

My Fitness App

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Abstract

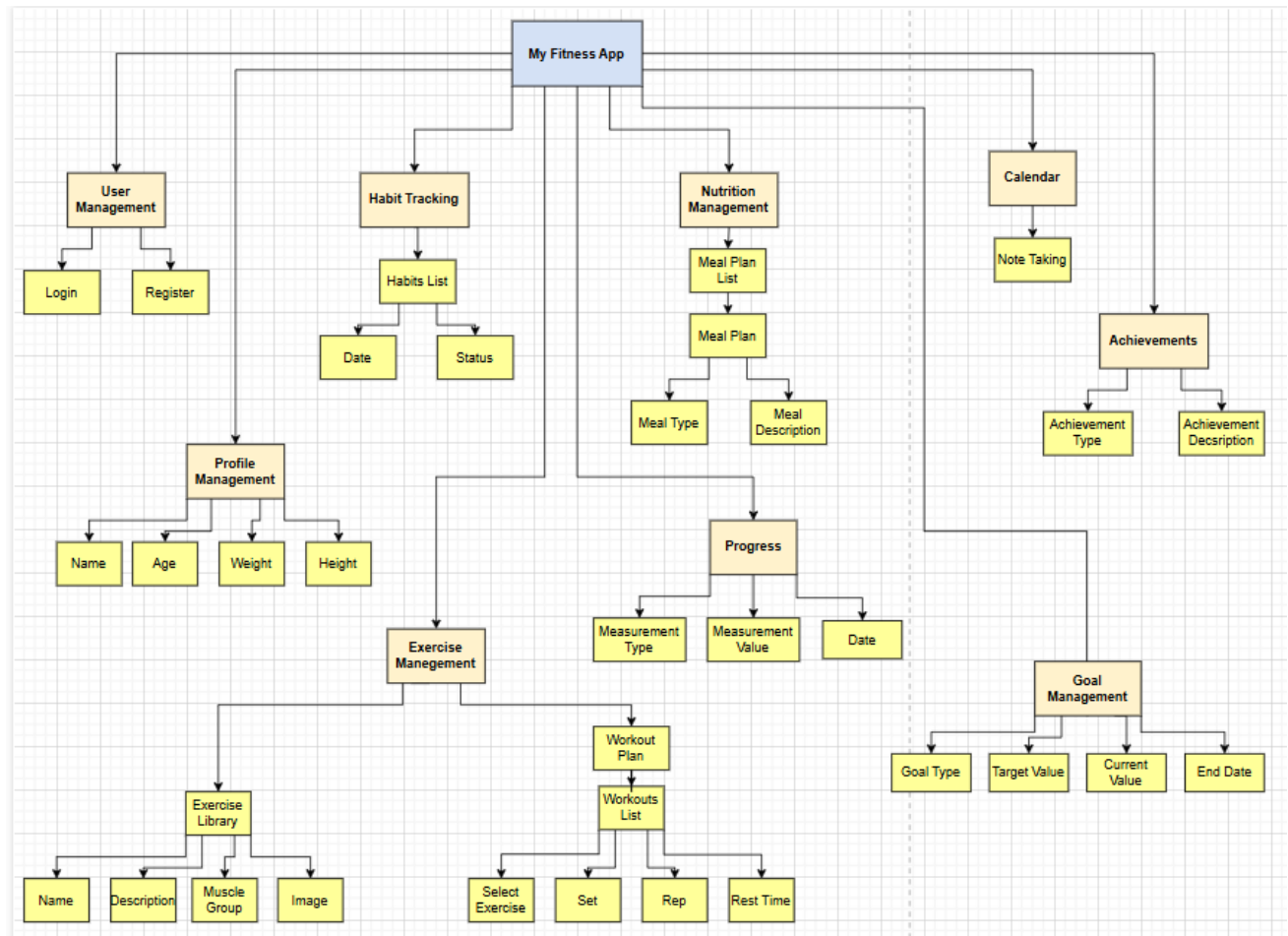
The fitness application is a comprehensive digital tool designed to support users in achieving their health and fitness goals. It includes features such as personalized nutrition plans, a comprehensive exercise library, customizable workout routines, and a calendar for scheduling. Users can set goals, track their progress, and monitor habits through intuitive interfaces. Motivational elements like achievements and rewards enhance engagement. Tailored for desktop use, the application ensures ease of navigation and detailed planning. By integrating exercise, nutrition, and habit tracking into a single platform, it provides a structured approach for users to maintain a consistent and healthy lifestyle.

