Workshop Administrasi Jaringan WEB SERVER



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PRODI D3 TEKNIK INFORMATIKA

DEPARTEMEN TEKNIK INFORMATIKA DAN KOMPUTER

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```
root@shera:~# apt update
Hit:1 http://security.debian.org/debian-security bookworm-security InRelease
Hit:2 http://deb.debian.org/debian bookworm InRelease
Hit:3 http://deb.debian.org/debian bookworm-updates InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
2 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@shera:~# apt install apache2 php
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-data apache2-utils libapache2-mod-php8.2 php-common php8.2
  php8.2-cli php8.2-common php8.2-opcache php8.2-readline
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom php-pear
The following NEW packages will be installed:
  apache2 apache2-data apache2-utils libapache2-mod-php8.2 php php-common
  php8.2 php8.2-cli php8.2-common php8.2-opcache php8.2-readline
0 upgraded, 11 newly installed, 0 to remove and 2 not upgraded.
Need to get 5,052 kB of archives.
After this operation, 23.1 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://deb.debian.org/debian bookworm/main amd64 apache2-data all 2.4.57-2
 [160 kB]
Get:2 http://deb.debian.org/debian bookworm/main amd64 apache2-utils amd64 2.4.5
7-2 [202 kB]
Get:3 http://deb.debian.org/debian bookworm/main amd64 apache2 amd64 2.4.57-2 [2
root@shera:~# systemctl restart apache2
root@shera:~# systemctl status apache2

    apache2.service - The Apache HTTP Server

     Loaded: loaded (/lib/systemd/system/apache2.service; enabled; preset: enabled
     Active: active (running) since Mon 2024-03-25 11:09:41 WIB; 13s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 13620 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/S
   Main PID: 13624 (apache2)
      Tasks: 6 (limit: 2285)
     Memory: 12.2M
         CPU: 386ms
     CGroup: /system.slice/apache2.service
                -13624 /usr/sbin/apache2 -k start
               -13625 /usr/sbin/apache2 -k start
                -13626 /usr/sbin/apache2 -k start
               —13627 /usr/sbin/apache2 -k start
                –13628 /usr/sbin/apache2 -k start
               __13629 /usr/sbin/apache2 -k start
Mar 25 11:09:41 shera systemd[1]: Starting apache2.service - The Apache HTTP Se>
Mar 25 11:09:41 shera systemd[1]: Started apache2.service - The Apache HTTP Ser>
 \rightarrow C
                 O 🗅 localhost
                                                                           ☆
                                                                                    Apache2 Debian Default Page
            debian
                                           It works!
         This is the default welcome page used to test the correct operation of the Apache2 server after
         installation on Debian systems. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html)
         before continuing to operate your HTTP server.
         If you are a normal user of this web site and don't know what this page is about, this probably means
         that the site is currently unavailable due to maintenance. If the problem persists, please contact the
         site's administrator.
                                    Configuration Overview
         Debian's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Debian tools. The configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the manual if the
```

apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Debian systems is as follows:

```
root@shera:~# cd /var/www/html/
root@shera:/var/www/html# cp index.html index.html.orig
root@shera:/var/www/html# rm index.html
root@shera:/var/www/html# nano index.html
GNU nano 7.2
                                    index.html *
<head>
<title>Welcome to www.shera.edu
</title>
<body>
<h1> Sukses!
<br>
<hr>
Website www.shera.edu telah beroperasi </h1>
</html>
root@shera:/var/www/html# systemctl restart apache2
root@shera:/var/www/html# systemctl status apache2

