

Project Proposal

LifeBalance+ (Meal & Fitness Tracker)

Project Description:

Our project aims to create an innovative mobile application that seamlessly integrates fitness tracking and meal management into a daily planner. This all-in-one app will empower users to achieve their health and wellness goals by providing detailed features, including meal tracking, calorie and macronutrient monitoring, fitness tracking for cardio and resistance training, and an intuitive workout split planner. Additionally, it offers advanced functionalities such as route planning for runs, a stopwatch, and music playback control.

List of Group Members and Their Responsibilities:

Jayson Sandhu (Project Manager): Responsible for project coordination, timeline management, overall app design including features & functionality of each aspect of user interaction.

Ajmain Khan (Front-End Developer): In charge of creating the user interface, including mockups and visual design.

Mitch Nolte (Back-End Developer): Responsible for building the app's server and database functionalities, following UML implementation and including all preset data + attributes required..

Lucas Silva Rocha (Quality Assurance): Ensures the app's nutrition and fitness content is accurate and tests the app's functionality, reports bugs, and ensures a smooth user experience.

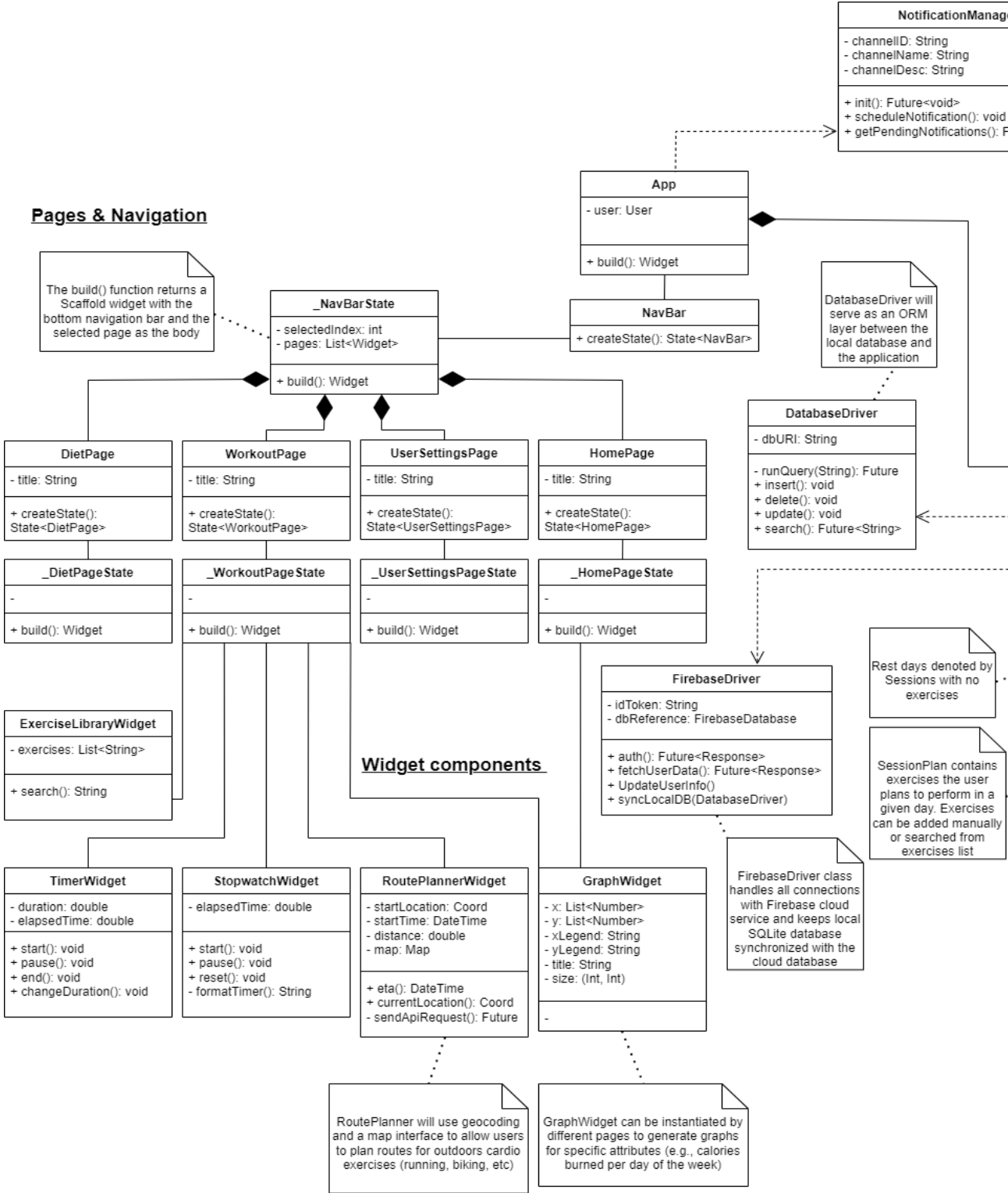
List of Features and Functional Requirements:

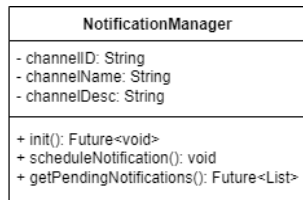
* All data entered and stored will be kept locally until it is synchronised with cloud storage as a backup when requested.

- Meal Tracking:
 - Allows users to input their meals and track their calories and macros, while contributing to daily caloric intake goals.
 - Provides preset options for common foods to expedite data entry.
 - Offers customizable nutrition goals with progress tracking metres.
 - Send notifications when meals have not been entered at Breakfast, Lunch & Dinner times accordingly as reminders.

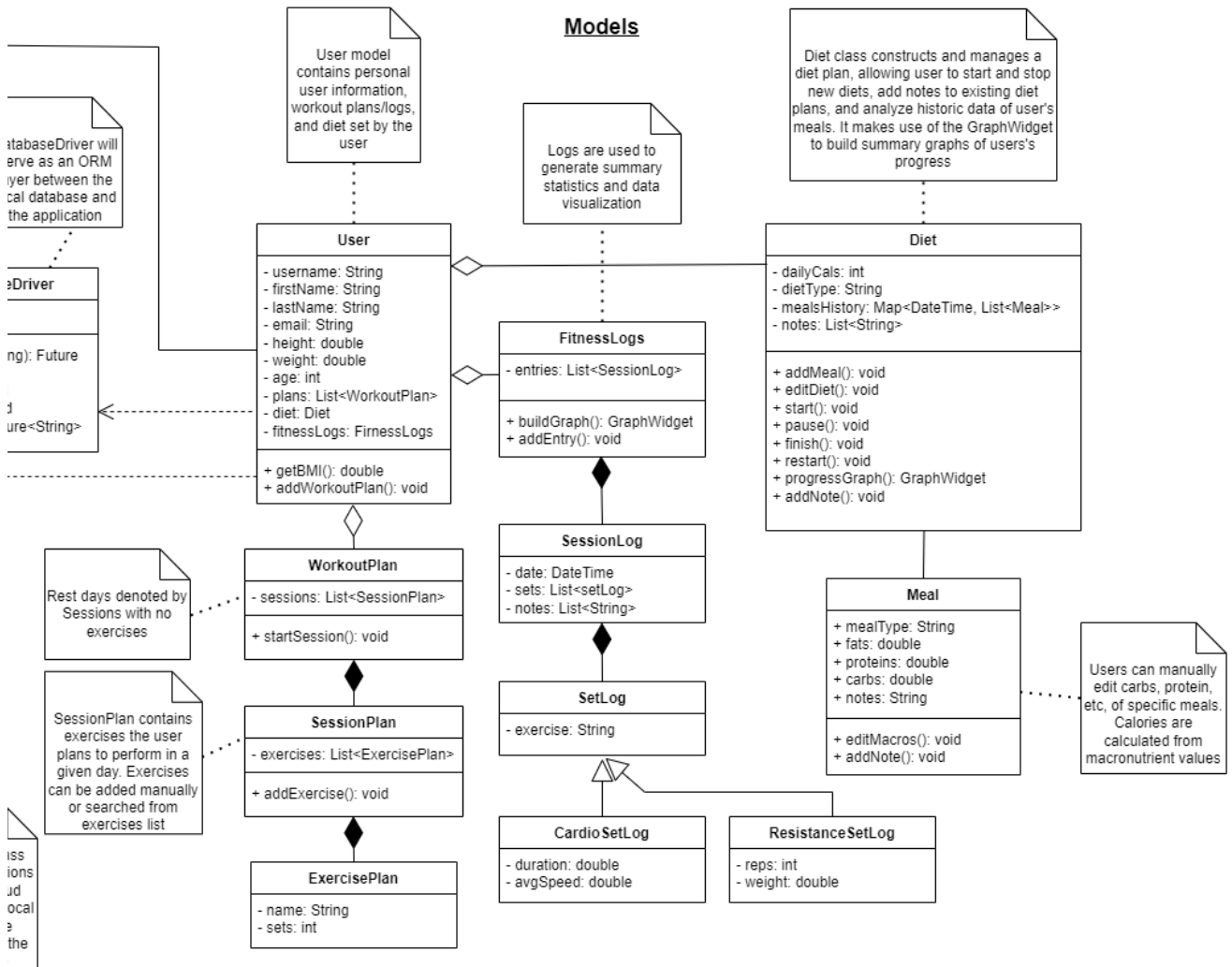
- Fitness Tracking:
 - For Cardio: Allows users to track time and speed/resistance per exercise.
 - For Resistance Training: Tracks exercises per session, sets per exercise, reps, weight, and potentially RPE per set.
 - Enables users to add comments to session entries.
 - Automatically tracks rest days between sessions.
 - Provides customizable fitness goals with progress tracking metres.
 - Bodyweight tracking, possibly with manual entry or integration with automated Bluetooth scales.
 - Send notifications if daily workout has not been completed by preset time.
- Graphs:
 - Stored data is used to generate graphs for meal and fitness tracking data, patterns and analytics.
 - Allows users to view weight/volume graphs for individual exercises and total volume over time.
 - Enables easy access to specific exercise graphs via tapping on entries in the fitness tracking section.
 - Facilitates the combination of graphs for comparative analysis (e.g., exercise progress, macro intake, bodyweight vs. caloric intake).
- Workout Split Planner:
 - Allows users to define the number of days in their workout split and the placement of rest days.
 - Offers both a default fixed weekly schedule and the flexibility to use more or fewer than 7 days.
 - Permits the selection of exercises for each day and the number of sets for each exercise.
 - Allows users to save multiple workout splits and provides basic split templates.
- Route Planner for Runs:
 - Includes weather information to aid in planning outdoor runs.
 - Implements maps functionality for visual representation of routes.
- Stopwatch & Timer:
 - Provides a built-in stopwatch and timer for workout timing and scheduling purposes.
- Optional Workout Reminder Notifications:
 - Sends workout reminders based on the user's defined workout split.
- Exercise Library:
 - Features an extensive list of exercises categorised by muscle groups and equipment requirements for workout planning.
- Music Playback Control:
 - Integrates music playback control if technically feasible.
 - Persistent media control UI as a small tile for easy access to music.

