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Day – 2

Task 1 - Apache Configurations

- How to point /fetch prefix to a specific directory.

➢ Create two directories under /var/www/html.
  cd /var/www/html/
  mkdir site1 site2

```
nishit@nishit-VirtualBox:~$ cd /var/www/html/
nishit@nishit-VirtualBox:/var/www/html$ sudo mkdir site1 site2
```

➢ Now create index.html file under site1 directory.
  cd site1/
  sudo nano index.html
file content: **Hello WOrld site1**

```
nishit@nishit-VirtualBox:/var/www/html$ cd site1/
nishit@nishit-VirtualBox:/var/www/html/site1$ sudo nano index.html
```

```
  GNU nano 4.8                          index.html
Hello WOrld site1
```

➢ Now create index.html file under site2 directory.
  cd ../site2
  sudo nano index.html
file content: **Hello WOrld site2**

```
nishit@nishit-VirtualBox:/var/www/html/site1$ cd ../site2
nishit@nishit-VirtualBox:/var/www/html/site2$ sudo nano index.html
```

```
  GNU nano 4.8                          index.html
Hello WOrld site2
```

➢ Make the changes in configuration file to open two website in one virtual host.
  sudo nano /etc/apache2/sites-available/000-default.conf
file changes: **ServerAdmin webmaster@localhost**
        DocumentRoot /var/www/html/site1
        Alias /site2 "/var/www/html/site2"

  Here in document root set path as site1 so if we try to open localhost then we able to see site1 index.html page. And in another line use Alias it is used to open multiple website using same document root.

```
nishit@nishit-VirtualBox:/var/www/html/site2$ sudo nano /etc/apache2/sites-available/000-default.conf
nishit@nishit-VirtualBox:/var/www/html/site2$
```

```
        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/html/site1
        Alias /site2 "/var/www/html/site2"
```
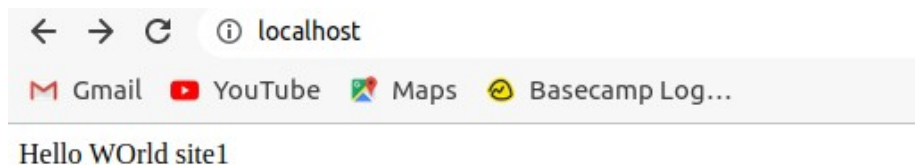
➢ Now, restart apache to made all the changes.
 **sudo systemctl restart apache2**

```
nishit@nishit-VirtualBox:/var/www/html/site2$ sudo systemctl restart apache2
nishit@nishit-VirtualBox:/var/www/html/site2$
```

➢ Check the result.

◆ In browser if we open localhost then as we expect site1 index.html page is open.

```
←  →  C    ⓘ localhost
M Gmail   ▶ YouTube   📍 Maps   ⊘ Basecamp Log...
```
Hello WOrld site1

◆ In browser if we open localhost/site2 then as we expect site2 index.html page is open.

```
←  →  C    ⓘ localhost/site2/
M Gmail   ▶ YouTube   📍 Maps   ⊘ Basecamp Log...
```
Hello WOrld site2
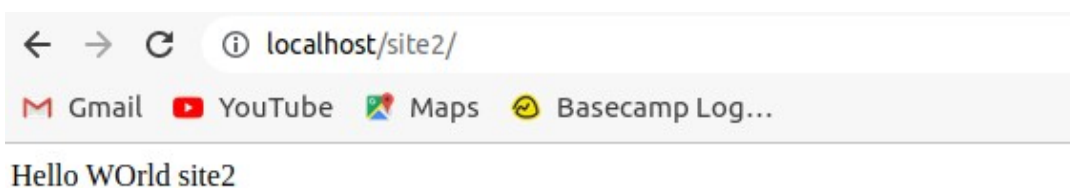
- How to hide the apache2 version from showing in the web browser