    apache2.service - The Apache HTTP Server

     Loaded: loaded (/lib/systemd/system/apache2.service; enabled; preset: enab
     Active: active (running) since Mon 2024-03-25 11:24:19 WIB; 13s ago
      Docs: https://httpd.apache.org/docs/2.4/
    Process: 14101 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/S
   Main PID: 14106 (apache2)
     Tasks: 6 (limit: 2285)
     Memory: 14.1M
       CPU: 442ms
     CGroup: /system.slice/apache2.service
              -14106 /usr/sbin/apache2 -k start
             —14107 /usr/sbin/apache2 -k start
             —14108 /usr/sbin/apache2 -k start
—14109 /usr/sbin/apache2 -k start
             -14110 /usr/sbin/apache2 -k start
-14111 /usr/sbin/apache2 -k start
Mar 25 11:24:19 shera systemd[1]: Starting apache2.service - The Apache HTTP Se>
Mar 25 11:24:19 shera systemd[1]: Started apache2.service - The Apache HTTP Ser
 \leftarrow \rightarrow C
               ○ 🗅 localhost
```

Sukses!

Website www.shera.edu telah beroperasi

shera@shera:/var/www/html

```
# Generated by NetworkManager

search localdomain

#nameserver 192.168.234.2

nameserver 192.168.234.128

• dnsmasq.service - dnsmasq - A lightweight DHCP and caching DNS server

Loaded: loaded (/lib/systemd/system/dnsmasq.service; enabled; preset: enabled)

Active: active (running) slace Tue 2024-03-26 18:53:36 WIB; 2h 10min ago

Process: 3506 ExecstartPre=/etc/init.d/dnsmasq checkconfig (code=exited, status=0/SUCCESS)

Process: 3514 ExecStartPost=/etc/init.d/dnsmasq systemd-exec (code=exited, status=0/SUCCESS)

Process: 3522 ZescStartPost=/etc/init.d/dnsmasq systemd-start-resolvconf (code=exited, status=0/SUCMain PID: 3522 (dnsmasq)

Tasks: 1 (limit: 2285)

Memory: 3.2M

CPU: 252ms

CGroup: /system.slice/dnsmasq.service

__3522 /usr/sbin/dnsmasq.service

__3522 /usr/sbin/dnsmasq.service

__3522 /usr/sbin/dnsmasq.service

__3522 /usr/sbin/dnsmasq.service

Mar 26 18:53:36 shera dnsmasq[3522]: started, version 2.89 cachesize 1800

Mar 26 18:53:36 shera dnsmasq[3522]: compile time options: IPv6 GNU-getopt DBus no-UBus i18n IDN2 DHCP 
Mar 26 18:53:36 shera dnsmasq[3522]: reading /etc/resolv.conf

Mar 26 18:53:36 shera dnsmasq[3522]: reading /etc/resolv.conf

Mar 26 18:53:36 shera dnsmasq[3522]: read /etc/hosts - 13 names

Mar 26 18:53:36 shera dnsmasq[3522]: read /etc/hosts - 13 names

Mar 26 18:53:36 shera dnsmasq[3522]: reading /etc/resolv.conf

Mar 26 18:53:36 shera dnsmasq[3522]: read /etc/hosts - 13 names

Mar 26 18:53:36 shera dnsmasq[3522]: reading /etc/resolv.conf

Mar 26 18:53:36 shera dnsmasq[3522]: using nameserver 192.168.234.2#53
```

```
root@shera:~# ping www.shera.edu
PING www.shera.edu (192.168.234.128) 56(84) bytes of data.
64 bytes from shera.edu (192.168.234.128): icmp_seq=1 ttl=64 time=2.99 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=2 ttl=64 time=0.057 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=3 ttl=64 time=0.086 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=4 ttl=64 time=0.056 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=5 ttl=64 time=0.061 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=6 ttl=64 time=0.050 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=7 ttl=64 time=0.051 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=8 ttl=64 time=0.051 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=9 ttl=64 time=0.053 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=10 ttl=64 time=0.077 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=11 ttl=64 time=0.051 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=12 ttl=64 time=0.067 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=13 ttl=64 time=0.053 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=14 ttl=64 time=0.063 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=15 ttl=64 time=0.128 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=16 ttl=64 time=0.052 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=17 ttl=64 time=0.086 ms
64 bytes from shera.edu (192.168.234.128): icmp_seq=18 ttl=64 time=0.062 ms
--- www.shera.edu ping statistics ---
18 packets transmitted, 18 received, 0% packet loss, time 17394ms
rtt min/avg/max/mdev = 0.050/0.227/2.992/0.670 ms
GNU nano 7.2
ServerName www.shera.edu
ServerAdmin webmaster@shera.edu
DocumentRoot /var/www/html
root@shera:~# systemctl restart apache2
root@shera:~# systemctl status apache2

