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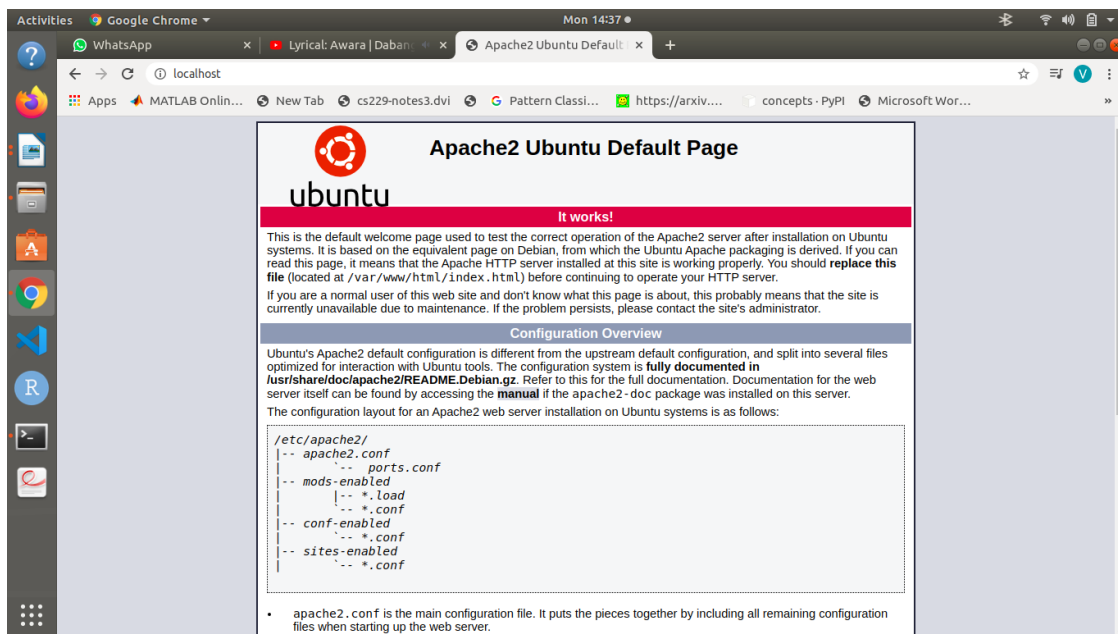
IT-402

ASSIGNMENT - 6

Configure http server on your laptop. Depending on the Linux distro being used, install using appropriate commands. Carry out following tasks:

1. Install Apache web server and configure it work on port 8080.

- To install Apache web server using command : **sudo apt install apache2.**
- To start Apache web server using command : **sudo service apache2 start.**
- By default server run in localhost:80.



