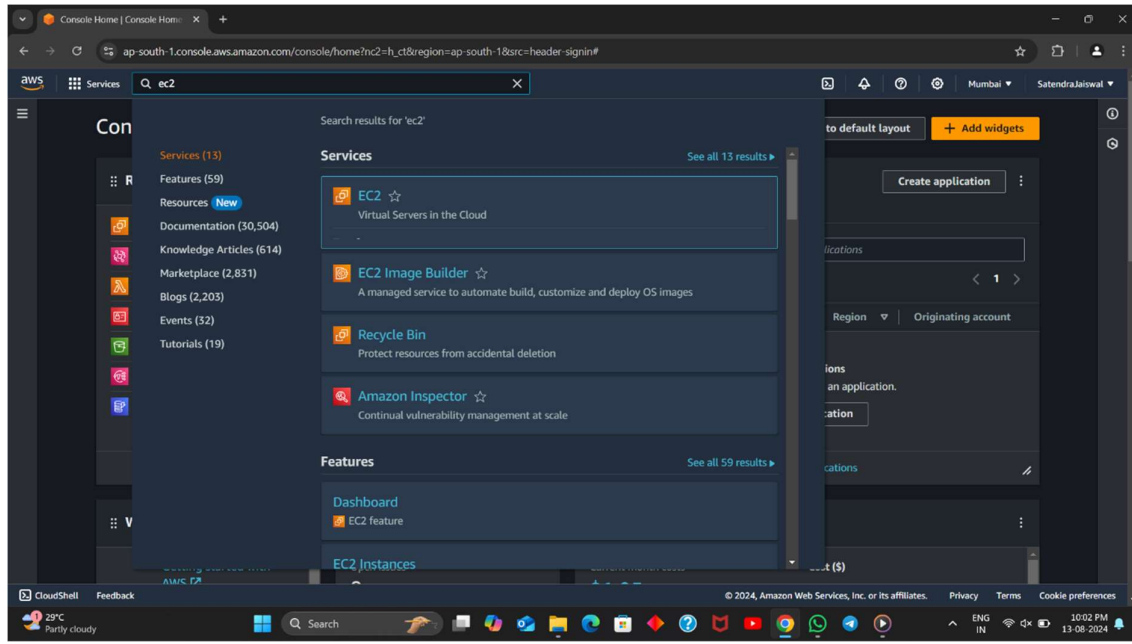


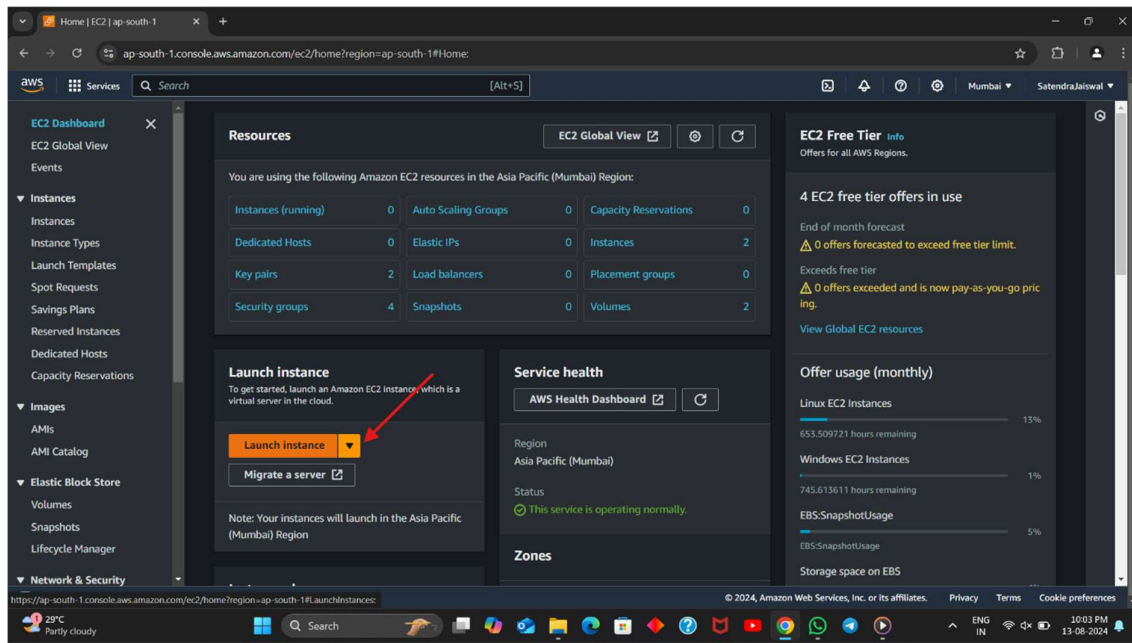
Amazon AWS

EC2 Server Instance Start/Stop Using Lambda

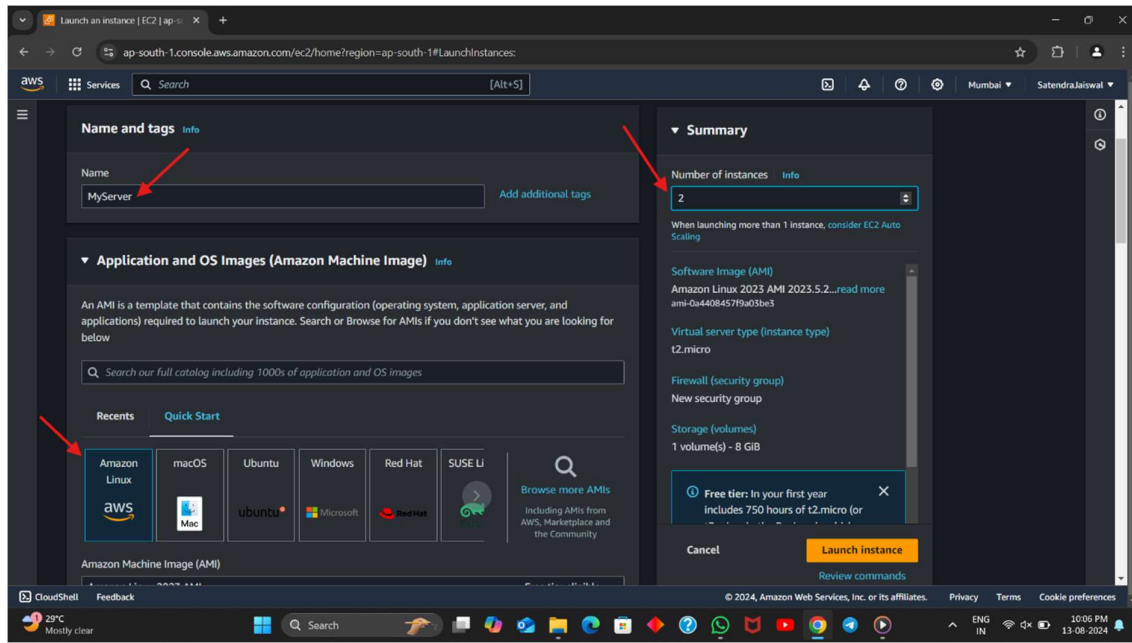
Step 1:- Sign in to Amazon AWS Management Console and Search For EC2



