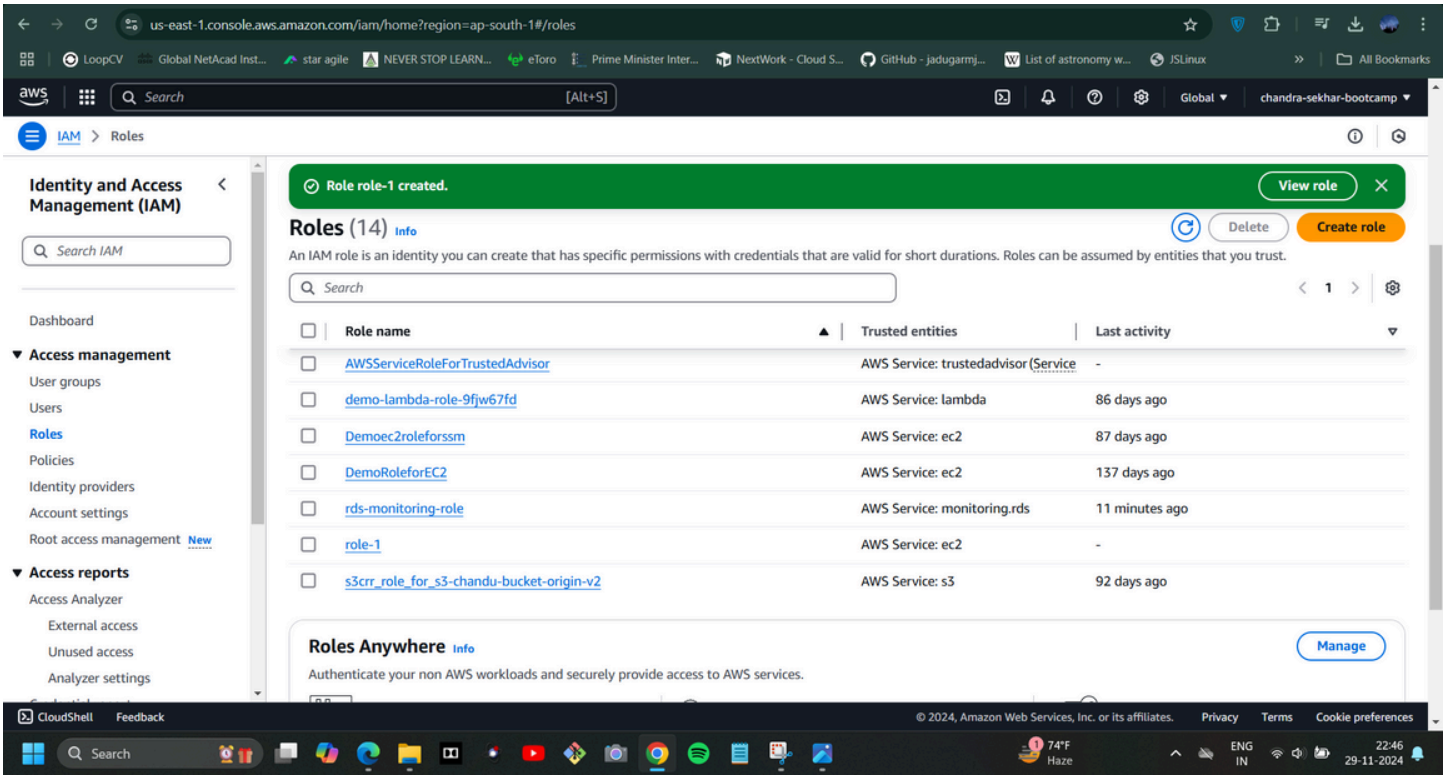


Naming the role name





Successfully created role with permissions

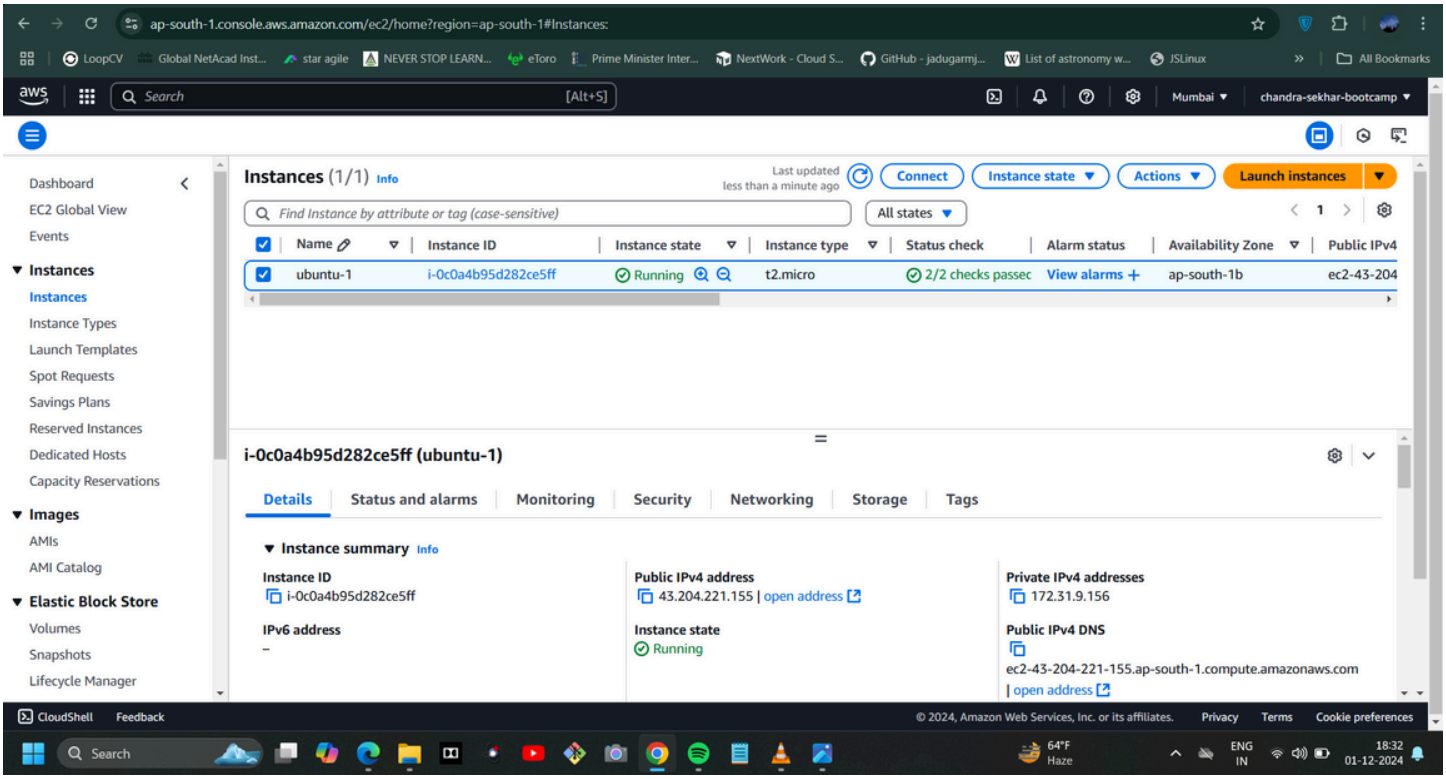


L3 -

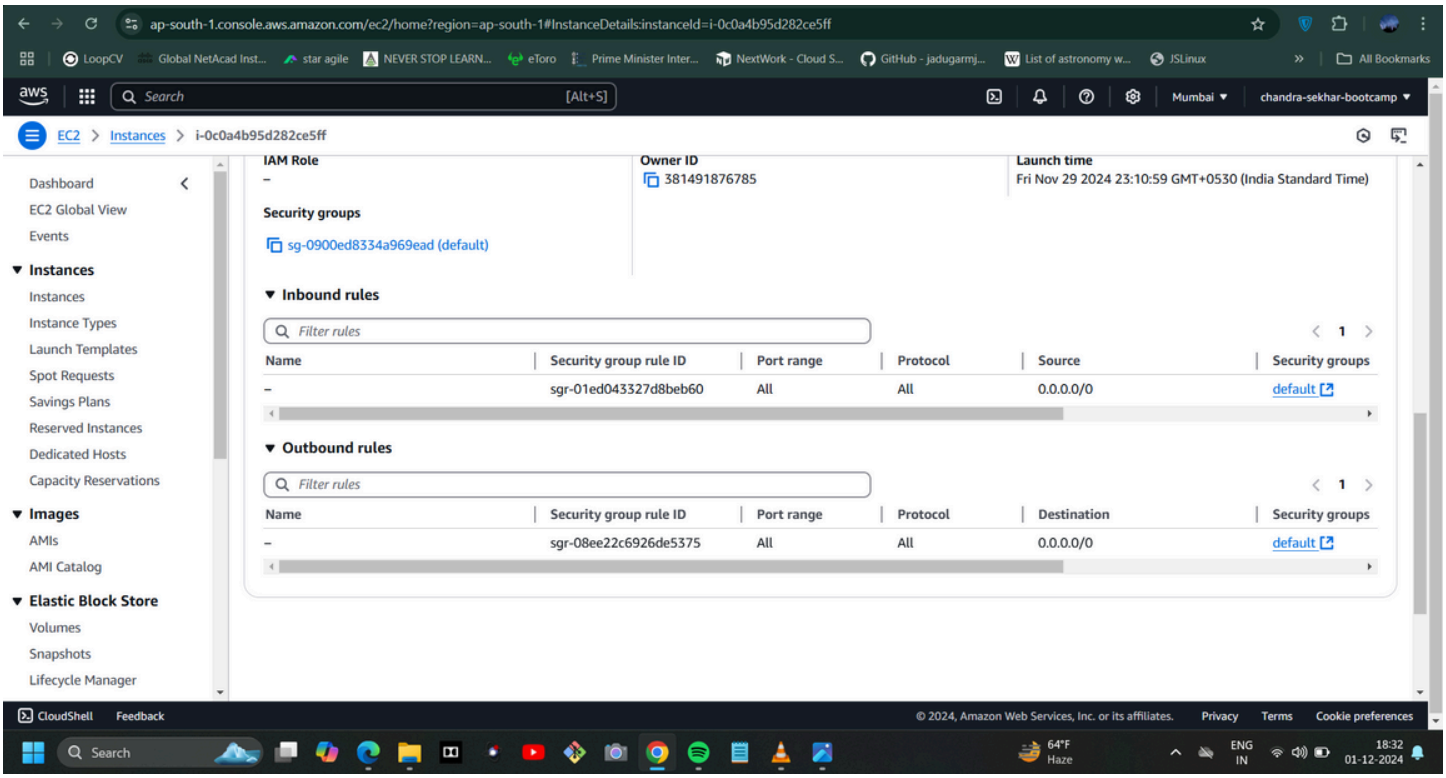
Launch AWS EC2 Ubuntu Instance and configure the Security Group - Inbound Rule: 8080. Justify the usage of Inbound Rules.

Step - 1

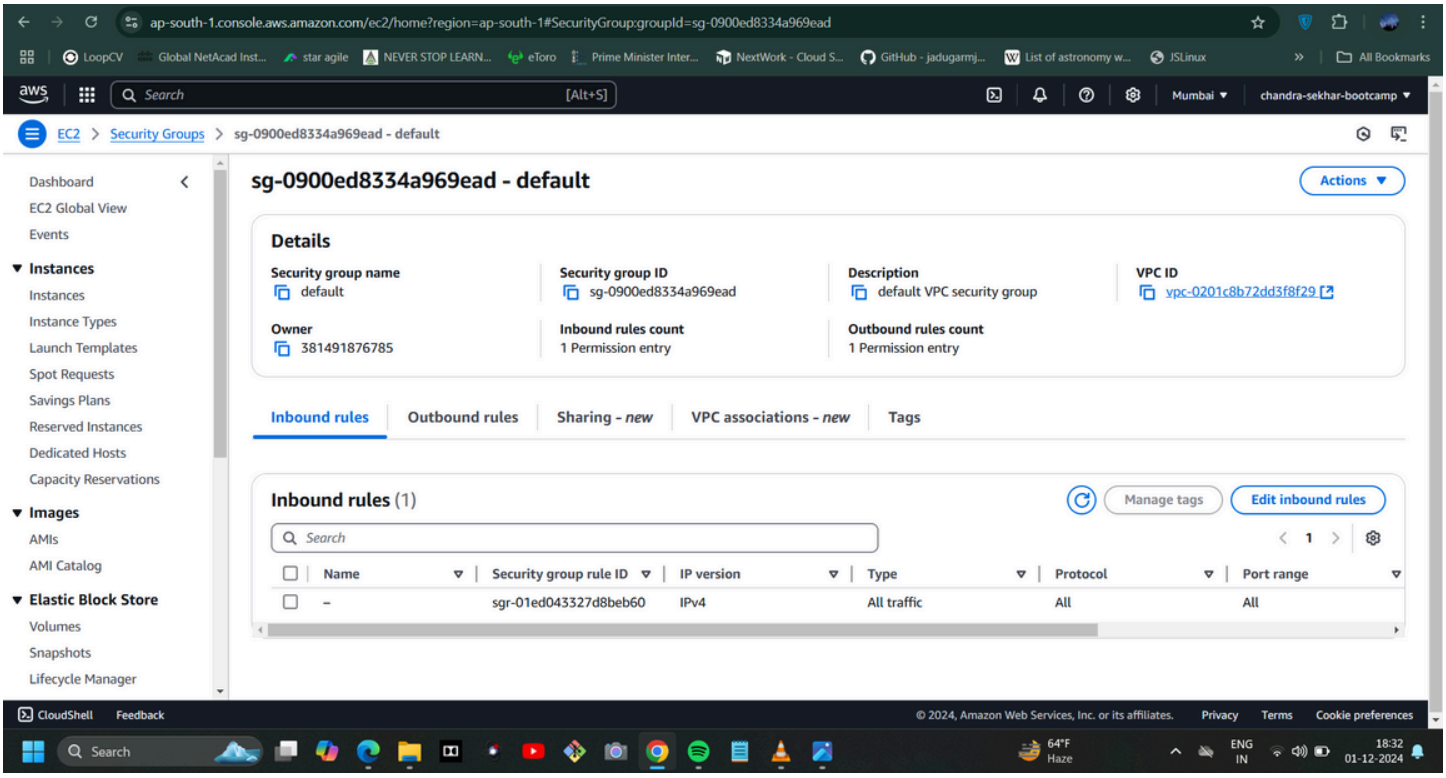
Launching the ec2 ubuntu server



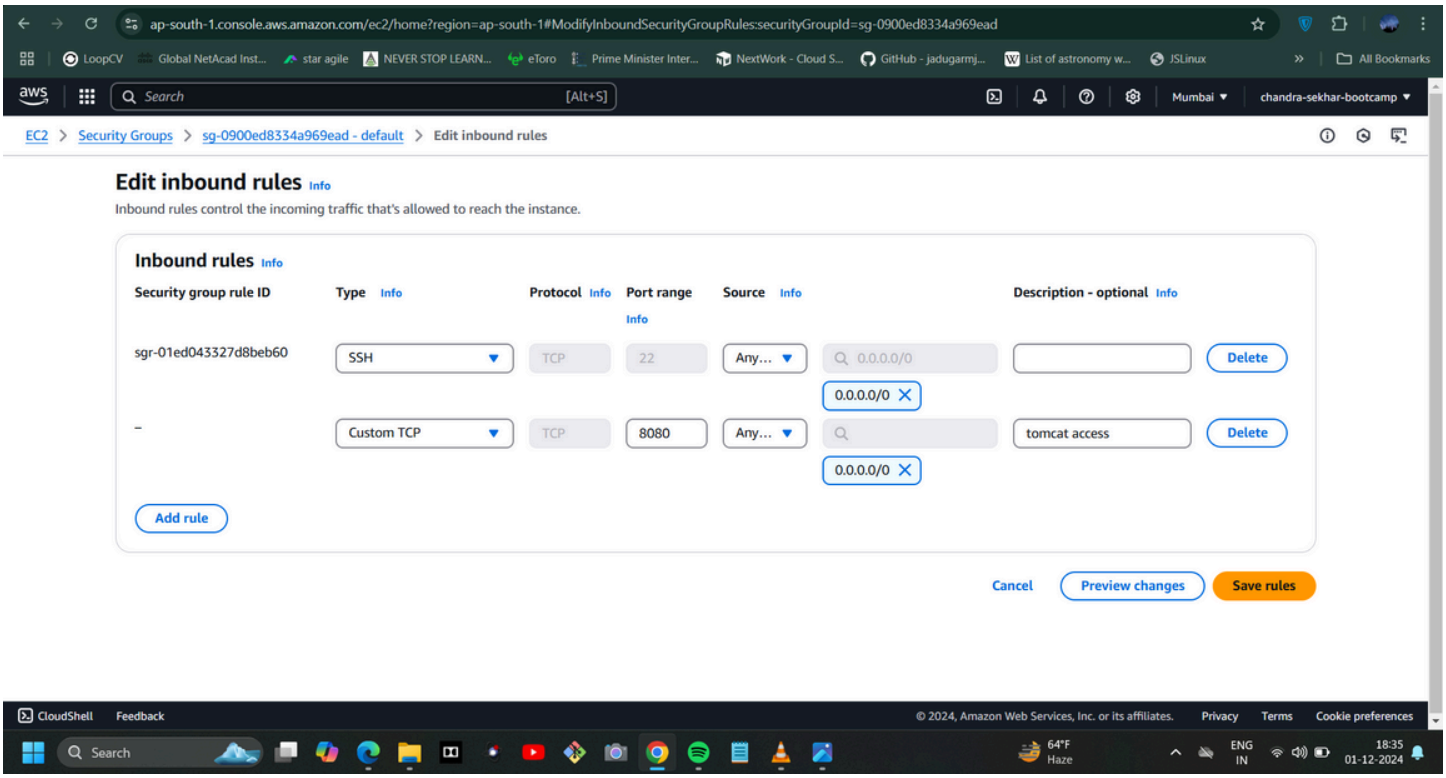
Navigate to security group and select inbound rule.



