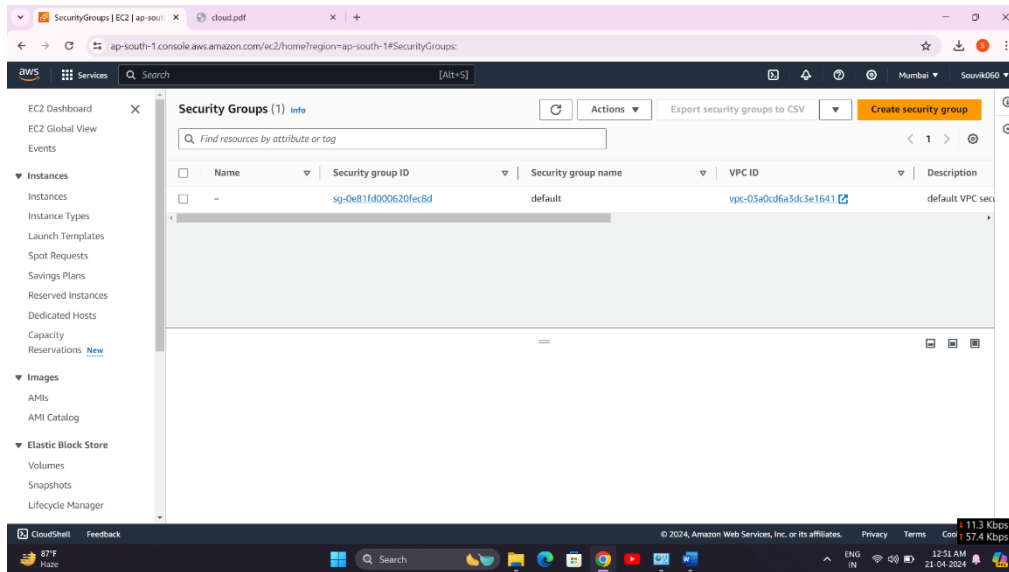


Assignment 12

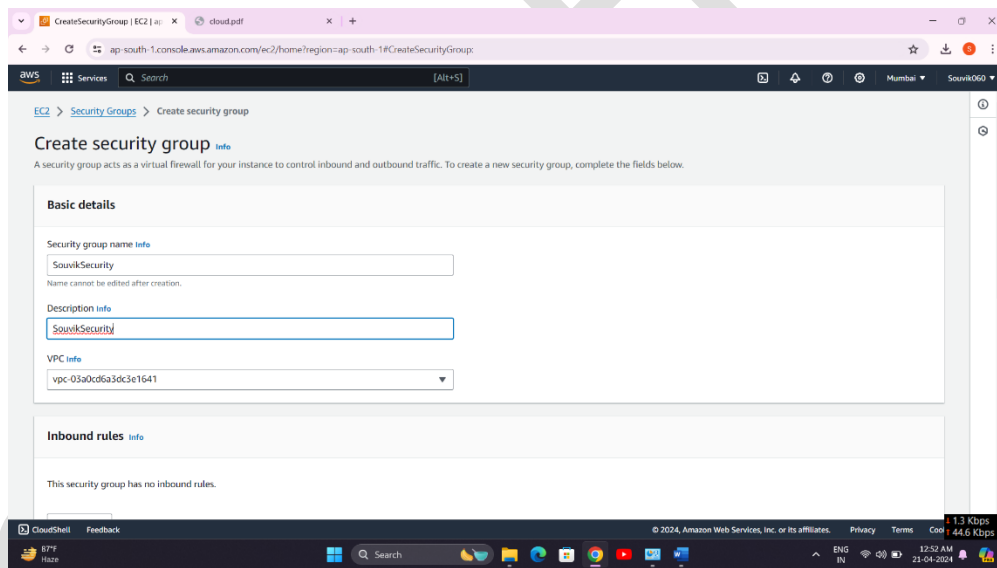
Problem Statement: Deploy and run the project in AWS without using port.

