

Fifty-Fifty : An Splitwise Application

Capstone Project 1

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Introduction

What is Fifty Fifty?

- A smart split-expense tool designed to simplify group expense management.
- Efficiently tracks, manages, and settles shared expenses among group members.

Key Features

- **Expense Splitting:** Excludes the payer from the split for fairness.
- **Group Integration:** Fetches members dynamically from API endpoints.
- **Settlement Mechanism:**
 - Real-time request approval for balances.
 - Status updates directly to "settled" upon approval.
- **User-Friendly Interface:** Intuitive design for seamless navigation.
- **Secure Authentication:** Implements session-based security for data protection.
- **Built with Spring Boot:** Reliable and scalable backend architecture

Tech Stack

FrontEnd

- **HTML:** Structuring the content of the application.
- **CSS:** Styling and designing the user interface with a clean and modern look.
- **JavaScript:** Adding interactivity and dynamic behavior to the UI.

Backend

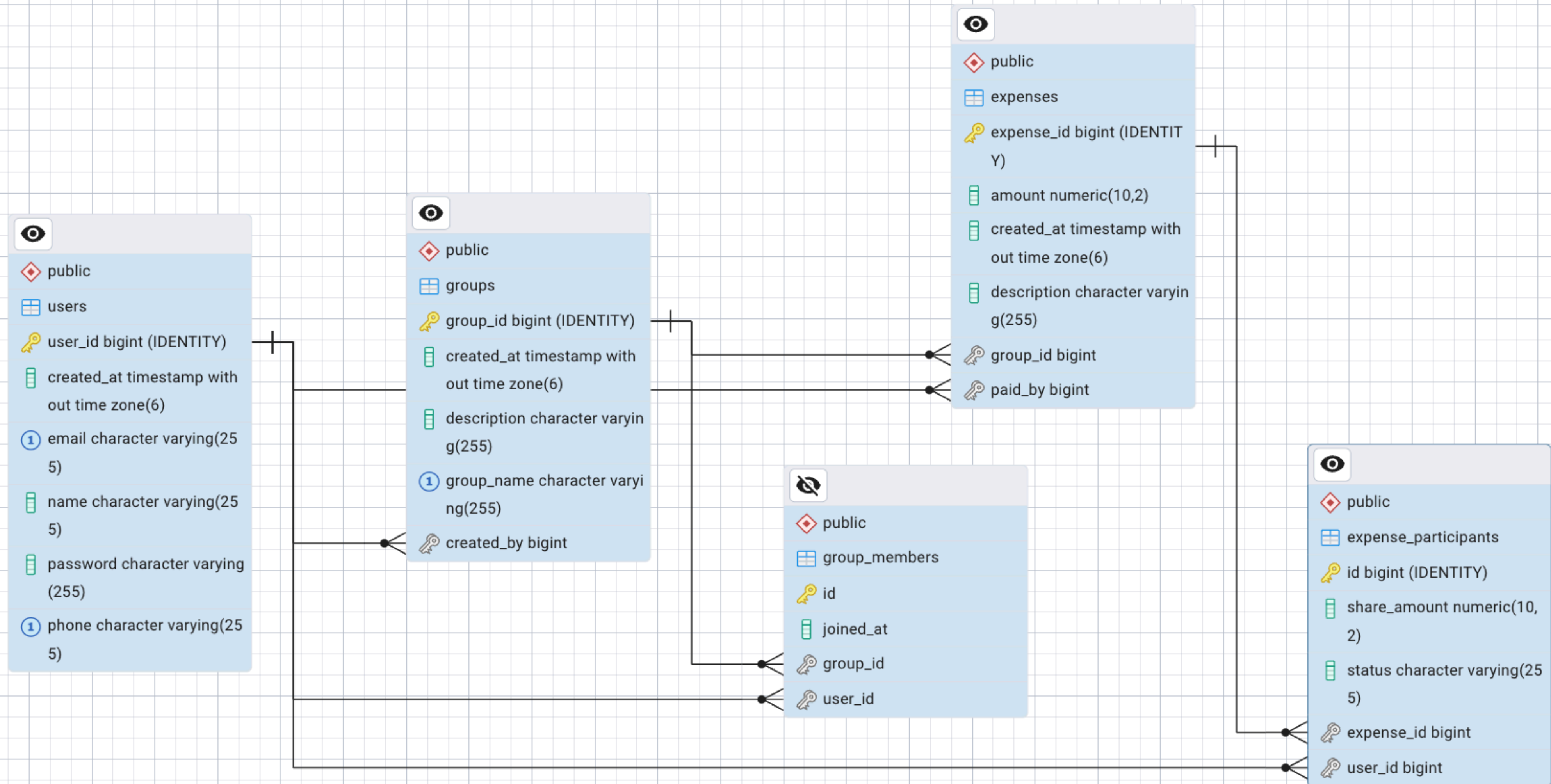
- **Spring Boot:** It is a framework that simplifies building production-ready applications with minimal configuration. It offers auto-configuration, embedded servers, and robust support for REST APIs.
- **Spring Security** (*JWT Authentication*): Ensures secure login and access control using JSON Web Tokens (JWT).
- **Spring Data JPA:** Used for object-relational mapping (ORM) to simplify database operations.