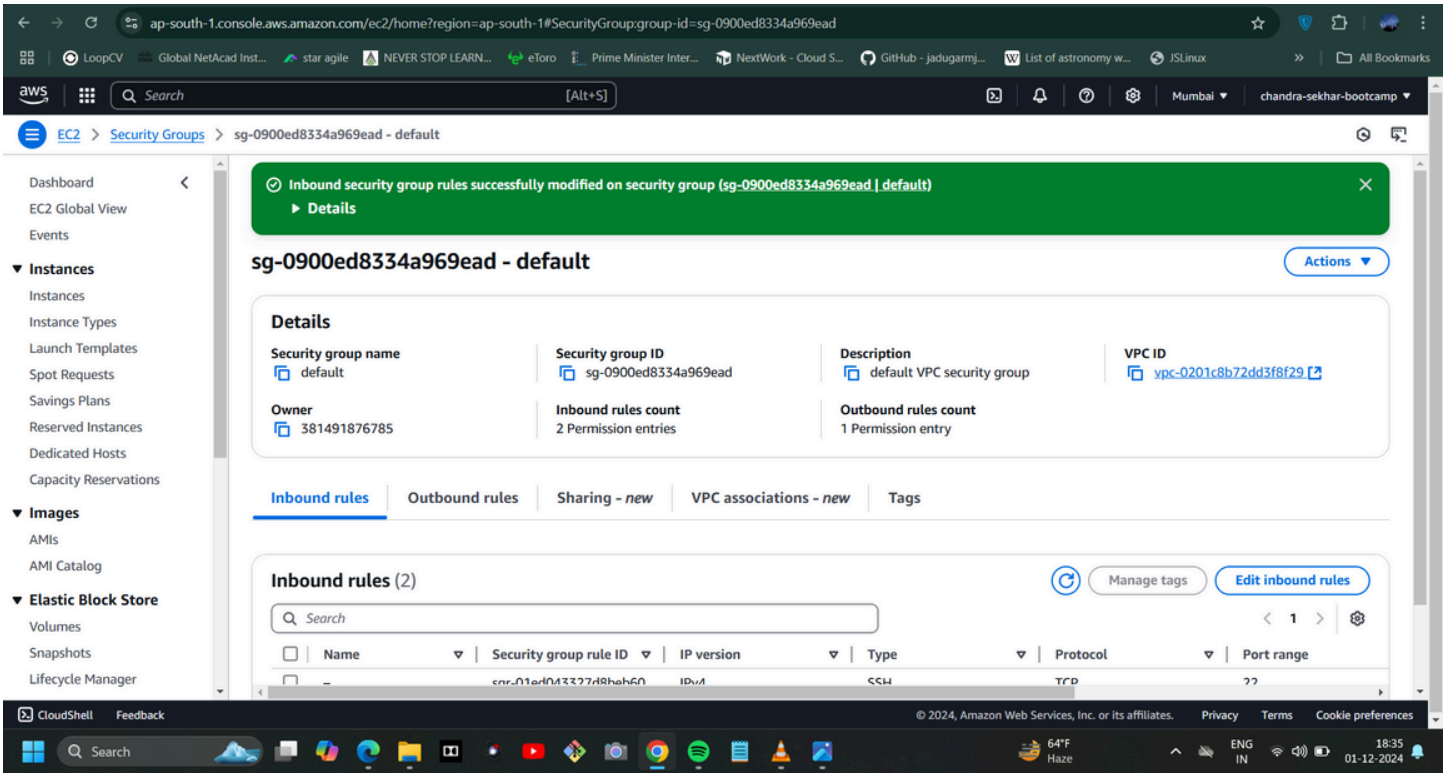
select edit inbound rule



writing the port number 8080(Tomcat) and giving access to everyone having ec2 public ip address.



successfully configured inbound rules.



Usage of Inbound rules:

1.Inbound rules control incoming traffic to an EC2 instance by specifying allowed protocols, IP ranges, and port numbers.

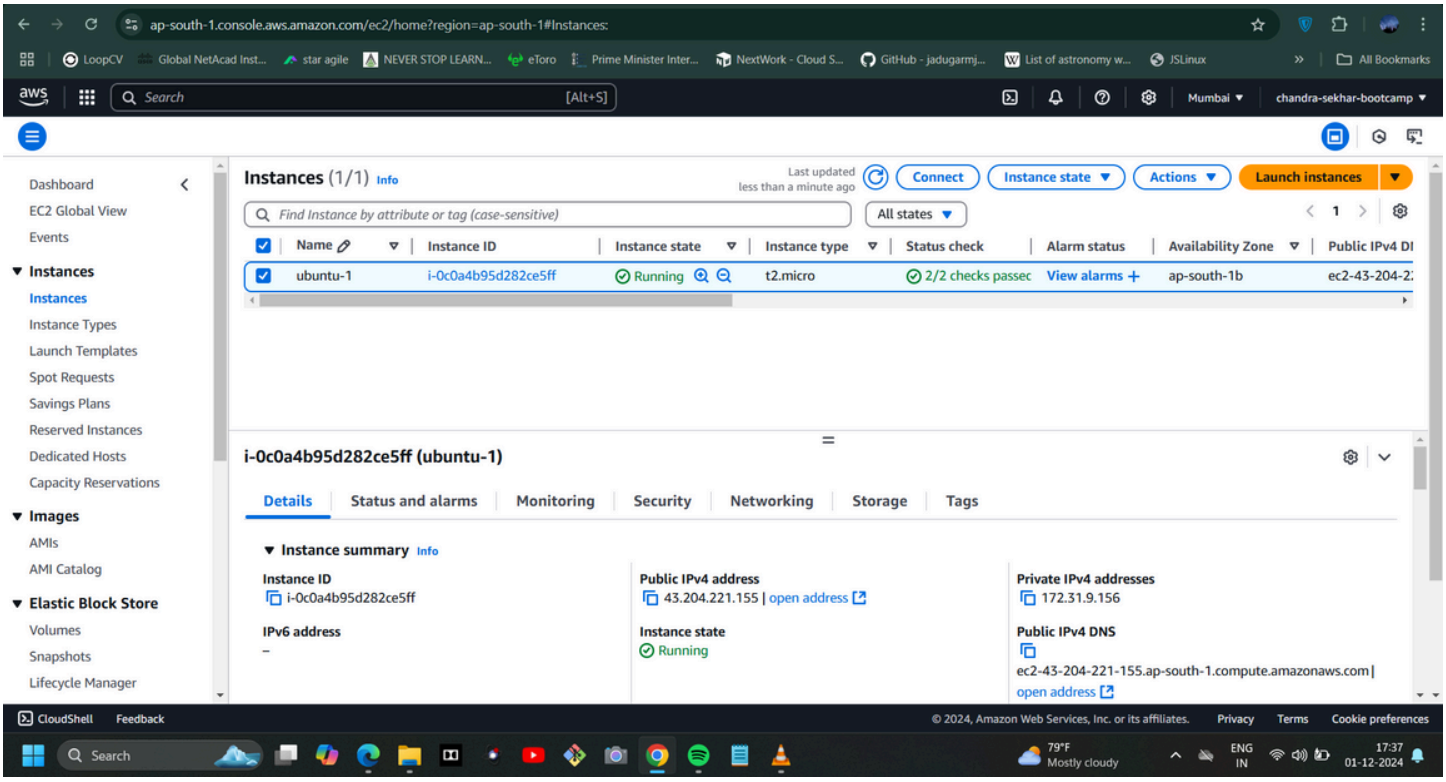
2.Inbound rules enable configuring access to specific port numbers (e.g., 22 for SSH, 80 for HTTP) on an EC2 instance.

L4 -

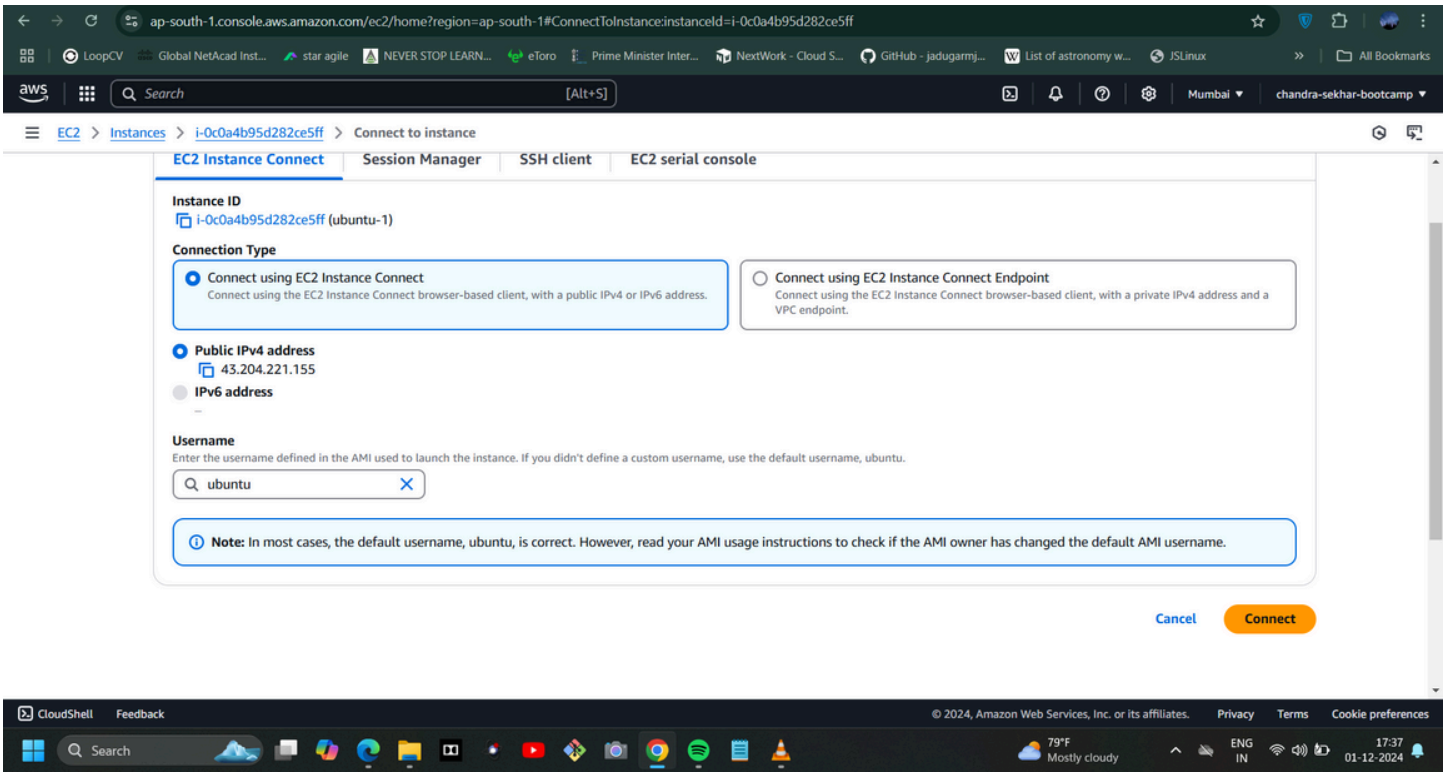
Connect to the AWS EC2 Ubuntu Instance and Update default packages, install JDK, Maven, Git, and validate the versions.

Step - 1

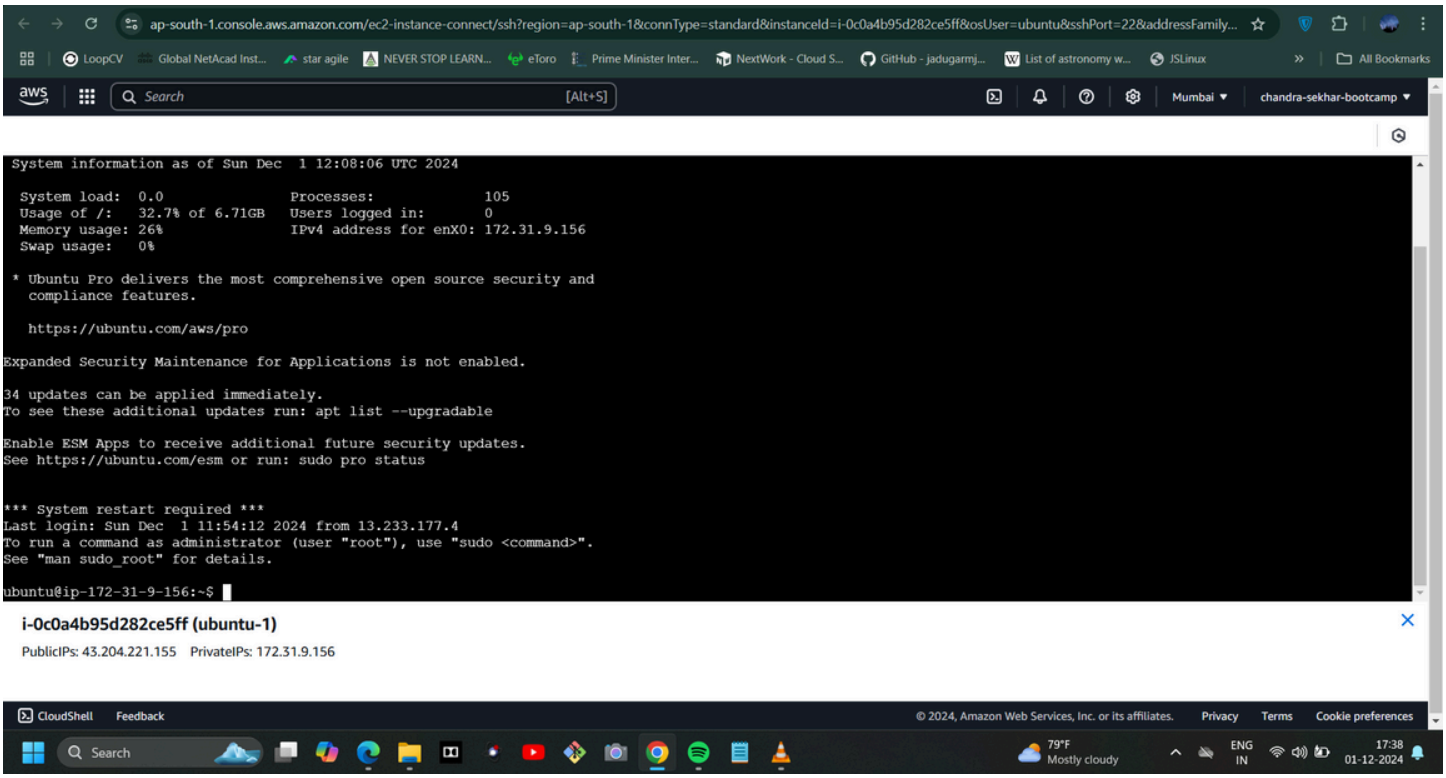
Navigate to Ubuntu Instance and select connect option.



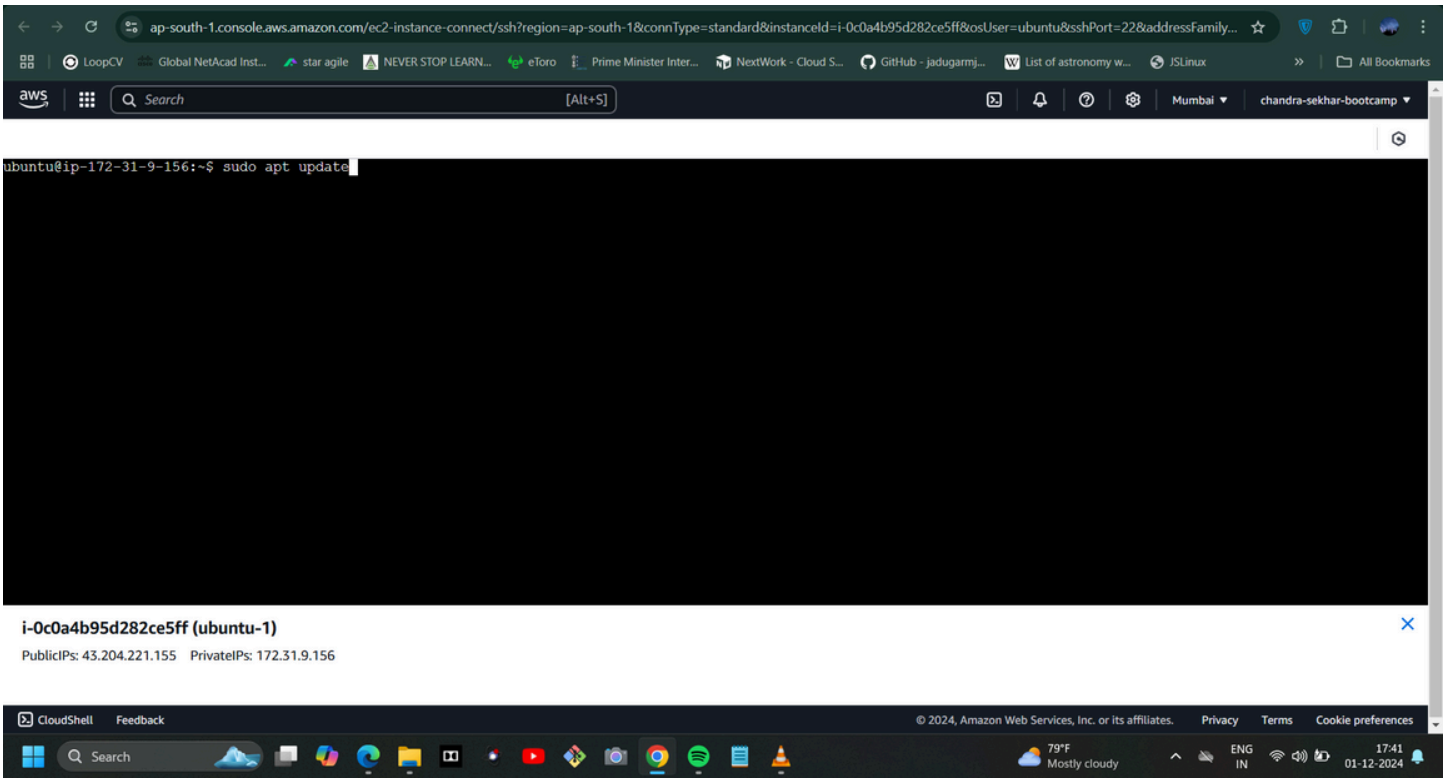
connect the server



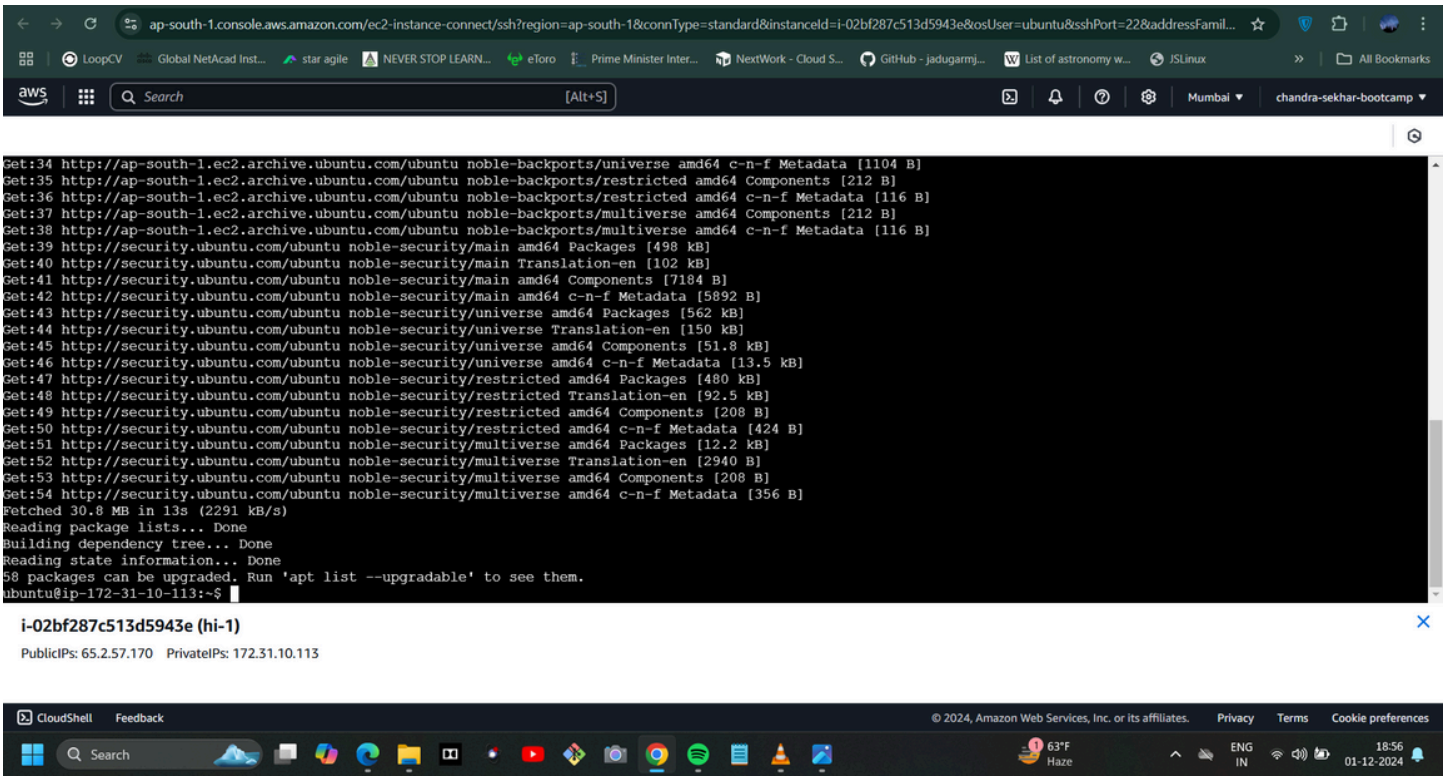
Ubuntu Instance as succesfully created.