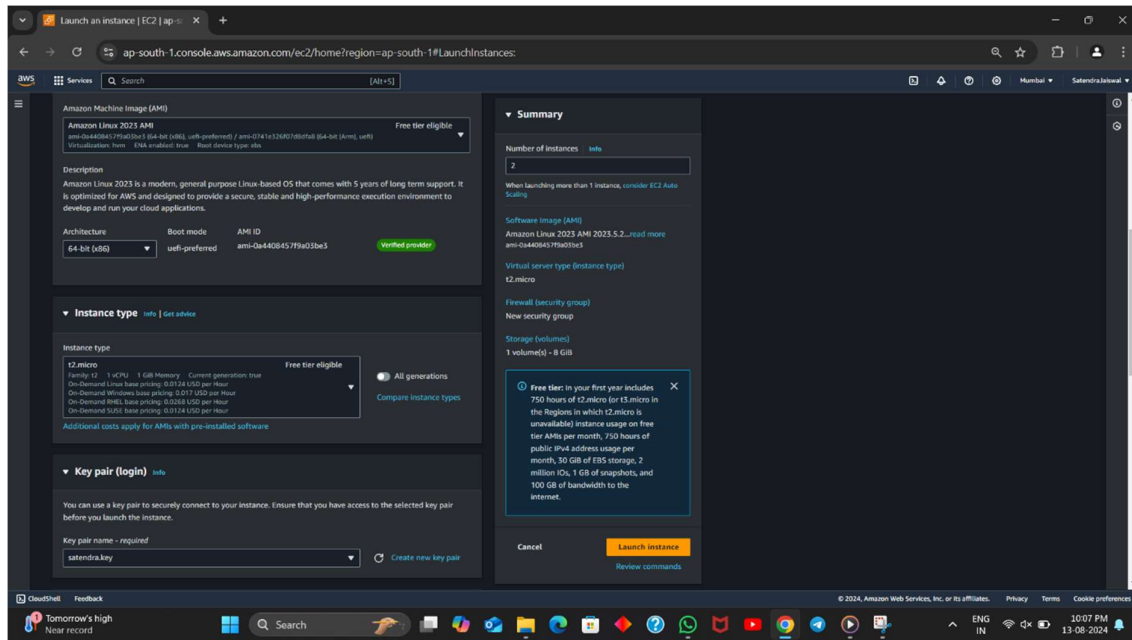
Step 2:- Click On Launch Instance to Launch An Instance



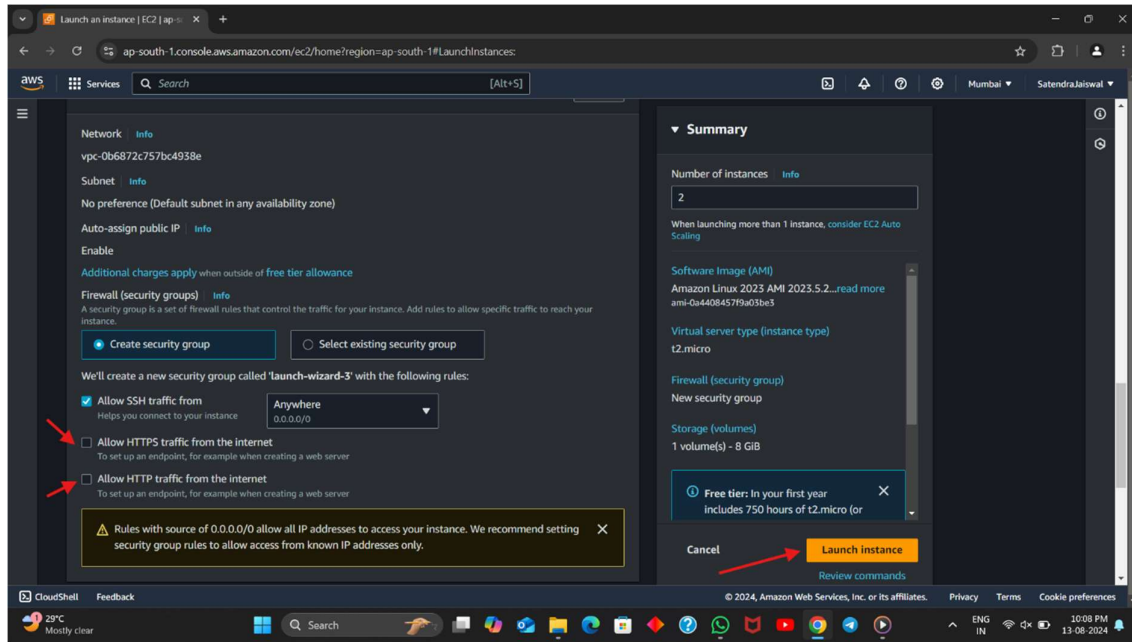
Step 3:- Enter A Name For Instance→Set Number of Instances to 2→Select Any OS(Here We Will Choose Amazon Linux)



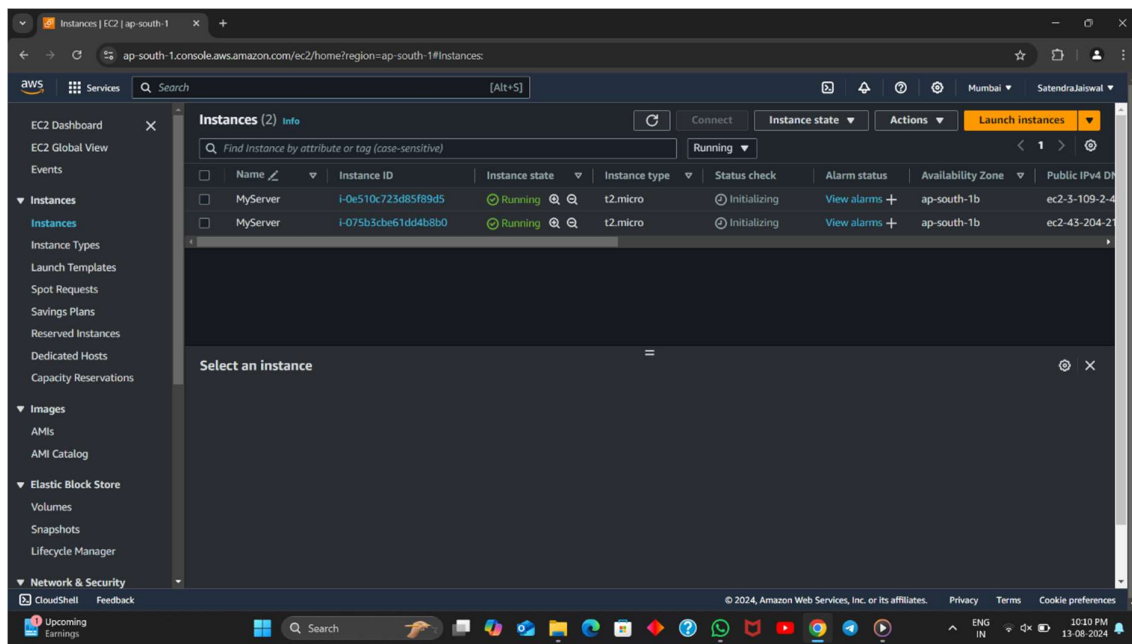
Step 4:- Select Amazon Machine Image(AMI),Instance Type, and Key Pair



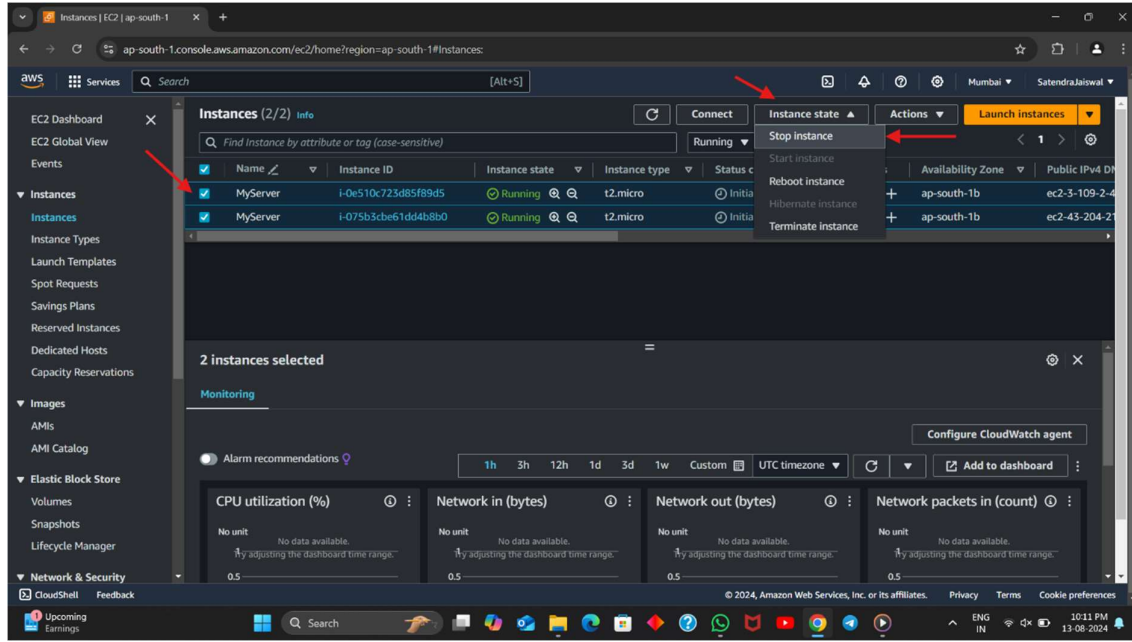
Step 5:- Allow HTTPS and HTTP Connection and Click on Launch Instance to Launch The Instances