Steps:

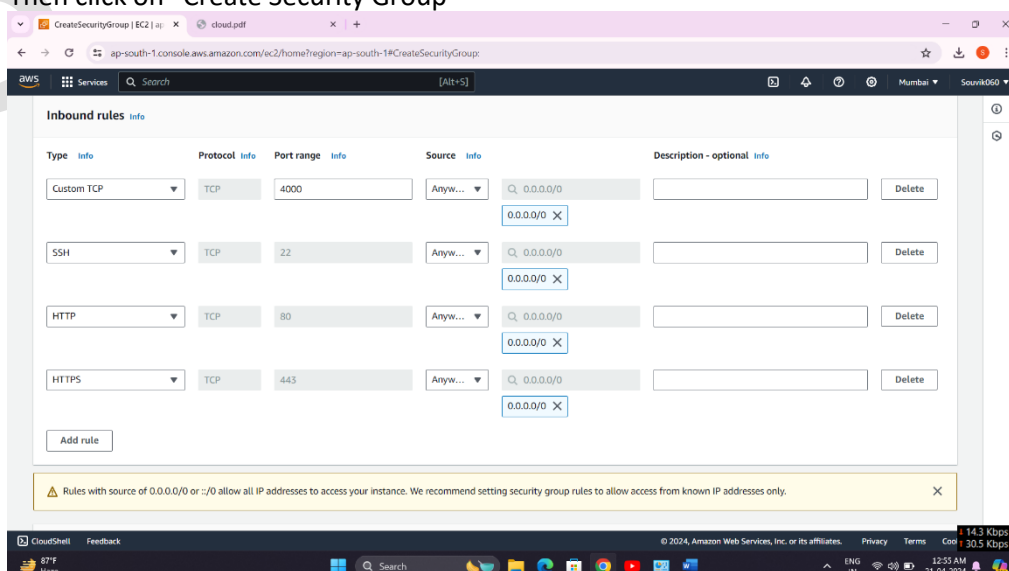
1. At first go to EC2 dashboard and then remove all security group except default, and then click on Create security group.



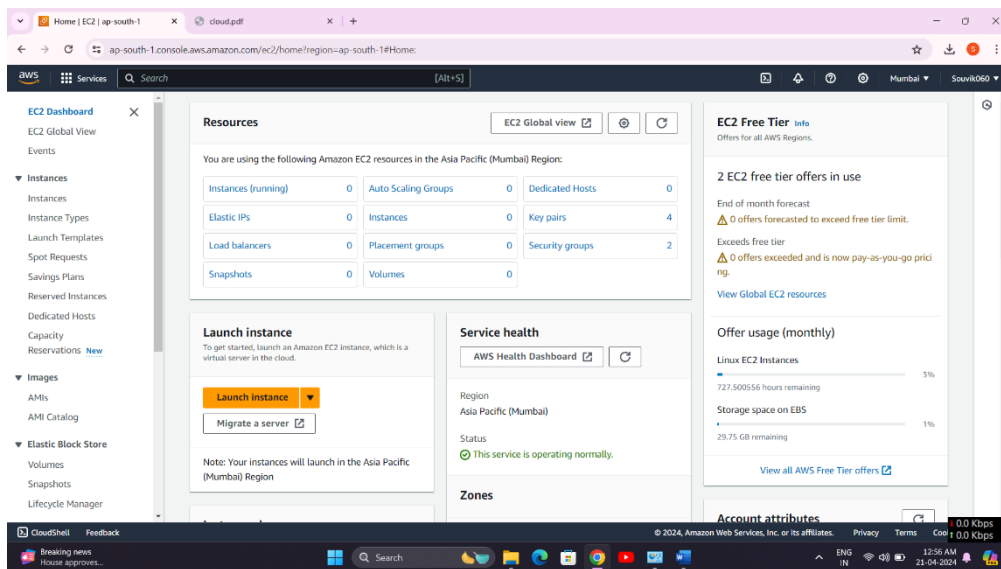
2. Now give its proper name and description(Same as Name).