Enter the command “sudo apt update” to update the existing packages.

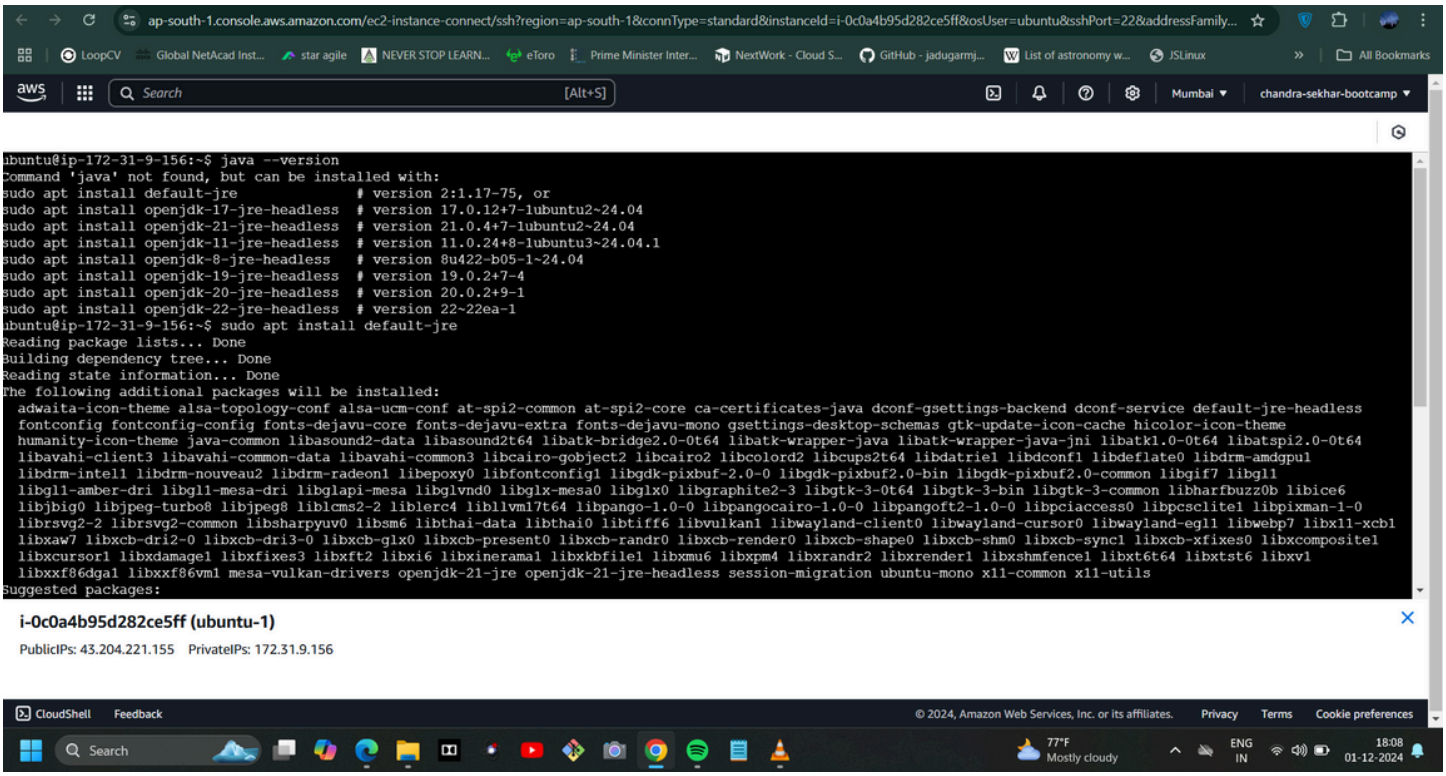


Succesfully updated all the existing packages.

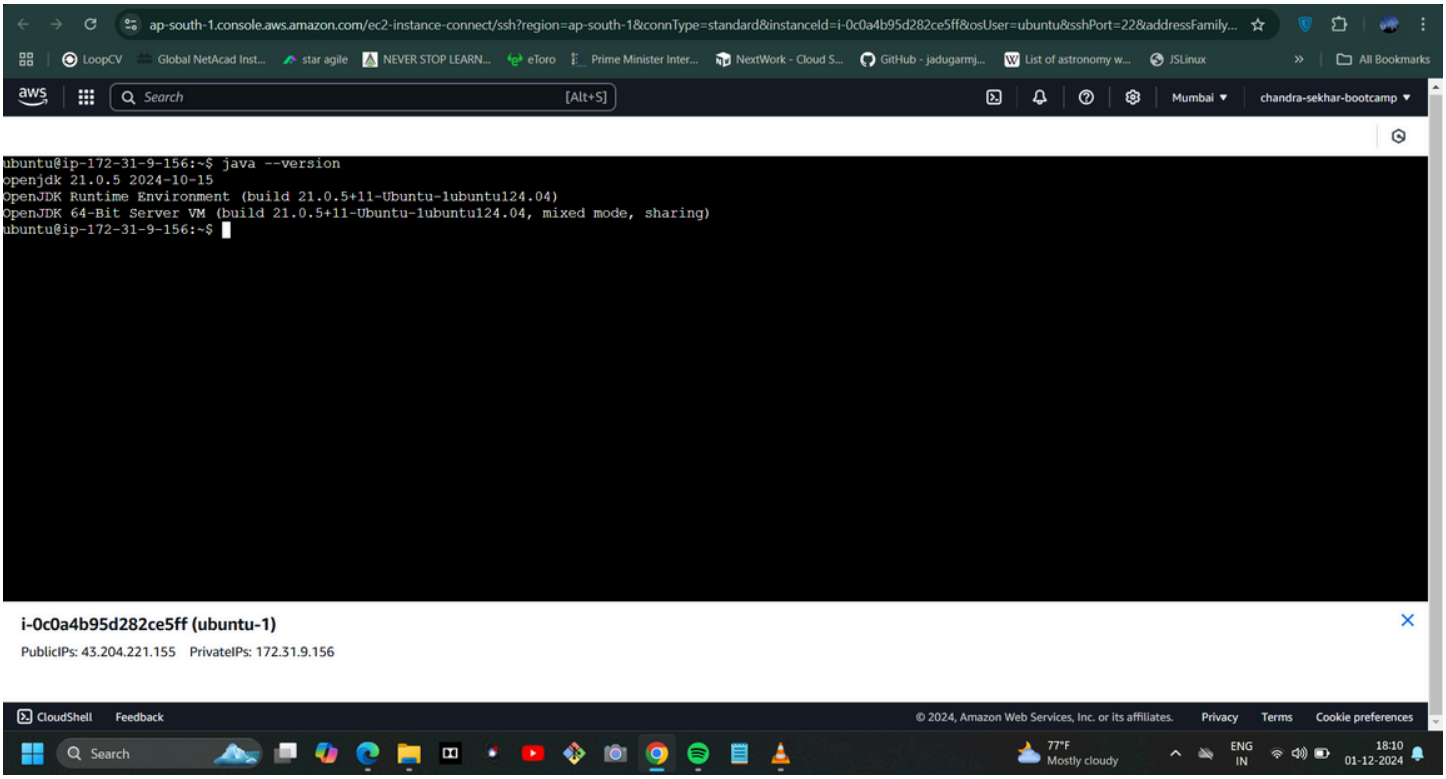


Step - 2

Installing java JDK by entering command “ sudo apt install default -jre”

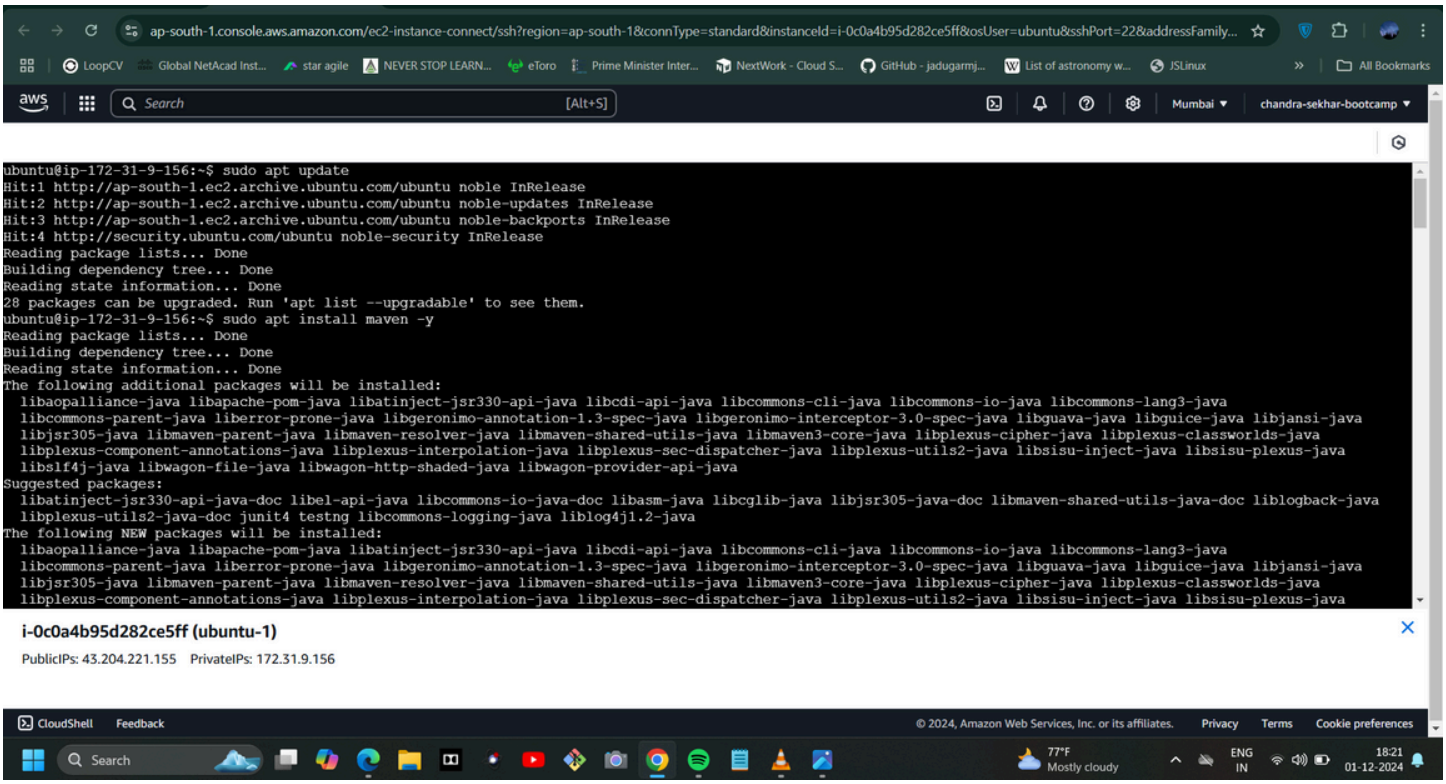


Successfully installed java JDK. entering the command to verify the version “java --version”

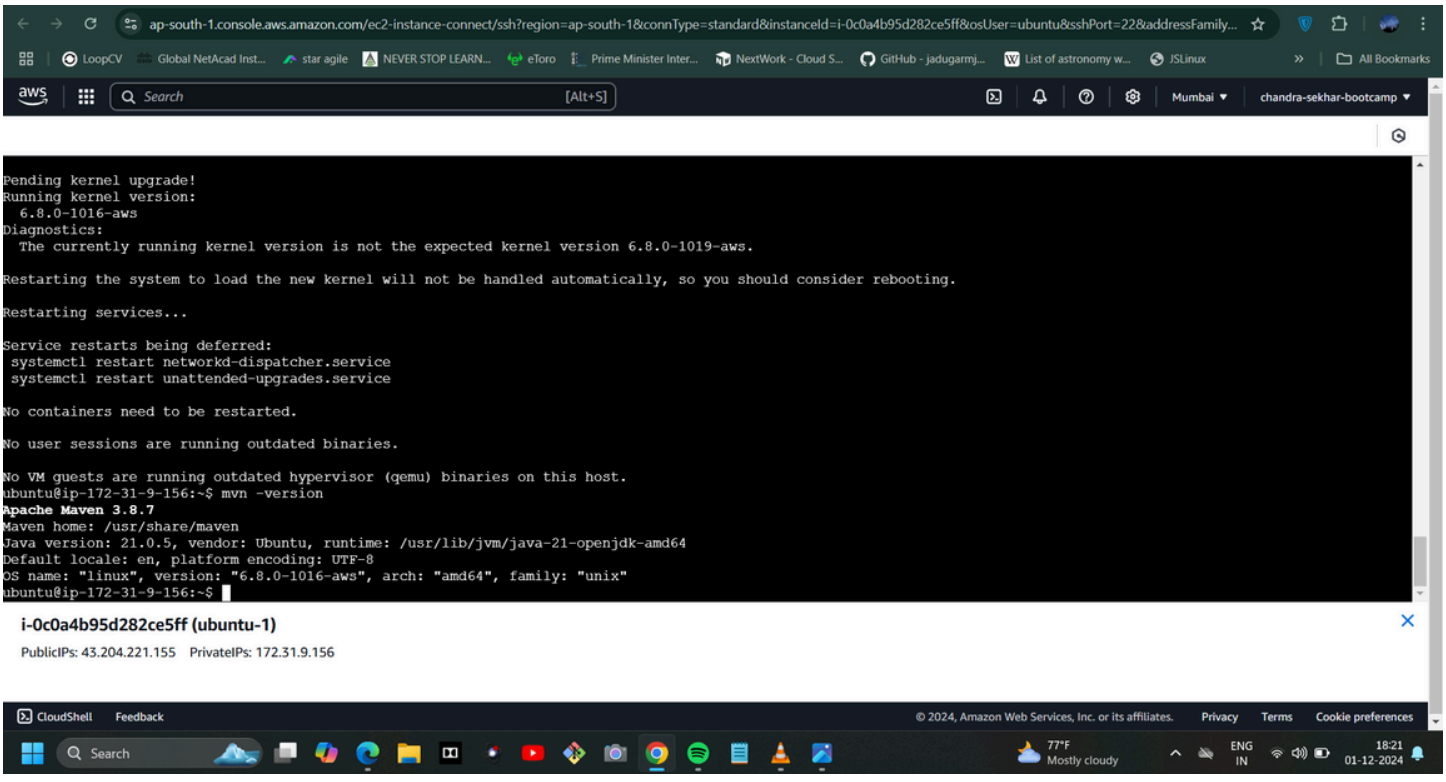


Step - 3

Installing Maven by enetring the command “sudo install maven -y”

