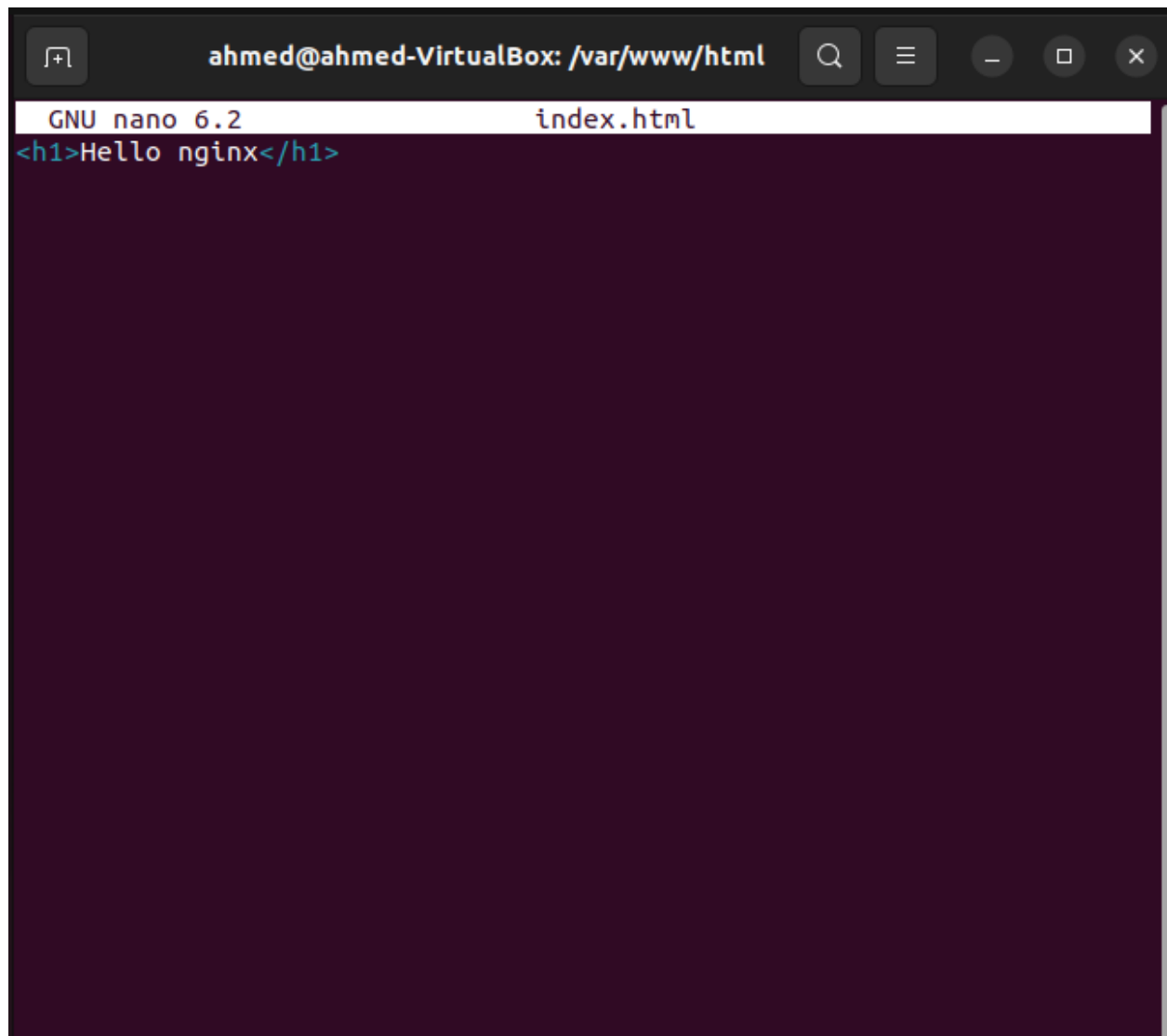


# Lab 5

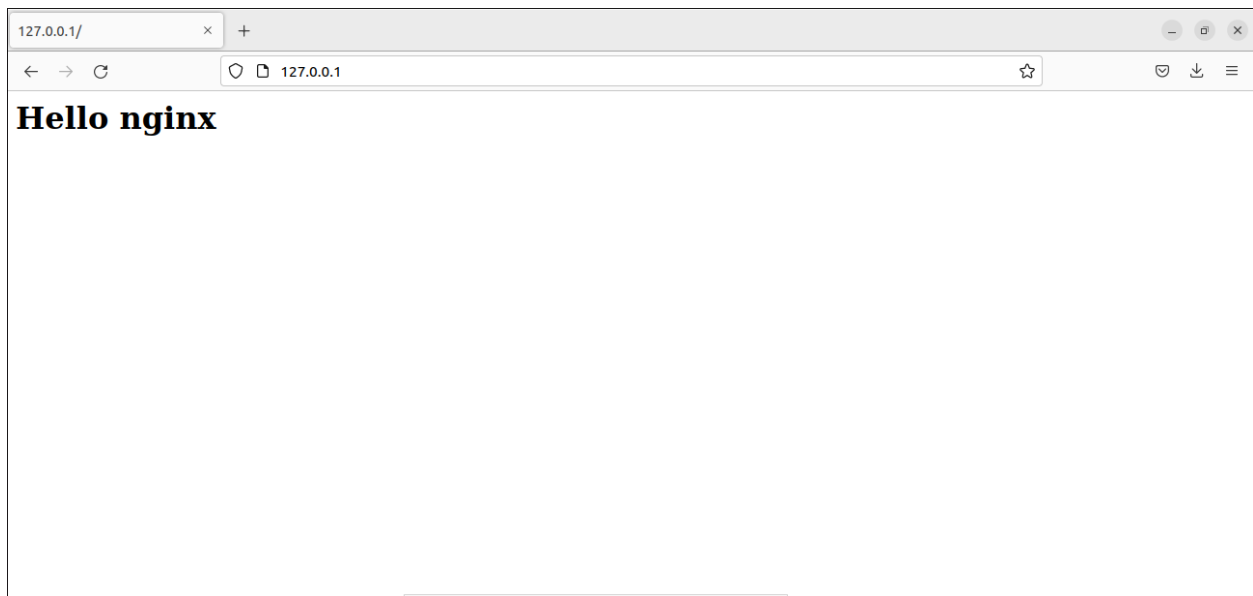
```
ahmed@ahmed-VirtualBox:~$ sudo apt update
[sudo] password for ahmed:
Hit:1 http://eg.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110
kB]
Get:3 http://eg.archive.ubuntu.com/ubuntu jammy-updates InRelease [119
kB]
Get:4 http://eg.archive.ubuntu.com/ubuntu jammy-backports InRelease [1
08 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packa
ges [280 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Pack
ages [731 kB]
Get:7 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Pac
kages [993 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main Translatio
n-en [147 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-
11 Metadata [41.6 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n
-f Metadata [9,020 B]
Get:11 http://security.ubuntu.com/ubuntu jammy-security/restricted amd
64 Packages [705 kB]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/restricted Tra
nslation-en [110 kB]
Get:13 http://security.ubuntu.com/ubuntu jammy-security/universe amd64
DEP-11 Metadata [18.5 kB]
Get:14 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main i386 Pac
kages [468 kB]
Get:15 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main Translat
ion-en [210 kB]
```

```
518 packages can be upgraded. Run 'apt list --upgradable' to see them.
ahmed@ahmed-VirtualBox:~$ sudo apt install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
