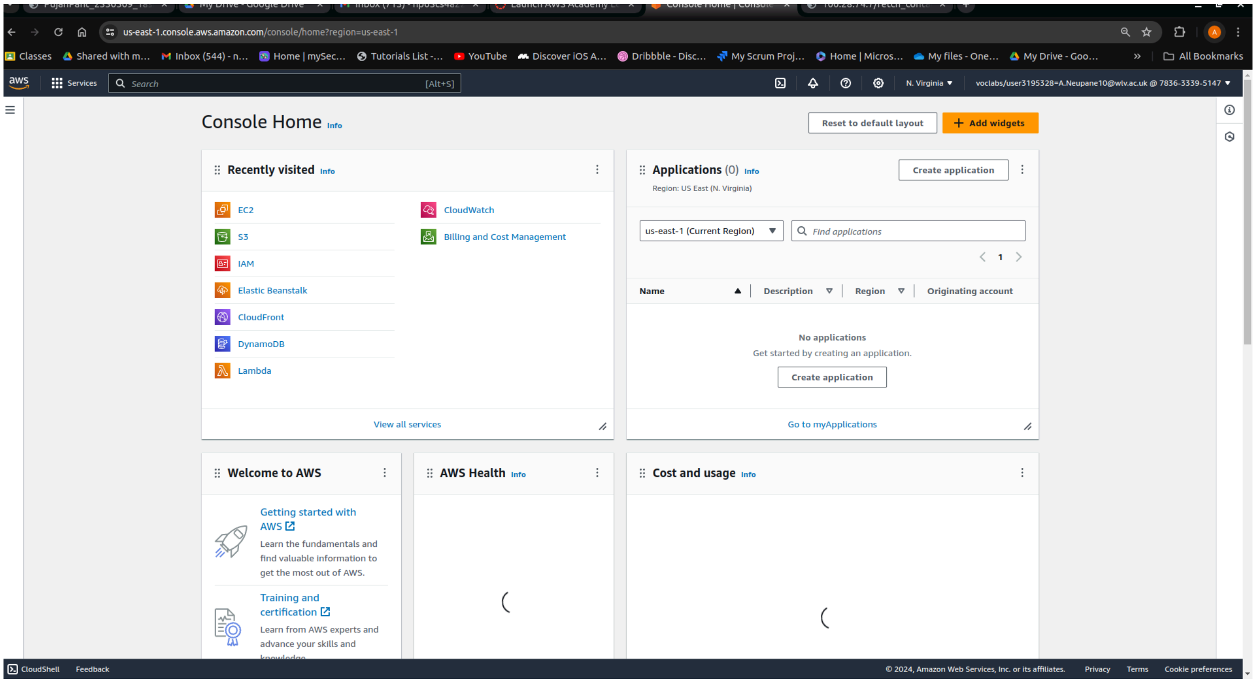
Task 2

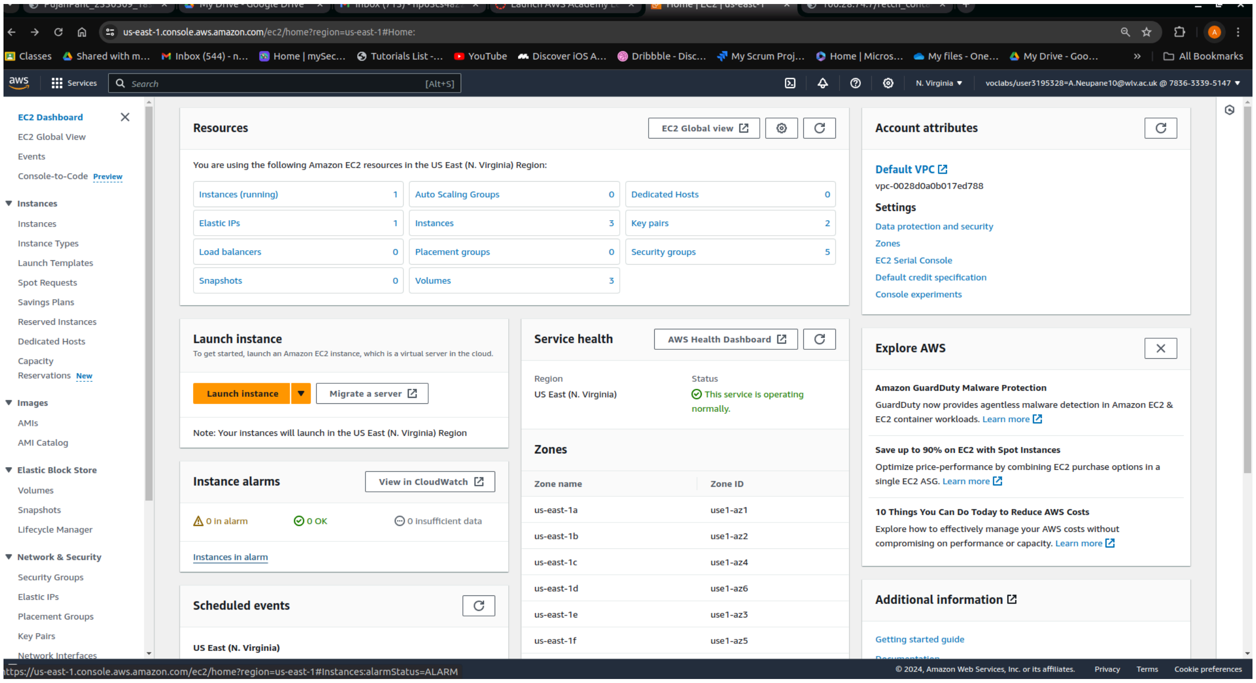
Hosting a web application on a Aws or Azure Linux server. The application should include both a front-end and a back-end. Your task is to create the hosting environment on the server and upload all necessary files for the application to function properly.

Let's start the task with the amazon console.

Step one: First sign in into amazon console. Your interface should look a like this.



Step 2: Go to EC2 service, and click on launch instances



Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	1	Auto Scaling Groups	0	Dedicated Hosts	0
Elastic IPs	1	Instances	3	Key pairs	2
Load balancers	0	Placement groups	0	Security groups	5
Snapshots	0	Volumes	3		

Account attributes

Default VPC
vpc-0028d0a0b017ed788

Settings
Data protection and security
Zones
EC2 Serial Console
Default credit specification
Console experiments

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Note: Your instances will launch in the US East (N. Virginia) Region

Service health

Region: US East (N. Virginia)
Status: This service is operating normally.

Zones

Zone name	Zone ID
us-east-1a	use1-az1
us-east-1b	use1-az2
us-east-1c	use1-az4
us-east-1d	use1-az6
us-east-1e	use1-az3
us-east-1f	use1-az5

Explore AWS

Amazon GuardDuty Malware Protection
GuardDuty now provides agentless malware detection in Amazon EC2 & EC2 container workloads. Learn more

Save up to 90% on EC2 with Spot Instances
Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. Learn more

10 Things You Can Do Today to Reduce AWS Costs
Explore how to effectively manage your AWS costs without compromising on performance or capacity. Learn more

Instance alarms

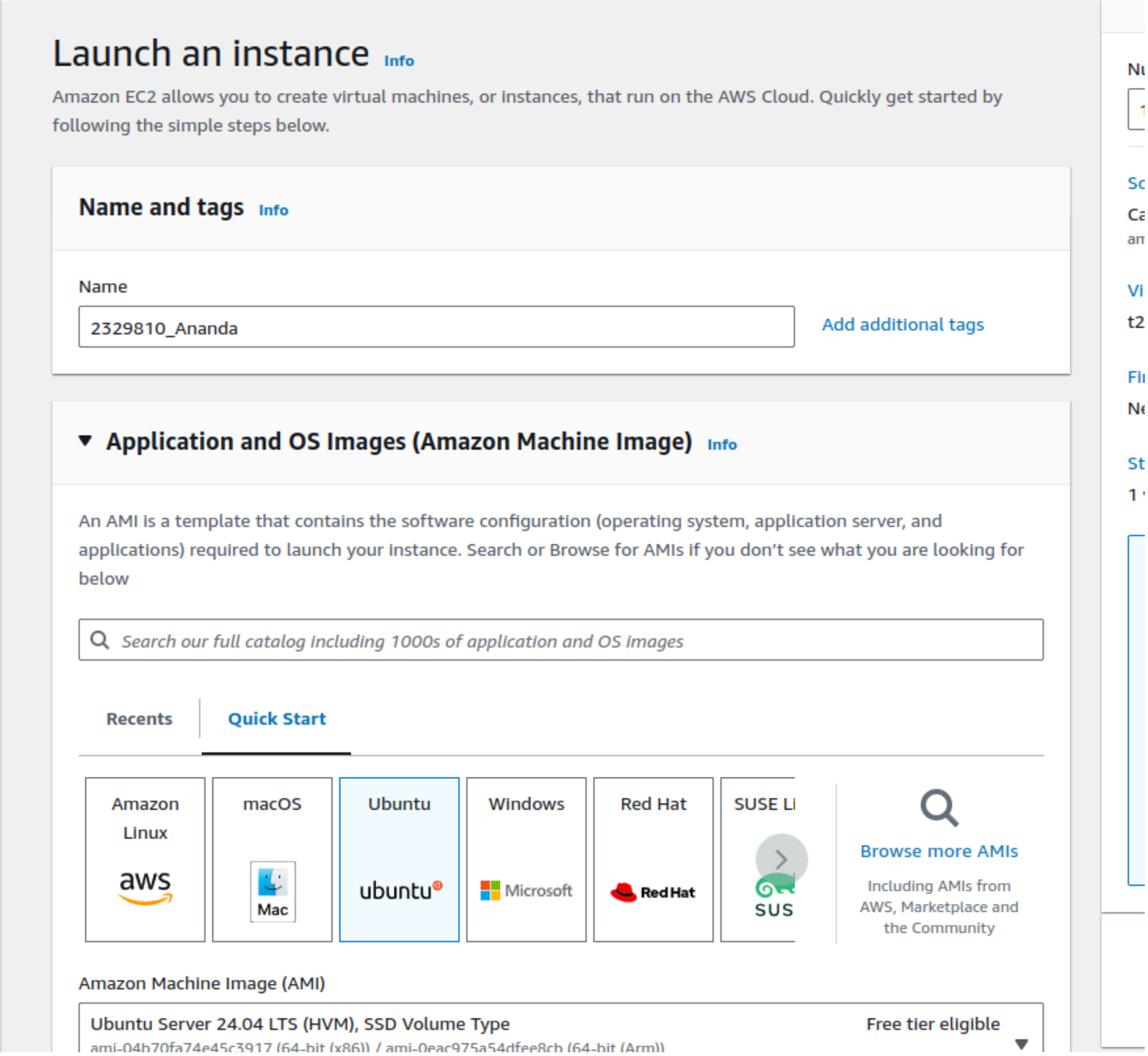
⚠ 0 in alarm ✓ 0 OK ⋯ 0 insufficient data

Additional information

Scheduled events

US East (N. Virginia)

Step 3: Give a name to your instance and select a operating system. Here i choose ubuntu system and keep my instance name 2329810_Ananada. And leave other config as it is.



Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name

2329810_Ananda

Add additional tags

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

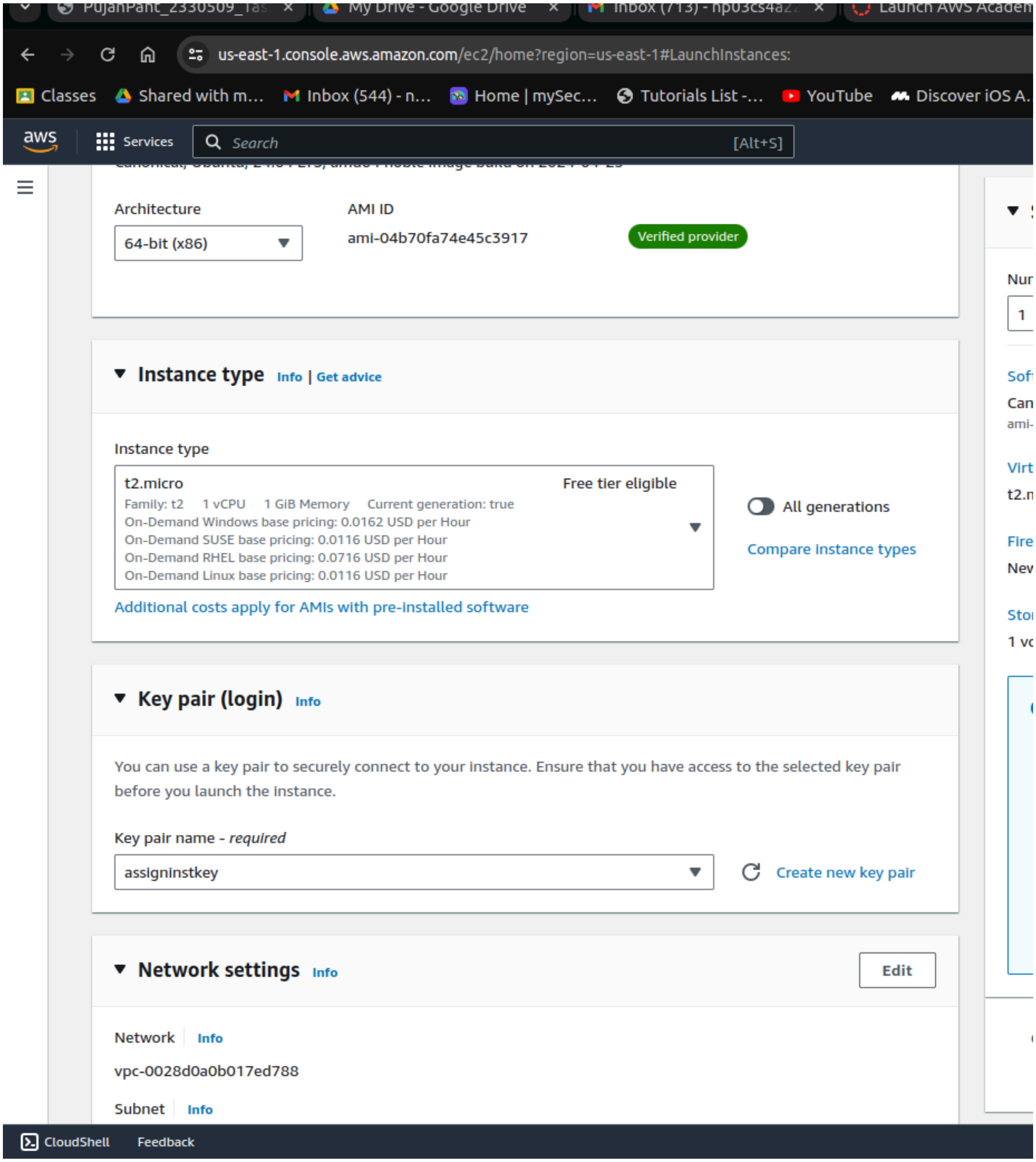
Search our full catalog including 1000s of application and OS images

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type Free tier eligible

ami-04b70fa74e45c3917 (64-bit (x86)) / ami-0eac975a54dfee8cb (64-bit (Arm))

Step four: You can use key pair value of past time or generate a new one for this and download in rpm version and keep in a directory.



Architecture: 64-bit (x86)

AMI ID: ami-04b70fa74e45c3917 — Verified provider

Instance type

Info | Get advice

Instance type

t2.micro — Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.0716 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