Before version hidding
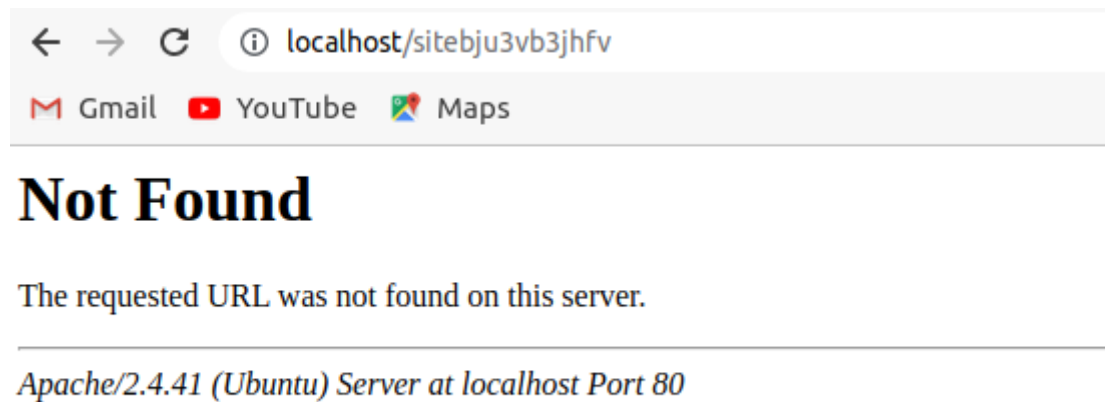
➢ After that in apache configuration file add below lines.

nano /*etc*/apache2/apache2.conf

 Add below two lines in configuration file

ServerSignature Off

ServerTokens Prod

Meaning of ServerSignature Off is Apache not to show the server version on error or other generated pages. And ServerTokens Prod instructs Apache to only include itself in the Server header that is returned with each page request.
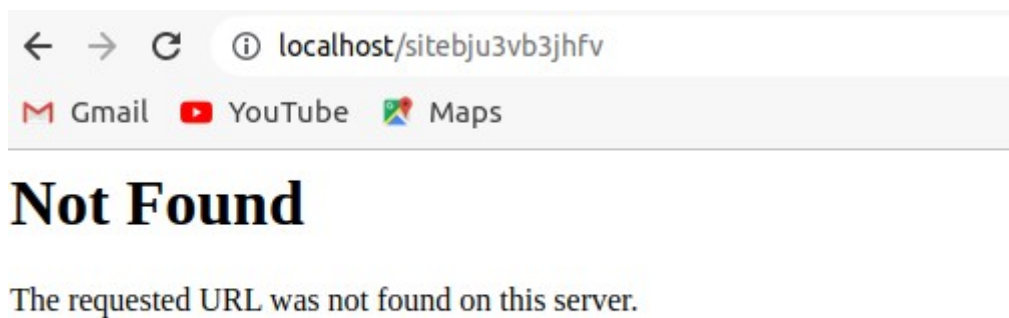

➢ Next, restart apache2 using below command, and test weather apache version is visible or not.

systemctl restart apche2.service

apache2 -v

➢ Check the result.

Task 2 - How to create scripts:

- MySQL Password reset for any user. (Both Static and Dynamic)

Using static:
➢ **Open mysql and create one use.**
   Sudo mysql -u root -p
   CREATE USER 'vatsal'@'localhost' IDENTIFIED BY '123';