Completion Report

The fitness application successfully integrated most of the features outlined in the initial plan. Key functionalities such as user profiles, goal setting, calendar, note-taking, habit tracking, exercise library, workout plans, and meal plans were fully implemented as promised. However, a few features were not accomplished due to various challenges:

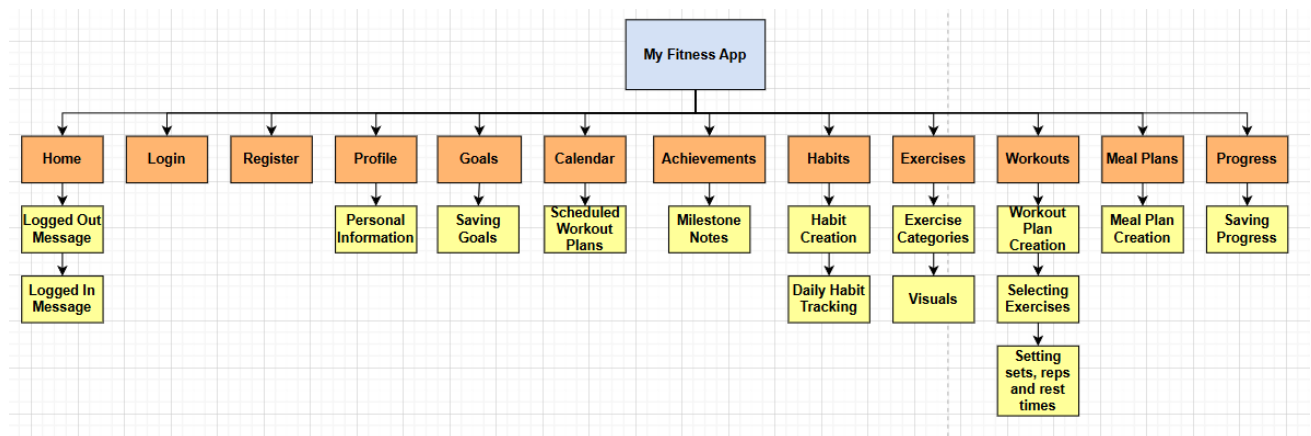
- **Progress Charts:**
While progress tracking was implemented, detailed charts showcasing users' progress were not included. This feature required significant effort and the adoption of additional software libraries or tools, which demanded more time and learning than initially anticipated.
- **Default Achievements:**
Initially, the application was intended to provide predefined achievements that users could unlock by completing specific milestones, such as a certain number of workouts or exercises. However, this was not implemented due to its complexity. Instead, users were given the ability to define and write their own achievements, a simpler and more feasible solution.

Functional Decomposition Diagram



- **User Management:** Handles user registration and login functionality.
- **Profile Management:** Manages user details like name, age, height, and weight.
- **Habit Tracking:** Tracks daily habits and their completion status.
- **Nutrition Management:** Allows users to create and view personalized meal plans.
- **Calendar:** Displays scheduled activities.
- **Achievements:** Allows users to create and view their own fitness achievements.
- **Progress:** Tracks and visualizes user progress with measurement data.
- **Exercise Management:** Enables users to create and customize workout plans by selecting exercises from a comprehensive library or adding their own, with options to specify details like sets, repetitions, rest times, and organize routines tailored to their fitness goals.
- **Goal Management:** Allows users to set fitness goals, track progress, and manage target values within a defined time frame