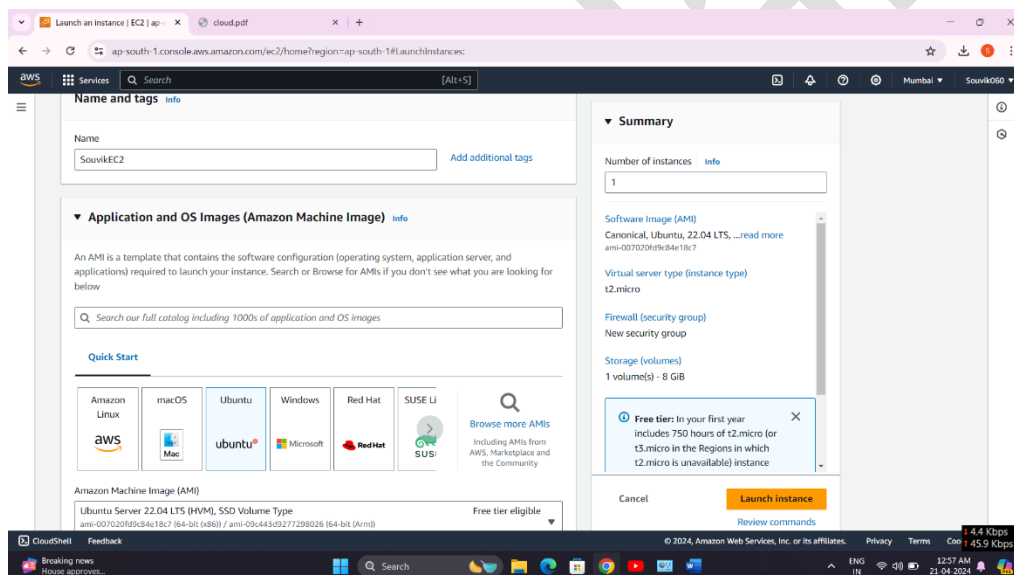
3. Now in inbound click on “Add rule” and in this way add 4 security rules (Custom TCP, SSH, HTTP, HTTPS). Then click on “Create Security Group”



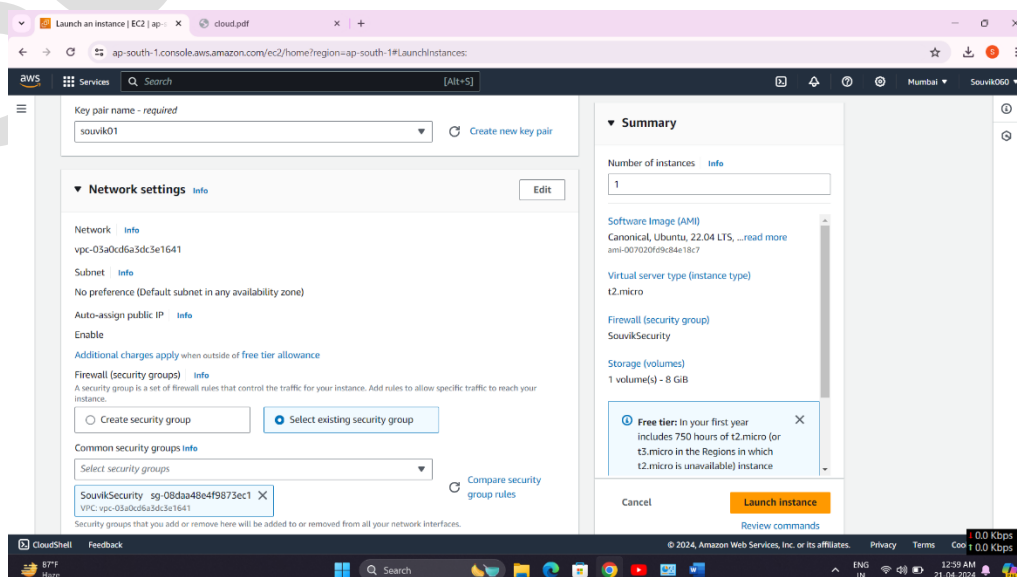
4. Go to EC2 dashboard and click on Launch Instance.



