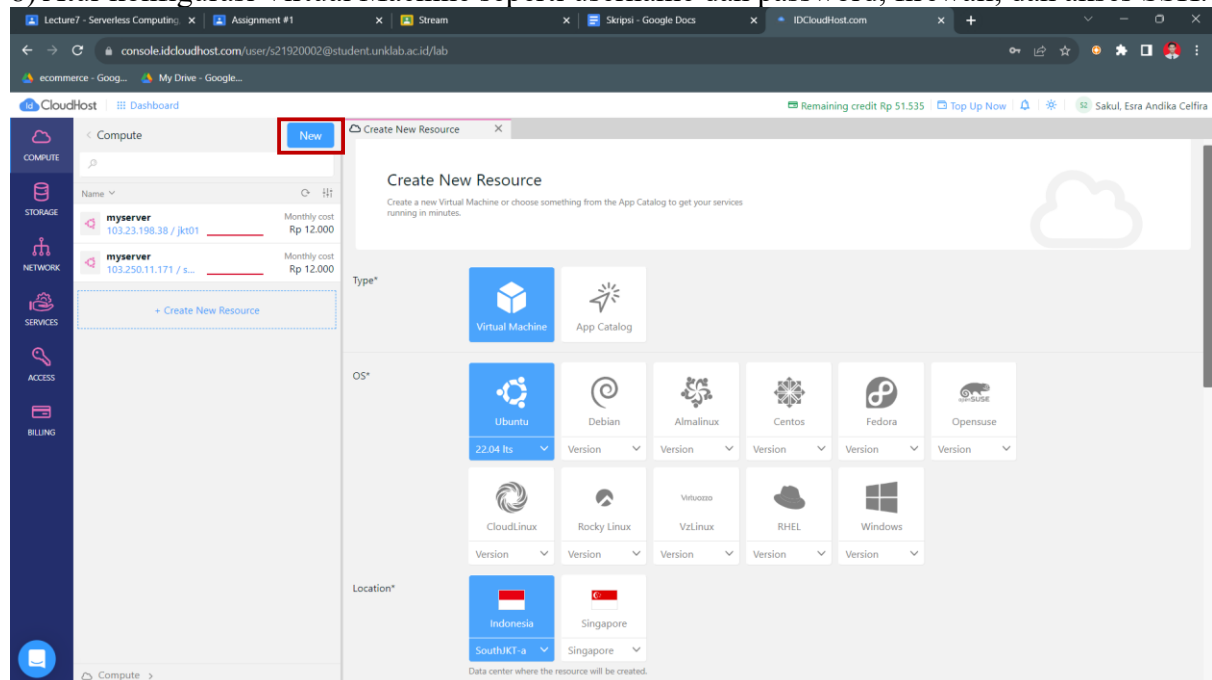


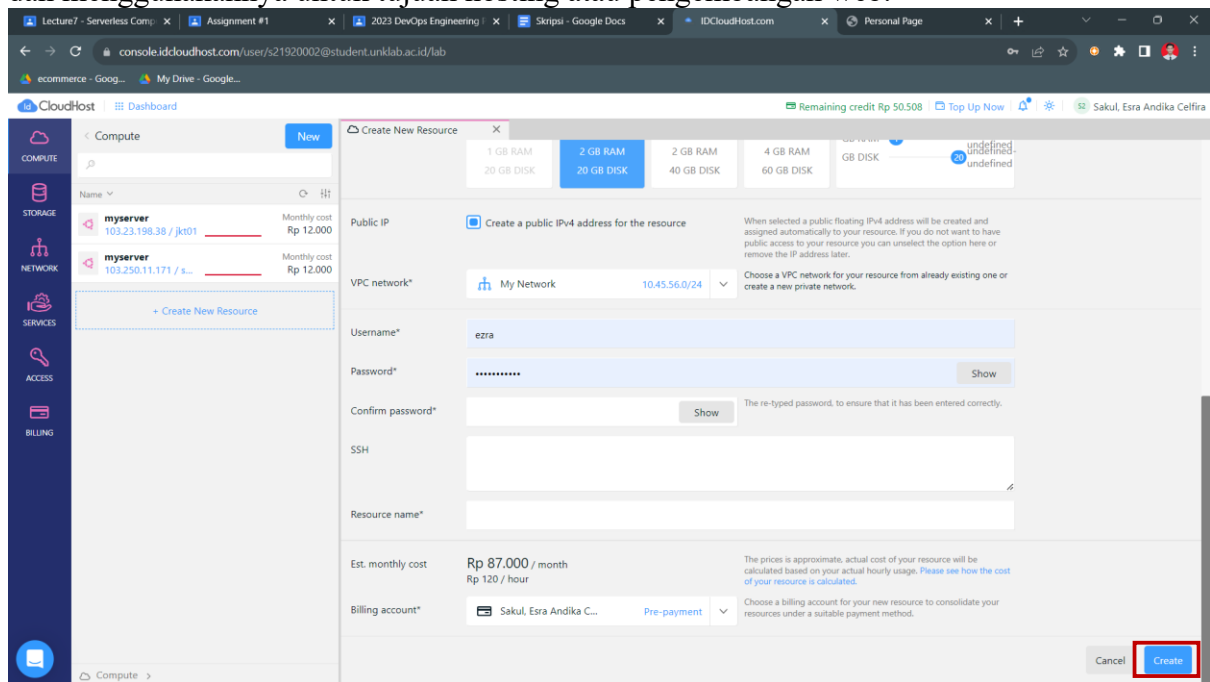
1 - Create a new Virtual Machine (Virtual Private Server (VPS))

Berikut adalah langkah-langkahnya:

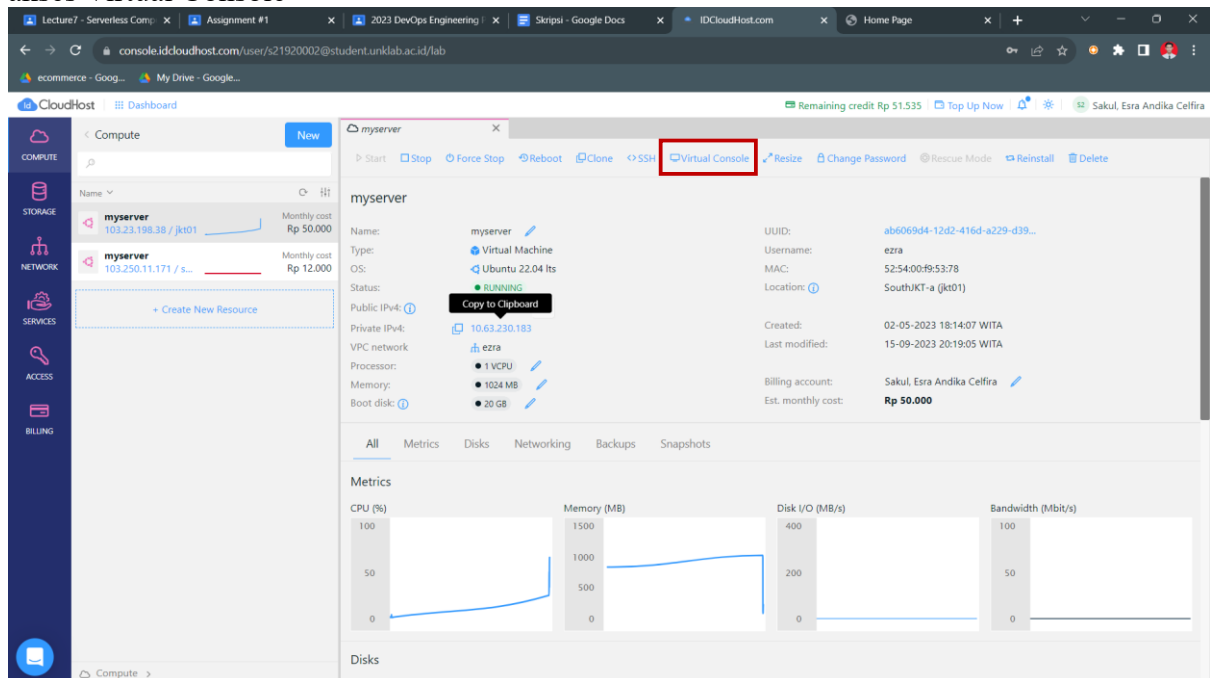
- 1) Login ke akun IDCloudHost.com Anda.
- 2) Pilih menu Compute dan klik Virtual Machine.
- 3) Klik tombol Create Virtual Machine.
- 4) Pilih jenis Virtual Machine yang ingin kita buat, seperti Ubuntu atau CentOS, dan versi yang diinginkan.
- 5) Atur ukuran dan kapasitas penyimpanan yang kita inginkan.
- 6) Pilih jaringan yang akan digunakan dan pilih opsi IP Address. Kita dapat memilih IP Public atau IP Private.
- 7) Buat nama host dan pilih lokasi server yang akan digunakan.
- 8) Atur konfigurasi Virtual Machine seperti username dan password, firewall, dan akses SSH.



