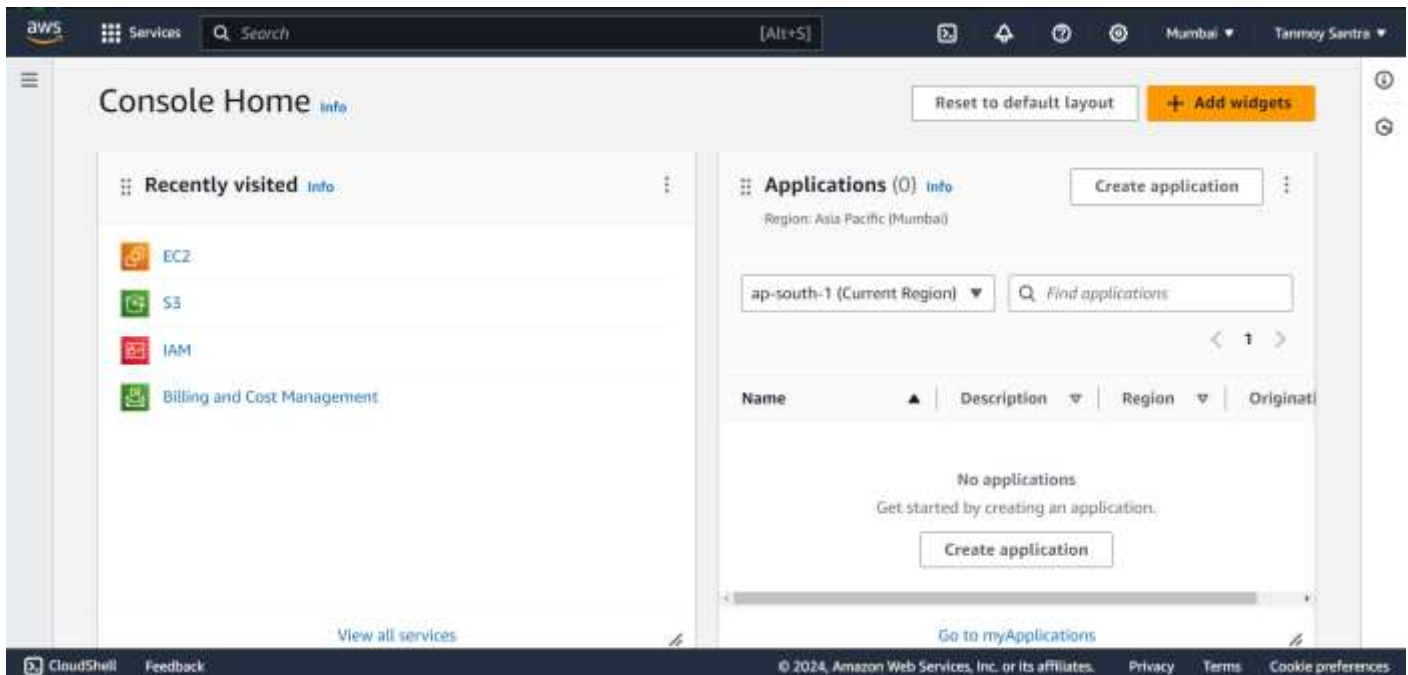


ASSIGNMENT - 10

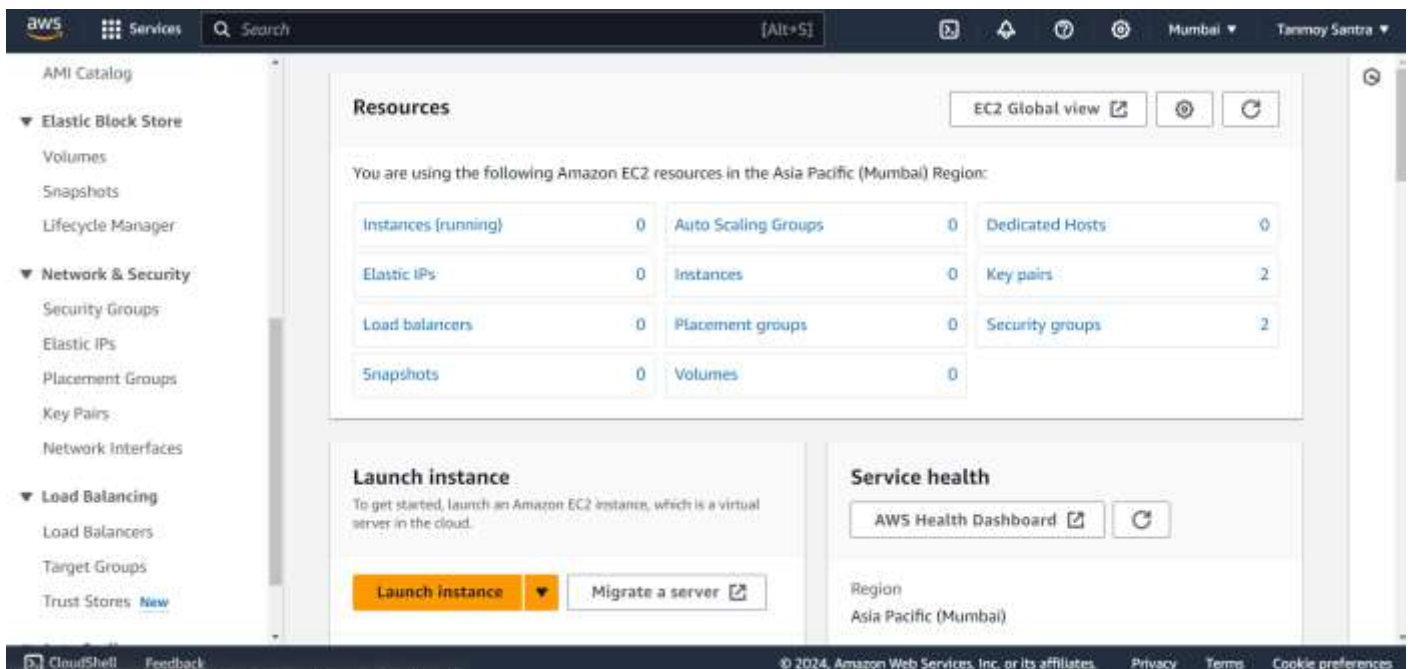
PROBLEM STATEMENT - Deploy a project from GitHub to EC2 by creating a new