Sitemap



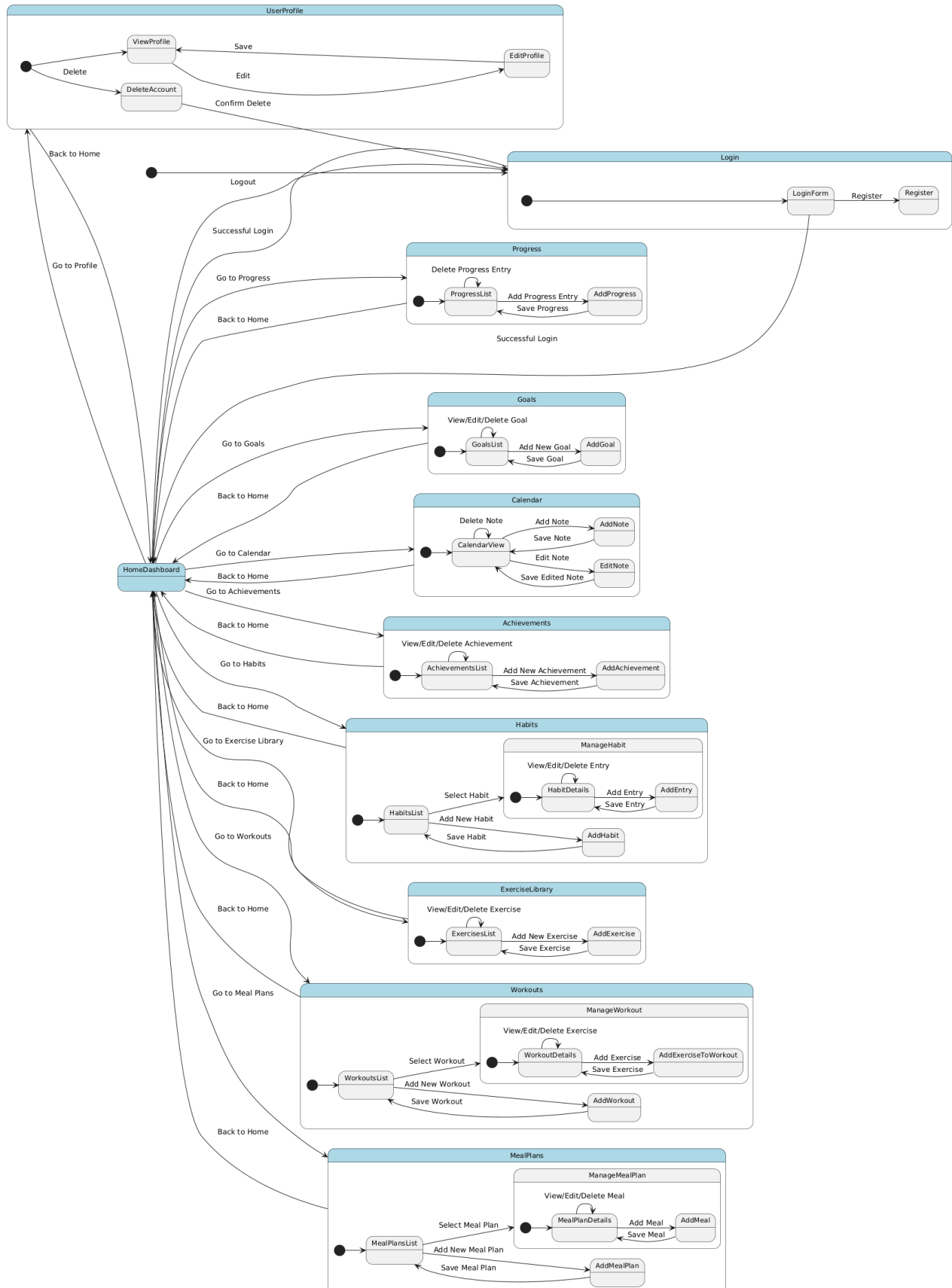
Use Cases

there is no detailed common use case as every registered user has access to all features (except for the exercise library created immediately after registration)