○ All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

assigninstkey

Create new key pair

Network settings

Info

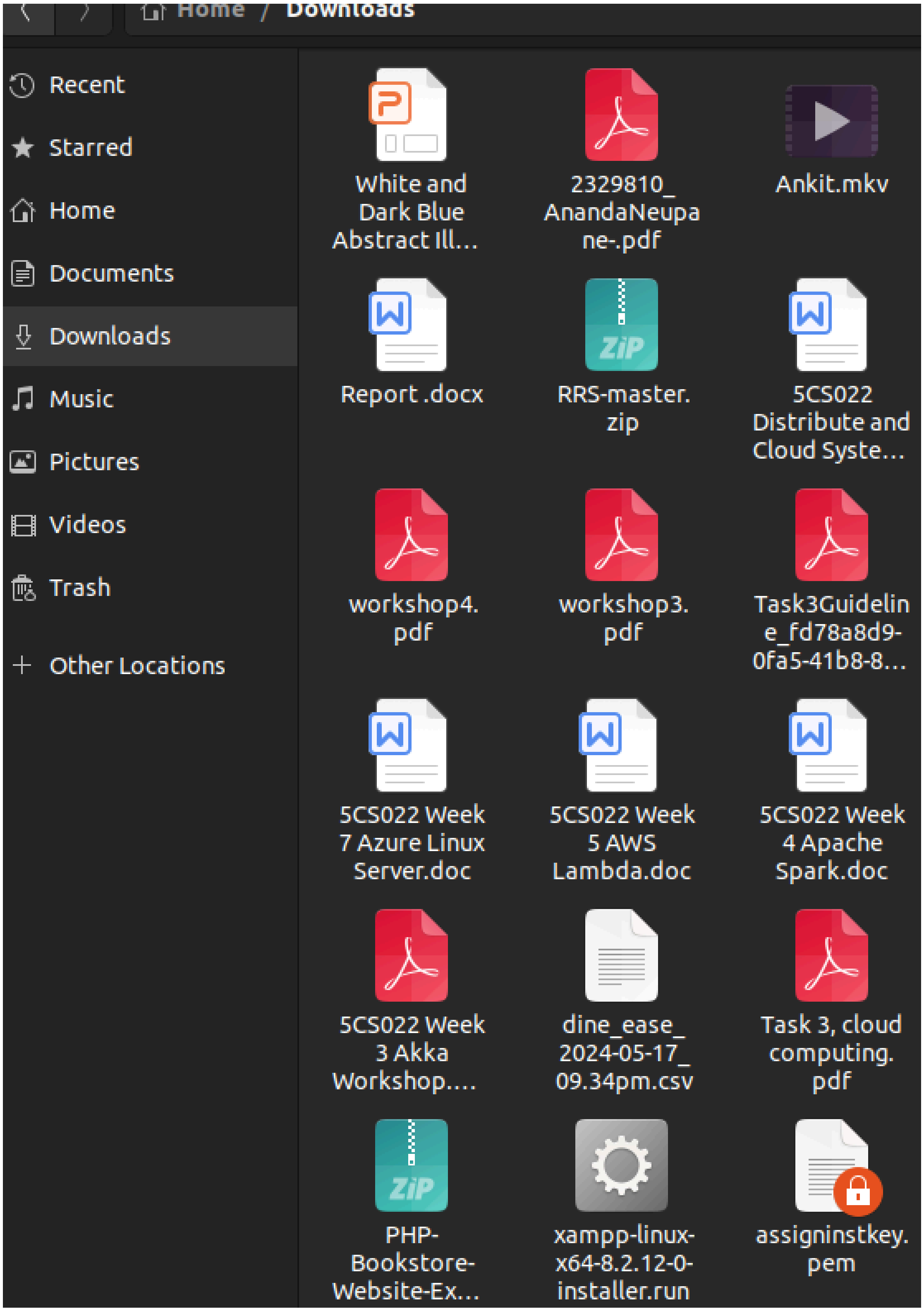
Edit

Network Info

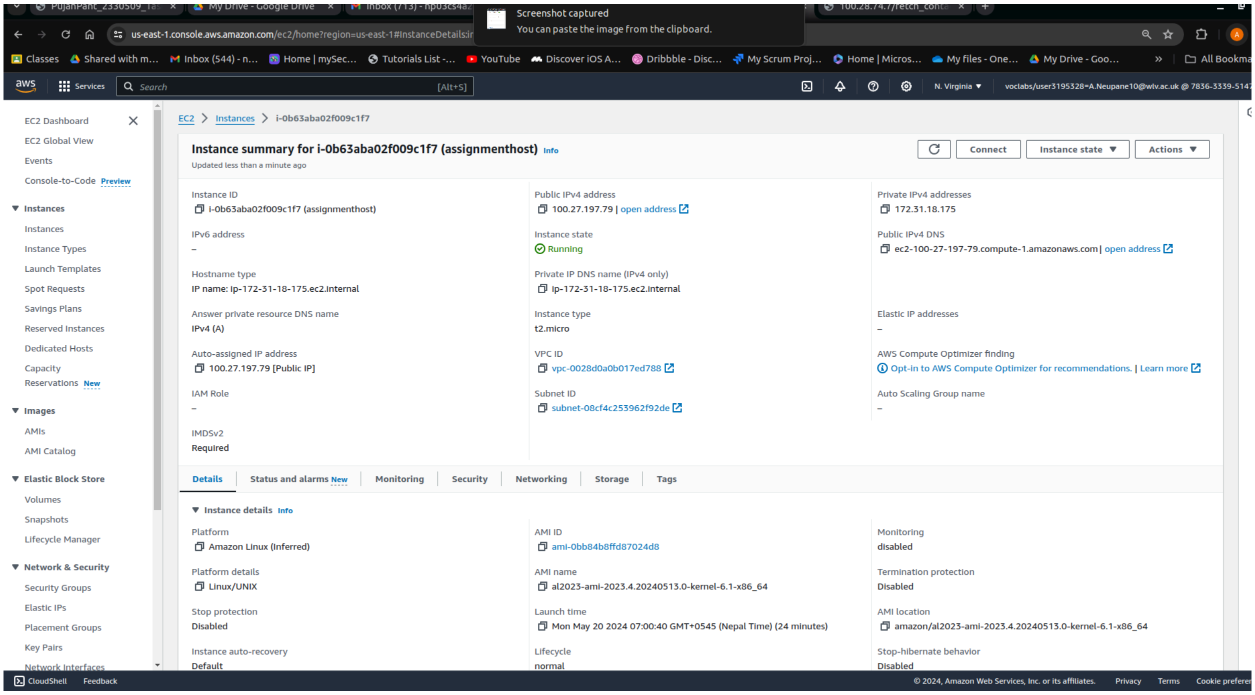
vpc-0028d0a0b017ed788

Subnet Info

Step five: Keep in safe place as we are going to need it during ssh connection


Home / Downloads
Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash
Other Locations
White and Dark Blue Abstract Ill...
2329810_ AnandaNeupane-.pdf
Ankit.mkv
Report .docx
RRS-master. zip
5CS022 Distribute and Cloud Syste...
workshop4. pdf
workshop3. pdf
Task3Guideline_fd78a8d9-0fa5-41b8-8...
5CS022 Week 7 Azure Linux Server.doc
5CS022 Week 5 AWS Lambda.doc
5CS022 Week 4 Apache Spark.doc
5CS022 Week 3 Akka Workshop....
dine_ease_ 2024-05-17_ 09.34pm.csv
Task 3, cloud computing. pdf
PHP-Bookstore-Website-Ex...
xampp-linux-x64-8.2.12-0-installer.run
assigninstkey. pem

Step 6: Here is the dashboard details of the instance i created



Instance summary for i-0b63aba02f009c1f7 (assignmenthost)
Updated less than a minute ago

Instance ID: i-0b63aba02f009c1f7 (assignmenthost)

Public IPv4 address: 100.27.197.79 | open address

Private IPv4 addresses: 172.31.18.175

IPv6 address: –

Instance state: Running

Public IPv4 DNS: ec2-100-27-197-79.compute-1.amazonaws.com | open address

Hostname type: IP name: ip-172-31-18-175.ec2.internal

Private IP DNS name (IPv4 only): ip-172-31-18-175.ec2.internal

Answer private resource DNS name: IPv4 (A)

Instance type: t2.micro

Elastic IP addresses: –

Auto-assigned IP address: 100.27.197.79 [Public IP]

VPC ID: vpc-0028d0a0b017ed788

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

IAM Role: –

Subnet ID: subnet-08cf4c253962f92de

Auto Scaling Group name: –

IMDSv2: Required

Instance details

Platform: Amazon Linux (Inferred)

AMI ID: ami-0bb84b8ffd87024d8

Monitoring: disabled

Platform details: Linux/UNIX

AMI name: al2023-ami-2023.4.20240513.0-kernel-6.1-x86_64

Termination protection: Disabled

Stop protection: Disabled

Launch time: Mon May 20 2024 07:00:40 GMT+0545 (Nepal Time) (24 minutes)

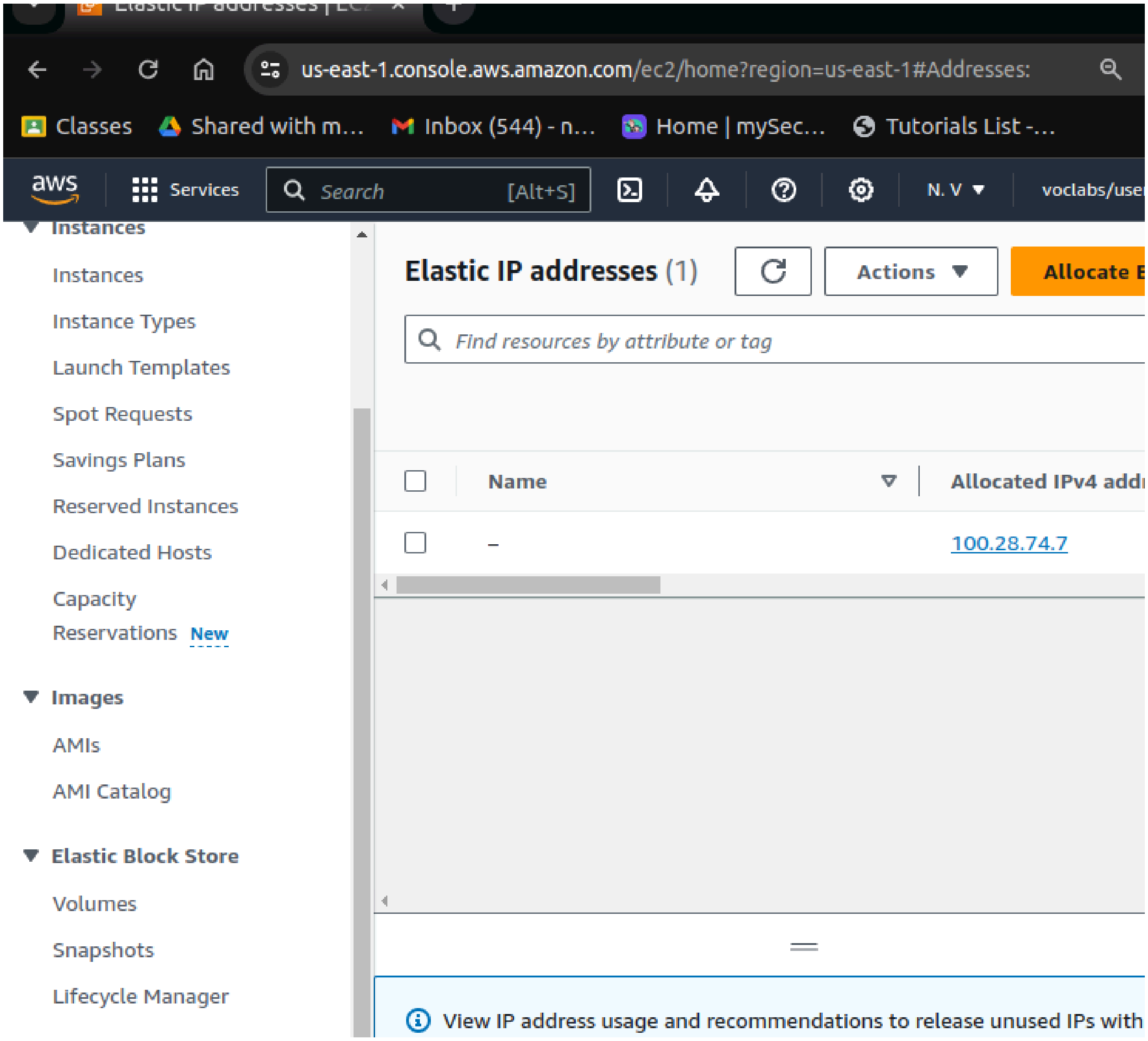
AMI location: amazon/al2023-ami-2023.4.20240513.0-kernel-6.1-x86_64

Instance auto-recovery: Default

Lifecycle: normal

Stop-hibernate behavior: Disabled

Step 7: I connect my ip to a elastic IP so i dont have any changing ips.

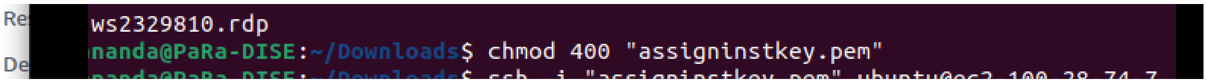


Elastic IP addresses (1)

	Name	Allocated IPv4 addr
□	–	100.28.74.7

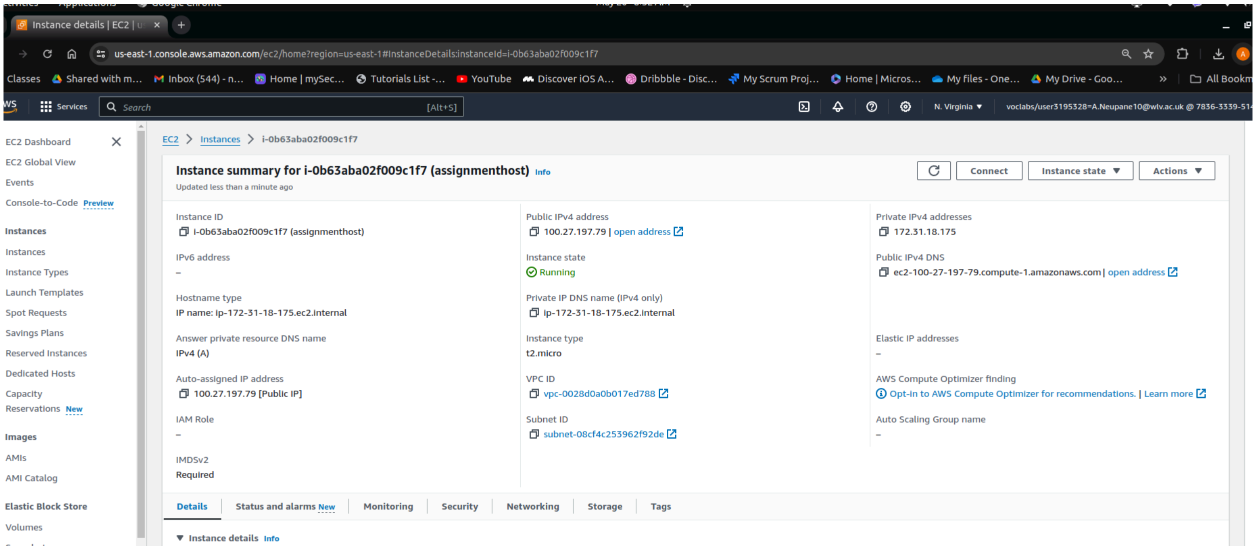
View IP address usage and recommendations to release unused IPs with

Step 8: Now connect to your machine through Ssh, to do so first you have to give root permission to your key pair in directory



```
ws2329810.rdp
nanda@PaRa-DISE:~/Downloads$ chmod 400 "assigninstkey.pem"
nanda@PaRa-DISE:~/Downloads$ ssh -i "assigninstkey.pem" ubuntu@ec2-100-28-74-7
```

Step 9: Connect using shh to your virtual machine. GO to connect section of your instance and choose the third option of ssh client and copy the command line prompt from example section and run in your terminal.



Instance summary for i-0b63aba02f009c1f7 (assignmenthost) Info

Updated less than a minute ago

Instance ID
i-0b63aba02f009c1f7 (assignmenthost)

IPv6 address
–

Hostname type
IP name: ip-172-31-18-175.ec2.internal

Answer private resource DNS name
IPv4 (A)

Auto-assigned IP address
100.27.197.79 [Public IP]

IAM Role
–

IMDSv2
Required

Public IPv4 address
100.27.197.79 | open address

Instance state
Running

Private IP DNS name (IPv4 only)
ip-172-31-18-175.ec2.internal

Instance type
t2.micro

VPC ID
vpc-0028d0a0b017ed788

Subnet ID
subnet-08cf4c253962f92de

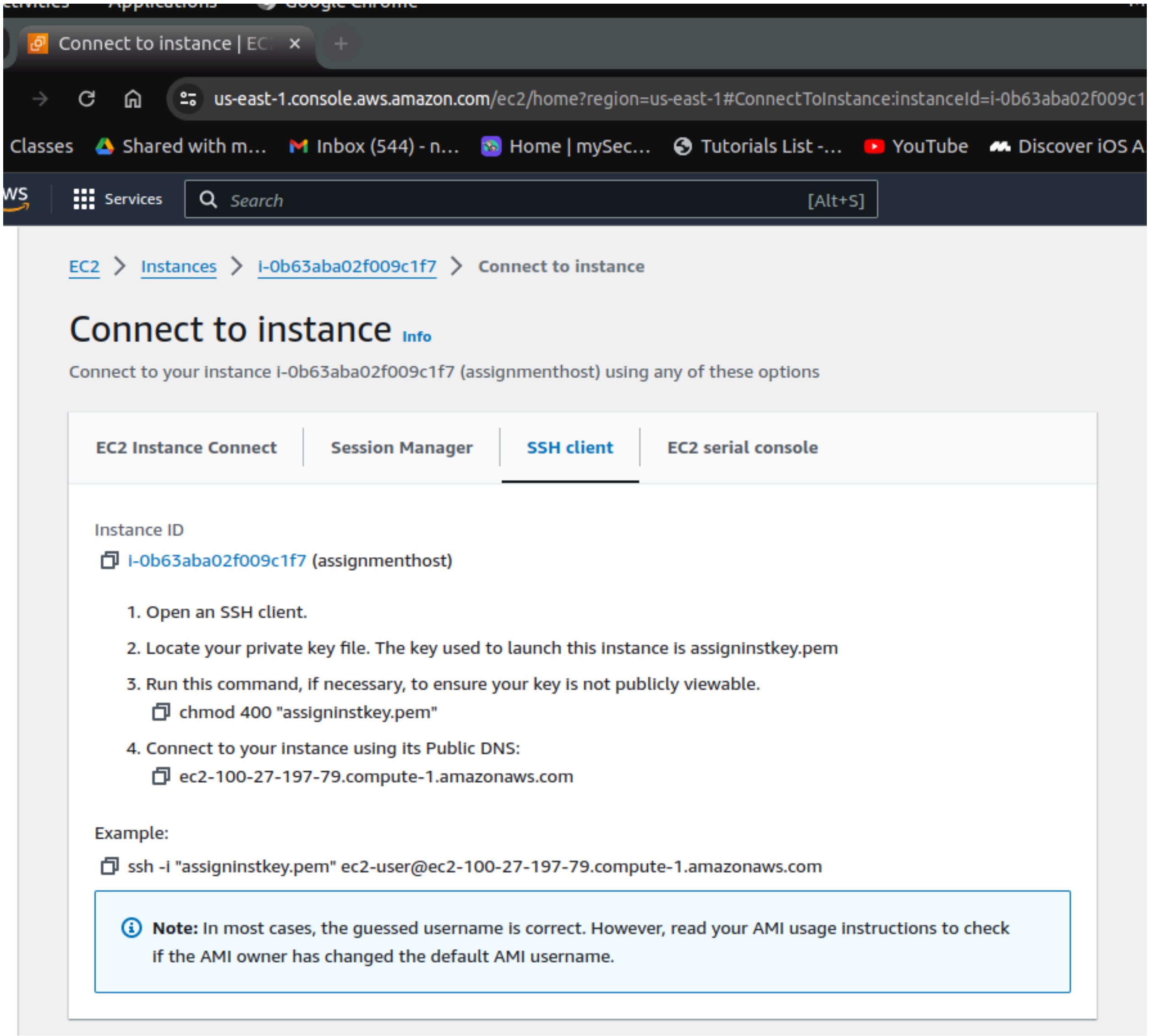
Private IPv4 addresses
172.31.18.175

Public IPv4 DNS
ec2-100-27-197-79.compute-1.amazonaws.com | open address

Elastic IP addresses
–

AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name
–



Connect to instance Info

Connect to your instance i-0b63aba02f009c1f7 (assignmenthost) using any of these options

Instance ID
i-0b63aba02f009c1f7 (assignmenthost)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is assigninstkey.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.

```
chmod 400 "assigninstkey.pem"
```

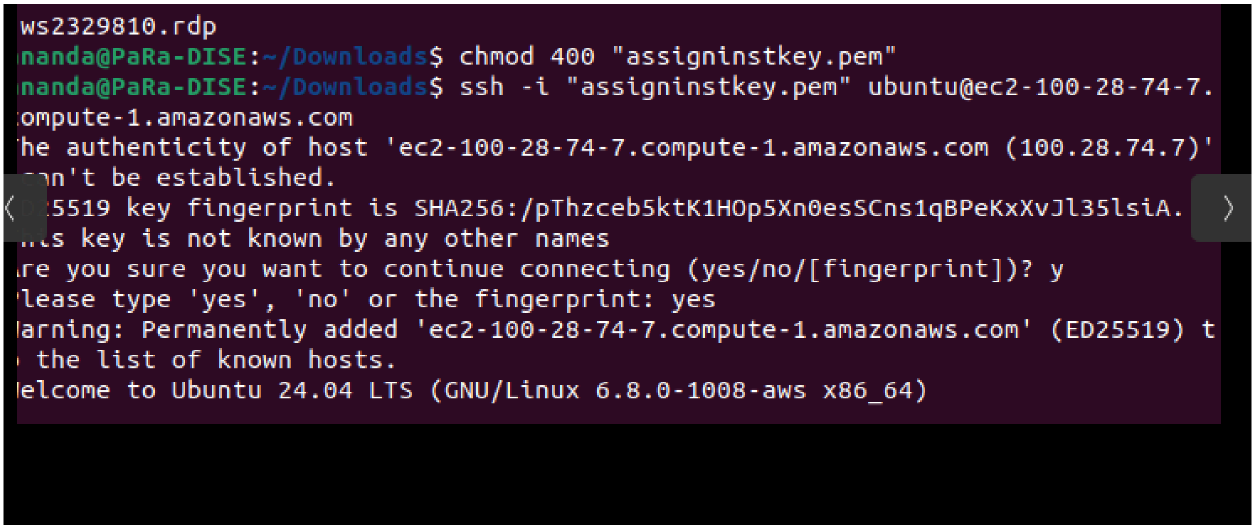
4. Connect to your instance using its Public DNS:

```
ec2-100-27-197-79.compute-1.amazonaws.com
```

