

**School of Computer Science, Engineering and Applications(SCSEA)**  
**B.C.A. TY (CCSA)**  
**Subject : Infrastructure Orchestration (P)**

**Name of the Student:** Shrushti Krishna Shrivastav **PRN:** 20220801024  
**Title of Practicle :** **HOSTING MULTIPLE WEBSITE ON SINGLE WEB SERVER  
USING EC2 INSTANCE**

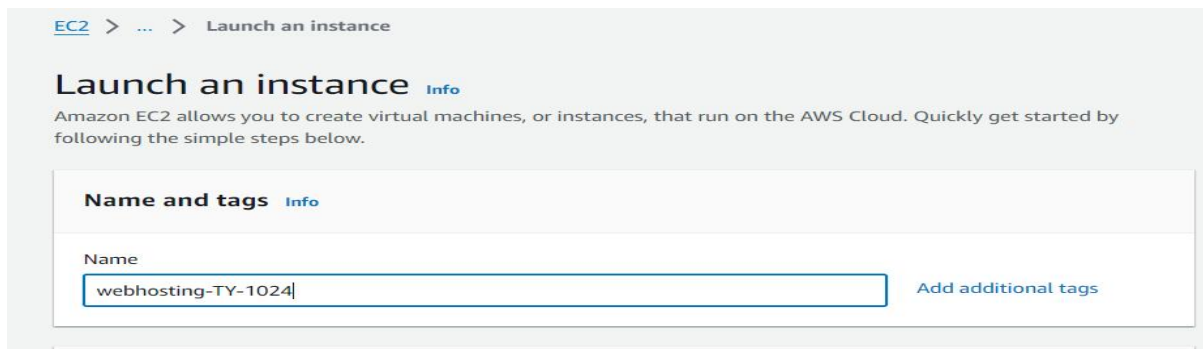
**Prerequisites:**

- 1.Key Pair: When launching your instance, make sure to download your key-pair (.pem file), which you'll use to connect via SSH.
- 2.Security Group with HTTP Allowed: Make sure to set your security group to allow HTTP traffic (port 80), so people can access your websites.

**Step 1: Launch your EC2 Instance**

Log in and Navigate to the EC2 dashboard. Click on the "Launch Instance" button.

Now name your instance: webhosting-TY-1024



EC2 > ... > Launch an instance

### 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.

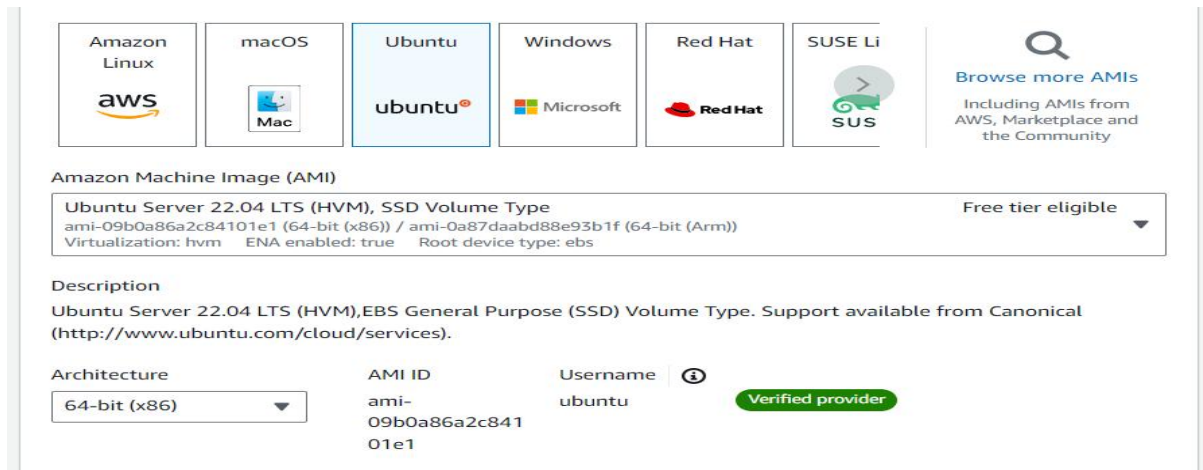
**Name and tags Info**

Name

webhosting-TY-1024

Add additional tags

Select AMI: Ubuntu server 22.04



Amazon Linux

macOS

**Ubuntu**

Windows

Red Hat

SUSE Li

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

ami-09b0a86a2c84101e1 (64-bit (x86)) / ami-0a87daabd88e93b1f (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Ubuntu Server 22.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).