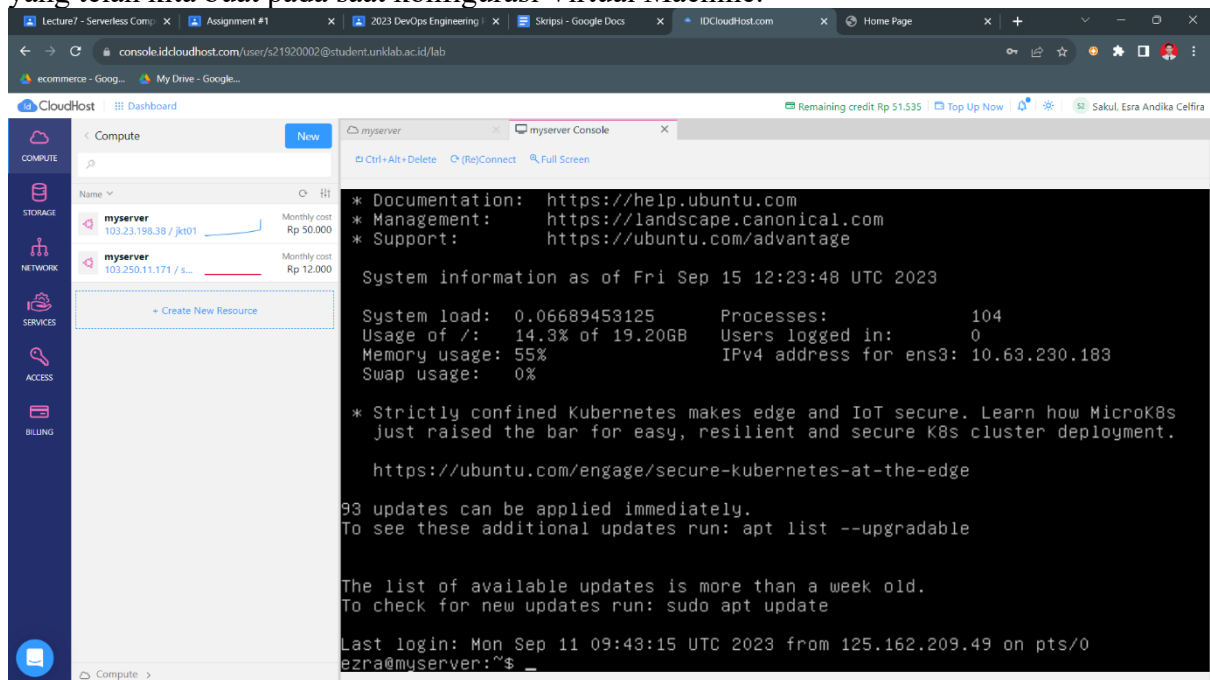
Setelah mengkonfigurasi Virtual Machine, klik tombol **Create** Virtual Machine. Selanjutnya, IDCloudHost.com akan memproses permintaan dan membuat Virtual Machine baru sesuai dengan konfigurasi yang ditentukan. Setelah selesai, kita dapat mengakses Virtual Machine dan menggunakannya untuk tujuan hosting atau pengembangan web.



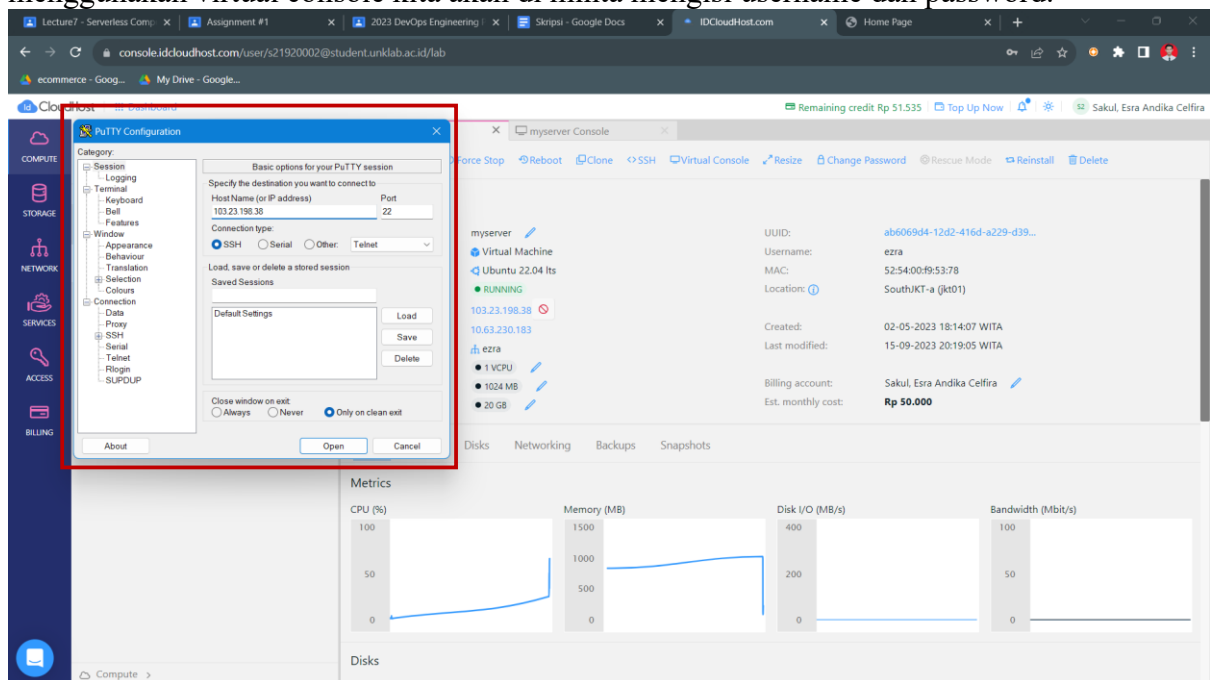
Berikut tampilan ketika kita telah selesai konfigurasi Virtual Machine, setelah itu kita coba akses Virtual Console



Setelah mengakses Virtual Console, kita akan diminta untuk mengisi username dan password yang telah kita buat pada saat konfigurasi Virtual Machine.



Selanjutnya kita coba akses cloud server milik kita menggunakan Putty, sama seperti menggunakan virtual console kita akan diminta mengisi username dan password.