Example:

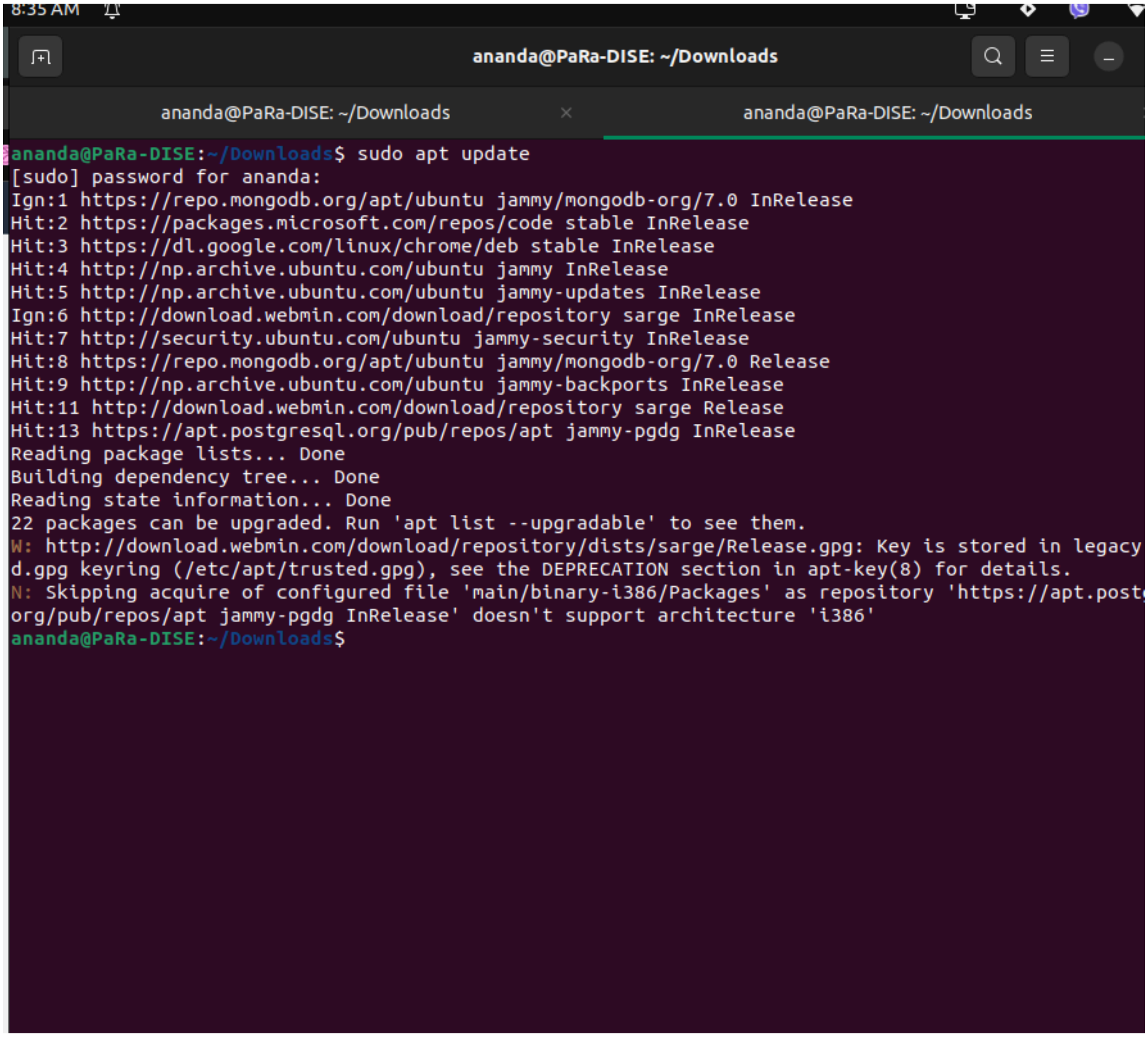
```
ssh -i "assigninstkey.pem" ec2-user@ec2-100-27-197-79.compute-1.amazonaws.com
```

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.



```
ws2329810.rdp
nanda@PaRa-DISE:~/Downloads$ chmod 400 "assigninstkey.pem"
nanda@PaRa-DISE:~/Downloads$ ssh -i "assigninstkey.pem" ubuntu@ec2-100-28-74-7.
ompute-1.amazonaws.com
he authenticity of host 'ec2-100-28-74-7.compute-1.amazonaws.com (100.28.74.7)'
can't be established.
D25519 key fingerprint is SHA256:/pThzceb5ktK1HOp5Xn0esSCns1qBPeKxXvJl35lsiA.
his key is not known by any other names
re you sure you want to continue connecting (yes/no/[fingerprint])? y
lease type 'yes', 'no' or the fingerprint: yes
arning: Permanently added 'ec2-100-28-74-7.compute-1.amazonaws.com' (ED25519) t
 the list of known hosts.
elcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1008-aws x86_64)
```

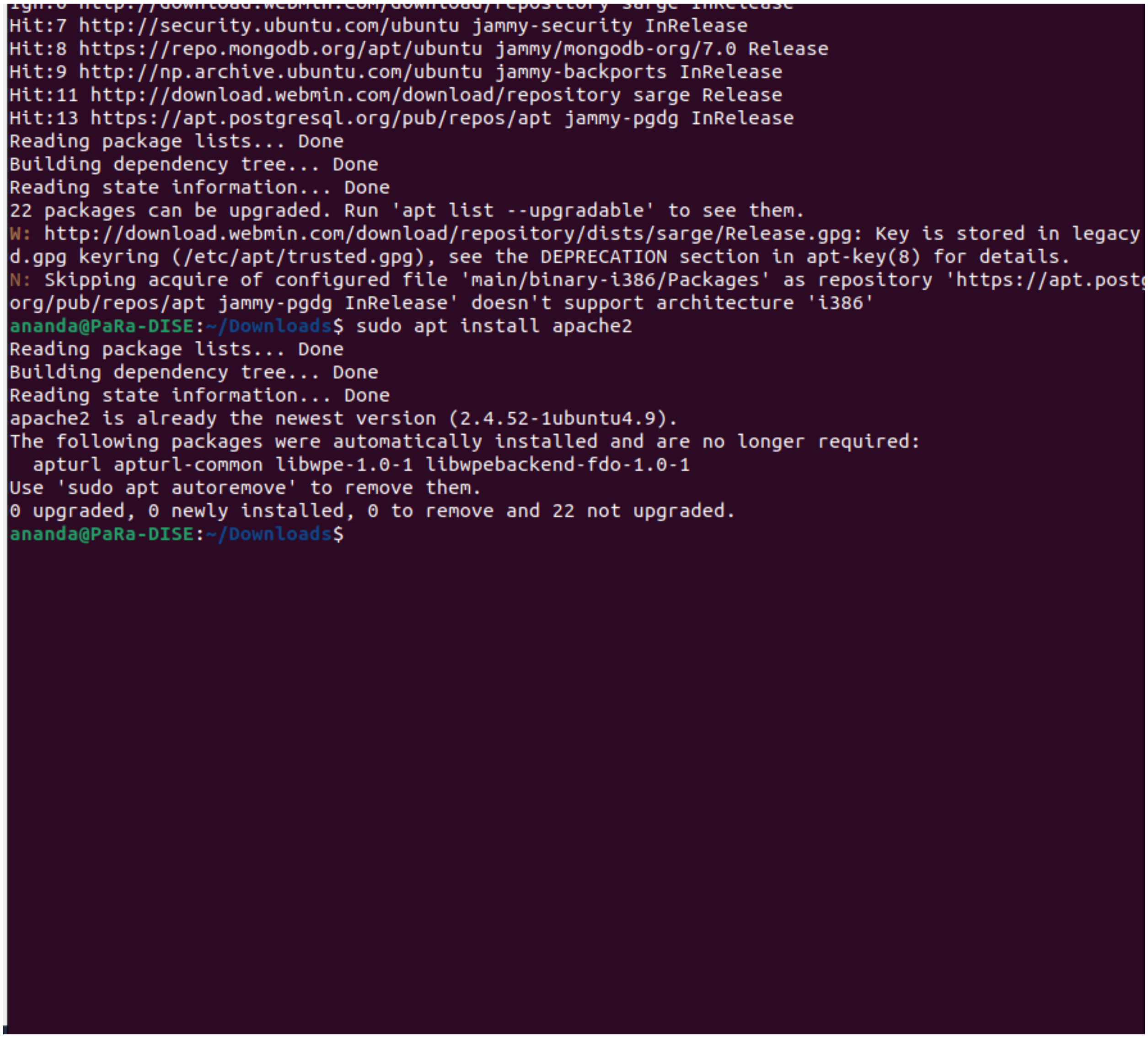
Step 10: Update your virtual machine with sudo apt update command



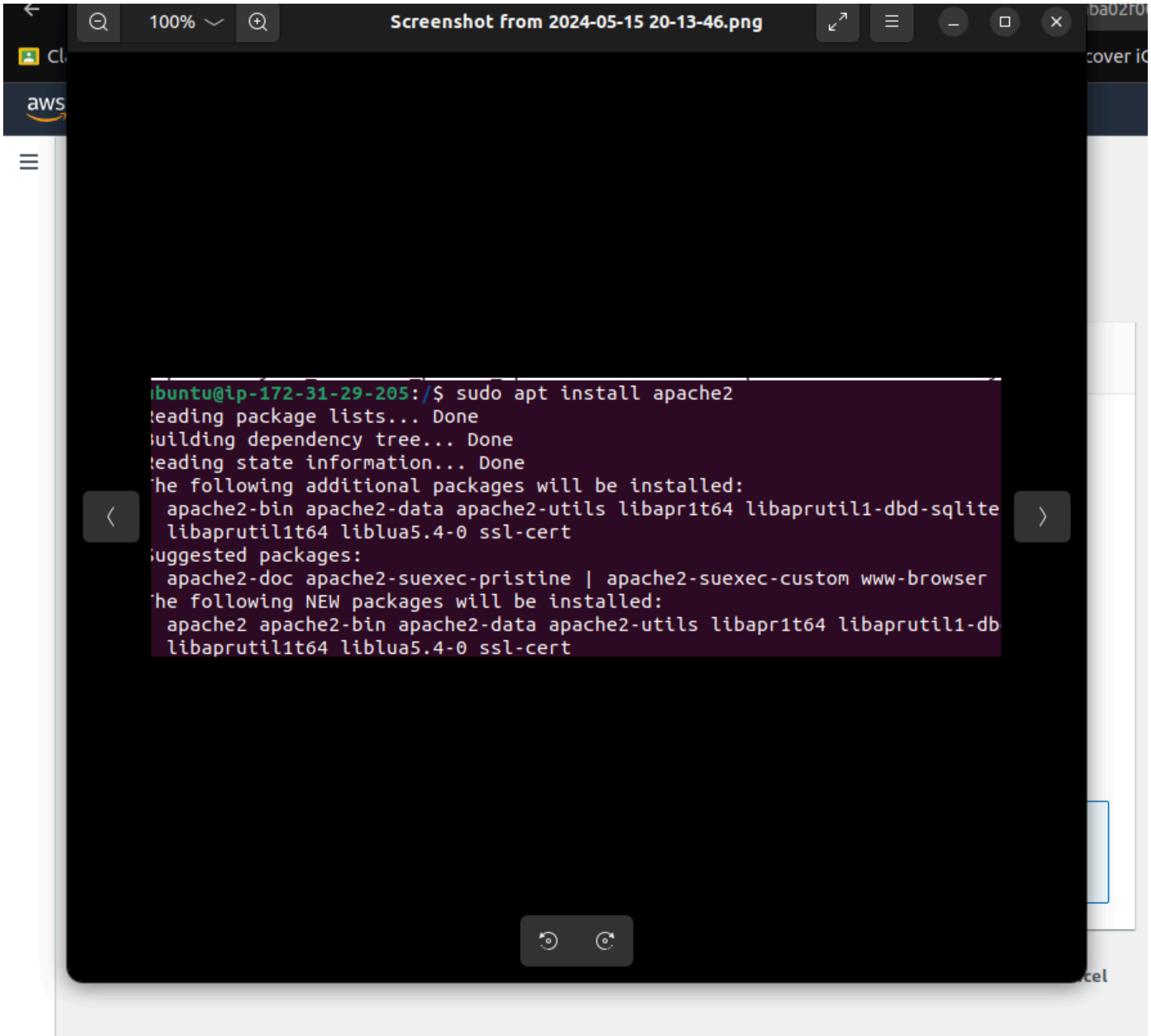
8:35 AM
ananda@PaRa-DISE: ~/Downloads
ananda@PaRa-DISE: ~/Downloads
ananda@PaRa-DISE: ~/Downloads

```
ananda@PaRa-DISE:~/Downloads$ sudo apt update
[sudo] password for ananda:
Ign:1 https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 InRelease
Hit:2 https://packages.microsoft.com/repos/code stable InRelease
Hit:3 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:4 http://np.archive.ubuntu.com/ubuntu jammy InRelease
Hit:5 http://np.archive.ubuntu.com/ubuntu jammy-updates InRelease
Ign:6 http://download.webmin.com/download/repository sarge InRelease
Hit:7 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:8 https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 Release
Hit:9 http://np.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:11 http://download.webmin.com/download/repository sarge Release
Hit:13 https://apt.postgresql.org/pub/repos/apt jammy-pgdg InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
22 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: http://download.webmin.com/download/repository/dists/sarge/Release.gpg: Key is stored in legacy
d.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
N: Skipping acquire of configured file 'main/binary-i386/Packages' as repository 'https://apt.post
org/pub/repos/apt jammy-pgdg InRelease' doesn't support architecture 'i386'
ananda@PaRa-DISE:~/Downloads$
```

Step 11: As we are going to host html and php website on hour virtual machine we need to download the tools for their hosting . Lets download apache2 and mysql here.

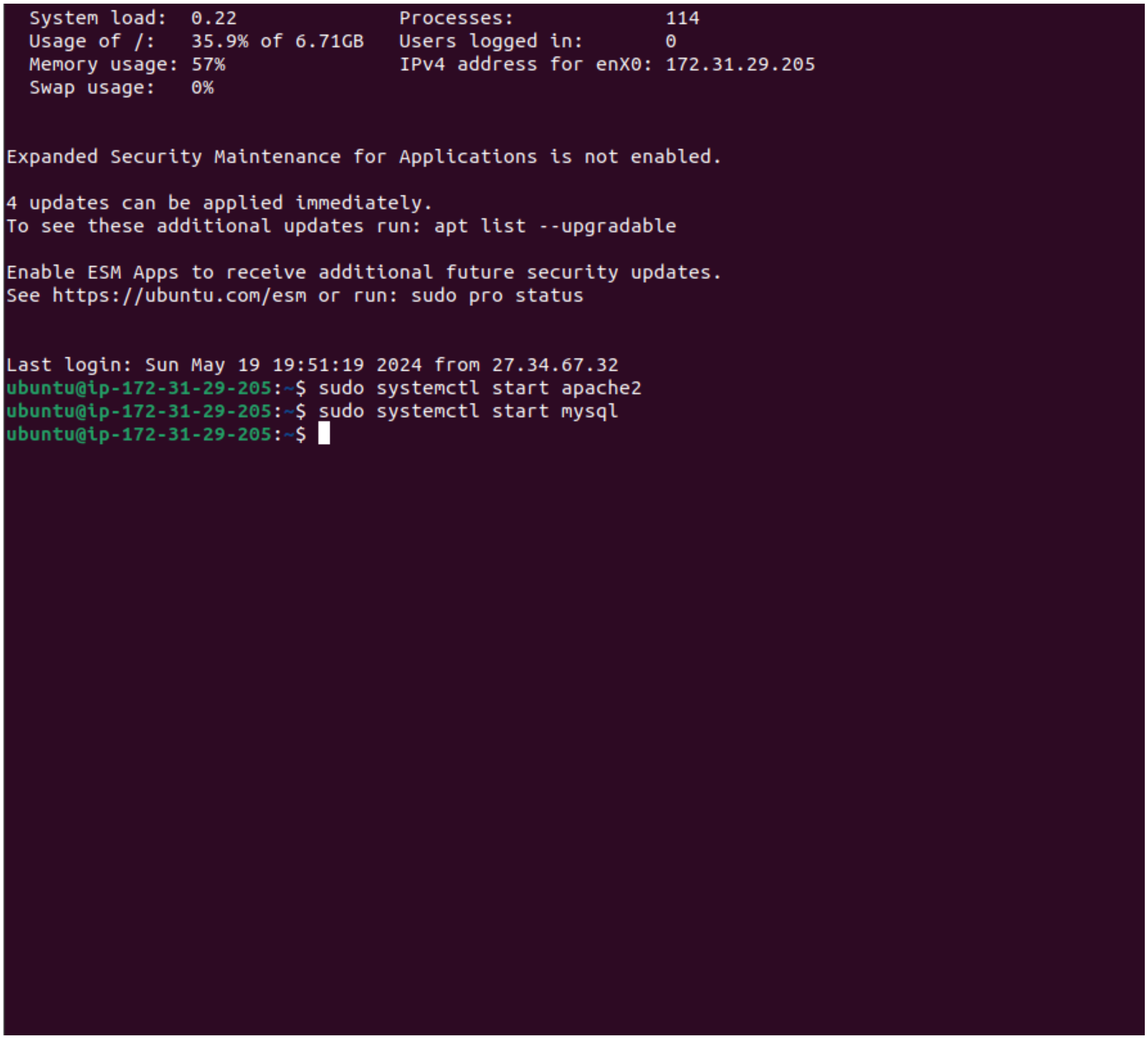


```
Ign:6 http://download.webmin.com/download/repository sarge InRelease
Hit:7 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:8 https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 Release
Hit:9 http://np.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:11 http://download.webmin.com/download/repository sarge Release
Hit:13 https://apt.postgresql.org/pub/repos/apt jammy-pgdg InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
22 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: http://download.webmin.com/download/repository/dists/sarge/Release.gpg: Key is stored in legacy
d.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
N: Skipping acquire of configured file 'main/binary-i386/Packages' as repository 'https://apt.postg
org/pub/repos/apt jammy-pgdg InRelease' doesn't support architecture 'i386'
ananda@PaRa-DISE:~/Downloads$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.52-1ubuntu4.9).
The following packages were automatically installed and are no longer required:
  apturl apturl-common libwpe-1.0-1 libwpebackend-fdo-1.0-1
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 22 not upgraded.
ananda@PaRa-DISE:~/Downloads$
```