security group and user data.

To Deploy the Project from GitHub to EC2 by creating a new Security Group

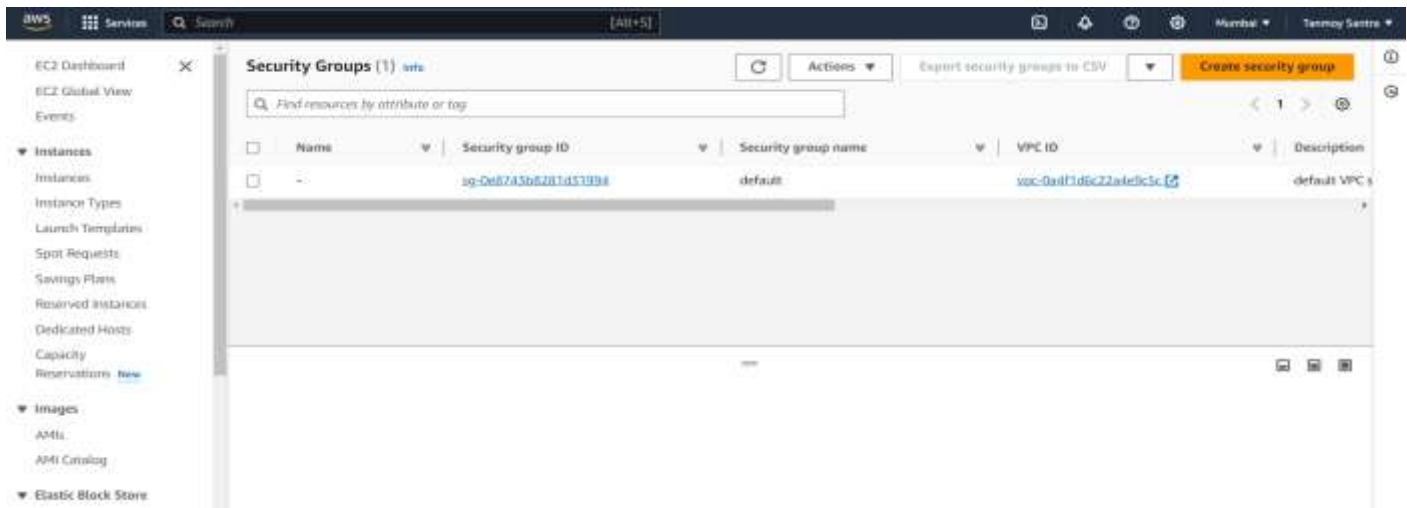
STEP 1- Select EC2 option.



