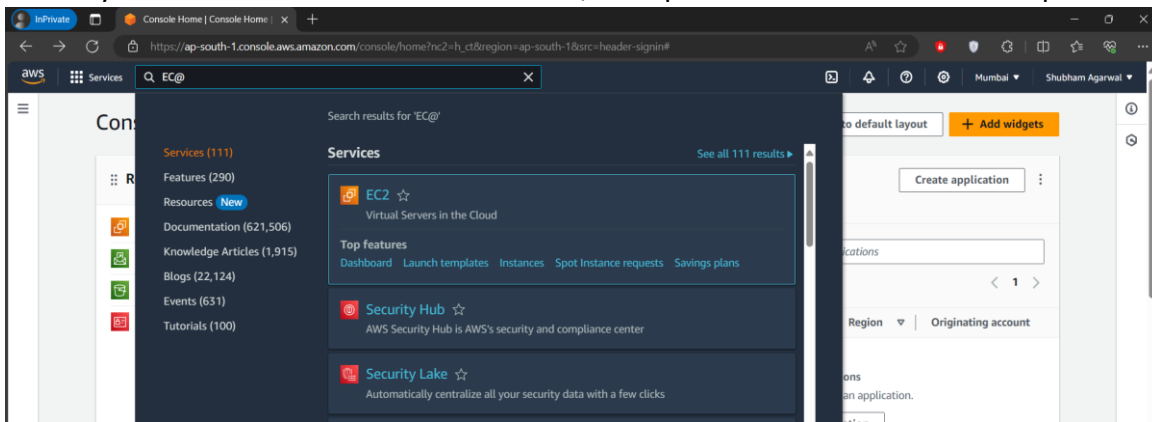


Assignment No. : 10

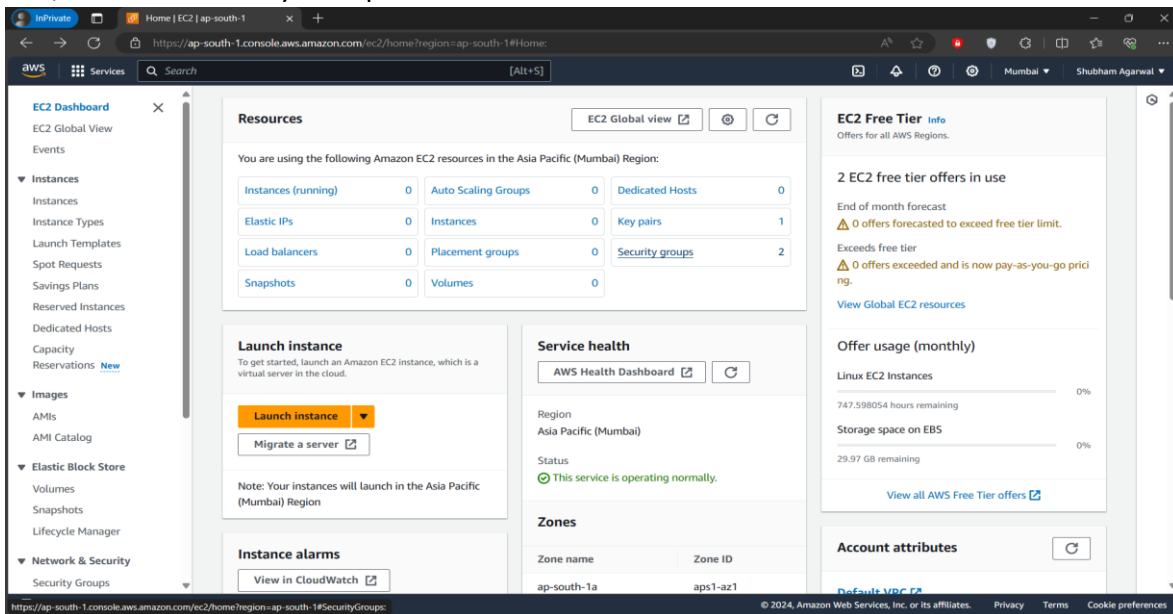
Problem Statement: Deploy a project from GitHub to EC2 by creating a new security group and user data.