Architecture

64-bit (x86)

AMI ID

ami-09b0a86a2c84101e1

Username

ubuntu

Verified provider

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Instance type : t2 micro

▼ **Instance type** [Info](#) | [Get advice](#)

Instance type

**t2.micro** Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux base pricing: 0.0124 USD per Hour

On-Demand Windows base pricing: 0.017 USD per Hour

On-Demand RHEL base pricing: 0.0268 USD per Hour

On-Demand SUSE base pricing: 0.0124 USD per Hour

☐ All generations

[Compare instance types](#)

[Additional costs apply for AMIs with pre-installed software](#)

Key pair : attach your key-pair (must know location where it is downloaded) or create a new one

▼ **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*

[Create new key pair](#)

Security group: Attach security group that allow http traffic (SG-CCSA-TY-1024)

**Firewall (security groups)** [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group ☒ Select existing security group

**Common security groups** [Info](#)

SG-CCSA-TY-1024 sg-08f4e0d7ab53772a8 X

VPC: vpc-0662aa9456cd34d0a

[Compare security group rules](#)

Security groups that you add or remove here will be added to or removed from all your network interfaces.

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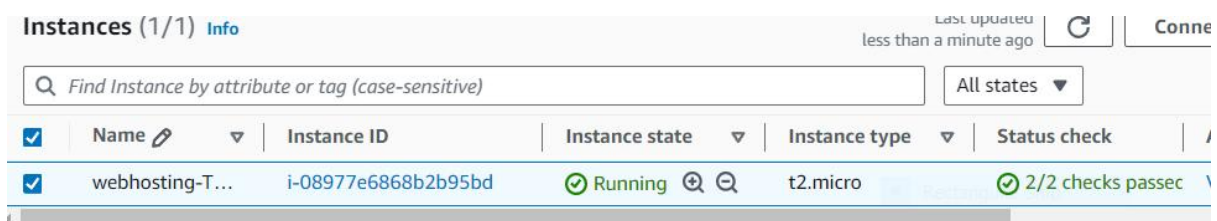
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Now 'LAUNCH' your Instance

Wait for your instance status to show as 'running' and '2/2 checks passed'.



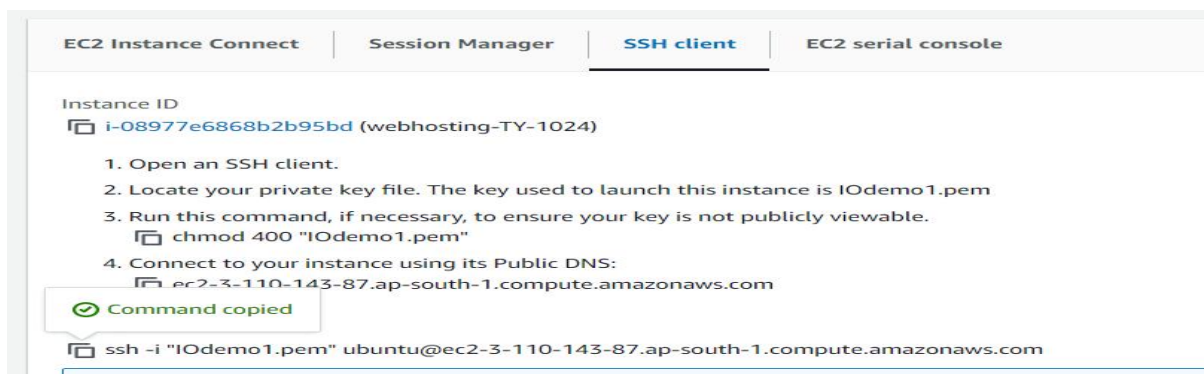
Instances (1/1) Info					Last updated less than a minute ago	Connect
Find Instance by attribute or tag (case-sensitive) All states						
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	
<input checked="" type="checkbox"/>	webhosting-T...	i-08977e6868b2b95bd	Running	t2.micro	2/2 checks passed	

