**Project 2.7 - Sprint #3**

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**Preface:**

This document is meant for the development team as well as the stakeholders of the Fit.ly application. Fit.ly is a fitness tracking mobile application for Android. Using Fit.ly, users will be able to calculate their caloric intake per day, schedule their workout plans accordingly, and track their day to day physical activities. We continued to use Notion to track each team member’s to dos and regularly checked in with each other during our Scrum meetings. This document describes our third and final coding sprint, including the features we implemented, each team member’s responsibilities, a summary of meetings, what worked well and what didn’t.

**Sprint Plan:**

1. Product Backlog:
   1. Pedometer permissions settings
   2. Logout bug
   3. Back button bug
   4. Detailed signup page
   5. Removing workouts from schedule bug
   6. Creating a new ActivityRecord each day
   7. Location tracking
2. Sprint 3 Backlog
   1. Pedometer permissions settings
   2. Logout bug
   3. Back button bug
   4. Detailed signup page
   5. Removing workouts from schedule bug
   6. Creating a new ActivityRecord each day

**Daily Scrum Meetings:**

**Meeting 1 - 11/20/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 12:00 PM - 1:00 PM

Location: RTH

Completed Tasks: This was our first meeting since the conclusion of the last sprint.

To do’s

* Melissa - Fix bug in schedule that creates duplicate copies.
  + Impediments: Service and database needs to be restructured to ensure coherency.
* Gregory - Changed pedometer switch so it changed values in the database, schedule bugs, adding activity backend
  + Impediments: Dealing with technical debt from previous sprints
* Natasha - Laptop Issues.
  + Impediments: Will not be able to contribute to code as laptop is not working.
* Jaejun - Create a UI for the change password page
  + Impediments: No impediments were identified.
* Harrison - Modify pulling for calories from Firebase based on different activity records and implement the activity records UI.
  + Impediments: No impediments were identified.

**Meeting 2 - 11/25/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 3:00 PM - 4:00 PM

Location: Google Hangouts

Completed Tasks:

* Melissa - Fixed bug in schedule display.
* Gregory - Changed pedometer switch so it changed values in the database
* Natasha - Re-installed Android Studio, set up project and firebase
* Jaejun - Finished UI for change password page

To do’s

* Melissa - Create a UI for the detailed sign up page.
  + Impediments: N/A
* Gregory - Set pedometer permission on sign in
  + Impediments: Figuring out how to set children in Firebase
* Natasha - Modify the Database structure to make activity records a map.
  + Impediments: May affect previously implemented methods that use activity record class.
* Jaejun - Add backend functionality for change password
  + Impediments: No impediments were identified.
* Harrison - Work on modifying pulling for calories from Firebase based on different activity records and implementing the activity records UI.
  + Impediments: No impediments were identified.

**Meeting 3 - 11/27/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 7:00 PM - 9:00 PM

Location: Fertitta Floor 3

Completed Tasks:

* Melissa - Finished UI for sign up page.
* Gregory - Changed app to set pedometer based on value in database
* Natasha - Modified database
* Jaejun - Finished implementing the some part of change password
* Harrison - Finished implementing the activity records UI.

To do’s

* Melissa - Add backend functionality for sign up page.
  + Impediments: Need to figure out how to store extra fields in the database.
* Gregory - Fix Schedule Bug (multiple copies)
  + Impediments: Changing someone else’s code, unfamiliar with structure
* Natasha - Finish Badge Display page.
  + Impediments: New way to that activity record is stored will require code modification
* Jaejun - Add more functionality to change password in Profile (Confirmation of password)
  + Impediments: No impediments were identified.
* Harrison - Work on pulling for calories from Firebase based on different activity records.
  + Impediments: No impediments were identified.

**Meeting 4 - 11/29/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 6:00 PM - 8:00 PM

Location: New Annenberg

Completed Tasks:

* Melissa - Made functions to retrieve information and parse sign up details.
* Gregory - Fixed Schedule bug
* Natasha - Retrieved data on when to display the big badges
* Jaejun - Finished implement the change password page

To do’s

* Melissa - Work on implementing the connection to the database.
  + Impediments: database schema needs to be changed to account for extra fields.
* Gregory - Add activity in backend
  + Impediments: flickering internet makes it hard to interact with firebase
* Natasha - Add UI to display big badges
  + Impediments: None
* Jaejun - Create UI for activity record
  + Impediments: No impediments were identified.
* Harrison - Modify pulling for calories from Firebase based on different activity records.
  + Impediments: Was having trouble with the display of burned calories for Dashboard UI.