Steps :

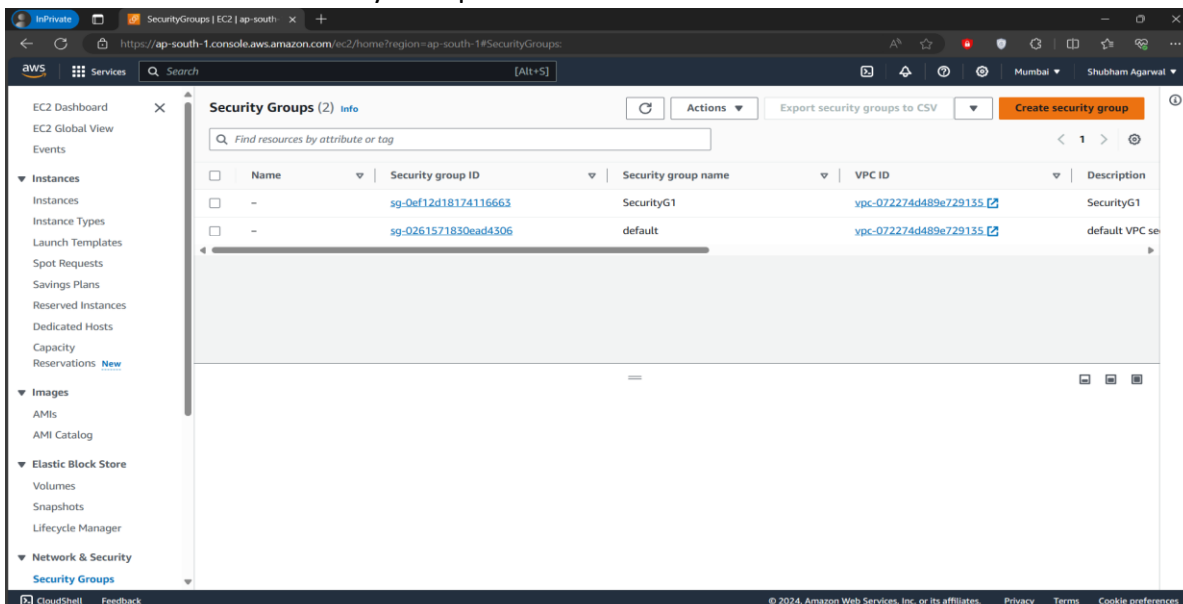
1. Access your AWS console and search for EC2, then proceed to click on the first option.



2. Now, Click on "Security Groups".



3. Now click on "Create security Group".



4. Fill up the name and description of the security group.

Create security group [info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

Security group name [info](#)
ShubhamSG1
Name cannot be edited after creation.

Description [info](#)
Assignment 10 SG

VPC [info](#)
vpc-072274d489e729135

Inbound rules [info](#)

This security group has no inbound rules.

[Add rule](#)

5. Now, scroll down to Inbound Rules and click on “Add rule”.

Security group name [info](#)
ShubhamSG1
Name cannot be edited after creation.

Description [info](#)
Assignment 10 SG

VPC [info](#)
vpc-072274d489e729135

Inbound rules [info](#)

This security group has no inbound rules.

[Add rule](#)

Outbound rules [info](#)

Type	Protocol	Port range	Destination	Description - optional
All traffic	All	All	Custom	

6. Set Custom TCP and give the port number as 4000 and select first option in CIDR blocks i.e. “0.0.0.0/”. Click on “Add rule” again and set type as “SSH” and select first option in CIDR blocks. Repeat this two more times and add rules of type “HTTP” and “HTTPS”.

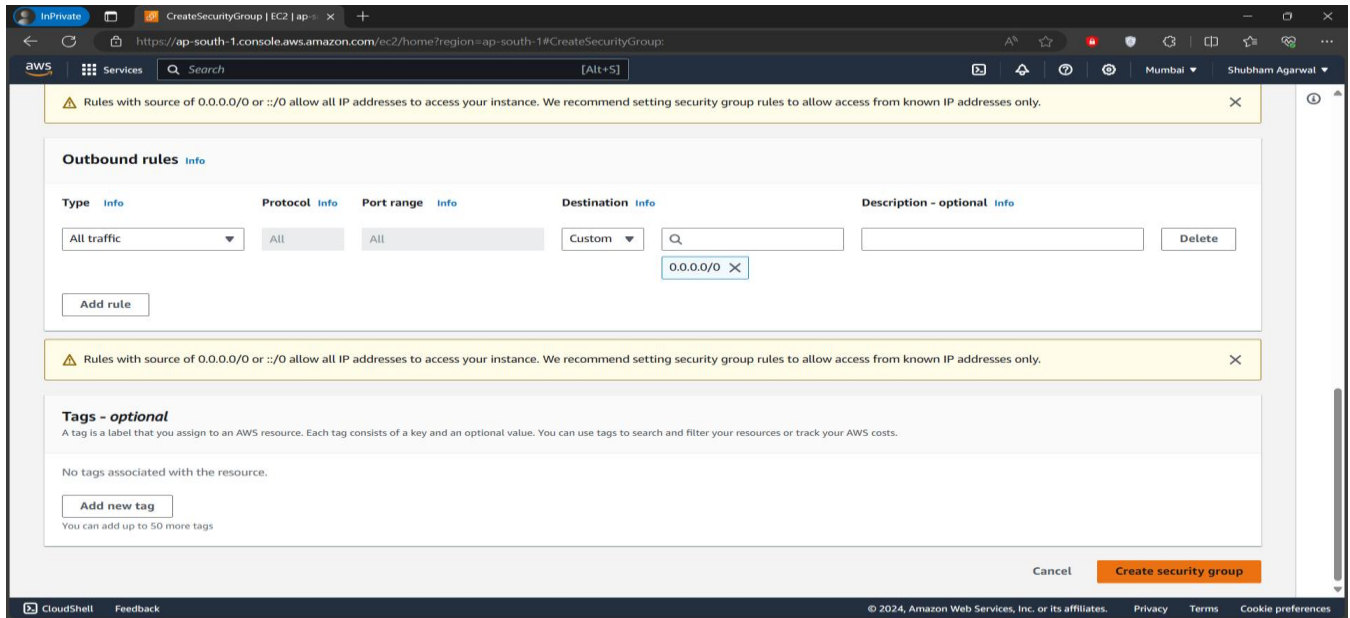
Inbound rules [info](#)