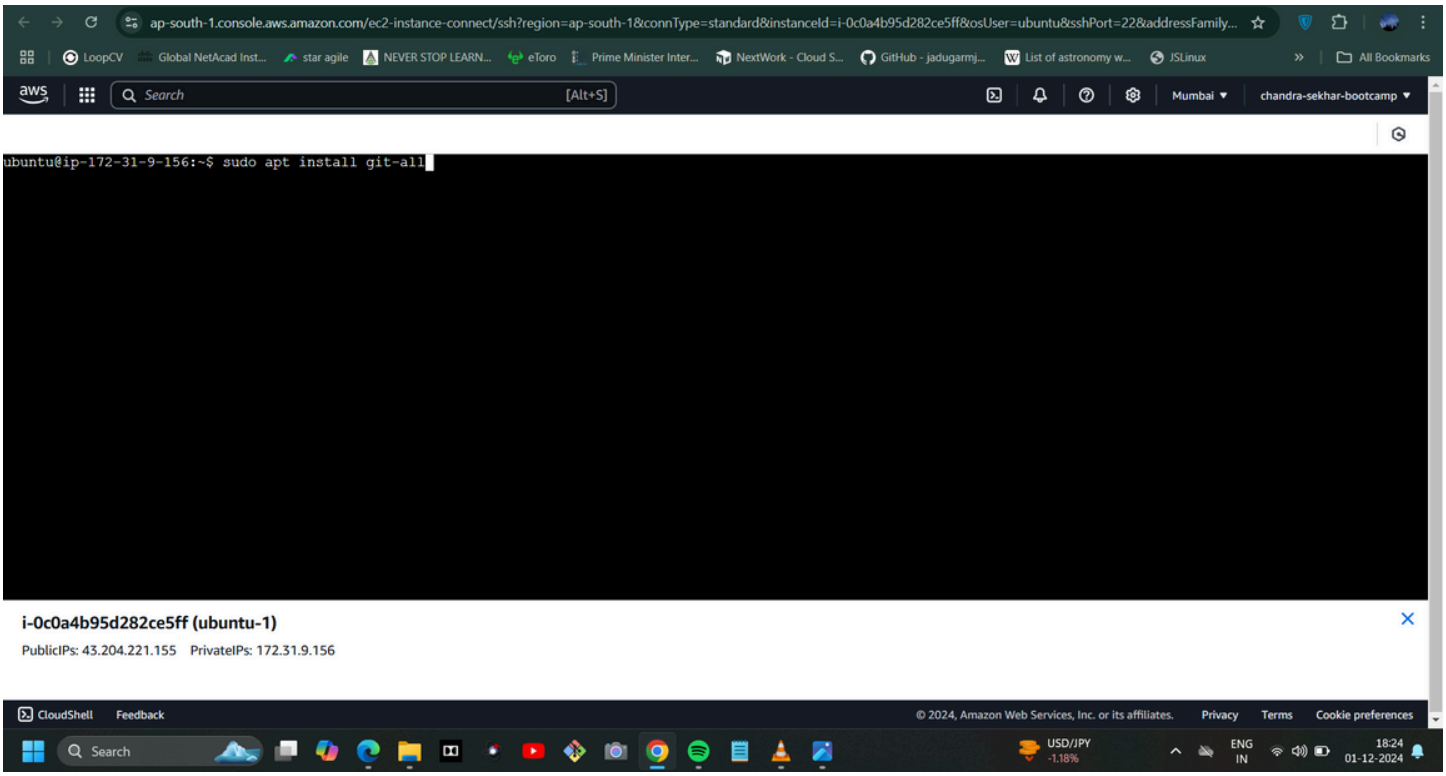


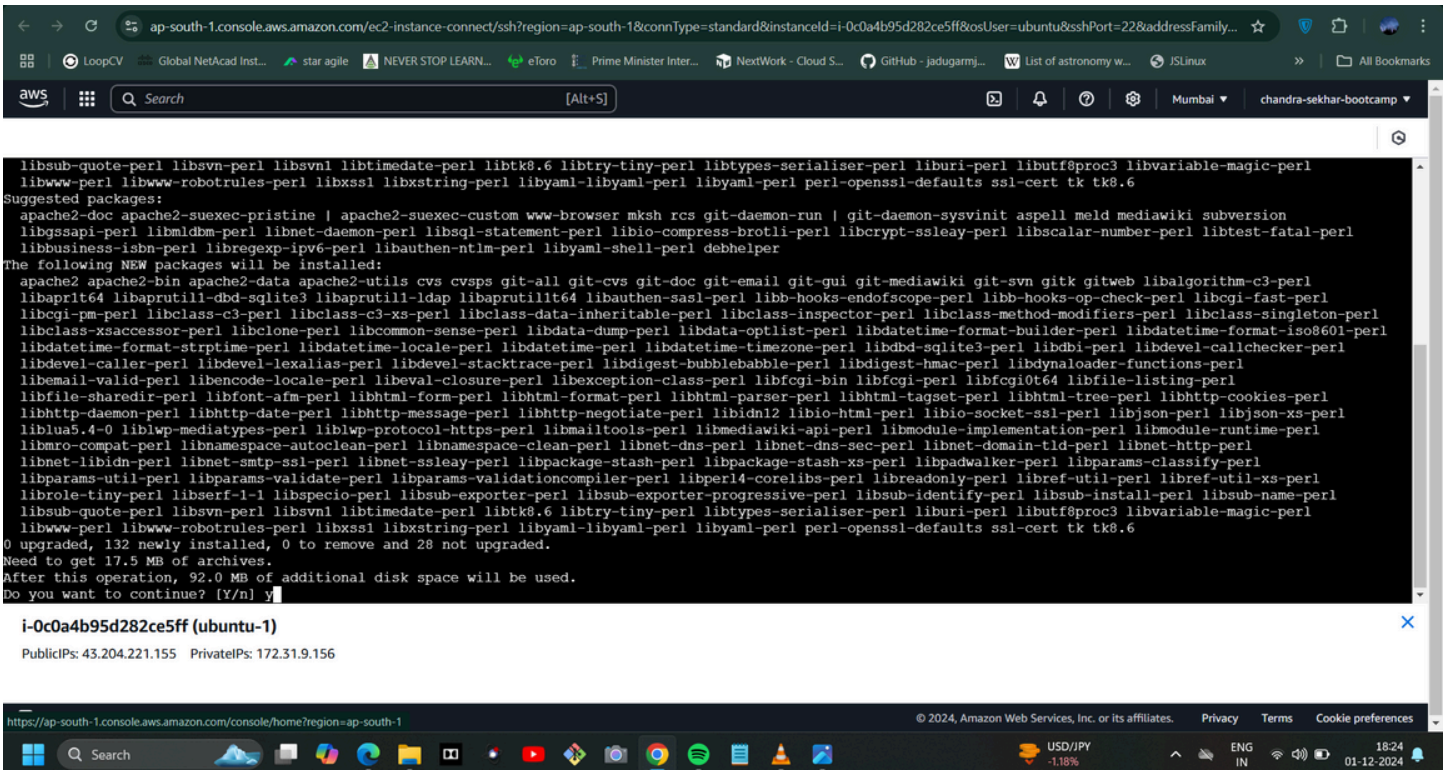
Successfully installed maven. entering the command to verify the version “mvn -version”



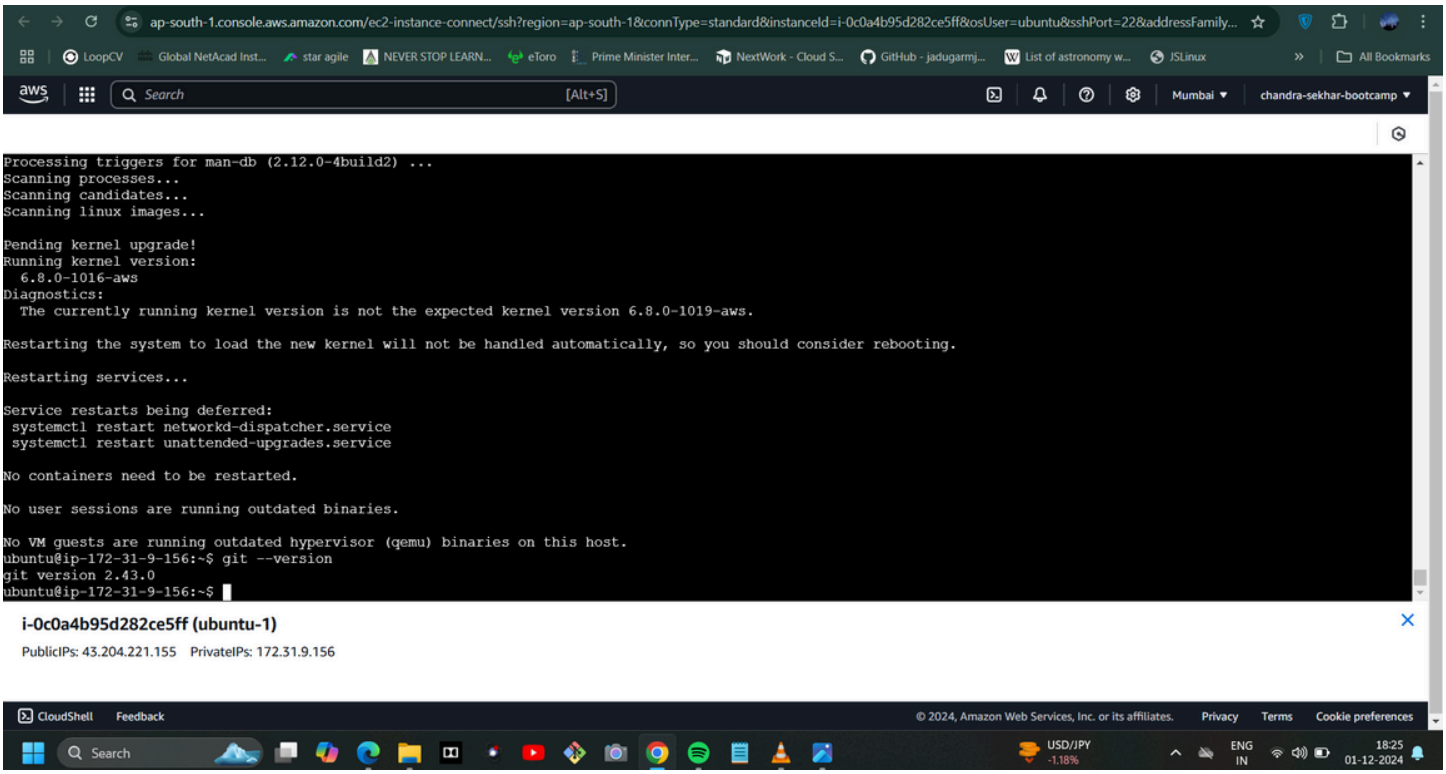
Step - 4

Installing git by entering command “sudo apt install git-all”





successfully installed git. now to check version enter “ git -version”

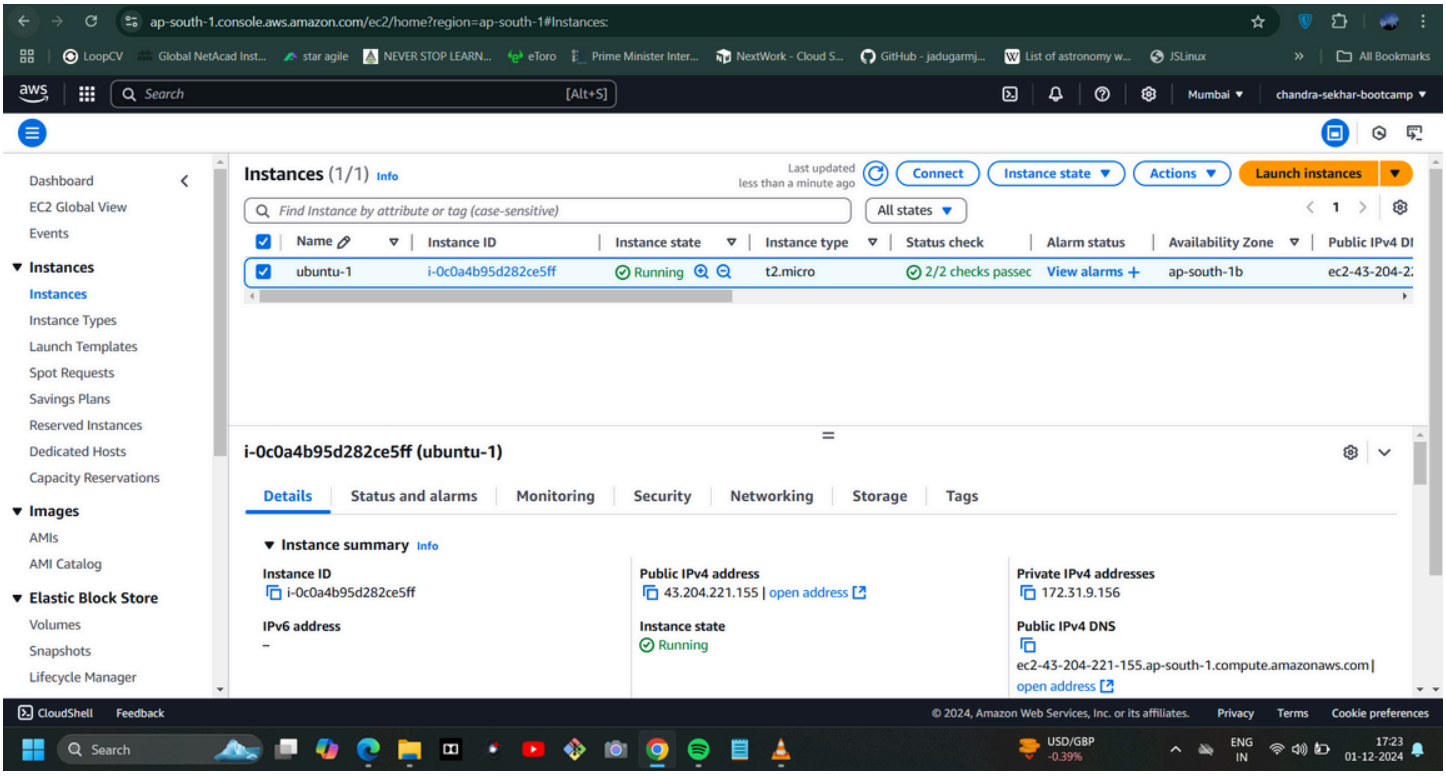

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0c0a4b95d282ce5ff&osUser=ubuntu&sshPort=22&addressFamily...
LoopCV
Global NetAcad Inst...
star agile
NEVER STOP LEARN...
eToro
Prime Minister Inter...
NextWork - Cloud S...
GitHub - jadugarmj...
List of astronomy w...
JSLinux
All Bookmarks
aws
Search
[Alt+S]
Mumbai
chandra-sekhar-bootcamp
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning candidates...
Scanning linux images...
Pending kernel upgrade!
Running kernel version:
6.8.0-1016-aws
Diagnostics:
The currently running kernel version is not the expected kernel version 6.8.0-1019-aws.
Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.
Restarting services...
Service restarts being deferred:
systemctl restart networkd-dispatcher.service
systemctl restart unattended-upgrades.service
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-9-156:~$ git --version
git version 2.43.0
ubuntu@ip-172-31-9-156:~$
i-0c0a4b95d282ce5ff (ubuntu-1)
PublicIPs: 43.204.221.155 PrivateIPs: 172.31.9.156
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
Search
USD/JPY
-1.18%
ENG
IN
18:25
01-12-2024

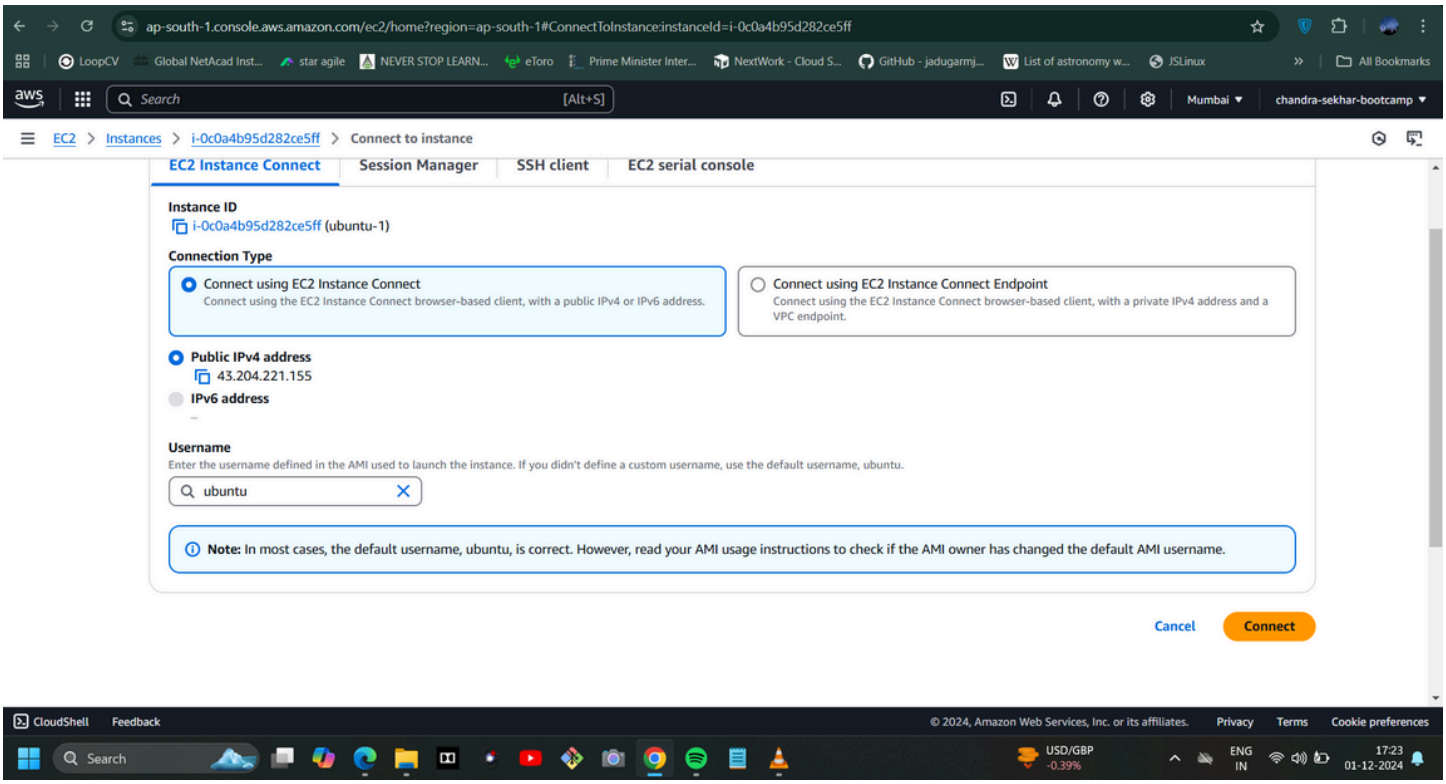
L5 -

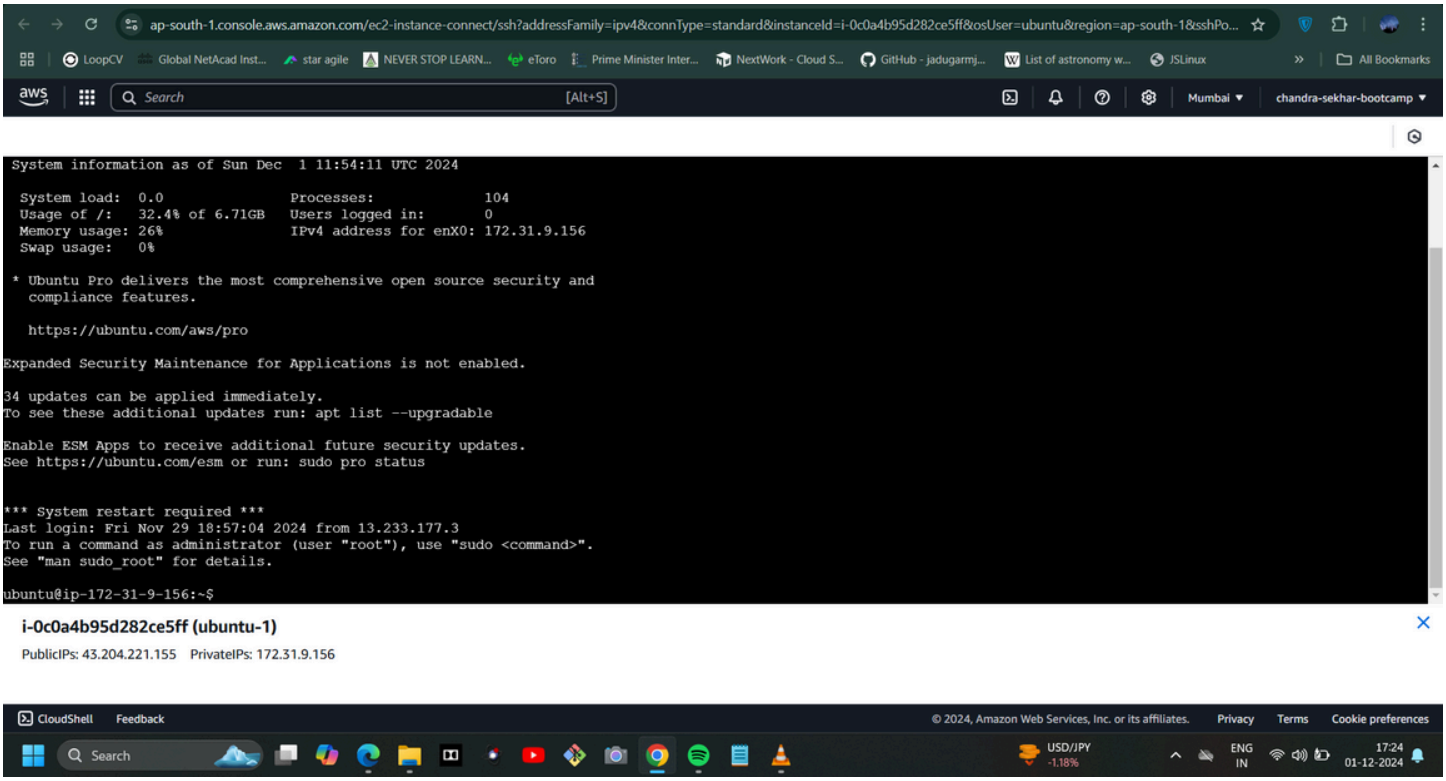
Install Tomcat web application server in AWS EC2 Ubuntu Instance and access Tomcat using a web browser.

