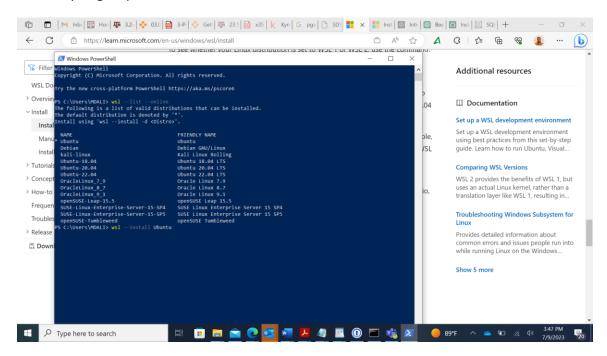1. Ubuntu WLS

2. Install postgresql

wsl --list --online

wsl --install -d Ubuntu

https://learn.microsoft.com/en-us/windows/wsl/install

https://www.sqlalchemy.org/

Install using annaconda power shell or python notebook

!pip install SQLAlchemy

already installed with annaconda jupiter lab

Flask

pip install SQLAlchemy

Requirement already satisfied: SQLAlchemy in c:\users\mdali\anaconda3\lib\site-packages (1.4.39)

Requirement already satisfied: greenlet!=0.4.17 in c:\users\mdali\anaconda3\lib\site-packages (from SQLAlchemy) (1.1.1)

flask

!pip install flask

Requirement already satisfied: flask in c:\users\mdali\anaconda3\lib\site-packages (1.1.2)

Requirement already satisfied: Jinja2>=2.10.1 in c:\users\mdali\anaconda3\lib\site-packages (from flask) (2.11.3)

Requirement already satisfied: Werkzeug>=0.15 in c:\users\mdali\anaconda3\lib\site-packages (from flask) (2.0.3)

Requirement already satisfied: click>=5.1 in c:\users\mdali\anaconda3\lib\site-packages (from flask) (8.0.4)

Requirement already satisfied: itsdangerous>=0.24 in c:\users\mdali\anaconda3\lib\site-packages (from flask) (2.0.1)

Requirement already satisfied: colorama in c:\users\mdali\anaconda3\lib\site-packages (from click>=5.1->flask) (0.4.6)

Requirement already satisfied: MarkupSafe>=0.23 in c:\users\mdali\anaconda3\lib\site-packages (from Jinja2>=2.10.1->flask) (2.0.1)

[Add or connect a database with WSL | Microsoft Learn](#)

Install PostgreSQL

To install PostgreSQL on WSL (ie. Ubuntu):

1. Open your WSL terminal (ie. Ubuntu).
2. Update your Ubuntu packages: `sudo apt update`

3. Once the packages have updated, install PostgreSQL (and the -contrib package which has some helpful utilities) with: `sudo apt install postgresql postgresql-contrib`
4. Confirm installation and get the version number: `psql --version`

There are 3 commands you need to know once PostgreSQL is installed:

- `sudo service postgresql status` for checking the status of your database.
- `sudo service postgresql start` to start running your database.
- `sudo service postgresql stop` to stop running your database.

The default admin user, `postgres`, needs a password assigned in order to connect to a database. To set a password:

1. Enter the command: `sudo passwd postgres`
2. You will get a prompt to enter your new password.
3. Close and reopen your terminal.

To run PostgreSQL with [psql](#) shell:

1. Start your postgres service: `sudo service postgresql start`
2. Connect to the postgres service and open the psql shell: `sudo -u postgres psql`

Once you have successfully entered the psql shell, you will see your command line change to look like this: `postgres=#`

 Note

Alternatively, you can open the psql shell by switching to the postgres user with: `su - postgres` and then entering the command: `psql`.

To exit postgres=# enter: `\q` or use the shortcut key: Ctrl+D

To see what user accounts have been created on your PostgreSQL installation, use from your WSL terminal: `psql -c "\du"` ...or just `\du` if you have the psql shell open. This command will display columns: Account User Name, List of Roles Attributes, and Member of role group(s). To exit back to the command line, enter: `q`.

For more about working with PostgreSQL databases, see the [PostgreSQL docs](#).

To work with with PostgreSQL databases in VS Code, try the [PostgreSQL extension](#).

Install VS code extensions

DESKTOP-AALCCGH:~$ sudo /etc/init.d/postgresql start

Starting postgresql (via systemctl): postgresql.service.

mdali@DESKTOP-AALCCGH:~$ sudo -u postgres psql

could not change directory to "/home/mdali": Permission denied

psql (14.8 (Ubuntu 14.8-0ubuntu0.22.04.1))

Type "help" for help.

postgres=# \conninfo

You are connected to database "postgres" as user "postgres" via socket in "/var/run/postgresql" at port "5432".

postgres=# pwd

postgres-# cd /home/mdali

postgres-# pwd

postgres-# ls

postgres-#

To fix permission denied


```
dali@DESKTOP-AALCCGH:/$ cd home

mdali@DESKTOP-AALCCGH:/home$ ls

mdali

mdali@DESKTOP-AALCCGH:/home$ ls -ltr

total 4

drwxr-x--- 3 mdali mdali 4096 Jul  9 16:52 mdali

mdali@DESKTOP-AALCCGH:/home$ chmod 777 mdali
```

```
mdali@DESKTOP-AALCCGH:/home$ sudo -u postgres psql

psql (14.8 (Ubuntu 14.8-0ubuntu0.22.04.1))

Type "help" for help.


postgres=#
```

option or PGDATA environment variable, represented here as ConfigDir.

