

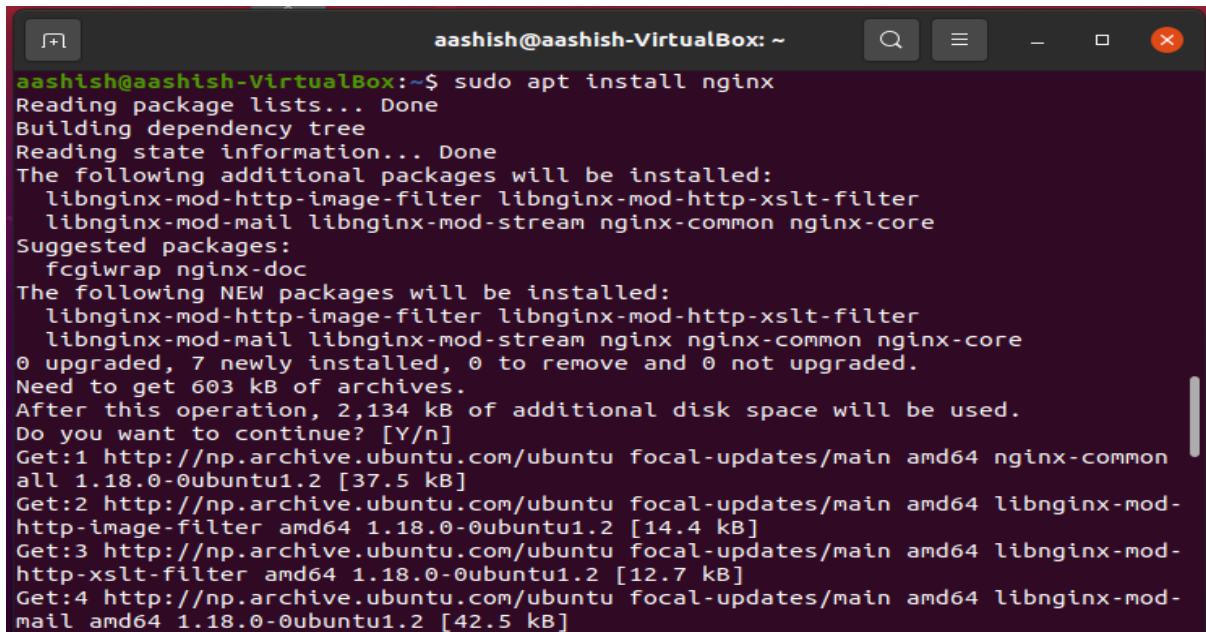
1.

Install nginx and host a simple index.html with message “Hello NGINX”.

Answer:

Firstly, we need to install the nginx. To install nginx we use following command;

```
- sudo apt install nginx
```

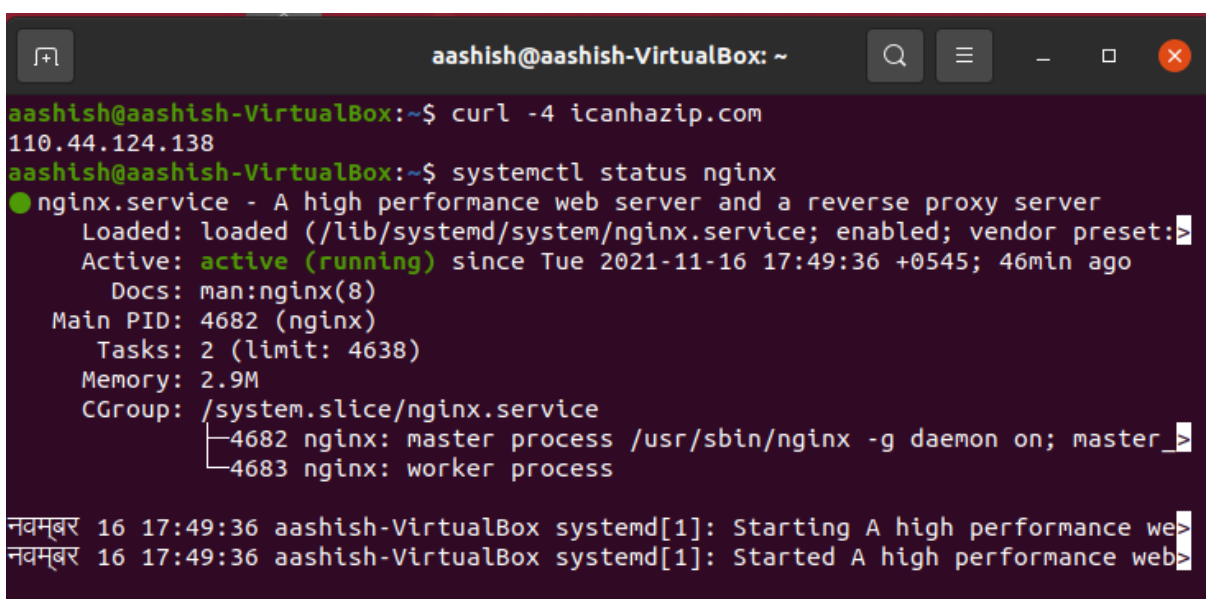
A terminal window titled 'aashish@aashish-VirtualBox: ~' showing the command 'sudo apt install nginx' and its output. The output indicates that several additional packages will be installed along with nginx, including various libnginx modules. It shows the disk space requirements and asks for confirmation to continue, which is accepted. The packages are then downloaded from the Ubuntu focal-updates repository.

```
aashish@aashish-VirtualBox:~$ sudo apt install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream nginx-common nginx-core
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream nginx nginx-common nginx-core
0 upgraded, 7 newly installed, 0 to remove and 0 not upgraded.
Need to get 603 kB of archives.
After this operation, 2,134 kB of additional disk space will be used.
Do you want to continue? [Y/n]
Get:1 http://np.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx-common
all 1.18.0-0ubuntu1.2 [37.5 kB]
Get:2 http://np.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-
http-image-filter amd64 1.18.0-0ubuntu1.2 [14.4 kB]
Get:3 http://np.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-
http-xslt-filter amd64 1.18.0-0ubuntu1.2 [12.7 kB]
Get:4 http://np.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-
mail amd64 1.18.0-0ubuntu1.2 [42.5 kB]
```