Step - 1

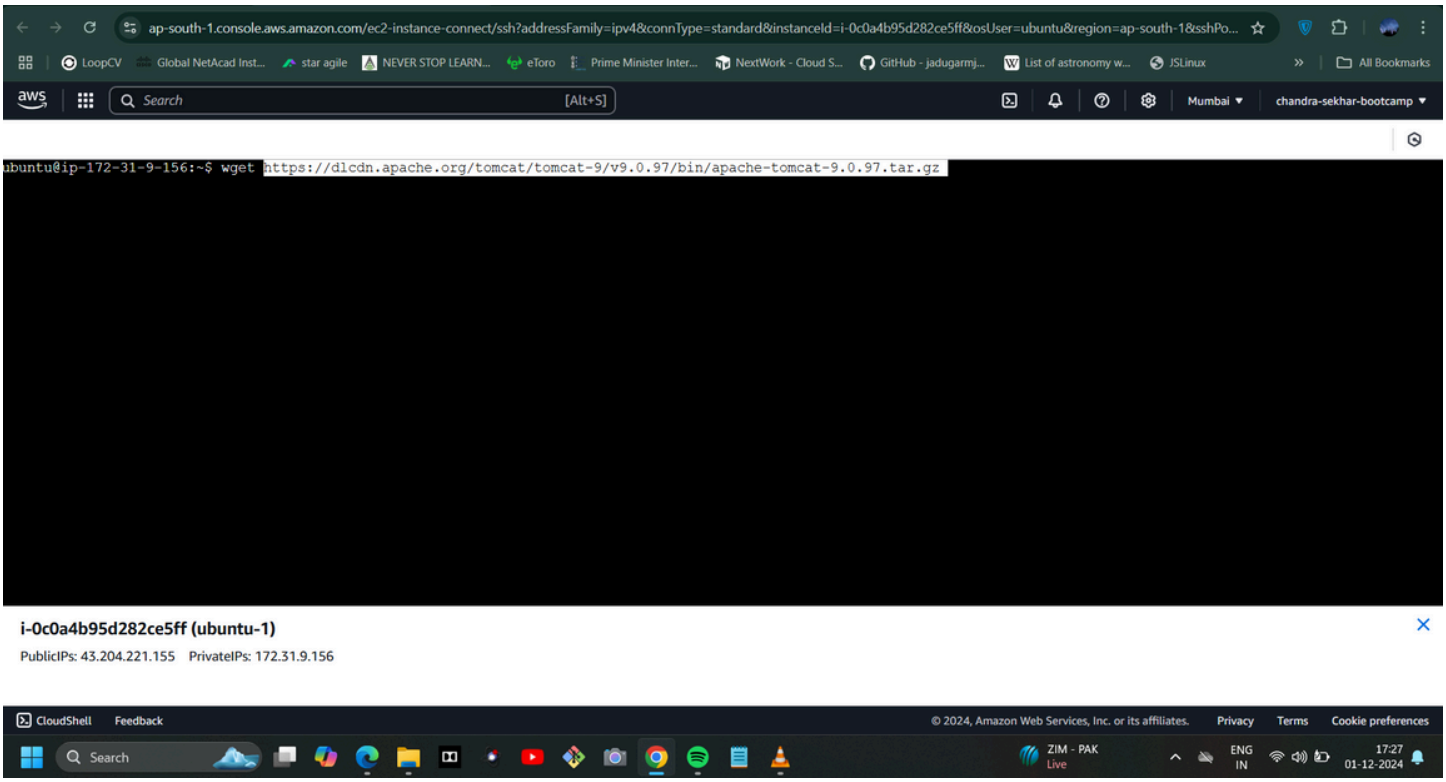
Launch and connect the ubuntu instance.



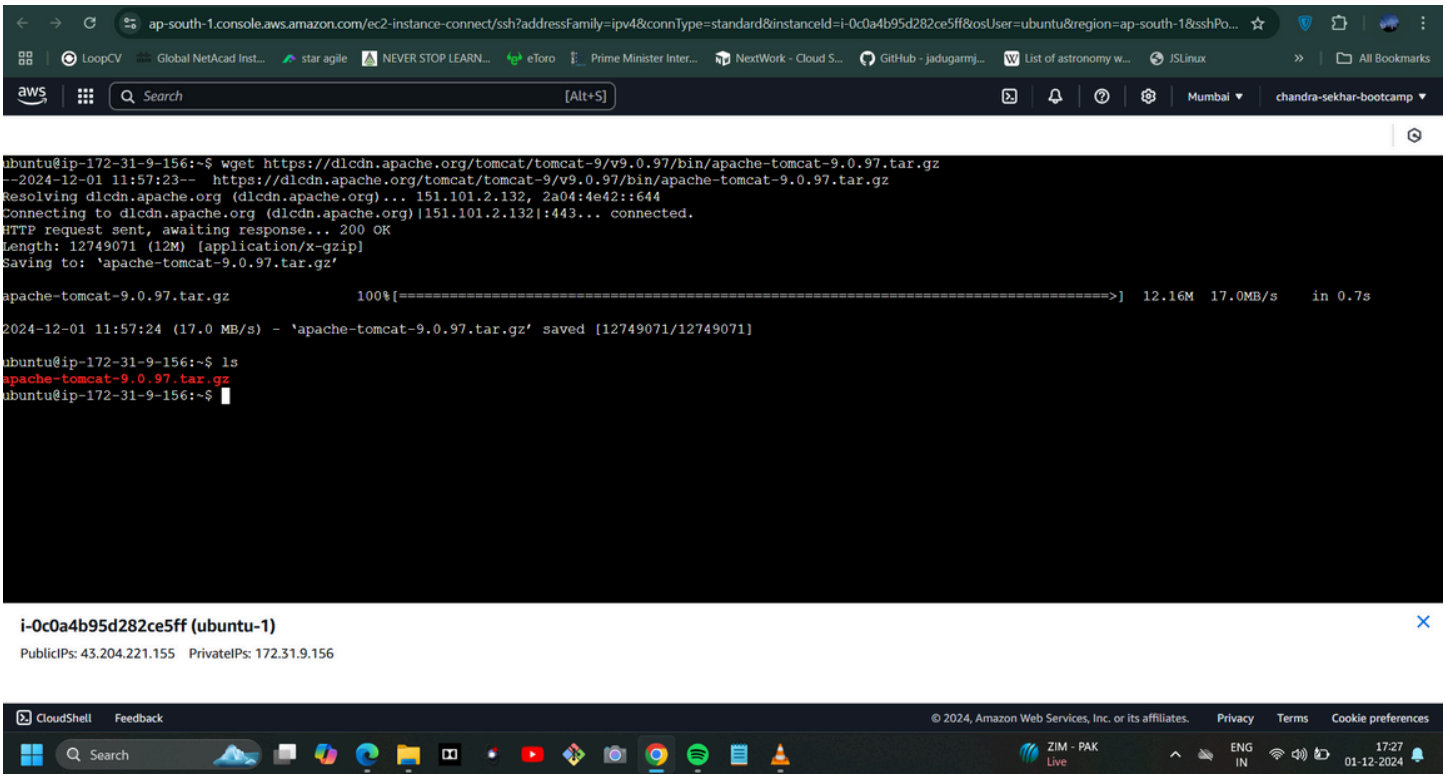




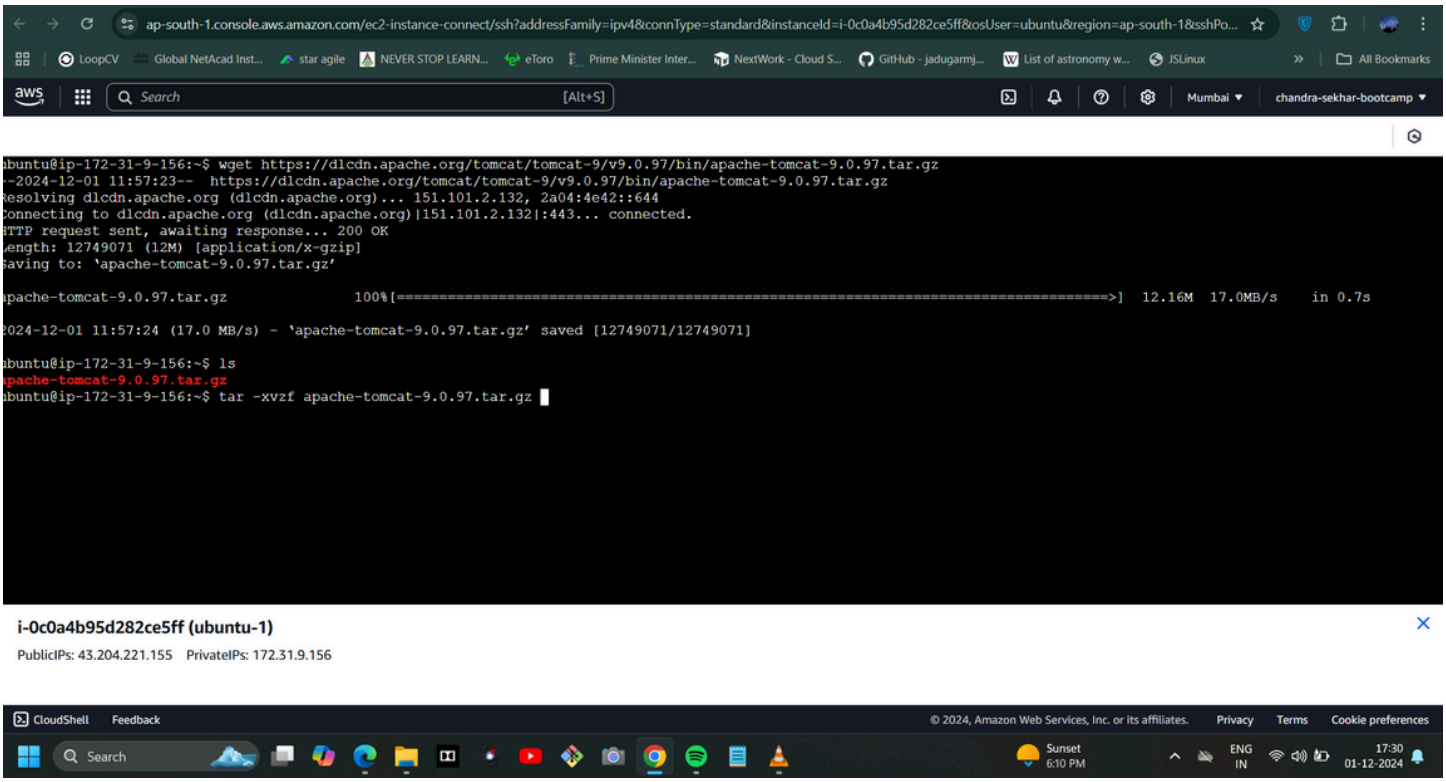
To download enter command “wget url of the file ”



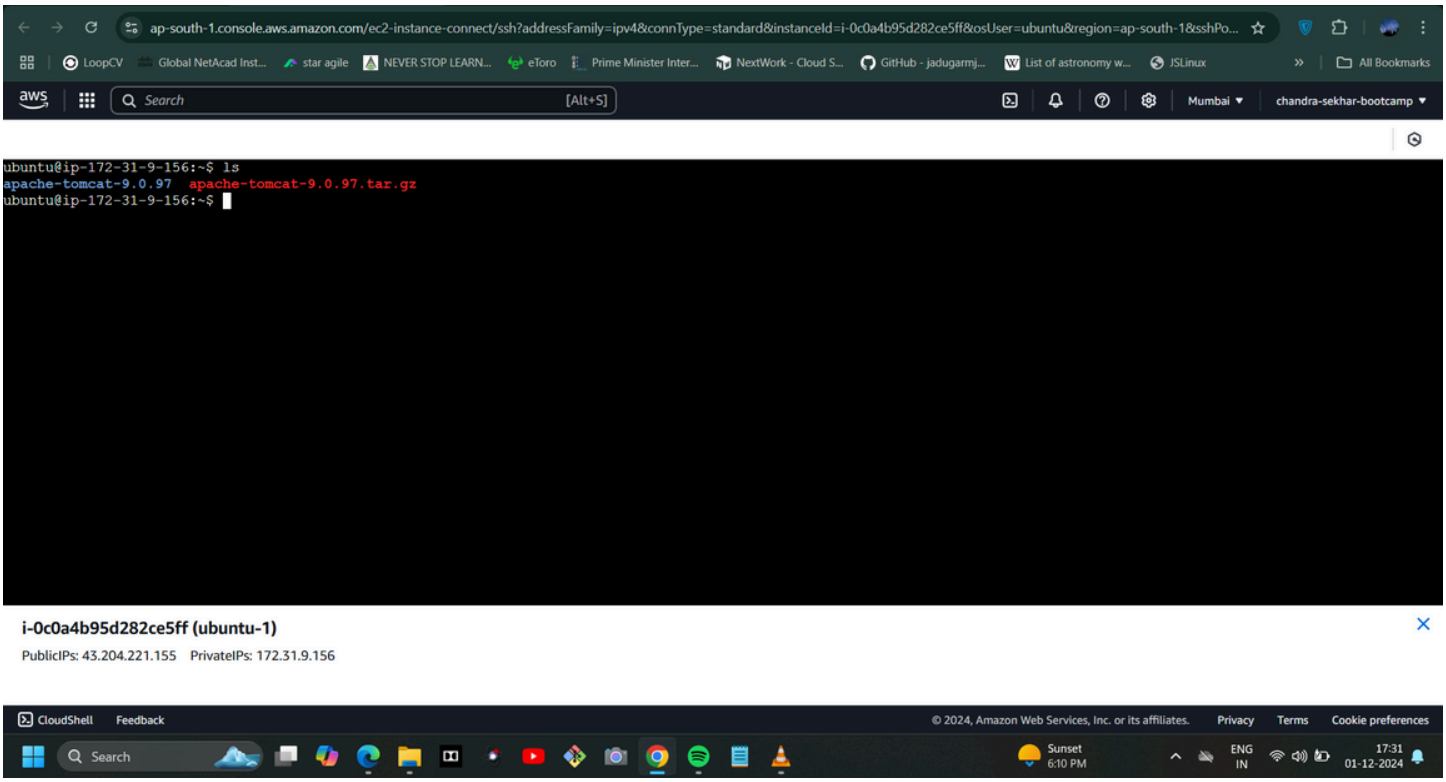
we can see the apache tar zip file after enterinf “ls” command.