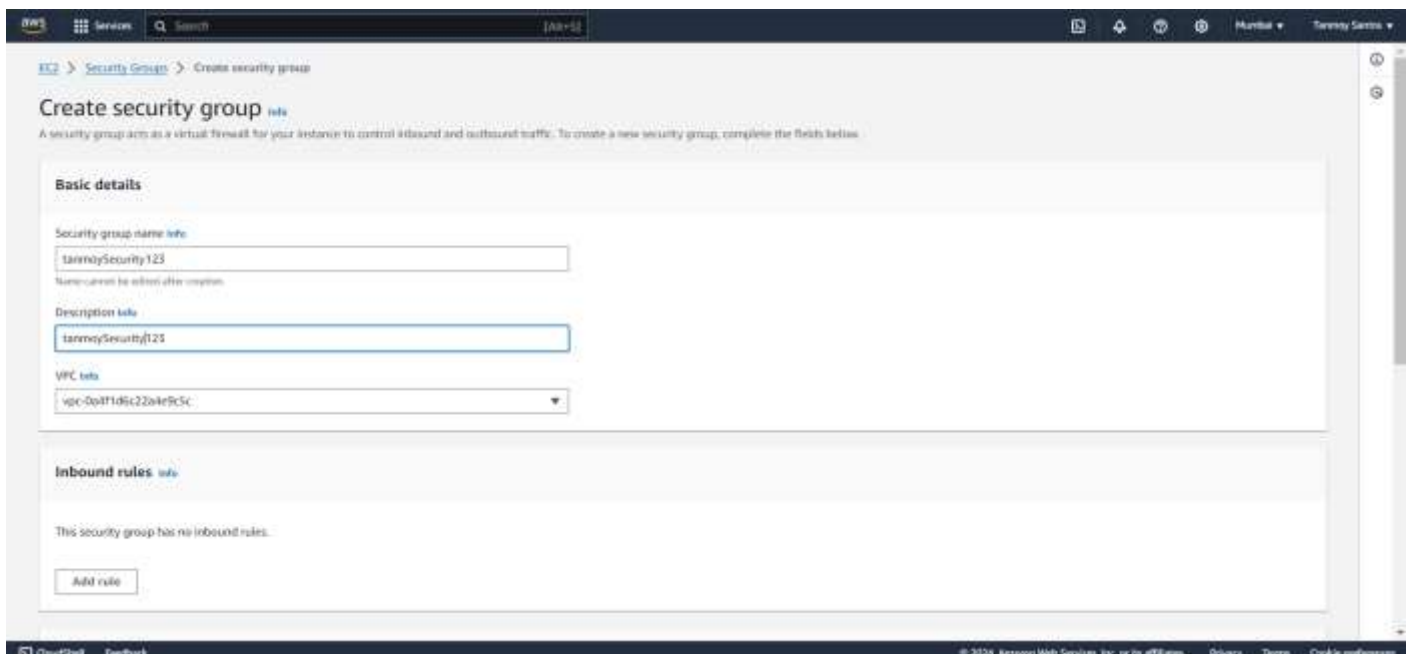
STEP 2- Go to the Security Groups option.