- To start the server in localhost:8080 we have to change in the file **ports.conf**. The path of file is **/etc/apache2/ports.conf** . Then change in file **Listen 80** to **Listen 8080**.

```
File Edit View Search Terminal Help
GNU nano 2.9.3 /etc/apache2/ports.conf

# If you just change the port or add more ports here, you will likely also
# have to change the VirtualHost statement in
# /etc/apache2/sites-enabled/000-default.conf

Listen 8080

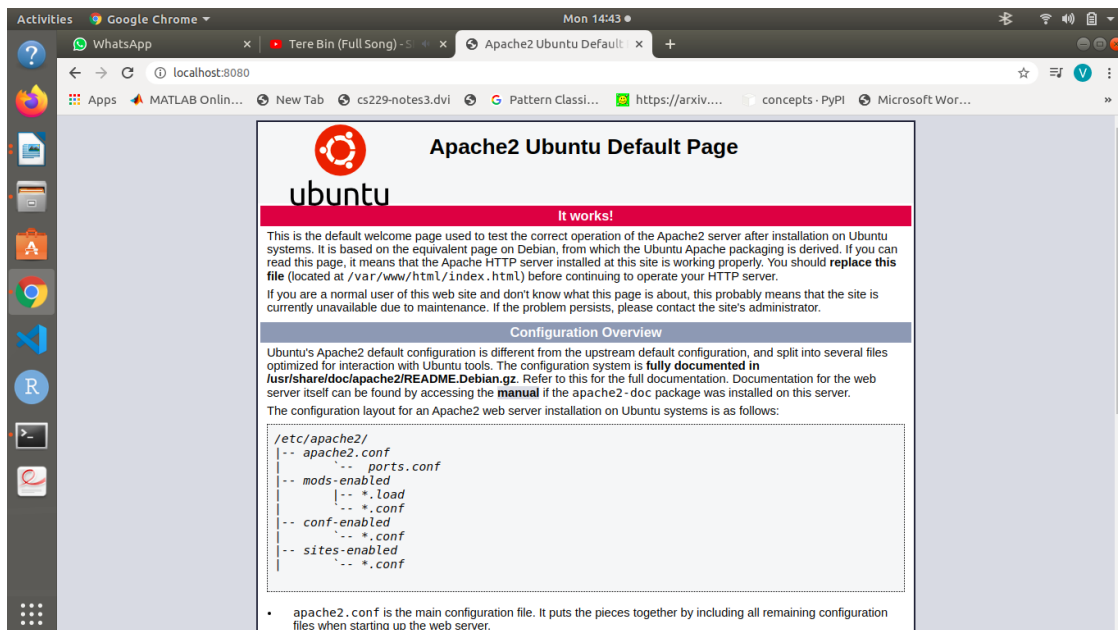
<IfModule ssl_module>
    Listen 443
</IfModule>

<IfModule mod_gnutls.c>
    Listen 443
</IfModule>

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

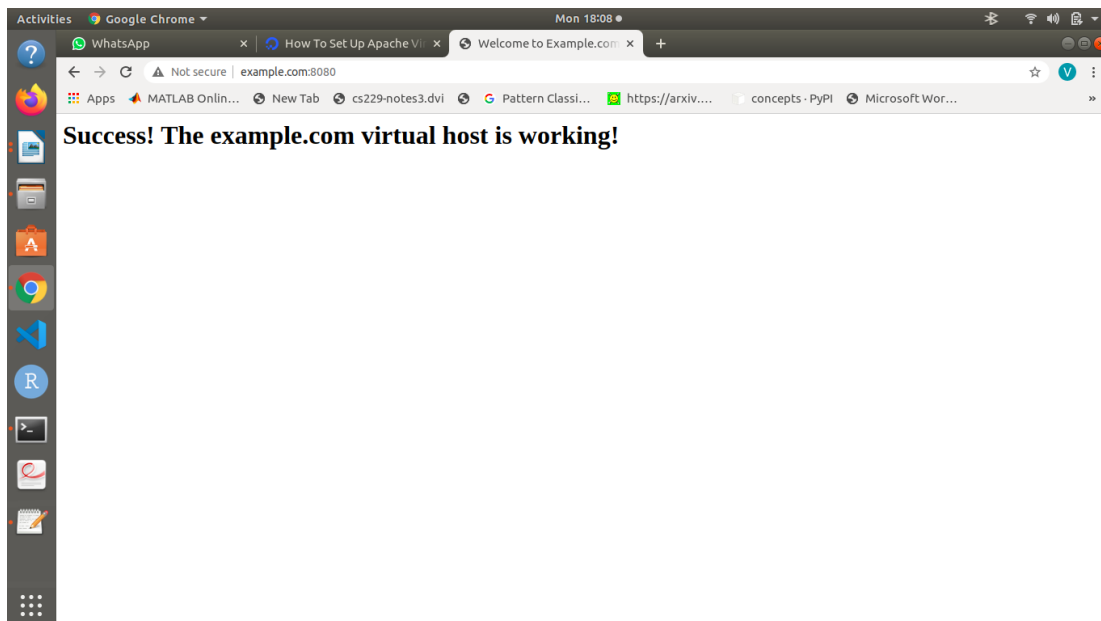
[ Read 15 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify    ^C Cur Pos
^X Exit      ^R Read File  ^_ Replace    ^U Uncut Text ^T To Spell  ^_ Go To Line
```

