

# ENGSE202 LAB2

## Creating a New User

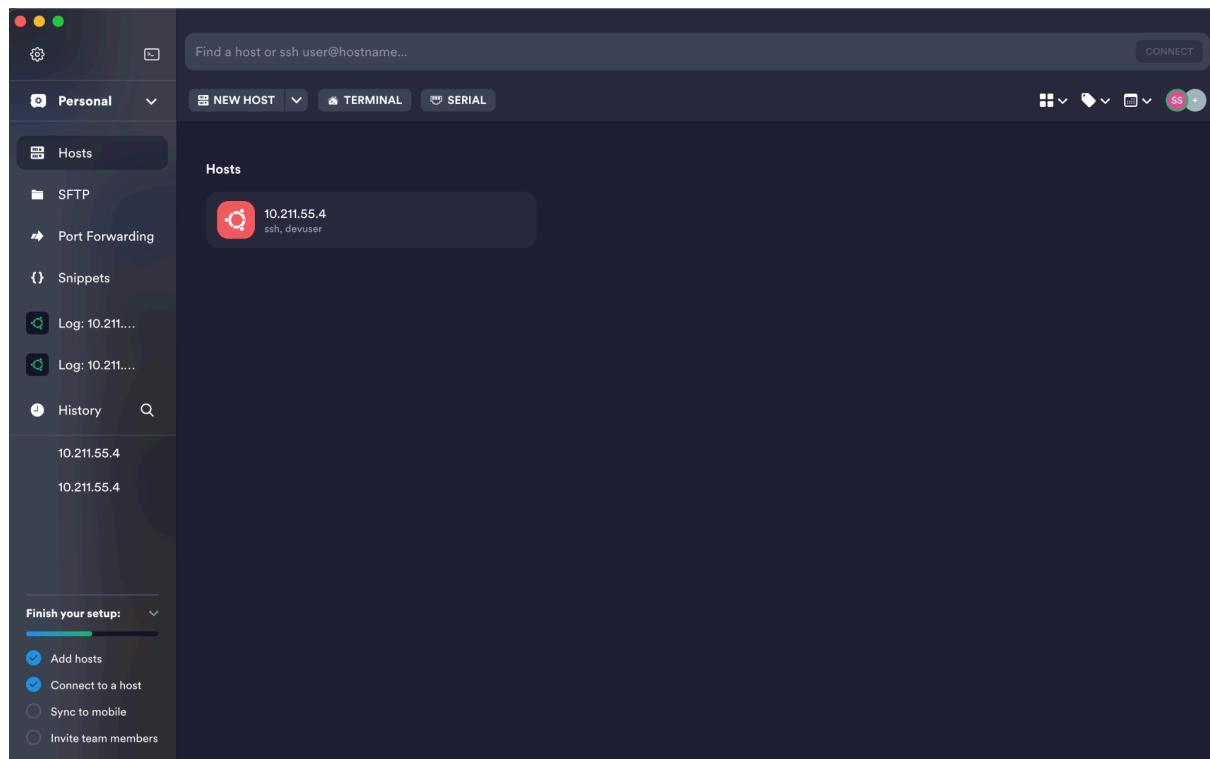
```
devuser@server:~$ sudo -i
[sudo] password for devuser:
root@server:~# adduser earth
Adding user `earth' ...
Adding new group `earth' (1001) ...
Adding new user `earth' (1001) with group `earth' ...
Creating home directory `/home/earth' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for earth
Enter the new value, or press ENTER for the default
  Full Name []: surapat
  Room Number []: 77
  Work Phone []: 0981865209
  Home Phone []: 054999999
  Other []:
Is the information correct? [Y/n] Y
root@server:~# ssh earth@10.211.55.4
```

## Setting Up a firewall

```
root@server:~# sfw status
Command 'sfw' not found, did you mean:
  command 'ufw' from snap ufw (0.36.2)
  command 'sf' from deb ruby-sprite-factory (1.7.1-4)
  command 'sow' from deb ruby-hoe (3.22.1+dfsg1-2)
  command 'ufw' from deb ufw (0.36.1-4ubuntu0.1)
  command 'fw' from deb funnelweb (3.2-5build1)
See 'snap info <snapname>' for additional versions.
root@server:~# ufw status
Status: active
```

To	Action	From
--	-----	-----
OpenSSH	ALLOW	Anywhere
OpenSSH (v6)	ALLOW	Anywhere (v6)

