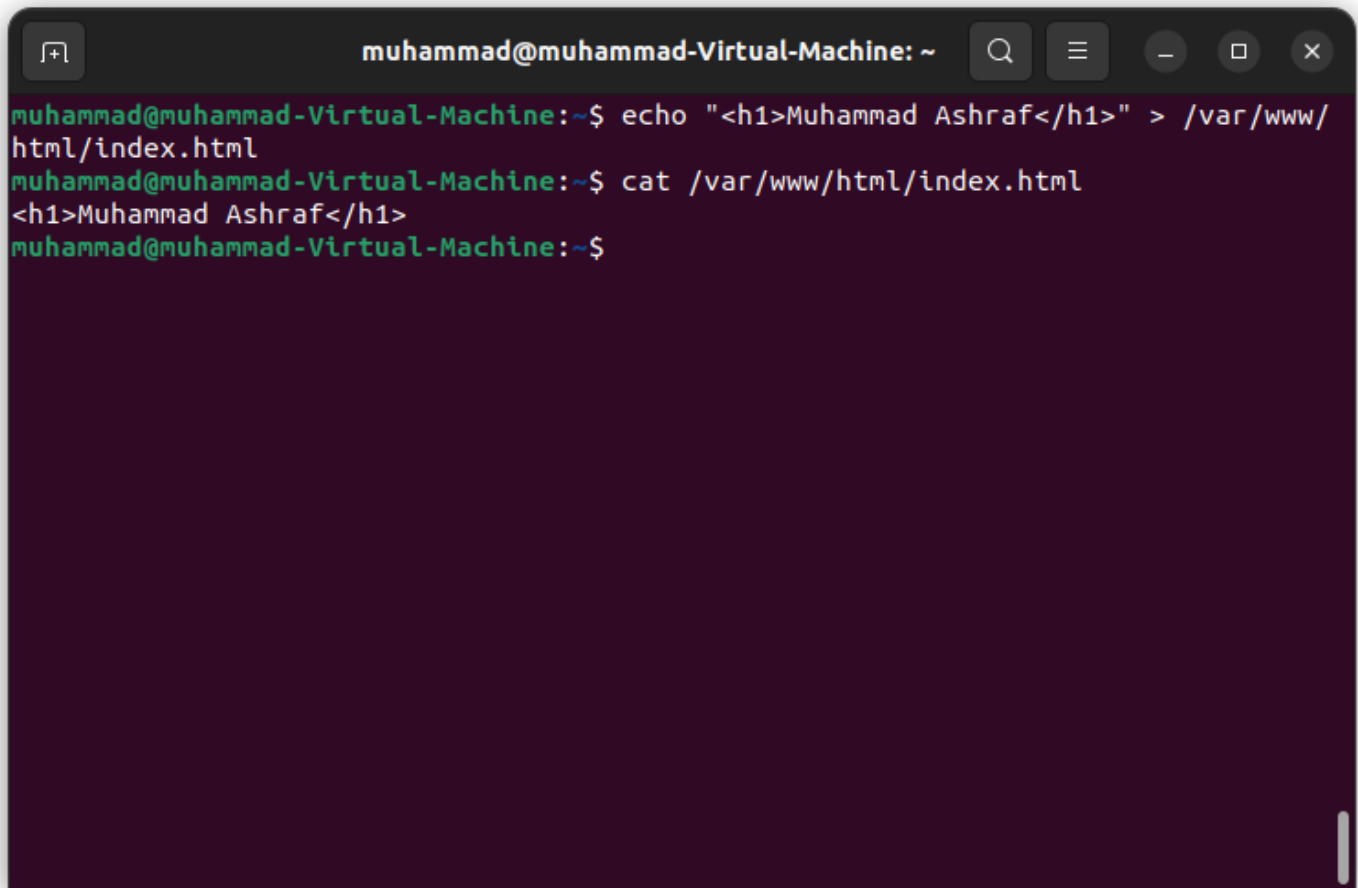


- Using apt install apache2 server

```
muhammad@muhammad-Virtual-Machine: ~  
muhammad@muhammad-Virtual-Machine:~$ sudo apt install apache2  
[sudo] password for muhammad:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  dctrl-tools dmideventd dpkg-repack gir1.2-timezonemap-1.0 gir1.2-xkl-1.0  
  libaio1 libdebconf-indebconf4 libdevmapper-event1.02.1 libdpkg-perl  
  libfile-fcntllock-perl libflashrom1 libftdi1-2 libllvm13 liblvm2cmd2.03  
  libqt5designer5 libqt5help5 libqt5positioning5 libqt5sensors5 libqt5test5  
  libqt5webchannel5 libqt5webkit5 libtimezonemap-data libtimezonemap1 lvm2  
