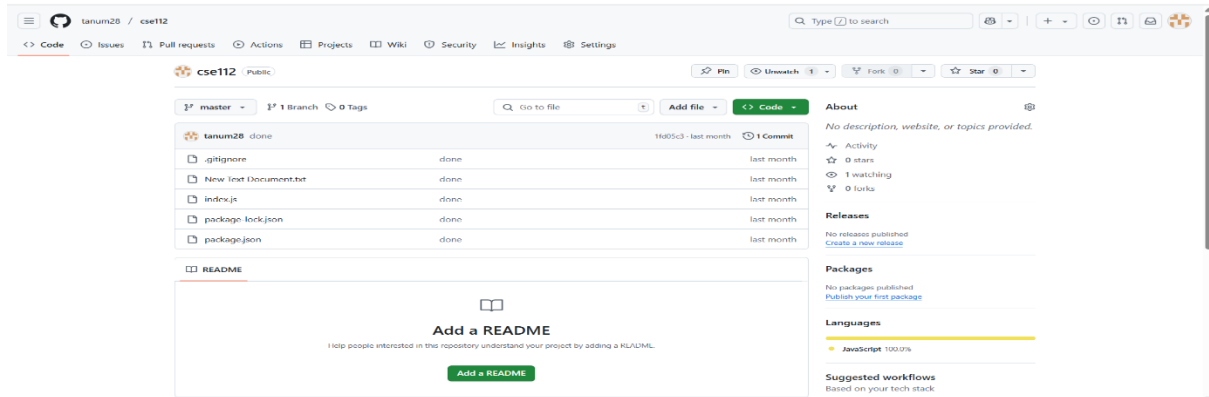


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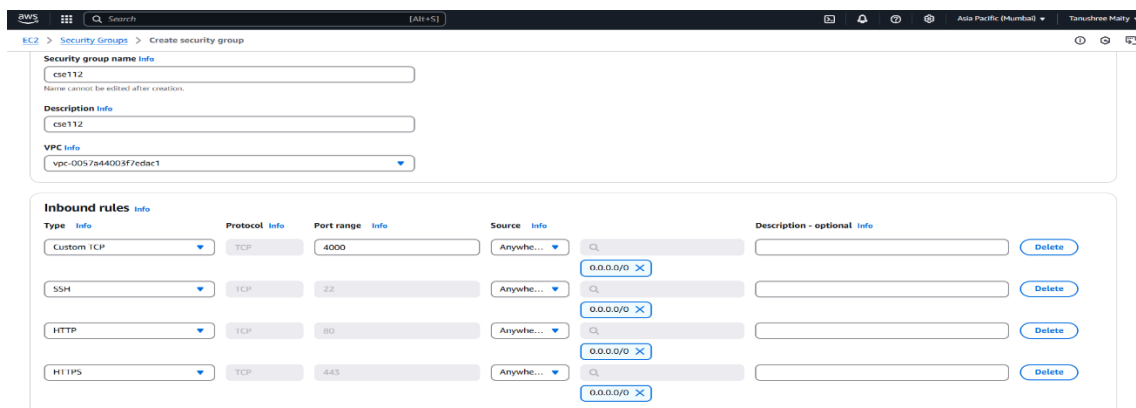
Deploy a project from GitHub to EC2 by creating a new security group and user data.

Solution:

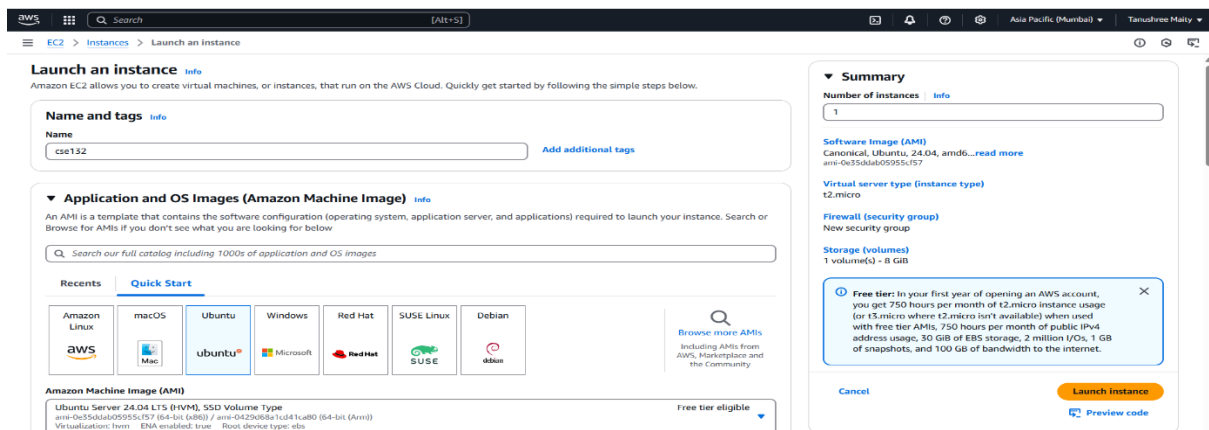
Step 1: Upload required files to GitHub.



Step 2: Now open AWS and open the current instance then scroll down and go to security Section. Then click on the link in security groups then click on edit inbound rules. Click on add rule and select the type of new rule custom TCP Port range 4000 source 0.0.0.0 or anywhere then click on save rule.



Step 3: open EC2 Click on launch instance. Give a name to the instance and select the operating system as Ubuntu.



Step 4: Create Key Pair.

Step 5: From the Network Section Select Existing Security Group then choose your previously created security group.

The screenshot shows the 'Launch instance' page in the AWS Management Console, specifically the 'Network settings' section. The 'Firewall (security groups)' section is expanded, showing 'Create security group' and 'Select existing security group' options. The 'Select existing security group' option is chosen, and a dropdown menu shows the selected security group 'tanu' (sg-007cc6efca97c794). The 'Common security groups' section is also visible, showing the same security group. The 'Configure storage' section is expanded, showing '1x' volume of '8' GiB with 'gp3' storage type. The 'Summary' section on the right shows the instance configuration: 'Number of instances: 1', 'Software Image (AMI): Canonical, Ubuntu, 24.04, amd64', 'Virtual server type (instance type): t2.micro', 'Firewall (security group): tanu', and 'Storage (volumes): 1 volume(s) - 8 GiB'. A 'Free tier' notification is displayed at the bottom of the summary section.

Step 6: After Selecting security group go to the user data section and write given cmd. and click launch instance.

The screenshot shows the 'Launch instance' page in the AWS Management Console, specifically the 'User data' section. The 'User data - optional' section is expanded, showing a text area with the following command:

```
#!/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_16.x | sudo -E bash -
apt-get install -y nodejs
git clone http://github.com/sudip7407/Repo1.git
cd Repo1
npm install
node index.js
```

 The 'Summary' section on the right shows the instance configuration: 'Number of instances: 1', 'Software Image (AMI): Canonical, Ubuntu, 24.04, amd64', 'Virtual server type (instance type): t2.micro', 'Firewall (security group): tanu', and 'Storage (volumes): 1 volume(s) - 8 GiB'. A 'Free tier' notification is displayed at the bottom of the summary section.

Step 6: Now copy the IPv4 address of the instance and paste it on web browser.

Step 7: Then, put the port like this IP address: Port (13.235.68.243:4000)

The screenshot shows a web browser window with the address bar displaying '65.0.134.46:4000'. The page content shows 'Hello World'.