Nguyen Thi Truc Ngan B1807652
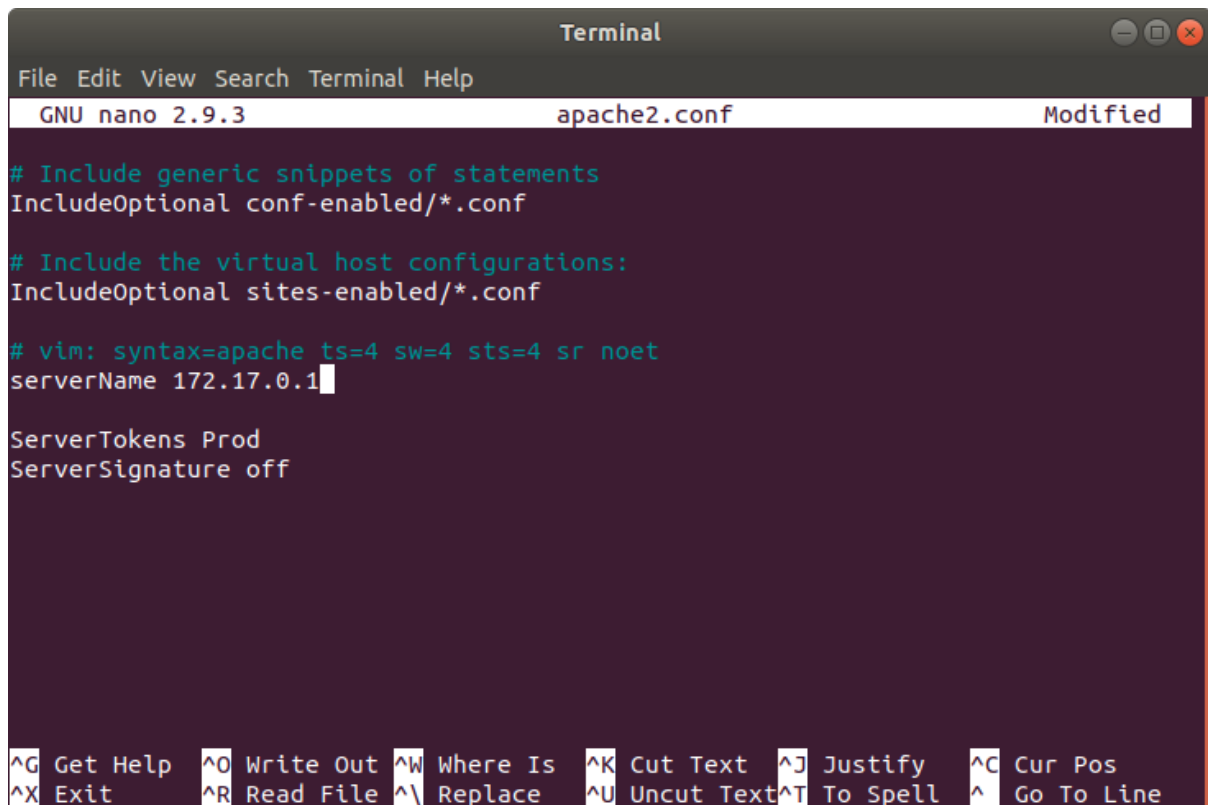
LAB 2

2.1.

- Go to $Web_Server folder
- Modify apache2.conf by using vi or nano editor

```
student@p24m01:~$ cd /etc/apache2
student@p24m01:/etc/apache2$ sudo nano apache2.conf
```

- Add the following directive and save the apache2.conf

- Restart apache

```
student@p24m01:/etc/apache2$ sudo systemctl restart apache2
```

Kết quả:

Trước:

Sau:

2.2

- Go to $Web_Html directory
- Create a folder test and few files inside that

```
student@p24m01:/var/www/html$ sudo mkdir test
student@p24m01:/var/www/html$ cd test
student@p24m01:/var/www/html/test$ touch hello
touch: cannot touch 'hello': Permission denied
student@p24m01:/var/www/html/test$ sudo touch hello hi
student@p24m01:/var/www/html/test$ ls
hello  hi
student@p24m01:/var/www/html/test$
```
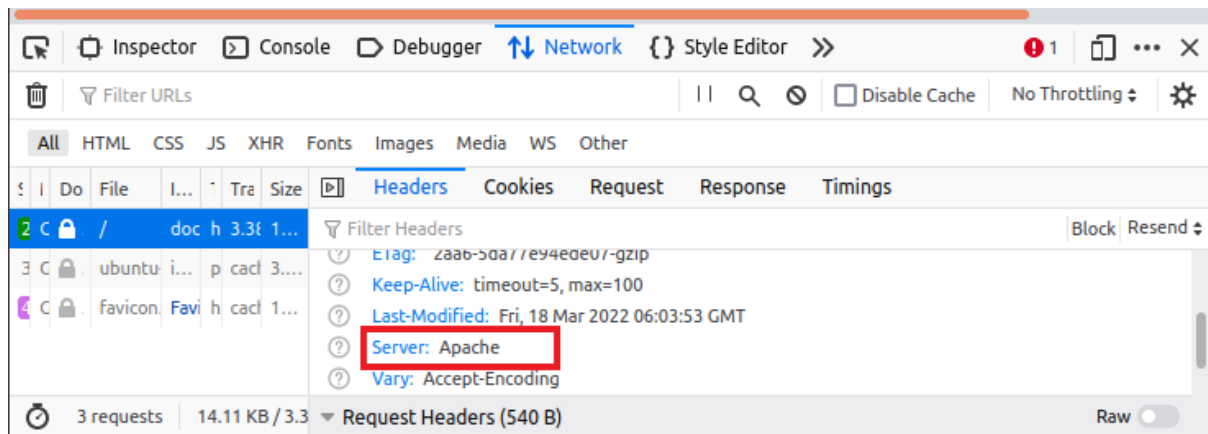
- Go to $Web_Server directory
- Open apache2.conf using vi

```
student@p24m01:/etc/apache2$ cd /etc/apache2
student@p24m01:/etc/apache2$ sudo nano apache2.conf
```

- Search for Directory and change Options directive to None or –Indexes

- Restart Apache

```
student@p24m01:/etc/apache2$ sudo systemctl restart apache2
```

Kết quả:

- Trước:

- Sau:

3.1

- Create a user and group called apache

```
student@p24m01:/etc/apache2$ sudo useradd -g apache apache
```

- Change apache installation directory ownership to newly created non-privileged user

```
student@p24m01:/etc/apache2$ sudo chown -R apache:apache /etc/apache2
student@p24m01:/etc/apache2$
```

- Go to $Web_Server
- Modify apache2.conf using nano

```
student@p24m01:/etc/apache2$ sudo chown -R apache:apache /etc/apache2
student@p24m01:/etc/apache2$ cd /etc/apache2
student@p24m01:/etc/apache2$ sudo nano apache2.conf
```