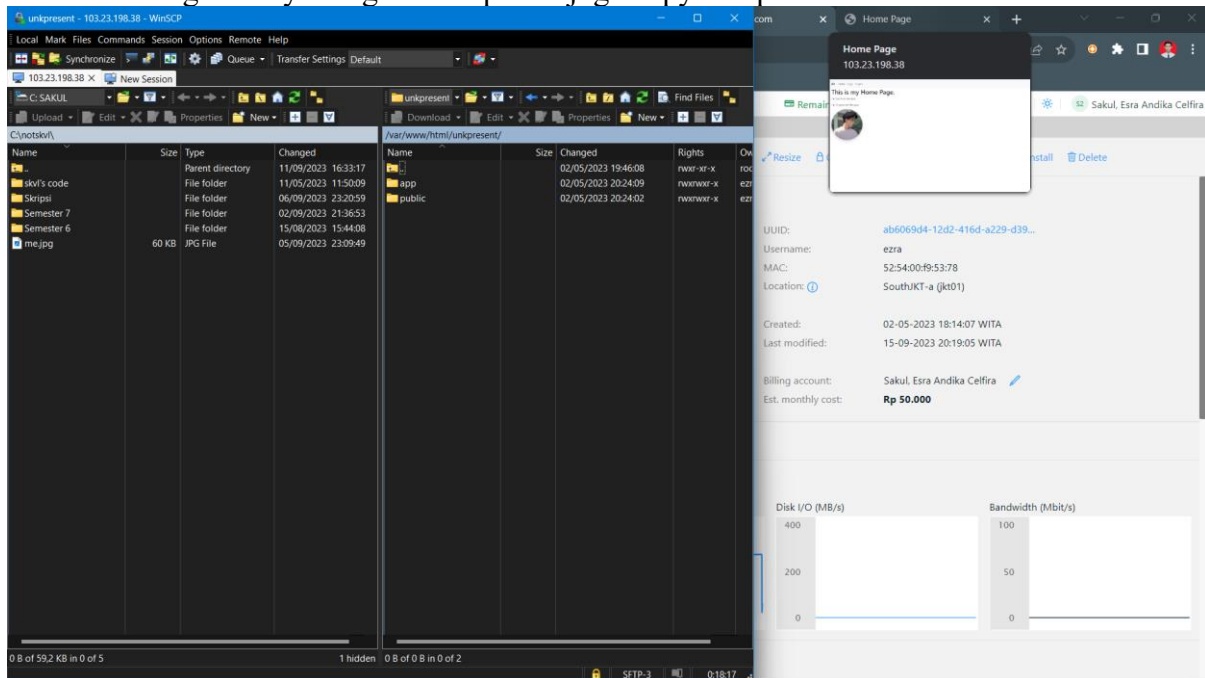
Berikut tampilan ketika kita berhasil mengakses cloud server kita menggunakan Putty.

The screenshot shows a web browser with multiple tabs. The active tab is 'console.idcloudhost.com/user/s21920002@student.unklab.ac.id/lab'. The browser address bar shows the URL. Below the browser, there is a 'CloudHost' dashboard. The dashboard has a sidebar with icons for COMPUTE, STORAGE, NETWORK, SERVICES, ACCESS, and BILLING. The main area displays system information for a server named 'ezra@myserver'. The system information includes: Management URL (https://landscape.canonical.com), Support URL (https://ubuntu.com/advantage), System load (0.0009765625), Processes (104), Usage of / (14.3% of 19.20GB), Users logged in (1), Memory usage (55%), IPv4 address for ens3 (10.63.230.183), Swap usage (0%), and a list of updates (93 updates can be applied immediately). Below the system information, there are four line graphs: CPU (%), Memory (MB), Disk I/O (MB/s), and Bandwidth (Mbit/s). The CPU graph shows a peak of 100%. The Memory graph shows a peak of 1500 MB. The Disk I/O graph shows a peak of 400 MB/s. The Bandwidth graph shows a peak of 100 Mbit/s. At the bottom, there is a 'Disks' section.

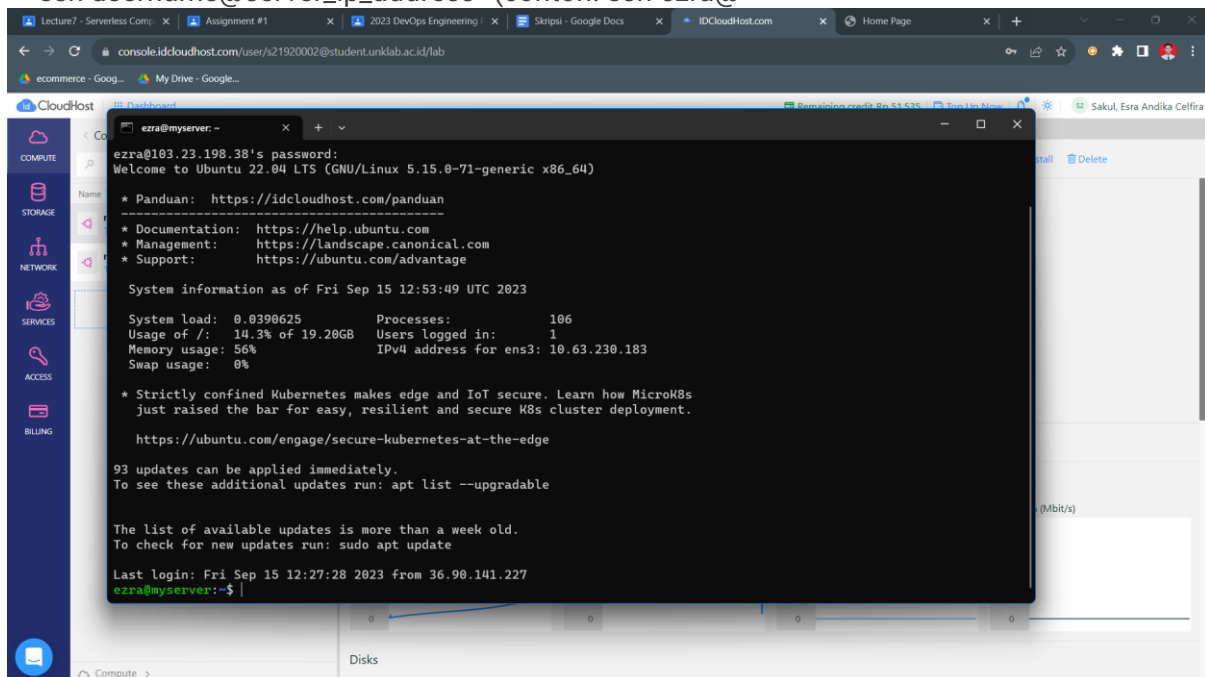
Selanjutnya mengakses cloud server melalui WinSCP

The screenshot shows the WinSCP software interface. The main window displays a file manager with a list of files and folders. The files and folders are: ., skripsi's code, Skripsi, Semester 7, Semester 6, and me.jpg. The file manager has a sidebar with icons for Local, Mark, Files, Commands, Session, Options, Remote, and Help. The main area shows a list of files and folders with columns for Name, Size, Type, and Changed. A 'Login' dialog box is open in the foreground, showing the 'New Site' tab. The dialog box has fields for File protocol (SFTP), Host name (103.23.198.34), Port number (22), User name, and Password. There are buttons for 'Save', 'Advanced...', 'Login', 'Close', and 'Help'. The 'Login' button is highlighted.

Berikut tampilan dari WinSCP, fungsi dari tools ini adalah untuk mentransfer file dari Client ke Server dengan hanya drag and drop atau juga copy dan paste.



Selanjutnya kita coba mengakses cloud server melalui CMD caranya kita tulis perintah berikut:
> "ssh username@server_ip_address" (contoh: ssh ezra@



[1] Change hak akses superuser atau root:

> sudo su

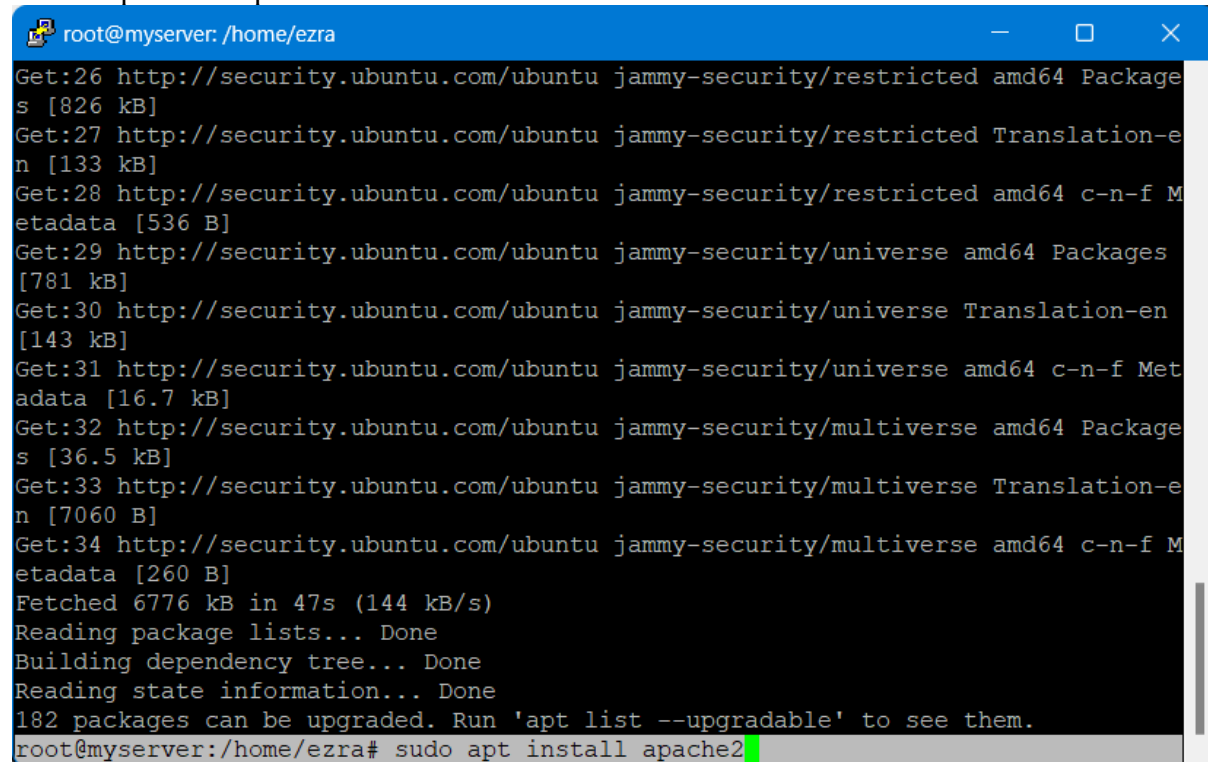
[2] Perbaharui paket yang tersedia ke versi terbaru ubuntu dengan perintah:

> sudo apt update

> sudo apt upgrade

[3] Install Apache di linux ubuntu 22.04, dengan menjalankan perintah berikut:

> sudo apt install apache2

A terminal window with a blue title bar showing 'root@myserver: /home/ezra'. The terminal output shows the results of an 'apt update' command, including download progress for various Ubuntu repositories (restricted, universe, multiverse) and their metadata. It reports that 6776 kB were fetched in 47 seconds at a rate of 144 kB/s. After reading package lists, building the dependency tree, and reading state information, it states that 182 packages can be upgraded. The final line shows the command 'root@myserver:/home/ezra# sudo apt install apache2' with a green cursor at the end.

```
root@myserver: /home/ezra
Get:26 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Package
s [826 kB]
Get:27 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-e
n [133 kB]
Get:28 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f M
etadata [536 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages
[781 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en
[143 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Met
adata [16.7 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Package
s [36.5 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-e
n [7060 B]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f M
etadata [260 B]
Fetched 6776 kB in 47s (144 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
182 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@myserver:/home/ezra# sudo apt install apache2
```

Jika sudah selesai menginstall apache, kita bisa cek versi apache dengan menggunakan perintah “apache2 -v”

```
root@myserver: /home/ezra
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for ufw (0.36.1-4build1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@myserver:/home/ezra# sudo apache
sudo: apache: command not found
root@myserver:/home/ezra# apache
Command 'apache' not found, did you mean:
  command 'apache2' from deb apache2-bin (2.4.52-1ubuntu4.6)
Try: apt install <deb name>
root@myserver:/home/ezra# apache2 -v
Server version: Apache/2.4.52 (Ubuntu)
Server built:   2023-05-03T20:02:51
root@myserver:/home/ezra#
```

Kita juga bisa cek apakah sudah terinstall atau belum dengan mengakses public ip address milik kita di browser, jika muncul tampilan seperti digambar makanya instalasi apache sukses.



2 - Create User “public_html” Directory

Jalan perintah di bawah ini untuk membuat User “public_html” Directory:

Change hak akses superuser atau root:

```
> sudo su
```

Check modul "userdir" sudah aktif pada server Apache2:

```
> sudo a2query -m userdir
```

Mengaktifkan modul "userdir" pada server Apache2:

```
> sudo a2enmod userdir
```

Me-restart atau memulai ulang service Apache2:

```
> sudo systemctl restart apache2
```

Create direktori public_html di direktori home pengguna "semmy":

```
> sudo mkdir /home/semmy/public_html
```

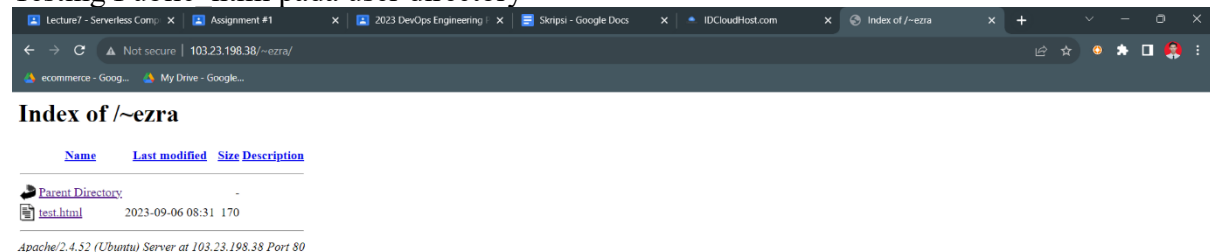
Mengubah hak akses dan kepemilikan direktori:

```
> sudo chown semmy:semmy /home/ezra/public_html
```

```
> sudo chmod -R 755 /home/ezra/public_html
```

