POSTGRESQL DEVELOPMENT PREPARATION

How to set up PostgreSQL:

There are several ways to set up PostgreSQL, but the most common method is to install it using a package manager or a binary installer.
On Linux, you can use the package manager of your distribution to install PostgreSQL. For example, on Ubuntu, you can run the following command:

```
sudo apt-get install postgresql
```

MacOs: In Macos we can setup PostgreSQL using Homebrew with this command

```
brew install postgresql
```

Windows: We can download the binary installer from the official PostgreSQL website and run it to install PostgreSQL

```
https://www.postgresql.org/docs/current/install-binaries.html
```

Another Way of Setting Up Postgresql using PGAdmin4 by using DOCKER

```
https://www.youtube.com/watch?v=vK3_bntpOQ0&t=45s&ab_channel=YappyToy
```

How to connect to PostgreSQL:

To connect to the PostgreSQL database, you can use a PostgreSQL client like `psql` or connect to the database from an application that supports the PostgreSQL protocol.
To connect using `psql`, run the following command in a terminal:

```
psql -h localhost -p 5432 -U teamproject -d <database-name>
```

Replace <database-name> with the name of the database you want to connect to. When prompted for a password, you can leave it blank as specified in the environment variables.

Command if first time connecting to PostgreSQL:

```
psql -h <host> -p <port> -U <username> -d postgres
```

How to interact with PostgreSQL:

After connecting to PostgreSQL database, we can interact with it using SQL commands. Here are some examples of commonly used commands:

- CREATE TABLE: creates a new table in the database
- INSERT INTO: inserts a new row into a table
- SELECT: retrieves data from one or more tables
- UPDATE: updates one or more rows in a table
- DELETE FROM: deletes one or more rows from a table

More documentation about the interacting list for PostgreSQL

```
https://www.postgresql.org/docs/15/queries.html
```

How PostgreSQL store our data:

PostgreSQL is a powerful and flexible open-source relational database management system that can be used to store and manage a wide variety of data, including music and personal information.

1. **Music Files**: If you want to store music files in PostgreSQL, you can use the bytea data type. The bytea data type is designed to store binary data, such as images or audio files, as a sequence of bytes. You can use this data type to store the actual music files in your database
2. **Music Metadata**: Instead of storing the music files themselves in PostgreSQL, it's more common to store the metadata associated with the music, such as the title, artist, album, genre, and release date. You can create a table in your PostgreSQL database with columns for each of these attributes and store the metadata for each song or album as a row in the table. This approach makes it easy to query and sort your music collection based on various criteria to help on our function like storing information about the Liked Song and Disliked Song.
3. **Personal Information**: Personal information can be stored in a variety of ways in PostgreSQL, depending on the nature of the information and how it will be used. For example, we can create a table for user's information that includes columns for name, user id ,password, and email address.