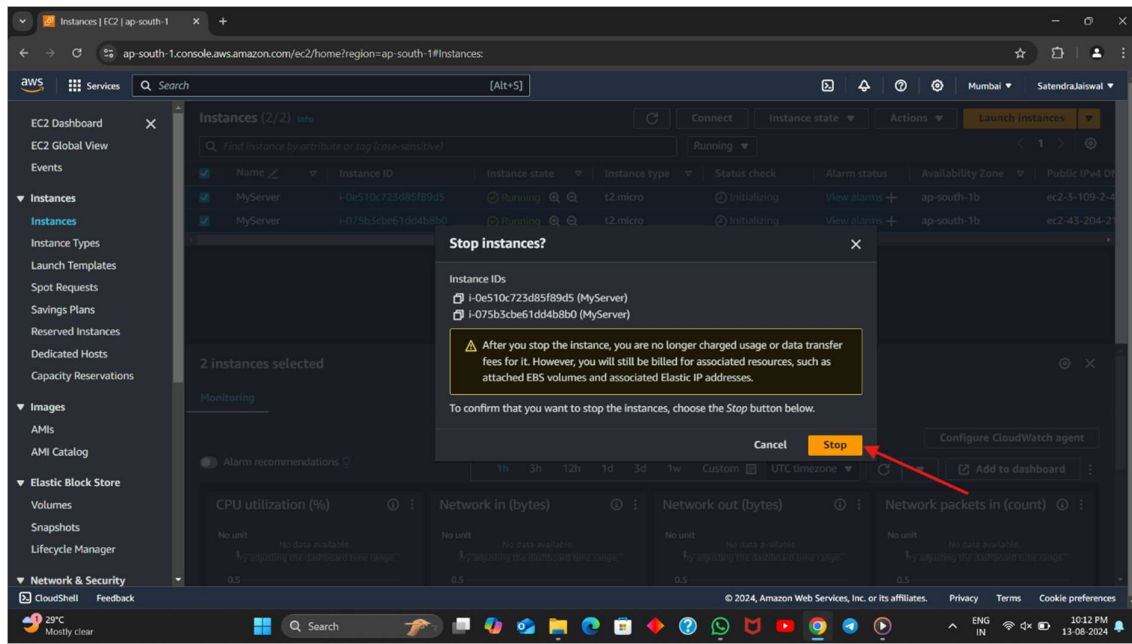
Instances Are Launched Successfully:



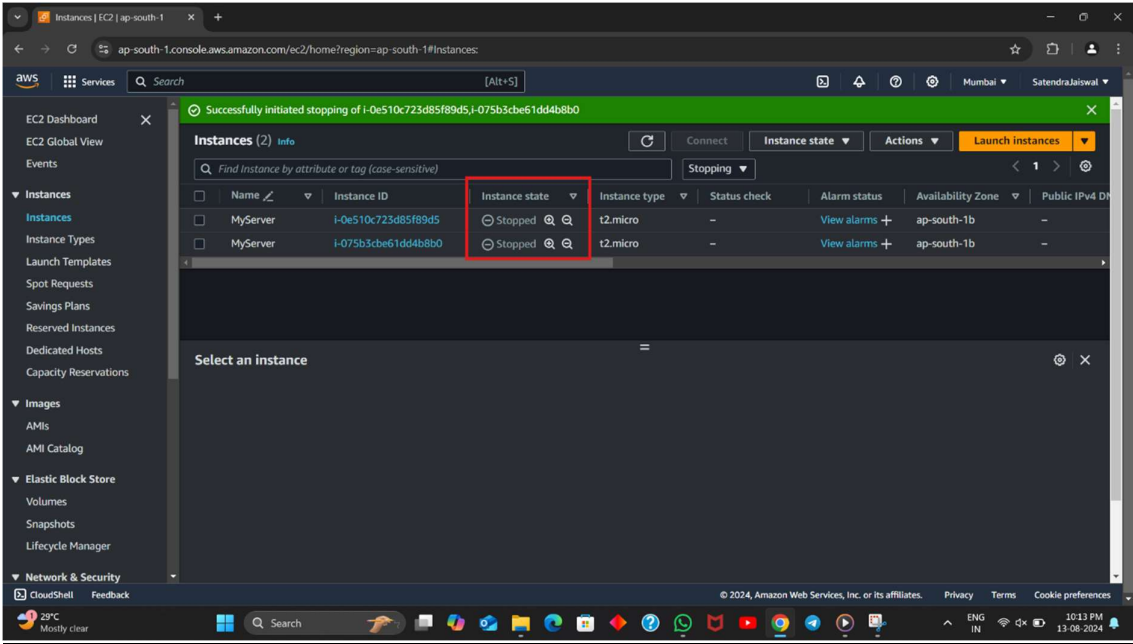
Step 6:- Now Stop The Server By Clicking Instance State→Stop Instance