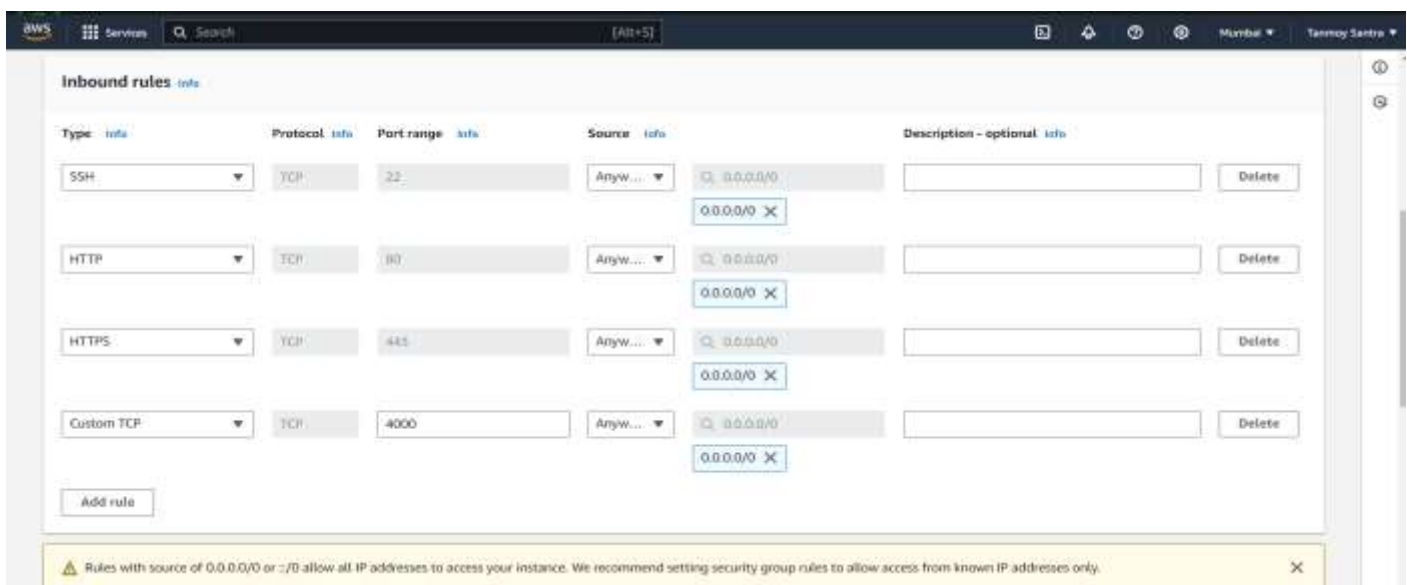
STEP 3- Click on Create Security Group.



STEP 4- Give a name and Description to the Security Group. Then click on Add Rule under the Inbound Rules tab.



STEP 5- Add the following 4 rules. Give all the rules the source address of 0.0.0.0/0 & and Port range of 4000 to Custom TCP.



STEP 6- Click on Create Security Group.

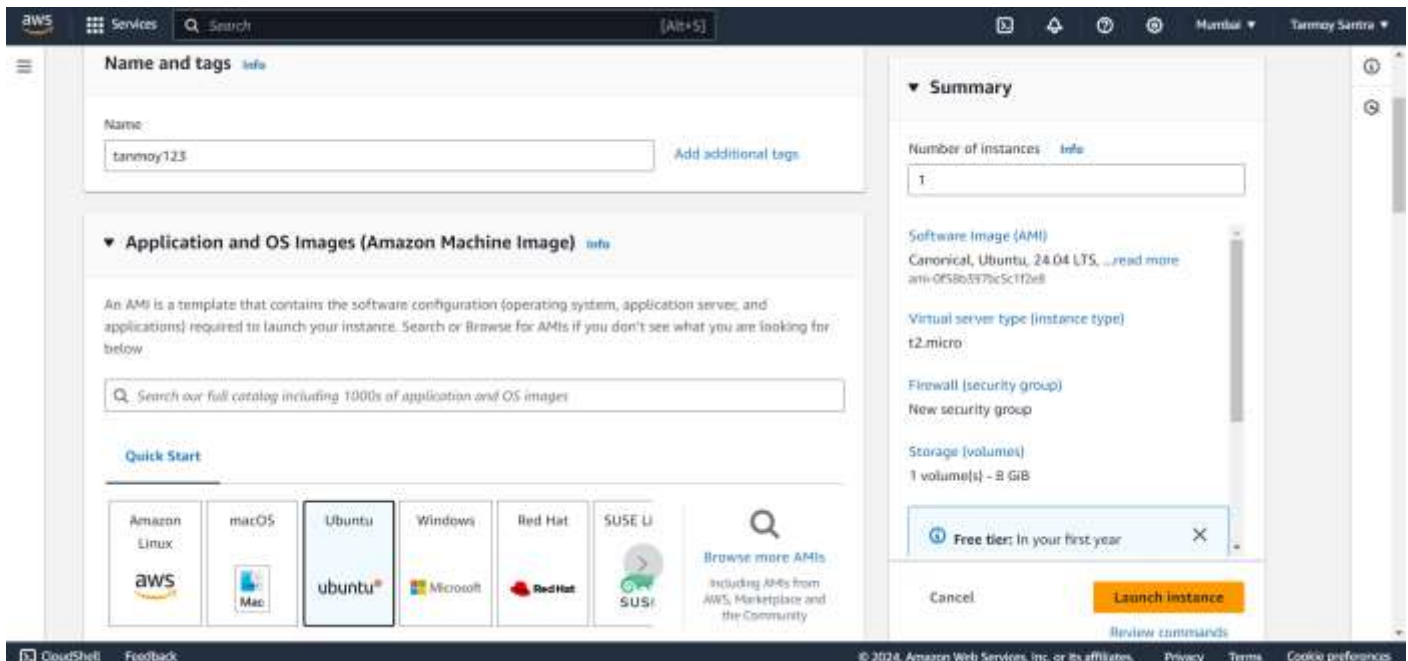
The screenshot shows the 'Create security group' wizard in the AWS Management Console, specifically the 'Outbound rules' step. The 'Type' is set to 'All traffic'. The 'Protocol' is 'All'. The 'Port range' is 'All'. The 'Destination' is 'Custom' with a search bar and a dropdown showing '0.0.0.0/0'. A warning message states: '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.' Below the rules section, there is a 'Tags - optional' section with a message: 'A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs. No tags associated with the resource.' At the bottom right, there are 'Cancel' and 'Create security group' buttons.

