

Fitness Meal Planner

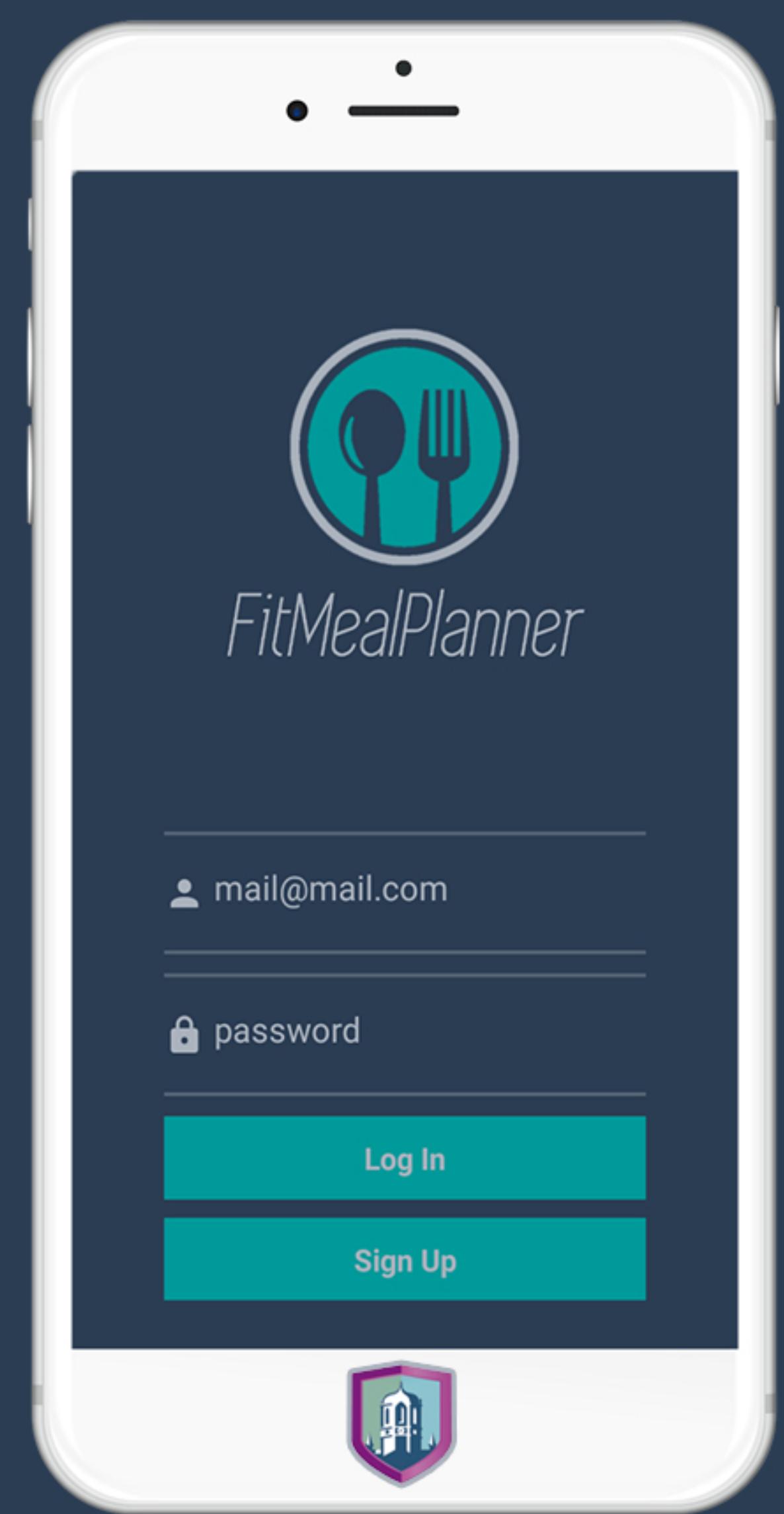
Student: Oisin McNally

Project Supervisor: Des Chambers

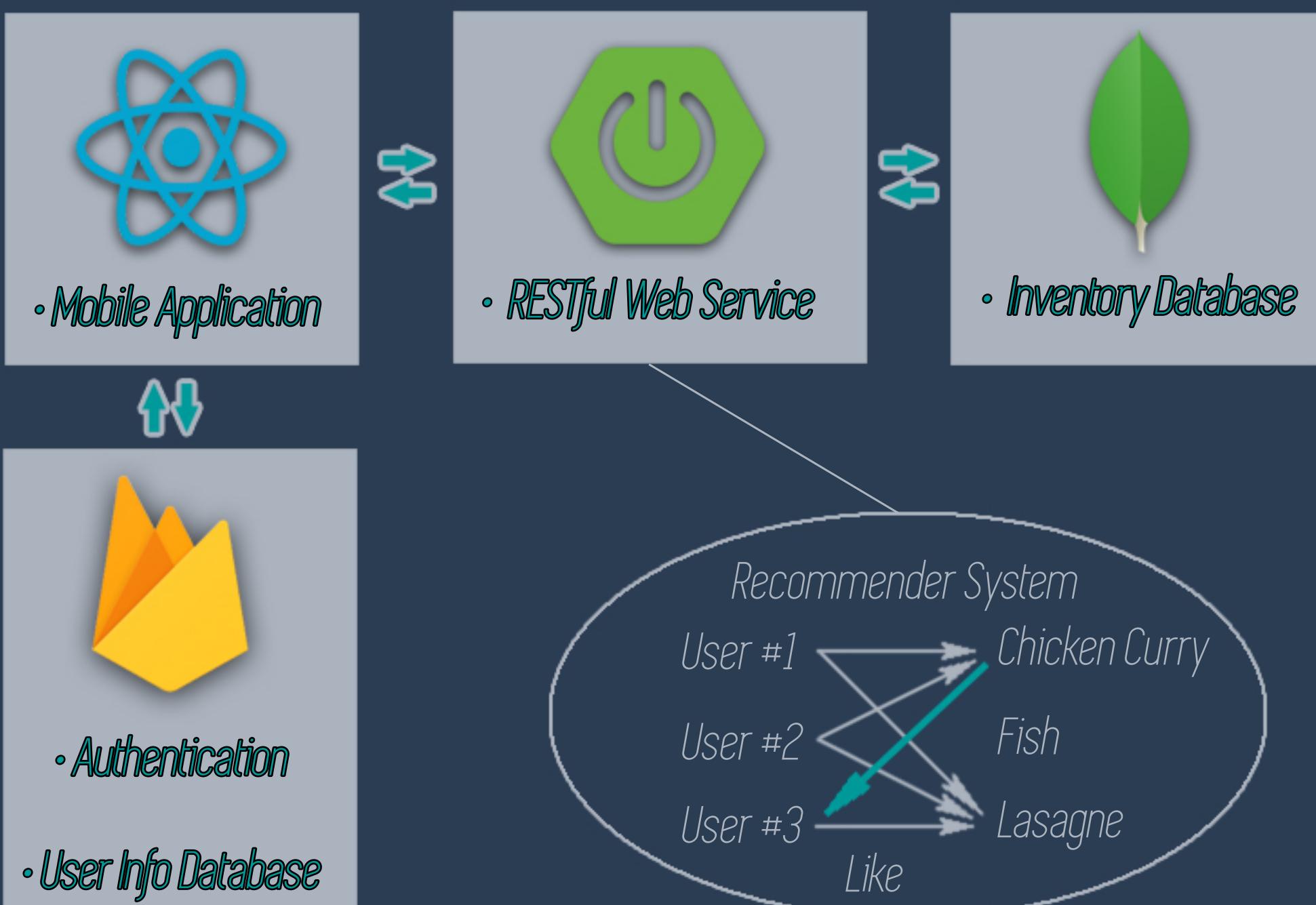
Co-Assessor: Enda Howley

Project Objectives

- Create a tailored meal plan based on a users nutrition requirements, goals and foods they enjoy.
- Monitor and provide feedback on user progress.
- Design a team management system.
- Use machine learning to make meal recommendations based on user feedback.
- Implement as a cross-platform mobile application using React Native.