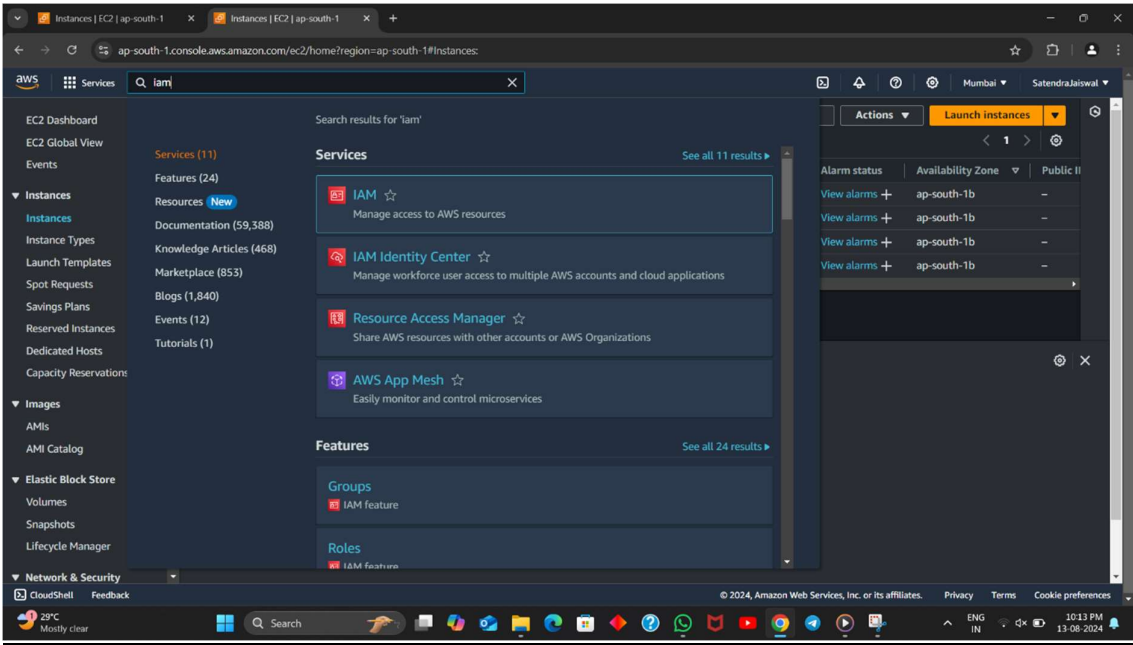
Click on Stop



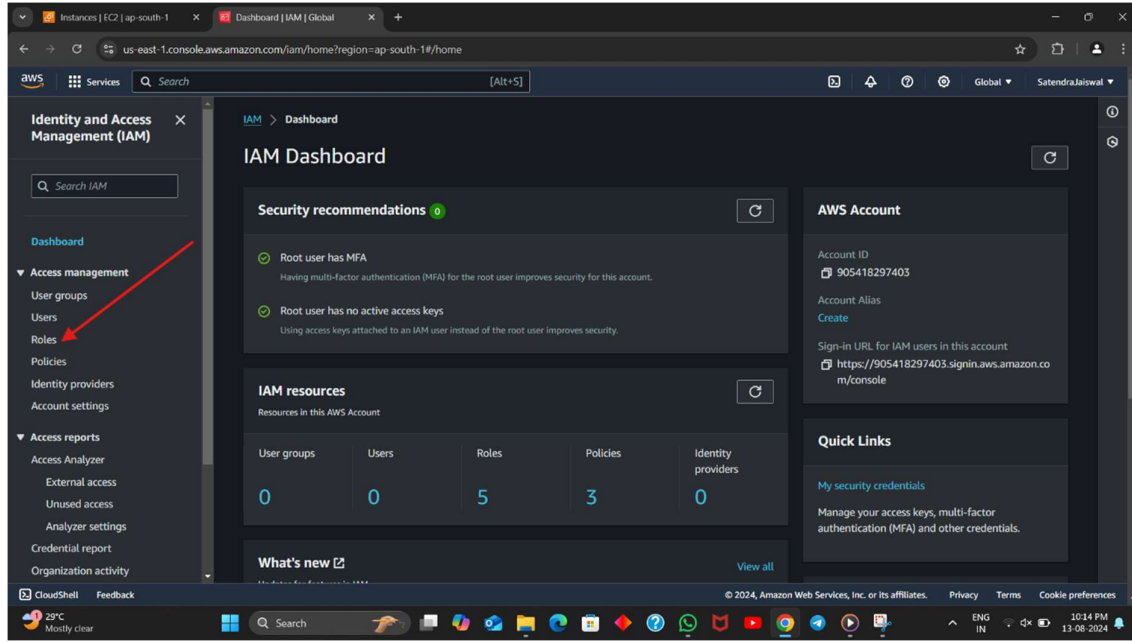
Instances are Stopped Successfully



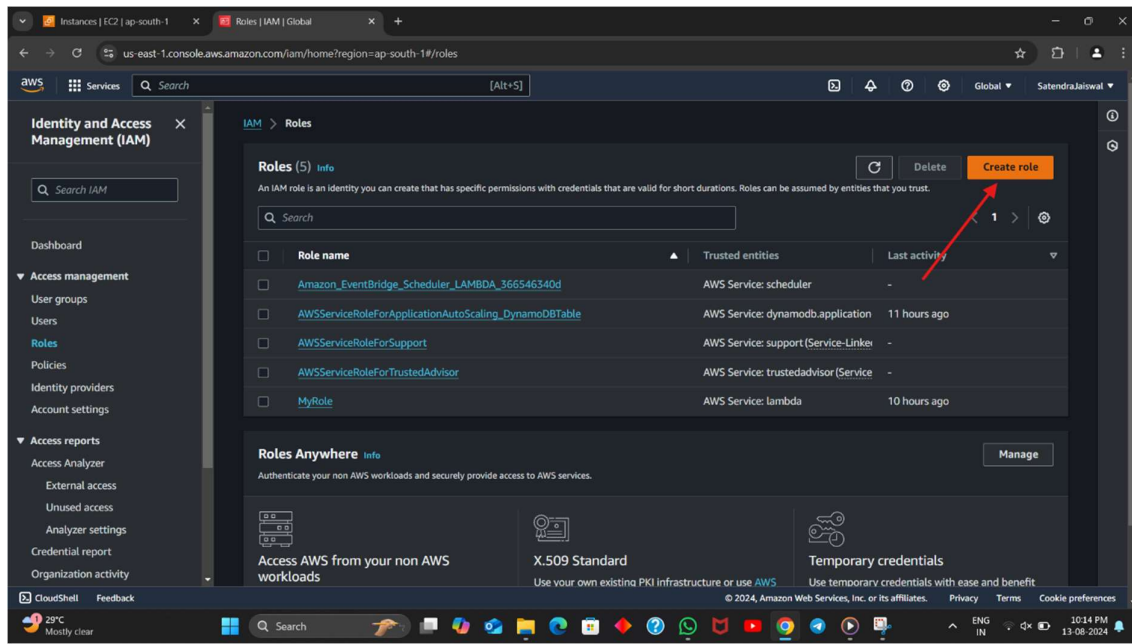
Step 7:- Now GoTo Search Bar and Search For IAM



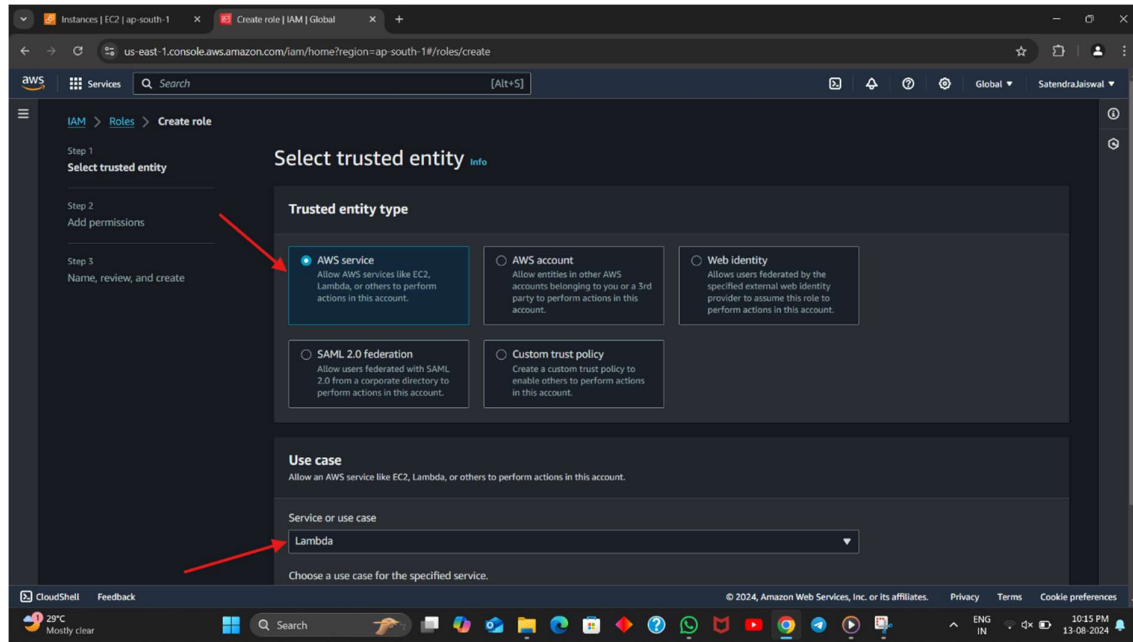
Step 8:- Click on Rules



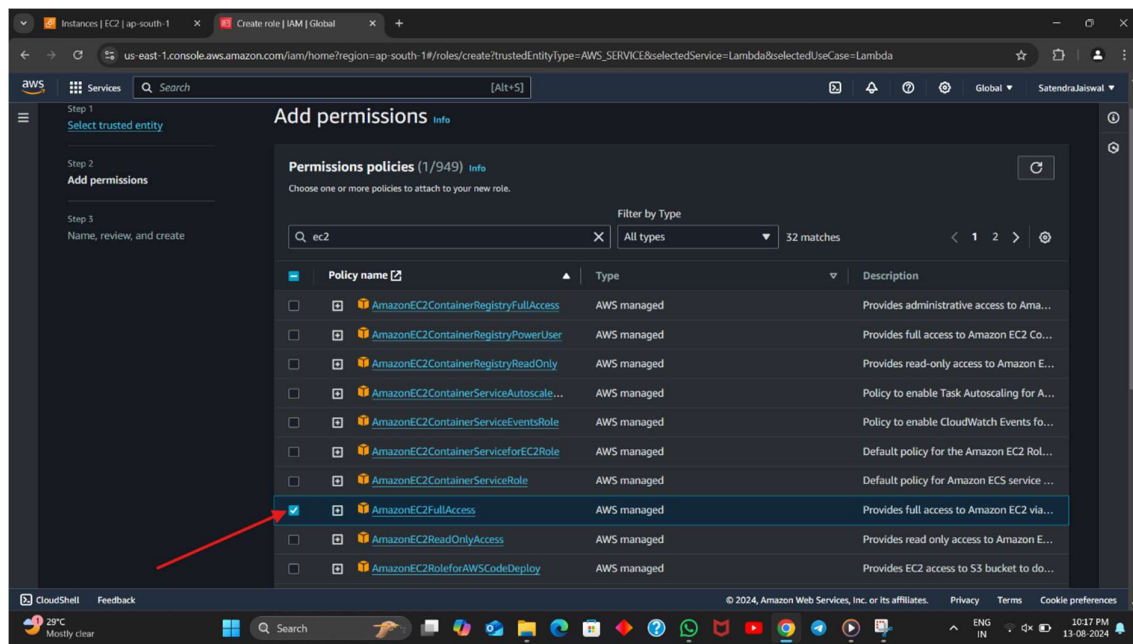
Step 9:- Click Create Role



Step 10:- Now Under Select Trusted Entity, Choose AWS Service & Choose Lambda Under Use Case