  python3-dbus.mainloop.pyqt5 python3-icu python3-pam python3-pyqt5  
  python3-pyqt5.qtsvg python3-pyqt5.qtwebkit python3-pyqt5.sip rdate  
  thin-provisioning-tools  
Use 'sudo apt autoremove' to remove them.  
The following additional packages will be installed:  
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1  
  libaprutil1-dbd-sqlite3 libaprutil1-ldap  
Suggested packages:  
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser  
The following NEW packages will be installed:  
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1  
  libaprutil1-dbd-sqlite3 libaprutil1-ldap  
0 upgraded, 8 newly installed, 0 to remove and 79 not upgraded.
```

- Replace the default `index.html` content with your own content

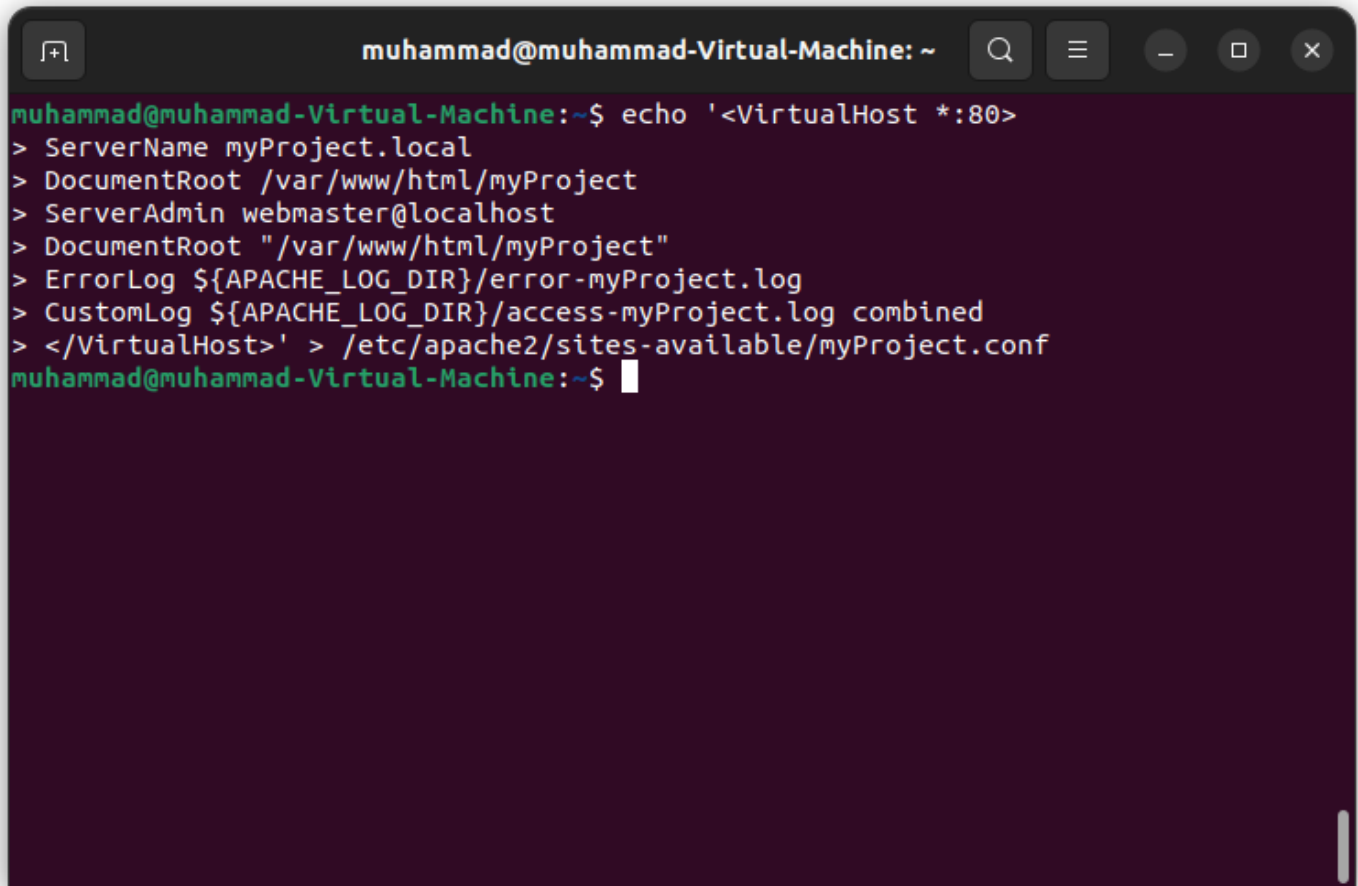
A terminal window titled "muhammad@muhammad-Virtual-Machine: ~" with standard window controls. The terminal shows a sequence of commands and their outputs. The first command uses 'echo' to write an HTML header to a file. The second command uses 'cat' to display the contents of that file, showing the header was successfully written.

```
muhammad@muhammad-Virtual-Machine:~$ echo "<h1>Muhammad Ashraf</h1>" > /var/www/html/index.html
muhammad@muhammad-Virtual-Machine:~$ cat /var/www/html/index.html
<h1>Muhammad Ashraf</h1>
muhammad@muhammad-Virtual-Machine:~$
```