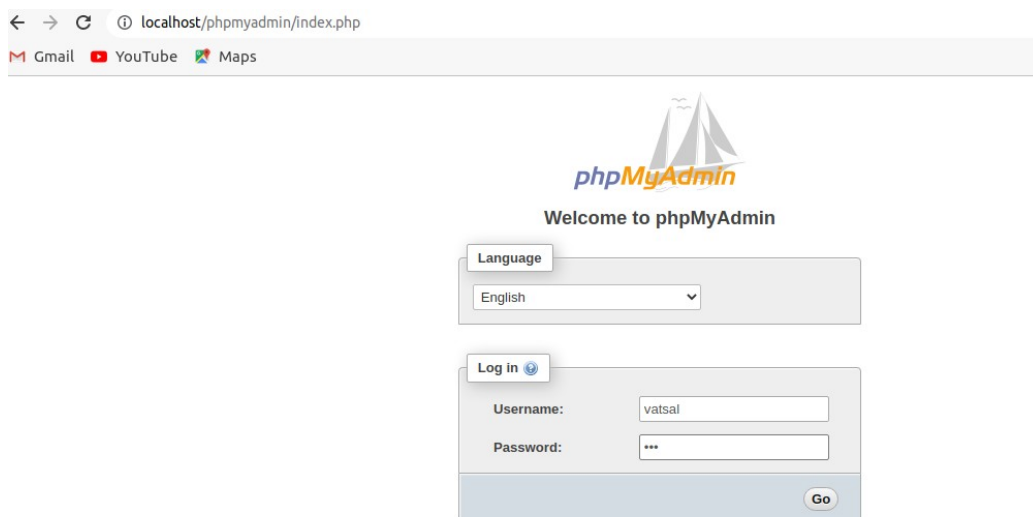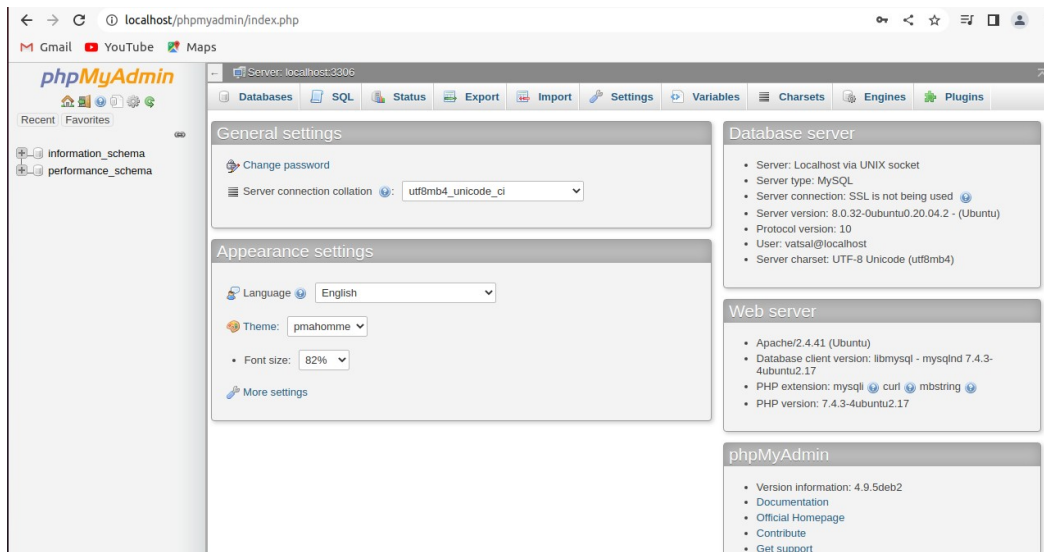➢ Open phpmyadmin using above created user.

➢ Reset password of user vatsal using below command.

ALTER USER 'vatsal'@'localhost' IDENTIFIED BY '456';


```
mysql> ALTER USER 'vatsal'@'localhost' IDENTIFIED BY '456';
Query OK, 0 rows affected (0.02 sec)

mysql>
```

➢ Now login user with updated password:

Using Dynamic

➢ Here I've created one shell script that can reset password of created user.
   sudo nano hello.sh

Script content: **#!/bin/bash**

mysql -u root -ppassword123 -e "ALTER USER 'vatsal'@'localhost' identified by '789';"

➢ Now, run script using below command.
   bash hello.sh

➢ Login with updated password.
   sudo mysql -u vatsal -p

- Linux Logs clear & shell history clear script.