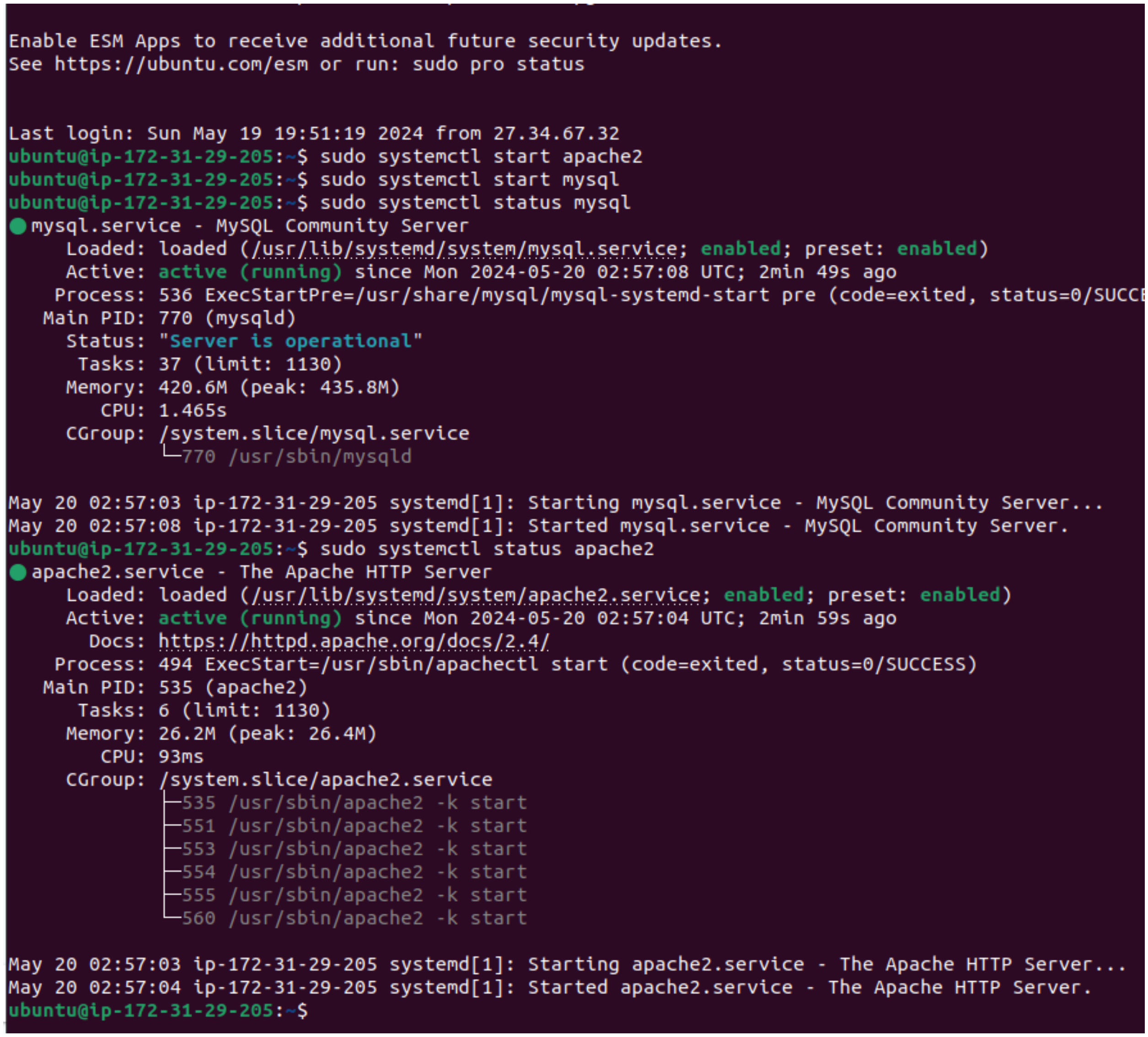


```
buntu@ip-172-31-29-205:/$ sudo apt install apache2
eading package lists... Done
uilding dependency tree... Done
eading state information... Done
he following additional packages will be installed:
 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite
 libaprutil1t64 liblua5.4-0 ssl-cert
uggested packages:
 apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
he following NEW packages will be installed:
 apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-db
 libaprutil1t64 liblua5.4-0 ssl-cert
```

Step 12: Once you got both installed on your device start them and you can check their status after hitting start command



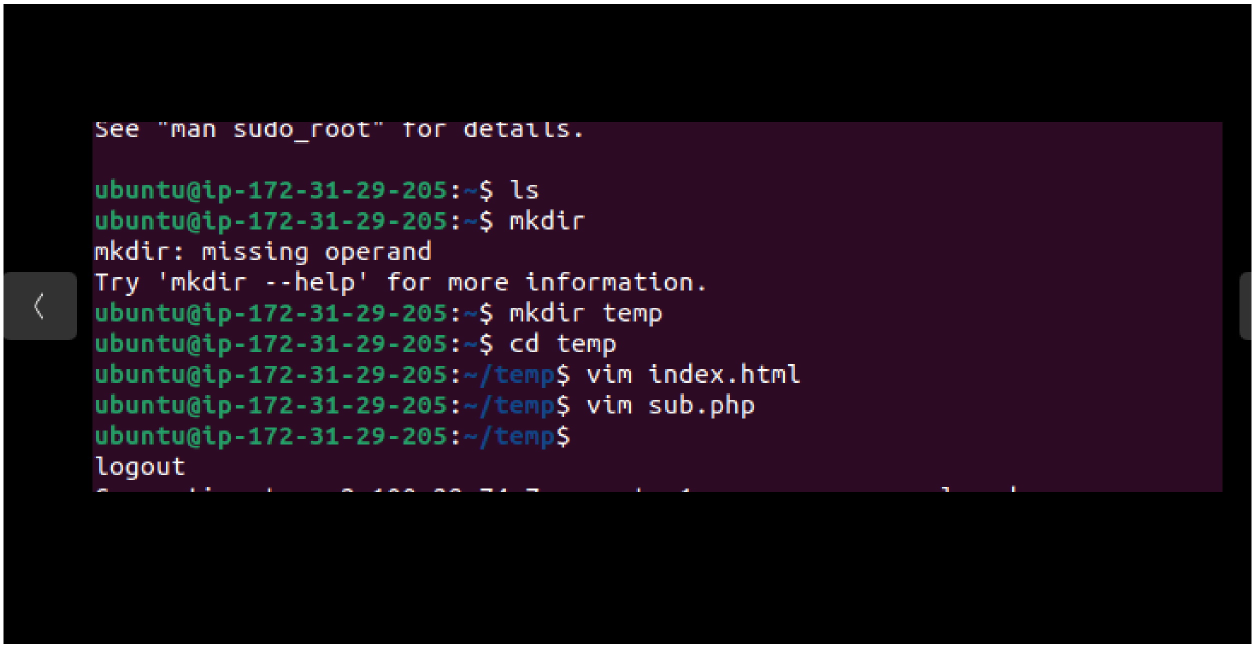
```
  System load:  0.22              Processes:             114
  Usage of /:   35.9% of 6.71GB   Users logged in:       0
  Memory usage: 57%               IPv4 address for enX0: 172.31.29.205
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

4 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Sun May 19 19:51:19 2024 from 27.34.67.32
ubuntu@ip-172-31-29-205:~$ sudo systemctl start apache2
ubuntu@ip-172-31-29-205:~$ sudo systemctl start mysql
ubuntu@ip-172-31-29-205:~$ 
```



```
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Sun May 19 19:51:19 2024 from 27.34.67.32
ubuntu@ip-172-31-29-205:~$ sudo systemctl start apache2
ubuntu@ip-172-31-29-205:~$ sudo systemctl start mysql
ubuntu@ip-172-31-29-205:~$ sudo systemctl status mysql
● mysql.service - MySQL Community Server
     Loaded: loaded (/usr/lib/systemd/system/mysql.service; enabled; preset: enabled)
     Active: active (running) since Mon 2024-05-20 02:57:08 UTC; 2min 49s ago
    Process: 536 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (code=exited, status=0/SUCCE
   Main PID: 770 (mysqld)
     Status: "Server is operational"
      Tasks: 37 (limit: 1130)
     Memory: 420.6M (peak: 435.8M)
        CPU: 1.465s
     CGroup: /system.slice/mysql.service
             └─770 /usr/sbin/mysqld

May 20 02:57:03 ip-172-31-29-205 systemd[1]: Starting mysql.service - MySQL Community Server...
May 20 02:57:08 ip-172-31-29-205 systemd[1]: Started mysql.service - MySQL Community Server.
ubuntu@ip-172-31-29-205:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Mon 2024-05-20 02:57:04 UTC; 2min 59s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 494 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 535 (apache2)
      Tasks: 6 (limit: 1130)
     Memory: 26.2M (peak: 26.4M)
        CPU: 93ms
     CGroup: /system.slice/apache2.service
             ├─535 /usr/sbin/apache2 -k start
             ├─551 /usr/sbin/apache2 -k start
             ├─553 /usr/sbin/apache2 -k start
             ├─554 /usr/sbin/apache2 -k start
             ├─555 /usr/sbin/apache2 -k start
             └─560 /usr/sbin/apache2 -k start

May 20 02:57:03 ip-172-31-29-205 systemd[1]: Starting apache2.service - The Apache HTTP Server...
May 20 02:57:04 ip-172-31-29-205 systemd[1]: Started apache2.service - The Apache HTTP Server.
ubuntu@ip-172-31-29-205:~$
```

Now you are ready for host

Step 13: Lets build your files
Here first, i created my files in a temporary directory on virtual machine then copy it to hosting directory /var/www/html/

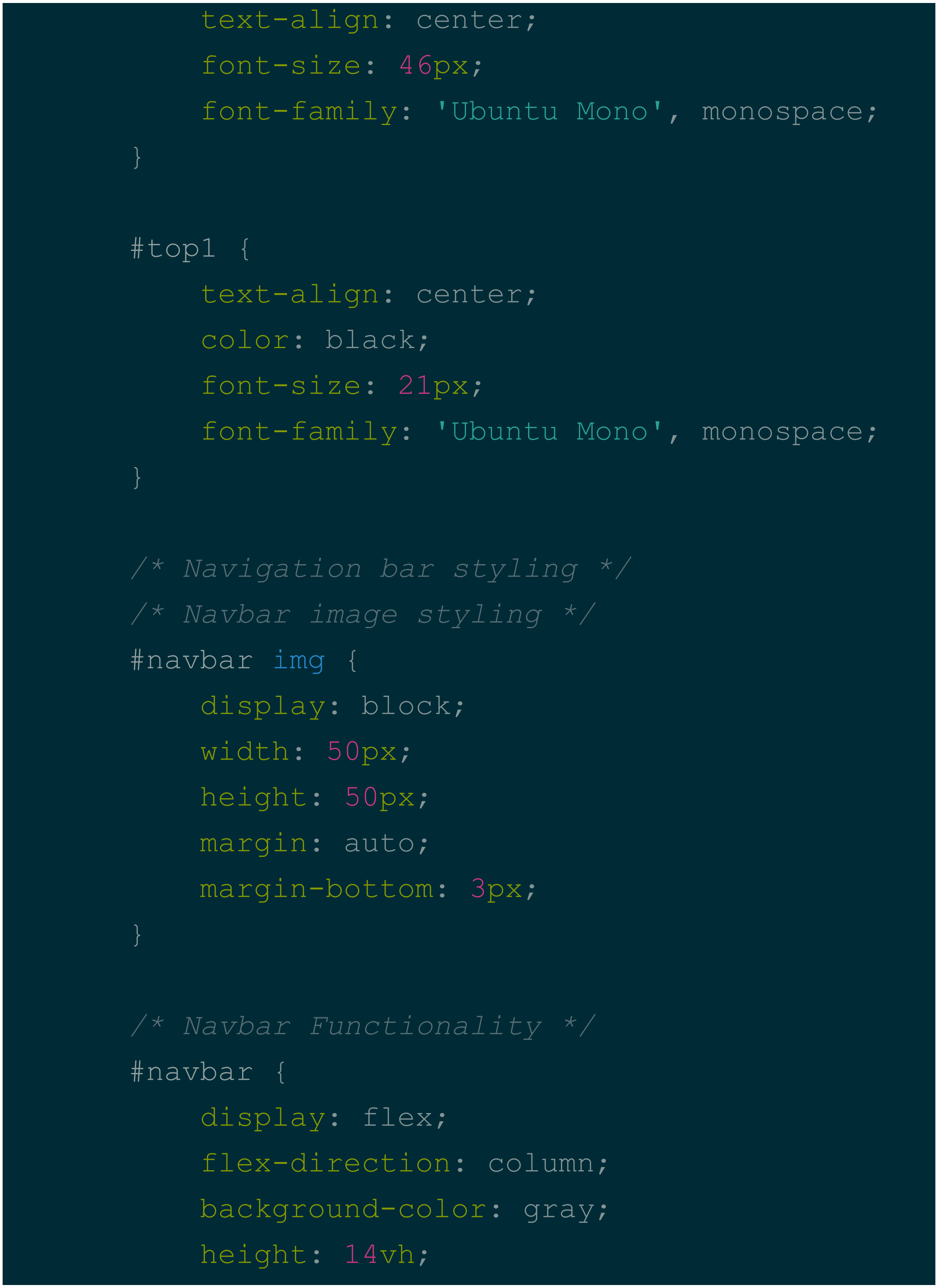


```
See "man sudo_root" for details.

ubuntu@ip-172-31-29-205:~$ ls
ubuntu@ip-172-31-29-205:~$ mkdir
mkdir: missing operand
Try 'mkdir --help' for more information.
ubuntu@ip-172-31-29-205:~$ mkdir temp
ubuntu@ip-172-31-29-205:~$ cd temp
ubuntu@ip-172-31-29-205:~/temp$ vim index.html
ubuntu@ip-172-31-29-205:~/temp$ vim sub.php
ubuntu@ip-172-31-29-205:~/temp$
logout
```

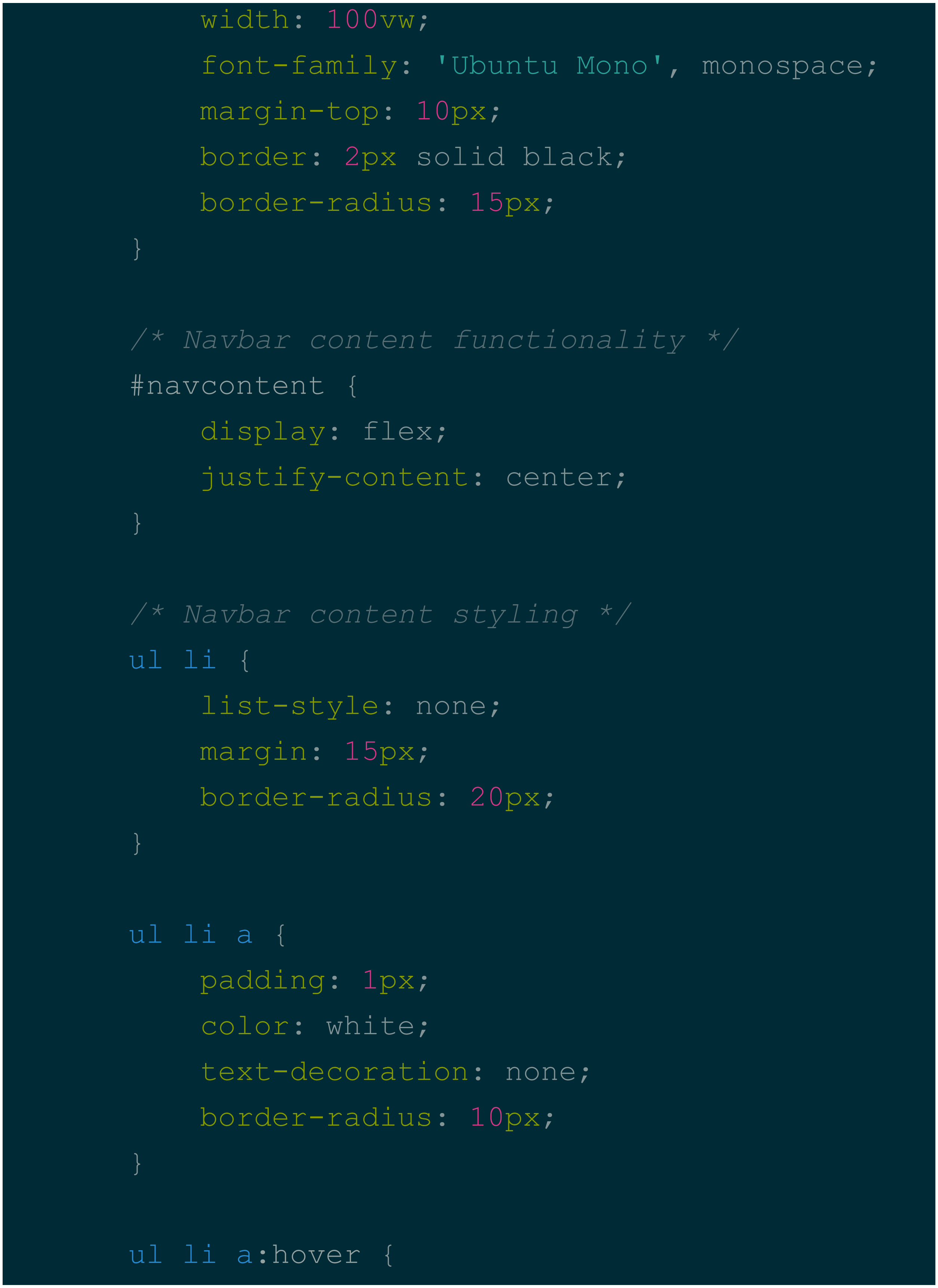
Here are my code:

I. Index.html

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link href="https://fonts.googleapis.com/css2?family=Ubuntu+Mono&display=swap" rel="stylesheet">
   <style>
       /* Your existing CSS styles here */
       /* Header Styling */
       #top {
           color: rgb(245, 10, 10);
```

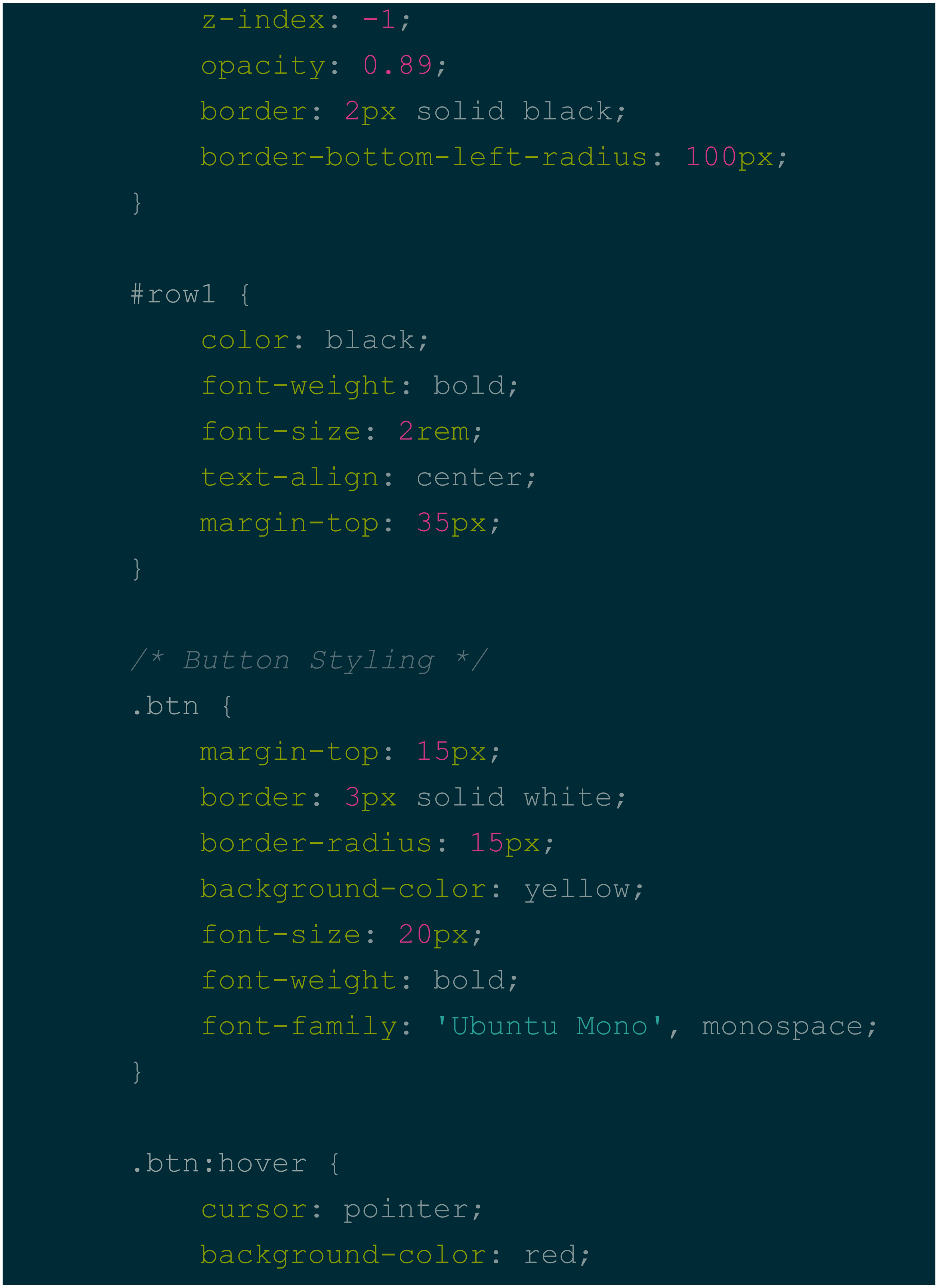