**Step 2: Connect to Your EC2 Instance**

Open Command Prompt and go to the directory where your key pair is saved.

```
C:\Users\shrushti\OneDrive\Desktop>
```

Once you're in the correct directory, copy and paste the SSH command provided to establish a connection to your EC2 instance.



EC2 Instance Connect | Session Manager | **SSH client** | EC2 serial console

Instance ID  
i-08977e6868b2b95bd (webhosting-TY-1024)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is IOdemo1.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.  
chmod 400 "IOdemo1.pem"
4. Connect to your instance using its Public DNS:  
ec2-3-110-143-87.ap-south-1.compute.amazonaws.com

Command copied

```
ssh -i "IOdemo1.pem" ubuntu@ec2-3-110-143-87.ap-south-1.compute.amazonaws.com
```

Copy the above command

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```
C:\Users\shrushti\OneDrive\Desktop>ssh -i "IOdemo1.pem" ubuntu@ec2-3-110-143-87.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-3-110-143-87.ap-south-1.compute.amazonaws.com (3.110.143.87)' can't be established.
ECDSA key fingerprint is SHA256:+ovOvi/p23t1vNIEkVG99ztVusdMSFD0mGJSoONEUq4.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```

You are now connected to your EC2 instance via SSH.

### **Step 3: Install Apache Web Server and Configure It**

Once connected to your EC2 instance, run the following commands to update and upgrade the system packages:

1. `sudo apt update -y`

```
ubuntu@ip-172-31-37-127:~$ sudo apt update -y
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu
```

2. `sudo apt upgrade -y`

```
ubuntu@ip-172-31-37-127:~$ sudo apt upgrade -y
Reading package lists... Done
```

3. install the Apache web server: `sudo apt install apache2 -y`

```
ubuntu@ip-172-31-37-127:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1
```

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### **Step 4: Cloning a GitHub Repository for a Website Template**

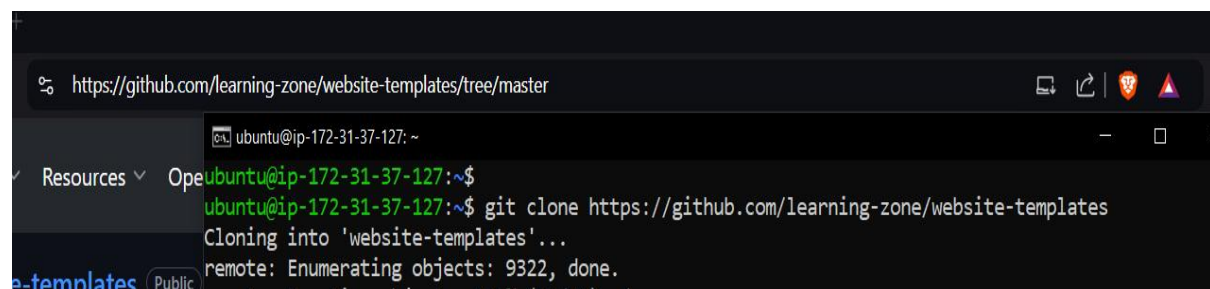
First, install Git on your system and configure it by running the following command:

Sudo apt install git -y

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ sudo apt install git -y  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done
```

clone the repository of your preferred website template.

Git clone <https://github.com/learning-zone/website-templates>



The screenshot shows a terminal window with the following commands and output:

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ git clone https://github.com/learning-zone/website-templates  
Cloning into 'website-templates'...  
remote: Enumerating objects: 9322, done.
```

I've cloned the 'learning-zone/website-templates' repository to use the website templates from it.