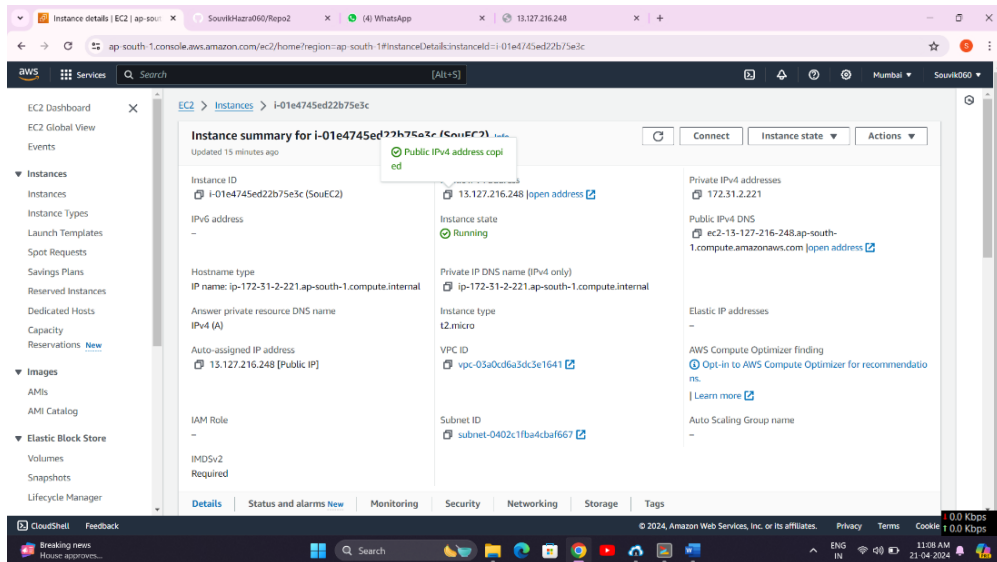
5. After it give a unique name and then click on Ubuntu.



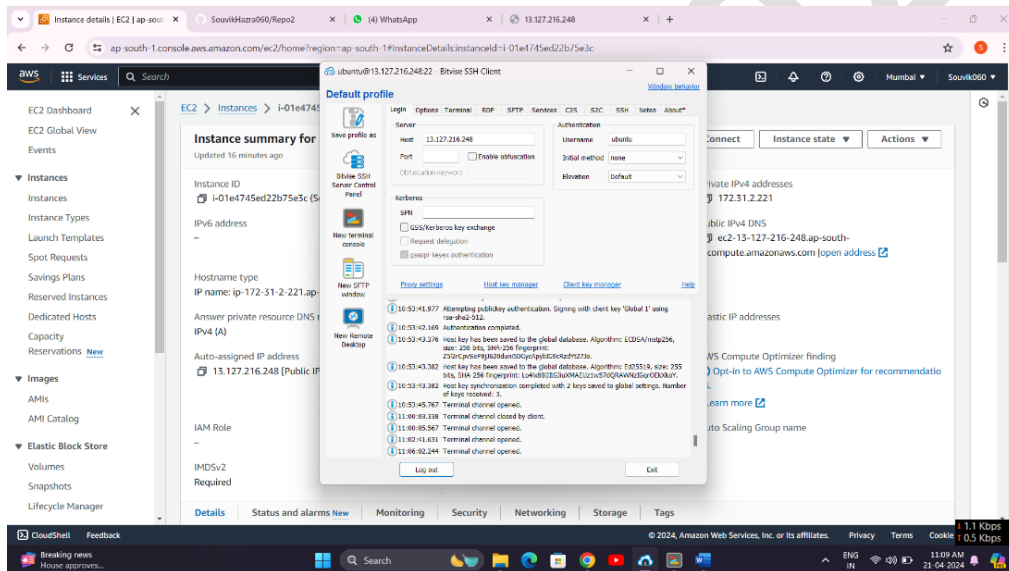
6. Now select key pair and in network settings also click on "Select existing security group" then select the security group which was created and click on Launch Instance.



7. Click on instance and copy public IPv4 address.



8. Paste the IPv4 address in host of BitVise SSH client and import key pair in Client key pair manager. After that click on Log In.