- Search for User & Group Directive and change as non-privileged account apache

```
                                    Terminal                                    — ▢ ✕

 File  Edit  View  Search  Terminal  Help
  GNU nano 2.9.3                    apache2.conf                     Modified

# MaxKeepAliveRequests: The maximum number of requests to allow
# during a persistent connection. Set to 0 to allow an unlimited amount.
# We recommend you leave this number high, for maximum performance.
#
MaxKeepAliveRequests 100


#
# KeepAliveTimeout: Number of seconds to wait for the next request from the
# same client on the same connection.
#
KeepAliveTimeout 5



# These need to be set in /etc/apache2/envvars
#User ${APACHE_RUN_USER}
#Group ${APACHE_RUN_GROUP}
user apache
Group apache
#

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^  Go To Line
```
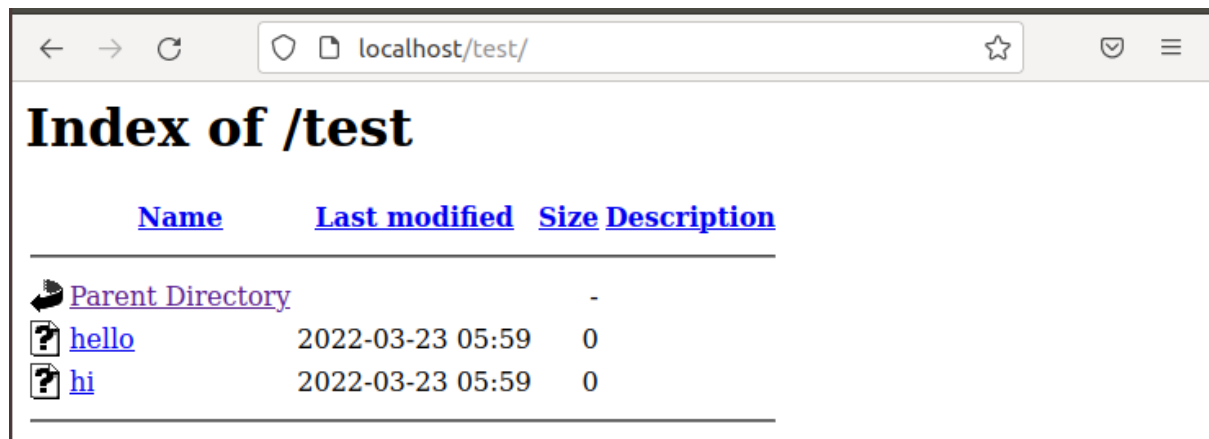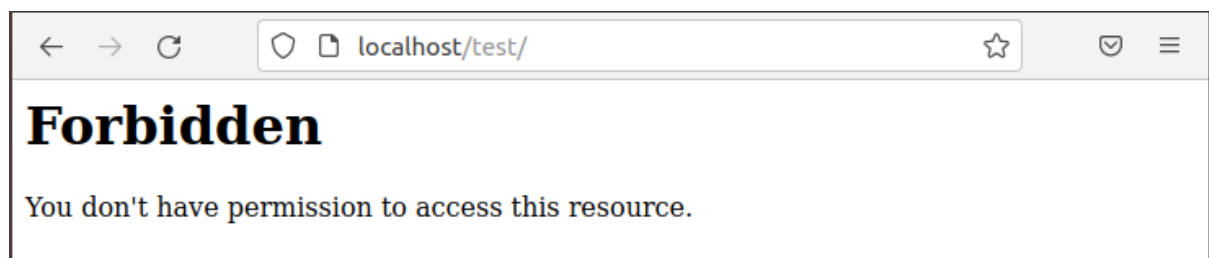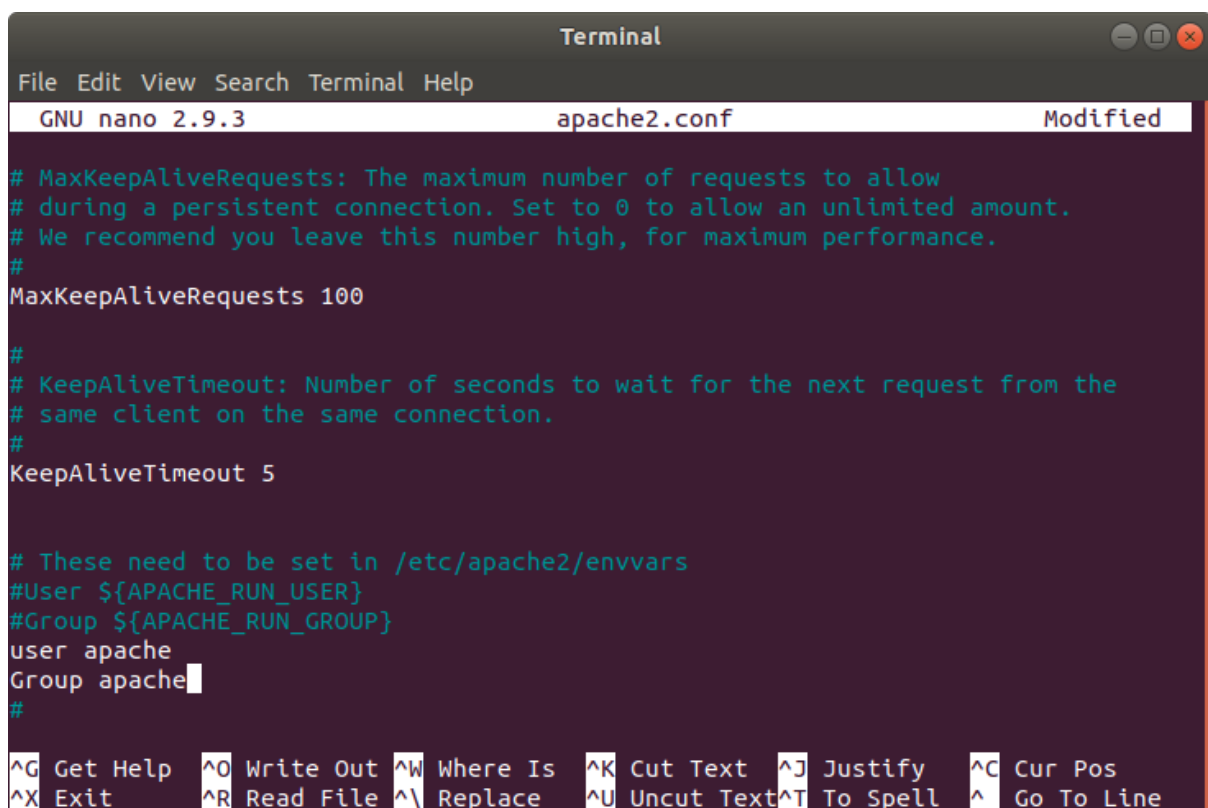
- Save the apache2.conf
- Restart Apache

```
student@p24m01:/etc/apache2$ sudo systemctl restart apache2
```