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 318 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://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 nginx-common all 1.18.0-6ubuntu14.3 [40.0 kB]
Get:2 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-geoip2 amd64 1.18.0-6ubuntu14.3 [11.9 kB]
Get:3 http://eg.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://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 lib
```

```
Processing triggers for dmcc (0.00.1-0ubuntu1) ...
ahmed@ahmed-VirtualBox:~$ sudo systemctl stop apache2
ahmed@ahmed-VirtualBox:~$ sudo ufw allow 80/tcp
Rules updated
Rules updated (v6)
ahmed@ahmed-VirtualBox:~$ sudo systemctl start nginx
ahmed@ahmed-VirtualBox:~$ cd /var/www/html
ahmed@ahmed-VirtualBox:/var/www/html$ sudo nano index.html
ahmed@ahmed-VirtualBox:/var/www/html$ sudo apt install php-fpm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
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 318 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://eg.archive.ubuntu.com/ubuntu jammy-updates/universe amd64
  php8.1-fpm amd64 8.1.2-1ubuntu2.11 [1,840 kB]
Get:2 http://eg.archive.ubuntu.com/ubuntu jammy/universe amd64 php-fpm
  all 2:8.1+92ubuntu1 [2,838 B]
Fetched 1,843 kB in 24s (78.4 kB/s)
Selecting previously unselected package php8.1-fpm.
(Reading database ... 197390 files and directories currently
```

