PostgreSQL Setup for Library Management System

Using Script:

1. Run this command with script file attached in zip.

```
psql -h localhost -p 5432 -U postgres -d postgres -f "D:\SpringBoot Interview Prep\Library Management System-project\create_database.sql"
```

2. Run 2nd command for inserting table and data to the database.

```
psql -h localhost -p 5432 -U postgres -d library_management_lms -f "D:\SpringBoot Interview Prep\Library Management System-project\insert_data.sql"
```

Manually:

1. Connect to PostgreSQL

- Open Command Prompt and navigate to the PostgreSQL `bin` folder:

```
C:\Program Files\PostgreSQL\16\bin>psql -h localhost -p 5432 -U postgres
```

- Enter the PostgreSQL password when prompted.

2. Create the Database

- List all databases to ensure connection:

```
\l
```

- Create the library_management_lms database:

```
CREATE DATABASE library_management_lms;
```

- Connect to the new database:

```
\c library_management_lms;
```

3. Create the users Table

- Define a table to store user information:

```
CREATE TABLE users (
    id SERIAL PRIMARY KEY,
    name VARCHAR(255) NOT NULL,
    email VARCHAR(255) NOT NULL UNIQUE
);
```

4. Create the book Table

- Define a table to store book information:

```
CREATE TABLE book (
    id SERIAL PRIMARY KEY,
    title VARCHAR(255) NOT NULL,
    author VARCHAR(255) NOT NULL,
    status VARCHAR(50) NOT NULL CHECK (status IN ('available', 'issued')),
    book_quantity BIGINT NOT NULL CHECK (book_quantity >= 0)
);
```

5. Insert Sample Data into the users Table

- Add sample users to the database:

```
INSERT INTO users (name, email) VALUES
('John Doe', 'johndoe@example.com'),
('Jane Smith', 'janesmith@example.com'),
('Mark Smith', 'marksmith@example.com'),
('Musk Nolan', 'musknolan@example.com'),
('Chris Hemsworth', 'chrishems@example.com');
```

6. Insert Sample Data into the book Table

- Add sample books to the database:

```
INSERT INTO book (title, author, status, book_quantity) VALUES
('Catcher in the Rye', 'J.D. Salinger', 'available', 5),
('To Kill a Mockingbird', 'Harper Lee', 'available', 3),
('Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future', 'Ashlee Vance', 'available', 4),
('Harry Potter and the Philosopher\'s Stone', 'J.K. Rowling', 'available', 5),
('American Pie', 'Don McLean', 'available', 8);
```

7. Configure Spring Boot Application

In your Spring Boot project, you'll need to configure the application.properties for the database connection.

- **src/main/resources/application.properties**:

```
• spring.application.name=lms
  spring.datasource.url=jdbc:postgresql://localhost:5432/library_management_lms
  spring.datasource.username=postgres
  spring.datasource.password=123456
  spring.datasource.driver-class-name=org.postgresql.Driver

  # Hibernate Properties
  spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.PostgreSQLDialect
  spring.jpa.hibernate.ddl-auto=update
```

8. Add PostgreSQL Dependency in Maven

If you haven’t added the PostgreSQL driver dependency in your pom.xml, include it:

```
<dependency>
    <groupId>org.postgresql</groupId>
    <artifactId>postgresql</artifactId>
</dependency>
```

Angular Front-End

make sure run -- npm install -- angular