The screenshot shows the AWS Management Console after the security group has been created. A green banner at the top states: 'Security group (sg-0a4425503f5c8743c | tanmoySecurity123) was created successfully'. Below this, the 'Details' tab is selected for the security group 'sg-0a4425503f5c8743c - tanmoySecurity123'. The details include: Security group name: tanmoySecurity123, Security group ID: sg-0a4425503f5c8743c, Description: tanmoySecurity123, VPC ID: vpc-0a4f1d6c22a4e9c5c, Owner: 975049959497, Inbound rules count: 4 Permission entries, and Outbound rules count: 1 Permission entry. Below the details, there are tabs for 'Inbound rules', 'Outbound rules', and 'Tags'. The 'Inbound rules' tab is active, showing 'Inbound rules (4)'. On the left, there is a navigation menu with options like 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Instances', 'Images', and 'Elastic Block Store'.

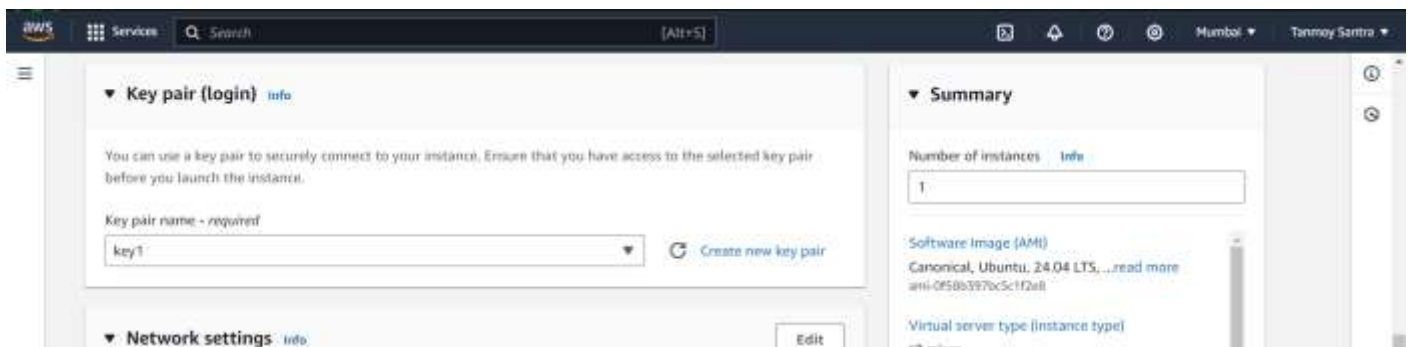
STEP 7- Now click on "Launch Instance".

The screenshot shows the AWS Management Console with the 'Launch instance' button highlighted. The console displays various resources and service health information. The 'Resources' section shows a summary of EC2 resources in the Asia Pacific (Mumbai) Region, including Instances (running), Elastic IPs, Load balancers, Snapshots, Auto Scaling Groups, Instances, Placement groups, Volumes, Dedicated Hosts, Key pairs, and Security groups. The 'Launch instance' button is prominently displayed in the 'Launch instance' section. The 'Service health' section shows the status of the AWS Health Dashboard, indicating that the service is operating normally. The 'EC2 Free Tier' section shows the usage of free tier offers, including 2 EC2 free tier offers in use and the end of month forecast.