    apache2.service - The Apache HTTP Server

    Loaded: loaded (/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Tue 2024-03-26 21:18:44 WIB; 10s ago
       Docs: https://httpd.apache.org/docs/2.4/
   Process: 4125 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 4130 (apache2)
     Tasks: 6 (limit: 2285)
    Memory: 12.1M
        CPU: 299ms
     CGroup: /system.slice/apache2.service
              <del>-</del>4130 /usr/sbin/apache2 -k start
              —4131 /usr/sbin/apache2 -k start
              —4132 /usr/sbin/apache2 -k start
              <del>-</del>4133 /usr/sbin/apache2 -k start
              −4134 /usr/sbin/apache2 -k start
             └─4135 /usr/sbin/apache2 -k start
Mar 26 21:18:44 shera systemd[1]: Starting apache2.service - The Apache HTTP Server...
Mar 26 21:18:44 shera systemd[1]: Started apache2.service - The Apache HTTP Server.
Toebian 12.x - VMware Workstation 17 Player (Non-commercial use only)
Firefox ESR
                                                Mar 26 21:20
 Activities
     Welcome to www.shera.edu ×
                    O & www.shera.edu
                                                                                     ☆
```

Sukses!

Website www.shera.edu telah beroperasi

```
root@shera:~# systemctl restart apache2
root@shera:~# systemctl status apache2

    apache2.service - The Apache HTTP Server

     Loaded: loaded (/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Tue 2024-03-26 21:23:38 WIB; 10s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 4193 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 4198 (apache2)
      Tasks: 6 (limit: 2285)
     Memory: 12.2M
        CPU: 185ms
     CGroup: /system.slice/apache2.service
                -4198 /usr/sbin/apache2 -k start
               —4199 /usr/sbin/apache2 -k start
                -4200 /usr/sbin/apache2 -k start
                -4201 /usr/sbin/apache2 -k start
                -4202 /usr/sbin/apache2 -k start
              4203 /usr/sbin/apache2 -k start
Mar 26 21:23:37 shera systemd[1]: Starting apache2.service - The Apache HTTP Server...
Mar 26 21:23:38 shera systemd[1]: Started apache2.service - The Apache HTTP Server.
root@shera:~# mkdir /etc/skel/public_html
root@shera:~#
root@shera:~# cd /home
root@shera:/home# adduser test1
Adding user `test1' ..
Adding new group `test1' (1001) ...
Adding new user `test1' (1001) with group `test1 (1001)' ...
Creating home directory `/home/test1' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for test1
Enter the new value, or press ENTER for the default
       Full Name []:
       Room Number []:
       Work Phone []:
       Home Phone []:
       Other [1:
Is the information correct? [Y/n] Y
Adding new user `test1' to supplemental / extra groups `users' ...
Adding user `test1' to group `users' ...
root@shera:/home# adduser test2
Adding user `test2' ...
Adding new group `test2' (1002) ...
Adding new user `test2' (1002) with group `test2 (1002)' ...
Creating home directory `/home/test2' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for test2
Enter the new value, or press ENTER for the default
         Full Name []:
         Room Number []:
         Work Phone []:
         Home Phone []:
         Other []:
Is the information correct? [Y/n] y
Adding new user `test2' to supplemental / extra groups `users' ...
Adding user `test2' to group `users' ...
root@shera:/home# adduser test3
Adding user `test3' ...
Adding new group `test3' (1003) ...
Adding new user `test3' (1003) with group `test3 (1003)' ...
Creating home directory `/home/test3' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for test3
Enter the new value, or press ENTER for the default
         Full Name []:
         Room Number []:
         Work Phone []:
         Home Phone []:
         Other []:
Is the information correct? [Y/n] y
Adding new user `test3' to supplemental / extra groups `users' ...
Adding user `test3' to group `users' ...
```