Program Flow



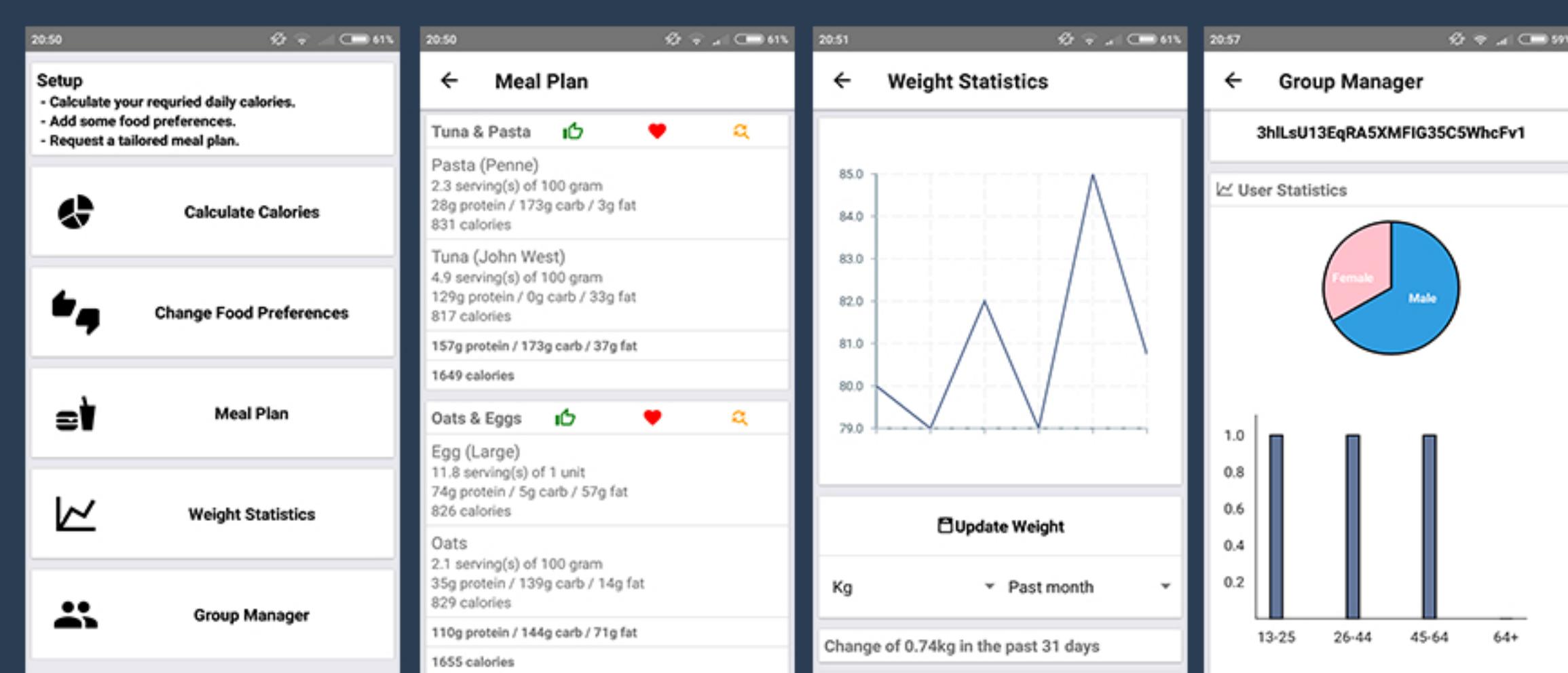
Program Description

- User login and signup is handled through Firebase. Information such as personal characteristics, current meal plan and weigh-ins are stored under the users unique id on the Firebase database.
- A Spring Boot RESTful web service is used as the back-end to handle more complex tasks that would not easily be developed in JavaScript.
- Calorie requirements, number of meals for the day and food preferences for each meal are sent using a HTTP POST to a URL endpoint where they are used to retrieve suitable meals from the DB and construct a meal plan.
- MongoDB stores the food and meal inventory. Lists of users that like each meal are stored here and used in Item-Item Collaborative Filtering to make meal recommendations to a user.

Conclusions

- This project was an exciting opportunity to work with some interesting frameworks such as React which is a product of Facebook.
- Although the distributed nature of this project was challenging it was rewarding and provided an insight into the work of a Full-Stack Developer.
- Through the recommendation of my project supervisor, the project was steered in the direction of collecting user information and providing feedback based on user behaviour which I feel added a significant level of value to the final result.

Screenshots



Main Menu

Meal Plan

Weight Statistics

Group Manager