```
        text-align: center;
        font-size: 46px;
        font-family: 'Ubuntu Mono', monospace;
    }

    #top1 {
        text-align: center;
        color: black;
        font-size: 21px;
        font-family: 'Ubuntu Mono', monospace;
    }

    /* Navigation bar styling */
    /* Navbar image styling */
    #navbar img {
        display: block;
        width: 50px;
        height: 50px;
        margin: auto;
        margin-bottom: 3px;
    }

    /* Navbar Functionality */
    #navbar {
        display: flex;
        flex-direction: column;
        background-color: gray;
        height: 14vh;
```

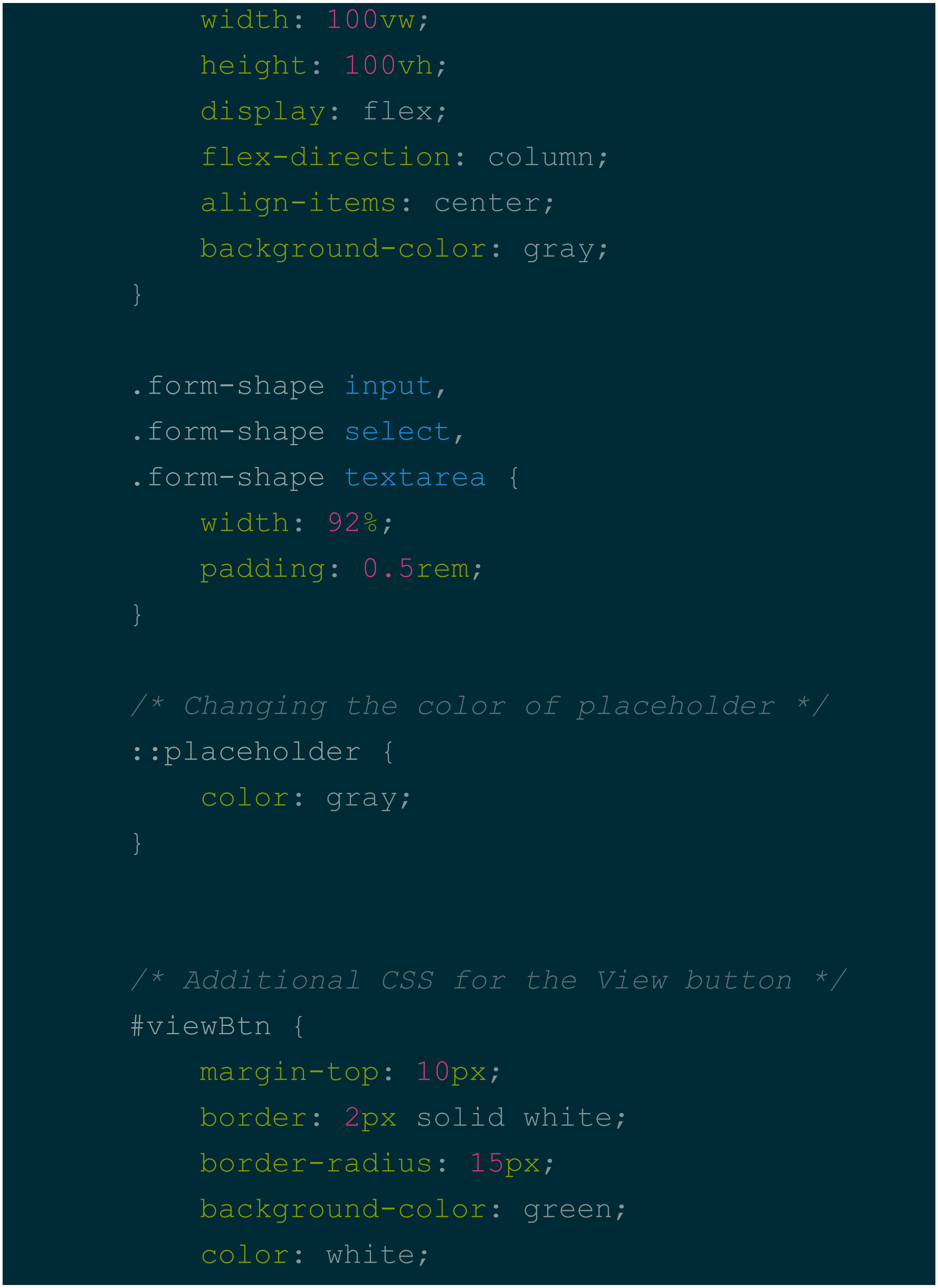


```css
    width: 100vw;
    font-family: 'Ubuntu Mono', monospace;
    margin-top: 10px;
    border: 2px solid black;
    border-radius: 15px;
}

/* Navbar content functionality */
#navcontent {
    display: flex;
    justify-content: center;
}

/* Navbar content styling */
ul li {
    list-style: none;
    margin: 15px;
    border-radius: 20px;
}

ul li a {
    padding: 1px;
    color: white;
    text-decoration: none;
    border-radius: 10px;
}

ul li a:hover {
```

```css
            background-color: red;
            border-radius: 10px;
        }

        /* website background image designing */
        #container1 {
            position: relative;
            display: flex;
            flex-direction: column;
            align-items: center;
            width: 100vw;
            height: 63vh;
        }

        /* Setting the background image using before pseudo selector */
        #container1::before {
            content: '';
            background: url("./1.jpg") no-repeat center center/cover;
            width: 100vw;
            height: 59vh;
            position: absolute;
            top: 0px;
            left: 0px;
            font-family: 'Ubuntu Mono', monospace;
            margin-right: 45px;
            font-weight: bold;
```



```css
        z-index: -1;
        opacity: 0.89;
        border: 2px solid black;
        border-bottom-left-radius: 100px;
    }

    #row1 {
        color: black;
        font-weight: bold;
        font-size: 2rem;
        text-align: center;
        margin-top: 35px;
    }

    /* Button Styling */
    .btn {
        margin-top: 15px;
        border: 3px solid white;
        border-radius: 15px;
        background-color: yellow;
        font-size: 20px;
        font-weight: bold;
        font-family: 'Ubuntu Mono', monospace;
    }

    .btn:hover {
        cursor: pointer;
        background-color: red;
        }

        #container3 {
            display: flex;
            justify-content: space-evenly;
        }

        #row2 {
            width: 24vw;
            height: 21vh;
            box-shadow: 2px 7px 16px 19px;
            margin-top: 51px;
            margin-bottom: 51px;
            display: flex;
            justify-content: center;
            align-items: flex-end;
            position: relative;
            margin-right: 38px;
            border-radius: 40px;
        }

        #row2::before {
            content: '';
            background: url('2.jpeg') no-repeat
center center/cover;
            position: absolute;
            top: 0px;
            left: 0px;
            width: 24vw;
            height: 21vh;
            z-index: -1;
            border-radius: 40px;
        }

        #row3 {
            position: relative;
            width: 24vw;
            height: 21vh;
            display: flex;
            justify-content: center;
            align-items: flex-end;
            box-shadow: 2px 7px 16px 19px;
            margin-top: 51px;
            margin-bottom: 51px;
            margin-left: 38px;
            border-radius: 40px;
        }

        #row3::before {
            content: '';
            background: url('3.jpeg') no-repeat
center center/cover;
            position: absolute;
            top: 0px;
            left: 0px;
            width: 24vw;
            height: 21vh;
            z-index: -1;
            border-radius: 40px;
        }

        #top3 {
            text-align: center;
            color: red;
            font-family: 'Ubuntu Mono', monospace;
        }

        #container4 {
            display: grid;
            grid-template-columns: repeat(auto-fit,
minmax(350px, 1fr));
            margin: 41px;
        }

        #row4 {
            width: 29vw;
            height: 360px;
            border: 2px solid black;
            background: url('a1.jpeg') no-repeat
center center/cover;
            display: flex;
            justify-content: center;
            align-items: flex-end;
            border-radius: 15px;
        }

        #row5 {
            width: 29vw;
            height: 360px;
            border: 2px solid black;
            background: url('a2.jpeg') no-repeat
center center/cover;
            display: flex;
            justify-content: center;
            align-items: flex-end;
            border-radius: 15px;
        }

        #row6 {
            width: 30vw;
            height: 360px;
            border: 2px solid black;
            background: url('a3.jpeg') no-repeat
center center/cover;
            display: flex;
            justify-content: center;
            align-items: flex-end;
            border-radius: 15px;
        }

        /* Designing of Contact Us */
        #ContactUs {
```



```css
    width: 100vw;
    height: 100vh;
    display: flex;
    flex-direction: column;
    align-items: center;
    background-color: gray;
}

.form-shape input,
.form-shape select,
.form-shape textarea {
    width: 92%;
    padding: 0.5rem;
}

/* Changing the color of placeholder */
::placeholder {
    color: gray;
}


/* Additional CSS for the View button */
#viewBtn {
    margin-top: 10px;
    border: 2px solid white;
    border-radius: 15px;
    background-color: green;
    color: white;
```

```
            font-size: 20px;
            font-weight: bold;
            font-family: 'Ubuntu Mono', monospace;
            padding: 8px 16px;
            cursor: pointer;
        }

        #viewBtn:hover {
            background-color: darkgreen;
        }

        #resultTable {
            margin-top: 20px;
            border-collapse: collapse;
            width: 100%;
        }

        #resultTable th,
        #resultTable td {
            border: 1px solid black;
            padding: 8px;
        }

        #resultTable th {
            background-color: #f2f2f2;
        }
    </style>
</head>
```

```
<body>
   <div id="ContactUs">
       <h1>Contact Us</h1>
       <form id="contactForm" method="POST"
action="submit_contact_form.php">
           <!-- Your form fields here -->
           <div class="form-shape">
               <label for="query">
                   Type of Query
               </label>
               <select name="myQuery" id="query">
                   <option value="sel" selected>
                       Select
                   </option>
                   <option value="ord">
                       Order related Issues
                   </option>
                   <option value="Site">
                       Site related Issues
                   </option>
                   <option value="fed">
                       Complaint related Issues
                   </option>
                   <option value="others">
                       Others
                   </option>
               </select>
```

```
            </div>
            <div class="form-shape">
                <label for="name">Name</label>
                <input type="text" name="myName"
id="name" placeholder="Enter your Name">
            </div>
            <div class="form-shape">
                <label for="email">Email-Id</label>
                <input type="email" name="myEmail"
id="email" placeholder="Enter your Email">
            </div>
            <div class="form-shape">
                <label for="phone">Phone No</label>
                <input type="tel" name="myPhone"
id="phone" placeholder="Enter your Phone">
            </div>
            <div class="form-shape">
                <label for="member">Are you our
member?</label>
                <select name="myMember" id="member">
                    <option value="select" selected>
                        Select
                    </option>
                    <option value="yes">
                        Yes
                    </option>
                    <option value="no">
                        No
```

```
                   </option>
               </select>
           </div>
           <div class="form-shape">
               <label for="message">Write your
Message</label>
               <textarea name="myMessage"
id="message" cols="20" rows="10"></textarea>
           </div>
           <div class="form-shape">
               <button type="submit"
class="btn">Submit</button>
           </div>
       </form>
       <button id="viewBtn" class="btn">View
Records</button>

   </div>
   <script>

document.addEventListener('DOMContentLoaded',
function () {
           const contactForm =
document.getElementById('contactForm');
           contactForm.addEventListener('submit',
function (event) {
               event.preventDefault();
               const formData = new
FormData(contactForm);
               fetch('submit_contact_form.php', {
                   method: 'POST',
                   body: formData,
               })
                   .then(response =>
response.json())
                   .then(data => {
                       if (data.success) {
                           alert('Form submitted
successfully!');
                           contactForm.reset();
                       } else {
                           alert('Error submitting
form: ' + data.error);
                       }
                   })
                   .catch(error => {
                       console.error('Error:',
error);
                       alert('An error occurred
while submitting the form.');
                   });
           });
       });
```

```
document.addEventListener('DOMContentLoaded', function () {
    // Your existing code for form submission and fetching records here

    // View button click event
    const viewBtn = document.getElementById('viewBtn');
    viewBtn.addEventListener('click', function () {
        window.location.href = 'http://100.28.74.7/fetch_contact_form.php'; // Redirect to fetch_contact_records.php
    });
});



    </script>
</body>

</html>
```

Ii. fetch_contact_data.php

```
<?php

ini_set('display_errors', 1);
ini_set('display_startup_errors', 1);
```

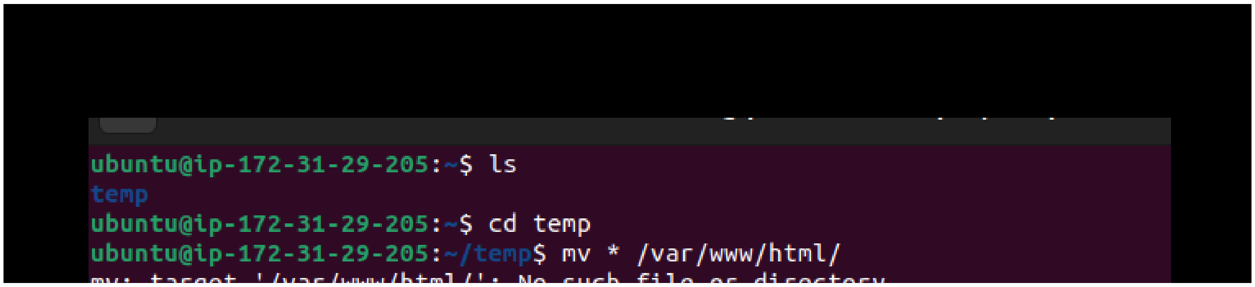
```php
error_reporting(E_ALL);

// Database connection
$mysqli = new mysqli("localhost", "ananda",
"ananda", "contact_us_db");

// Check connection
if ($mysqli->connect_error) {
   die("Connection failed: " .
$mysqli->connect_error);
}

// Fetch data from the database
$sql = "SELECT * FROM contact_us ORDER BY id DESC
LIMIT 5";
$result = $mysqli->query($sql);

if ($result->num_rows > 0) {
   $rows = $result->fetch_all(MYSQLI_ASSOC);
   echo json_encode(['success' => true, 'records'
=> $rows]);
} else {
   echo json_encode(['success' => false, 'message'
=> 'No records found']);
}

// Close connection
$mysqli->close();
```

```
?>
```

Iii. submit_contact_form.php

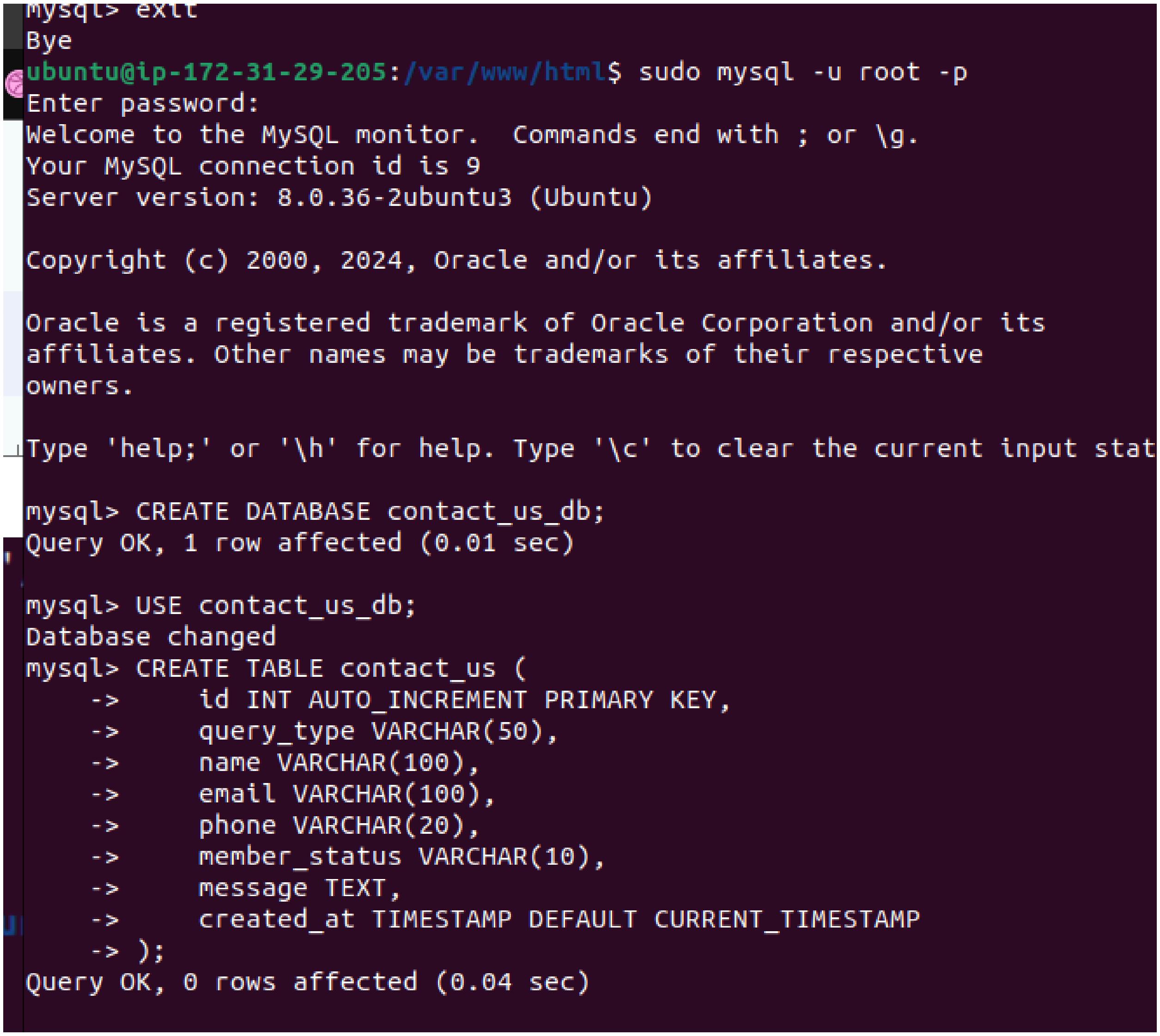
```
<?php

ini_set('display_errors', 1);
ini_set('display_startup_errors', 1);
error_reporting(E_ALL);