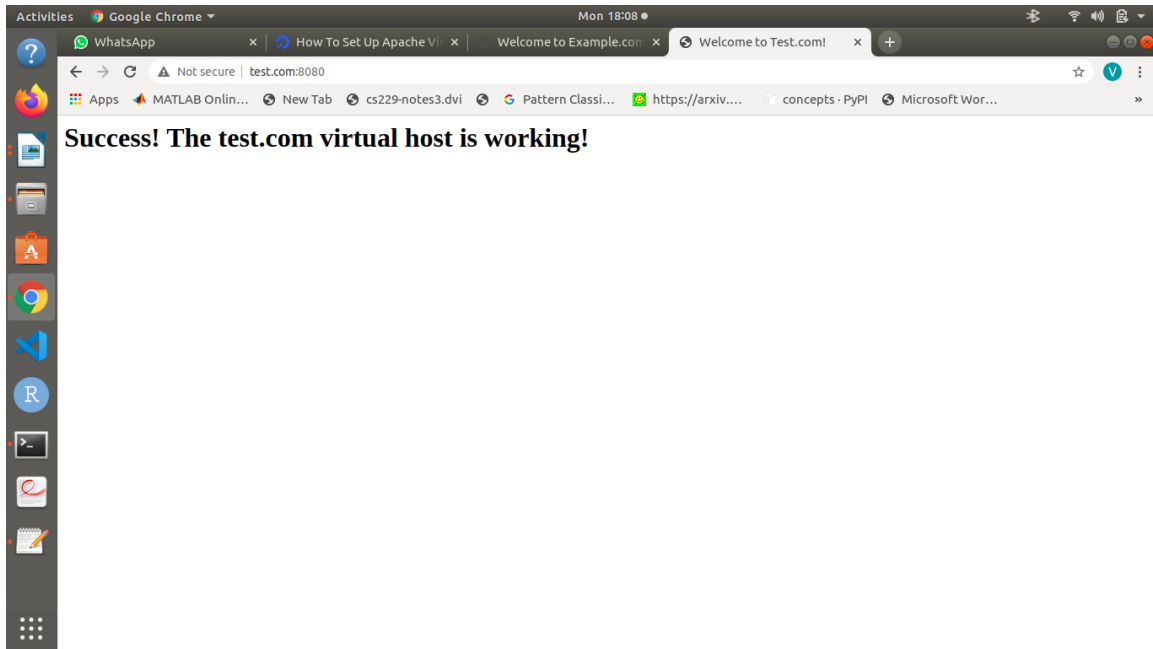
- Restart the Apache web server using command : **sudo service apache2 restart.**
- Then go to web browser then type localhost:8080 .The Apache web server is run in this port.