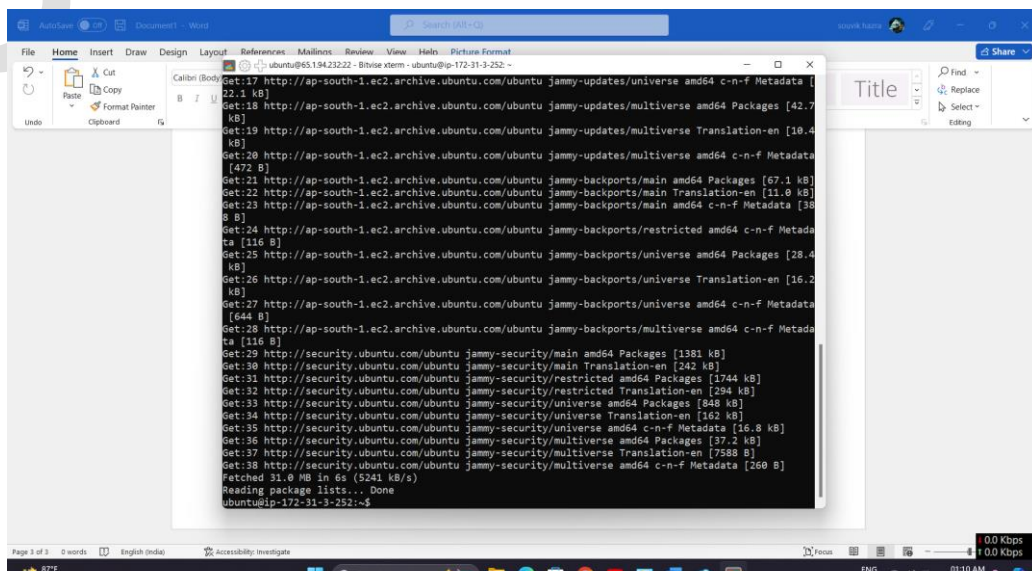


9. Now open terminal in BitVise SSH and then write all commands :

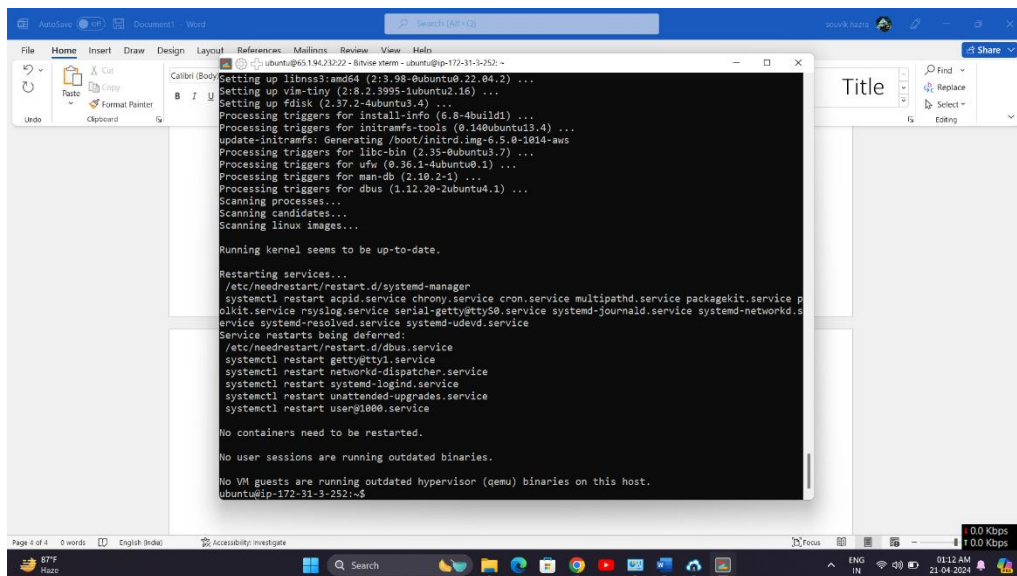
- Pwd

```
ubuntu@ip-172-31-3-252:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-3-252:~$
```

