

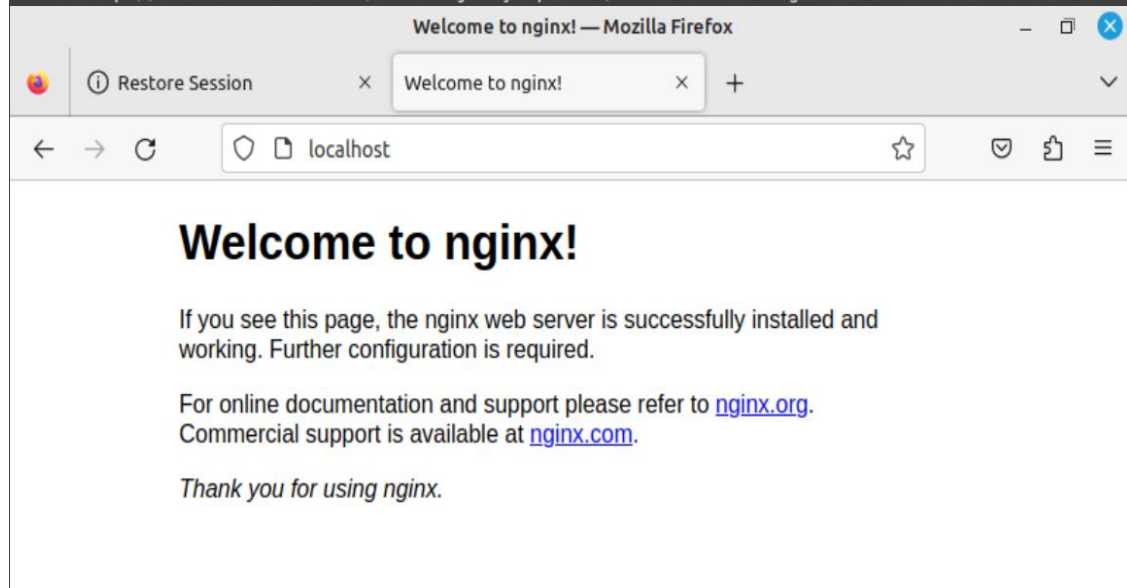
# System Admin2 Lab5

## Lab objectives:

- Using apt , install nginx.

- sudo apt install nginx

```
donia@donia-VirtualBox:~$ sudo apt install nginx
[sudo] password for donia:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libnginx-mod-http-geoip2 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libnginx-mod-stream-geoip2 nginx-common nginx-core
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  libnginx-mod-http-geoip2 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libnginx-mod-stream-geoip2 nginx nginx-common nginx-core
0 upgraded, 9 newly installed, 0 to remove and 9 not upgraded.
Need to get 696 kB of archives.
After this operation, 2,395 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 nginx-common all 1.18.0-6ubuntu14.3 [40.0 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-geoip2 amd64 1.18.0-6ubuntu14.3 [11.9 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-image-filter amd64 1.18.0-6ubuntu14.3 [15.4 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.18.0-6ubuntu14.3 [13.7 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-mail amd64 1.18.0-6u
```



- Enable port 80 on the firewall.

- sudo ufw allow 80

```
donia@donia-VirtualBox:/var/www/html$ sudo ufw allow 80
```

```
Rule added
```

```
Rule added (v6)
```

```
donia@donia-VirtualBox:/var/www/html$ sudo ufw status
```

```
Status: active
```

To	Action	From
--	-----	----
20/tcp	DENY	Anywhere
21/tcp	DENY	Anywhere
2049/tcp	ALLOW	Anywhere
2049/udp	ALLOW	Anywhere
80	ALLOW	Anywhere
20/tcp (v6)	DENY	Anywhere (v6)
21/tcp (v6)	DENY	Anywhere (v6)
2049/tcp (v6)	ALLOW	Anywhere (v6)
2049/udp (v6)	ALLOW	Anywhere (v6)
80 (v6)	ALLOW	Anywhere (v6)

```
donia@donia-VirtualBox:/var/www/html$
```