2. Create 2 different virtual host sites and enable it

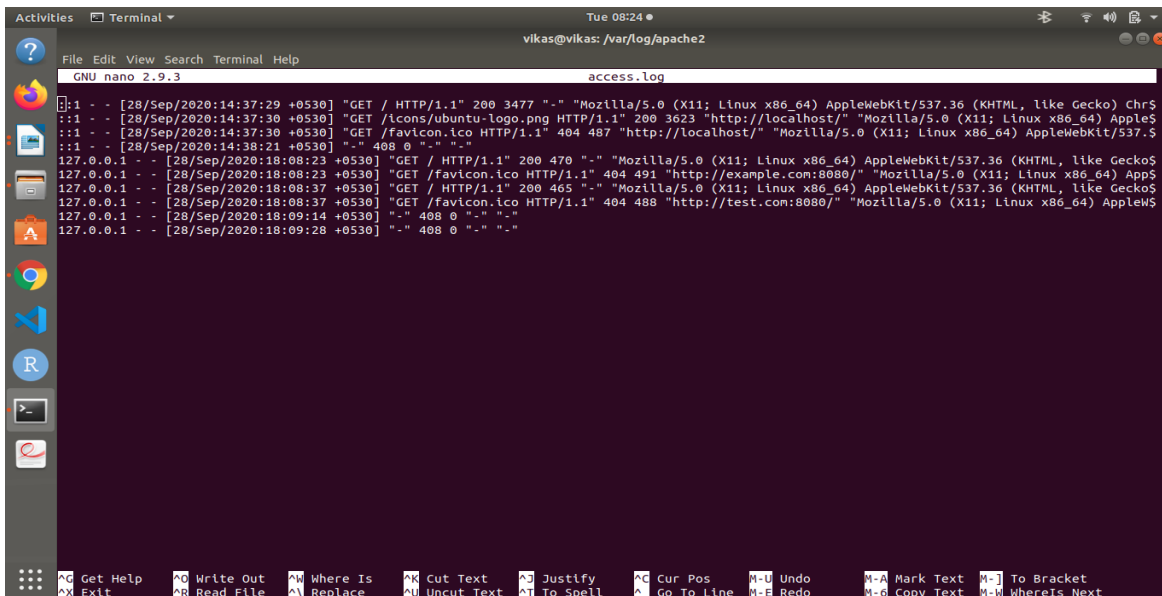
- First create two folders in ‘/var/www/’ directory. I create example.com and test.com
- Command : **sudo mkdir -p /var/www/example.com/public_html**
- Command : **sudo mkdir -p /var/www/test.com/public_html**
- Command : **sudo chown -R \$USER:\$USER /var/www/example.com/public_html**
- Command : **sudo chown -R \$USER:\$USER /var/www/test.com/public_html**
- Command : **sudo chmod -R 755 /var/www**
- Create index.html files in both folder.
- Command : **nano /var/www/example.com/public_html/index.html**
- Command : **nano /var/www/test.com/public_html/index.html**
- Now go to ‘/etc/apache2/sites-available/’ folder
- Command : **sudo nano /etc/apache2/sites-available/example.com.conf**
- Command : **sudo nano /etc/apache2/sites-available/test.com.conf**
- Now to enable these two sites with the help of a2ensite help command
- Command : **sudo a2ensite example.com.conf**
- Command : **sudo a2ensite test.com.conf**
- Restart the apache service using command : **sudo service apache2 restart**.
- Add the hosts to ‘/etc/hosts’. (in my case example.com and test.com) and give them ip 127.0.0.1
- Open the websites using port 8080 (i.e., use the urls ‘example.com:8080’ and ‘test.com:8080’).