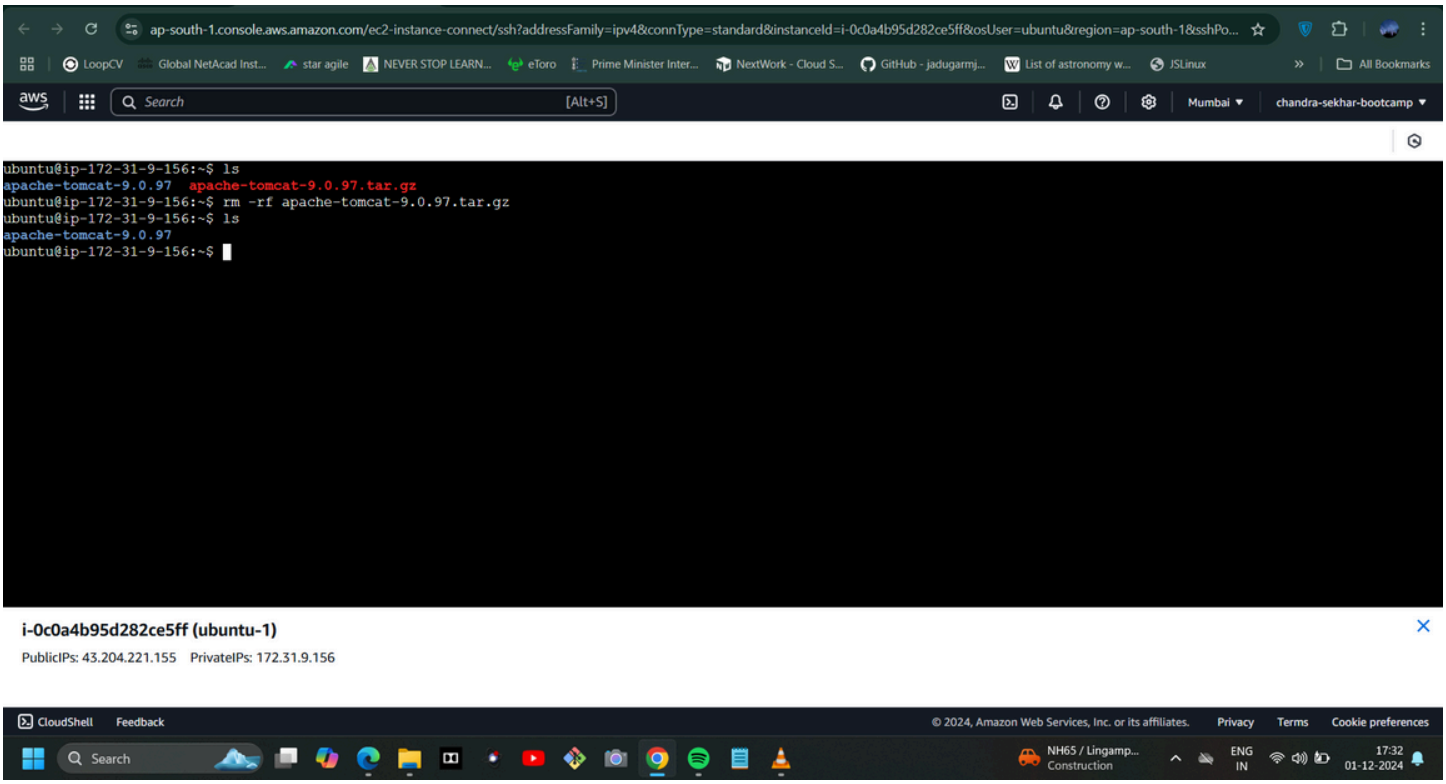
To unzip the tar file enter command “tar -xvzf-tomcat-9.0.097.tar.gz”



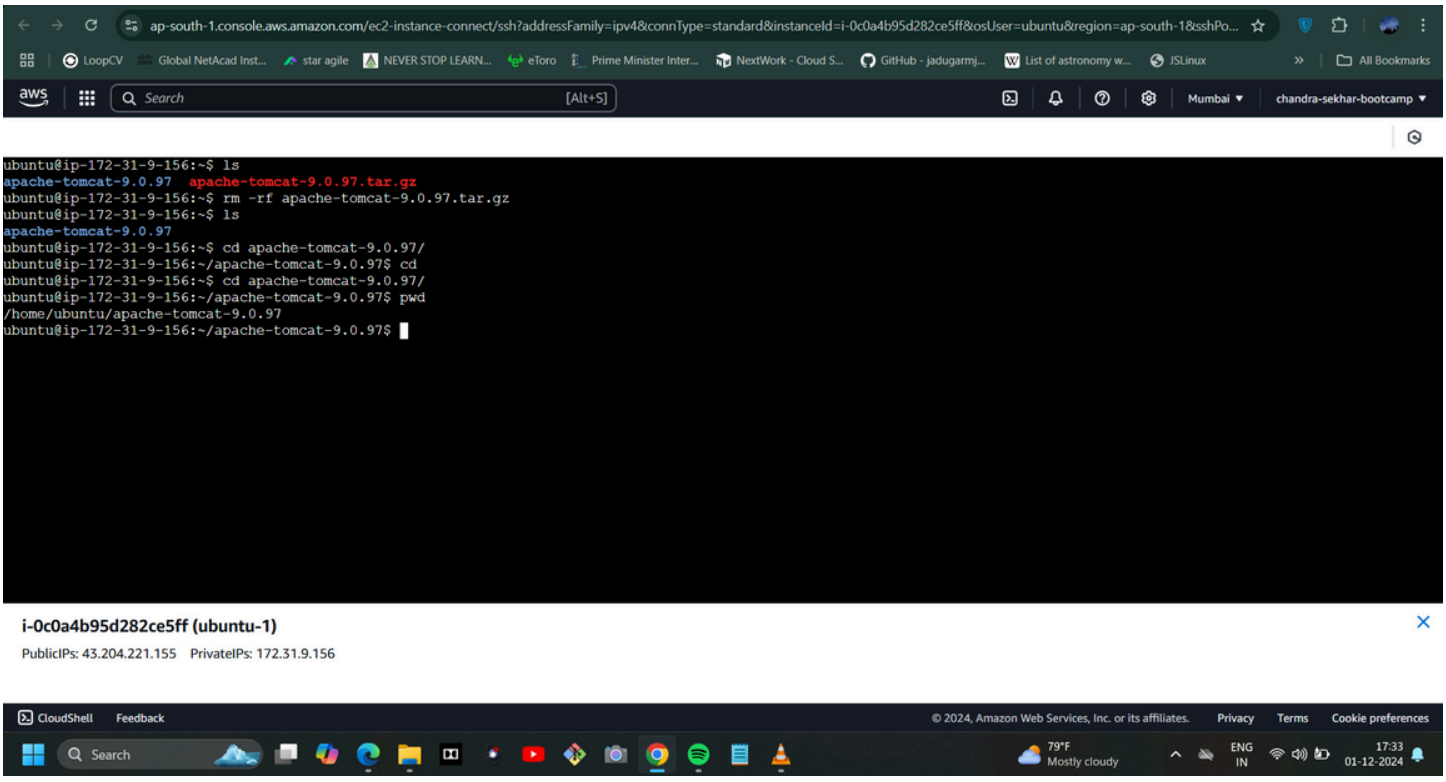
after the above command enter ls command to see the unzip file.



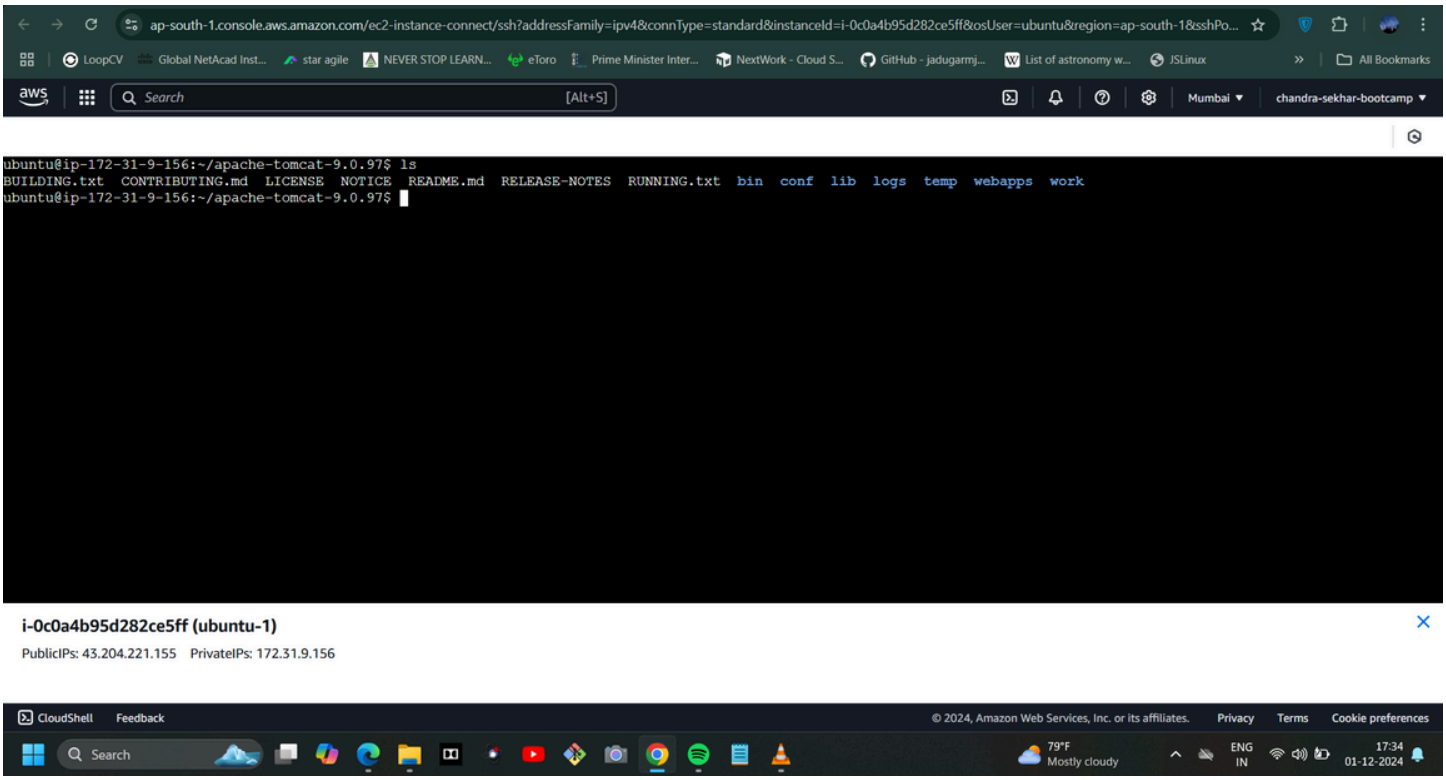
now to remove the zip file from folder enter command “ rm -rf tomcat-9.0.097.tar.gz”



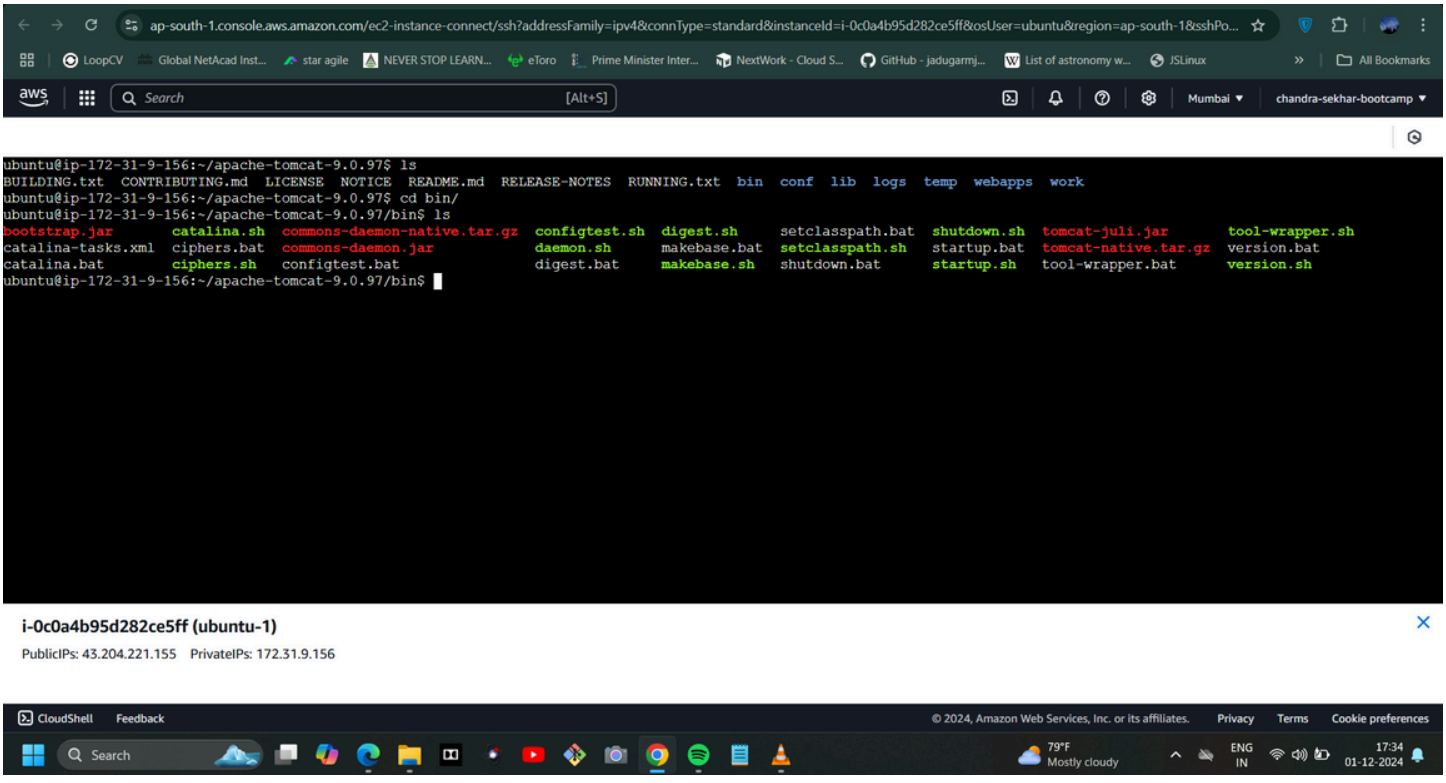
Enter command “cd apache- tomcat-9.0.097" to change the directory.



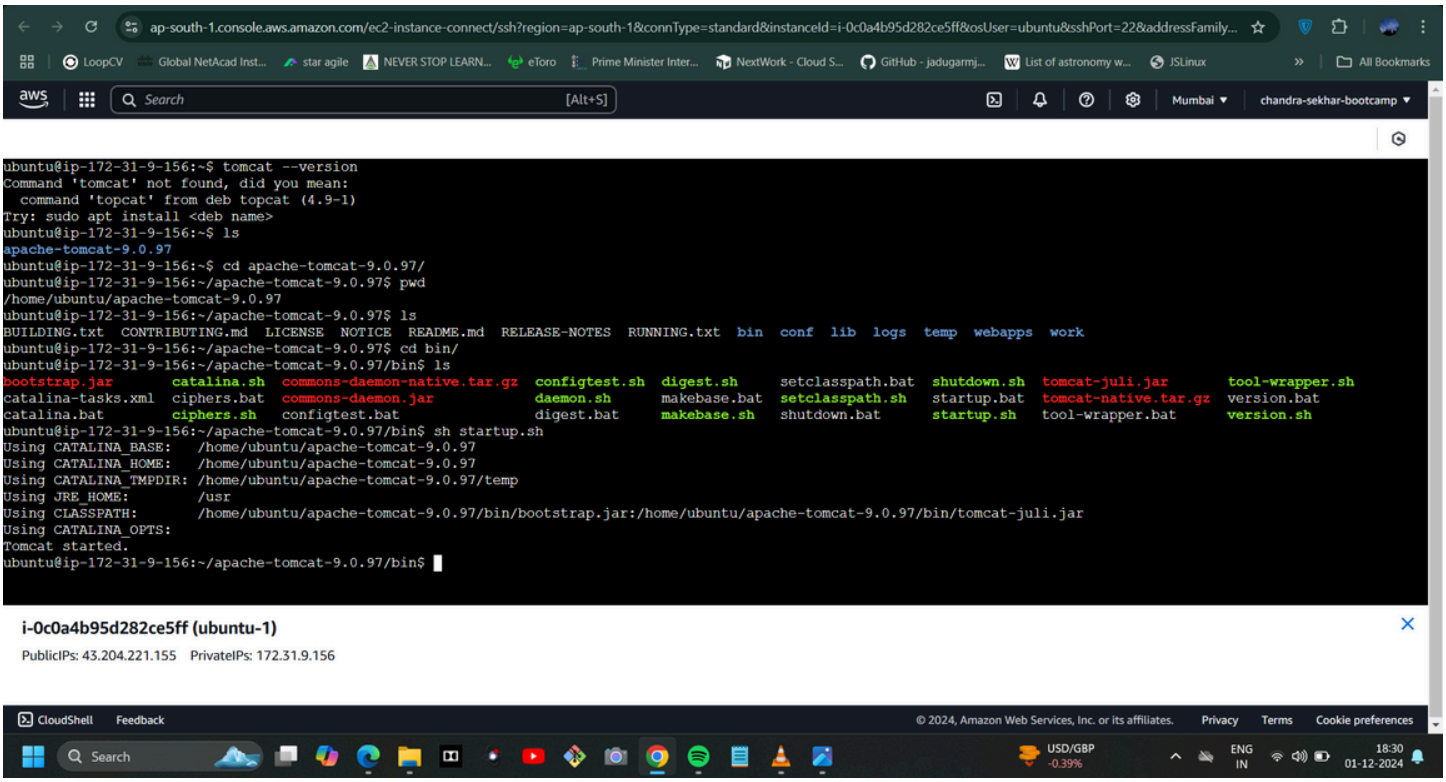
Enter ls to use bin folder



Enter commmand “cd bin” to access bin files



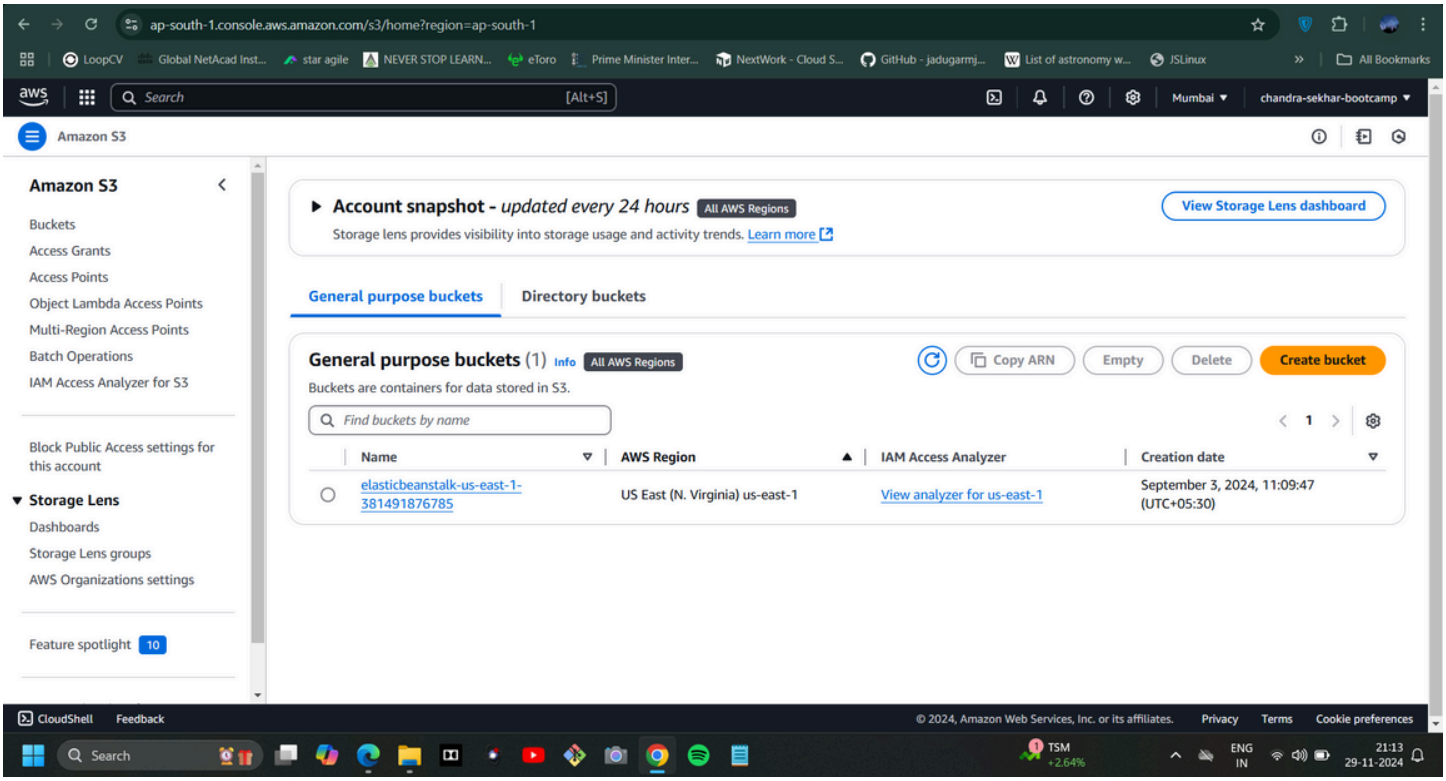
Enter command “sh startup.sh” to startup the tomcat. we can see tomcat started successfully.


ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0c0a4b95d282ce5ff&osUser=ubuntu&sshPort=22&addressFamily...
LoopCV
Global NetAcad Inst...
star agile
NEVER STOP LEARN...
eToro
Prime Minister Inter...
NextWork - Cloud S...
GitHub - jadugarmj...
List of astronomy w...
JSLinux
All Bookmarks
aws
Search
[Alt+S]
Mumbai
chandra-sekhar-bootcamp
ubuntu@ip-172-31-9-156:~$ tomcat --version
Command 'tomcat' not found, did you mean:
command 'topcat' from deb topcat (4.9-1)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-9-156:~$ ls
apache-tomcat-9.0.97
ubuntu@ip-172-31-9-156:~$ cd apache-tomcat-9.0.97/
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97$ pwd
/home/ubuntu/apache-tomcat-9.0.97
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97$ ls
BUILDING.txt CONTRIBUTING.md LICENSE NOTICE README.md RELEASE-NOTES RUNNING.txt bin conf lib logs temp webapps work
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97$ cd bin/
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97/bin$ ls
bootstrap.jar catalina.sh commons-daemon-native.tar.gz configtest.sh digest.sh setclasspath.bat shutdown.sh tomcat-juli.jar tool-wrapper.sh
catalina-tasks.xml ciphers.bat commons-daemon.jar daemon.sh makebase.bat setclasspath.sh startup.bat tomcat-native.tar.gz version.bat
catalina.bat ciphers.sh configtest.bat digest.bat makebase.sh shutdown.bat startup.sh tool-wrapper.bat version.sh
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97/bin$ sh startup.sh
Using CATALINA_BASE: /home/ubuntu/apache-tomcat-9.0.97
Using CATALINA_HOME: /home/ubuntu/apache-tomcat-9.0.97
Using CATALINA_TMPDIR: /home/ubuntu/apache-tomcat-9.0.97/temp
Using JRE_HOME: /usr
Using CLASSPATH: /home/ubuntu/apache-tomcat-9.0.97/bin/bootstrap.jar:/home/ubuntu/apache-tomcat-9.0.97/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
ubuntu@ip-172-31-9-156:~/apache-tomcat-9.0.97/bin$
i-0c0a4b95d282ce5ff (ubuntu-1)
PublicIPs: 43.204.221.155 PrivateIPs: 172.31.9.156
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
Search
USD/GBP
-0.39%
ENG
IN
18:30
01-12-2024

L6 -

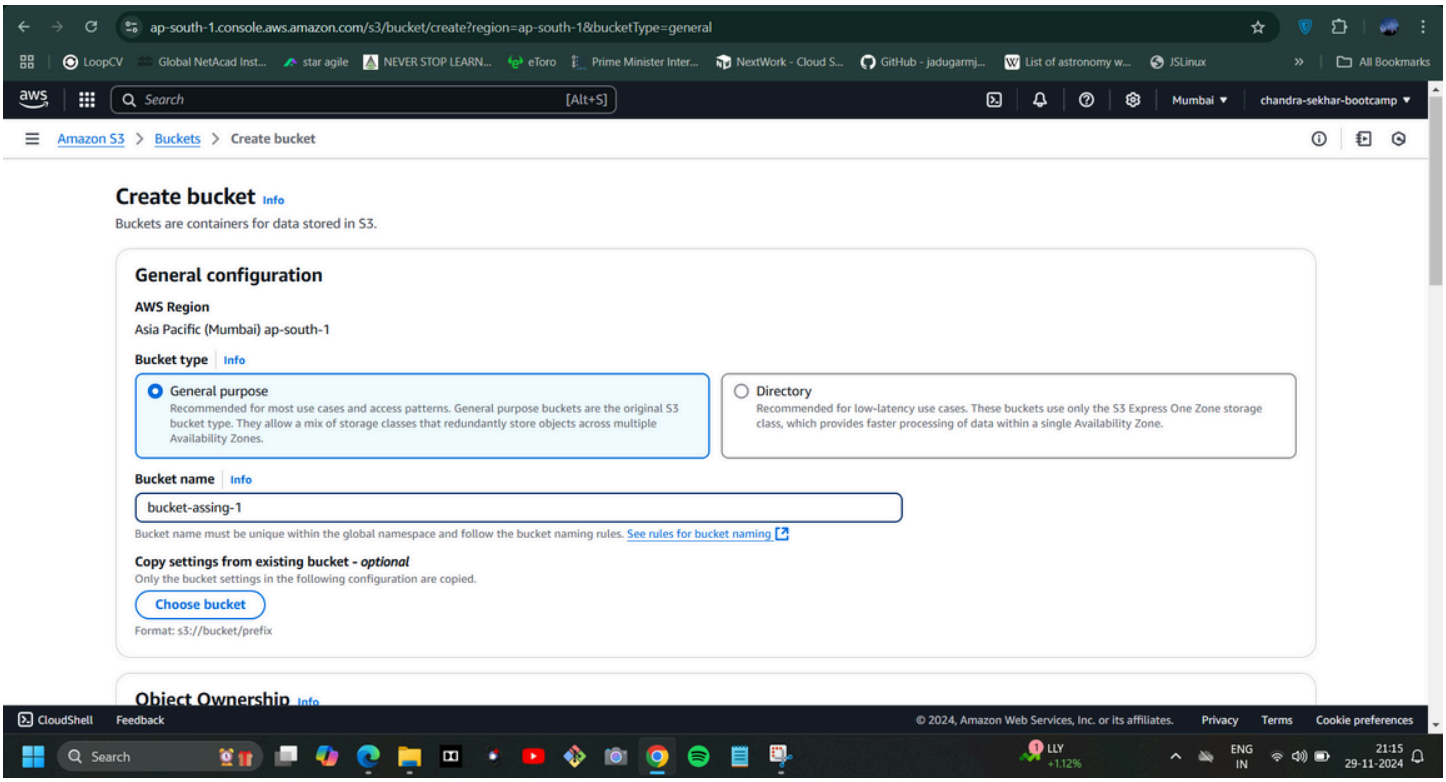
Create S3 Bucket and add folders and files

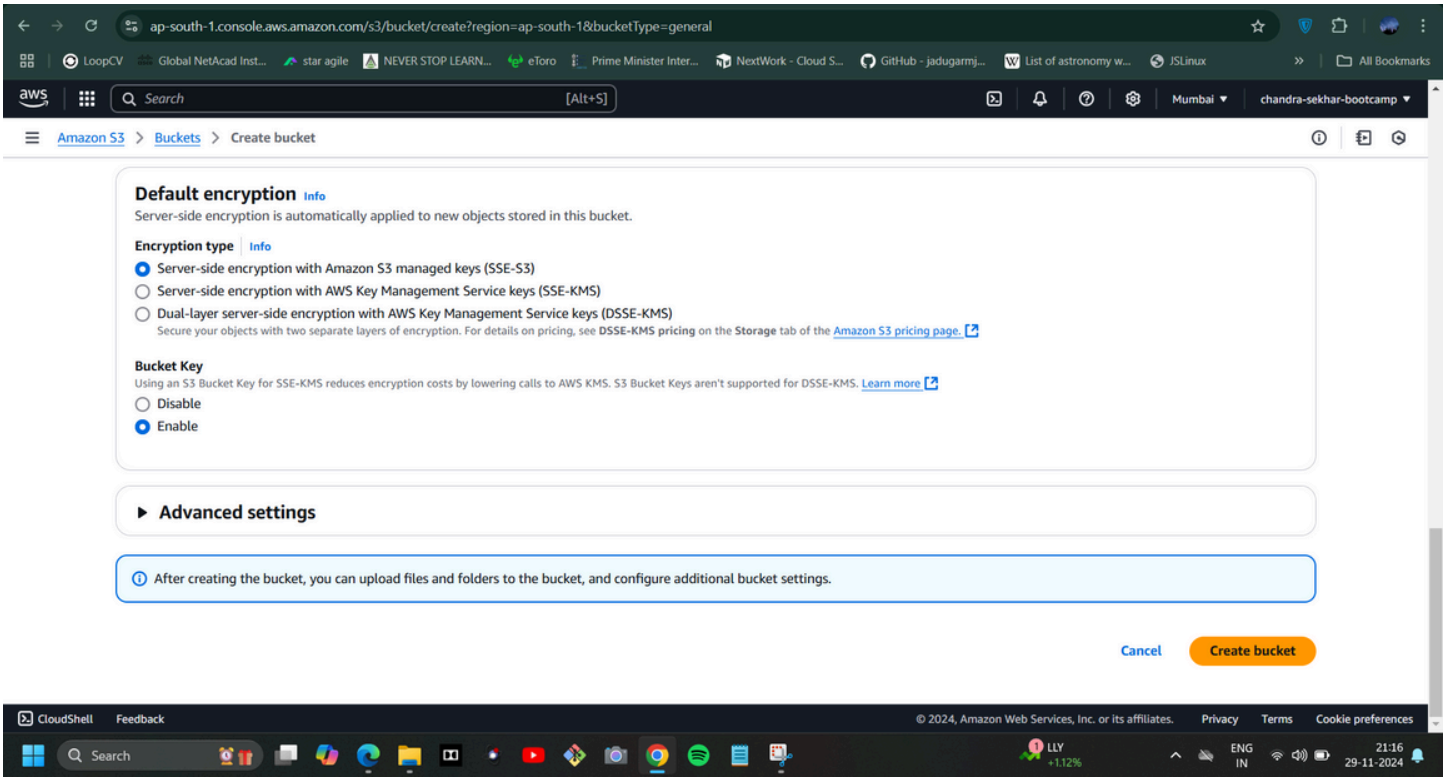
Step-1 Click on create bucket option.

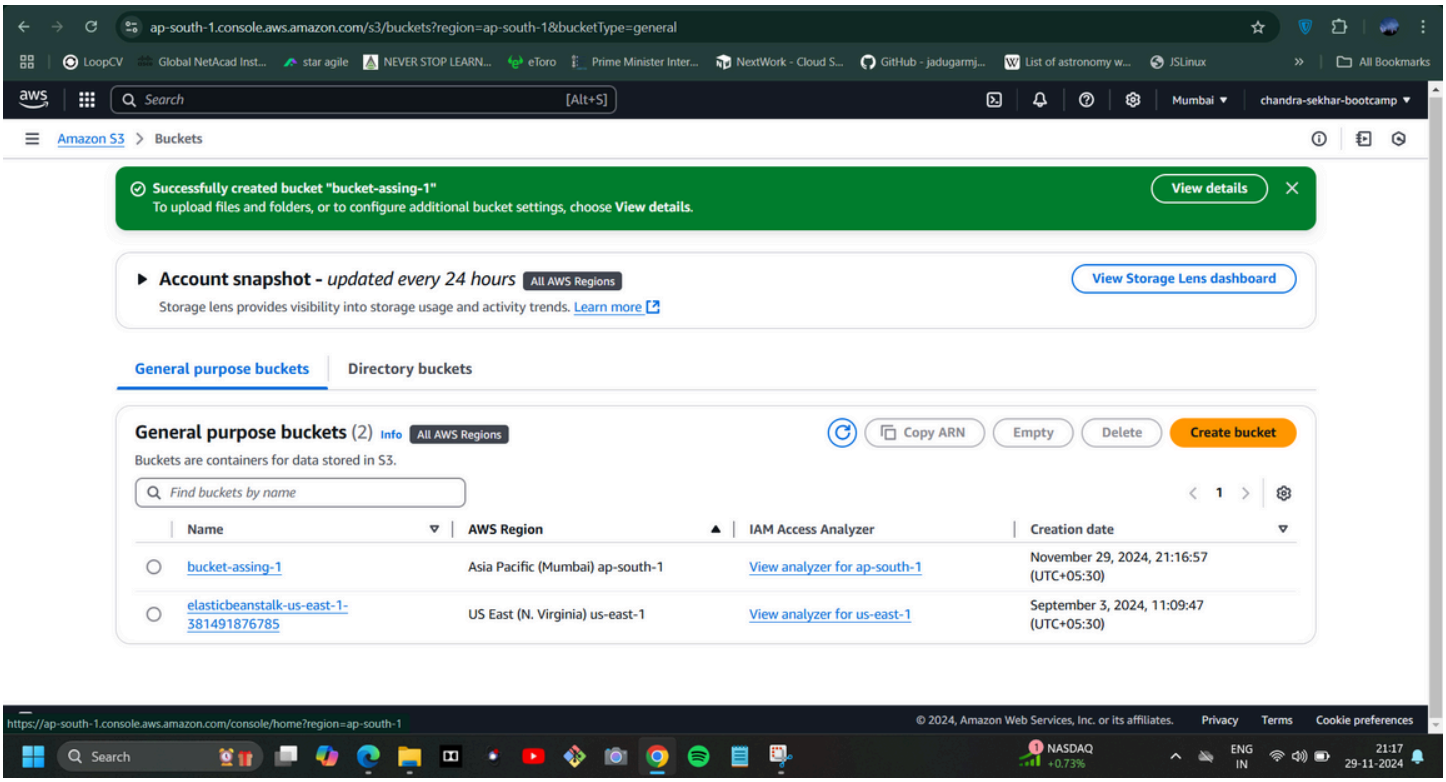


Step - 2

Leaving everything as default and then clicking on create bucket option.

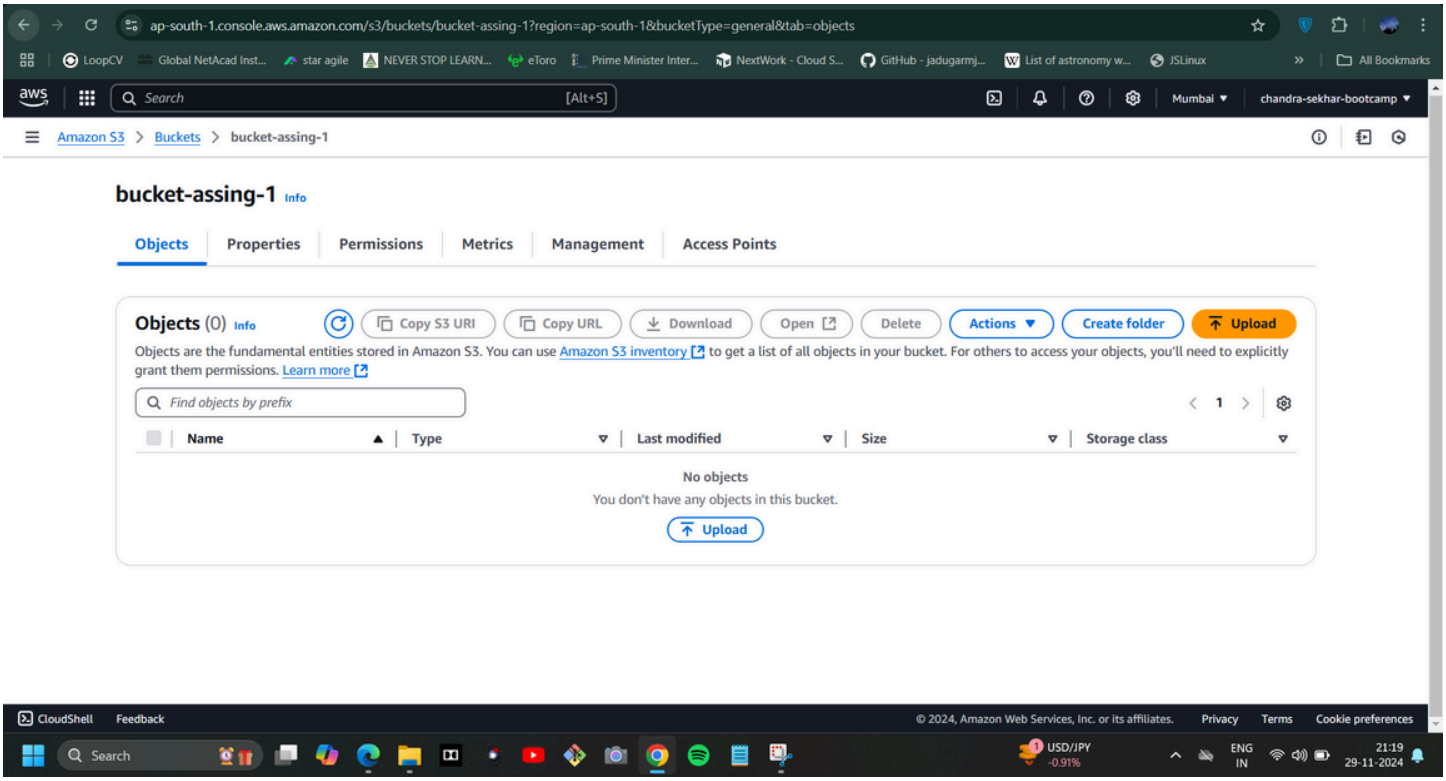

ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general
Search [Alt+S]
Mumbai
chandra-sekhar-bootcamp
Amazon S3 > Buckets > Create bucket
Create bucket Info
Buckets are containers for data stored in S3.
General configuration
AWS Region
Asia Pacific (Mumbai) ap-south-1
Bucket type Info
General purpose
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.
Directory
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.
Bucket name Info
bucket-assing-1
Bucket name must be unique within the global namespace and follow the bucket naming rules. See rules for bucket naming
Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.
Choose bucket
Format: s3://bucket/prefix
Object Ownership Info
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general
Search [Alt+S]
Mumbai
chandra-sekhar-bootcamp
Amazon S3 > Buckets > Create bucket
Default encryption Info
Server-side encryption is automatically applied to new objects stored in this bucket.
Encryption type Info
Server-side encryption with Amazon S3 managed keys (SSE-S3)
Server-side encryption with AWS Key Management Service keys (SSE-KMS)
Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)
Secure your objects with two separate layers of encryption. For details on pricing, see DSSE-KMS pricing on the Storage tab of the Amazon S3 pricing page.
Bucket Key
Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. Learn more
Disable
Enable
Advanced settings
After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.
Cancel
Create bucket
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