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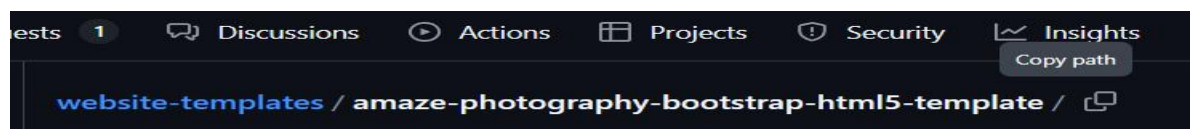
**Step 5: Copying web template files to each website folder**

Use the `mkdir` command to create a folder for each website inside the `/var/www/html` directory.

Sudo mkdir /var/www/html/'site\_name'

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ sudo mkdir /var/www/html/site1  
ubuntu@ip-172-31-37-127:~$ sudo mkdir /var/www/html/site2  
ubuntu@ip-172-31-37-127:~$ sudo mkdir /var/www/html/site3  
ubuntu@ip-172-31-37-127:~$
```

Copy the website templates you need into these folders using the `cp` command.



Sudo cp -r website-templates/'paste-the-copied-path-here-of -the-website'/\*  
/var/www/html/'site\_name'

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ sudo cp -r website-templates/amaze-photography-bootstrap-html5-template/* /var/www/html/site1  
ubuntu@ip-172-31-37-127:~$
```

Follow the same command to copy website template to folder

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ sudo cp -r website-templates/amaze-photography-bootstrap-html5-template/* /var/www/html/site1  
ubuntu@ip-172-31-37-127:~$ sudo cp -r website-templates/aerosky-real-estate-html-responsive-website-template/* /var/www/html/site2  
ubuntu@ip-172-31-37-127:~$ sudo cp -r website-templates/atlanta-free-business-bootstrap-template/* /var/www/html/site2  
ubuntu@ip-172-31-37-127:~$ sudo cp -r website-templates/aerosky-real-estate-html-responsive-website-template/* /var/www/html/site3  
ubuntu@ip-172-31-37-127:~$
```



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**Step 6: Restart Apache to apply the changes.**

Sudo systemctl restart apache2