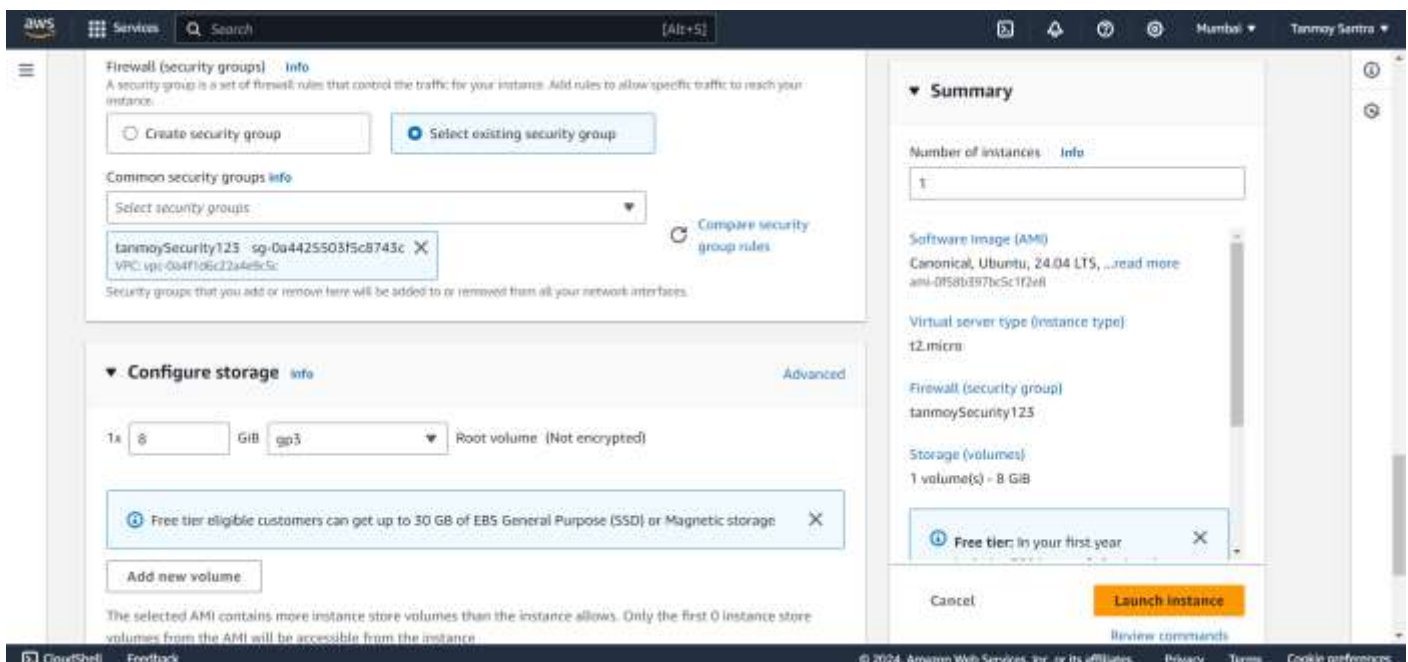
STEP 8- Give a unique name to the instance and select Ubuntu.



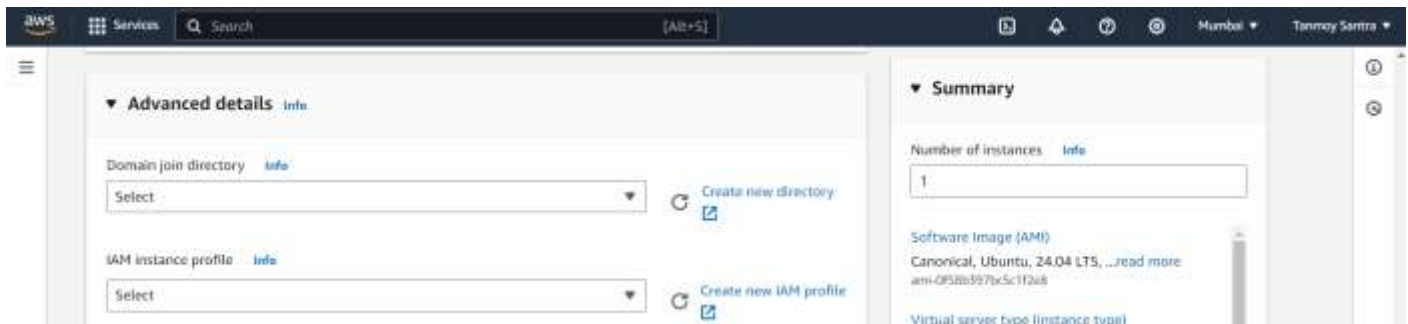
STEP 9- Under key pair (login) select an existing key from the drop down menu or create a new key.