- install php module for apache2

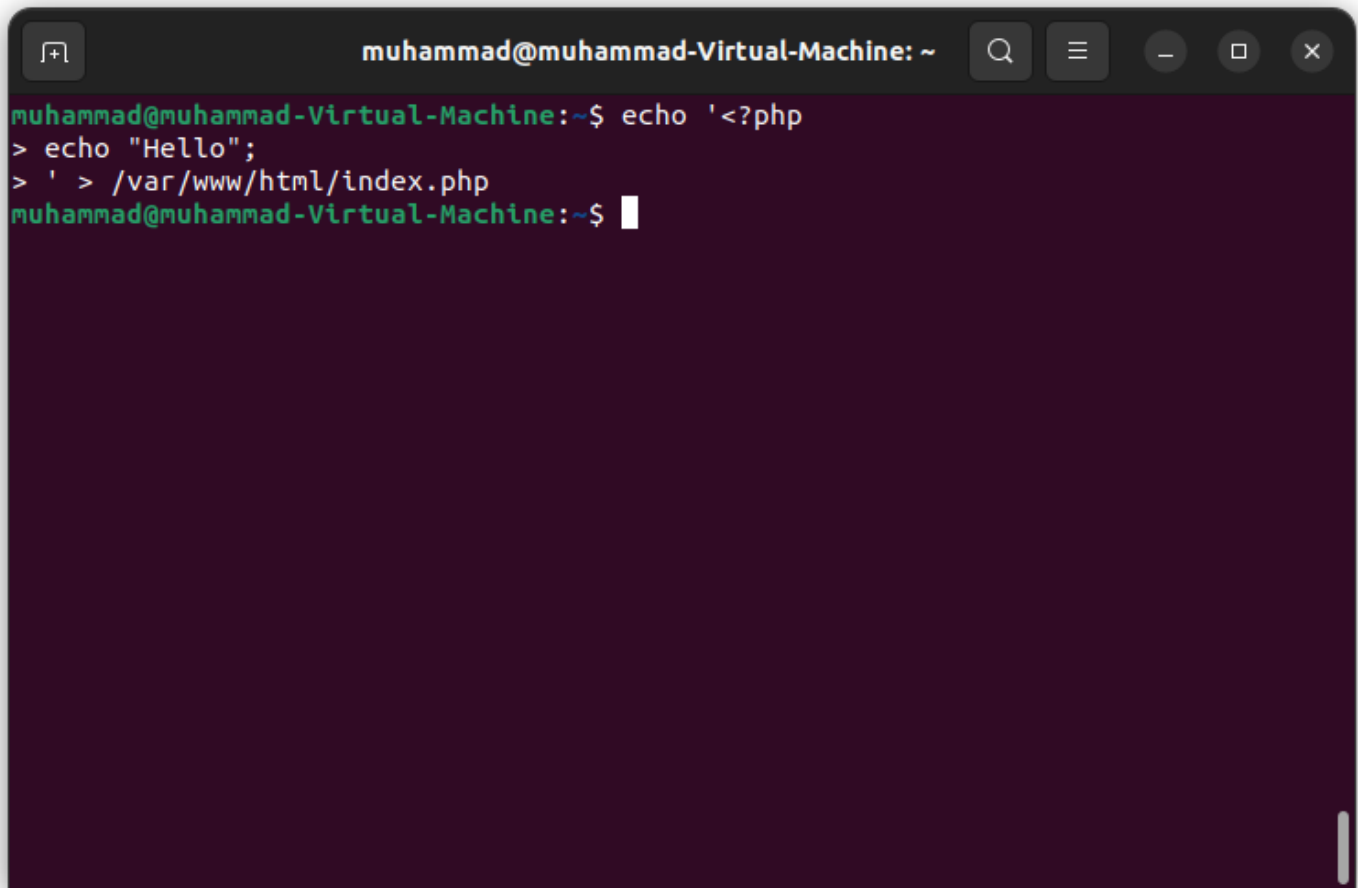
```
muhammad@muhammad-Virtual-Machine: ~  
muhammad@muhammad-Virtual-Machine:~$ apt install libapache2-mod-php  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  dctrl-tools dmideventd dpkg-repack gir1.2-timzone-1.0 gir1.2-xkl-1.0  
  libaio1 libdebconf-installer4 libdevmapper-event1.02.1 libdpkg-perl  
  libfile-fcntllock-perl libflashrom1 libftdi1-2 libllvm13 libllvm2cmd2.03  
  libqt5designer5 libqt5help5 libqt5positioning5 libqt5sensors5 libqt5test5  
  libqt5webchannel5 libqt5webkit5 libtimezonemap-data libtimezonemap1 lvm2  
  python3-dbus.mainloop.pyqt5 python3-icu python3-pam python3-pyqt5  
  python3-pyqt5.qtsvg python3-pyqt5.qtwebkit python3-pyqt5.sip rdate  
  thin-provisioning-tools  
Use 'apt autoremove' to remove them.  
The following additional packages will be installed:  
  libapache2-mod-php8.1 php-common php8.1-cli php8.1-common php8.1-opcache  
  php8.1-readline  
Suggested packages:  
  php-pear  
The following NEW packages will be installed:  
  libapache2-mod-php libapache2-mod-php8.1 php-common php8.1-cli php8.1-common  
  php8.1-opcache php8.1-readline  
0 upgraded, 7 newly installed, 0 to remove and 79 not upgraded.  
Need to get 0 B/5,118 kB of archives.
```