After installing the nginx server, we start the nginx server and check the status using following commands;

```
- sudo systemctl start nginx
```

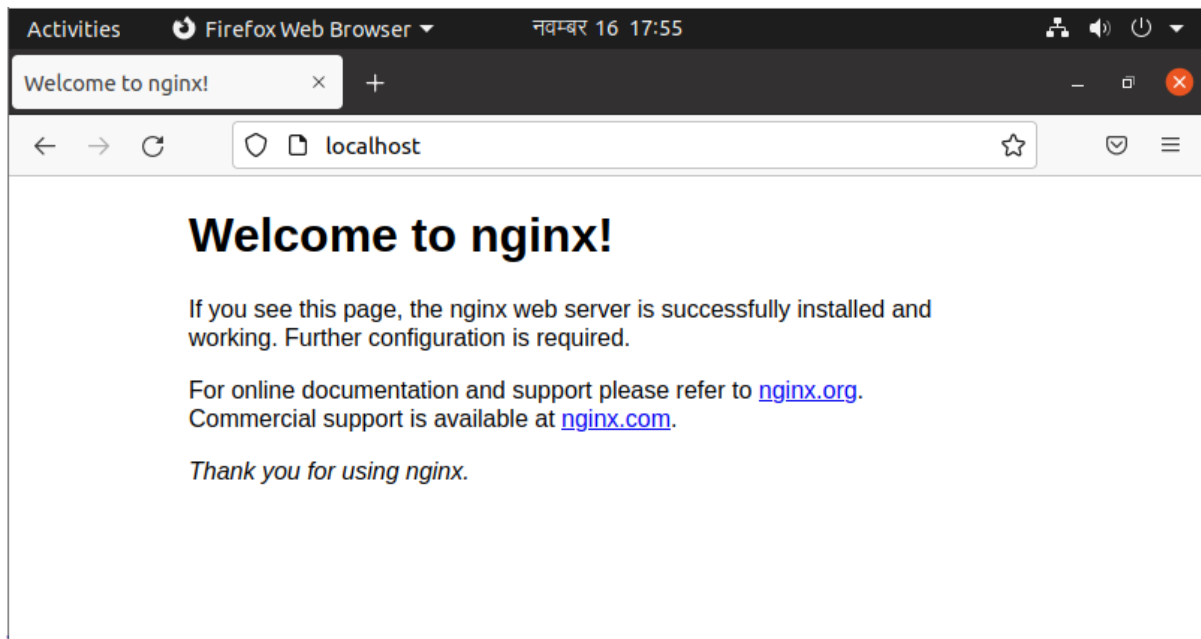
```
- sudo systemctl status nginx
```

A terminal window titled 'aashish@aashish-VirtualBox: ~' showing two commands. First, 'curl -4 icanhazip.com' returns the IP address 110.44.124.138. Then, 'systemctl status nginx' shows that the nginx.service is active (running) and provides details about its configuration, PID, tasks, memory, and CGroup. At the bottom, there are two log messages from systemd indicating the successful start of the nginx service.

```
aashish@aashish-VirtualBox:~$ curl -4 icanhazip.com
110.44.124.138
aashish@aashish-VirtualBox:~$ systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset:▶
   Active: active (running) since Tue 2021-11-16 17:49:36 +0545; 46min ago