3.2

- Go to $Web_Server directory
- Change permission of bin and conf folder

```
student@p24m01:/etc/apache2$ sudo chmod -R 750 /etc/apache2
student@p24m01:/etc/apache2$
```

3.3

- Go to $Web_Server directory
- Open apache2.conf using vi
- Search for Directory at root level

```
  GNU nano 2.9.3                    apache2.conf

Include ports.conf


# Sets the default security model of the Apache2 HTTPD server. It does
# not allow access to the root filesystem outside of /usr/share and /var/www.
# The former is used by web applications packaged in Debian,
# the latter may be used for local directories served by the web server. If
# your system is serving content from a sub-directory in /srv you must allow
# access here, or in any related virtual host.
<Directory />
        Options -Indexes
        AllowOverride None
        Require all denied
</Directory>

<Directory /usr/share>
        AllowOverride None
        Require all granted
</Directory>

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text^T To Spell    ^  Go To Line
```

- Save the apache2.conf
- Restart Apache

```
student@p24m01:/etc/apache2$ sudo systemctl restart apache2
```

3.4

- Go to $Web_Server directory
- Open apache2.conf using nano
- Search for Directory and add following

```
                              Terminal                          ⊖ ⊡ ✖
File  Edit  View  Search  Terminal  Help
  GNU nano 2.9.3                apache2.conf              Modified


# Include of directories ignores editors' and dpkg's backup files,
# see README.Debian for details.

# Include generic snippets of statements
IncludeOptional conf-enabled/*.conf

# Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
serverName 172.17.0.12.2.2

ServerTokens Prod
ServerSignature off

<LimitExcept GET POST HEAD>
deny from all
</LimitExcept>

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```
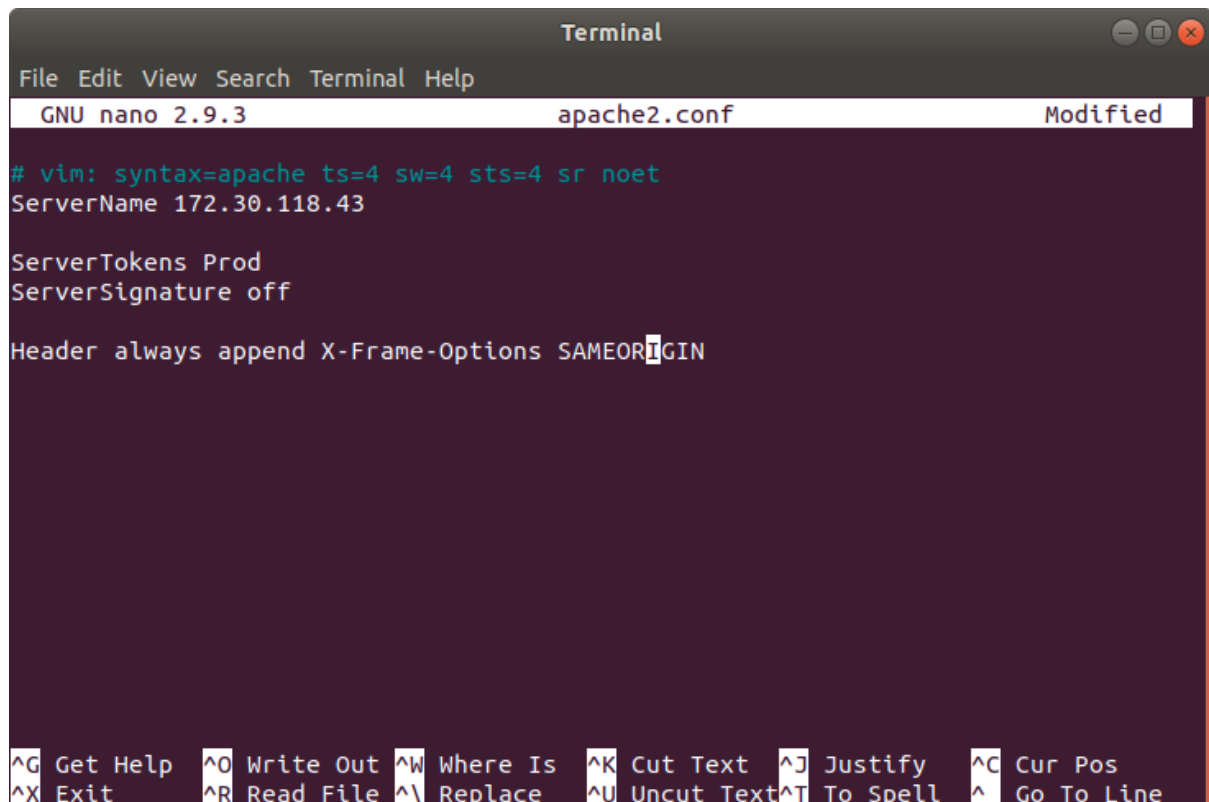
- Restart Apache

```
student@p24m01:/etc/apache2$ sudo systemctl restart apache2
```

4.2

- Ensure mod_headers.so is enabled in your apache2.conf
- Go to $Web_Server directory
- Add the following directive and save the apache2.conf