Database

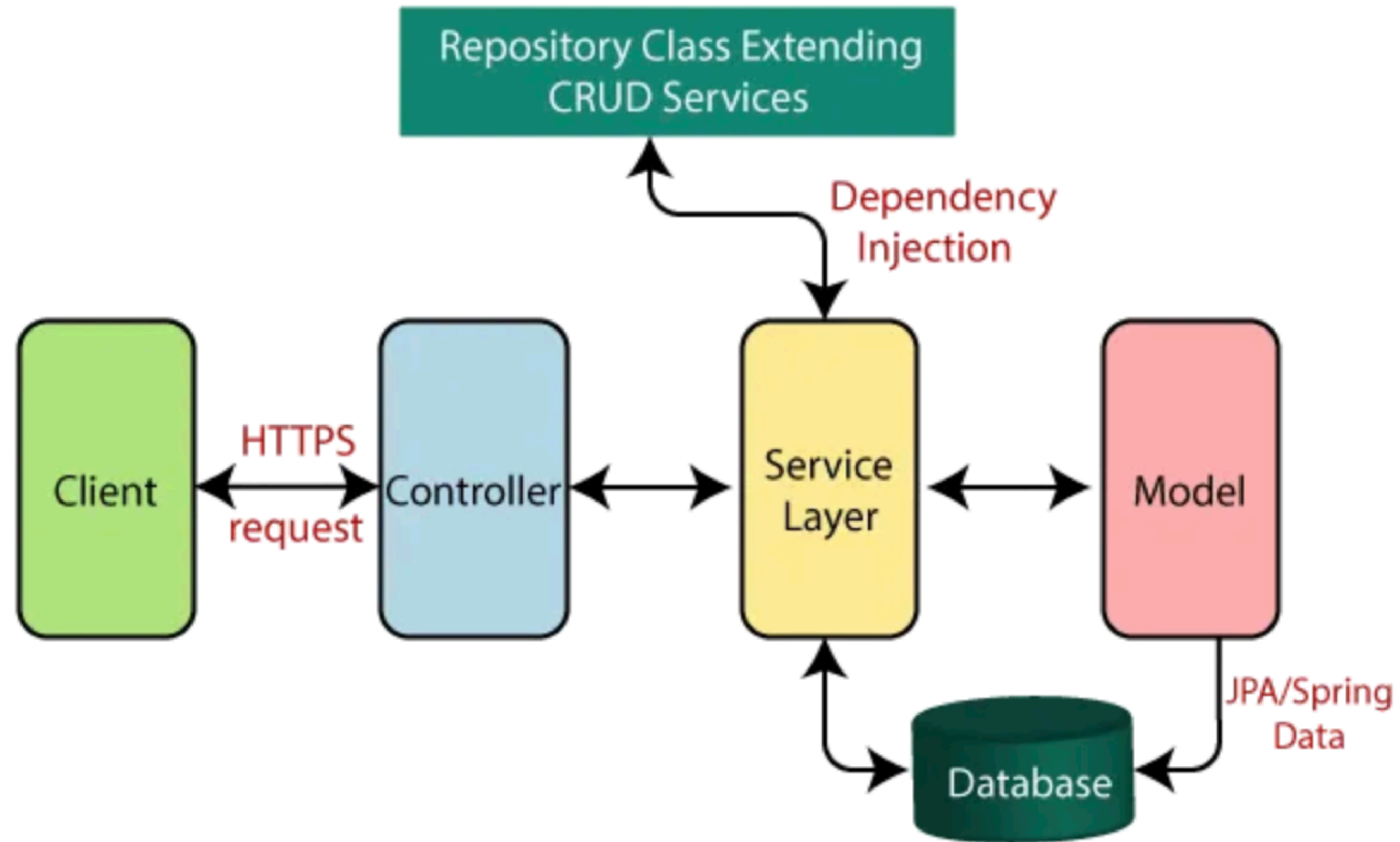
- **Postgres:** PostgreSQL is a powerful, open-source relational database system known for its robustness, scalability, and support for advanced data types.

Also used *Postman* for Testing Api's.

ER-Diagram



Architecture Diagram



Springboot Architecture

Future Goals

- **Feature Enhancements:** Implement "good-to-have" features outlined in the SRS for an enriched user experience.
- **Payment Gateway Integration:** Enable secure and seamless online payments for transactions and settlements.
- **Real-Time Notifications:** Introduce alerts for expenses, approvals, and settlements to keep users informed.
- **Theme Support:** Add light and dark mode options to improve usability and accessibility for all users.

Thank You!!