# Terminus



# Update

```
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-89-generic aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Wed Nov 29 03:27:16 AM UTC 2023

System load:          0.0
Usage of /:           11.2% of 61.66GB
Memory usage:         6%
Swap usage:           0%
Processes:            108
Users logged in:     1
IPv4 address for enp0s5: 10.211.55.4
IPv6 address for enp0s5: fdb2:2c26:f4e4:0:21c:42ff:fe1e:5a40

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

39 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Wed Nov 22 06:04:55 2023
devuser@server:~$ sudo apt update
[sudo] password for devuser:
Hit:1 http://ports.ubuntu.com/ubuntu-ports jammy InRelease
Get:2 http://ports.ubuntu.com/ubuntu-ports jammy-updates InRelease [119 kB]
Hit:3 http://ports.ubuntu.com/ubuntu-ports jammy-backports InRelease
Get:4 http://ports.ubuntu.com/ubuntu-ports jammy-security InRelease [110 kB]
Fetched 229 kB in 2s (102 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
40 packages can be upgraded. Run 'apt list --upgradable' to see them.
devuser@server:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following NEW packages will be installed:
  ubuntu-pro-client-l10n
The following packages have been kept back:
  firmware-sof-signed
The following packages will be upgraded:
```

# Apache Test



# Ubuntu

## Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. 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

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu 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 Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   '-- ports.conf
|-- mods-enabled
|   '-- *.load
|   '-- *.conf
|-- conf-enabled
|   '-- *.conf
|-- sites-enabled
|   '-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`, `a2dissite`, and `a2enconf`, `a2disconf`. See their respective man pages for detailed information.
- The binary is called `apache2` and is managed using `systemd`, so to start/stop the service use `systemctl start apache2` and `systemctl stop apache2`, and use `systemctl status apache2` and `journalctl -u apache2` to check status. `systemctl` and `apache2ctl` can also be used for service management if desired. **Calling `/usr/bin/apache2` directly will not work** with the default configuration.

### Document Roots

By default, Ubuntu does not allow access through the web browser to *any* file outside of those located in `/var/www`,

# Install mySQL

```
devuser@server:~$ sudo apt install mysql-server
[sudo] password for devuser:
E: Invalid operation install
devuser@server:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
libcgifast-perl libcgipm-perl libclone-perl libencode-locale-perl libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgioldbl
libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
liblwp-mediatypes-perl libmecab2 libprotobuf-lite23 libtimedate-perl liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils
mysql-client-8.0 mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
libdata-dump-perl libipc-sharedcache-perl libbusiness-isbn-perl libwww-perl mailx tinyca
The following NEW packages will be installed:
libcgifast-perl libcgipm-perl libclone-perl libencode-locale-perl libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgioldbl
libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
liblwp-mediatypes-perl libmecab2 libprotobuf-lite23 libtimedate-perl liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils
mysql-client-8.0 mysql-client-core-8.0 mysql-common mysql-server mysql-server-8.0 mysql-server-core-8.0
0 upgraded, 28 newly installed, 0 to remove and 1 not upgraded.
Need to get 28.9 MB of archives.
After this operation, 238 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

```
devuser@server:~$ sudo mysql
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'P@ssw0rd';
Query OK, 0 rows affected (0.01 sec)

mysql> exit
```

# Login mySQL

```
devuser@server:~$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> exit
Bye
```

# mySQL secure installation

```
devuser@server:~$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Enter password for user root:

VALIDATE PASSWORD COMPONENT can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?

Press y|Y for Yes, any other key for No: y

There are three levels of password validation policy:

LOW    Length >= 8
MEDIUM Length >= 8, numeric, mixed case, and special characters
STRONG Length >= 8, numeric, mixed case, special characters and dictionary      file

Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: 1
Using existing password for root.

Estimated strength of the password: 100
Change the password for root ? ((Press y|Y for Yes, any other key for No) :

... skipping.
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL without having to have
a user account created for them. This is intended only for
testing, and to make the installation go a bit smoother.
You should remove them before moving into a production
environment.

Remove anonymous users? (Press y|Y for Yes, any other key for No) : y
Success.

Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y
Success.

By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.

Remove test database and access to it? (Press y|Y for Yes, any other key for No) : y
  - Dropping test database...
Success.

  - Removing privileges on test database...
Success.

Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
```

## PHP install

```
devuser@server:~$ sudo apt install php libapache2-mod-php php-mysql  
[sudo] password for devuser:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done
```

```
devuser@server:~$ php -v  
PHP 8.1.2-1ubuntu2.14 (cli) (built: Aug 18 2023 11:41:11) (NTS)  
Copyright (c) The PHP Group  
Zend Engine v4.1.2, Copyright (c) Zend Technologies  
    with Zend OPcache v8.1.2-1ubuntu2.14, Copyright (c), by Zend Technologies
```

## Sudo mkdir Lab2