```
GNU nano 2.9.3                    apache2.conf                      Modified

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
ServerName 172.30.118.43

ServerTokens Prod
ServerSignature off

Header always append X-Frame-Options SAMEORIGIN


^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify    ^C Cur Pos
^X Exit        ^R Read File   ^\ Replace     ^U Uncut Text  ^T To Spell   ^  Go To Line
```
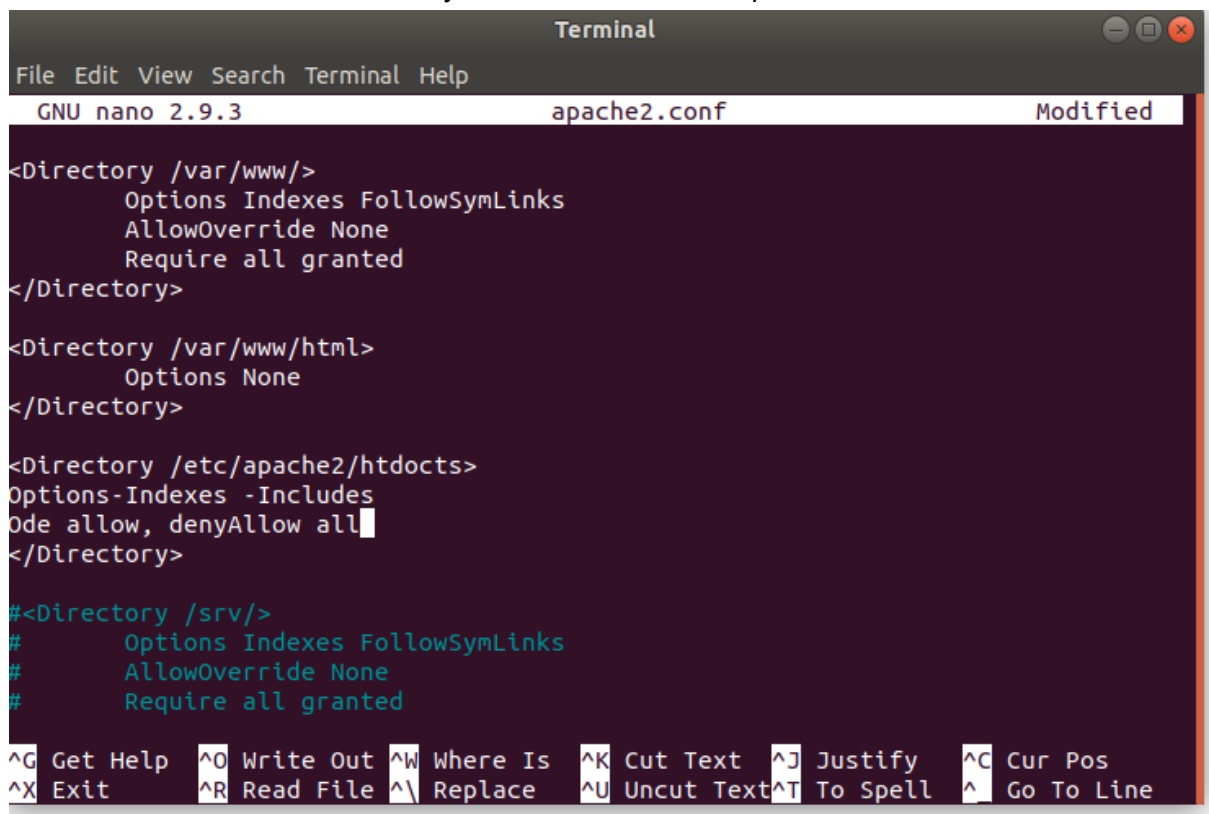
4.4

- Go to $Web_Server directory
- Open apache2.conf using nano
- Search for Directory and add Includes in Options directive


```
GNU nano 2.9.3                    apache2.conf                      Modified

<Directory /var/www/>
        Options Indexes FollowSymLinks
        AllowOverride None
        Require all granted
</Directory>

<Directory /var/www/html>
        Options None
</Directory>

<Directory /etc/apache2/htdocts>
Options-Indexes -Includes
Ode allow, denyAllow all
</Directory>