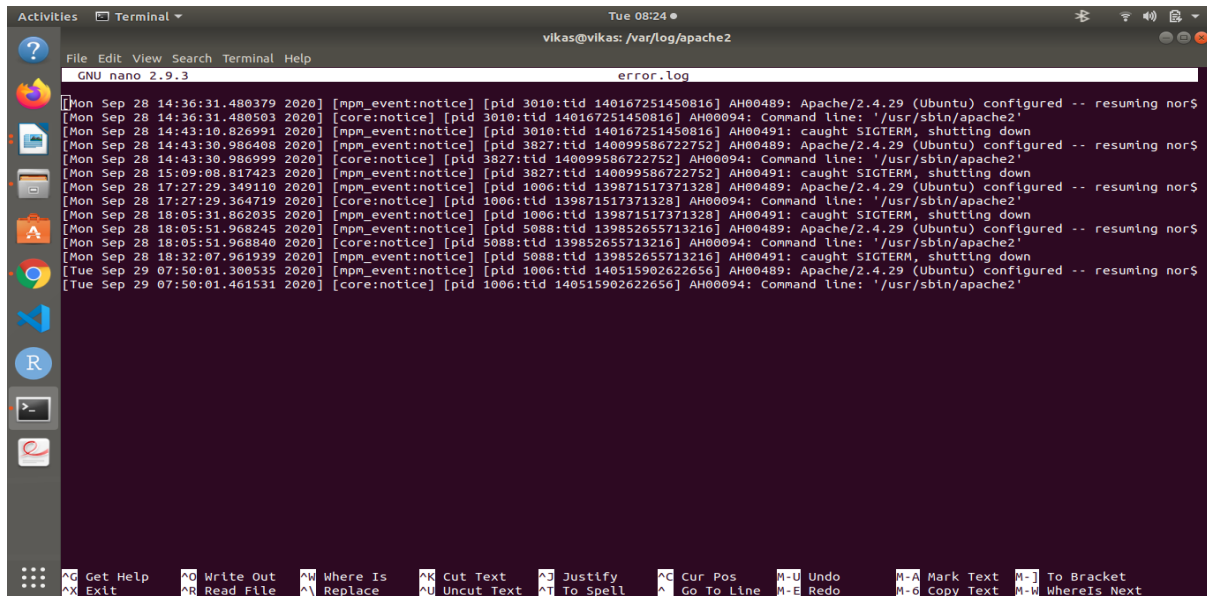




3. Inspect the log and verify the activity

The log files are stored in **/var/log/apache2**. To verify the activity of example.com, open file **example.com-access.log** and for test.com, open file **test.com-access.log**. These log files have basic metadata of headers for visiting the site, i.e., timestamp, web browser, os, etc.