- sudo apt-get update



- `sudo apt-get upgrade`



```

Setting up libnss3:amd64 (2:3.98-0ubuntu0.22.04.2) ...
Setting up vim-tiny (2:8.2.3995-1ubuntu2.16) ...
Setting up fdisk (2:57.2-4ubuntu3.4) ...
Processing triggers for install-info (6.8-4build1) ...
Processing triggers for initscripts-tools (0.140ubuntu13.4) ...
update-intramfs: Generating /boot/initrd.img-6.5.0-1814-aws
Processing triggers for libc-bin (2.35-0ubuntu3.7) ...
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

Running kernel seems to be up-to-date.

Restarting services...
/etc/needrestart/needrestart.d/systemd-manager
systemctl restart acpid.service chrony.service cron.service multipathd.service packagekit.service polkit.service rsyslog.service serial-getty@ttyS0.service systemd-journald.service systemd-networkd.service systemd-resolved.service systemd-udev.service
Service restarts being deferred:
/etc/needrestart/needrestart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.service

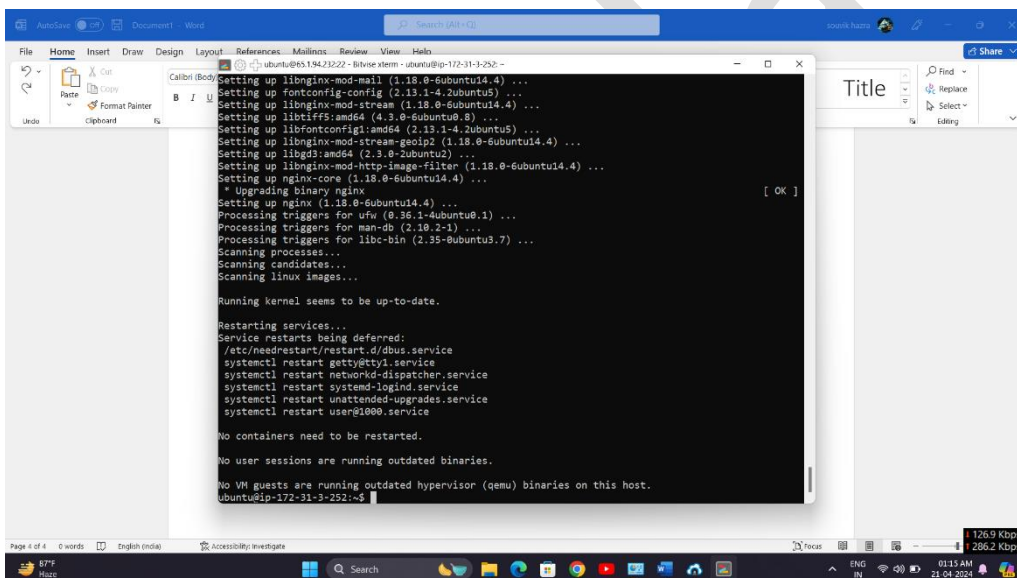
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-3-252:~$

```

- `sudo apt-get install nginx`



```

Setting up libnginx-mod-mail (1.18.0-6ubuntu14.4) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.4) ...
Setting up librtfss:amd64 (4.3.0-6ubuntu0.8) ...
Setting up libfontconfig1:amd64 (2:13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geopip2 (1.18.0-6ubuntu14.4) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.4) ...
Setting up nginx-core (1.18.0-6ubuntu14.4) ...
* Upgrading binary nginx
Setting up nginx (1.18.0-6ubuntu14.4) ...
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.7) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

Running kernel seems to be up-to-date.

Restarting services...
Service restarts being deferred:
/etc/needrestart/needrestart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.service

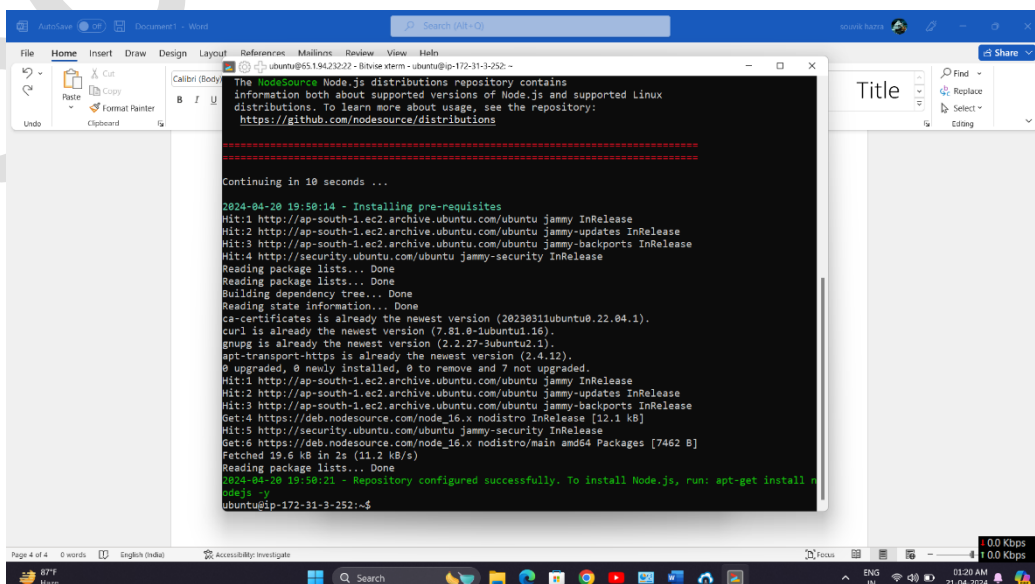
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-3-252:~$