UML Code Design:

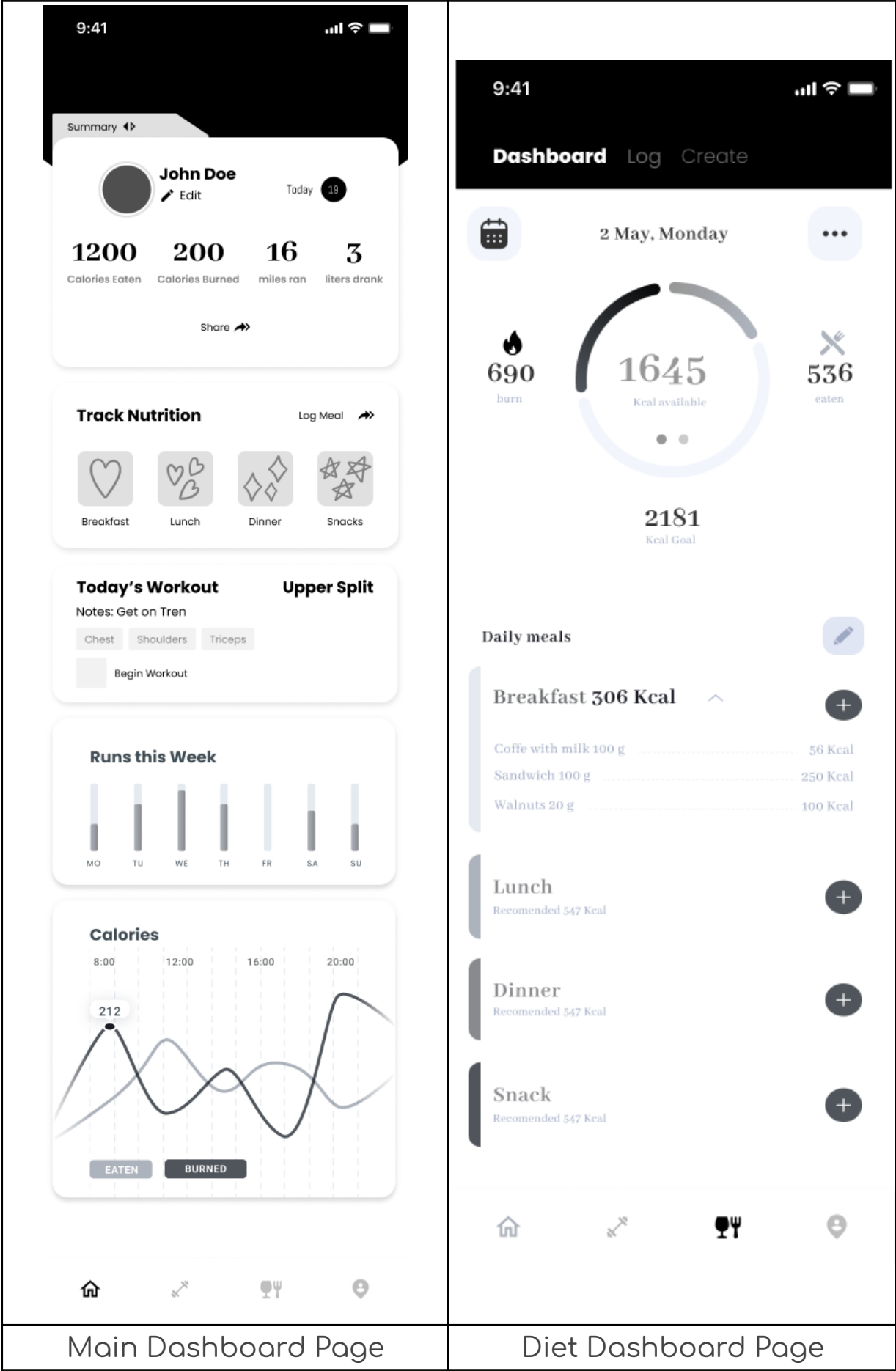


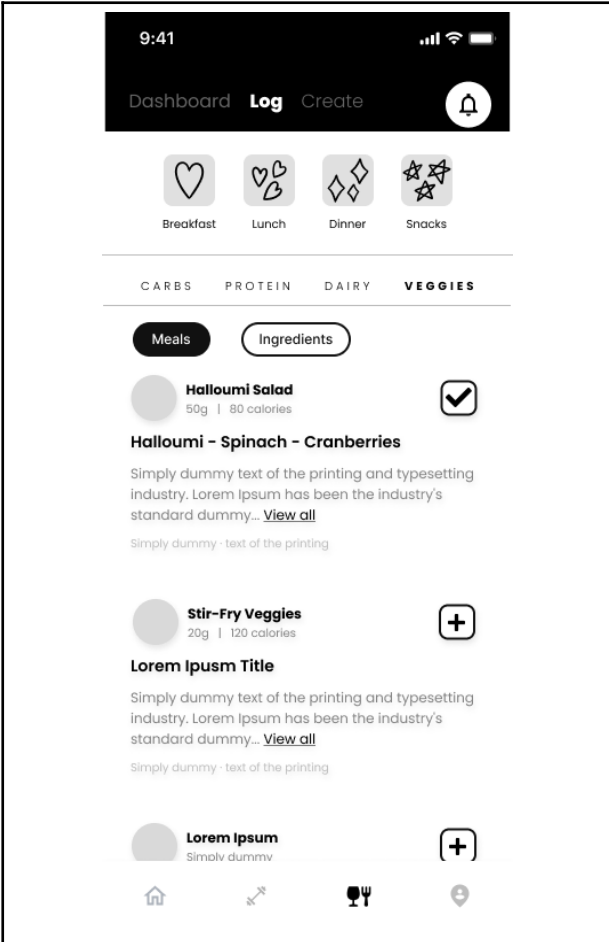


NotificationManager schedules and sends notifications to users's phones depending on app permissions