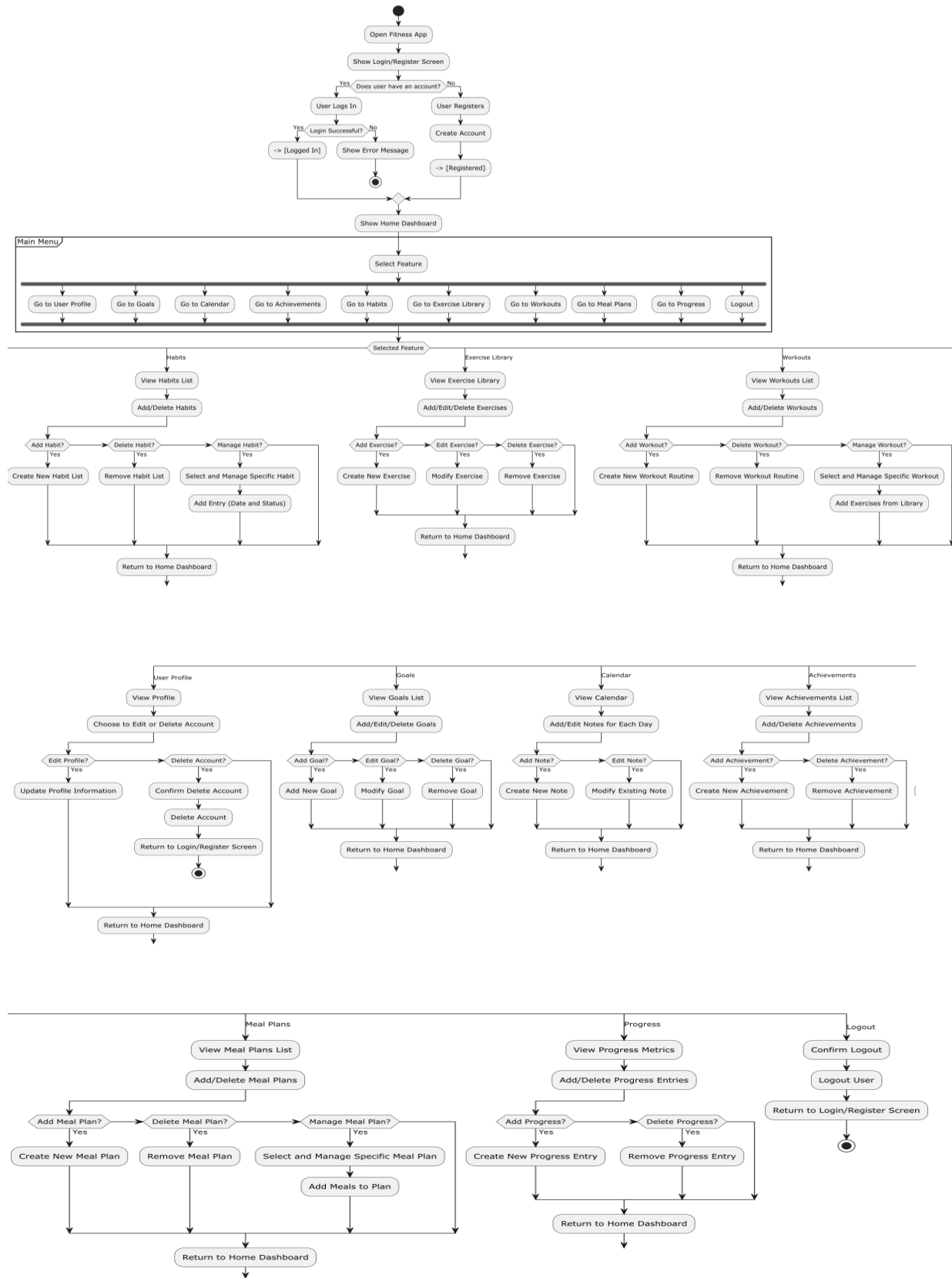


- **Register:** Allows users to create an account to access all features of the fitness application.
- **Login:** Enables users to securely log in to their accounts.
- **View/Edit/Delete Profile:** Users can manage their personal information such as name, age, height, weight.
- **Create/View/Update/Delete Nutrition Plan:** Users can customize, modify, or delete their personalized meal and nutrition plans.
- **Create/View/Update/Delete Workout Plan:** Enables users to build, adjust, or remove workout routines, including exercises, sets, and repetitions.
- **Add/Delete Exercise:** Users can add specific exercises from the library or remove them as needed for their plans.
- **Add/Delete Goal:** Allows users to set or remove fitness goals, like weight loss or strength gain.
- **Add/Delete Achievement:** Users can manage milestones or achievements.
- **Add/Delete Progress:** Users can log or remove progress data, such as workout stats or body measurements.
- **Create/View/Update/Delete Habits List:** Helps users track and manage healthy habits like hydration or stretching.
- **Add Notes to the Calendar:** Users can add notes to their calendar for planning or reminders.
- **Set Default Exercises While Registering:** Automatically adds a default set of exercises to the user's library upon registration.

State Diagram



Activity Diagram



Sequence Diagram



Layout

The image displays a series of wireframe layouts for a fitness application, organized into a grid. Each wireframe represents a different page and includes a navigation bar with links: Home, Profile, Goals, Calendar, Achievements, Habits, Exercises, Workouts, Meal Plans, Progress, and Logout.

- Home Page / Logout:** Features a navigation bar and two main content areas: 'Introduction Text' and 'Image'.
- Login Page:** Features a navigation bar, an 'Image' placeholder, and a login form with 'Email' and 'Password' fields.
- Register Page:** Features a navigation bar, an 'Image' placeholder, and a registration form with fields for 'Name', 'Email', 'Password', 'Age', 'Height', and 'Weight'.
- Home Page / Login:** Features a navigation bar and two main content areas: 'Welcome Back Text' and 'Image'.