```

- `curl -SL https://deb.nodesource.com/setup_16.x|sudo -E bash -`



```

The NodeSource Node.js distributions repository contains
information both about supported versions of Node.js and supported Linux
distributions. To learn more about usage, see the repository:
https://github.com/nodesource/distributions

Continuing in 10 seconds ...

2024-04-20 19:50:14 - Installing pre-requisites
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20230311ubuntu0.22.04.1).
curl is already the newest version (7.81.0-1ubuntu16).
gnupg is already the newest version (2.2.27-2ubuntu2.3).
apt-transport-https is already the newest version (2.4.12).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 https://deb.nodesource.com/node_16.x nodistro InRelease [12.1 kB]
Hit:5 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:6 https://deb.nodesource.com/node_16.x nodistro/main amd64 Packages [7462 B]
Fetched 19.6 kB in 2s (11.2 kB/s)
Reading package lists... Done
2024-04-20 19:50:21 - Repository configured successfully. To install Node.js, run: apt-get install nodejs -y
ubuntu@ip-172-31-3-252:~$

```

- `sudo apt install nodejs`

```

The following NEW packages will be installed:
nodejs
0 upgraded, 1 newly installed, 0 to remove and 7 not upgraded.
Need to get 27.5 MB of archives.
After this operation, 128 MB of additional disk space will be used.
Get:1 https://deb.nodesource.com/node_16.x nodistro/main amd64 nodejs amd64 16.20.2-1nodesource1 [27.5 MB]
Fetched 27.5 MB in 1s (32.7 MB/s)
Selecting previously unselected package nodejs.
(Reading database ... 65316 files and directories currently installed.)
Preparing to unpack .../nodejs_16.20.2-1nodesource1_amd64.deb ...
Unpacking nodejs (16.20.2-1nodesource1) ...
Setting up nodejs (16.20.2-1nodesource1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

Restarting services...
Service restarts being deferred:
/etc/passwd:restart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.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-172-31-3-252:~$
  
```

- `git clone https://github.com/SouvikHazra060/Repo2.git`
- `cd repo2`
- `npm install`
- `node index.js`

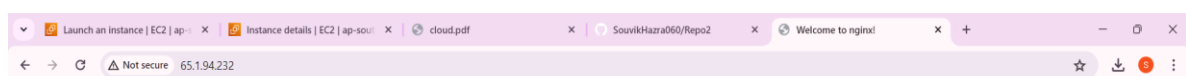
```

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-3-252:~$ git clone https://github.com/SouvikHazra060/Repo2.git
Cloning into 'Repo2'...
remote: Enumerating objects: 14, done.
remote: Counting objects: 100% (14/14), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 14 (delta 4), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (14/14), 51.14 KiB | 1.09 MiB/s, done.
Resolving deltas: 100% (4/4), done.
ubuntu@ip-172-31-3-252:~$ cd Repo2
ubuntu@ip-172-31-3-252:~/Repo2$ npm install
npm WARN deprecated uid@2.0.0: Please upgrade to version 2.0.0 or higher. Older versions may use Math.random() in certain circumstances, which is known to be problematic. See https://v8.dev/blog/math-random for details.
added 258 packages, and audited 259 packages in 8s
18 packages are looking for funding
  run `npm fund` for details
12 vulnerabilities (10 moderate, 2 critical)

To address all issues, run:
  npm audit fix

Run `npm audit` for details.
npm notice
npm notice New major version of npm available! 8.19.4 -> 10.9.2
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.9.2
npm notice Run `npm install -g npm@10.9.2` to update!
npm notice
ubuntu@ip-172-31-3-252:~/Repo2$ node index.js
Started server
  
```

10. Now server has started. If we paste it in url section then we can see nginx has started. To stop server click (ctrl+c).