data_directory = '/var/lib/postgresql/14/main'   # use data in another directory

                                                        # (change requires restart)

hba_file = '/etc/postgresql/14/main/pg_hba.conf'   # host-based authentication file

                                                        # (change requires restart)

ident_file = '/etc/postgresql/14/main/pg_ident.conf'   # ident configuration file

                                                        # (change requires restart)

If external_pid_file is not explicitly set, no extra PID file is written.

external_pid_file = '/var/run/postgresql/14-main.pid'   # write an extra PID file

                                                        # (change requires restart)

#--

CONNECTIONS AND AUTHENTICATION

#--

- Connection Settings -

#listen_addresses = 'localhost'   # what IP address(es) to listen on;

                                                # comma-separated list of addresses;

                                                # defaults to 'localhost'; use '*' for all

                                                # (change requires restart)

port = 5432   # (change requires restart)

max_connections = 100   # (change requires restart)

#superuser_reserved_con

[Quick Start — Flask-SQLAlchemy Documentation (3.0.x) (palletsprojects.com)](#)

```
!pip install Flask-SQLAlchemy
```

```
postgres=# create user a3pmfatima with password 'Supergmat123#';
CREATE ROLE
postgres=# alter user a3pmfatima with superuser;
ALTER ROLE
postgres=#
```

postgres=# create database   realestate with OWNER a3pmfatima;

CREATE DATABASE

postgres=#

```
username = 'a3pmfatima' password = 'supergmat123#' database = 'realestate'
app.config['SQLALCHEMY_DATABASE_URI'] =
f"postgresql://{username}:{password}@localhost:5432/{database}"
```

```
sudo -u postgres psql
```

```
\du
```

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ sudo -u postgres psql

psql (14.8 (Ubuntu 14.8-0ubuntu0.22.04.1))

Type "help" for help.

postgres=# /du

postgres-# \du

                                   List of roles

  Role name | Attributes | Member of

-------------+--+-----------

 a3pmfatima | Superuser | {}

 postgres | Superuser, Create role, Create DB, Replication, Bypass RLS | {}

postgres-#

PostgreSQL Getting Started (ntu.edu.sg)

```
sudo service postgresql restart
```
dali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ sudo /etc/init.d/postgresql restart

Restarting postgresql (via systemctl): postgresql.service.

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ psql -h localhost -U a3pmfatima

Password for user a3pmfatima:

psql: error: connection to server at "localhost" (127.0.0.1), port 5432 failed: FATAL: database "a3pmfatima" does not exist

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ ls

DO NOT DISABLE!

If you change this first entry you will need to make sure that the

database superuser can access the database using some other method.

Noninteractive access to all databases is required during automatic

maintenance (custom daily cronjobs, replication, and similar tasks).

#

Database administrative login by Unix domain socket

#local   all   postgres   peer

local   all   postgres   trust

TYPE   DATABASE   USER   ADDRESS   METHOD

"local" is for Unix domain socket connections only

local   all   all   peer

IPv4 local connections:

host   all   all   127.0.0.1/32   scram-sha-256

IPv6 local connections:

host   all   all   ::1/128   scram-sha-256

Allow replication connections from localhost, by a user with the

replication privilege.

local   replication   all   peer

host   replication   all   127.0.0.1/32   scram-sha-256

host   replication   all   ::1/128   scram-sha-256

local   realestate   a3pmfatima   md5

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$

conf.d   environment   pg_ctl.conf   pg_hba.conf   pg_ident.conf   postgresql.conf   start.conf

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ vi pg_hba.conf

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ sudo vi pg_hba.conf

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ psql -h localhost

Password for user mdali:

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ psql -h localhost -U a3pmfatima realestate

Password for user a3pmfatima:

psql (14.8 (Ubuntu 14.8-0ubuntu0.22.04.1))

SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, bits: 256, compression: off)

Type "help" for help.

realestate=#

[PostgreSQL Getting Started (ntu.edu.sg)](ntu.edu.sg)

[Download (pgadmin.org)](pgadmin.org)

PostgreSQL: File Browser pgadmin

ALTER USER postgres PASSWORD
postgres=# ALTER USER postgres PASSWORD 'Supergmat123#';

ALTER ROLE

postgres=#

postgres=# ALTER USER postgres PASSWORD 'Supergmat123#';

ALTER ROLE

postgres=#

postgres=# ALTER USER postgres PASSWORD 'Supergmat123#';

ALTER ROLE

postgres=# \c realestate

You are now connected to database "realestate" as user "postgres".

realestate=#

[Different methods to create a table in PostgreSQL - CommandPrompt Inc.](#)

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$ php -v

Command 'php' not found, but can be installed with:

sudo apt install php8.1-cli   # version 8.1.2-1ubuntu2.13, or

sudo apt install php-cli   # version 2:8.1+92ubuntu1

mdali@DESKTOP-AALCCGH:/etc/postgresql/14/main$

[How to Install phpMyAdmin with Apache on Windows WSL - Geek Rewind](#)

[How to Install phpMyAdmin with Apache on Windows WSL - Geek Rewind](#)

Create info.php

Fix the issue

sudo apt install libapache2-mod-php8.0
[PHP 8.1.2-1ubuntu2.13 - phpinfo()](#)

How to fix [20.04 - Apache2 not loading PHP 8.0.5 - returns php as text not executing - Ask Ubuntu](#)
Postgress sql extention for visual code

Wsl extenstion for visual code

New Spring Boot CRUD applications -   Database

Install Annaconda

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