// Database connection
$mysqli = new mysqli("localhost", "ananda",
"ananda", "contact_us_db");

// Check connection
if ($mysqli->connect_error) {
   die("Connection failed: " .
$mysqli->connect_error);
}

// Fetch data from the database
$sql = "SELECT * FROM contact_us ORDER BY id DESC
LIMIT 5";
$result = $mysqli->query($sql);

if ($result->num_rows > 0) {
   $rows = $result->fetch_all(MYSQLI_ASSOC);
   echo json_encode(['success' => true, 'records'
=> $rows]);
} else {
    echo json_encode(['success' => false, 'message' => 'No records found']);
}

// Close connection
$mysqli->close();
?>
```

Here i have created them in temp directory and now i will move them to /var/www/html



```
ubuntu@ip-172-31-29-205:~$ ls
temp
ubuntu@ip-172-31-29-205:~$ cd temp
ubuntu@ip-172-31-29-205:~/temp$ mv * /var/www/html/
mv: target '/var/www/html/': No such file or directory
```

Step 14: Now build mysql connection for your files
Here, i have created a database named contact_us-db and inside it i have contact_us table and different columns, you can check the code



```
mysql> exit
Bye
ubuntu@ip-172-31-29-205:/var/www/html$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.36-2ubuntu3 (Ubuntu)

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Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input stat

mysql> CREATE DATABASE contact_us_db;
Query OK, 1 row affected (0.01 sec)