Type	Protocol	Port range	Source	Description - optional
Custom TCP	TCP	4000	Anyw...	0.0.0.0/0
SSH	TCP	22	Anyw...	0.0.0.0/0
HTTP	TCP	80	Anyw...	0.0.0.0/0
HTTPS	TCP	443	Anyw...	0.0.0.0/0

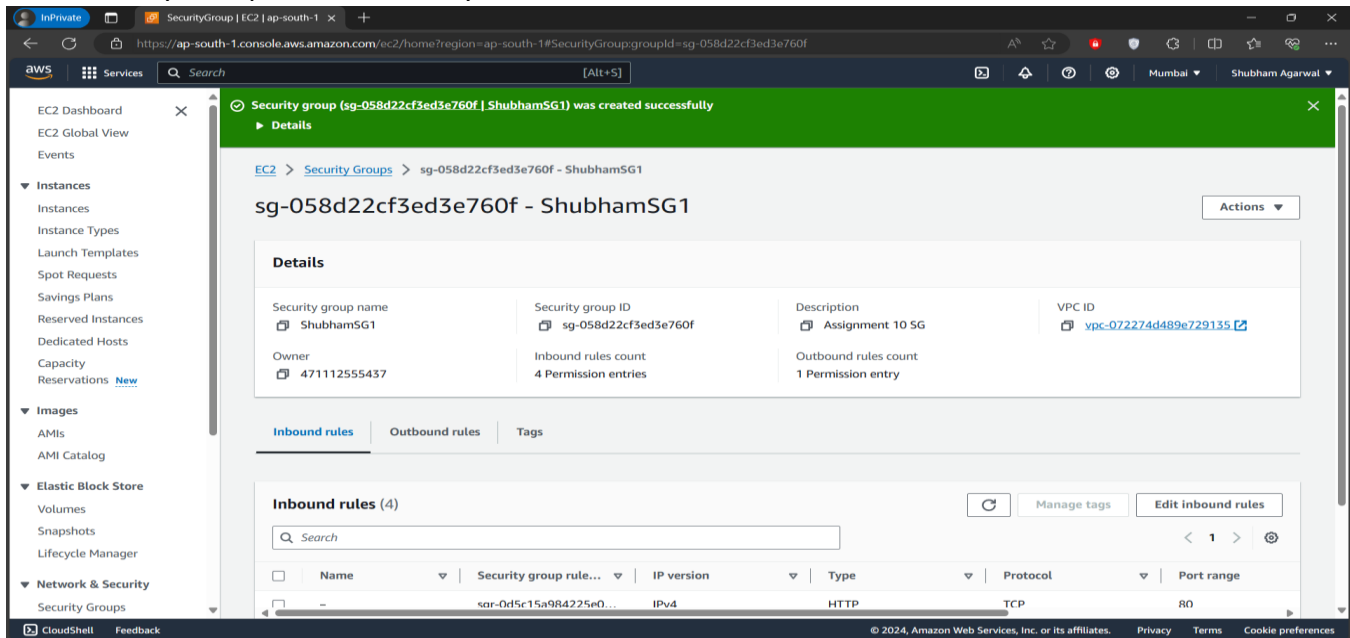
[Add rule](#)