Linux Log Clear:

Step 1: Move to root user. And check linux logs.

Sudo su

du -h */var*/log/

```
nishit@nishit-VirtualBox:~$ sudo su
[sudo] password for nishit:
root@nishit-VirtualBox:/home/nishit# cd ../..
root@nishit-VirtualBox:/# du -h /var/log/
17M     /var/log/journal/9165507fbfe34a369055c4bdc4cf8cc3
17M     /var/log/journal
4.0K    /var/log/unattended-upgrades
4.0K    /var/log/openvpn
4.0K    /var/log/dist-upgrade
8.0K    /var/log/dbconfig-common
4.0K    /var/log/private
4.0K    /var/log/speech-dispatcher
80K     /var/log/apache2
8.0K    /var/log/cups
312K    /var/log/apt
844K    /var/log/installer
12K     /var/log/mysql
4.0K    /var/log/hp/tmp
8.0K    /var/log/hp
4.0K    /var/log/gdm3
20M     /var/log/
```

Step 2: Select any directory and move into that. And Check which logs are available.

cd */var*/log/cups

du -h *

```
root@nishit-VirtualBox:/# cd /var/log/cups
root@nishit-VirtualBox:/var/log/cups# du -h *
4.0K    access_log
```

Step 4: Clear log and check the result.

cat */dev*/null > access_log

du -h

```
root@nishit-VirtualBox:/var/log/cups# cat /dev/null > access_log
root@nishit-VirtualBox:/var/log/cups# ddu -h

Command 'ddu' not found, did you mean:

  command 'dda' from snap dda (0.1)
  command 'ddd' from deb ddd (1:3.3.12-5.2build1)
  command 'du' from deb coreutils (8.30-3ubuntu2)
  command 'mdu' from deb mtools (4.0.24-1)
  command 'xdu' from deb xdu (3.0-20)
  command 'ddv' from deb ncbi-tools-x11 (6.1.20170106+dfsg1-8)
  command 'dd' from deb coreutils (8.30-3ubuntu2)

See 'snap info <snapname>' for additional versions.

root@nishit-VirtualBox:/var/log/cups# du -h
4.0K    .
root@nishit-VirtualBox:/var/log/cups#
```

shell history clear script:

Before clear:

```
root@nishit-VirtualBox:/# history
    1  cd ../..
    2  du -h /var/log/
    3  cd /var/log/hp
    4  du -h *
    5  cat /dev/n
    6  cd ../..
    7  cd ..
    8  cd /var/log/munin/
    9  cd /var/log/hp
   10  du -h
   11  cat /dev/n
   12  cat /dev/null
   13  cat /dev/null > ./tmp
   14  du -h *
   15  cat /dev/null > tmp
   16  cd ../..
   17  cd ..
   18  cd /var/log/cups
   19  du -h *
   20  cat /dev/null > access_log
   21  ddu -h
   22  du -h
   23  cd ../../..
   24  history
root@nishit-VirtualBox:/# 
```

After clear history:
  ➢ **Execute below command to clear history.**
     history -d 24
     history | grep 24 (It is check where 24 line is)
     history -c && history -w (Using this we remove history)

```
root@nishit-VirtualBox:/# history -d 24
root@nishit-VirtualBox:/# history | grep 24
   24  history -d 24
   25  history | grep 24
root@nishit-VirtualBox:/# history -c && history -w
root@nishit-VirtualBox:/# history
    1  history
root@nishit-VirtualBox:/# 
```

- MySQL Installation script with password 'Root@123456' for root user.

Step 1: Create one shell script file.

sudo nano hello.sh

file content:

#!/bin/bash

mysql -u root -ppassword123 -e "ALTER USER 'root'@'localhost' identified by 'Root@123456';"

Step 2: Execute .sh file using below command.

bash hello.sh

Step 3: Now login with updted password.

sudo mysql -u root -p

Task 3 - Create an add user script in Ubuntu 22.02 LTS.

