Task: Host "Hello World" Website using Nginx on AWS EC2

Objective

Deploy a simple web application using an Ubuntu EC2 instance in AWS and configure Nginx to serve a custom "Hello World" webpage

1. Create an EC2 Instance

Region: us-east-1 (N. Virginia)
AMI: Ubuntu Server 22.04 LTS
Instance type: t2.micro (Free Tier eligible)
Key pair: Create or use an existing .pem key file for SSH access.
Security Group:
Inbound Rules:
SSH (22) — your IP
HTTP (80) — Anywhere (0.0.0.0/0)
Outbound Rule: All traffic (default)

Storage: Default (8 GiB)

2. Connect to the Instance

- Use the terminal (Linux/Mac) or PowerShell (Windows):
- **ssh -i "your-key.pem" ubuntu@<Public-IP>**

```
C:\Users\Priyadharshini>cd downloads

C:\Users\Priyadharshini\Downloads>ssh -i "website.pem" ubuntu@ec2-98-81-161-39.compute-1.amazonaws.com
The authenticity of host 'ec2-98-81-161-39.compute-1.amazonaws.com (98.81.161.39)' can't be established.
ED25519 key fingerprint is SHA256:PbwGNTPU3vDObSAd2RiTM2vRineOH/Sj3/4PCp22YKU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-98-81-161-39.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1015-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Mon Nov 10 04:36:24 UTC 2025

  System load:  0.3               Temperature:           -273.1 C
  Usage of /:   25.8% of 6.71GB   Processes:             115
  Memory usage: 25%               Users logged in:       0
  Swap usage:   0%                IPv4 address for ens5: 172.31.31.75

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
```

3. update system package
sudo apt update -y
sudo apt upgrade -y

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-31-75:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1585 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [299 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.7 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1498 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [303 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [378 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.4 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2244 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [509 kB]
Get:23 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1305 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [30.3 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [5564 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [484 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [40.4 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main Translation-en [9208 B]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7140 B]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [368 B]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [28.9 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [17.5 kB]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [11.0 kB]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1444 B]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [212 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:41 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [215 kB]
Get:42 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:43 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [9336 B]
Get:44 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [906 kB]
Get:45 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [203 kB]
Get:46 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:47 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.4 kB]
Get:48 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2135 kB]
Get:49 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [485 kB]
Get:50 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:51 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [27.4 kB]
Get:52 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5708 B]
Get:53 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:54 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 B]
Fetched 38.6 MB in 6s (6461 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-31-75:~$ sudo apt install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

4.Install Nginx
sudo apt install nginx -y

5. Verify Installation
Open a browser and visit:
http://<Public-IP>

6. Replace the Default Website
sudo nano /var/www/html/index.nginx-debian.html

7. website
<!DOCTYPE html>

<html>

<head>

　　<title>Hello World</title>

</head>

<body style="text-align:center; margin-top:100px; font-size:40px;">

　　<h1>Hello World</h1> </body>
</html>

8. Open a browser and visit:

http://<Public-IP>

HELLO WORLD