- Profile Page:** Features a navigation bar and a profile form with fields for 'Name', 'Email', 'Age', 'Height', and 'Weight', along with 'Edit' and 'Delete' buttons.
- Goal / Achievement / Exercise / Progress Page:** Features a navigation bar and a list of 'List Element 1', 'List Element 2', and 'List Element 3'.
- Calendar Page:** Features a navigation bar, a 'Calendar' placeholder, and a list of 'Note 1' and 'Note 2'.
- Habits Page:** Features a navigation bar and a table with columns for 'Habit', 'Date List', and 'Status List'.
- Workout / Meal Plans Page:** Features a navigation bar and a list of 'Workout / Meal 1', 'Workout / Meal 2', 'Workouts / Meals for 1', 'Workout Meal 1', and 'Workout Meal 2'.

On the right side of the grid, there is a list of features and their descriptions:

- . **Profile:** Manage personal information.
- . **Goals:** Set and track fitness objectives.
- . **Calendar:** View workout and meal schedules.
- . **Achievements:** Review the milestones reached.
- . **Habits:** Track healthy habits.
- . **Exercises:** Browse the exercise library and more.
- . **Workouts:** Create own workout programs.
- . **Meal Plans:** View personalized meal plans.
- . **Progress:** Monitor progress.

Future Work

If given more time and resources, the fitness application could be enhanced and extended in the following ways:

- An **administrator role** would be introduced to manage the application more effectively. The administrator would have the ability to create and manage a predefined list of achievements, which would automatically unlock when users complete specific tasks or milestones. Additionally, the administrator would have privileges such as viewing the list of all users, assigning workout or meal plans to specific users, adding new exercises to their special exercise library or global exercise library and deleting user accounts if necessary. This feature would provide centralized control and enhance the overall user experience by offering structured achievements and personalized plans.
- The **progress page** would be enhanced with graphical representations, such as detailed charts and visualizations. These visual elements would make progress tracking more intuitive and engaging for users.