- create new Named VirtualHost to serve new php project with special access log



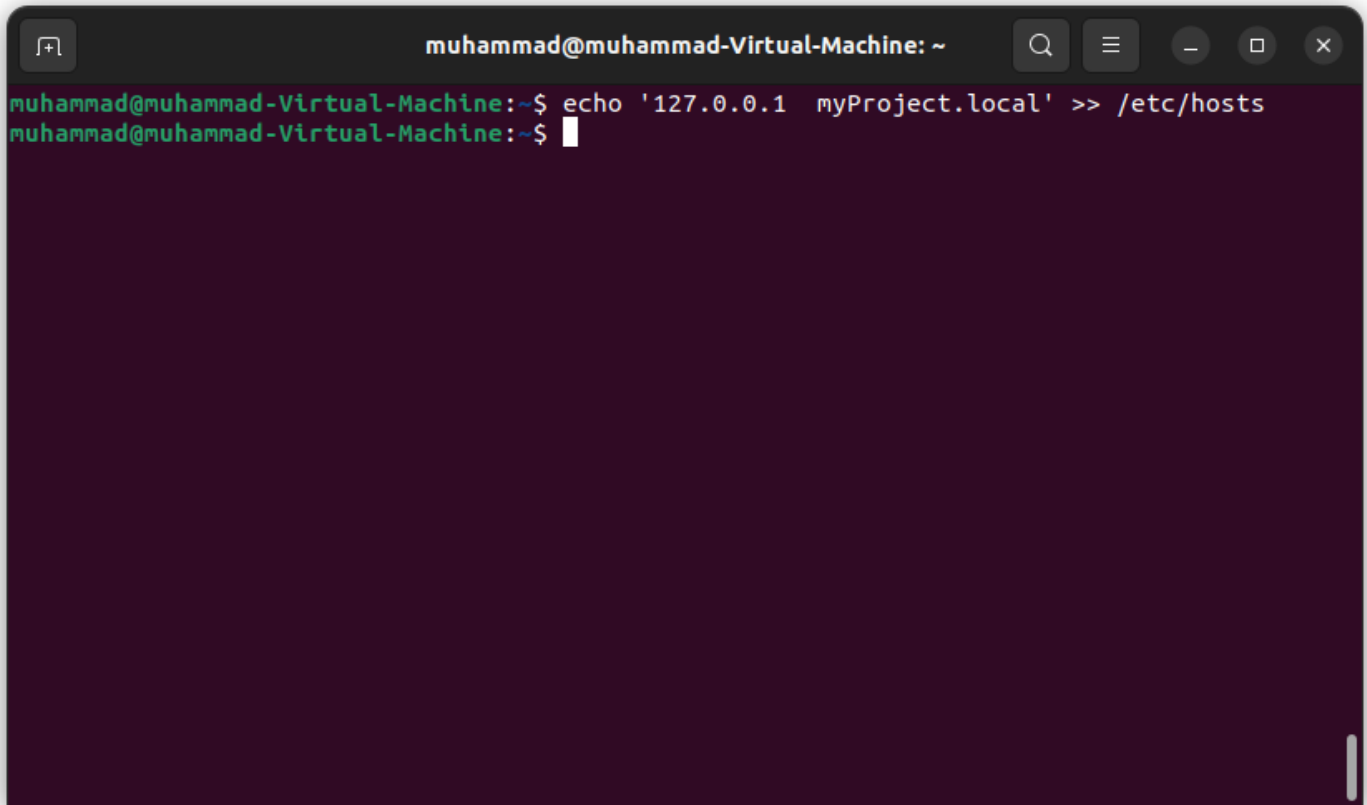
```
muhammad@muhammad-Virtual-Machine: ~  
muhammad@muhammad-Virtual-Machine:~$ echo '<VirtualHost *:80>  
> ServerName myProject.local  
> DocumentRoot /var/www/html/myProject  
> ServerAdmin webmaster@localhost  
> DocumentRoot "/var/www/html/myProject"  
> ErrorLog ${APACHE_LOG_DIR}/error-myProject.log  
> CustomLog ${APACHE_LOG_DIR}/access-myProject.log combined  
> </VirtualHost>' > /etc/apache2/sites-available/myProject.conf  
muhammad@muhammad-Virtual-Machine:~$
```

- create simple `index.php` file for the php site

A terminal window titled "muhammad@muhammad-Virtual-Machine: ~" with standard window controls. The terminal shows a sequence of commands to create a PHP file: first, an echo command to verify PHP is installed, then a redirection command to create the file. The prompt returns after the second command.