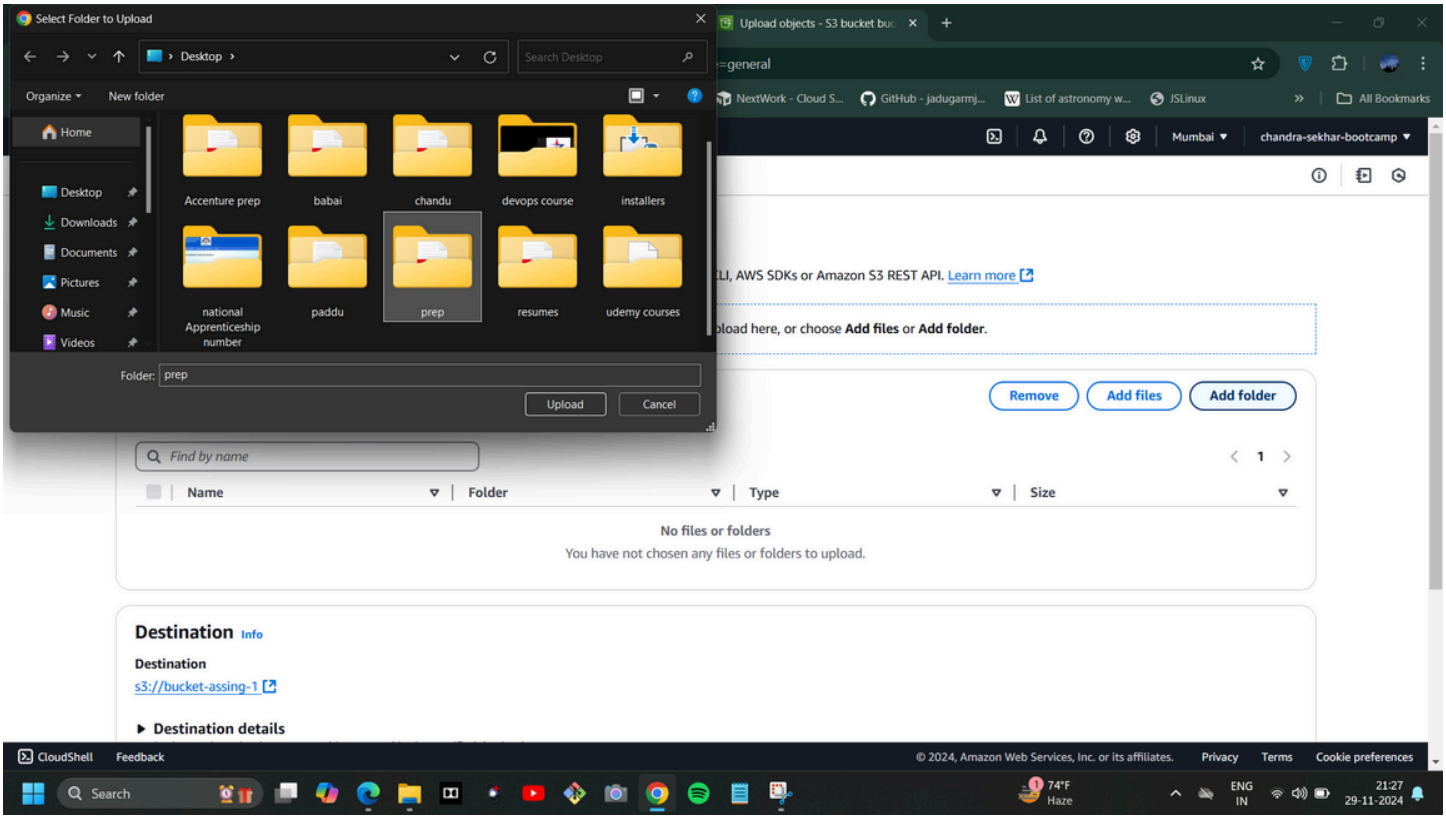


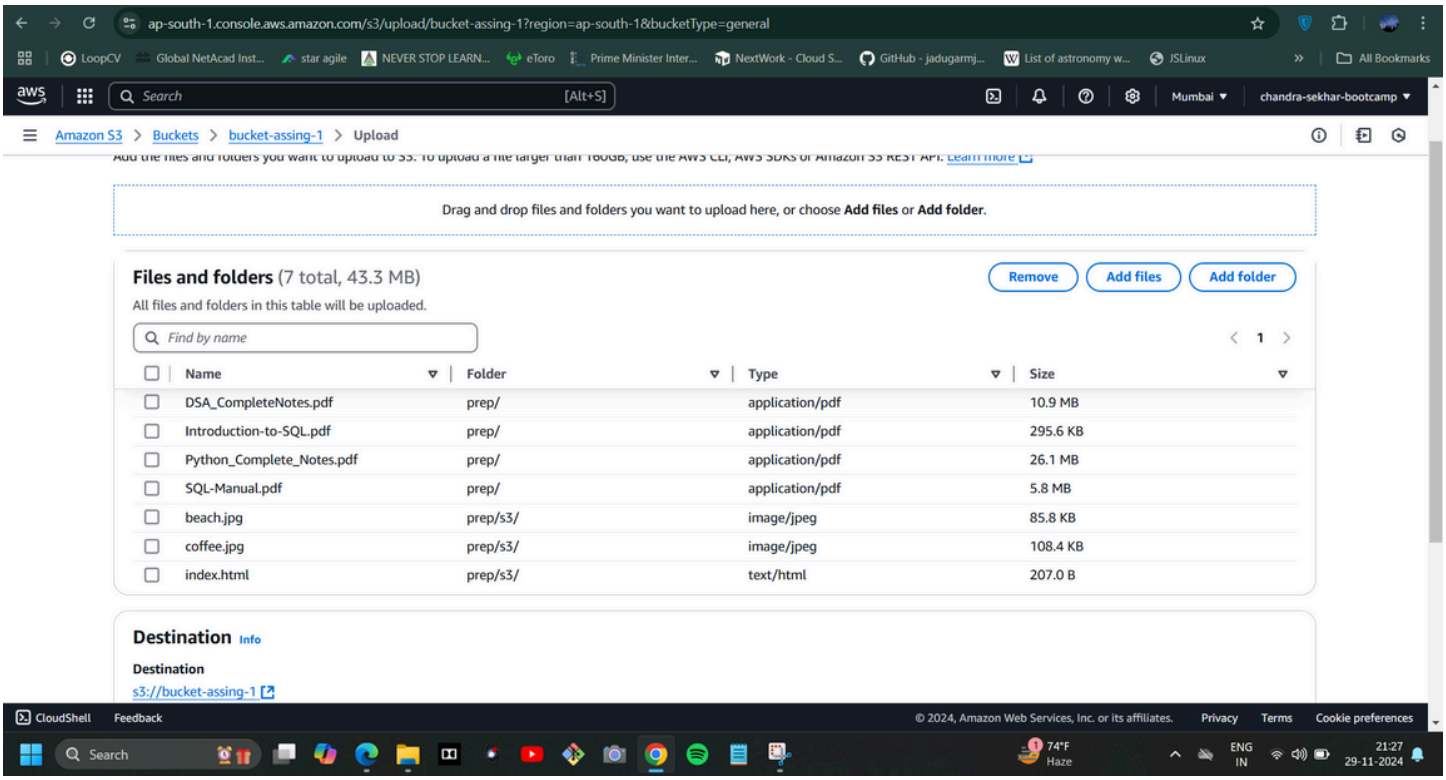
Step - 3

now adding folders and files

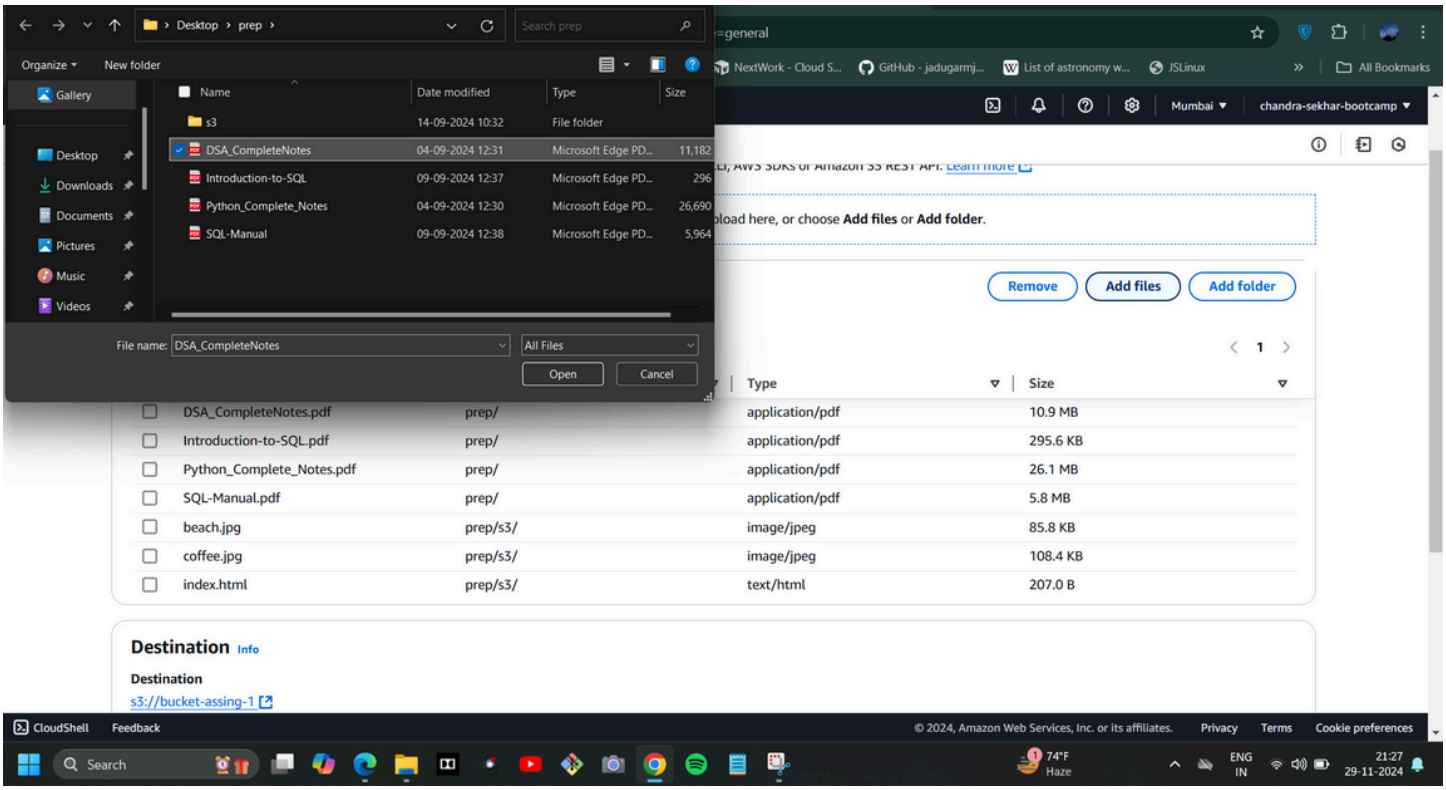


Adding Folders

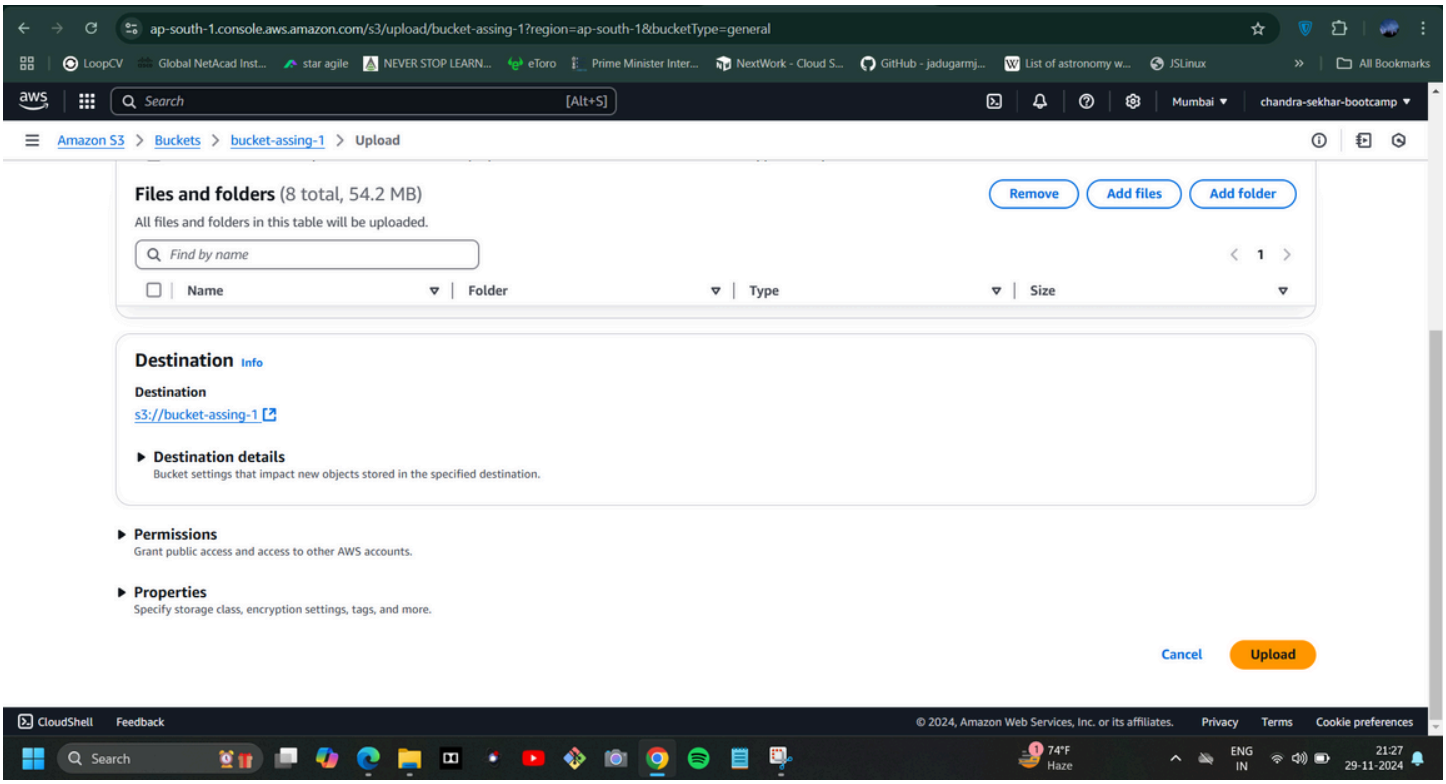


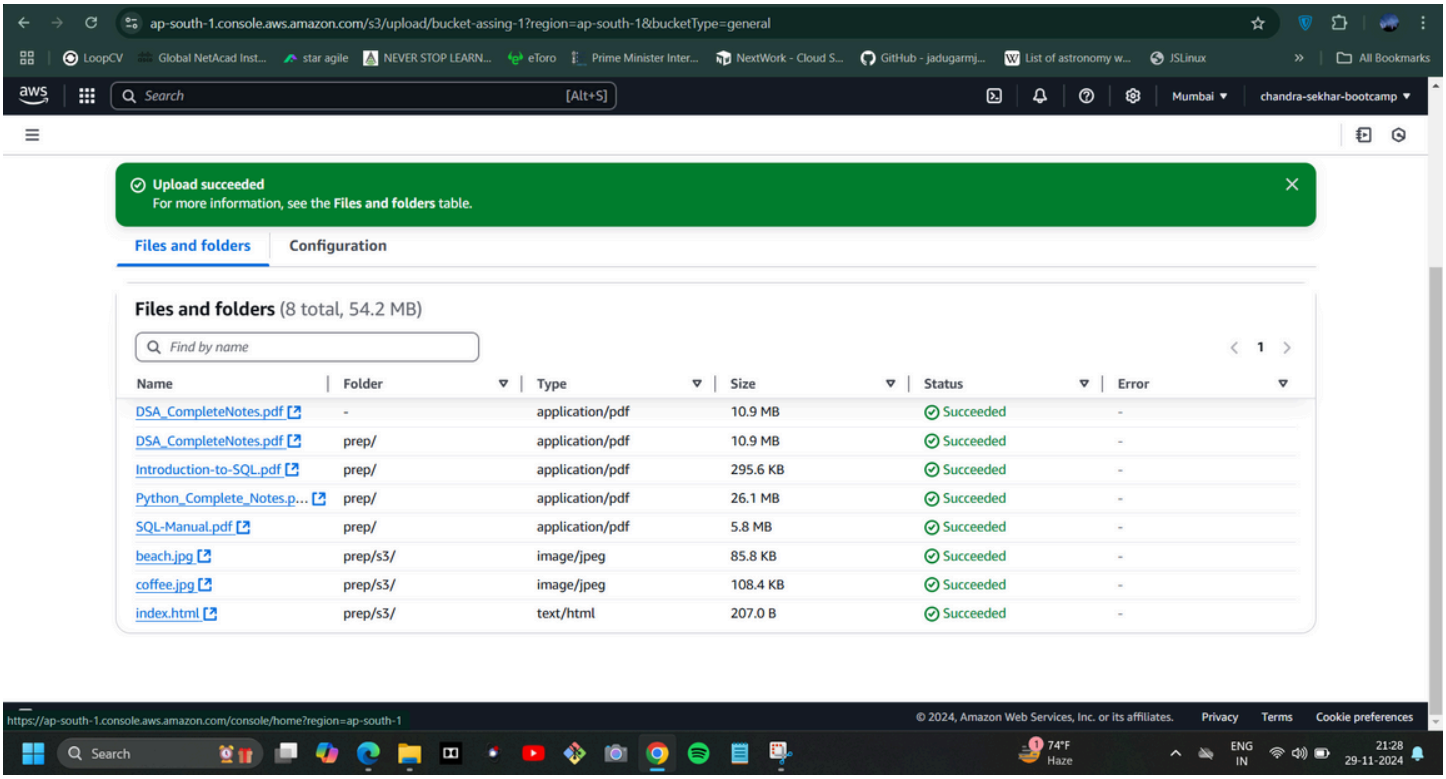


Adding Files



Uploading all of them to S3 bucket





final result