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

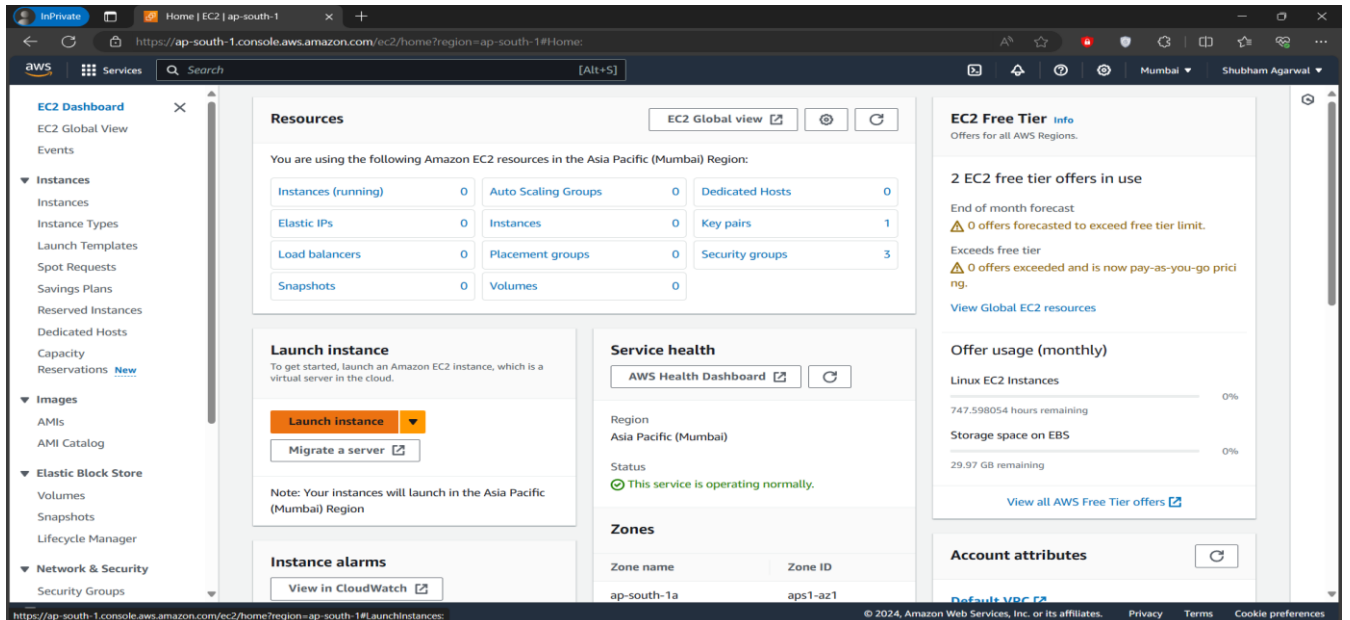
7. Click on “Create security group”.



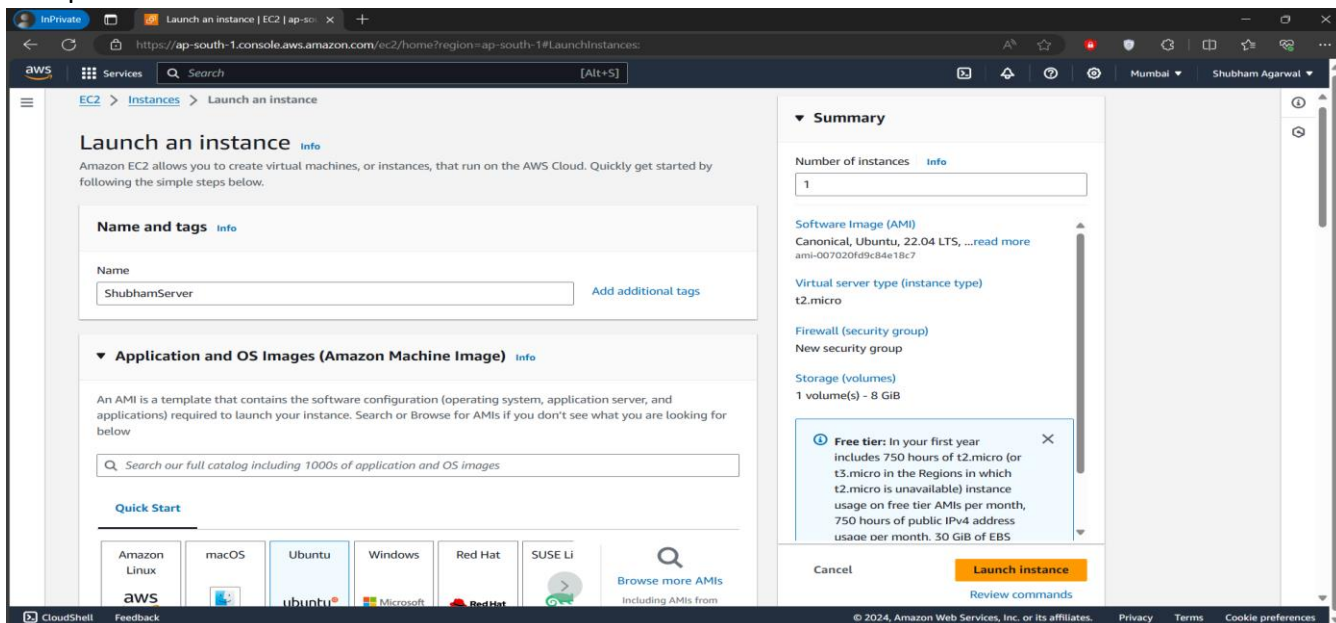
8. Your Security Group will successfully Created