```
root@shera:/home# ls -lR /home/test1/
/home/test1/:
total 4
drwxr-xr-x 2 test1 test1 4096 Mar 26 21:26 public_html
/home/test1/public_html:
total 0
root@shera:/home# ls -lR /home/test2/
/home/test2/:
total 4
drwxr-xr-x 2 test2 test2 4096 Mar 26 21:29 public_html
/home/test2/public_html:
total 0
root@shera:/home# ls -lR /home/test3/
/home/test3/:
total 4
drwxr-xr-x 2 test3 test3 4096 Mar 26 21:30 public_html
/home/test3/public_html:
total 0
root@shera:/home/test1# find . -type d -exec chmod 755 {} \;
root@shera:/home/test1# find . -type f -exec chmod 644 {} \;
root@shera:/home/test1# chown -R root:www-data .
root@shera:/home/test1# ls
public_html
root@shera:/home/test1# ls -l
total 4
drwxr-xr-x 2 root www-data 4096 Mar 26 21:26 public_html
root@shera:/home/test2# find . -type d -exec chmod 755 {} \;
root@shera:/home/test2# find . -type f -exec chmod 644 {} \;
root@shera:/home/test2# chown -R root:www-data .
root@shera:/home/test2# ls -1
total 4
drwxr-xr-x 2 root www-data 4096 Mar 26 21:29 public_html
root@shera:/home# cd test3
root@shera:/home/test3# find . -type d -exec chmod 755 {} \;
root@shera:/home/test3# find . -type f -exec chmod 644 {} \;
root@shera:/home/test3# chown -R root:www-data .
root@shera:/home/test3# ls -1
total 4
drwxr-xr-x 2 root www-data 4096 Mar 26 21:30 public_html
Toebian 12.x - VMware Workstation 17 Player (Non-commercial use only)
Firefox ESR
 Activities
                                                Mar 26 21:40
     Index of /~test1
                           ×
                               +
 \leftarrow \rightarrow G
                    O & www.shera.edu/~test1/
Index of /~test1
        <u>Name</u>
                   Last modified Size Description
 Parent Directory
Apache/2.4.57 (Debian) Server at www.shera.edu Port 80
```

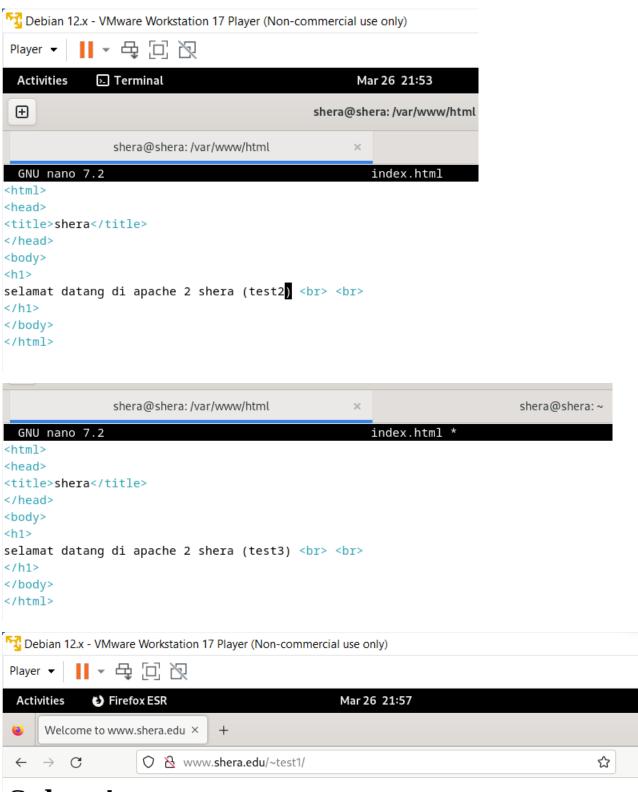


Index of /~test3

Last modified Size Description <u>Name</u> Parent Directory

Apache/2.4.57 (Debian) Server at www.shera.edu Port 80