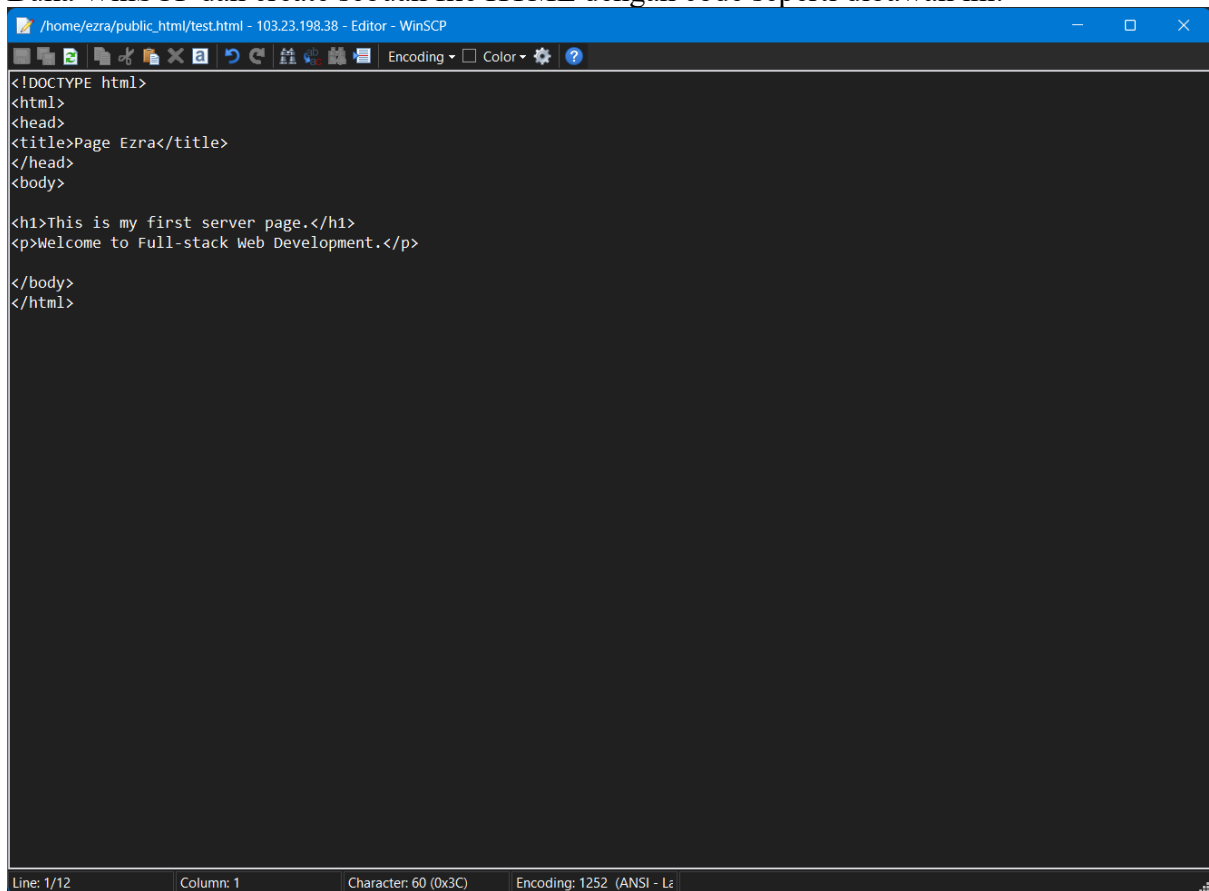
```
> sudo chmod -R 755 /home/ezra
```

Testing Public html pada user directory



3 - Create HTML File in “public_html”

Buka WinSCP dan create sebuah file HTML dengan code seperti dibawah ini.

A screenshot of the WinSCP application window. The title bar shows the file path /home/ezra/public_html/test.html and the IP address 103.23.198.38. The editor contains the following HTML code:

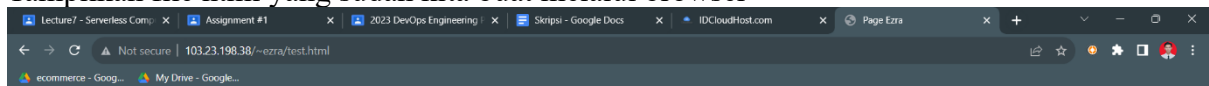
```
<!DOCTYPE html>
<html>
<head>
<title>Page Ezra</title>
</head>
<body>

<h1>This is my first server page.</h1>
<p>Welcome to Full-stack Web Development.</p>

</body>
</html>
```

The status bar at the bottom indicates Line: 1/12, Column: 1, Character: 60 (0x3C), and Encoding: 1252 (ANSI - L2).

Tampilkan file html yang sudah kita buat melalui browser



This is my first server page.

Welcome to Full-stack Web Development.

4 – Install Mysql

1. Untuk memulai instal MySQL bisa dimulai dengan perintah:

```
> sudo apt install mysql-server
```

2. Selanjutnya aktifkan service MySQL di Ubuntu 22.04 dengan perintah:

```
> sudo systemctl start mysql.service
```

3. Untuk menambahkan keamanan pada MySQL database, kita bisa menjalankan perintah `mysql_secure_installation` yang akan menambahkan beberapa pilihan seperti validasi keamanan password, tidak memberikan akses untuk remote login dan membuang sample user.

Disini ada beberapa tahap yang harus kita lakukan, dimulai dari masuk ke MySQL prompt dengan mengetikkan perintah berikut:

```
> sudo mysql
```

```
> mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH  
mysql_native_password BY 'ganti_password_kita';
```

Kemudian keluar dari MySQL prompt

```
mysql> exit
```

[4] Setelah metode autentikasi untuk user root kita ubah, kemudian kita jalankan perintah berikut:

```
❑ sudo mysql_secure_installation
```

NOTE: ADA BEBERAPA PERTANYAAN YANG AKAN DI JAWAB.

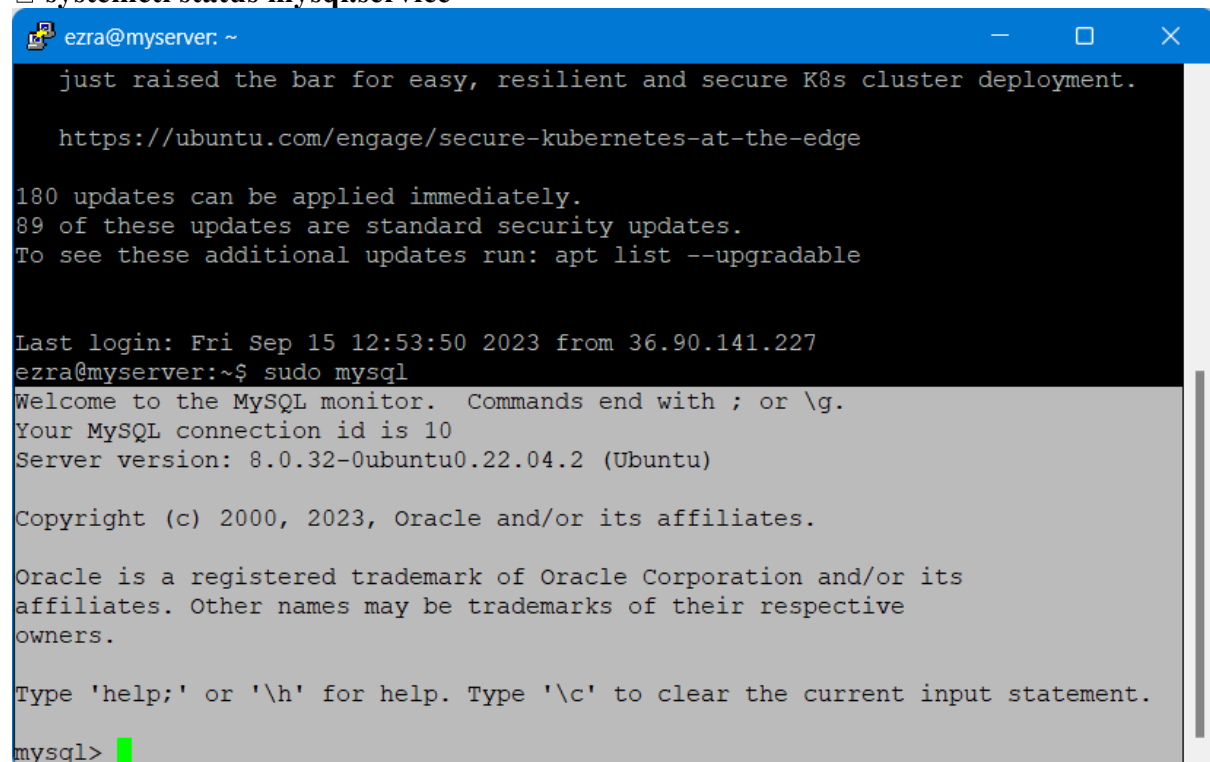
[5] Setelah proses `mysql_secure_installation` selesai, selanjutnya kita bisa mengembalikan metoda autentikasi user root ke semula yaitu `auth_socket` dengan beberapa perintah seperti berikut:

```
> mysql -u root -p
```

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH auth_socket;
```

[6] Selanjutnya, kita bisa melihat status MySQL service dengan perintah:

```
❑ systemctl status mysql.service
```



```
ezra@myserver: ~  
just raised the bar for easy, resilient and secure K8s cluster deployment.  
  
https://ubuntu.com/engage/secure-kubernetes-at-the-edge  
  
180 updates can be applied immediately.  
89 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Last login: Fri Sep 15 12:53:50 2023 from 36.90.141.227  
ezra@myserver:~$ sudo mysql  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 10  
Server version: 8.0.32-0ubuntu0.22.04.2 (Ubuntu)  
  
Copyright (c) 2000, 2023, Oracle and/or its affiliates.  
  