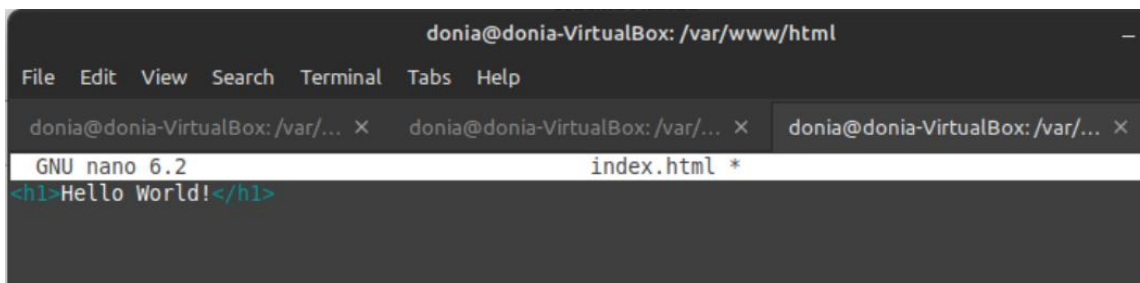
- Create index.html file on root directory of the server section and test it.

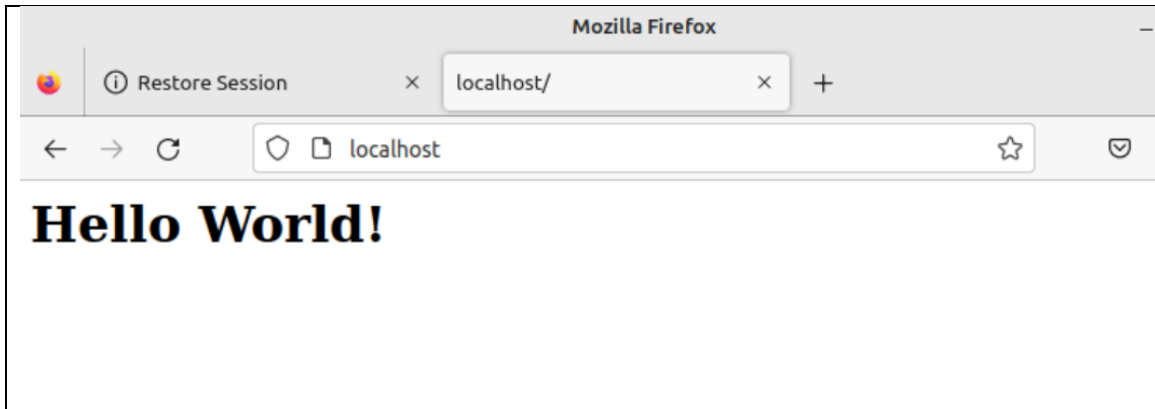
- sudo nano index.html

```
donia@donia-VirtualBox:/var/www/html$ sudo nano index.html
```

```
[sudo] password for donia:
```

```
donia@donia-VirtualBox:/var/www/html$
```





- Install php-fpm package.