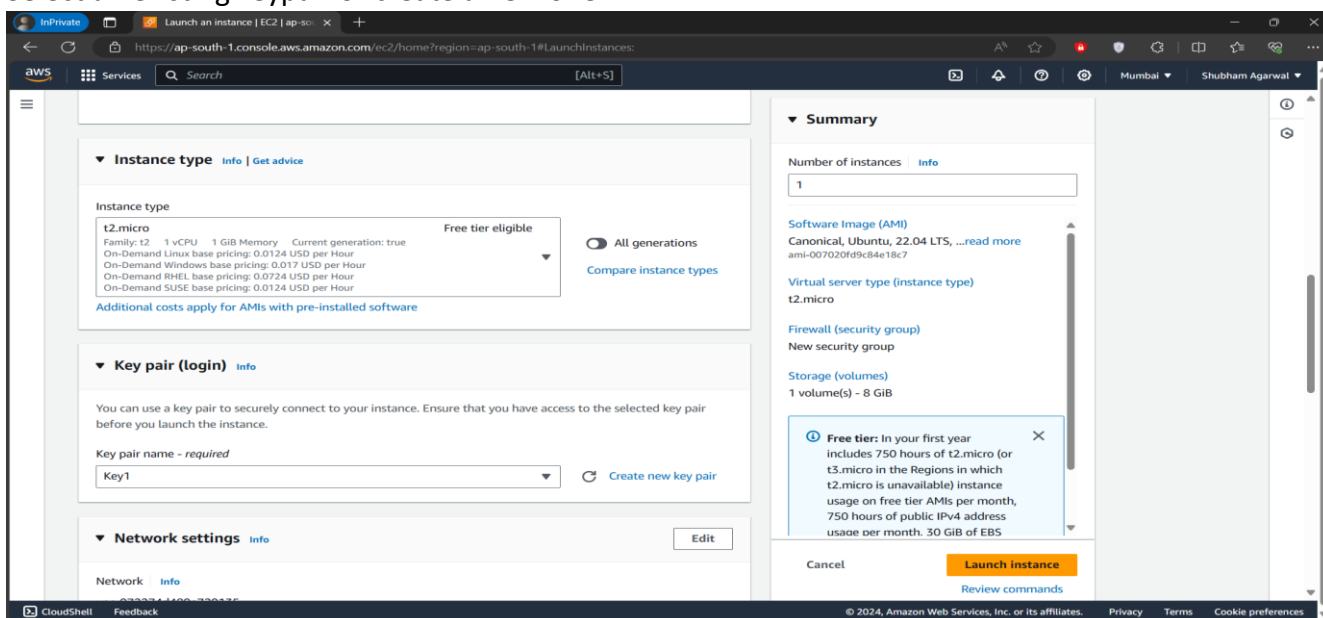
9. Now, go to EC2 dashboard and click on “Launch instance”.



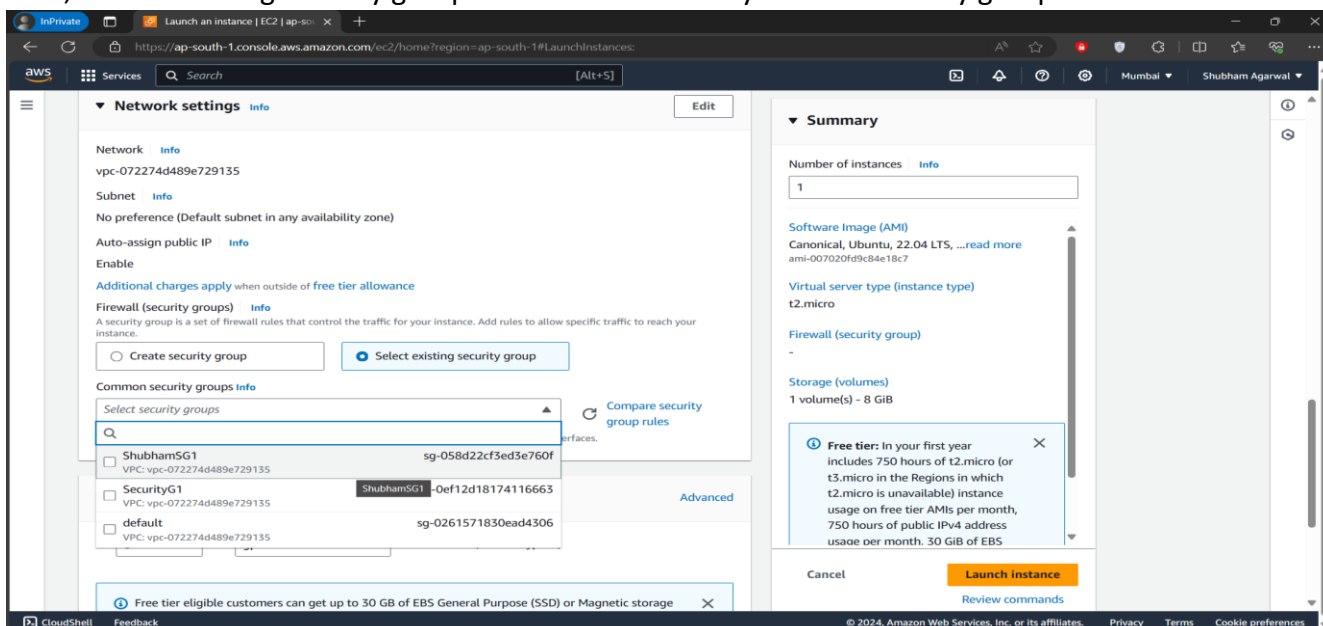
10. Fill up the instance name and select Ubuntu as the AMI.