```
ubuntu@ip-172-31-37-127:~$  
ubuntu@ip-172-31-37-127:~$ sudo systemctl restart apache2  
ubuntu@ip-172-31-37-127:~$
```

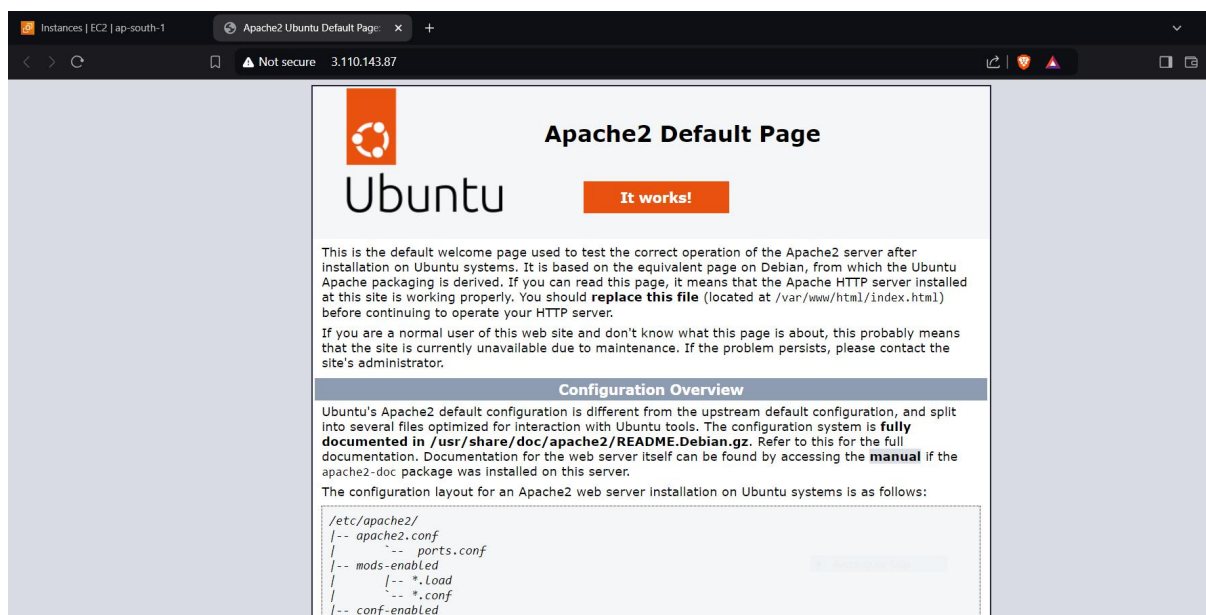
**Step 7: Access the Apache server.**

Make sure to use http:// (not https://) when accessing the Apache server.

First, copy the public IPv4 address of your EC2 instance.

Then, paste it into your browser's address bar (e.g., '(http://your-ec2-ip-add)' )

This will allow you to check if the Apache server is properly installed and running.



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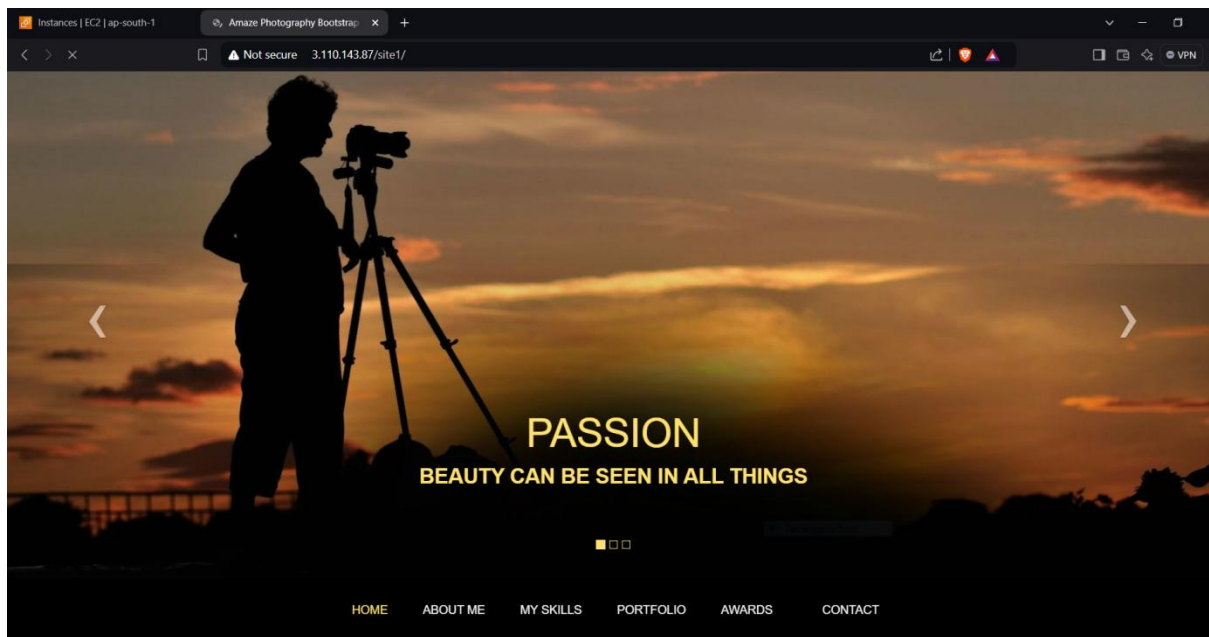
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Once you confirm that Apache is running, you can proceed to access your specific websites using:

(Replace "your-ec2-public-ip" with the public IPv4 address of your EC2 instance, then append the respective site names to view the content from each website template.)

<http://your-ec2-public-ip/site1>





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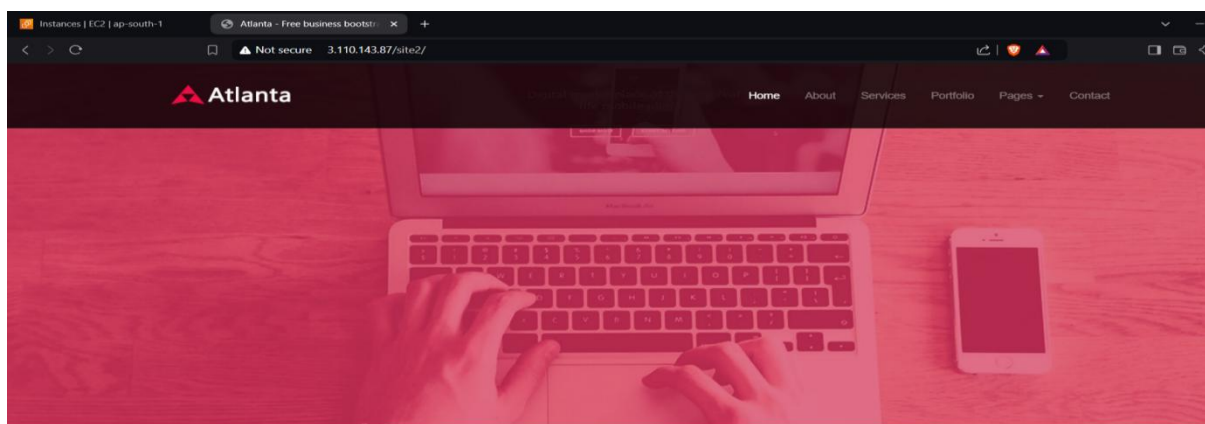
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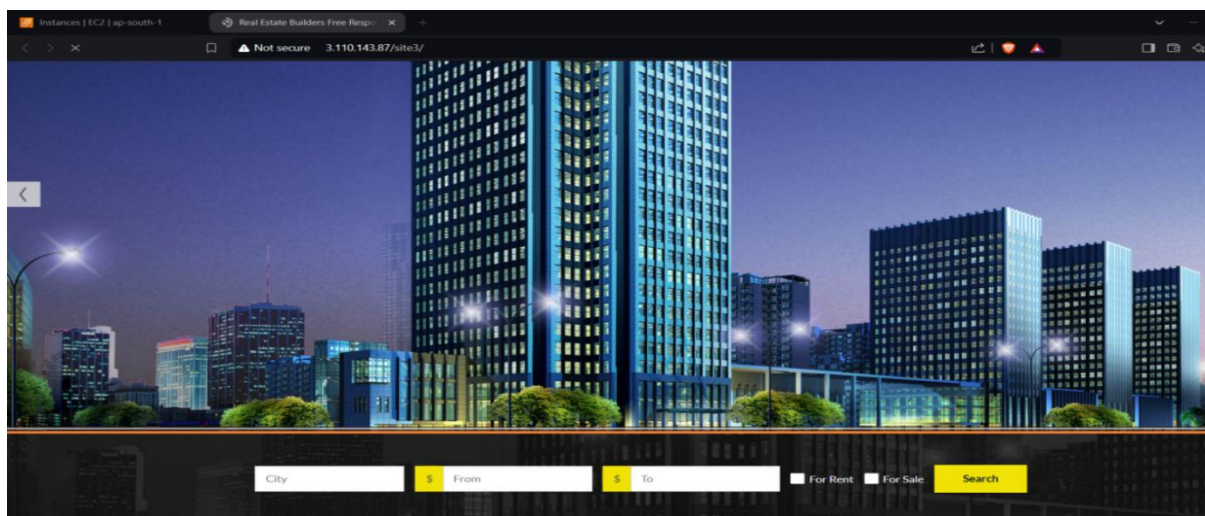
<http://your-ec2-public-ip/site2>



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Nullam ac rhoncus sapien, non gravida purus. Alinon elit imperdiet congue. Integer ultricies  
Sed elit imperdiet congue. Integer ultricies sed ligula eget tempus.

<http://your-ec2-public-ip/site3>



Done.