Design Document for Fitness App

Group 3_sc_4

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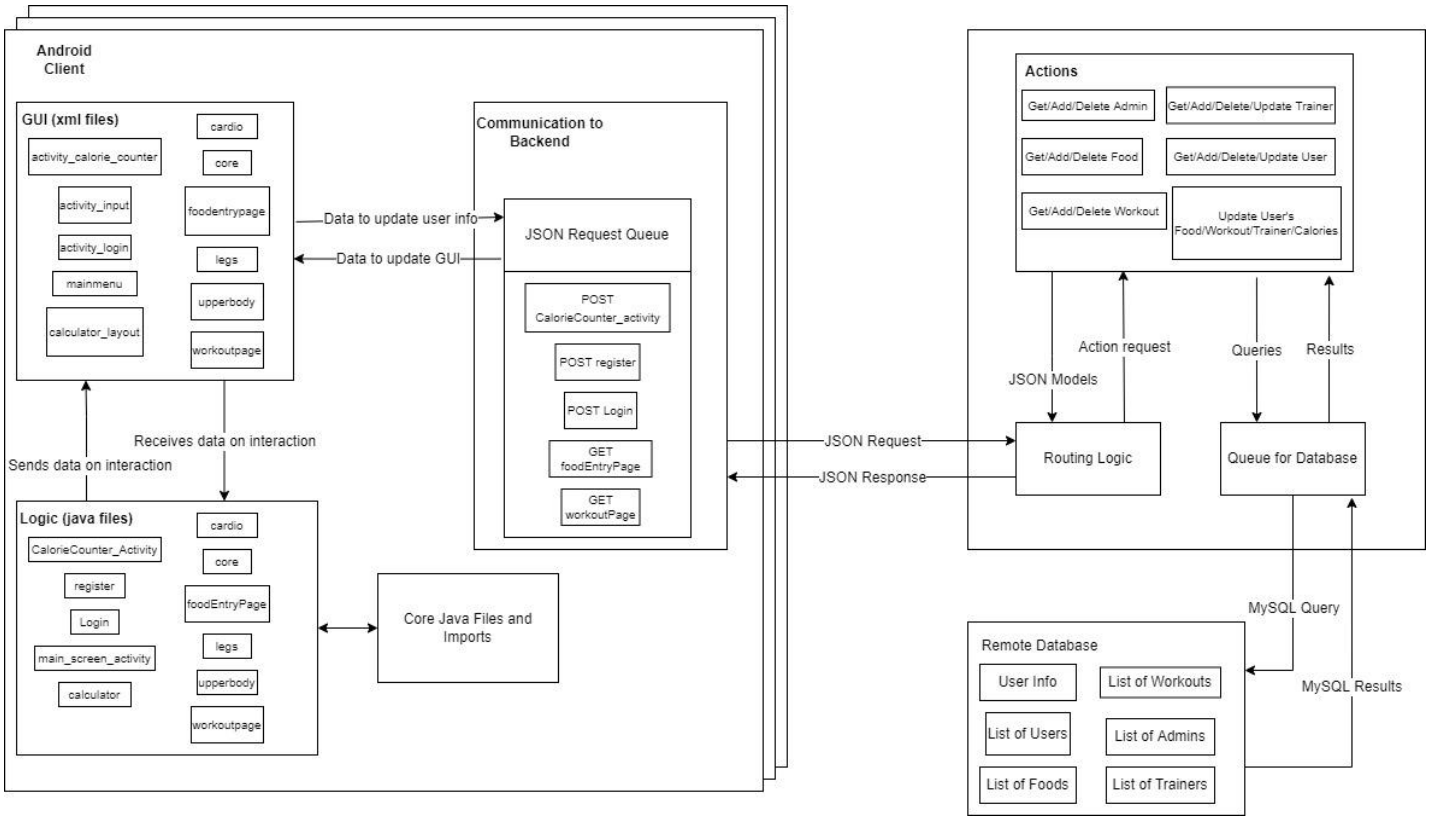
Block Diagram



Design Description

The user's side uses XML files. The user can login, input food, select workouts, etc. The user information to be updated is sent to the front end which sends a JSON request to the server. The server has actions to interact with the database. The server uses the Jpa repository to send a query to the database.

The MySQL database stores info for the different types of users as well as the foods and workouts. For the users, it has usernames and passwords. For the food, it has the amount of calories and the user who input that food. After updating, the server sends JSON string to the front end, which updates the user interface.

The main screen, login, and different workouts are in Java classes and have the code to interact with the GUI.

Entities Stored in the Database:

- **User**
- **Trainer (User)**
- **Admin (User)**
- **Food (Tracks user's diet)**
- **Workout (Workouts trainers give to users)**

Spring Boot Controllers:

- Each entity possesses its own controller and repository class

User Controllers:

- The controller classes for the different types of users have methods to register a new user in the database and to login an existing user. The login method will return the id of the currently logged in user, which the frontend stores and uses to get that user's information.

Other Entity Controllers:

- The controllers for the other entities such as Food and Workout have the basic methods to create, read, update, and delete entities (CRUD).

Table Relationships Diagram