```
devuser@server:~$ cd /var/www  
devuser@server:/var/www$ sudo mkir lab2  
sudo: mkir: command not found  
devuser@server:/var/www$ sudo mkdir lab2  
devuser@server:/var/www$ ls -l  
total 8  
drwxr-xr-x 2 root root 4096 Nov 29 05:00 html  
drwxr-xr-x 2 root root 4096 Nov 29 07:10 lab2  
devuser@server:/var/www$ sudo chown -R $USER:$USER /var/www/lab2  
devuser@server:/var/www$ ls -l  
total 8  
drwxr-xr-x 2 root      root      4096 Nov 29 05:00 html  
drwxr-xr-x 2 devuser   devuser   4096 Nov 29 07:10 lab2  
devuser@server:/var/www$ sudo nano /etc/apache2/sites-available/lab2.conf  
devuser@server:/var/www$ sudo nano /etc/apache2/sites-available/lab2.conf  
devuser@server:/var/www$ sudo a2ensite lab2  
Enabling site lab2.  
To activate the new configuration, you need to run:  
    systemctl reload apache2  
devuser@server:/var/www$ systemctl reload apache2  
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====  
Authentication is required to reload 'apache2.service'.  
Authenticating as: Surapat Supap (devuser)  
Password:  
polkit-agent-helper-1: pam_authenticate failed: Authentication failure  
==== AUTHENTICATION FAILED ====  
Failed to reload apache2.service: Access denied  
See system logs and 'systemctl status apache2.service' for details.  
devuser@server:/var/www$ systemctl reload apache2  
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====  
Authentication is required to reload 'apache2.service'.  
Authenticating as: Surapat Supap (devuser)  
Password:  
==== AUTHENTICATION COMPLETE ===
```

# Lab2 website

The screenshot shows a terminal window with the title "GNU nano 6.2" at the top left and the path "/var/www/lab2/index.html" at the top right. The main area of the terminal displays the following HTML code:

```
<html>
<head>
    <title>LAB2 website</title>
</head>
<body>
    <h1>Hello World! This is a book!!</h1>

    <p>This is the landing page of <strong>LAB2</strong>.</p>
</body>
</html>
```

At the bottom of the terminal window, there is a menu bar with various keyboard shortcuts for navigating and editing the file. The menu items include:

- Help (Alt+H)
- Exit (Alt+X)
- Write Out (Alt+O)
- Read File (Alt+R)
- Where Is (Alt+W)
- Replace (Alt+R)
- Cut (Alt+K)
- Paste (Alt+U)
- Execute (Alt+T)
- Justify (Alt+J)
- Location (Alt+C)
- Go To Line (Alt+G)
- Undo (M-U)
- Redo (M-E)
- Set Mark (M-A)
- Copy (M-C)

A status bar at the bottom indicates "[ Read 10 lines ]".

## Setting VirtualHost

```
<VirtualHost *:80>
    ServerName Lab2
    ServerAlias www.Lab2.com
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/Lab2
    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

## Creating Databases

```
devuser@server:~$ sudo mysql -u root -p
[sudo] password for devuser:
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

```
devuser@server:~$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 29
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE lab2;
Query OK, 1 row affected (0.01 sec)

mysql> CREATE USER 'user'@'%' IDENTIFIED BY 'P@ssw0rd';
Query OK, 0 rows affected (0.01 sec)

mysql> GRANT ALL ON Lab2.* TO 'user'@'%';
Query OK, 0 rows affected (0.00 sec)

mysql> exit
Bye
```

```
devuser@server:~$ sudo mysql -u root -p
Enter password:
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
devuser@server:~$ mysql -u user -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 39
Server version: 8.0.35-Ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> SHOW DATABASES;
+-----+
| Database      |
+-----+
| Lab2          |
| information_schema |
| performance_schema |
+-----+
3 rows in set (0.00 sec)
```

```
mysql> INSERT INTO Lab2.todo_list (content) VALUES ("My 1 important item");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Lab2.todo_list (content) VALUES ("My 2 important item");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Lab2.todo_list (content) VALUES ("My 3 important item");
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Lab2.todo_list;
+-----+-----+
| item_id | content      |
+-----+-----+
|      1 | My 1 important item |
|      2 | My 2 important item |
|      3 | My 3 important item |
+-----+-----+
3 rows in set (0.00 sec)
```



## TODO

1. My 1 important item
2. My 2 important item
3. My 3 important item

# Install Git