Step 11:- Give EC2 Full Access Permission To The Role



Step 12:- Give Role A Name

The screenshot shows the AWS IAM console 'Create role' wizard. The browser address bar indicates the URL: `us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/roles/create?trustedEntityType=AWS_SERVICE&selectedService=Lambda&selectedUseCase=Lambda&policies=arn%3Aaws...`. The left sidebar shows the navigation menu with 'IAM' > 'Roles' > 'Create role'. The main content area is titled 'Name, review, and create'. Under 'Role details', the 'Role name' field is highlighted with a red arrow and contains the text 'RoleForStartStop'. Below it, the 'Description' field contains the text 'Allows Lambda functions to call AWS services on your behalf.' The 'Step 1: Select trusted entities' section is visible below the role details. The bottom of the screen shows the Windows taskbar with the date and time as 10:18 PM on 13-08-2024.

Role details

Role name
Enter a meaningful name to identify this role.

Description
Add a short explanation for this role.

Step 1: Select trusted entities

Trust policy

```
1 {  
2   "Version": "2012-10-17",  
3   "Statement": [  
4     {  
5       "Effect": "Allow",  
6       "Action": "lambda:*",  
7       "Resource": "*" } ]  
8 }
```

Step 13:- Click Create Role

The screenshot shows the AWS IAM console 'Create role' wizard at Step 2: Add permissions. The browser address bar is the same as in Step 12. The left sidebar shows 'IAM' > 'Roles' > 'Create role'. The main content area is titled 'Step 2: Add permissions'. Under 'Permissions policy summary', there is a table with one row: 'AmazonEC2FullAccess' (AWS managed) attached as 'Permissions policy'. Below this, the 'Step 3: Add tags' section is visible, showing 'Add tags - optional' and 'No tags associated with the resource.' A red arrow points to the 'Create role' button at the bottom right. The bottom of the screen shows the Windows taskbar with the date and time as 10:19 PM on 13-08-2024.

Step 2: Add permissions

Permissions policy summary

Policy name	Type	Attached as
AmazonEC2FullAccess	AWS managed	Permissions policy

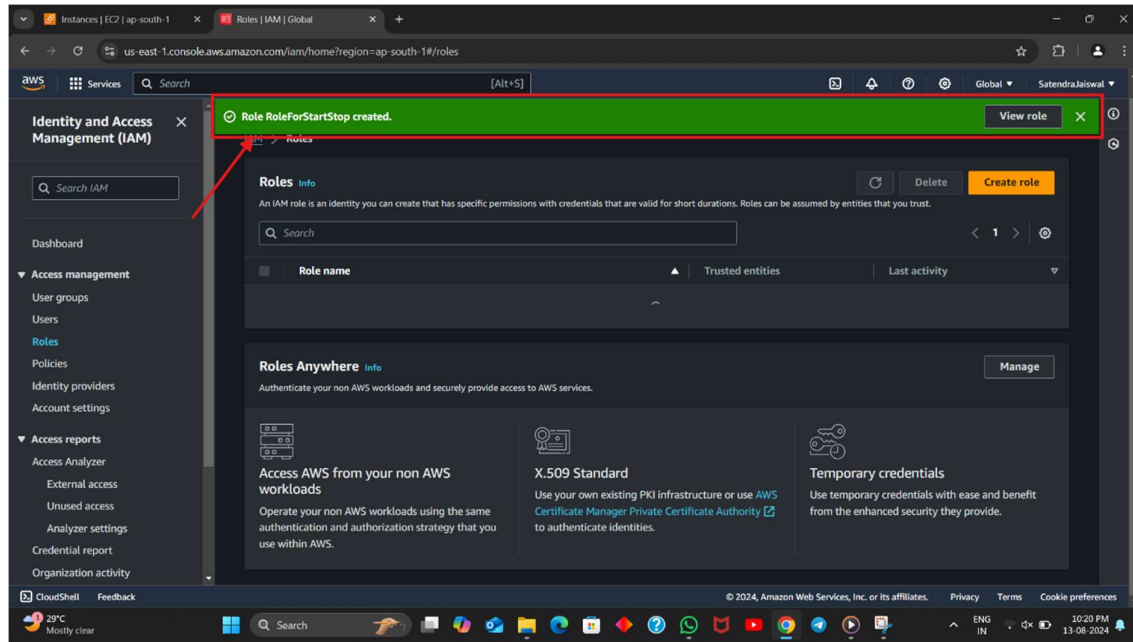
Step 3: Add tags

Add tags - optional [Info](#)
Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

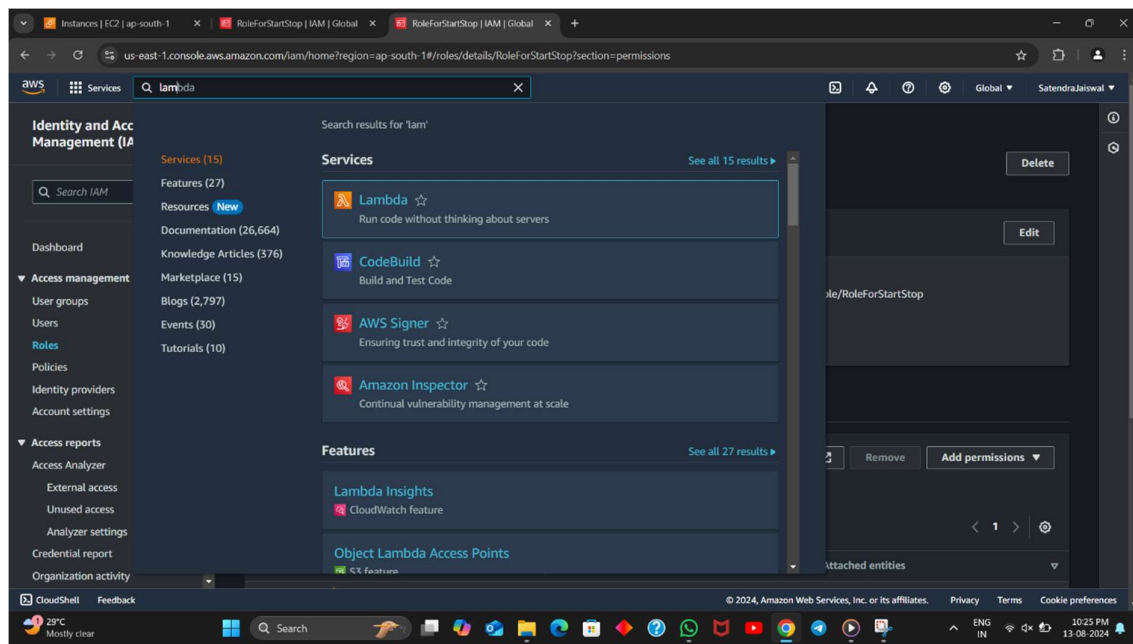
No tags associated with the resource.

You can add up to 50 more tags.