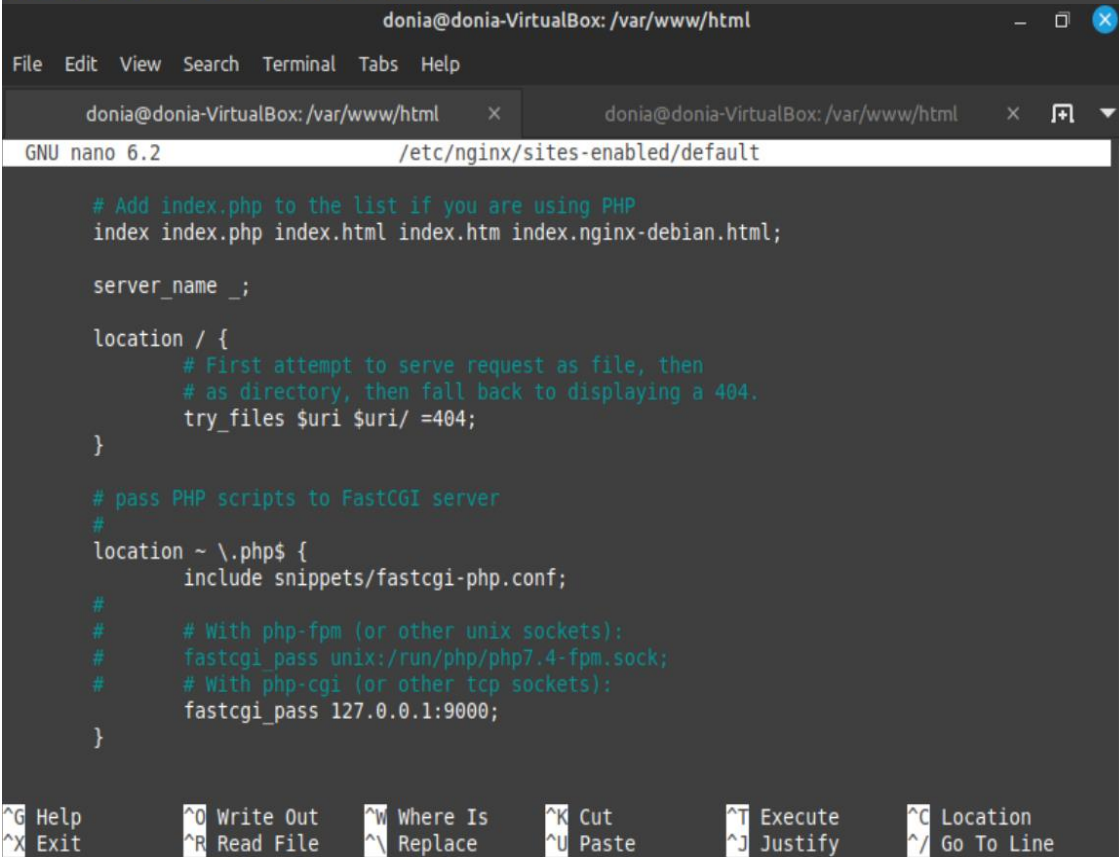
- sudo apt install php-fpm

```
donia@donia-VirtualBox:/var/www/html$ sudo apt install php-fpm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  php8.1-fpm
Suggested packages:
  php-pear
The following NEW packages will be installed:
  php-fpm php8.1-fpm
0 upgraded, 2 newly installed, 0 to remove and 9 not upgraded.
Need to get 1,843 kB of archives.
After this operation, 5,634 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 php8.1-fpm amd64 8.1.2-1ubuntu2.11 [1,840 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy/universe amd64 php-fpm all 2:8.1+92ubuntu1 [2,838 B]
Fetched 1,843 kB in 2s (878 kB/s)
Selecting previously unselected package php8.1-fpm.
(Reading database ... 576482 files and directories currently installed.)
Preparing to unpack .../php8.1-fpm_8.1.2-1ubuntu2.11_amd64.deb ...
Unpacking php8.1-fpm (8.1.2-1ubuntu2.11) ...
Selecting previously unselected package php-fpm.
Preparing to unpack .../php-fpm_2%3a8.1+92ubuntu1_all.deb ...
Unpacking php-fpm (2:8.1+92ubuntu1) ...
Setting up php8.1-fpm (8.1.2-1ubuntu2.11) ...

donia@donia-VirtualBox:/var/www/html$ l /etc/php/
8.1/
donia@donia-VirtualBox:/var/www/html$ l /etc/php/8.1/fpm/
conf.d/  php-fpm.conf  php.ini  pool.d/
```

- Configure main site to enable php-fpm.

```
- sudo nano /etc/nginx/sites-enabled/default
donia@donia-VirtualBox:/var/www/html$ sudo nano /etc/nginx/sites-enabled/default
[sudo] password for donia:
donia@donia-VirtualBox:/var/www/html$
```



```
donia@donia-VirtualBox: /var/www/html
File Edit View Search Terminal Tabs Help
donia@donia-VirtualBox:/var/www/html x donia@donia-VirtualBox:/var/www/html x
GNU nano 6.2 /etc/nginx/sites-enabled/default

# Add index.php to the list if you are using PHP
index index.php index.html index.htm index.nginx-debian.html;

server_name _;

location / {
    # First attempt to serve request as file, then
    # as directory, then fall back to displaying a 404.
    try_files $uri $uri/ =404;
}

# pass PHP scripts to FastCGI server
#
location ~ \.php$ {
    include snippets/fastcgi-php.conf;
    #
    # With php-fpm (or other unix sockets):
    fastcgi_pass unix:/run/php/php7.4-fpm.sock;
    # With php-cgi (or other tcp sockets):
    fastcgi_pass 127.0.0.1:9000;
}

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line
```

- Create index.php file and test it.

```
- sudo nano /var/www/html/index.php
donia@donia-VirtualBox:/var/www/html$ sudo nano /var/www/html/index.php
donia@donia-VirtualBox:/var/www/html$
donia@donia-VirtualBox:/var/www/html$
```



```
donia@donia-VirtualBox: /var/www/html
File Edit View Search Terminal Tabs Help
donia@donia-VirtualBox:/var/www/html x donia@donia-VirtualBox:/var/www/html x
GNU nano 6.2 /var/www/html/index.php *
<?php
    echo "Hello ITI PHP!";
?>
```