#<Directory /srv/>
#        Options Indexes FollowSymLinks
#        AllowOverride None
#        Require all granted

^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify    ^C Cur Pos
^X Exit        ^R Read File   ^\ Replace     ^U Uncut Text  ^T To Spell   ^  Go To Line
```
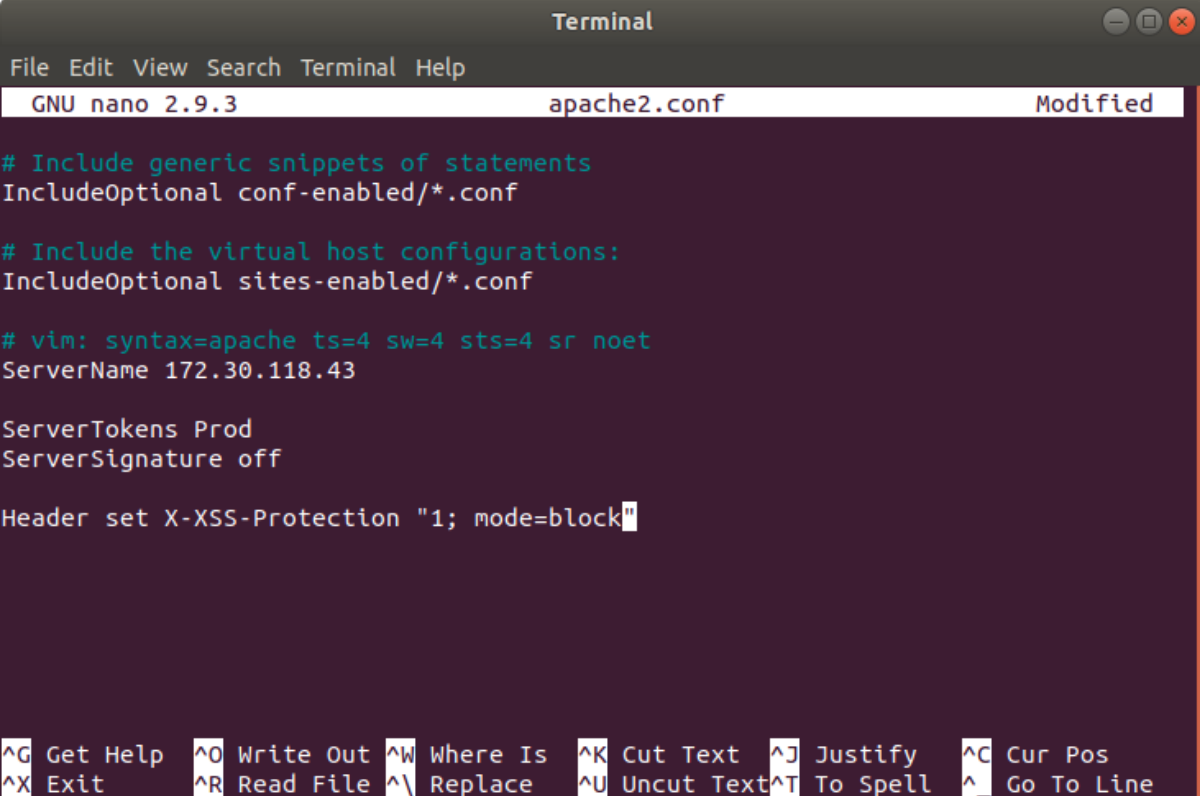
- Go to $Web_Server directory

- Open apache2.conf using vi and add following Header directive

```
  GNU nano 2.9.3                    apache2.conf                    Modified

# Include generic snippets of statements
IncludeOptional conf-enabled/*.conf

# Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
ServerName 172.30.118.43

ServerTokens Prod
ServerSignature off

Header set X-XSS-Protection "1; mode=block"




^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```