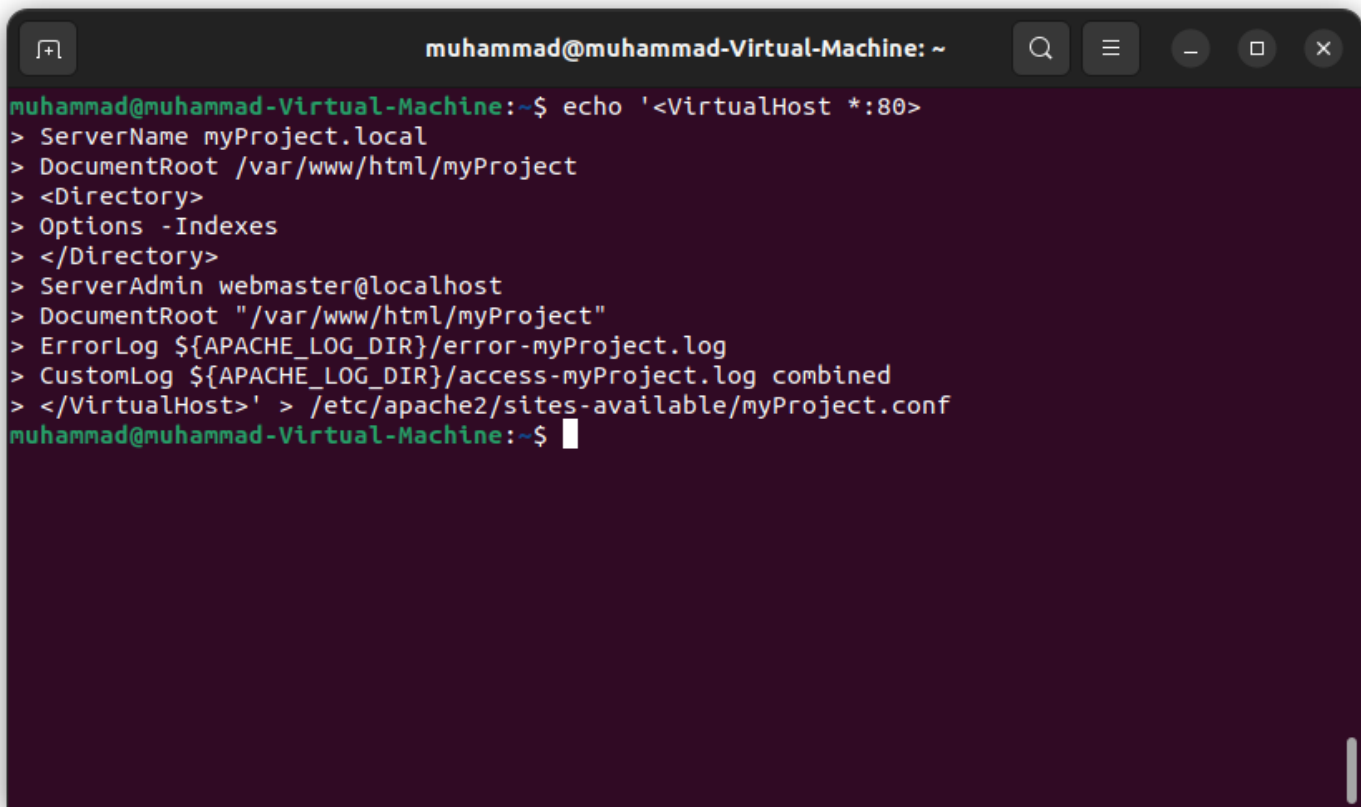
```
muhammad@muhammad-Virtual-Machine:~$ echo 'php
&gt; echo "Hello";
&gt; ' &gt; /var/www/html/index.php
muhammad@muhammad-Virtual-Machine:~$</pre
```

- configure `/etc/hosts` for php site.



```
muhammad@muhammad-Virtual-Machine: ~  
muhammad@muhammad-Virtual-Machine:~$ echo '127.0.0.1  myProject.local' >> /etc/hosts  
muhammad@muhammad-Virtual-Machine:~$
```

- disable directory listing for the new virtualhost



```
muhammad@muhammad-Virtual-Machine: ~  
muhammad@muhammad-Virtual-Machine:~$ echo '<VirtualHost *:80>  
> ServerName myProject.local  
> DocumentRoot /var/www/html/myProject  
> <Directory>  
> Options -Indexes  
> </Directory>  
> ServerAdmin webmaster@localhost  
> DocumentRoot "/var/www/html/myProject"  
> ErrorLog ${APACHE_LOG_DIR}/error-myProject.log  
> CustomLog ${APACHE_LOG_DIR}/access-myProject.log combined  
> </VirtualHost>' > /etc/apache2/sites-available/myProject.conf  
muhammad@muhammad-Virtual-Machine:~$
```