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

11. Now write these all commands:

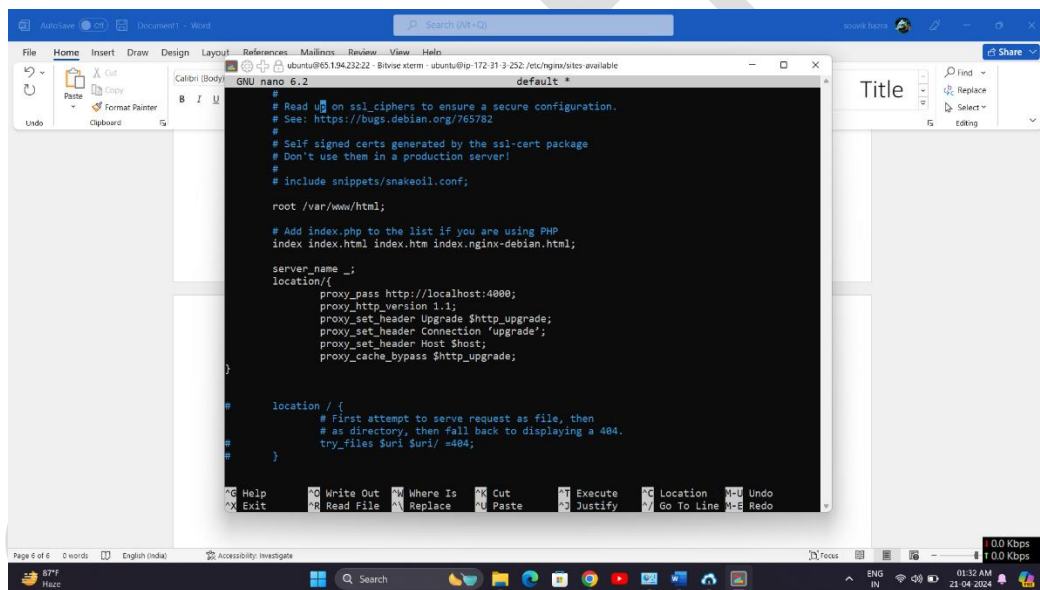
- cd /
- pwd
- cd etc/nginx/sites-available/
- sudo nano default

```
Last login: Sat Apr 20 19:50:00 2024 from 152.58.182.232
ubuntu@ip-172-31-3-252:~$ cd /
ubuntu@ip-172-31-3-252:/$ pwd
/
ubuntu@ip-172-31-3-252:/$ cd etc/nginx/sites-available/
ubuntu@ip-172-31-3-252:/etc/nginx/sites-available$
```

12. A new window will be opened. There at first go to location area and comment all codes and then write:

```
location/{
    proxy_pass http://localhost:4000;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection 'upgrade';
    proxy_set_header Host $host;
    proxy_cache_bypass $http_upgrade;
}
```

->After it click ctrl+x, then y then click enter.



13. Now open new server terminal and write the commands

- cd Repo2
- sudo systemctl restart nginx.

```
Last login: Sat Apr 20 19:58:18 2024 from 152.58.182.232
ubuntu@ip-172-31-3-252:~$ cd Repo2
ubuntu@ip-172-31-3-252:~/Repo2$ sudo systemctl restart nginx
Job for nginx.service failed because the control process exited with error code.
See "systemctl status nginx.service" and "journalctl -xeu nginx.service" for details.
ubuntu@ip-172-31-3-252:~/Repo2$
```

14..Now copy that public IPv4 address again and paste it in url and there we can see that without giving port(:4000) with url we have hosted the website.