```
GNU nano 7.2
                                                    index.html
<html>
<head>
<title>shera</title>
</head>
<body>
<h1>
selamat datang di apache 2 shera (test1) <br> <br>
</body>
</html>
```

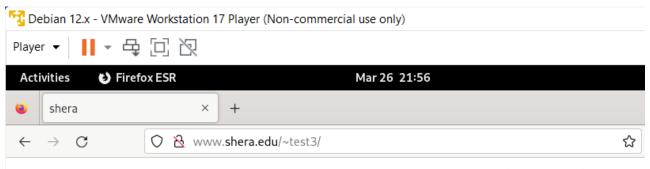


Sukses!

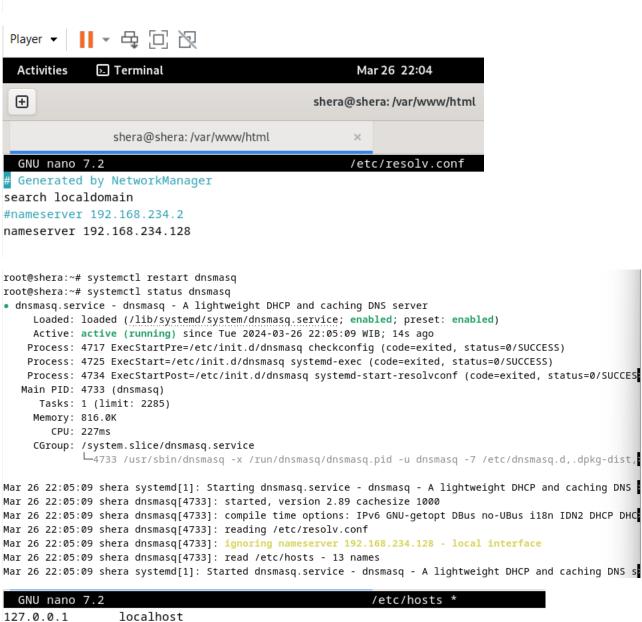
Website www.shera.edu telah beroperasi



selamat datang di apache 2 shera (test2)



selamat datang di apache 2 shera (test3)



