

### Question 3

#### **3.Hosting and scanning a website in Virtual Machine .**

**Ans:**

##### **1.Install ubuntu**

Install the vm virtual box and install a ubuntu instance using ubuntu 22.04 image

##### **2.Installing Nginx**

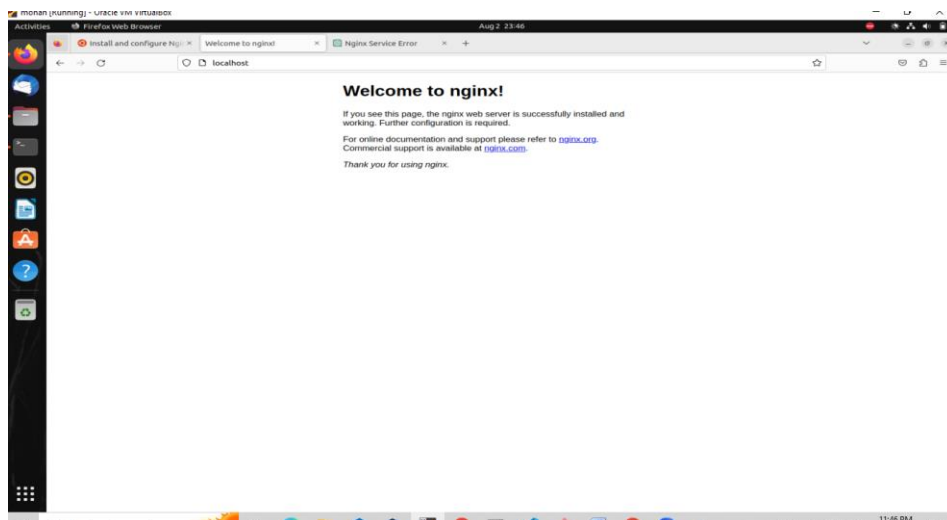
To install Nginx, use following command:

```
sudo apt update
```

```
sudo apt install nginx
```

After installing it, you already have everything you need.

You can point your browser to your server IP address. You should see this page:



##### **3.Creating our own website**

Default page is placed in /var/www/html/ location. You can place your static pages here, or use virtual host and place it other location.

Virtual host is a method of hosting multiple domain names on the same server.

Let's create simple HTML page in /var/www/mohan/ (it can be anything you want). Create index.html file in this location.

```
cd /var/www
```

```
sudo mkdir mohan
```

```
cd mohan
```

```
sudo "${EDITOR:-vi}" index.html
```

Paste the following to the index.html file:

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```
<!doctype html>
<html>
<head>
  <meta charset="utf-8">
  <title>Hello, Nginx!</title>
</head>
<body>
  <h1>Hello, Nginx!</h1>
  <p>We have just configured our Nginx web server on Ubuntu Server!</p>
</body>
</html>
```

Save this file. In next step we are going to set up virtual host to make Nginx use pages from this location.

### **4. Setting up virtual host**

To set up virtual host, we need to create file in `/etc/nginx/sites-enabled/` directory.

For this mohan directory, we will make our site available on 84 port, not the standard 80 port. You can change it if you would like to.

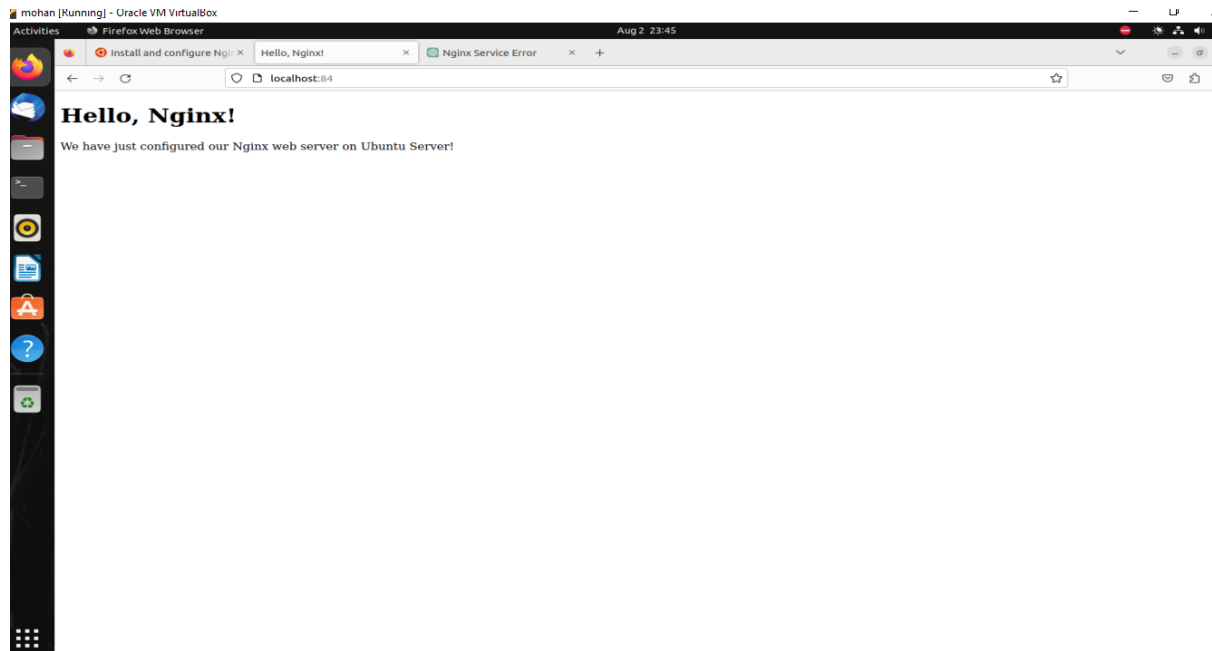
```
cd /etc/nginx/sites-enabled
sudo "${EDITOR:-vi}" mohan
server {
    listen 84;
    listen [::]:84;

    server_name mohan.com;

    root /var/www/mohan;
    index index.html;

    location / {
        try_files $uri $uri/ =404;
    }
}
```

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root is a directory where we have placed our .html file. index is used to specify file available when visiting root directory of site. server\_name can be anything you want, because you aren't pointing it to any real domain by now.

## 5. Activating virtual host and testing results

To make our site working, simply restart Nginx service.

```
sudo service nginx restart
```

Let's check if everything works as it should. Open our newly created site in web browser. Remember that we used :84 port.

## 6. Scan the virtual machine using Nmap

check the ipaddress of ubuntu server by using \$ifconfig

then check the ipaddress and check the ports which are opened