Oracle is a registered trademark of Oracle Corporation and/or its  
affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
mysql>
```

5 – Install PHP

[1] Menginstall PHP sekaligus modul pendukung lainnya:

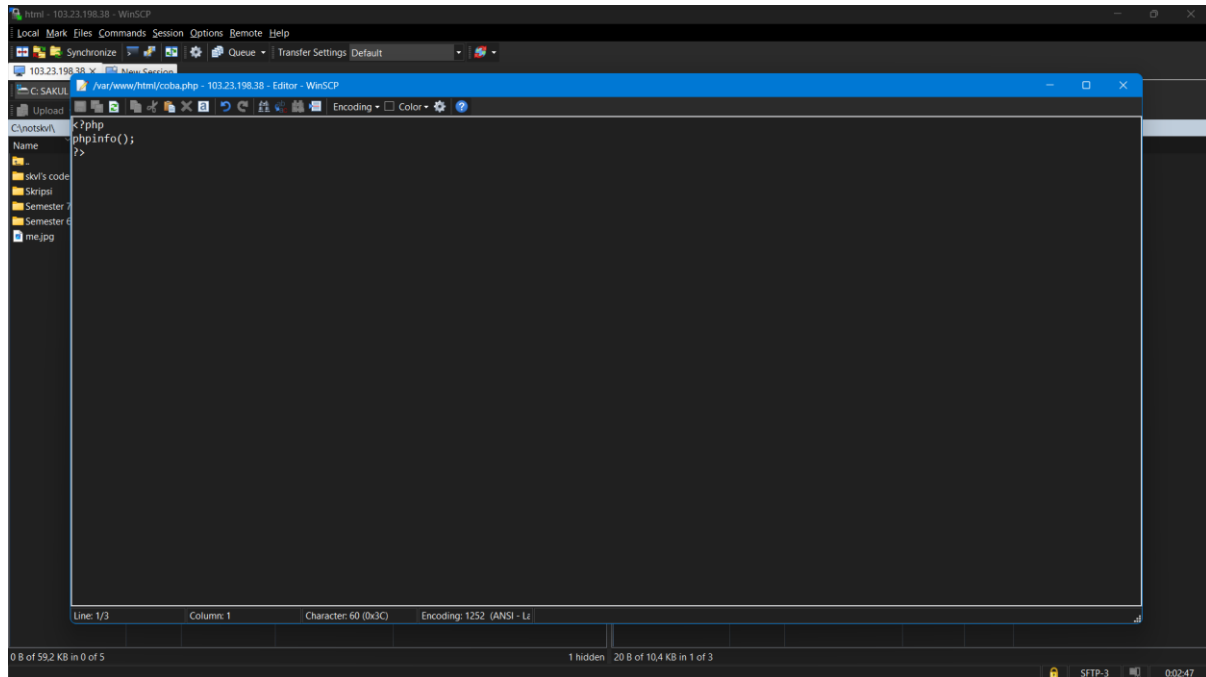
> sudo apt install php libapache2-mod-php php-mysql

[2] Buat “test.php” file guna memastikan PHP sudah terinstall di server:

> sudo nano /var/www/html/test.php

Dan ketikan:

```
<?php  
phpinfo();  
?>
```



[3] Akhiri dengan klik tombol Ctrl + X dan type Y, lalu Enter secara berurutan.

[4] Silakan kembali ke browser dan ketikan “https://public-ip-address/test.php” (contoh: h103.23.198.38).

Browser akan memunculkan tampilan PHP version yang berarti kita telah sukses menginstall php di Ubuntu

Lecture7 - Serverless Con...Assignment #12023 DevOps EngineeringSkripsi - Google DocsIDCloudHost.comPHP 8.1.2-1ubuntu2.11 - p...+Not secure | 103.23.198.38/unkpresent/test.phpecommerce - Goog...My Drive - Google...

PHP Version 8.1.2-1ubuntu2.11

php

System	Linux myservr 5.15.0-71-generic #78-Ubuntu SMP Tue Apr 18 09:00:29 UTC 2023 x86_64
Build Date	Feb 22 2023 22:56:18
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.1/apache2
Loaded Configuration File	/etc/php/8.1/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.1/apache2/conf.d
Additional .ini files parsed	/etc/php/8.1/apache2/conf.d/10-opcache.ini, /etc/php/8.1/apache2/conf.d/10-pdo.ini, /etc/php/8.1/apache2/conf.d/20-calendar.ini, /etc/php/8.1/apache2/conf.d/20-ctype.ini, /etc/php/8.1/apache2/conf.d/20-exif.ini, /etc/php/8.1/apache2/conf.d/20-ffi.ini, /etc/php/8.1/apache2/conf.d/20-fileinfo.ini, /etc/php/8.1/apache2/conf.d/20-ftp.ini, /etc/php/8.1/apache2/conf.d/20-gettext.ini, /etc/php/8.1/apache2/conf.d/20-iconv.ini, /etc/php/8.1/apache2/conf.d/20-imagick.ini, /etc/php/8.1/apache2/conf.d/20-ldap.ini, /etc/php/8.1/apache2/conf.d/20-odbc.ini, /etc/php/8.1/apache2/conf.d/20-openssl.ini, /etc/php/8.1/apache2/conf.d/20-pdo_mysql.ini, /etc/php/8.1/apache2/conf.d/20-phar.ini, /etc/php/8.1/apache2/conf.d/20-posix.ini, /etc/php/8.1/apache2/conf.d/20-readline.ini, /etc/php/8.1/apache2/conf.d/20-shmop.ini, /etc/php/8.1/apache2/conf.d/20-sockets.ini, /etc/php/8.1/apache2/conf.d/20-sysmsg.ini, /etc/php/8.1/apache2/conf.d/20-syssem.ini, /etc/php/8.1/apache2/conf.d/20-sysshm.ini, /etc/php/8.1/apache2/conf.d/20-tokenizer.ini
PHP API	20210902
PHP Extension	20210902
Zend Extension	420210902
Zend Extension Build	API420210902.NTS
PHP Extension Build	API20210902.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
IPv6 Support	enabled
DTrace Support	available, disabled
Registered PHP Streams	https, ftps, compress, zlib, php, file, glob, data, http, ftp, phar
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, tls, tlsv1.0, tlsv1.1, tlsv1.2, tlsv1.3
Registered Stream Filters	zlib.*, string.rot13, string.toupper, string.tolower, convert.*, consumed, dechunk, convert.iconv.*

6 - Mengaktifkan file .htaccess di Apache2

Untuk mengaktifkan file .htaccess di Apache2 pada Ubuntu Server, ikuti langkah-langkah berikut:

[1] Pastikan modul rewrite sudah diaktifkan. Anda dapat memeriksa apakah modul ini sudah diaktifkan dengan menjalankan

perintah:

```
> sudo a2enmod rewrite
```

[2] Setelah modul rewrite diaktifkan, buka file konfigurasi untuk situs web yang ingin Anda aktifkan .htaccess. Misalnya, jika Anda

ingin mengaktifkan .htaccess untuk situs web default, buka file konfigurasinya dengan menjalankan perintah:

```
> sudo nano /etc/apache2/sites-available/000-default.conf
```

[3] Di dalam blok konfigurasi untuk situs web, tambahkan konfigurasi berikut di bawah direktif

```
<VirtualHost>:
```

```
<Directory "/var/www/html">
```

```
AllowOverride All
```

```
</Directory>
```

[4] OR Jika Anda ingin mengaktifkan .htaccess di direktori /home/user/public_html, maka pada langkah ke-3, gantilah konfigurasi sebagai berikut:

```
<Directory "/home/semmy/public_html">
```

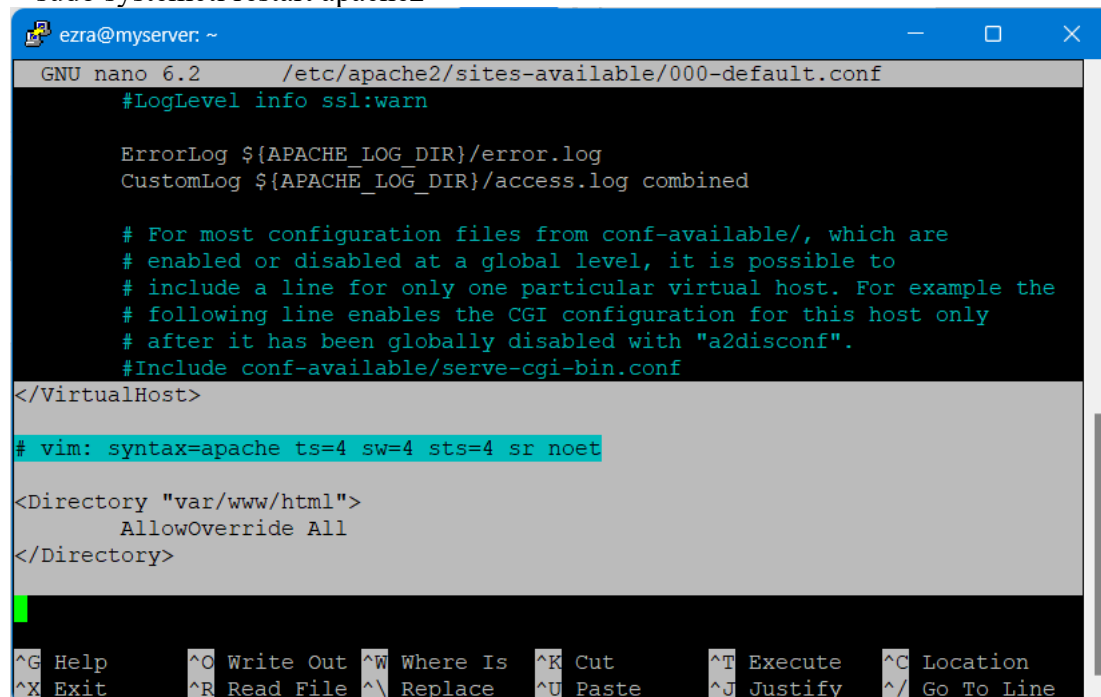
```
AllowOverride All
```

```
</Directory>
```

[5] Simpan dan tutup file konfigurasi dengan menekan Ctrl+X, lalu ketik Y untuk menyimpan perubahan dan Enter untuk menutup editor.

[6] Restart apache web server:

```
> sudo systemctl restart apache2
```



The screenshot shows a terminal window titled 'ezra@myserver: ~'. The nano editor is open, editing the file '/etc/apache2/sites-available/000-default.conf'. The visible content includes: '#LogLevel info ssl:warn', 'ErrorLog \${APACHE_LOG_DIR}/error.log', 'CustomLog \${APACHE_LOG_DIR}/access.log combined', a comment block about configuration files, and the start of a '<VirtualHost>' block. The line '# vim: syntax=apache ts=4 sw=4 sts=4 sr noet' is highlighted in blue. Below the virtual host block, the '<Directory "/var/www/html">' block is visible, containing 'AllowOverride All'. The bottom of the terminal shows the nano editor's command palette with options like Help, Write Out, Where Is, Cut, Execute, Location, Exit, Read File, Replace, Paste, Justify, and Go To Line.

7 – Upload Project AIMVC Framework



Project AIMVC Framework

Semmy Taju • Sep 11



unkpresent.zip
Compressed Archive

Kita akan upload dua folder yang sudah di buat didalam unkpresent.zip yaitu **app** folder dan **public** folder ke dalam cloud server.

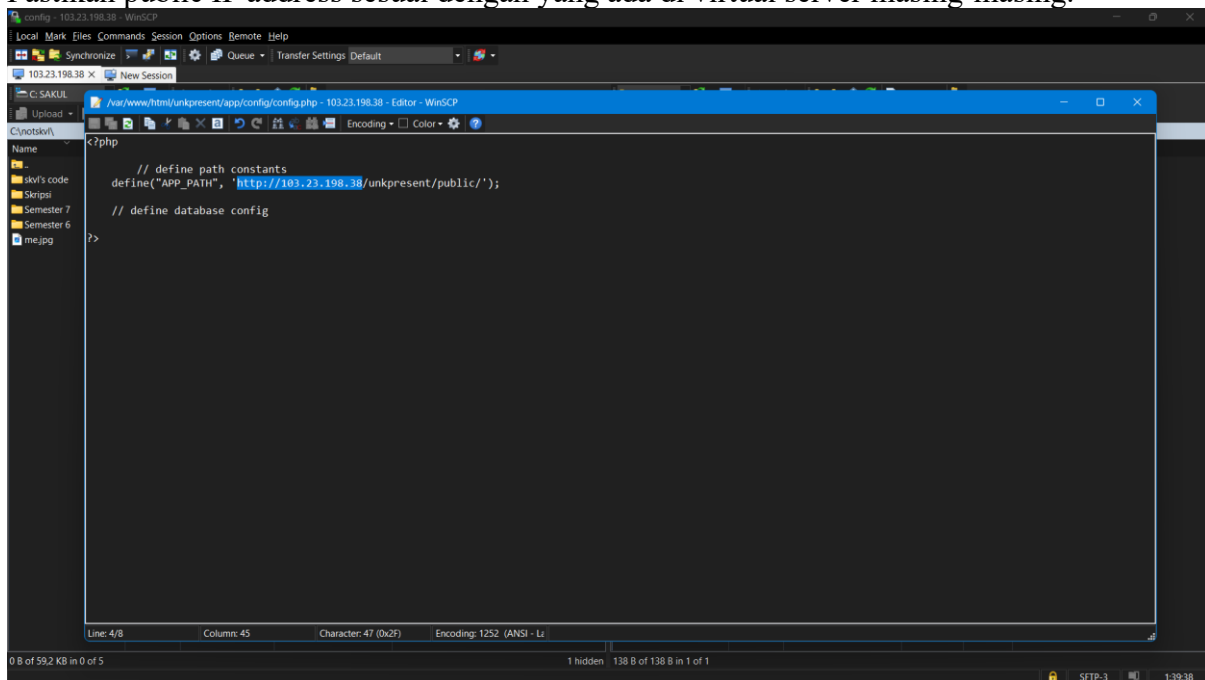
The screenshot shows the WinSCP interface with two panels. The left panel displays the local file system (C:\SAKUL) with a list of files and folders. The right panel displays the remote file system (jst:/www/html/unkpresent/) with a list of files and folders.

Name	Size	Type	Changed
..		Parent directory	11/09/2023 16:33:17
skripsi code		File folder	11/05/2023 11:50:09
Skripsi		File folder	06/09/2023 23:20:59
Semester 7		File folder	02/09/2023 21:36:53
Semester 6		File folder	15/08/2023 15:44:08
me.jpg	60 KB	JPG File	05/09/2023 23:09:49

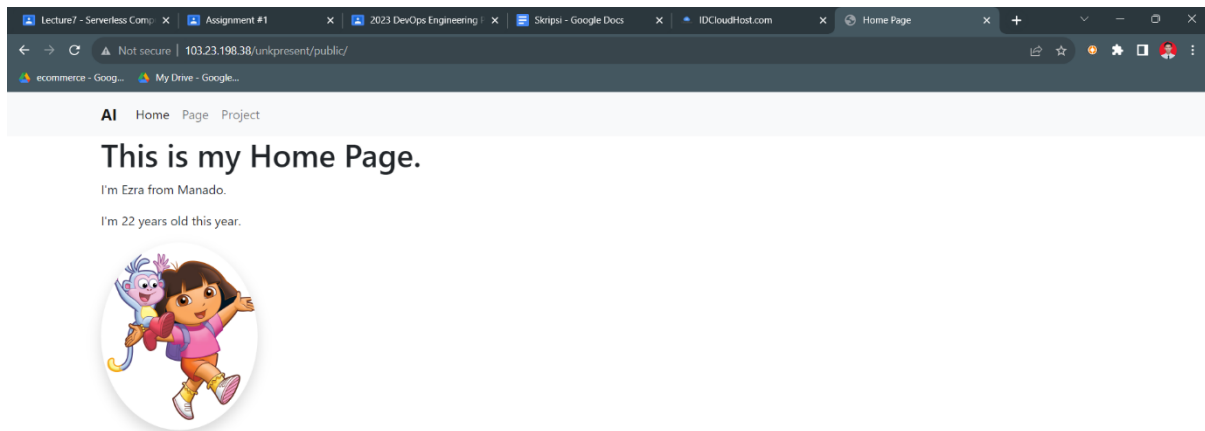
Name	Size	Changed	Rights	Owner
..		02/05/2023 19:46:08	rw-r--r--	root
app		02/05/2023 20:24:09	rw-rw-r--	eza
public		02/05/2023 20:24:02	rw-rw-r--	eza
test.php	1 KB	16/09/2023 07:42:00	rw-rw-r--	eza

0 B of 59.2 KB in 0 of 5 1 hidden 0 B of 19 B in 2 of 3 SFTP-3 1:19:52

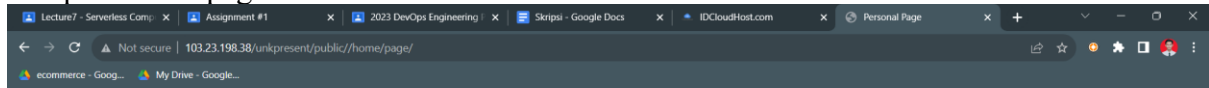
Berikutnya edit file “/var/www/html/unkpresent/app/config/config.php”.
Pastikan public IP address sesuai dengan yang ada di virtual server masing-masing.

A screenshot of the WinSCP application interface. The top menu bar includes 'Local', 'Mark', 'Files', 'Commands', 'Session', 'Options', 'Remote', and 'Help'. Below the menu is a toolbar with icons for 'Synchronize', 'Queue', and 'Transfer Settings'. The main window shows a file explorer on the left with a tree view containing folders like 'skv's code', 'Scripts', 'Semester 7', 'Semester 6', and 'me.jpg'. The central pane displays the contents of the file '/var/www/html/unkpresent/app/config/config.php'. The code is in PHP and includes comments for defining path constants and database configuration. The public IP address '103.23.198.38' is highlighted in blue. The status bar at the bottom shows 'Line: 4/8', 'Column: 45', 'Character: 47 (0x2F)', and 'Encoding: 1252 (ANSI - L)'. The bottom right corner of the application shows 'SFTP-3' and the time '1:39:38'.

Akses project AIMVC via browser <http://103.23.198.38/unkpresent/public/> (menggunakan public ip address masing-masing)
Jika muncul gambar dan beberapa fitur maka kita sukses mengupload Project AIMVC Framework.



Tampilan homepage



AI Home Page Project

This is my Personal Page in Home.

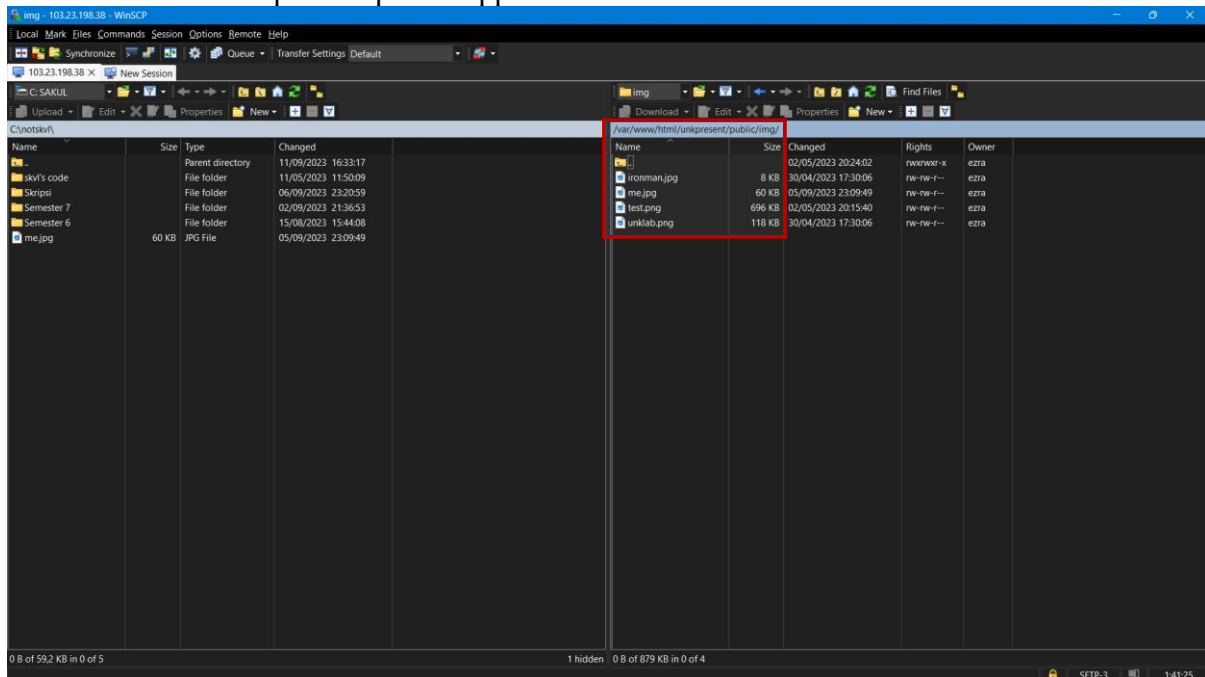
Current page: home

Next page: 3

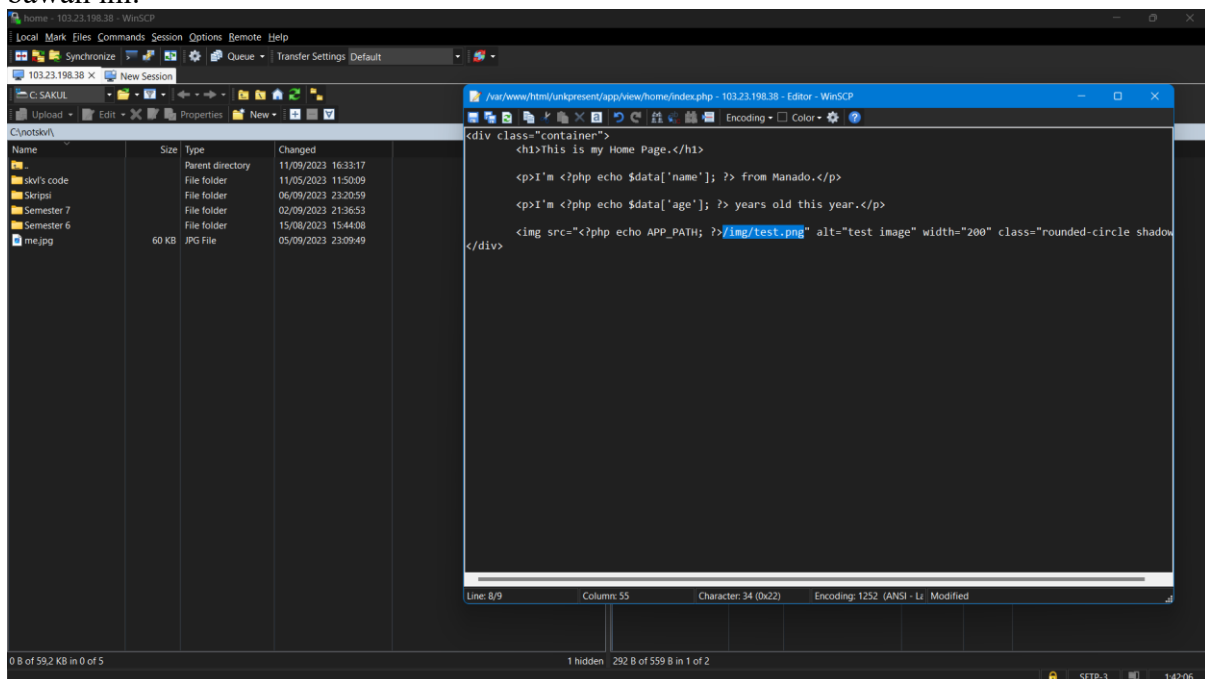
Previous page: 1

8 – Bonus Part (mengganti gambar project AIMVC)

Pertama-tama upload gambar yang ingin digunakan pada project AIMVC di dalam direktori “/var/www/html/unkpresent/public/app”



kemudian masuk kedalam direktori “/var/www/html/unkpresent/app/view/home” lalu buka file index.php dan edit path serta nama file gambar yang ingin diganti seperti gambar di bawah ini.



Setelah itu refresh browser atau langsung akses <http://103.23.198.38/unkpresent/public/> (menggunakan public ip address masing-masing).