mysql> USE contact_us_db;
Database changed
mysql> CREATE TABLE contact_us (
    ->     id INT AUTO_INCREMENT PRIMARY KEY,
    ->     query_type VARCHAR(50),
    ->     name VARCHAR(100),
    ->     email VARCHAR(100),
    ->     phone VARCHAR(20),
    ->     member_status VARCHAR(10),
    ->     message TEXT,
    ->     created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP
    -> );
Query OK, 0 rows affected (0.04 sec)
```
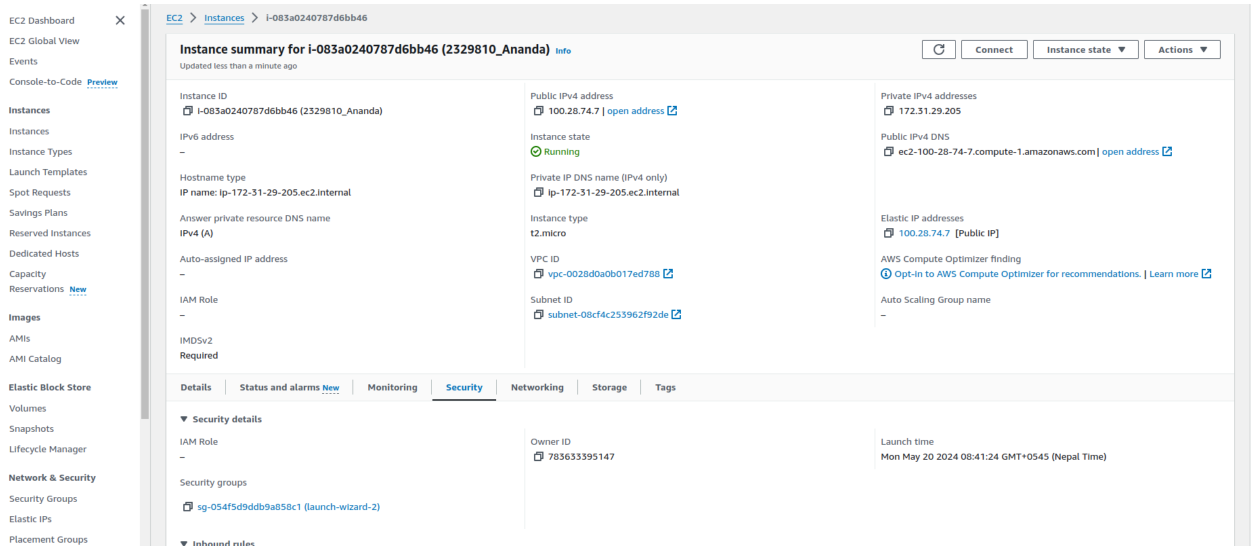

Step 15: After successful deployment of table. Try to open your site with ip/index.html

Here mine is:(http://100.28.74.7/)

But first you will be unable to open it as you havent give the security inbound traffic rule to your instance. You have to make the port 80(http) and 443(https) available.

First, on your instance details go to security section and click on the security group link provided there:



Instance summary for i-083a0240787d6bb46 (2329810_Ananda) Info

Updated less than a minute ago

Instance ID: i-083a0240787d6bb46 (2329810_Ananda)

Public IPv4 address: 100.28.74.7 | open address

Private IPv4 addresses: 172.31.29.205

IPv6 address: –

Instance state: Running

Public IPv4 DNS: ec2-100-28-74-7.compute-1.amazonaws.com | open address

Hostname type: IP name: ip-172-31-29-205.ec2.internal

Private IP DNS name (IPv4 only): ip-172-31-29-205.ec2.internal

Answer private resource DNS name: IPv4 (A)

Instance type: t2.micro

Elastic IP addresses: 100.28.74.7 [Public IP]

Auto-assigned IP address: –

VPC ID: vpc-0028d0a0b017ed788

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

IAM Role: –

Subnet ID: subnet-08cf4c253962f92de

Auto Scaling Group name: –

IMDSv2: Required

▼ Security details

IAM Role: –

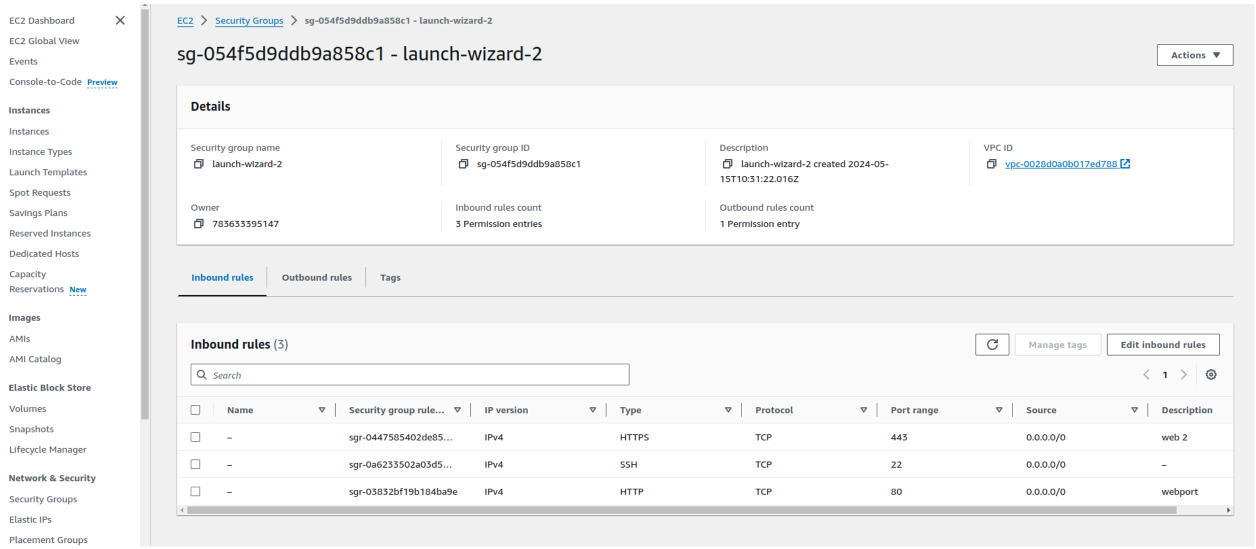
Owner ID: 783633395147

Launch time: Mon May 20 2024 08:41:24 GMT+0545 (Nepal Time)

Security groups: sg-054f5d9ddb9a858c1 (launch-wizard-2)

▼ Inbound rules

On clicking you will reach to interface which give you option to edit inbound rule, which means the incoming traffic. So click on button.



sg-054f5d9ddb9a858c1 - launch-wizard-2

Details

Security group name: launch-wizard-2

Security group ID: sg-054f5d9ddb9a858c1

Description: launch-wizard-2 created 2024-05-15T10:31:22.016Z

VPC ID: vpc-0028d0a0b017ed788

Owner: 783633395147

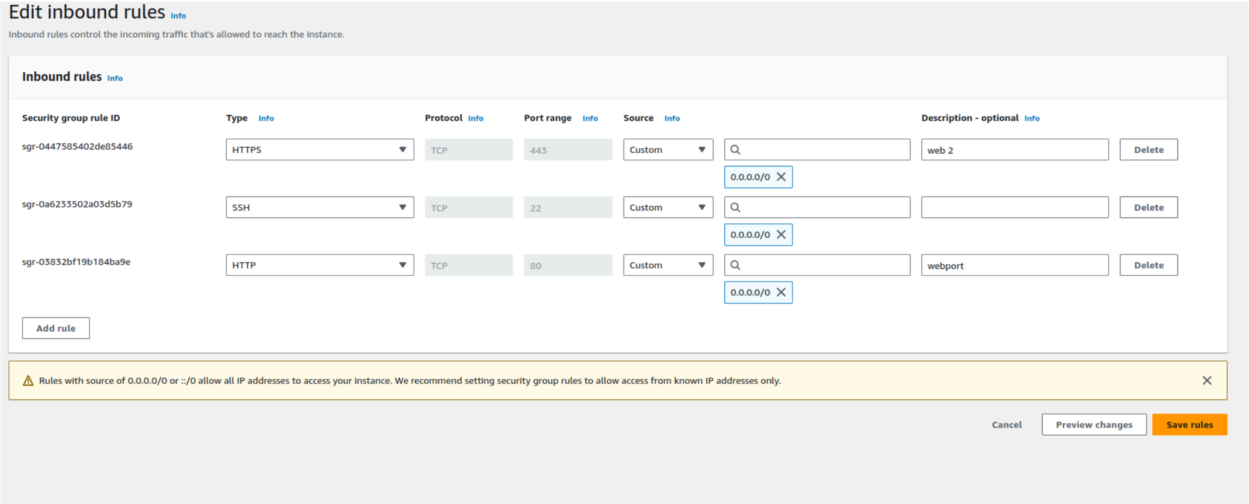
Inbound rules count: 3 Permission entries

Outbound rules count: 1 Permission entry

Inbound rules (3)

□	Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
□	–	sgr-0447585402de85...	IPv4	HTTPS	TCP	443	0.0.0.0/0	web 2
□	–	sgr-0a6233502a03d5...	IPv4	SSH	TCP	22	0.0.0.0/0	–
□	–	sgr-03832bf19b184ba9e	IPv4	HTTP	TCP	80	0.0.0.0/0	webport

Here you can add rule add the tags and mention to whom its going to be available as here 0.0.0.0/0 is accessible by everywhere. Click on save rule option .



Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules Info

Security group rule ID	Type Info	Protocol Info	Port range Info	Source Info		Description - optional Info	
sgr-0447585402de85446	HTTPS	TCP	443	Custom	0.0.0.0/0	web 2	Delete
sgr-0a6233502a03d5b79	SSH	TCP	22	Custom	0.0.0.0/0		Delete
sgr-03832bf19b184ba9e	HTTP	TCP	80	Custom	0.0.0.0/0	webport	Delete

Add rule

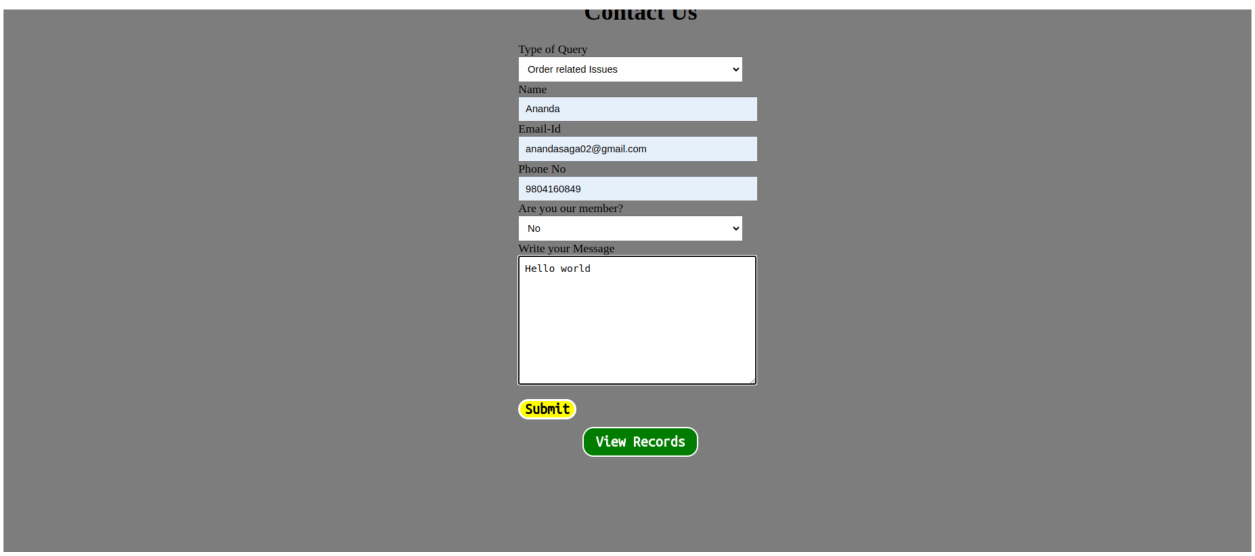
⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Preview changes Save rules

Step 16: Now host your ip address in your browser it must work:

Here mine is:(http://100.28.74.7/)

This interface is the hosted html file. Here you can fill up your inputs.



Contact Us

Type of Query

Order related Issues

Name

Ananda

Email-Id

anandasaga02@gmail.com

Phone No

9804160849

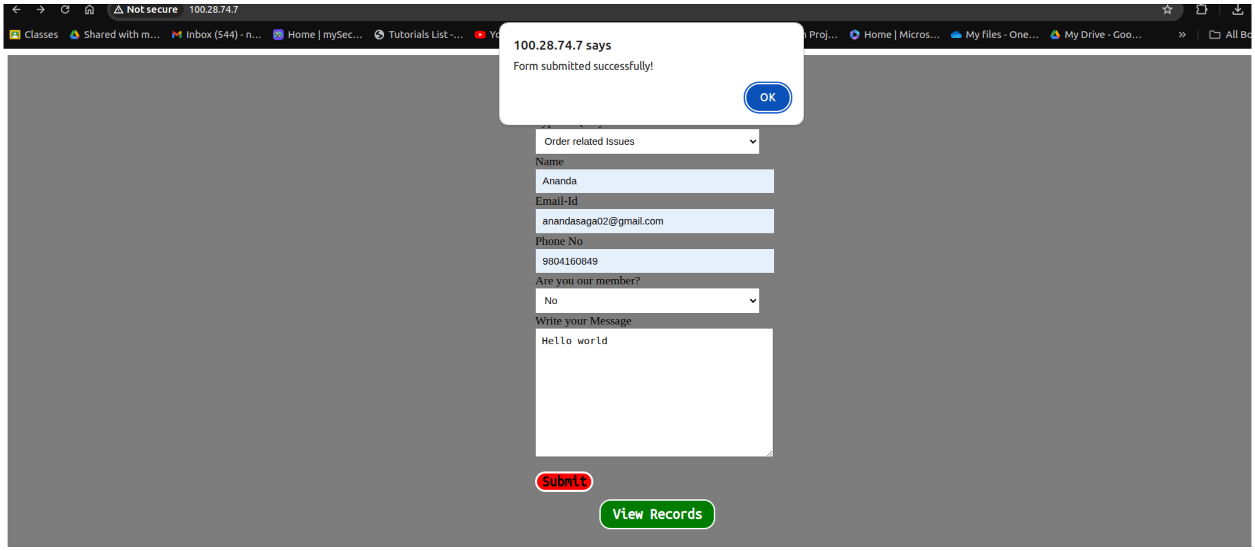
Are you our member?

No

Write your Message

Hello world

On clicking submit button your forms get submitted, as reference you get a pop up.



100.28.74.7 says

Form submitted successfully!

Order related Issues

Name

Ananda

Email-Id

anandasaga02@gmail.com

Phone No

9804160849

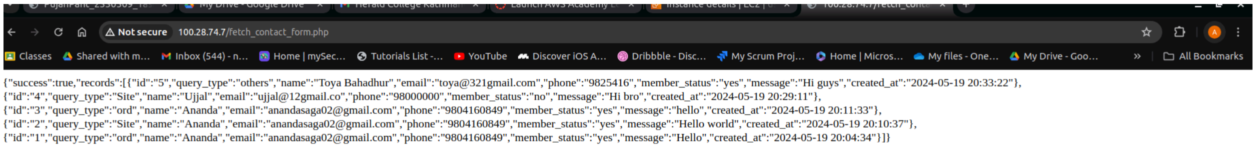
Are you our member?

No

Write your Message

Hello world

On clicking view records, you can see the past details of persons who filled the form. This shows the program is completely syncing the front end and backend and the website is successfully hosted.

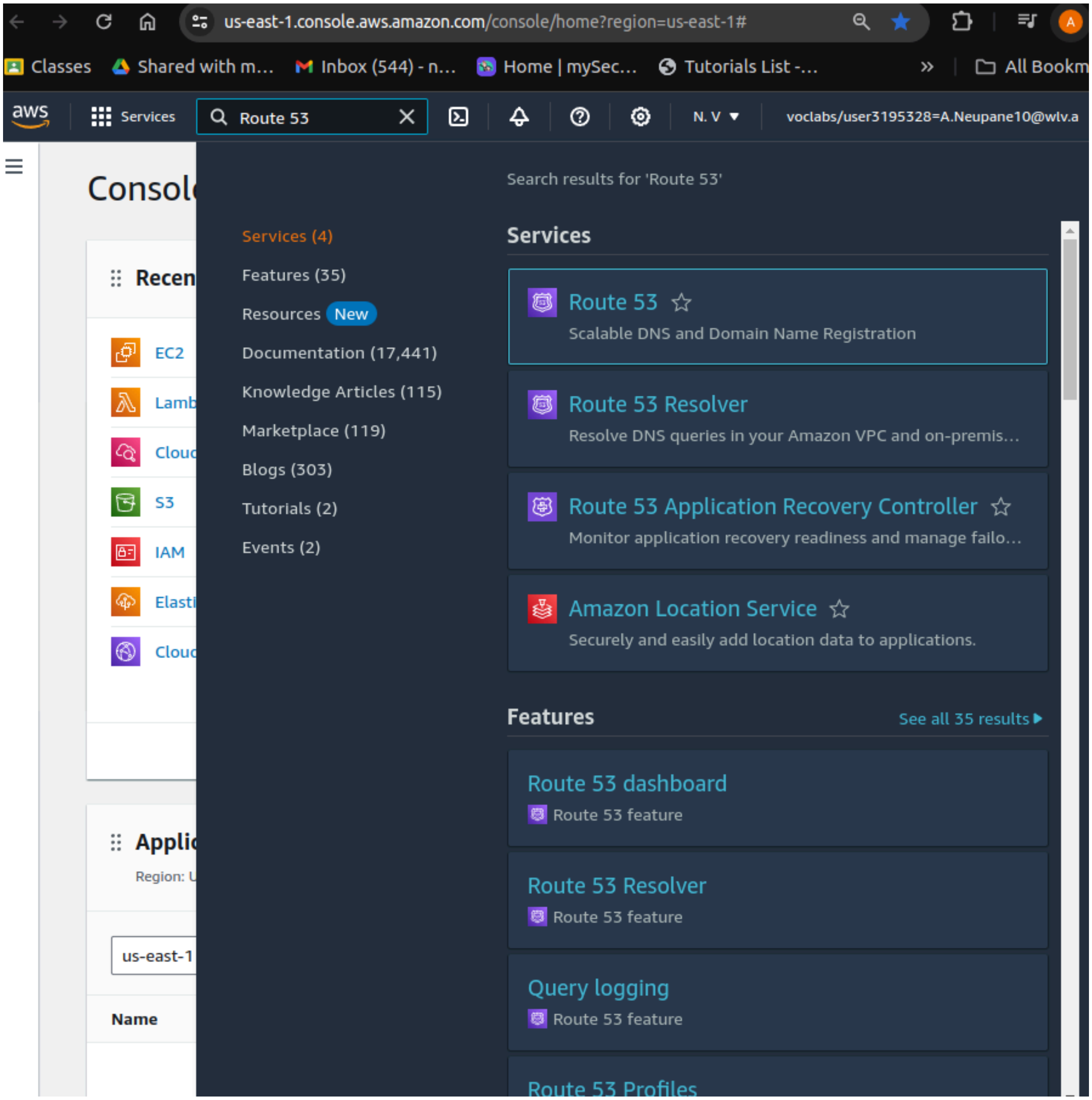


{"success":true,"records":[{"id":"5","query_type":"others","name":"Toya Bahadhur","email":"toya@321gmail.com","phone":"9825416","member_status":"yes","message":"Hi guys","created_at":"2024-05-19 20:33:22"},
{"id":"4","query_type":"Site","name":"Ujjal","email":"ujjal@12gmail.co","phone":"98000000","member_status":"no","message":"Hi bro","created_at":"2024-05-19 20:29:11"},
{"id":"3","query_type":"ord","name":"Ananda","email":"anandasaga02@gmail.com","phone":"9804160849","member_status":"yes","message":"hello","created_at":"2024-05-19 20:11:33"},
{"id":"2","query_type":"Site","name":"Ananda","email":"anandasaga02@gmail.com","phone":"9804160849","member_status":"yes","message":"Hello world","created_at":"2024-05-19 20:10:37"},
{"id":"1","query_type":"ord","name":"Ananda","email":"anandasaga02@gmail.com","phone":"9804160849","member_status":"yes","message":"Hello","created_at":"2024-05-19 20:04:34"}]}

This complete documentation shows the hosting of a dynamic website on your ec2 instance.

Now let us connect our ip into domain name ((ww.andy assignment.greatnet.site))

Step 1: Search for Dns Service in aws console. Route 53 provide Dns service



us-east-1.console.aws.amazon.com/console/home?region=us-east-1#

Search results for 'Route 53'

Services

Route 53 ☆
Scalable DNS and Domain Name Registration

Route 53 Resolver
Resolve DNS queries in your Amazon VPC and on-premis...

Route 53 Application Recovery Controller ☆
Monitor application recovery readiness and manage failo...

Amazon Location Service ☆
Securely and easily add location data to applications.

Features

See all 35 results ▶

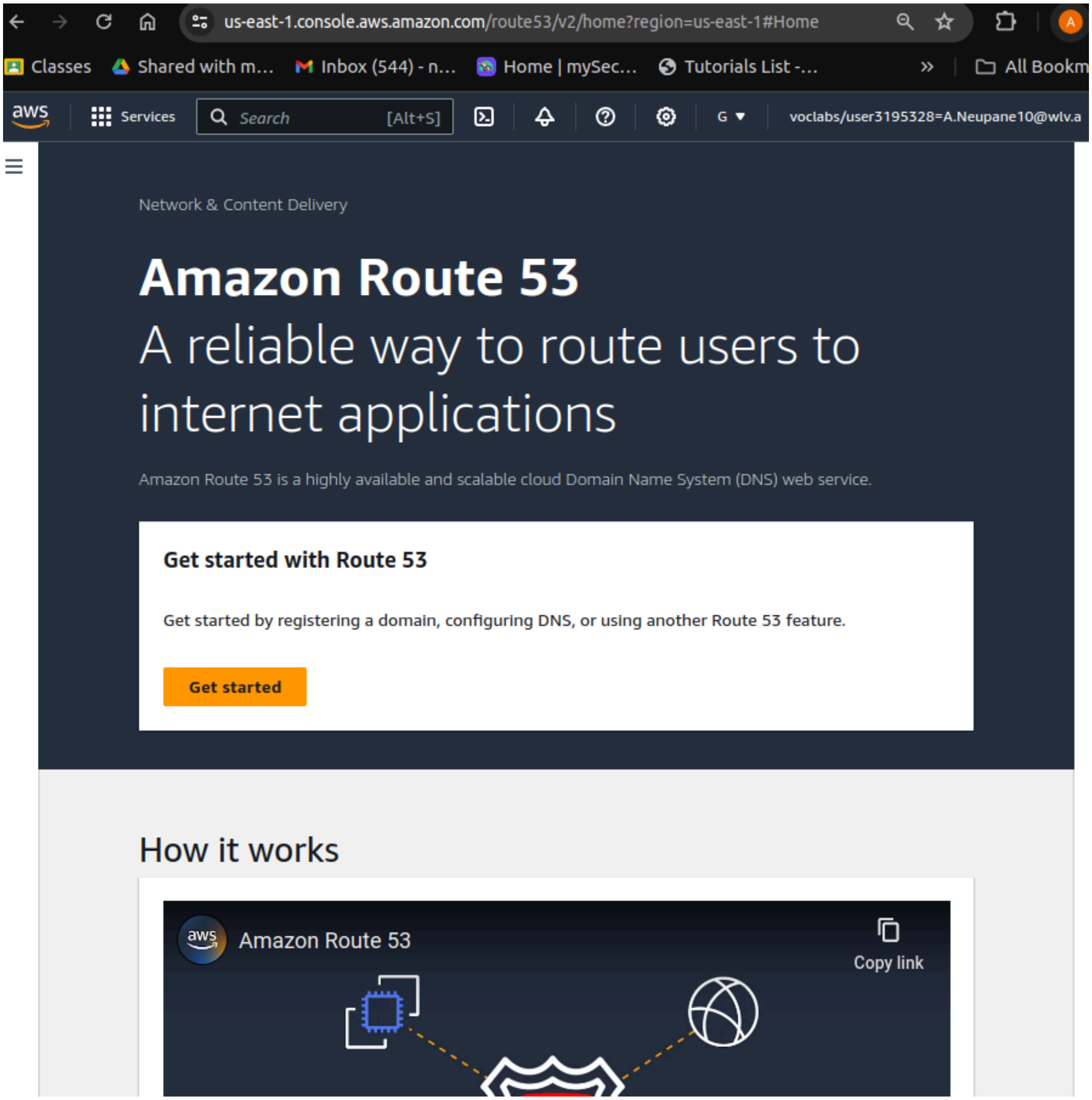
Route 53 dashboard
Route 53 feature

Route 53 Resolver
Route 53 feature

Query logging
Route 53 feature

Route 53 Profiles

Step 2: On clicking you will get this dashboard for Route 53. Click on get started



us-east-1.console.aws.amazon.com/route53/v2/home?region=us-east-1#Home
Classes
Shared with m…
Inbox (544) - n…
Home | mySec…
Tutorials List -…
All Bookm
aws
Services
Search
[Alt+S]
G
voclabs/user3195328=A.Neupane10@wlv.a

Network & Content Delivery

Amazon Route 53

A reliable way to route users to internet applications

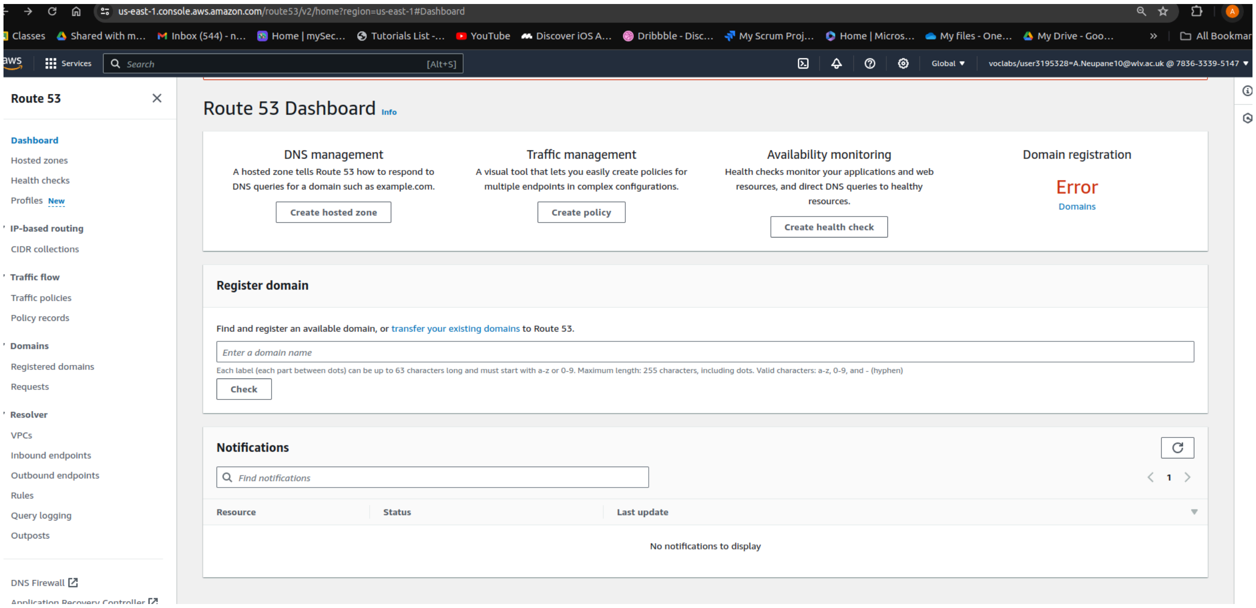
Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service.

Get started with Route 53

Get started by registering a domain, configuring DNS, or using another Route 53 feature.

How it works

On going to dashboard you can see this interface:



Route 53 Dashboard

DNS management
A hosted zone tells Route 53 how to respond to DNS queries for a domain such as example.com.

Traffic management
A visual tool that lets you easily create policies for multiple endpoints in complex configurations.

Availability monitoring
Health checks monitor your applications and web resources, and direct DNS queries to healthy resources.

Domain registration
Error

Register domain

Find and register an available domain, or transfer your existing domains to Route 53.

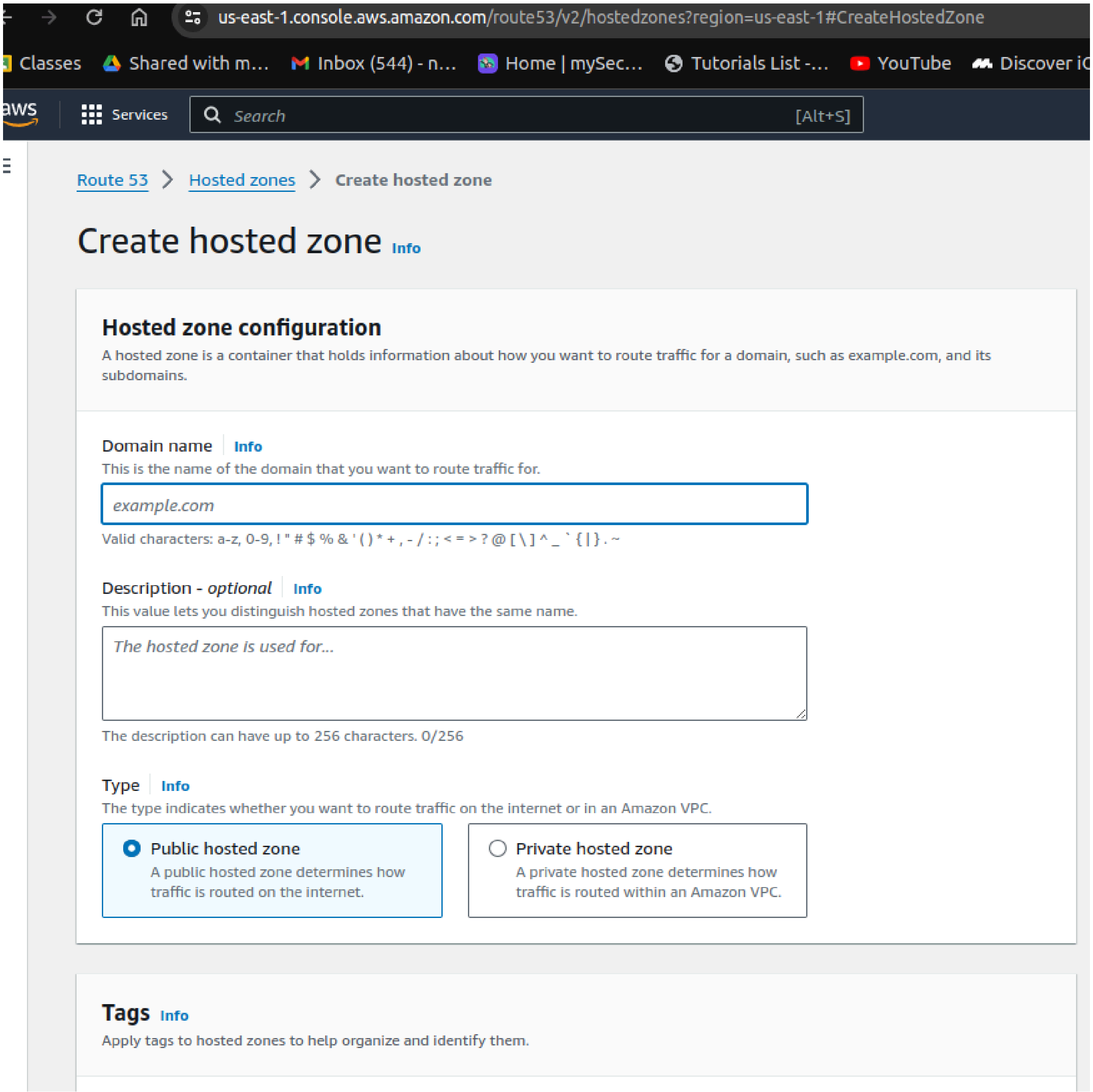
Enter a domain name

Each label (each part between dots) can be up to 63 characters long and must start with a-z or 0-9. Maximum length: 255 characters, including dots. Valid characters: a-z, 0-9, and - (hyphen)

Notifications

No notifications to display

Now, click on create hosted zone



Route 53 > Hosted zones > Create hosted zone

Create hosted zone Info

Hosted zone configuration

A hosted zone is a container that holds information about how you want to route traffic for a domain, such as example.com, and its subdomains.

Domain name Info

This is the name of the domain that you want to route traffic for.

example.com

Valid characters: a-z, 0-9, ! " # $ % & ' ( ) * + , - / : ; < = > ? @ [\ ] ^ _ ` { | } . ~

Description - *optional* Info

This value lets you distinguish hosted zones that have the same name.

The hosted zone is used for...

The description can have up to 256 characters. 0/256

Type Info

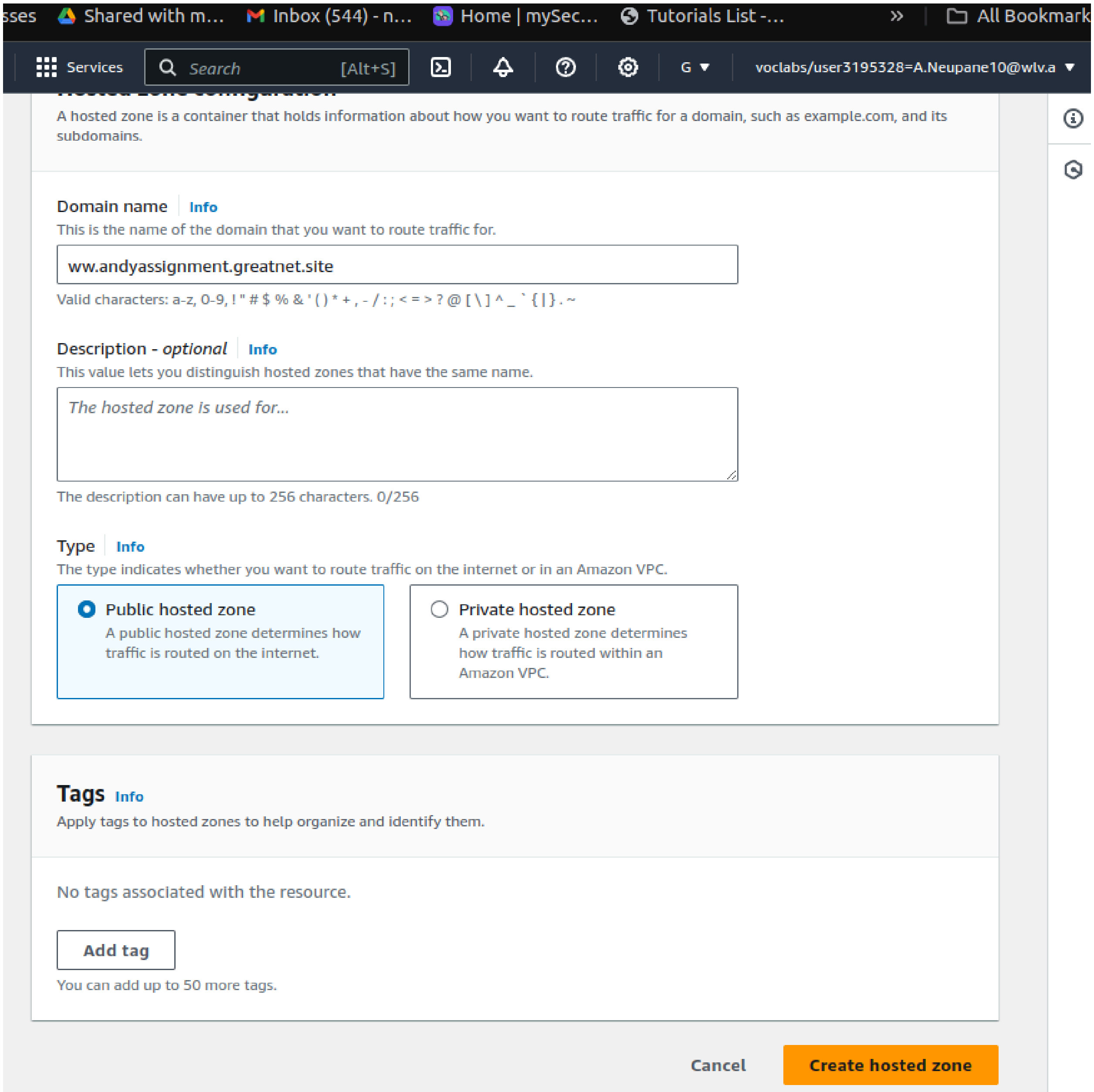
The type indicates whether you want to route traffic on the internet or in an Amazon VPC.

● Public hosted zone
A public hosted zone determines how traffic is routed on the internet.

○ Private hosted zone
A private hosted zone determines how traffic is routed within an Amazon VPC.

Tags Info

Apply tags to hosted zones to help organize and identify them.



A hosted zone is a container that holds information about how you want to route traffic for a domain, such as example.com, and its subdomains.

Domain name Info

This is the name of the domain that you want to route traffic for.

ww.andyassignment.greatnet.site

Valid characters: a-z, 0-9, ! " # $ % & ' ( ) * + , - / : ; < = > ? @ [\ ] ^ _ ` { | } . ~

Description - *optional* Info

This value lets you distinguish hosted zones that have the same name.

The hosted zone is used for...

The description can have up to 256 characters. 0/256

Type Info

The type indicates whether you want to route traffic on the internet or in an Amazon VPC.

● Public hosted zone
A public hosted zone determines how traffic is routed on the internet.

○ Private hosted zone
A private hosted zone determines how traffic is routed within an Amazon VPC.

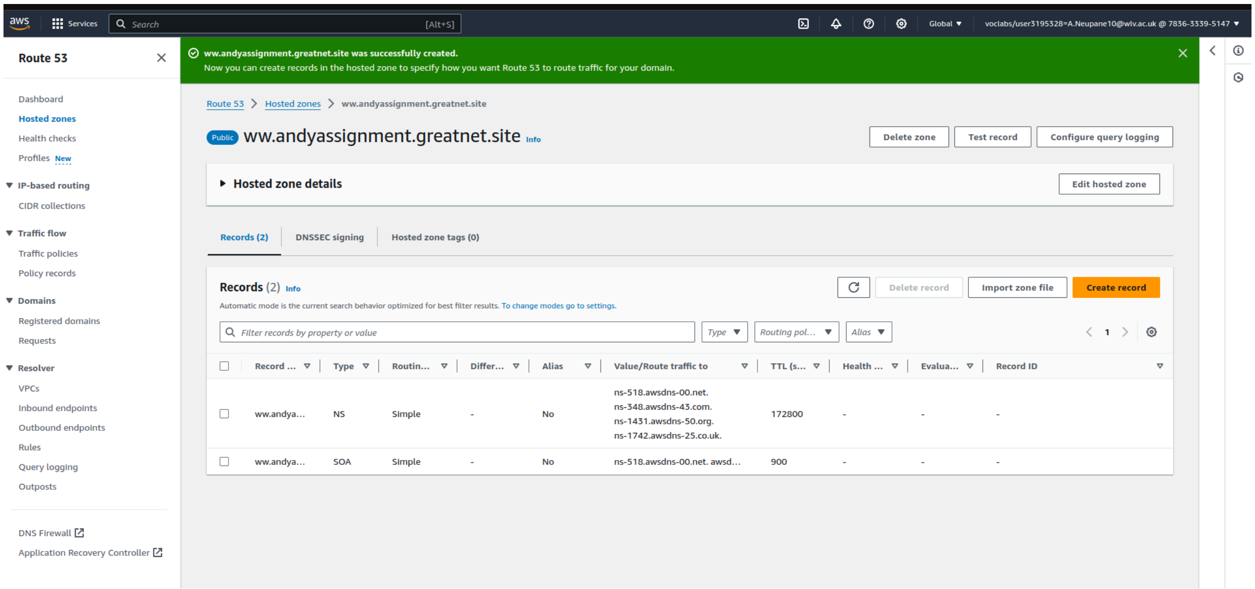
Tags Info

Apply tags to hosted zones to help organize and identify them.

No tags associated with the resource.

You can add up to 50 more tags.

Here, you will be redirected to create hosted zone form. Give you domain name here and select public hosted zone which will allow your site to be easily accessible throughout internet.



ww.andyassignment.greatnet.site was successfully created.
Now you can create records in the hosted zone to specify how you want Route 53 to route traffic for your domain.

Route 53 > Hosted zones > ww.andyassignment.greatnet.site

Public ww.andyassignment.greatnet.site

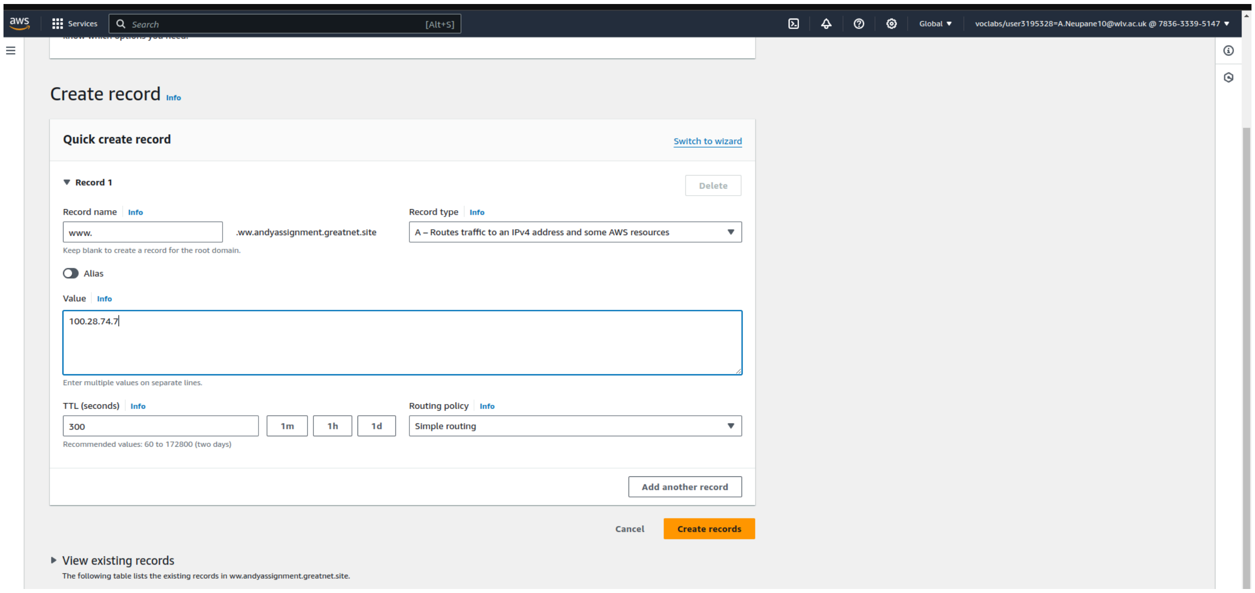
Records (2)

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Record ...	Type	Routin...	Differ...	Alias	Value/Route traffic to	TTL (s...	Health ...	Evalua...	Record ID
ww.andya...	NS	Simple	-	No	ns-518.awsdns-00.net. ns-348.awsdns-43.com. ns-1431.awsdns-50.org. ns-1742.awsdns-25.co.uk.	172800	-	-	-
ww.andya...	SOA	Simple	-	No	ns-518.awsdns-00.net. awsd...	900	-	-	-

The zone has been successfully created. Now we are going to add records of type A and CName.

A record is for ip address and CName is the section for our domain name to transfer route traffic.



Create record

Quick create record

Record 1

Record name: www. .ww.andyassignment.greatnet.site

Keep blank to create a record for the root domain.

Record type: A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value: 100.28.74.7

Enter multiple values on separate lines.

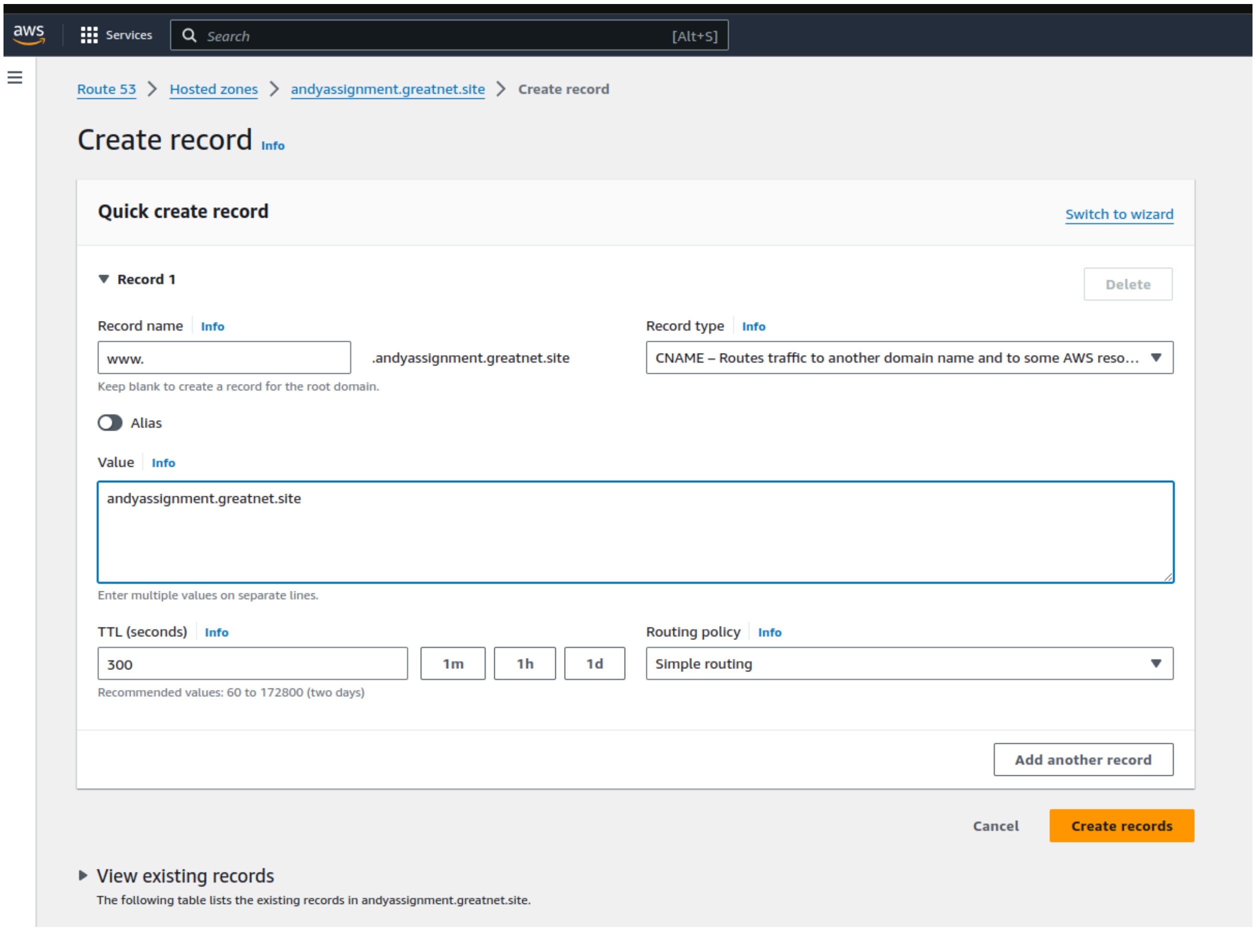
TTL (seconds): 300

Recommended values: 60 to 172800 (two days)

Routing policy: Simple routing

View existing records

The following table lists the existing records in ww.andyassignment.greatnet.site.


aws
Services
Search
[Alt+S]
Route 53 > Hosted zones > andyassignment.greatnet.site > Create record

Create record Info

Quick create record

▼ Record 1

Record name Info: www. .andyassignment.greatnet.site

Keep blank to create a record for the root domain.

Record type Info: CNAME – Routes traffic to another domain name and to some AWS reso…

○ Alias

Value Info: andyassignment.greatnet.site

Enter multiple values on separate lines.

TTL (seconds) Info: 300

Recommended values: 60 to 172800 (two days)

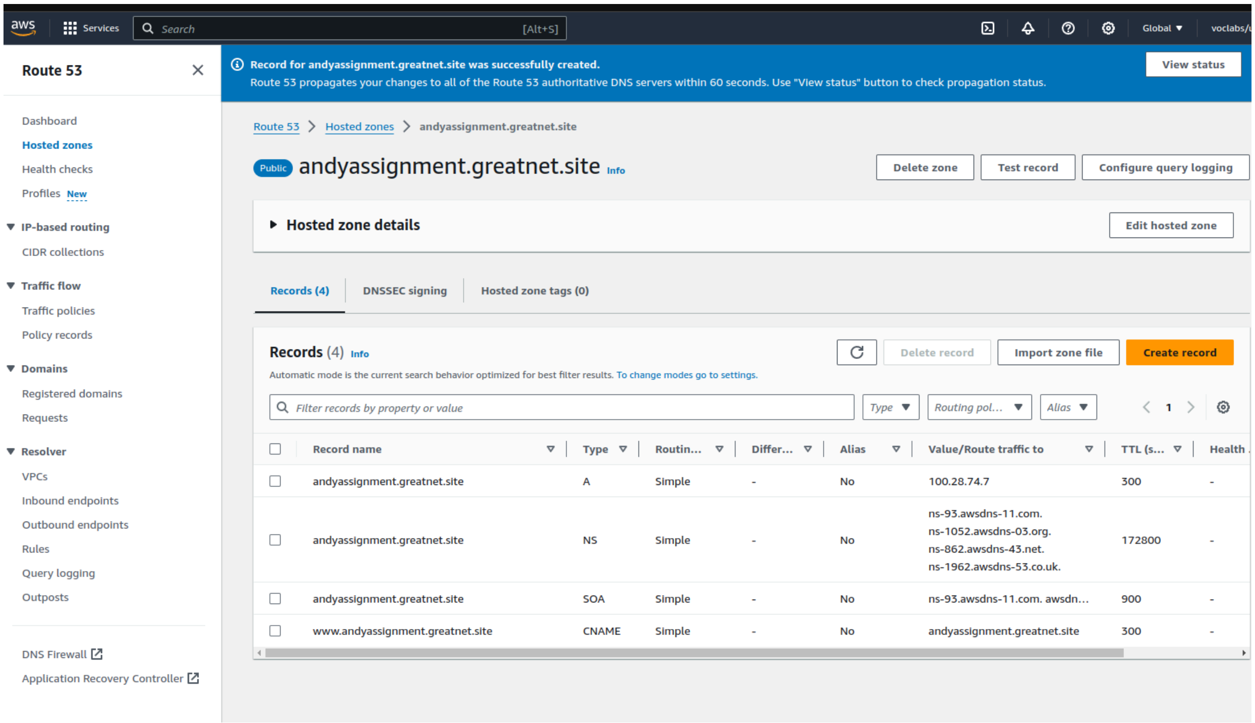
Routing policy Info: Simple routing

▶ View existing records

The following table lists the existing records in andyassignment.greatnet.site.

Now the dashboard contains total 4 records.

These NS (name server) records are copied to dns of our domain name



Record for andyassignment.greatnet.site was successfully created.
Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status.

andyassignment.greatnet.site

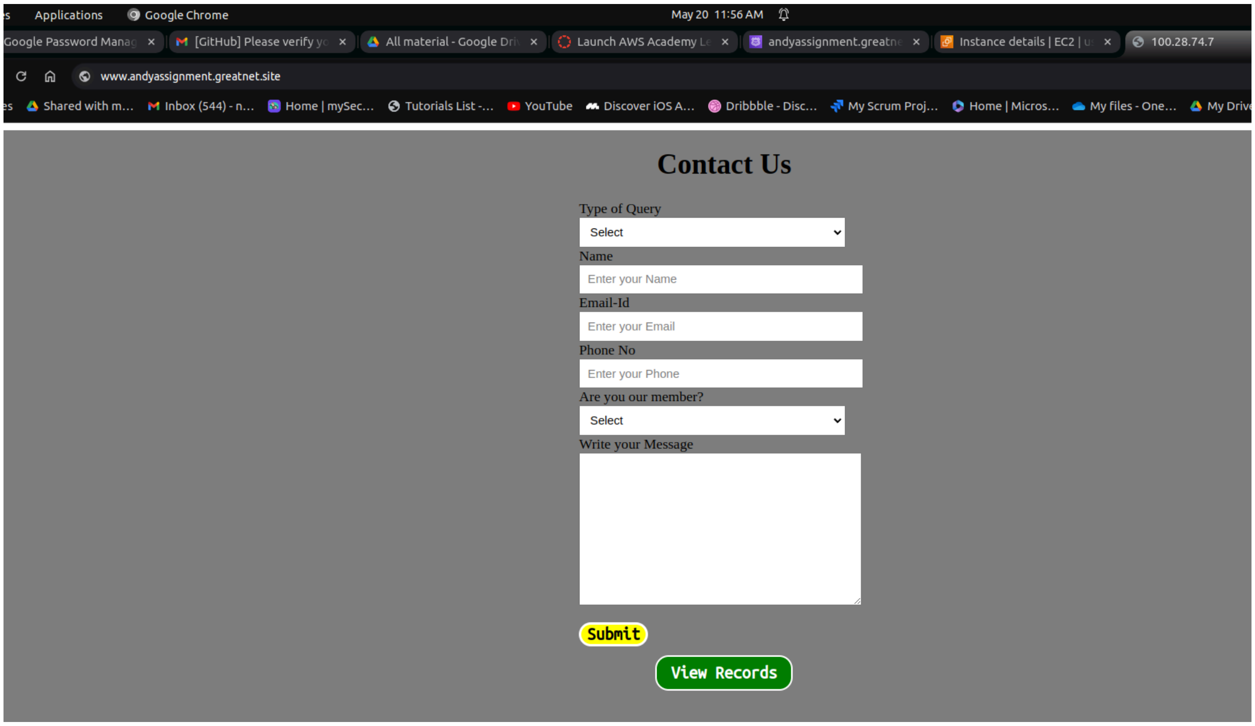
Hosted zone details

Records (4)

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

☐	Record name	Type	Routin…	Differ…	Alias	Value/Route traffic to	TTL (s…	Health
☐	andyassignment.greatnet.site	A	Simple	-	No	100.28.74.7	300	-
☐	andyassignment.greatnet.site	NS	Simple	-	No	ns-93.awsdns-11.com. ns-1052.awsdns-03.org. ns-862.awsdns-43.net. ns-1962.awsdns-53.co.uk.	172800	-
☐	andyassignment.greatnet.site	SOA	Simple	-	No	ns-93.awsdns-11.com. awsdn…	900	-
☐	www.andyassignment.greatnet.site	CNAME	Simple	-	No	andyassignment.greatnet.site	300	-

Here, the instance is successfully accessible from domain name ww.andy assignment.greatnet.site



Contact Us

Type of Query
Select

Name
Enter your Name

Email-Id
Enter your Email

Phone No
Enter your Phone

Are you our member?
Select

Write your Message

This is the end of task 2