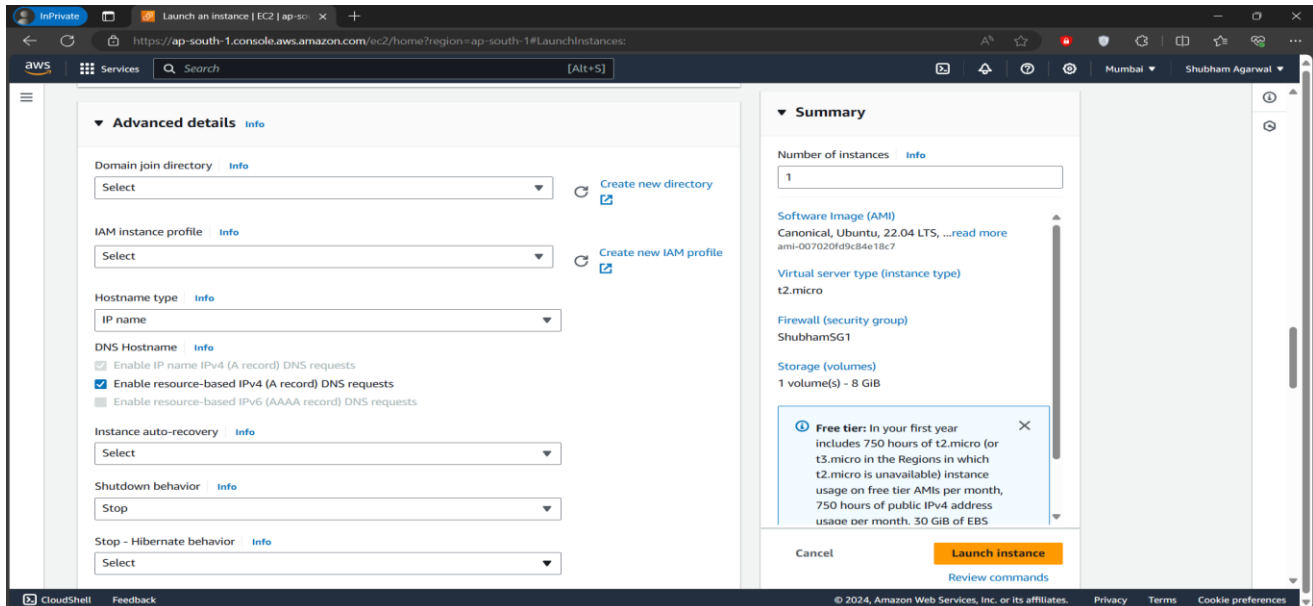
11. Select an existing keypair or create a new one.