     Docs: man:nginx(8)
  Main PID: 4682 (nginx)
    Tasks: 2 (limit: 4638)
   Memory: 2.9M
    CGroup: /system.slice/nginx.service
            └─4682 nginx: master process /usr/sbin/nginx -g daemon on; master_▶
               └─4683 nginx: worker process

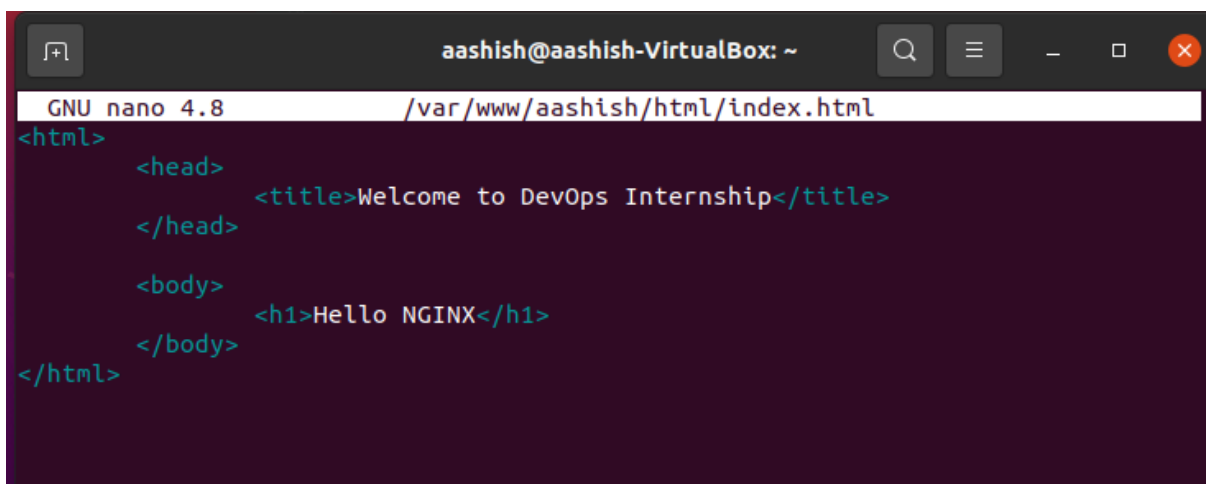
novम्बर 16 17:49:36 aashish-VirtualBox systemd[1]: Starting A high performance we▶
novम्बर 16 17:49:36 aashish-VirtualBox systemd[1]: Started A high performance web▶
```

Since, the nginx server is running. We can test it from the web browser as well.



Now, we create a directory **/var/www/aashish/html/** and add index.html in the directory using following command;

- **sudo mkdir /var/www/aashish/html**
- **cd /var/www/aashish/html**
- **sudo nano index.html**



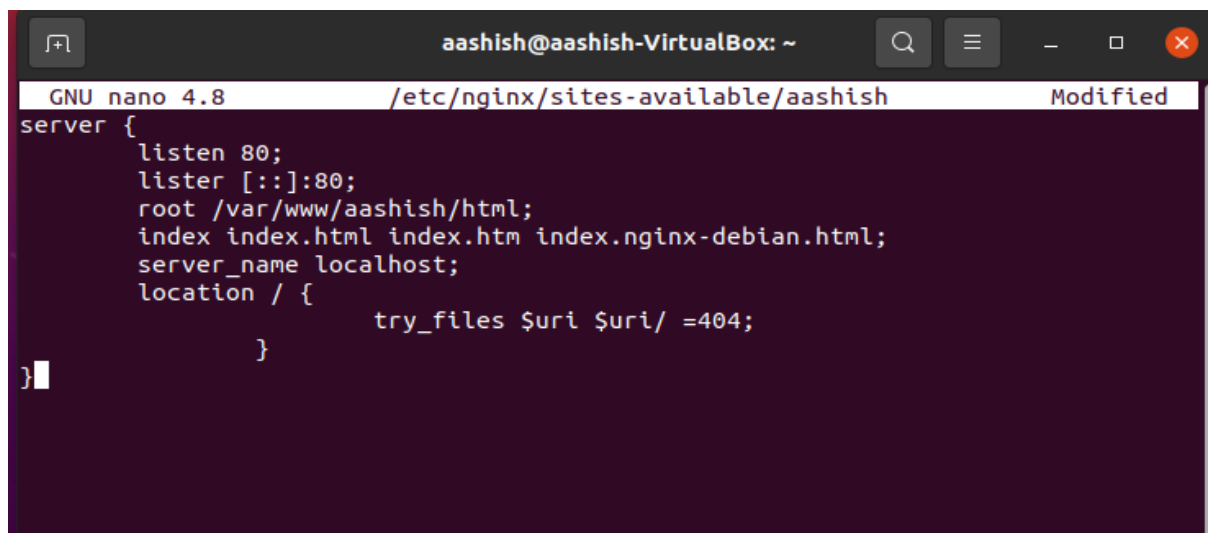
In the **index.html** file the above things are added.