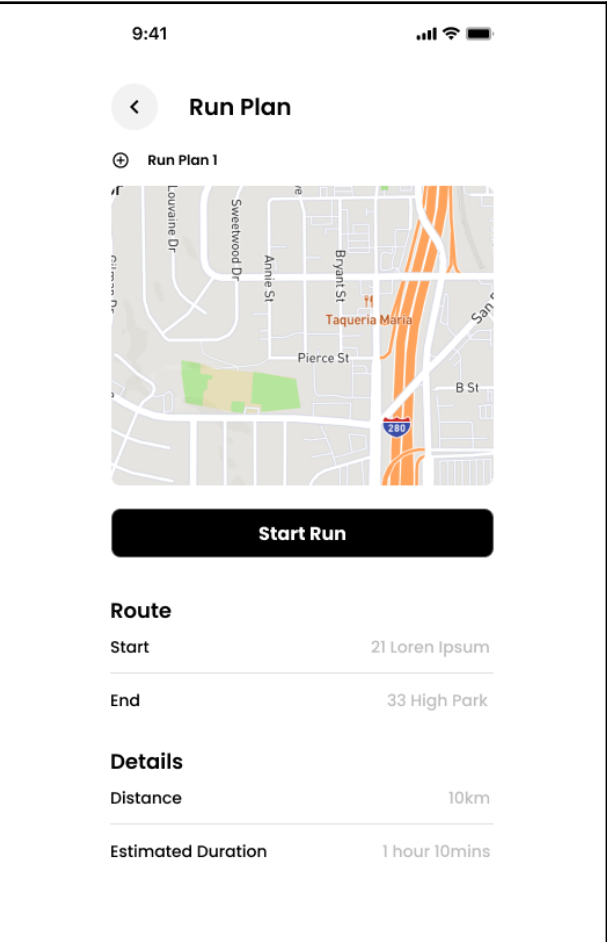


Mockup of User Interface:

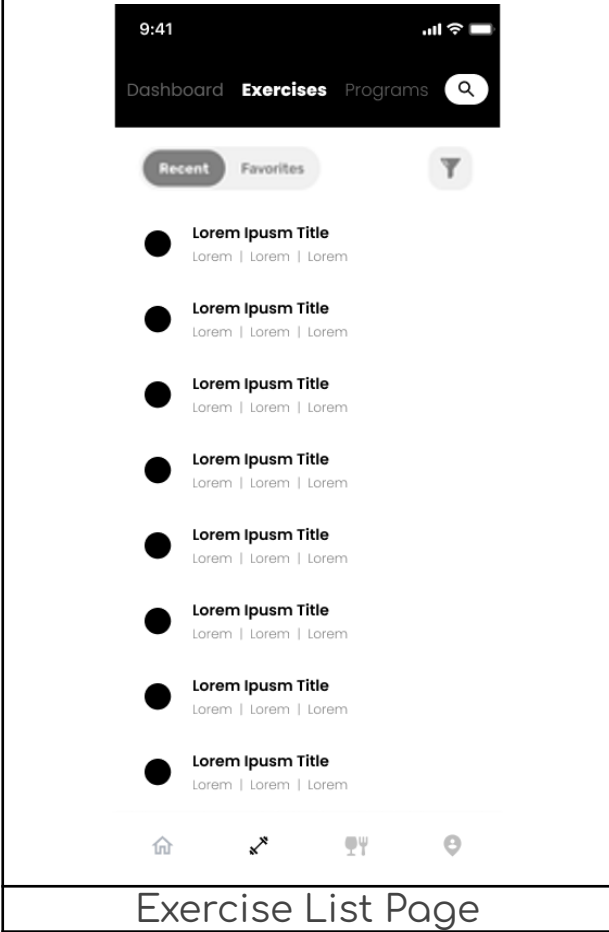




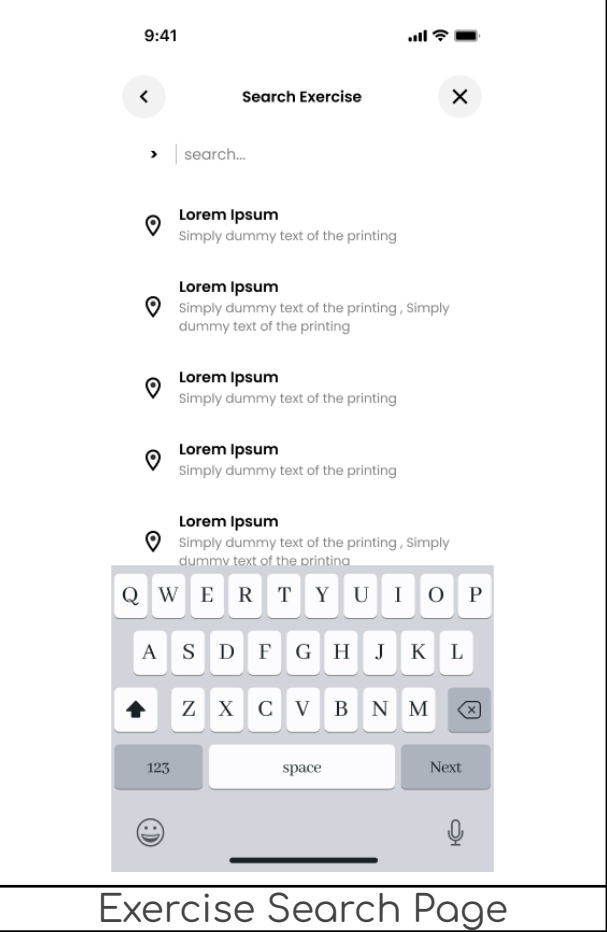
Meal Log Page



Run Route Planner Page



Exercise List Page



Exercise Search Page

<div data-bbox="209 210 766 374"> <div>9:41</div> <div> <div>Dashboard</div> <div>Exercises</div> <div>Programs</div> </div> </div> <div data-bbox="365 396 614 434"> <div>Gym</div> <div>Run</div> <div>History</div> </div> <div data-bbox="220 479 756 553"> <div>Hey John</div> </div> <div data-bbox="220 591 756 665"> <div>Today's a great day to run!</div> <div>Plan Run</div> </div> <div data-bbox="209 703 766 1193"> <div>Today's Workout</div> <div>Push Day</div> <div> <div>Chest</div> <div>Shoulder</div> <div>Triceps</div> </div> <table> <tr> <td>Bench Press</td> <td>4 Sets</td> </tr> <tr> <td>Shoulder Press</td> <td>3 Sets</td> </tr> <tr> <td>Tricep Pushdown</td> <td>3 Sets</td> </tr> <tr> <td>Incline Bench Press</td> <td>3 Sets</td> </tr> </table> <div>Start Workout</div> </div> <div data-bbox="209 1216 766 1814"> <div>Distribution</div> <div> </div> <div> <div>BACK</div> <div>LEG</div> <div>CHEST</div> </div> </div> <div data-bbox="209 1852 766 1968"> <div> <div>Home</div> <div>Run</div> <div>History</div> <div>Profile</div> </div> </div>	Bench Press	4 Sets	Shoulder Press	3 Sets	Tricep Pushdown	3 Sets	Incline Bench Press	3 Sets	<div data-bbox="825 568 1385 1585"> <div>New Routine</div> <div>Exercise Name</div> <div>...</div> <div>Exercise Type</div> <div></div> <div>Description</div> <div>...</div> <div>Metric</div> <div></div> <div>Days</div> <div></div> <div> <div>Confirm</div> <div>Cancel</div> </div> </div>
Bench Press	4 Sets								
Shoulder Press	3 Sets								
Tricep Pushdown	3 Sets								
Incline Bench Press	3 Sets								
<div>Fitness Dashboard Page</div>	<div>Routine Planner Page</div>								

Scope of Project:

The project scope is realistic given the team's size and the allocated time frame.

- Aligns with course objectives and required components.
- Strives for comprehensiveness while avoiding overly ambitious features.

This project proposal outlines the development of a holistic Fitness & Diet Planner App with clear features, roles, and responsibilities for each team member. It ensures the integration of various functionalities to support users in their health and wellness journeys.