A terminal window titled 'ahmed@ahmed-VirtualBox: /var/www/html' with standard window controls. The GNU nano 6.2 editor is open, editing 'index.html'. The content of the file is '<h1>Hello nginx</h1>'.

```
ahmed@ahmed-VirtualBox: /var/www/html
GNU nano 6.2 index.html
<h1>Hello nginx</h1>
```

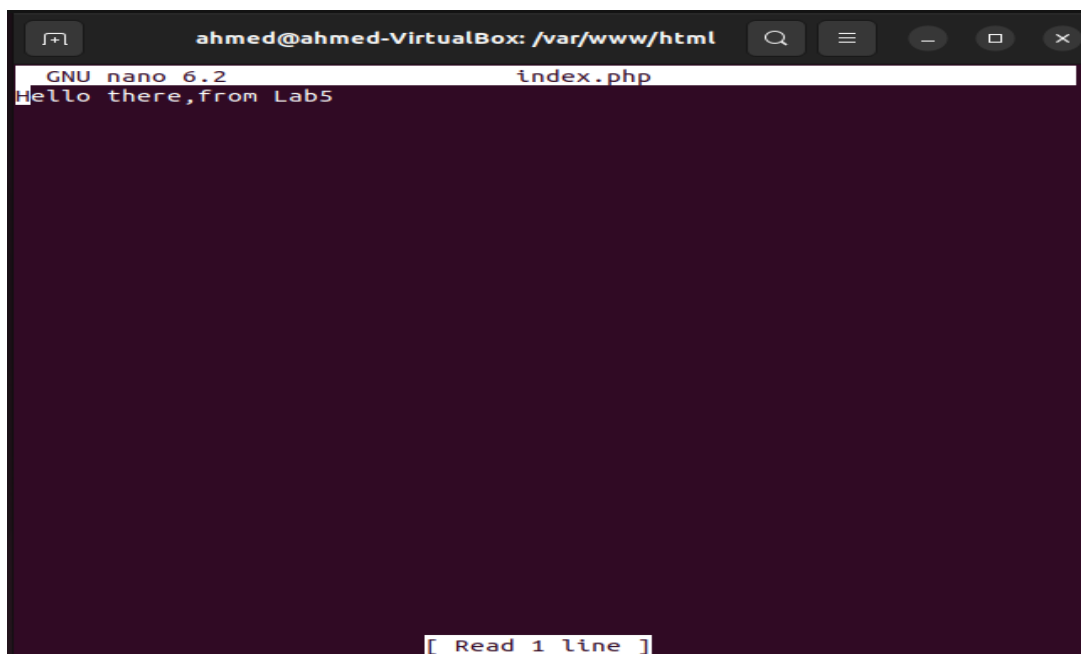


```
Package installed.
ahmed@ahmed-VirtualBox:/var/www/html$ sudo apt remove apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer
required:
  apache2-data apache2-utils systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  apache2
0 upgraded, 0 newly installed, 1 to remove and 318 not upgraded.
After this operation, 546 kB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 197416 files and directories currently
installed.)
Removing apache2 (2.4.52-1ubuntu4.4) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for ufw (0.36.1-4build1) ...
ahmed@ahmed-VirtualBox:/var/www/html$ sudo apt install php-fpm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
php-fpm is already the newest version (2:8.1+92ubuntu1).
The following packages were automatically installed and are no longer
required:
  apache2-data apache2-utils systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 318 not upgraded.
ahmed@ahmed-VirtualBox:/var/www/html$ sudo nano /etc/nginx/sites-avail
able/default
ahmed@ahmed-VirtualBox:/var/www/html$ sudo nano index.php
ahmed@ahmed-VirtualBox:/var/www/html$ sudo service nginx restart
```

```
#
location ~ /\.php$ {
    include snippets/fastcgi-php.conf;

    #
    # With php-fpm (or other unix sockets):
    fastcgi_pass unix:/run/php/php8.1-fpm.sock;
    #
    # With php-cgi (or other tcp sockets):
    fastcgi_pass 127.0.0.1:9000;
}

# deny access to .htaccess files, if Apache's document root
# concurs with nginx's one
#
#location ~ /\.ht {
#    deny all;
#}
}
```



The screenshot shows a web browser window with the address bar displaying "ahmed@ahmed-VirtualBox: /var/www/html". The browser content area shows the output of a terminal command, which is the content of the "index.php" file. The output is "Hello there,from Lab5". The browser window has a dark theme and standard navigation buttons. At the bottom of the browser window, there is a status bar that says "[ Read 1 line ]".