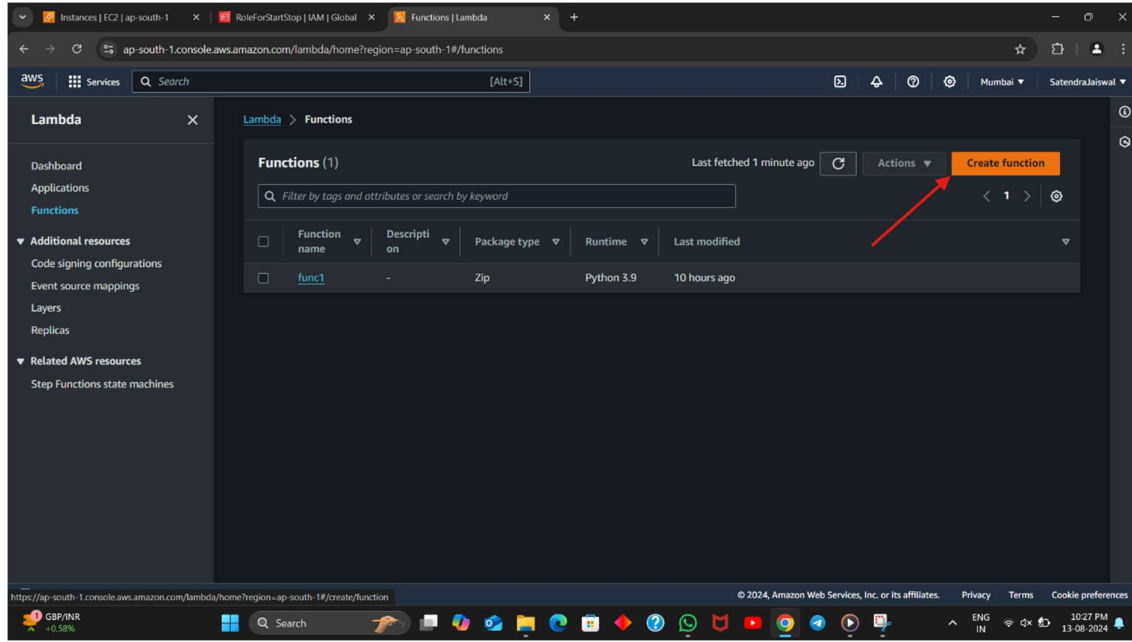
Role is Created Successfully



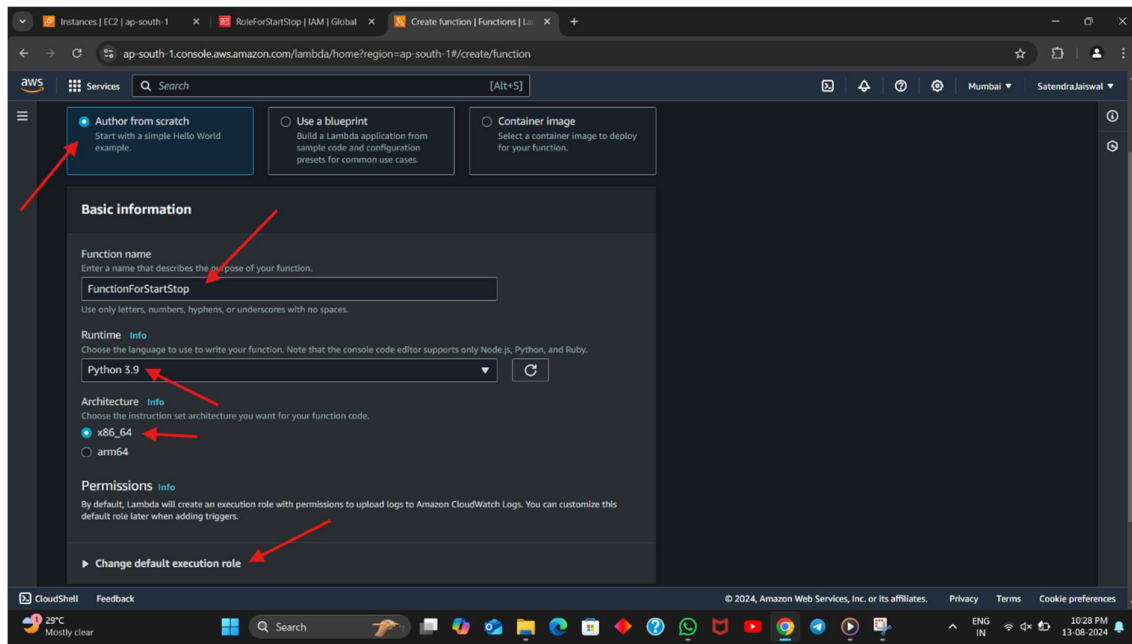
Step 14:- Now Search For Lambda and Open it



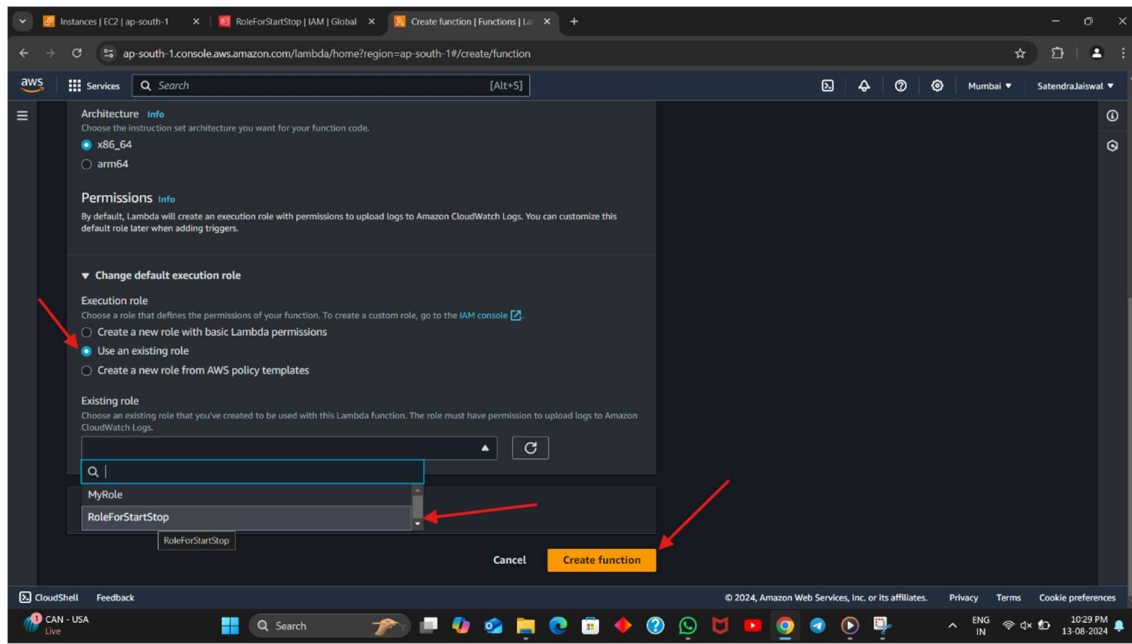
Step 15:- Click on Create Function



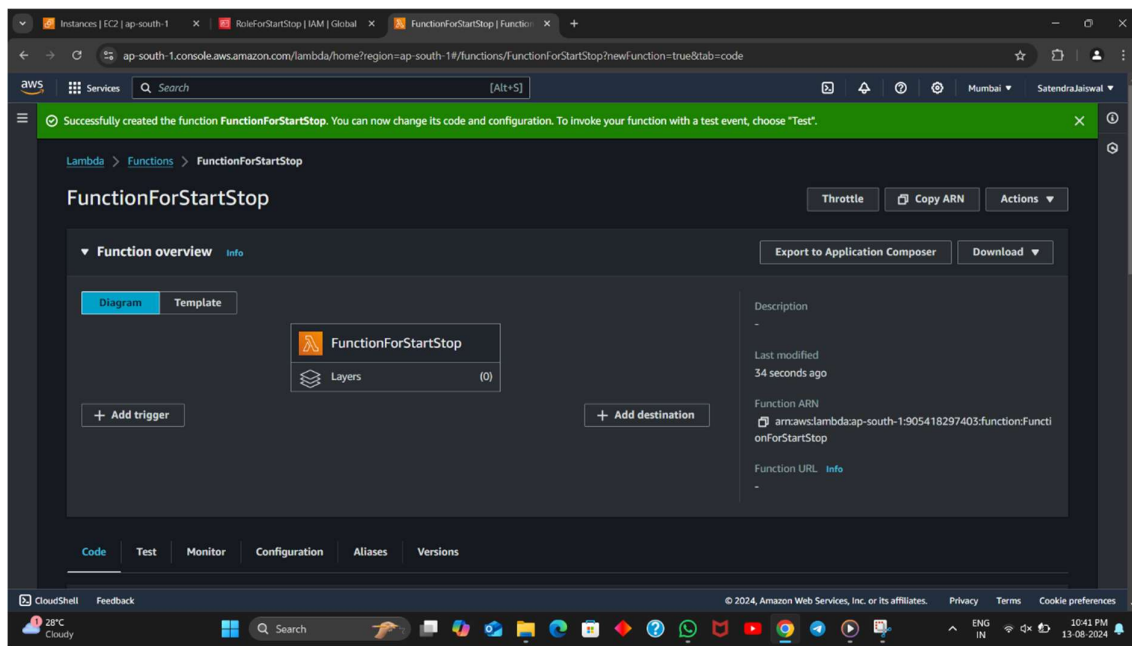
Step 16:- Select Author From Scratch→Enter Function Name→Select Python 3.9 As Runtime→Select x86_64 as Architecture→And Click On Change Default Execution Role



