Software Requirements Specification

For **Food’n Fit**

Version 1.0

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of Food'n Fit is to above all make a diet and nutrition app. We plan on having an app that lets its users do a variety of nutrition based and dietary based searches for recipes. Additionally we want the app to track/ help users track their daily dietary macronutrients and save them in a database for later use.

Version 0.1

1.2 Document Conventions

Typographical conventions used in writings this Requirements Specification were Size 11 font with Google Documents "Normal Text". Our app name was Highlighted around the document to show Emphasis on it. We used the regular standards and template for making this document. We wanted every requirement statement to have its own priority. This was chosen because it would allow for us to decide which parts were more or less valuable.

1.3 Intended Audience and Reading Suggestions

This document is intended for anyone working on Food'n Fit with us, including the Managers and outside resources we use. These readers will get value out of us making this document because it shows in a more technical sense what Food'n Fit is about and what we plan on doing with it. The rest of this SRS is organized according to section. There is 5 main sections and each section is further split up into smaller sections to help the reader navigate to exactly where he/she needs to be. The outline is attached at the beginning of the document describing all of these locations.

1.4 Product Scope

The goal of Food'n Fit is provide an all-in-one home for someone looking to better themselves through fitness and nutrition. We will allow the users to make an account and calculate/track their individual daily nutrition progress. Along with that we will allow users to search recipes based on a variety of different search features. These include searching by Ethnicity, Macronutrient and Calories.

1.5 References

The only reference we used in the making of this document was the template provided on Blackboard by our Profesor Frank Conlon. This can be found at his Blackboard.

2. Overall Description

2.1 Product Perspective

Food’n fit is a fitness/food phone app aimed at anyone looking for new food ideas that will fit into their diet goals, and also anyone who is looking for an easy way to keep track of their calories. It focuses on categorizing food recipes base on their macros. This sets Food’n fit apart from other fitness applications.

2.2 Product Functions

- Profile
- Searching recipes
- Calorie Tracking

2.3 User Classes and Characteristics

ThumbsUp will consist of one main group of users: *beginners*, and *experts*. Both groups are equal in importance to the success of this product and are expected to be present in roughly equal quantities. These user groups will be defined by the following characteristics:
Beginner:

- New to calories counting.
- New to concepts of macro nutrients.

Experts:

- Have experience in calories counting.
- Know concepts of macro nutrients.

Both groups will share the following characteristics:

- Looking for an easier way to keep track of calories.
- Interested in discovering new food recipes that fits their diet.

2.4 Operating Environment

The following mobile OS will be supported:

- iOS
- Android

2.5 Design and Implementation Constraints

The Food'n fit application is intended to run on a mobile app; visual and performance constraints for mobile devices will apply. The application will require network access in order to perform the major functions defined in section 2.3.

2.6 User Documentation

Documentation for Food'n fit will take the form of short instructions and tooltips displayed on the webpage. Food'n fit aims to use modern UI design in order to make interaction intuitive and consistent with similar applications already on the market.

2.7 Assumptions and Dependencies

- The system shall assume that the user has had no prior experience interacting with traditional authentication interfaces or other platforms that provide a similar service as Food'n fit.
- The system shall require a document base database for data persistence.

3. External Interface Requirements

3.1 User Interfaces

The app will have three main tabs: the profile, the recipe finder, and the calorie tracker.
The Profile:

- Display user's personal goals
    - weight, height, age, calorie cap, and macros caps.
    - Can be edited using text fields.

The Recipe Finder:

- Multiple dynamic-dropdown fields to auto-populate ingredients
    - Fields can be dropped or added by user, via a button
    - With their selection of the given ingredients, the system will display a new list of possible recipes

Calorie Tracker:

- Meal log
    - User can search for a meal similar to recipe finder, and log that meal nutritions to daily macros
    - Or, user can manually enter macros for a meal not in the database
- Display the user's current daily macros
    - protein, carbs, and fat

3.2 Hardware Interfaces

Food'n Fit does not have any external hardware components.

3.3 Software Interfaces

The frontend of Food'n Fit shall be an Ionic 4 application. Recipe informations, account profile, and food preferences will be stored in a document base database.

3.4 Communications Interfaces

Standard HTTP requests will be used to store and retrieve data between our frontend and servers.

4. System Features

4.1 Recipe Finder (System Feature 1)

4.1.1 Description and Priority

This feature shall allow the user to select from an auto-populating list of ingredients, based on either direct selection or through a search. With their selection of the given ingredients, the system will display a new list of possible meals. These meals will contain all, most, or at least some of the selected ingredients. The system shall allow the user to click on these given meals to view their nutrition, macros, and total calories.

Priority: High **Benefit**: 10 **Penalty**: 0 **Cost**: 8 (Time) **Risk**: 0

4.1.2 Stimulus/Response Sequences

1) The user will begin by logging in
    1.2) If the user is already logged in, they will be initially shown the meal finder feature.
2) The user can either scroll and select, or use a search bar to find and select their desired ingredients
3) The user will then be able to select any resulting meals from a list
    3.1) The user may exit to the previous page to enter different ingredients.

4) Whilst selecting their meal, they may view each individual meal's nutrition, calories, amd macro information.
    4.1) The user may exit to the previous page to select a different meal.

