

# Team 2: Product Backlog

## Project Name

Bamboo

## Team Members

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## Problem Statement

Many people are interested in keeping track of their eating, exercise, and sleeping habits to monitor their progress with various health goals. Existing apps that do this are often specific to one aspect of health, like exercise, making it more work for the user to keep up with multiple platforms and enter a lot of data each day. Bamboo will be an all-in-one mobile application to keep track of your health and wellness-related habits and find out the best way to go about achieving your goals. In addition to this, the application will also be able to recommend meals and exercise routines catered to the individual user..

## Background Information

### Problem

While there are many existing health and lifestyle apps, they each have their drawbacks, including having a narrow set of features, a steep learning curve, or premium paywall. This app plans to address these issues by targeting three aspects of health: diet, exercise, and if time allows, sleep. Furthermore, the app will be intuitive to use and appeal to a wider audience.

### Domain

The app falls into the health and fitness category.

### Existing Applications

The existing applications only focus on one aspect of health or have technical issues like frequent crashes, CPU intensive, and battery draining.

Examples of some popular applications with similar functionality are:

- MyFitnessPal: This app is the most similar to ours in terms of features, as it tracks the user's exercise and diet. A key difference in Bamboo will be our exercise and meal recommendation. While MyFitnessPal does have a 'recipe discovery' section, this is not tailored to the individual user as ours will be. This app is a little overwhelming

with its many features and crowded home screen, we plan to have a simpler and more intuitive design. Also, there have been many reviews complaining of how the app has too many ads, lags and crashes often, drains battery, and has not been continued to be updated. Many of the app's features are also only available to premium users. Bamboo will be free, and we will minimize such performance issues.

- **Fabulous - Daily Motivation:** This app provides challenges for the user to improve various habits, including health and wellness related ones. Instead of tracking multiple goals at once however, the user has to proceed challenge by challenge. There are several criticisms of this app: the actual challenges seem too simple, the app is not free, and the user cannot customize wake up times for different days. On Bamboo, users will set their own goals, the app will be free, and goals can be different for different days of the week.
- **Lark - 24/7 Health Coach:** This application tracks your diet, exercise, sleep, medication, and weight and texts you advice and motivation. However, the app is meant for people who have healthcare plans or who have bought a 23andme.com service. Our app will be free and accessible to the general public.

## **Targeted Users**

The targeted users are people who want to track key aspects of their lifestyle and promote their health. The app will appeal to the average person that is somewhat interested in tracking their lifestyle, as it will be intuitive to use, aesthetically pleasing, and does not require an in-depth knowledge of fitness.

## **Functional Requirements**

As a user, I would like to...:

1. Sign up for a Bamboo account
2. Set up my account profile with health characteristics specific to me
3. Be able to log in and manage account information
4. Be able to recover my account if I forget the password
5. Be able to access my account on various mobile devices
6. Be able to view my personal information
7. Be able to update my personal information as needed
8. Be able to log out of my account
9. Be able to delete my account and all personal data from the application if needed
10. Be able to choose my system of measurement (metric or imperial)
11. Enter daily exercise information such as number of hours for each activity
12. Enter daily diet and meal information
13. Enter daily sleep information (if time allows)
14. Be able to enter information for previous days if I forgot to

15. Set goals for minutes/hours of daily or weekly exercise
16. Set goals for daily calorie intake
17. Set dietary goals regarding certain nutrients, such as the amount of sodium, or fat in a daily diet
18. Set goals for going to sleep at a specific time (if time allows)
19. Set goals for waking up at a specific time (if time allows)
20. Set goals for getting a certain amount of sleep per night (if time allows)
21. View my current goals
22. Edit and update my current goals
23. Track my progress with my goals
24. Check analytics over time
25. Receive notifications as reminders to input my exercise or dietary information
26. Receive reminders to exercise on days I consistently forget
27. Receive reminders of my goals based on other behaviour patterns (if time allows)
28. Receive notifications with positive encouragement, such as how long of a streak I'm on of achieving goals
29. Edit notifications settings as needed
30. Find recommended meals that are in line with my set goals
31. Find recommended meals with specific tags, such as high protein or low sodium
32. Find recommended exercise routines to speed up progress towards set goals
33. Set dietary restrictions and allergy information for meal recommendations
34. Scan product barcodes for easy input of meal information (if time allows)
35. Choose menu items from nearby restaurants for easy input of meal information (if time allows)
36. Add regular workout routines or common meals to a saved list, to save time inputting the same information again on a later date
37. Be able to complete daily input in a short period of time
38. View a graphical representation of exercise over time
39. View a graphical representation of calories consumed over days
40. View weekly/monthly reports containing diet and exercise data and goal progress

As a developer, I would like to...:

1. Improve exception handling and produce proper messages for errors
2. Have thorough test cases that test functionality and possible edge cases
3. Ensure the security of the users' data and passwords

## **Non-Functional Requirements**

### **Architecture and Performance**

To be able to divide the work effectively, we will be using different technologies for the frontend and backend. The frontend will be built using React Native framework so that it can be easily used across different mobile platforms. We plan to use MongoDB to set up

the database and handle data requests, and Spring Boot Java Web Service to service requests from the front end. Our backend will be created using Node.js, which will offer higher performance and easy scalability to our application.

## **Usability**

Bamboo will be designed to minimize manual input from the user. The user interface will be simple and intuitive so that all users find it easy to navigate through it. The app will be cross-platform to ensure that people can access it from all mobile devices. Health-related apps usually focus on one aspect of lifestyle, but Bamboo will track different types of data like exercise and diet.

## **Security**

To ensure a secure platform, a user will not be able to access the app without being logged in. Passwords will be encrypted while handling requests and in the database so that they are not visible to developers and other users. For the same reason, users will be provided with a choice on whether they want to allow location tracking.

## **Hosting/Deployment**

We will be using Heroku to host the server and database. This app will be deployed to Google PlayStore for testing by targeted users.

## **Response Time & Scalability**

The application's UI response time should be as fast as possible. Application launch time, i.e. time that is required for the UI of the application to load, should be less than 10 seconds. Any response to a user action should be completed in less than 1 second. For any responses that take longer than 10 seconds, the application will show a loading screen or a progress bar that shows how long the action will take so that users will know what to expect. We also aim to have Bamboo be able to handle at least 100 simultaneous requests.