```
devuser@ubutuserver:~$ sudo apt update
Hit:1 http://th.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://th.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://th.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://th.archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
devuser@ubutuserver:~$ sudo apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.10).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
devuser@ubutuserver:~$ git --version
git version 2.34.1
devuser@ubutuserver:~$
```

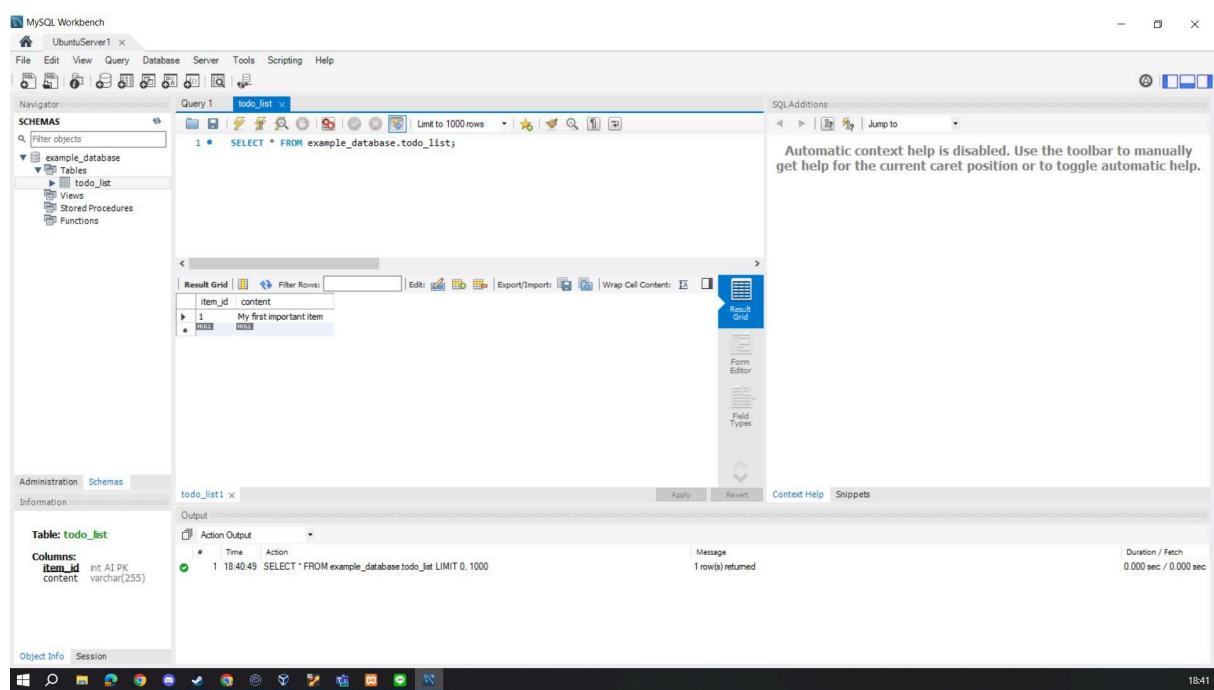
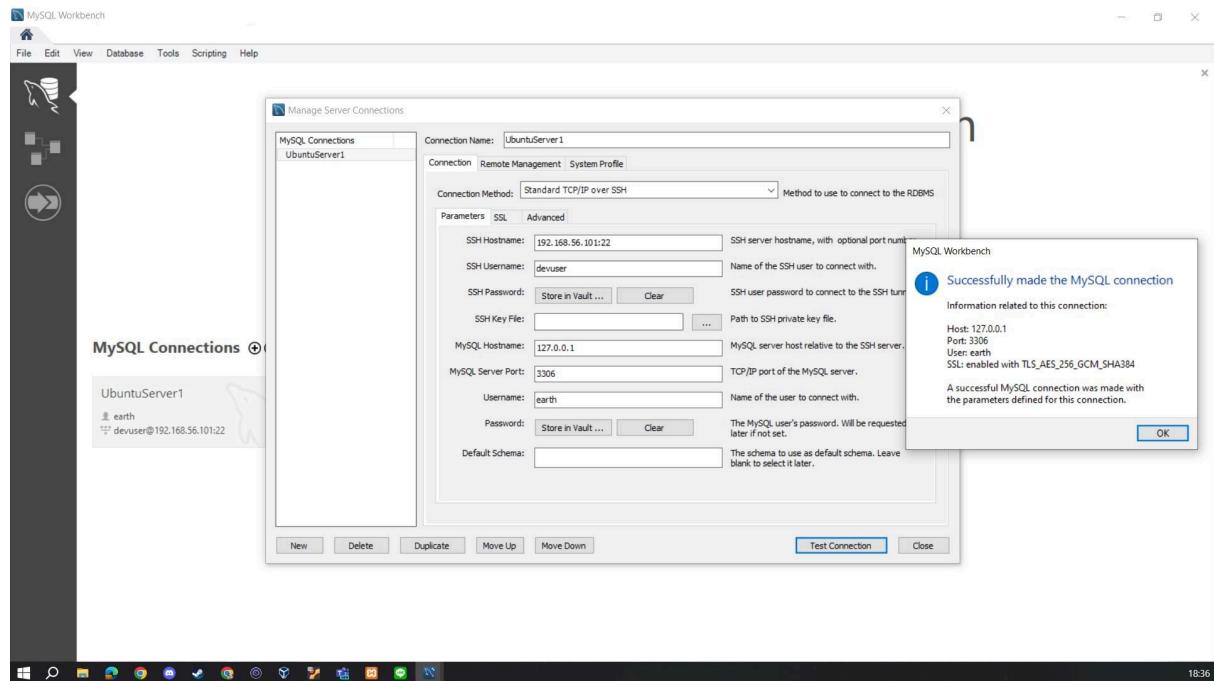
```
devuser@ubutuserver:~$ git --version
git version 2.34.1
devuser@ubutuserver:~$ sudo apt install make libssl-dev libghc-zlib-dev libcurl4-gnutls-dev
libexpat1-dev gettext unzip -y
[sudo] password for devuser:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gettext is already the newest version (0.21-4ubuntu4).
make is already the newest version (4.3-4.1build1).
libghc-zlib-dev is already the newest version (0.6.2.2-1build1).
libcurl4-gnutls-dev is already the newest version (7.81.0-1ubuntu1.14).
libexpat1-dev is already the newest version (2.4.7-1ubuntu0.2).
libssl-dev is already the newest version (3.0.2-0ubuntu1.12).
unzip is already the newest version (6.0-26ubuntu3.1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
devuser@ubutuserver:~$ mkdir tmp
cd /tmp
devuser@ubutuserver:/tmp$ https://mirrors.edge.kernel.org/pub/software/scm/git/
-bash: https://mirrors.edge.kernel.org/pub/software/scm/git/: No such file or directory
devuser@ubutuserver:/tmp$ https://mirrors.edge.kernel.org/pub/software/scm/git/
-bash: https://mirrors.edge.kernel.org/pub/software/scm/git/: No such file or directory
devuser@ubutuserver:/tmp$ curl -o git.tar.gz https://mirrors.edge.kernel.org/pub/software/sc
m/git/git-2.38.1.tar.gz
  % Total    % Received % Xferd  Average Speed   Time   Time     Time Current
                                         Dload  Upload Total Spent   Left Speed
100  369  100  369    0     0   224      0  0:00:01  0:00:01 ---:---  224
devuser@ubutuserver:/tmp$ curl -o git.tar.gz https://mirrors.edge.kernel.org/pub/software/sc
m/git/git-2.38.1.tar.gz
  % Total    % Received % Xferd  Average Speed   Time   Time     Time Current
                                         Dload  Upload Total Spent   Left Speed
100  9.9M  100  9.9M    0     0  54132      0  0:03:13  0:03:13 ---:--- 82199
devuser@ubutuserver:/tmp$ tar -zxf git.tar.gz
devuser@ubutuserver:/tmp$ cd git-*
```

