

Weight Tracking App

Goal:

The primary goal of this project is to design and develop a weight-tracking mobile application that helps users monitor their daily weight progress and achieve their weight-related goals. The app will provide an intuitive, user-centered experience while ensuring secure data storage and reliable functionality. The weight-tracking app will allow users to log their daily weight, set a goal weight, and track progress over time.

Components and Functionality:

Database:

- Daily Weight Table: Stores entries for the user's daily weight and the corresponding date.
- User Login Table: Stores user credentials (username and password) securely.
- Goal Weight Table: Stores a single, user-defined goal weight.

UI:

- Login Screen: Allows users to log in or create a new account.
- Weight Log Screen: Displays a grid of all daily weight entries and allows users to add new entries.
- Goal Weight Screen: Allows users to set a goal weight and notifies them when it's reached.

Functionality requirements:

- Secure user authentication.
- User-friendly mechanisms to log daily weights and set a goal weight.
- Notifications when users reach their goal weight

The application is designed for individuals who want to monitor their weight progress. All users are individual app users with a singular goal of weight tracking. No shared or administrative accounts are required. The goals of each will vary from logging daily weight efficiently to viewing progress over time. As for user needs simple is always better in my opinion. So, making it simple and intuitive, secure login, data storage and some sort of visual cues for progress and mile markers.

Screens and Features

1. Login Screen
 - a. Fields for username and password.
 - b. “Create Account” option for new users.
 - c. Button to log in.
 - d. Error messages for incorrect login credentials.
2. Weight Log Screen
 - a. Grid displaying daily weights and corresponding dates.
 - b. Button to add a new daily weight.
 - c. Option to edit or delete existing entries.
3. Goal Weight Screen
 - a. Field to set or update a goal weight.

- b. Button to save the goal weight.
- c. Notification feature to alert users when the goal weight is reached.

Navigation Between Screens

- After logging in, users will be directed to the Weight Log Screen.
- A navigation menu will allow users to switch between the Weight Log Screen and the Goal Weight Screen.
- Error messages and validation checks will ensure smooth transitions.

Functional Requirements in Code Design The app's code design will represent the functional requirements and connect them to the UI as follows:

1. Login Screen
 - a. Input fields for username and password linked to the database.
 - b. API calls to authenticate user credentials.
2. Weight Log Screen
 - a. Grid view component displaying daily weight entries retrieved from the database.
 - b. Input field and save button to add a new weight.
 - c. Database update calls for adding, editing, or deleting entries.
3. Goal Weight Screen
 - a. Input field linked to the Goal Weight Table in the database.
 - b. Notification logic triggered when the user's current weight matches the goal weight.

Data Flow Between Components

Richard Seabridge
CS 360 Mobile Arch & Programming
Southern New Hampshire University
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- Login data is authenticated against the User Login Table.
- Daily weight entries are fetched from the Daily Weight Table and displayed on the Weight Log Screen.
- The goal weight is stored in the Goal Weight Table, and notifications are triggered when conditions are met.

UI Components and Data Requirements

- Login Screen: Username and password fields (input), login button (action).
- Weight Log Screen: Grid view (output), input field (daily weight), and save button (action).
- Goal Weight Screen: Input field (goal weight) and save button (action).