Step1: Create shell script file.

nano nishit.sh

```
nishit@nishit-VirtualBox:~$ nano nishit.sh
nishit@nishit-VirtualBox:~$ bash nishit.sh
adduser: Only root may add a user or group to the system.
```

Step2: Add folowing content.

#!/bin/bash

sudo adduser Nishit

```
  GNU nano 4.8
#!/bin/bash
sudo adduser Nishit
```

Step3: Run script using bash <u>filename</u>. And check user is add or not.
bash nishit.sh
ls -la

```
nishit@nishit-VirtualBox:~$ bash nishit.sh
adduser: Please enter a username matching the regular expression configured
via the NAME_REGEX[_SYSTEM] configuration variable.  Use the `--force-badname'
option to relax this check or reconfigure NAME_REGEX.
nishit@nishit-VirtualBox:~$ ls -la
total 92
drwxr-xr-x 18 nishit nishit 4096 Feb  9 13:47 .
drwxr-xr-x  3 root   root   4096 Feb  9 10:20 ..
-rw-r--r--  1 nishit nishit  220 Feb  9 10:20 .bash_logout
-rw-r--r--  1 nishit nishit 3771 Feb  9 10:20 .bashrc
drwx------ 15 nishit nishit 4096 Feb  9 12:02 .cache
drwx------ 12 nishit nishit 4096 Feb  9 11:54 .config
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Desktop
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Documents
drwxr-xr-x  2 nishit nishit 4096 Feb  9 12:59 Downloads
drwx------  3 nishit nishit 4096 Feb  9 11:24 .gnupg
drwxr-xr-x  3 nishit nishit 4096 Feb  9 10:51 .local
drwx------  4 nishit nishit 4096 Feb  9 10:53 .mozilla
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Music
-rw-rw-r--  1 nishit nishit   33 Feb  9 13:45 nishit.sh
-rw-rw-r--  1 nishit nishit 1024 Feb  9 13:47 .nishit.sh.swp
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Pictures
drwx------  3 nishit nishit 4096 Feb  9 11:24 .pki
-rw-r--r--  1 nishit nishit  807 Feb  9 10:20 .profile
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Public
drwx------  3 nishit nishit 4096 Feb  9 10:55 snap
drwx------  2 nishit nishit 4096 Feb  9 11:24 .ssh
-rw-r--r--  1 nishit nishit    0 Feb  9 11:30 .sudo_as_admin_successful
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Templates
drwxr-xr-x  2 nishit nishit 4096 Feb  9 10:51 Videos
nishit@nishit-VirtualBox:~$
```

- **The user must have access to his/her own home directory only.**

  - Open *etc/*passwd file

  ```
  root@nishit-VirtualBox:/home/nishit# nano /etc/passwd
  ```

  - In this file we see user have access own home directory.

  ```
  nishit:x:1000:1000:nishit,,,:/home/nishit:/bin/bash
  ```

  Conclusion: When we create new user user can access his/her own directory.

- **The user cannot access another directory on the server.**

Command: **mkdir demo**
  stat -c %a demo
  chmod 655 demo
  cd demo

➢ Here for demo directory permission is 775 that means for owner permission are (read, write, execute), group owner also have all permission, for other have only read and execute permission so in next command changing user permission to 655 that means owner permission are (read, write), group owner have (read, execute), for other have only read and execute permission. Now, user can't access directory.

```
nishit@nishit-VirtualBox:~$ mkdir demo
nishit@nishit-VirtualBox:~$ stat -c %a demo
775
nishit@nishit-VirtualBox:~$ chmod 655 demo
nishit@nishit-VirtualBox:~$ cd demo
bash: cd: demo: Permission denied
nishit@nishit-VirtualBox:~$
```

- The user cannot move back to the server's root.
- You will have to jail the user to its own home directory and create an SFTP user to connect with a Username and password.
- Add SSH key to access the new user home directory.