```
rm -f "$execdir/$p" && \
if test -z ""; \
then \
    test -n "" && \
    ln -s "$destdir_from_execdir_SQ/bin/git" "$execdir/$p" || \
{ test -z "" && \
    ln "$execdir/git" "$execdir/$p" 2>/dev/null || \
    ln -s "git" "$execdir/$p" 2>/dev/null || \
    cp "$execdir/git" "$execdir/$p" || exit; }; \
fi \
done && \
remote(curl_aliases="git-remote-https git-remote-ftp git-remote-ftps" && \
for p in $remote(curl_aliases); do \
    rm -f "$execdir/$p" && \
    test -n "" && \
    ln -s "git-remote-$p" "$execdir/$p" || \
{ test -z "" && \
    ln "$execdir/git-remote-$p" "$execdir/$p" 2>/dev/null || \
    ln -s "git-remote-$p" "$execdir/$p" 2>/dev/null || \
    cp "$execdir/git-remote-$p" "$execdir/$p" || exit; } \
done
devuser@ubutuserver:/tmp/git-2.38.1$ git --version
git version 2.34.1
devuser@ubutuserver:/tmp/git-2.38.1$
```

## Login Git

```
devuser@ubutuserver:/tmp/git-2.38.1$ git config --global user.name "earth"
devuser@ubutuserver:/tmp/git-2.38.1$ git config --global user.email "surapat_su66@live.rmutl.ac.th"
devuser@ubutuserver:/tmp/git-2.38.1$ git config --list
user.name=earth
user.email=surapat_su66@live.rmutl.ac.th
devuser@ubutuserver:/tmp/git-2.38.1$
```

# MySQL Workbench



# VScode link SSH

The screenshot shows two instances of Visual Studio Code. The top instance is in 'SSH' mode, displaying the contents of the `ssh/config` file:

```
C: > Users > WINDOW X > ssh > config
1 # Read more about SSH config files: https://linux.die.net/man/5/ssh\_config
2 Host UbuntuServer
3   HostName 192.168.56.101
4   User devuser
```

The bottom instance is connected to the remote host `192.168.56.101`, showing the file structure at the root of the drive:

- `index.html`
- `info.php`
- `todo_list.php`

The status bar at the bottom of the bottom instance indicates the connection details: `SSH: 192.168.56.101`.

## Virtual Hosts

สร้าง directories lab2-1\_033 และ lab2-2\_033

