Software Requirements and Design Document

For

Group 11

Version 1.0

Authors:

Tristan F

Kiara B

Jared R

Kaedon H

Jeffrey M

1. Overview

The KitchGym is a fitness/health mobile app that allows you to record your old workouts as well as create new ones. The results of these workouts can then transfer over to the health portion of the app where meals can be created depending on your required calorie intake.

2. Functional Requirements

High Priority

1. Users must be able to create custom workouts.
2. Users must be able to save their created workouts.
3. Users must be able to search for recipes that fit within their caloric limit by inputting ingredients.
4. App must be able to calculate the calorie count of food that the user inputs via the "Input Meal" button.
5. App must include a calorie tracker.
6. App must be able to track all of the meals a user inputs.

Medium Priority

7. App must be able to suggest food to reach a user's daily caloric goal.
8. Homepage must display a visual progress report that includes weight changes, average calories burned per workout, and the average time spent per workout.

Low Priority

9. Make app look nice (color scheme, animations, icons, etc)

3. Non-functional Requirements

1. The App should be accessible to people with vision issues by implementing an audio screen reader, a large font option, and a screen magnifier.
2. The App should be accessible for people with color blindness. This can be done by making sure any information represented through color (like a pie chart) is also stated through other means, such as text.
3. App should include a "help" menu to address possible problems a user may have.
4. All data will be stored in remote databases to reduce the amount of local storage space used.
5. User interface should be simple and responsive.
6. App should be able to run on Android version 4.0.3 and up. Android 10 will be the target development version.
7. APIs will be used to create workouts and meals. (Recipe Puppy, TheMealDB, Nutritionx, Wger).
8. In the event that an API or database is unable to be accessed, the user will be notified by an error message.
9. Any code should be well documented and readable.
10. Users will receive notifications reminding them to work out and eat. Can be disabled.

11. App should be able to launch in under 5 seconds on a cold start. Transitions between activities should be as instant as possible.
12. Any caloric calculations will be rounded to the nearest whole number.
13. Weight calculations will be rounded to the nearest tenth of a pound or kilogram.
14. Time spent working out will be rounded to the nearest second.

4. Use Case Diagram
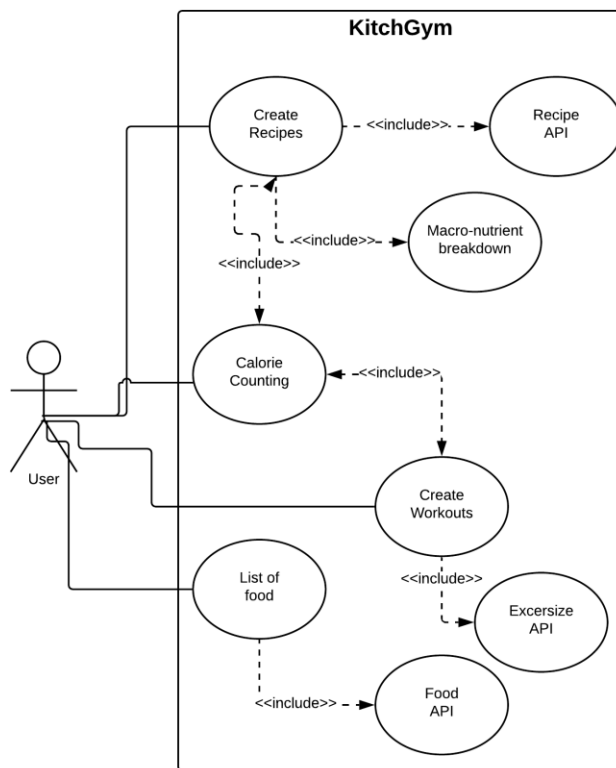
5. Class Diagram and/or Sequence Diagrams

As of right now, a Class Diagram cannot be effectively created. So here is the Sequence Diagram:
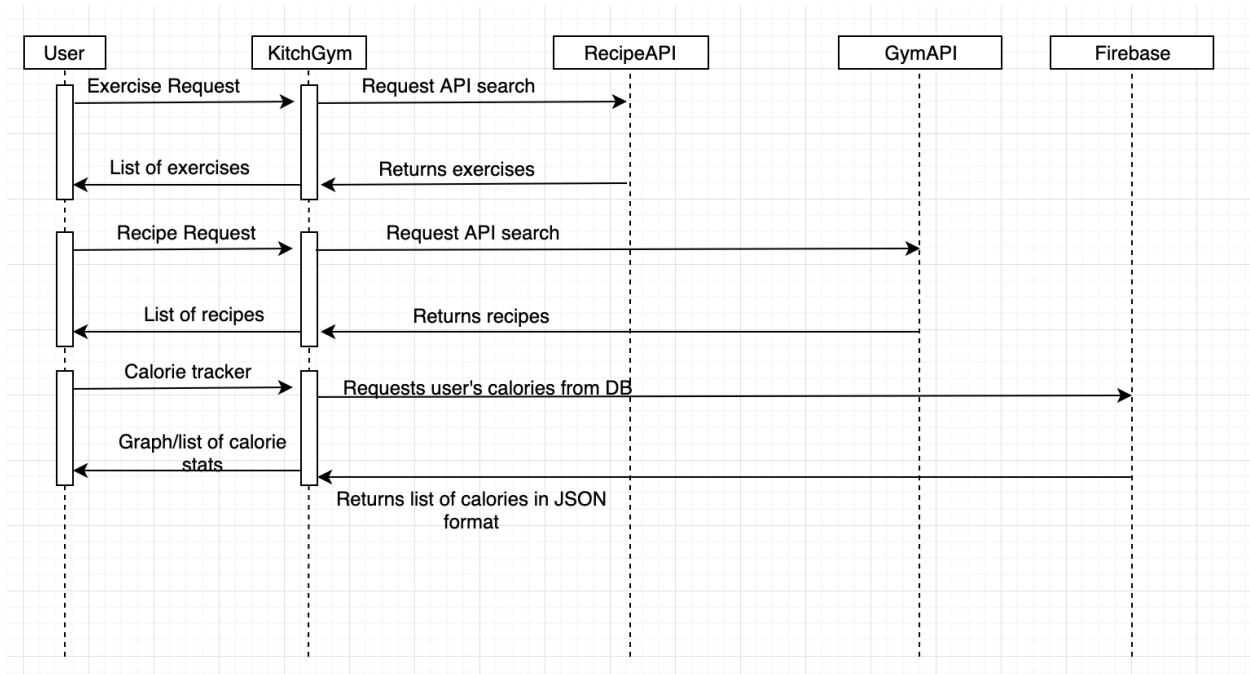
6. Operating Environment

The application will operate on an Android device. The minimum OS would be API 15: Android 4.0.3 (IceCreamSandwich). This environment was chosen because it allows the application to run on 100% of devices, according to Android Studio.

7. Assumptions and Dependencies

- The devices being used are Android and that the device's operating system is up-to-date, or at least Android 4.0.3
- The utilized APIs are going to stay public
- The user's device will be able to connect to the internet when using the KitchGym
- The users will only want to work out the main muscle groups, and have knowledge of basic exercises such as: bicep curls, bench press, etc.
- Users actively input their calorie intake in order to accurately calculate calories