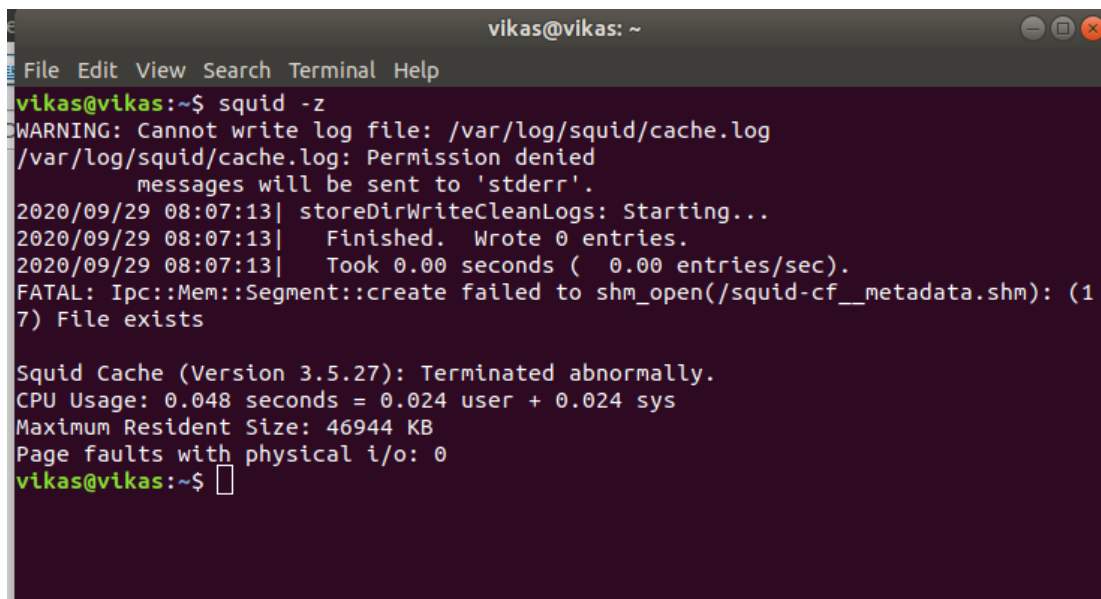




```
GNU nano 2.9.3 error.log
[Mon Sep 28 14:36:31.480379 2020] [mpm_event:notice] [pid 3010:ttd 140167251450816] AH00489: Apache/2.4.29 (Ubuntu) configured -- resuming nor$
[Mon Sep 28 14:36:31.480503 2020] [core:notice] [pid 3010:ttd 140167251450816] AH00094: Command line: '/usr/sbin/apache2'
[Mon Sep 28 14:43:10.826991 2020] [mpm_event:notice] [pid 3010:ttd 140167251450816] AH00491: caught SIGTERM, shutting down
[Mon Sep 28 14:43:30.906408 2020] [mpm_event:notice] [pid 3827:ttd 140099586722752] AH00489: Apache/2.4.29 (Ubuntu) configured -- resuming nor$
[Mon Sep 28 14:43:30.986999 2020] [core:notice] [pid 3827:ttd 140099586722752] AH00094: Command line: '/usr/sbin/apache2'
[Mon Sep 28 15:09:08.817423 2020] [mpm_event:notice] [pid 3827:ttd 140099586722752] AH00491: caught SIGTERM, shutting down
[Mon Sep 28 17:27:29.349110 2020] [mpm_event:notice] [pid 1006:ttd 139871517371328] AH00489: Apache/2.4.29 (Ubuntu) configured -- resuming nor$
[Mon Sep 28 17:27:29.364719 2020] [core:notice] [pid 1006:ttd 139871517371328] AH00094: Command line: '/usr/sbin/apache2'
[Mon Sep 28 18:05:31.862035 2020] [mpm_event:notice] [pid 1006:ttd 139871517371328] AH00491: caught SIGTERM, shutting down
[Mon Sep 28 18:05:51.968245 2020] [mpm_event:notice] [pid 5088:ttd 139852655713216] AH00489: Apache/2.4.29 (Ubuntu) configured -- resuming nor$
[Mon Sep 28 18:05:51.968840 2020] [core:notice] [pid 5088:ttd 139852655713216] AH00094: Command line: '/usr/sbin/apache2'
[Mon Sep 28 18:32:07.961939 2020] [mpm_event:notice] [pid 5088:ttd 139852655713216] AH00491: caught SIGTERM, shutting down
[Tue Sep 29 07:50:01.300535 2020] [mpm_event:notice] [pid 1006:ttd 140515902622656] AH00489: Apache/2.4.29 (Ubuntu) configured -- resuming nor$
[Tue Sep 29 07:50:01.461531 2020] [core:notice] [pid 1006:ttd 140515902622656] AH00094: Command line: '/usr/sbin/apache2'
```

4. Configure squid proxy on the same laptop

- First we need to install squid using '**sudo apt install squid**'.
- To configure squid we can go to file '**/etc/squid/squid.conf**'. Chnage some configurations and save the file.
- Command : **sudo grep -n http_access /etc/squid/squid.conf**
- To run squid use '**squid -z**'.



```
vikas@vikas: ~
File Edit View Search Terminal Help
vikas@vikas:~$ squid -z
WARNING: Cannot write log file: /var/log/squid/cache.log
/var/log/squid/cache.log: Permission denied
        messages will be sent to 'stderr'.
2020/09/29 08:07:13| storeDirWriteCleanLogs: Starting...
2020/09/29 08:07:13|   Finished.   Wrote 0 entries.
2020/09/29 08:07:13|   Took 0.00 seconds ( 0.00 entries/sec).
FATAL: Ipc::Mem::Segment::create failed to shm_open(/squid-cf__metadata.shm): (17) File exists

Squid Cache (Version 3.5.27): Terminated abnormally.
CPU Usage: 0.048 seconds = 0.024 user + 0.024 sys
Maximum Resident Size: 46944 KB
Page faults with physical i/o: 0
vikas@vikas:~$
```