Datascience-0

ex00 create database and docker composer
first going to the folder ex and connect with terminal

Install PostgreSQL with terminal

```
sudo apt update
sudo apt install postgresql postgresql-contrib
```

Verify PostgreSQL Installation

```
psql –version
```

Start the PostgreSQL Server - Option 1: Using PostgreSQL Locally

```
sudo systemctl start postgresql  # Linux
brew services start postgresql  # macOS
```

To check if it's running:

```
sudo systemctl status postgresql
```

Log in to PostgreSQL using the credentials provided:

```
psql -U your_login -d piscineds -h localhost -W
```

Enter `"mysecretpassword"` when prompted.

Connect to PostgreSQL (As your user)

```
sudo -u postgres psql
```

coming sql terminal `piscineds=#`

with sql terminal create database

```
CREATE DATABASE piscineds;
```

create user with my login

```
CREATE USER arajapak WITH PASSWORD ‘mysecretpassword’
```

Grant privillege

```
GRANT ALL PRIVILEGES ON DATABASE piscineds TO arajapak;
```

connect to postgresql

```
psql _u arajapak -d piscineds -h localhost -W
```

aftre coming sql terminal and for quit \q

Switch to PostgreSQL superuser (`postgres`)

Option 2: Using Docker Compose(optional)
install docker and docker composer with terminal

```
sudo apt install docker docker-compose
```

verification installation ok or not

```
docker –version
docker-compose --version
```

Navigation to you working directory cd ~/datasciens-0/ex00
after inside folder

- Create a `docker-compose.yml` file with the following contents:

```
version: '3.1'

services:
  db:
    image: postgres
    restart: always
    environment:
      POSTGRES_USER: your_login
      POSTGRES_PASSWORD: mysecretpassword
      POSTGRES_DB: piscineds
    ports:
- "5432:5432"
```

for exit ctrl.x and enter

Run the following command to start PostgreSQL inside Docker:

```
docker-compose up -d
```

checking running

```
docker ps
```

*** si problem solution with terminal run docker root**

```
sudo docker-compose up -d
```

add yourself the docker group replace your name with your actual login

```
sudo username -aG docker arajapak
```

reset you vm

Once the container is running, connect to the database with:

```
psql -U your_login -d piscineds -h localhost -W
```

```
psql -U arajapak -d piscineds -h localhost -W
```

Verifying the Connection
you can check if the database is running with:

```
\l  # Lists available databases
\dt # Lists tables inside the current database
```

si problem port - solution
changement with yml file

```
ports:
  - "5433:5432"
docker-compose up -d
psql -U arajapak -d piscineds -h localhost -p 5433 -W
```

database exit chek

```
SELECT current_database();
```

user exit

```
SELECT current_user;
```

****
if `piscineds` already exists (`\l` confirms it).

```
sudo -u postgres psql -c "\l"
```