```
GNU nano 7.2

127.0.0.1 localhost

127.0.1.1 shera.shera.net shera

#192.168.234.128 shera.edu

#192.168.234.128 www.shera.edu

192.168.234.128 mww.virthost1.com www.virthost2.com www.virthost3.com

192.168.234.128 blog.shera.edu

192.168.234.128 blog.shera.edu

192.168.234.129 ftp.shera.edu

# The following lines are desirable for IPv6 capable hosts

::1 localhost ip6-localhost ip6-loopback

ff02::1 ip6-allnodes

ff02::2 ip6-allrouters
```

```
root@shera:~# ping www.virthost1.com
PING www.virthost1.com (192.168.234.128) 56(84) bytes of data.
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=1 ttl=64 time=2.59 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=2 ttl=64 time=0.065 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=3 ttl=64 time=0.052 ms
o4 bytes from www.virthost1.com (192.168.234.128): icmp_seq=4 ttl=64 time=0.050 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=5 ttl=64 time=0.052 ms
^C
--- www.virthost1.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4055ms
rtt min/avg/max/mdev = 0.050/0.560/2.585/1.012 ms
root@shera:~# ping www.virthost2.com
PING www.virthost1.com (192.168.234.128) 56(84) bytes of data.
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=1 ttl=64 time=0.032 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=2 ttl=64 time=0.055 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=3 ttl=64 time=0.061 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=4 ttl=64 time=0.065 ms
--- www.virthost1.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3074ms
rtt min/avg/max/mdev = 0.032/0.053/0.065/0.012 ms
root@shera:~# ping www.virthost3.com
PING www.virthost1.com (192.168.234.128) 56(84) bytes of data.
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=1 ttl=64 time=0.539 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=2 ttl=64 time=0.051 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=3 ttl=64 time=0.064 ms
64 bytes from www.virthost1.com (192.168.234.128): icmp_seq=4 ttl=64 time=0.053 ms
^C
--- www.virthost1.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3054ms
rtt min/avg/max/mdev = 0.051/0.176/0.539/0.209 ms
root@shera:/var/www/html# mkdir www.virthost1.com www.virthost2.com www.virthost3.com
root@shera:/var/www/html# cp index.html www.virthost1.com/
root@shera:/var/www/html# cp index.html www.virthost2.com/
root@shera:/var/www/html# cp index.html www.virthost3.com/
GNU nano 7.2
                                                   index.html *
<html>
<head>
<title>shera</title>
</head>
<body>
<h1>
selamat datang di apache 2 shera (test1) <br> <br>
</h1>
</body>
</html>
                                                   index.html
GNU nano 7.2
<html>
<head>
<title>shera</title>
</head>
<body>
selamat datang di apache 2 shera (virthost2) <br> <br>
</h1>
</body>
</html>
```

```
GNU nano 7.2
                                                    index.html *
<html>
<head>
<title>shera</title>
<body>
<h1>
selamat datang di apache 2 shera (virthost3) <br> <br>
</body>
</html>
root@shera:~# cd /etc/apache2/sites-available
root@shera:/etc/apache2/sites-available# ls
000-deafult.conf 000-default.conf 000-default.conf.oriq default-ssl.conf
root@shera:/etc/apache2/sites-available# cp 000-default.conf www.virthost1.com.conf
root@shera:/etc/apache2/sites-available# cp 000-default.conf www.virthost2.com.conf
root@shera:/etc/apache2/sites-available# cp 000-default.conf www.virthost3.com.conf
GNU nano 7.2
                                            www.virthost1.com.conf *
<VirtualHost *:80>
       # The ServerName directive sets the request scheme, hostname and port that
        # the server uses to identify itself. This is used when creating
       # redirection URLs. In the context of virtual hosts, the ServerName
       # specifies what hostname must appear in the request's Host: header to
        # match this virtual host. For the default virtual host (this file) this
        # value is not decisive as it is used as a last resort host regardless.
        # However, you must set it for any further virtual host explicitly.
        ServerName www.virthost1.com
        ServerAdmin webmaster@virthost1.com
       DocumentRoot /var/www/html/www.virthost1.com
 GNU nano 7.2
                                             www.virthost2.com.conf *
<VirtualHost *:80>
        # The ServerName directive sets the request scheme, hostname and port that
        # the server uses to identify itself. This is used when creating
        # redirection URLs. In the context of virtual hosts, the ServerName
        # specifies what hostname must appear in the request's Host: header to
        # match this virtual host. For the default virtual host (this file) this
        # value is not decisive as it is used as a last resort host regardless.
        # However, you must set it for any further virtual host explicitly.
        ServerName www.virthost2.com
        ServerAdmin webmaster@virthost2.com
        DocumentRoot /var/www/html/www.virthost2.com
                                             www.virthost3.com.conf *
 GNU nano 7.2
<VirtualHost
        # The ServerName directive sets the request scheme, hostname and port that
        # the server uses to identify itself. This is used when creating
        # redirection URLs. In the context of virtual hosts, the ServerName
        # specifies what hostname must appear in the request's Host: header to
        # match this virtual host. For the default virtual host (this file) this
        # value is not decisive as it is used as a last resort host regardless.
        # However, you must set it for any further virtual host explicitly.
        ServerName www.virthost3.com
        ServerAdmin webmaster@virthost3.com
```

DocumentRoot /var/www/html/www.virthost3.com



selamat datang di apache 2 shera (virthost3)