4.1.3 Functional Requirements

REQ-1: The system shall allow the user to select from a list of ingredients .
REQ-2: The system shall allow the user to search for specific ingredients in the list.
REQ-3: The system shall generate, given any number of ingredients from the user, another list of meals which include the previously selected ingredients.
REQ-4: The system shall allow the user to select any generated meal to view the recipe's nutritional information.
REQ-5: The system shall allow the user, at any given page in the feature, to exit to a previous page if not already in the app's home screen.
REQ-6: The system shall display a message to the user if an error or incorrect input occurs.

4.2 Daily Macros and Calorie Tracker (System Feature 2)

4.2.1 Description and Priority

By adding a meal to their daily intake log, a user will be able to track their daily intake of calories and macros. By a daily cycle, the system shall allow the user to carefully track their injested macros such as protein, carbs, and fat. The app shall reset a daily log each day by midnight, yet still allowing the user to check past daily logs.

Priority: High **Benefit**: 8 **Penalty**: 0 **Cost**: 5 (Time) **Risk**: 0

4.2.2 Stimulus/Response Sequences

1) The user selects a meal to add to their daily log.
    1.2) The app shall present a message confirming their log submission.
2) The user may select another meal of their previous list or look up more ingredients instead.
3) The user will be able to view their daily and past logs from their profile, each log containing their daily intake of macros and calories from their previously added meals.
4) The user at any time can remove a meal from the current day's log
    4.1) The app shall present a message confirming their removal.

4.2.3 Functional Requirements

REQ-1: The system shall allow the user to add any meal into a daily log.
REQ-2: The system shall allow the user to remove any meal from the daily log.
REQ-3: The system shall generate a message confirming the user's addition to their daily log.
REQ-4: The system shall generate a message confirming the user's removal of a meal from their daily log.
REQ-5: The system shall generate a daily report of their log for the user to see.
REQ-5: The system shall display on daily reports the total amount of calories, protien, carbs, and fats from the user-selected meals.

4.3 User Profile (System Feature 3)

4.3.1 Description and Priority

A user will be able to edit and customize their profile to better suit the user's needs and goals. The user profile feature will allow users to enter and edit their customizable attributes such as their age, weight, height, sex, and weight goals. Given these inputs, the app will be able to generate a suggested daily amount of calories and macros for the user to reach on a daily basis to help complete their goals.

Priority: Medium **Benefit**: 6 **Penalty**: 0 **Cost**: 7 (Time) **Risk**: 0

4.3.2 Stimulus/Response Sequences

1) The user shall select their profile page to view their customizable profile from the profile tab.
2) The user can enter their weight into their profile.
    2.1) The user may edit their weight at any point
3) The user can enter their height into their profile
    3.1) The user may edit their height at any point
4) The user may enter their age into their profile
    4.1) The user may edit their age at any given point
5) The user may enter their sex into their profile
    5.1) The user may edit their sex at any given point
6) The user may enter their goal to lose or gain weight, and the amount desired per week.
    6.1) The user may edit their goals at any given point.
7) The user, if all inputs are given in the profile, shall have a suggested calorie and macros to reach on a daily basis in order to complete their goals.

4.3.3 Functional Requirements

REQ-1: The system shall allow the user to access their profile from the profile tab.
REQ-2: The system shall allow the user to input their weight.
REQ-3: The system shall allow the user to edit their weight after the initial input.
REQ-4: The system shall allow the user to input their height.
REQ-5: The system shall allow the user to edit their height after the initial input.
REQ-6: The system shall allow the user to input their age.
REQ-7: The system shall allow the user to edit their age after the initial input.
REQ-8: The system shall allow the user to input their sex.
REQ-9: The system shall allow the user to edit their sex after the initial input.
REQ-10: The system shall allow the user to input their desired goal to lose weight.
REQ-11: The system shall allow the user to input their desired goal amount to lose per week.
REQ-10: The system shall allow the user to input their desired goal to gain weight.
REQ-11: The system shall allow the user to input their desired goal amount to gain per week.
REQ-12: The system shall generate a suggested amount of calories, protein, carbs, and fats to reach for the user.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Our application relies on efficient queries to retrieve information in a timely manner; if our searches through the database causes more than a second or two wait for the user, it may cause the user to be less interested in the application. Situations where the user is loading their profile or when searching for a possible meal are the most database intensive. We also want to give users ample amount of space to save personal information like calorie intakes or recent meals.

5.2 Safety Requirements

Our application is fairly benign in the sense that we do not foresee any harm to a users safety during or after using our application. One possible scenario is a user searching for a meal through our service and being allergic to one of the ingredients. With this in mind, we will allow users to input their allergies and exclude those meals from their search.

5.3 Security Requirements

Since our application stores mostly food and intake information, there are not many possibilities to leak personal information to other users. We will not require users to put in information such as birthdate or phone numbers. However, we will still allow the users to create an account with a

username and password. This would only be needed for logging into one's account to access their previous food habits or calorie intake.

5.4 Software Quality Attributes

The system must run on on IOS and Android devices.

5.5 Business Rules

There are no business rules that we are aware of at the moment.