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| Project name | FitBuddy: Your Personal Fitness Companion |

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| Project author | | |
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| 1. Short project description (Business needs and system features) |
| In the realm of personal fitness and wellness, FitBuddy emerges as your dedicated companion for achieving your health and fitness aspirations. With FitBuddy, you'll gain access to exercise tracking, customized workout plans, nutrition tracking, and the expertise of professional coaches. Set your fitness goals, monitor your progress, and find unwavering motivation on your journey to a healthier lifestyle. FitBuddy is your steadfast partner in the pursuit of wellness and personal fitness excellence. The system will be developed using ***Golang, gorilla/mux*** and PostgreSQL.It will implement a web-based front-end client using Golang’s ***html/template*** package and ***jQuery*** OR ***React.js/Vue.js/Angular*** JavaScript/TypeScript libraries for asynchronous page data updates. The backend will be implemented as a ***REST/JSON API*** using JSON data serialization OR an GraphQL API. The main user roles are:  • User – can create an account; login and logout; track nutrition and workouts; set fitness goals; log progress; hire a coach.  • Coach(extends User) – can coach an user; can be booked from a user |

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| 1. Main Use Cases / Scenarios | | |
| **Use case name** | **Brief Descriptions** | **Actors Involved** |
| * 1. **User Registration** | Users can create accounts by providing their email addresses and setting passwords. This use case covers the process of user registration. | User, Coach |
| * 1. **User Login/Logout** | Users can login and logout which will create/delete their own security tokens which will be used in subsequent API requests. | User, Coach |
| * 1. **Profile Management** | Allows users to update and manage their fitness profiles. Users can edit personal information, upload a profile picture, and set fitness preferences. | User, Coach |
| * 1. **Fitness Goal Setting** | Users can set specific fitness goals, such as weight loss, muscle gain, or endurance improvement, and establish target dates for achieving them. | User |
| * 1. **Workout Plan Creation** | Users can create customized workout plans, selecting exercises, setting repetitions, and scheduling workouts based on their goals. | User |
| * 1. **Exercise Tracking** | Users log their workout results, including the number of sets, repetitions, weight used, and exercise duration. Progress is tracked and displayed visually. | User |
| * 1. **Nutrition Planning** | Users can create and access nutrition plans, log their meals(if the meal don’t exists the user can create it), track calorie intake, and manage dietary restrictions. | User |
| * 1. **Coach Booking** | Users can browse and select fitness coaches, view their schedules, and book coaching sessions or training plans. Users can access professional guidance to enhance their fitness routines. | User |
| * 1. **Coach Dashboard** | Coaches have a dedicated dashboard to manage their schedules, create personalized training plans, and track client progress. Coaches can provide professional guidance to users. | Coach |

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| 1. Main Views (Frontend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * 1. **Home** | The home page serves as the initial landing page for users. It provides options for users to either register a new account or log in to their existing accounts. | / |
| * 1. **Registration** | This view allows users to register by providing their email addresses and setting passwords. It facilitates the account creation process. | /register |
| * 1. **Login** | Users can log in to their accounts using their registered email and password, gaining access to the platform's features. | /login |
| * 1. **Dashboard** | The user's personalized dashboard displays an overview of their fitness journey, including their fitness goals, workout plans, and progress tracking. | /dashboard |
| * 1. **Profile** | Users can view, update and manage their fitness profiles, including personal information, profile picture, and fitness preferences. | /profile |
| * 1. **Fitness Goal Setting** | This view lets users set specific fitness goals, with options to specify goals, target dates, and descriptions. | /goals |
| * 1. **Workout Plan Creation** | Users create customized workout plans, selecting exercises, setting repetitions, and scheduling workouts based on their goals. | /workouts |
| * 1. **Exercise Tracking** | Users log their workout results, including sets, repetitions, weights used, and exercise duration, and can view their progress. | /exercises |
| * 1. **Nutrition Tracking** | Users create and access nutrition plans, log their meals, track calorie intake, and manage dietary restrictions. | /nutrition |
| * 1. **Admin Coach Booking** | Users can browse fitness coaches, view their schedules, and book coaching sessions or training plans. | /coaches |
| * 1. **Coach Registration** | Coaches have a dedicated register view which allows them to register by giving more specific information about them – bio, contact information, etc. | /register/coach |
| * 1. **Coach Dashboard** | Coaches have a dedicated dashboard to manage their schedules, create personalized training plans, and track client progress. | /dashboard |

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| 1. API Resources (Backend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * 1. **User** | Users can be retrieved using a GET request to fetch user data. To create a new user, use a POST request. If a user wants to update their profile, a PUT request can be used to modify user data for that user. | */api/users* |
| * 1. **Exercise** | To access a list of available exercises, you can use a GET request for exercise data. If you want to add a new exercise to the library, use a POST request. | */api/exercise* |
| * 1. **Workout** | Users can retrieve their workout plans with a GET request for workout plan data. To create a new workout plan, use a POST request. If users want to update or modify an existing workout plan, a PUT request can be employed. | */api/workout* |
| * 1. **Progress Log** | To view a user's progress logs, a GET request for progress log data can be used. If a user wants to log their workout progress, a POST request can help create a new progress log entry. | */api/progress* |
| * 1. **Fitness Goal** | Users can fetch their fitness goals using a GET request for fitness goal data. To set new fitness goals, a POST request is utilized. If users want to update or modify existing fitness goals, they can use a PUT request. | */api/goals* |
| * 1. **Nutrition Plan** | Users can access their nutrition plans using a GET request for nutrition plan data. To create a new nutrition plan, a POST request is employed. If users want to make changes to an existing nutrition plan, a PUT request is used. | */api/nutrition-plan* |
| * 1. **Food** | Users can view information about specific food items or meals using a GET request for food data. To add new food items to a nutrition plan, a POST request can be used. | */api/plan* |
| * 1. **Coach** | Coaches and their profiles can be retrieved with a GET request for coach data. To book a coaching session or training plan with a coach, a POST request is utilized. Coaches can manage their schedules, which may involve a combination of GET, POST, and PUT requests for coach data and interactions. | */api/coach* |