Step 17:- Click on Use an Existing Role and Select The Role Created in Step 7-13→Click on Create Function



Lambda Function Created Successfully

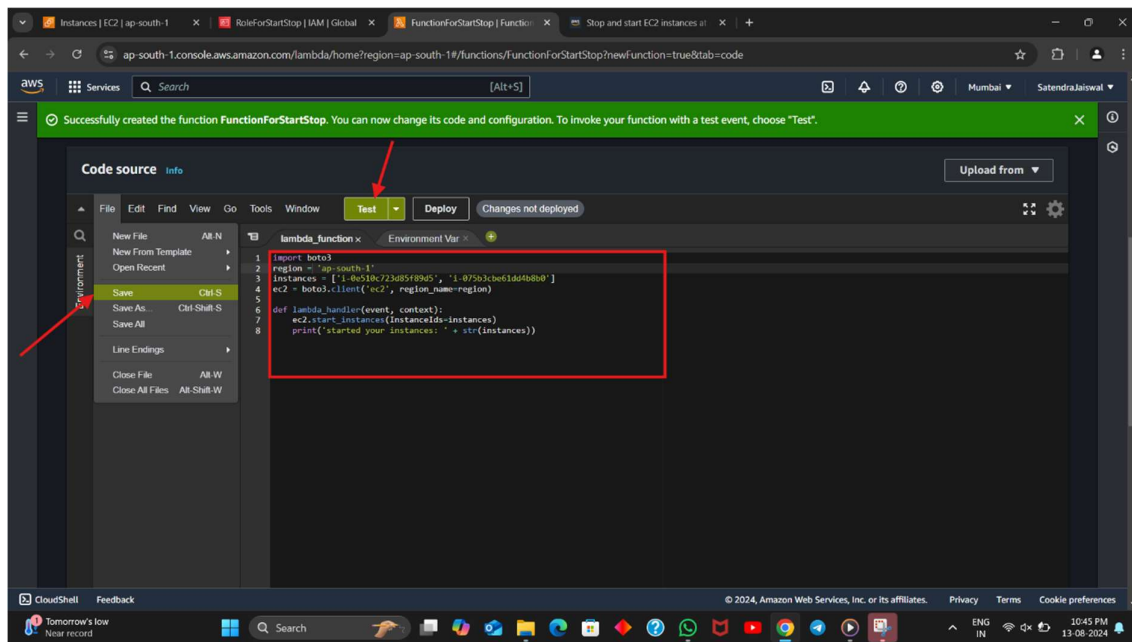


Step 18:- Scroll Down And Write The Following Lambda Function Code In The Code Section To Start The Instance

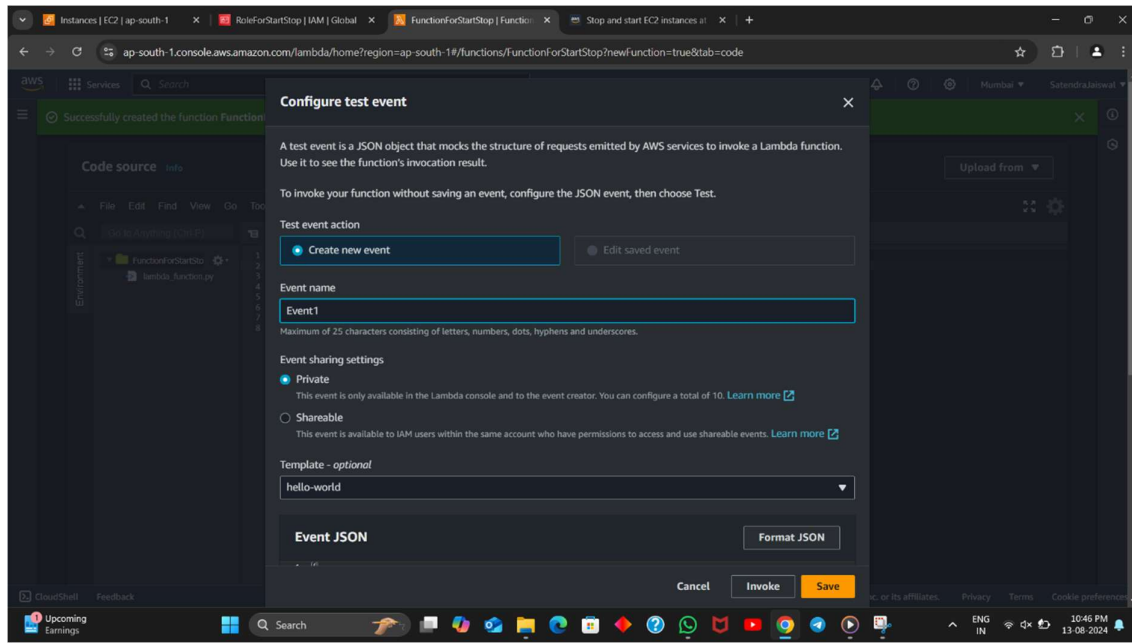
```
import boto3
region = 'us-west-1'
instances = ['i-12345cb6de4f78g9h', 'i-08ce9b2d7eccf6d26']
ec2 = boto3.client('ec2', region_name=region)

def lambda_handler(event, context):
    ec2.start_instances(InstanceIds=instances)
    print('started your instances: ' + str(instances))
```

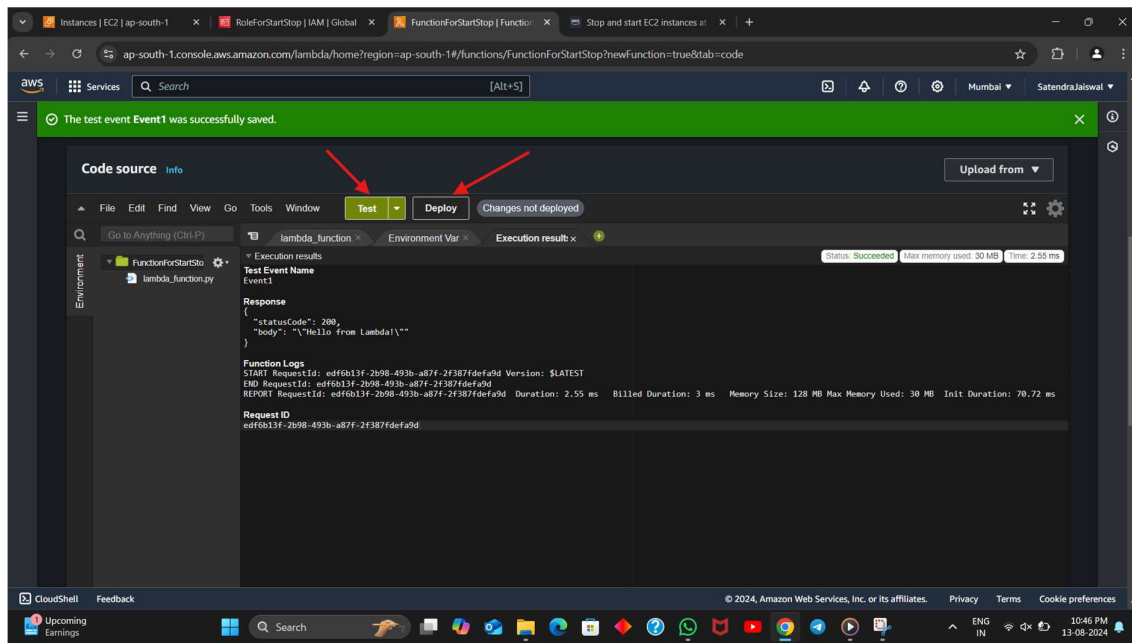
Step 19:- Save The Code → Save The File → And Click On Test