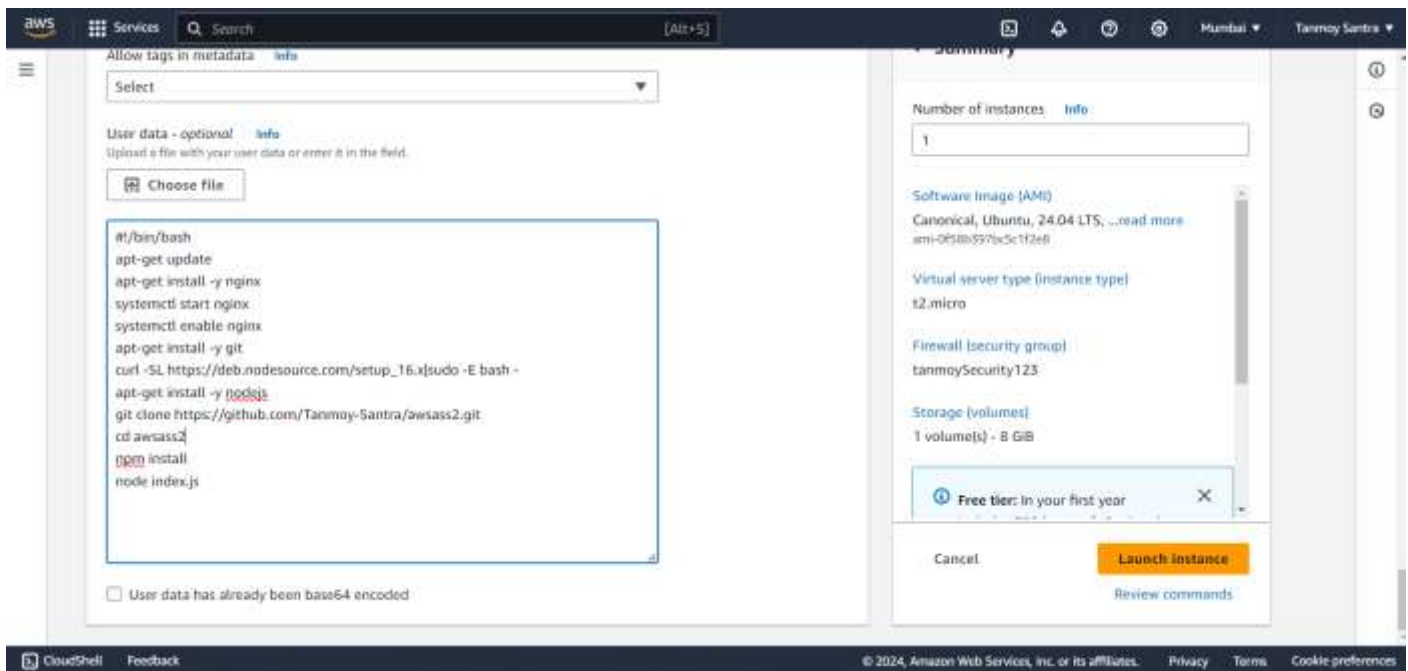
STEP 10- Select the Select Existing Security Group, then select the newly created security group.