```
Last login: Wed Dec 6 11:38:20 2023 from 192.168.56.1
devuser@ubutuserver:~$ sudo mkdir -p var/www/lab2
[sudo] password for devuser:
devuser@ubutuserver:~$ cd var/www/lab2
devuser@ubutuserver:~/var/www/lab2$ sudo mkdir -p /var/www/lab2-1_033/public_html
devuser@ubutuserver:~/var/www/lab2$ sudo mkdir -p /var/www/lab2-2_033/public_html
devuser@ubutuserver:~/var/www/lab2$
```

เปลี่ยน สิทธิ ของ directories

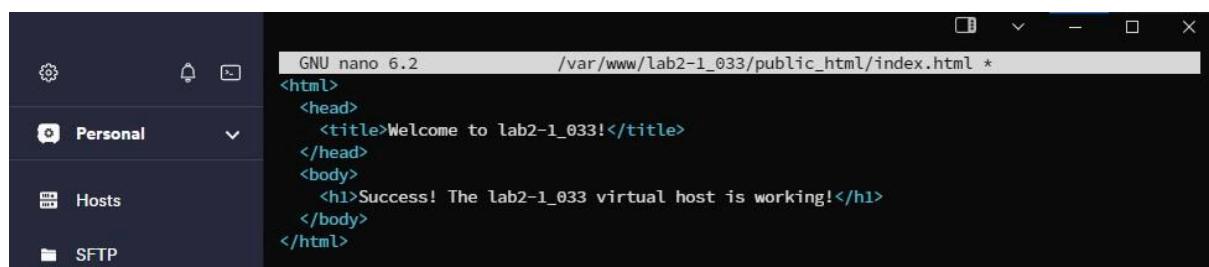
```
devuser@ubutuserver:~/var/www/lab2$ sudo chown -R $USER:$USER /var/www/lab2-1_033/public_html
devuser@ubutuserver:~/var/www/lab2$ sudo chown -R $USER:$USER /var/www/lab2-2_033/public_html
```

ให้ สิทธิ ของ directories

```
devuser@ubutuserver:~/var/www/lab2$ sudo chmod -R 755 /var/www
```

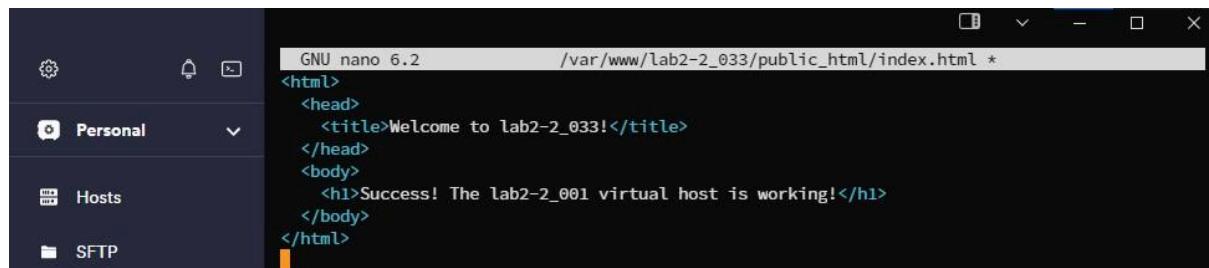
สร้าง index.html ทั้งสอง folder

```
devuser@ubutuserver:~/var/www/lab2$ nano /var/www/lab2-1_033/public_html/index.html
```



```
GNU nano 6.2          /var/www/lab2-1_033/public_html/index.html *
<html>
<head>
<title>Welcome to lab2-1_033!</title>
</head>
<body>
<h1>Success! The lab2-1_033 virtual host is working!</h1>
</body>
</html>
```

```
devuser@ubutuserver:~/var/www/lab2$ nano /var/www/lab2-2_033/public_html/index.html
```



```
GNU nano 6.2          /var/www/lab2-2_033/public_html/index.html *
<html>
<head>
<title>Welcome to lab2-2_033!</title>
</head>
<body>
<h1>Success! The lab2-2_033 virtual host is working!</h1>
</body>
</html>
```

# Copy 000-default.conf ไป /etc/apache2/sites-available และ เปลี่ยนชื่อเป็น lab2-1\_033.conf

```
devuser@ubutuserver:~/var/www/lab2$ sudo cp /etc/apache2/sites-available/000-default.conf /etc/apache2/sites-available/lab2-1_033.conf
```

```
GNU nano 6.2 /etc/apache2/sites-available/lab2-1_033.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.example.com

    ServerAdmin admin@lab2-2_033
    ServerName lab2-1_033
    ServerAlias www.lab2-1_033
    DocumentRoot /var/www/lab2-1_033/public_html

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined

    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For example the
    # following line enables the CGI configuration for this host only
    # after it has been globally disabled with "a2disconf".
    #Include conf-available/serve-cgi-bin.conf
</VirtualHost>

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

Read 33 lines ]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location  
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line

Finish your setup:

- Add hosts
- Connect to a host
- Sync to mobile
- Invite team members

Copy lab2-1\_001.conf และ เปลี่ยนชื่อ lab2-2\_001.conf

```
devuser@ubutuserver:~/var/www/lab2$ sudo nano /etc/apache2/sites-available/lab2-1_033.conf
```

Enable ไฟล์ทั้งสอง

```
devuser@ubutuserver:~/var/www/lab2$ sudo a2ensite lab2-1_033.conf  
Enabling site lab2-1_033.
```

```
To activate the new configuration, you need to run:  
    systemctl reload apache2
```

```
devuser@ubutuserver:~/var/www/lab2$ sudo a2ensite lab2-2_033.conf  
Enabling site lab2-2_033.
```

```
To activate the new configuration, you need to run:  
    systemctl reload apache2
```

Disable ไฟล์ default

```
devuser@ubutuserver:~/var/www/lab2$ sudo a2dissite 000-default.conf  
Site 000-default already disabled
```

Restart Apache

```
devuser@ubutuserver:~/var/www/lab2$ sudo systemctl restart apache2  
devuser@ubutuserver:~/var/www/lab2$ sudo systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)  
   Active: active (running) since Wed 2023-12-06 18:10:44 UTC; 4s ago  
     Docs: https://httpd.apache.org/docs/2.4/  
   Process: 19824 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)  
 Main PID: 19828 (apache2)  
    Tasks: 6 (limit: 4558)  
   Memory: 10.3M  
      CPU: 35ms
```

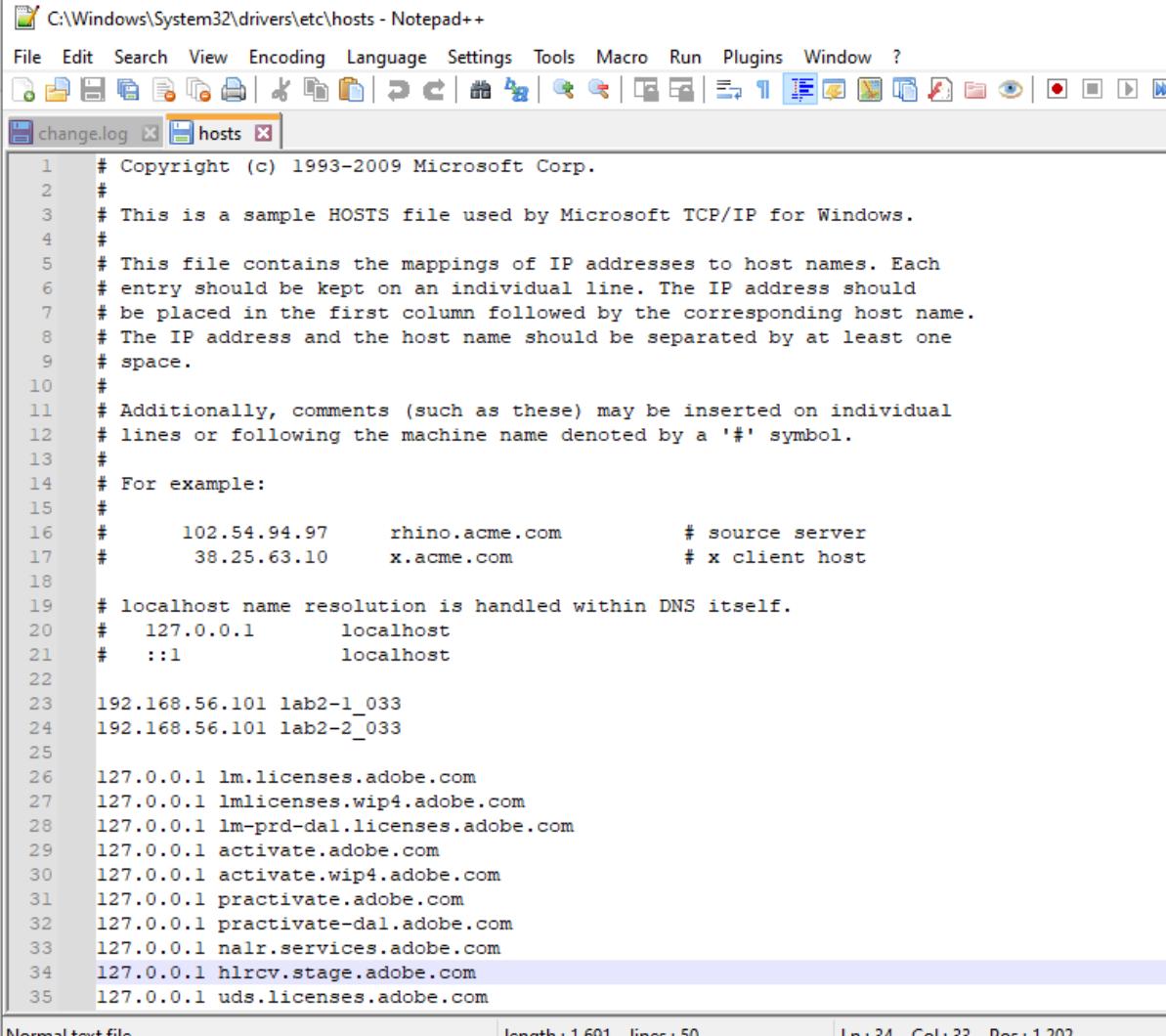
Test Apache

```
devuser@ubutuserver:~/var/www/lab2$ sudo apache2ctl configtest  
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this message  
Syntax OK
```

