
Design Document for Sweat Stats

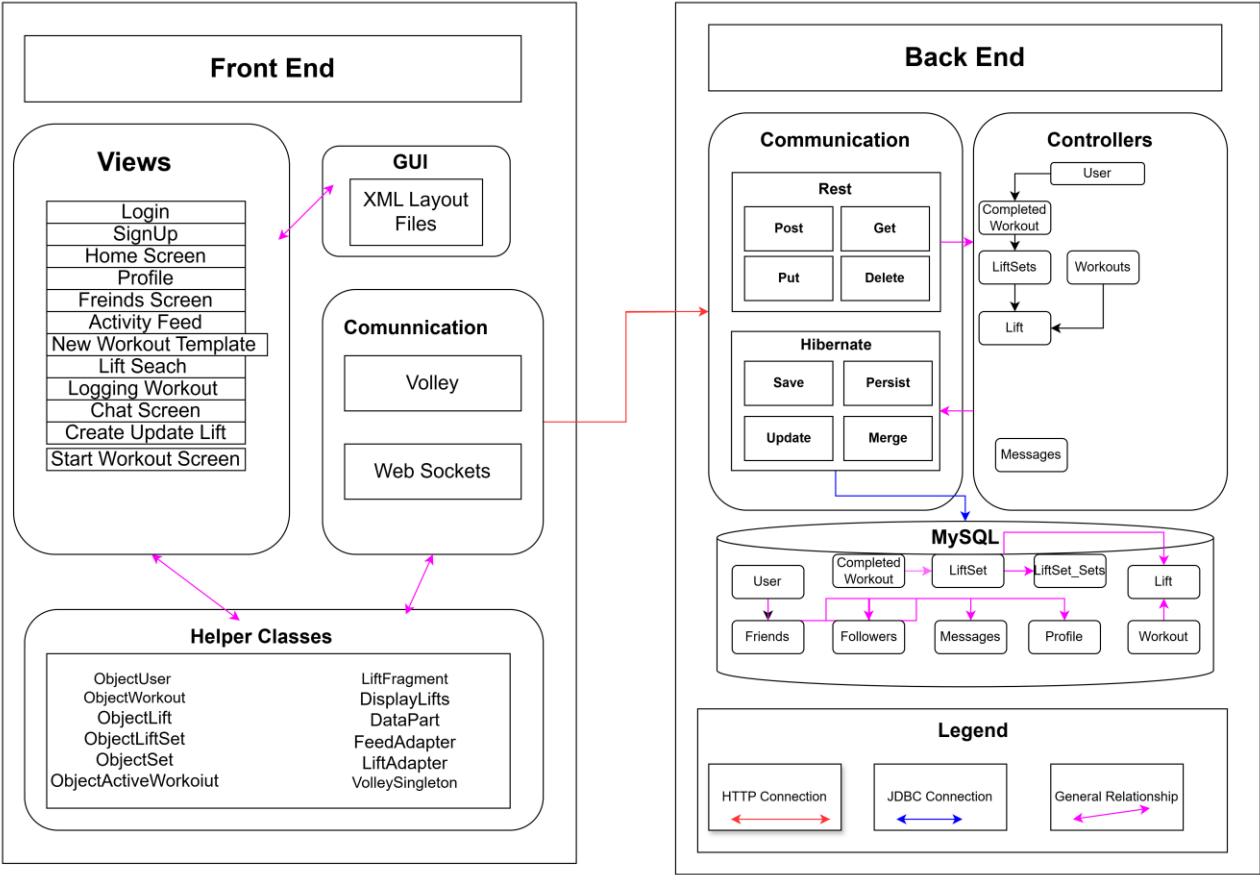
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Frontend

The actor interacts with the application via Android activities and fragments, which manage different features of the fitness tracker. These include login, profile management, friends, workout creation, and the social feed. Each feature is represented by a view built using XML layouts. For instance, the Login View allows users to input credentials, while the Profile View displays and edits user details.

Activities act as controllers, handling user inputs and sending API requests using Volley or OkHttp. Responses are parsed and displayed dynamically. For example, the Social Feed View integrates a WebSocket to update the feed in real-time.

Navigation between features is managed through intents, such as redirecting from the Login View to the Home Screen View upon successful authentication. Each activity communicates with the backend through RESTful APIs for tasks like fetching user data, managing friendships, or updating workouts. Error handling ensures smooth interaction, with invalid inputs or server issues shown using toast messages.

This modular structure separates UI components, user interaction, and data communication for maintainability and scalability.

- Backend
 - Communication
 - CRUD Operations
 - Post – used to push data to the database
 - Get – used to retrieve data from the database
 - Put – used to update data that is in the database
 - Delete – used to delete data from the database
 - Controllers
 - User – Hold the important information such as passwords, username, and email for each user
 - Lift – Holds information for each lift such as title, description, equipment, level, and type of exercise.
 - Workout – Serves as a template of lifts for a completed workout, holds a list of lifts.
 - Completed Workout – Holds a list of LiftSet placeholder objects, used to store lifts done as well as weight and reps for each set in a lift
 - LiftSet – Holds a lift, as well as a list of sets. Serves as a filler object to be store as a list in Completed Workout