Now, we create a aashish.conf file in **/etc/nginx/sites-available** using following command;

- **nano /etc/nginx/sites-available/aashish.conf**

We add the following things in the **aashish.conf** file and save and exit.

```
server {
    listen 80;
    listen [::]:80;
    root /var/www/aashish/html;
    index index.html index.htm index.nginx-debian.html;
server_name localhost;
location / {
    try_files $uri $uri/ =404;
}
}
```



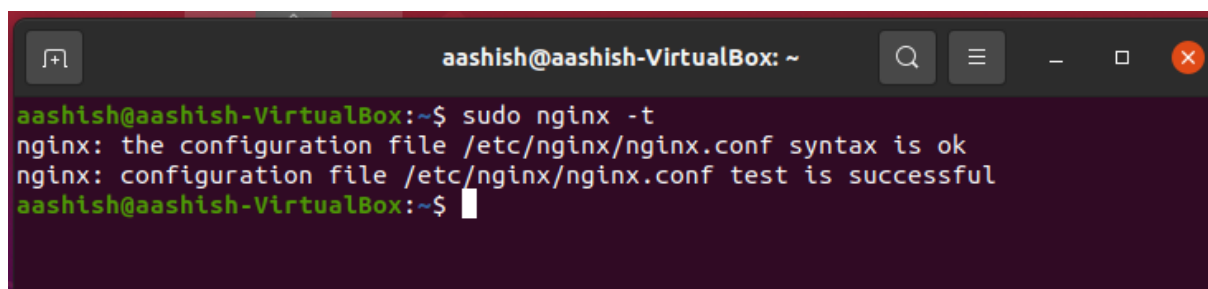
```
aashish@aashish-VirtualBox: ~
GNU nano 4.8 /etc/nginx/sites-available/aashish Modified
server {
    listen 80;
    listen [::]:80;
    root /var/www/aashish/html;
    index index.html index.htm index.nginx-debian.html;
    server_name localhost;
    location / {
        try_files $uri $uri/ =404;
    }
}
```

We create symbolic link or soft link of aashish.conf file from /etc/nginx/sites-available to /etc/nginx/sites-enabled using following command;

```
- ln -s /etc/nginx/sites-available/aashish.conf /etc/nginx/sites-enabled
```

Then, we check the for syntax error and if everything is fine we restart the nginx server using following commands;

```
- sudo nginx -t
- sudo systemctl restart nginx
```



```
aashish@aashish-VirtualBox: ~
aashish@aashish-VirtualBox:~$ sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
aashish@aashish-VirtualBox:~$
```

```
aashish@aashish-VirtualBox: ~  
aashish@aashish-VirtualBox:~$ sudo nginx -t  
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok  
nginx: configuration file /etc/nginx/nginx.conf test is successful  
aashish@aashish-VirtualBox:~$ systemctl restart nginx  
aashish@aashish-VirtualBox:~$ systemctl status nginx  
● nginx.service - A high performance web server and a reverse proxy server  
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: >  
   Active: active (running) since Tue 2021-11-16 18:53:13 +0545; 9s ago  
     Docs: man:nginx(8)  
  Process: 5849 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_proce>  
  Process: 5850 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (c>  
 Main PID: 5851 (nginx)  
    Tasks: 2 (limit: 4638)  
   Memory: 2.4M  
    CGroup: /system.slice/nginx.service  
           └─5851 nginx: master process /usr/sbin/nginx -g daemon on; master_>  
             └─5852 nginx: worker process  
  
नवम्बर 16 18:53:13 aashish-VirtualBox systemd[1]: Starting A high performance we>  
नवम्बर 16 18:53:13 aashish-VirtualBox systemd[1]: Started A high performance web>  
lines 1-15/15 (END)
```

After restarting the server, we test it on the web browser as follows;



Hence, the **index.html** file is hosted successfully with message “**Hello NGINX**” at localhost.