12. Now, select "Existing security group" and select the newly created security group.

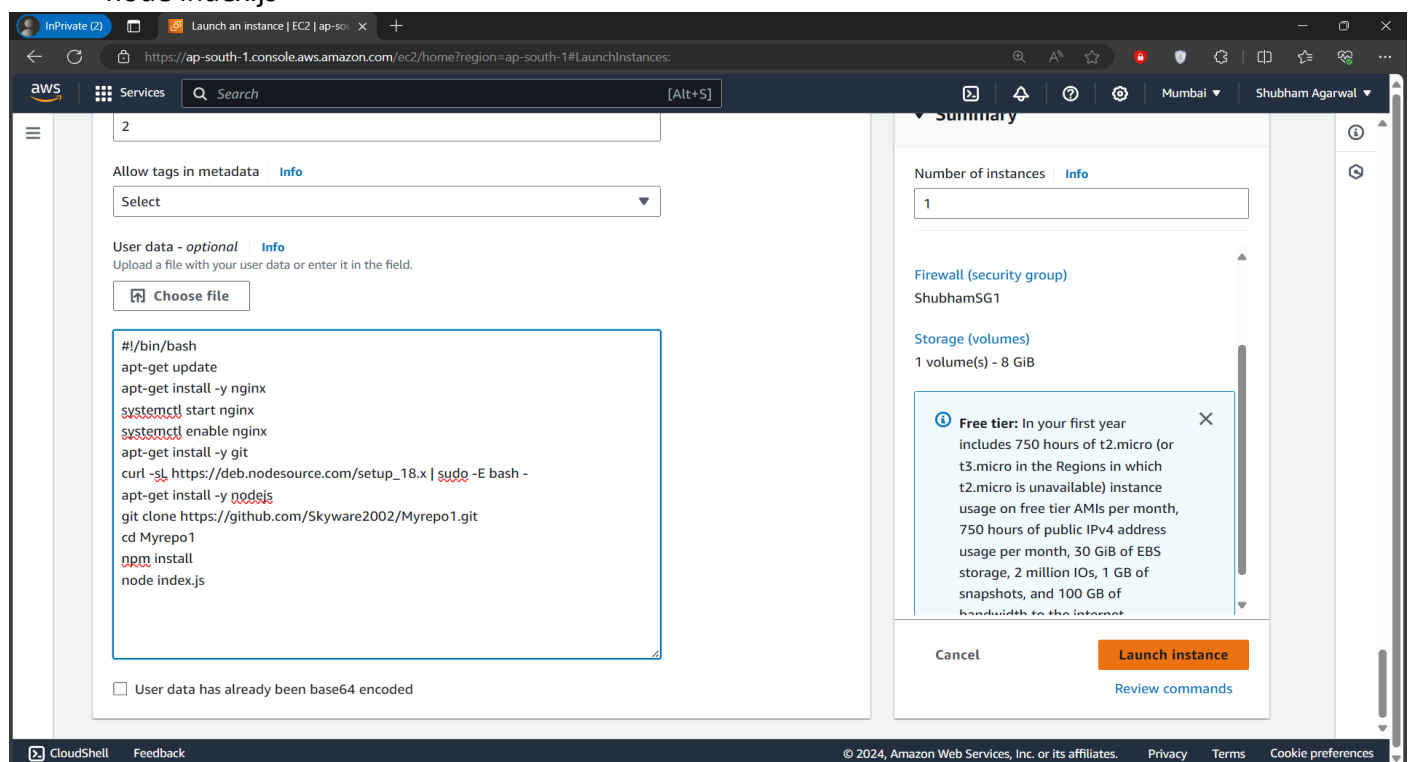


13. Expand the “Advanced details” section.

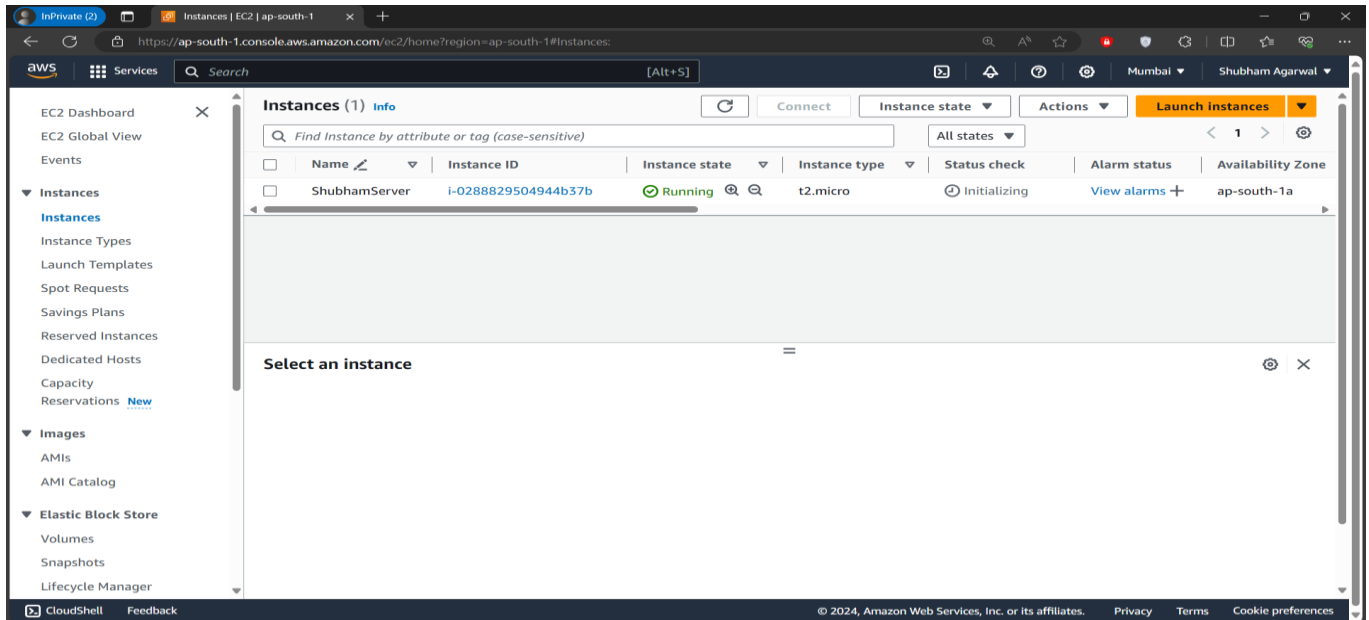


14. Scroll down to the “User data” section and type the following script and then click On the “Launch Instance”:

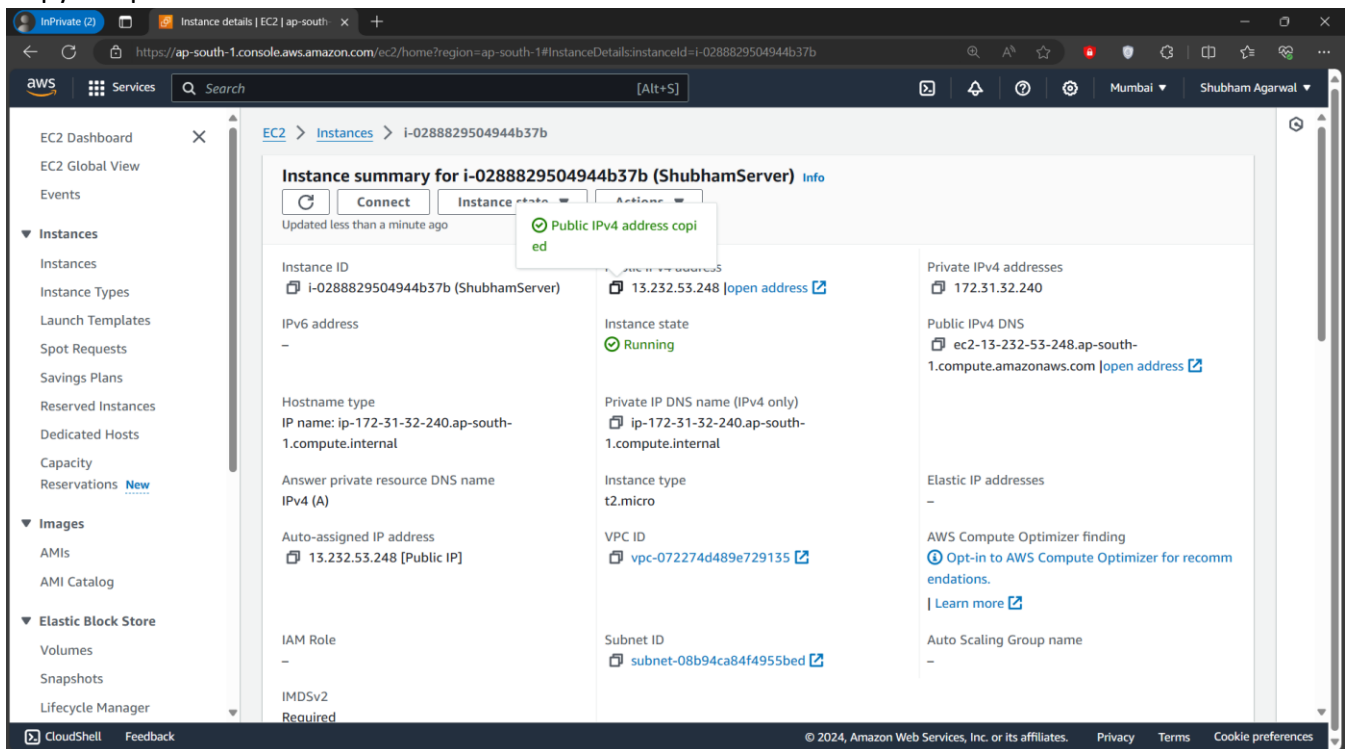
```
#!/bin/bash
apt-get update
apt-get install -y nginx
systemctl start nginx
systemctl enable nginx
apt-get install -y git
curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash -
apt-get install -y nodejs
git clone <github repository cloning link>
cd Repo_name
npm install
node index.js
```



15. Now go to “Instances” and click on the instance id of the newly created instance.



16. Copy the public IPv4 address.



17. Open a new tab and paste the IPv4 address copied and add “:4000” to the end of it. This will display our intended website.