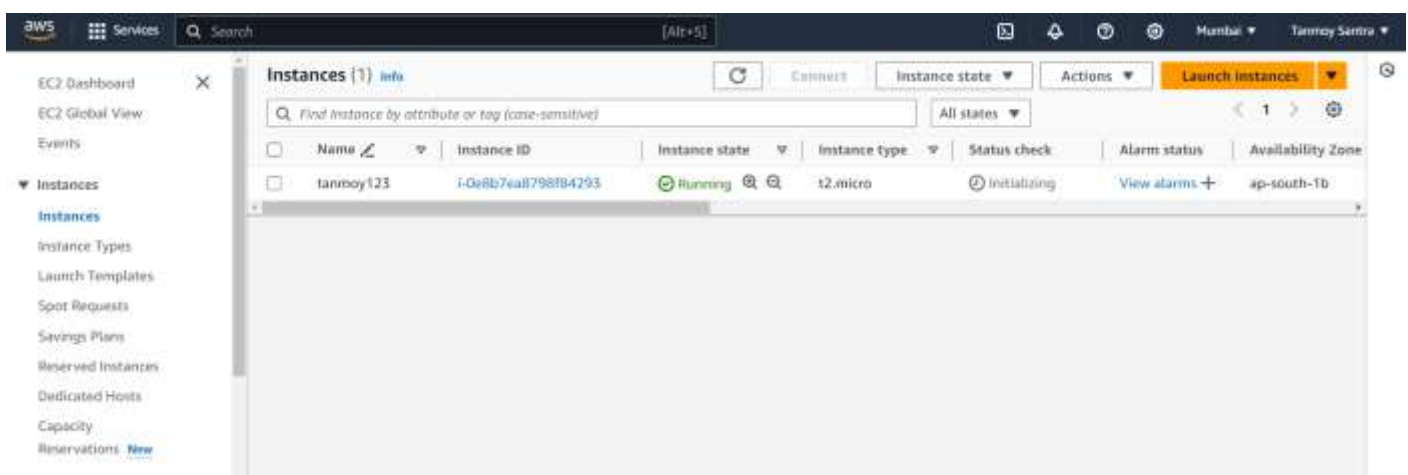
STEP 11- Expand the Advanced Details tab.



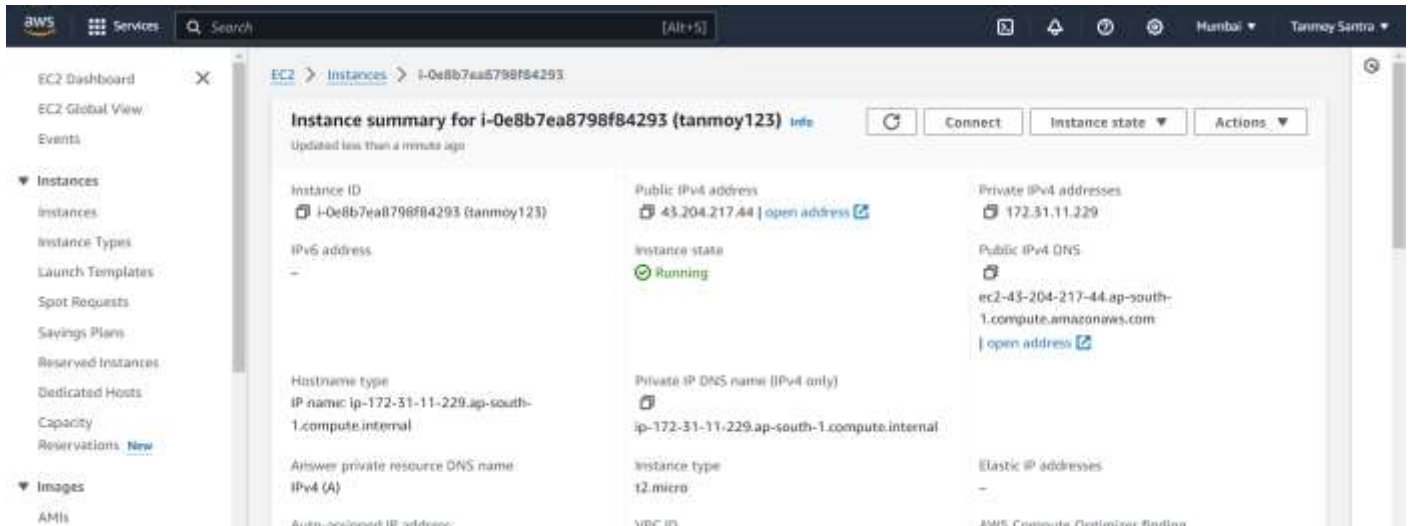
STEP 12- Scroll down to the bottom, in the bash console type the following commands. Then click on “Launch Instance”.



STEP 13- Click on instance id to enter into the instance.



STEP 14- Copy the Public IPv4 Address.



STEP 15- Paste the IP-Address in a new Window. Nginx window will open.



STEP 20- The Nodejs file content will be visible. Now add “:4000” at the end of the IPv4 Address.