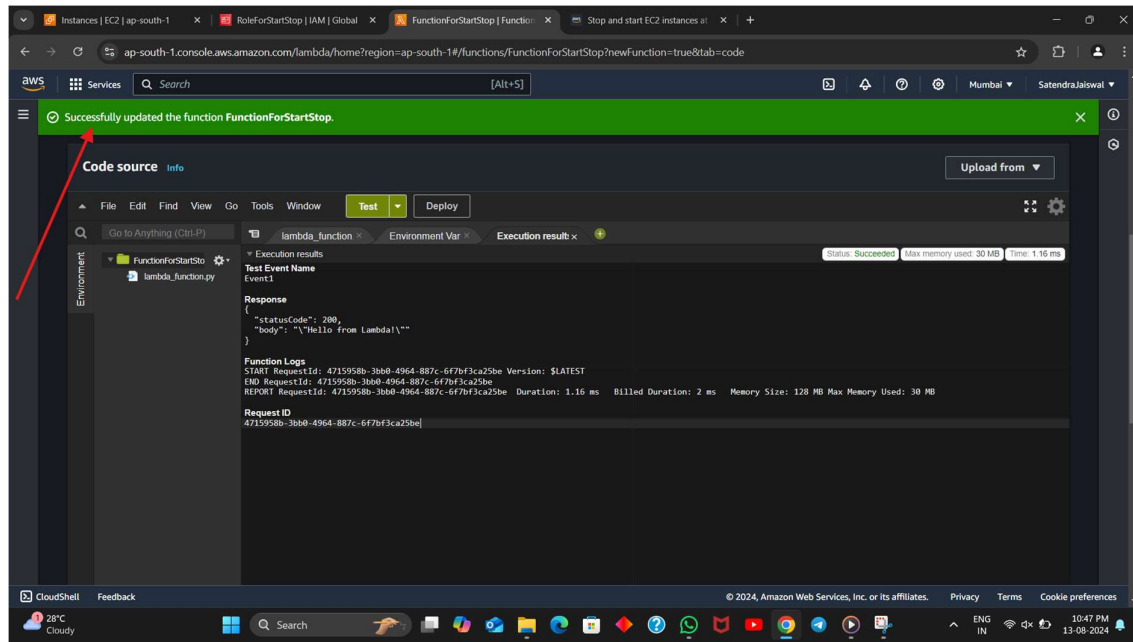
Step 20:- Enter The Test Event Name And Click On Save



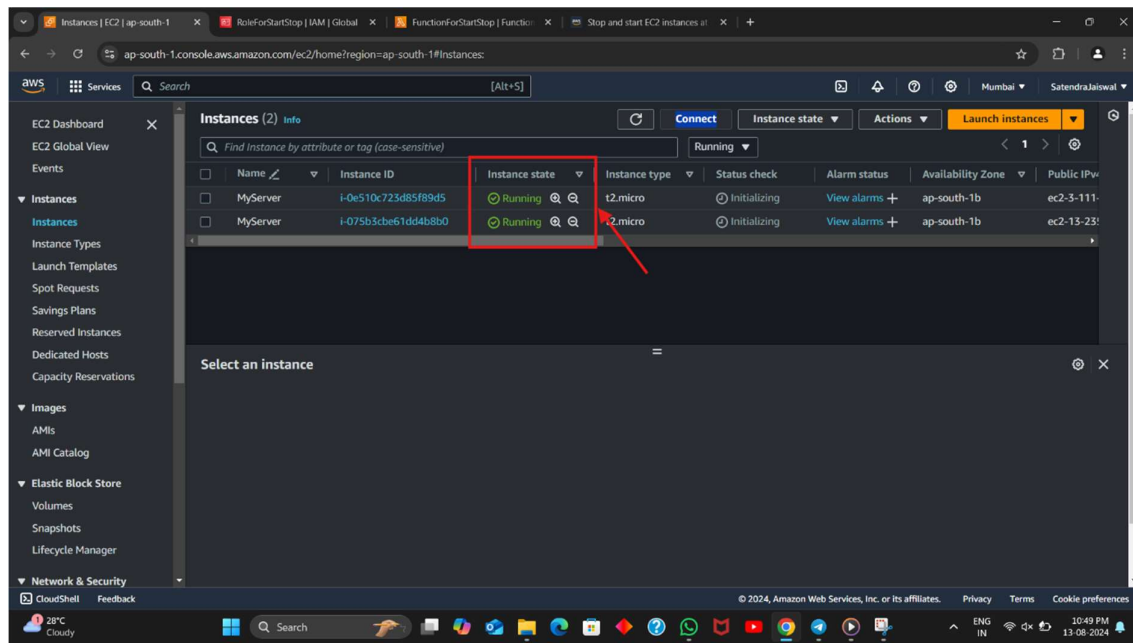
Step 21:- Test Event Created Successfully→Click On Test→Finally Deploy The Code



Lambda Function Code is Deployed Successfully



By Using The Above Code We Started Our Stopped EC2 Instance Successfully



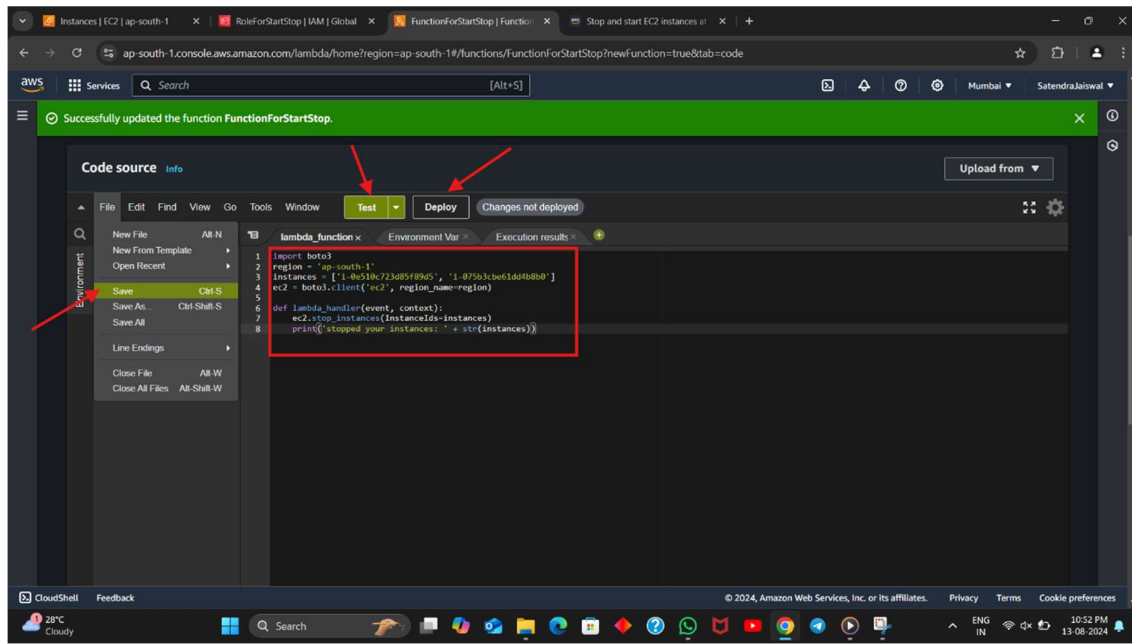
Now We Will Do The Same Thing To Stop Our Instances.

Step 22:- Write The Following Lambda Function Code In The Code Section To Stop The Running Instance

```
import boto3
region = 'us-west-1'
instances = ['i-12345cb6de4f78g9h', 'i-08ce9b2d7eccf6d26']
ec2 = boto3.client('ec2', region_name=region)

def lambda_handler(event, context):
    ec2.stop_instances(InstanceIds=instances)
    print('stopped your instances: ' + str(instances))
```

Step 23:- Write The Code→Save The File→Click On Test→Click On Deploy



Deployed Successfully

Step 24:- Here You Can See That By Using The Above The Code We Successfully Stopped Our Running Instances