แก้ไขไฟล์ hosts ใน etc เพิ่ม

192.168.56.101 lab2-1\_033

192.168.56.101 lab2-2\_033

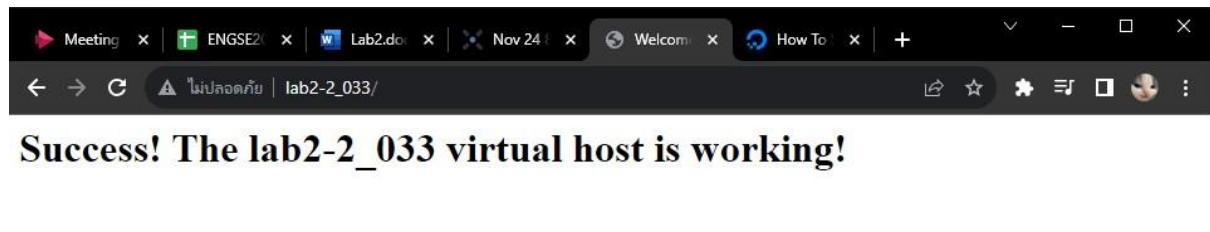
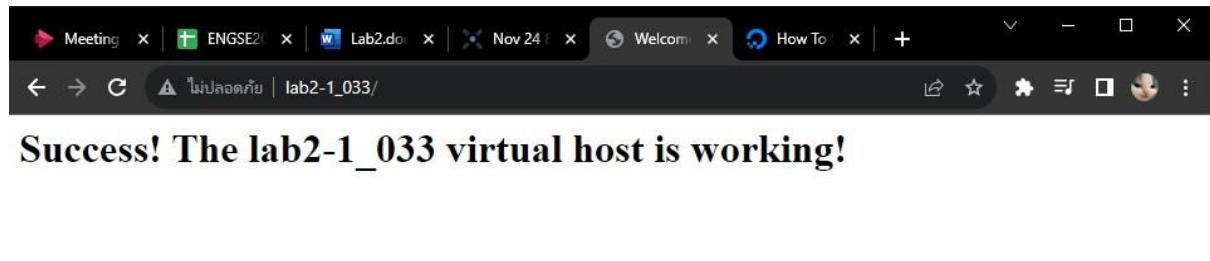


The screenshot shows the Windows hosts file open in Notepad++. The file path is C:\Windows\System32\drivers\etc\hosts. The content of the file is as follows:

```
1 # Copyright (c) 1993-2009 Microsoft Corp.
2 #
3 # This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
4 #
5 # This file contains the mappings of IP addresses to host names. Each
6 # entry should be kept on an individual line. The IP address should
7 # be placed in the first column followed by the corresponding host name.
8 # The IP address and the host name should be separated by at least one
9 # space.
10 #
11 # Additionally, comments (such as these) may be inserted on individual
12 # lines or following the machine name denoted by a '#' symbol.
13 #
14 # For example:
15 #
16 #      102.54.94.97      rhino.acme.com          # source server
17 #              38.25.63.10      x.acme.com            # x client host
18 #
19 # localhost name resolution is handled within DNS itself.
20 #    127.0.0.1          localhost
21 #    ::1                localhost
22 #
23 192.168.56.101 lab2-1_033
24 192.168.56.101 lab2-2_033
25 #
26 127.0.0.1 lm.licenses.adobe.com
27 127.0.0.1 lmlicenses.wip4.adobe.com
28 127.0.0.1 lm-prd-dal.licenses.adobe.com
29 127.0.0.1 activate.adobe.com
30 127.0.0.1 activate.wip4.adobe.com
31 127.0.0.1 practivate.adobe.com
32 127.0.0.1 practivate-dal.adobe.com
33 127.0.0.1 nalr.services.adobe.com
34 127.0.0.1 hlrcv.stage.adobe.com
35 127.0.0.1 uds.licenses.adobe.com
```

At the bottom of the window, status information is displayed: Normal text file, length: 1,691, lines: 50, Ln: 34, Col: 33, Pos: 1,202.

## ทดสอบโดยการเข้าด้วย domain



66543210033-7 สุรพัช สุภาพ