**Meeting 5 - 12/1/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 8:00 PM - 9:00 PM

Location: Google Hangouts

Completed Tasks:

* Melissa - Implemented the connection from sign up to the database.
* Gregory - Add activity adds it to list in Firebase
* Natasha - Finished UI for big badge display.
* Jaejun - Finished UI for activity record page.

To do’s

* Melissa - Change the calorie formula to account for height and weight.
  + Impediments: Need to figure out how to retrieve height and weight from the database.
* Gregory - Add activity changes UI in dashboard
  + Impediments: No impediments were identified.
* Natasha - Update backend to award big badge after 7 consecutive workout days.
  + Impediments: Two people working on the same file may result in merge conflicts
* Jaejun - Work on pulling activity record data from firebase.
  + Impediments: Structure of stored data in Firebase is making it hard to read data as it changes.
* Harrison - Work on modifying pulling for calories from Firebase based on different activity records.
  + Impediments: Structure of stored data in Firebase is making it hard to read data as it changes.

**Meeting 6 - 12/2/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 3:00 PM - 6:00 PM

Location: RTH

Completed Tasks:

* Melissa - Modified calorie formula.
  + Impediments: No impediments were identified.
* Gregory - Add activity adds workout to dashboard schedule
  + Impediments: Interdependency of work is contributing to delayed progress.
* Natasha - Updated backed for big badge
  + Impediments: Interdependency of work is contributing to delayed progress.
* Jaejun - Finished implementing the activity record page
  + Impediments: No impediments were identified
* Harrison - Finished modifying the pulling for calories from Firebase based on different activity records.
  + Impediments: No impediments were identified

**Sprint Review Meeting - 12/3/2018**

List of attendees: Melissa Wen, Natasha Thakur, Harrison Cha, Jaejun Min, Greg Farn

Time: 3:00 PM - 6:00 PM

Location: New Annenberg

**Completed**

* The activity record UI was completed. It is able to display past activity records which contain workout information and are unique to the user.
* The calorie consumption pulling was updated to reflect the daily activity records.
* The Firebase database was restructured to make it easier for members to pull and read data.
* We implemented a better UI for our signup page, since previously many fields in our old profile page were not being displayed because they were empty. Now, the signup page includes fields for height, weight, and age, which are displayed in the profile page, and are used in our calculation of calorie consumption to make it more precise.
* There was a bug in our schedule display page that resulted in copies of the same workout being added to the schedule when the workout was marked as completed. We discovered that it was because the service and the schedule were adding to the same schedule object every time the schedule object had changed. We resolved this by consolidating our code into one request through the database.
* We made our calorie tracking more accurate by implementing a more detailed calculation of calories that factors in a user’s weight and height. Previously, a user’s calorie total was calculated as calories burned from walking + calories gained from consumption.
* We modified the way we stored the ActivityRecord class. Instead of a list, it is now a hashmap that allows us to access the information for each day with a key which lets us add more functionality, like display old activity records
* We implemented a NumConsecutiveDays counter. This keeps track of the number of consecutive days a person has worked out and resets the counter to 0 once they meet their goals for 7 consecutive days.
* Using the NumConsecutiveDaysCounter we implemented displaying the big badge on the badge display page. If the user worked out for 7 consecutive days then they receive a big badge that is displayed on
* We also added a way for the user to change his/her password while logged in to his/her account.
* Pedometer permissions settings were implemented. The user can give us permission to use the android pedometer when they sign up and can modify the permission using a toggle button on their profile page.
* We fixed the logout button bug. The app no longer crashes when we press the logout button. It goes back to the login page.
* If the back button was pressed without logging out our app would crash. Now if you press the back button the app automatically logs you out and does not crash.

**Planned but incomplete:**

* We wanted to implement location tracking so the user can better track his/her/their workouts. For example, this could be to track hiking locations, running spots, or other outdoor activities. Although this feature would be nice to have, we ultimately prioritized getting rid of bugs in our code and ensuring its robustness over adding extra features.

**What went well:**

* Again, our team had a consistent schedule of meetings, held almost other day throughout the duration of the sprint. Although, they weren’t always face-to-face, the meetings helped facilitate communication and knowledge of what was done and to be done.
* We were flexible with adapting our Firebase schema with our needs. The way we structured our Firebase data initially made it harder for us to pull the required data for Firebase. For example, when only one activity record was made, it was not contained under an unique Firebase ID, but instead stored the contents of the object as individual childs. However, when we created 2 or more activity records, the other activity record objects were stored under an unique Firebase ID. This made it hard to pull the data during the transition from when an user was initially created with a single activity record, to one with multiple activity record because the method to read the data changed. We resolved this issue by restructuring how the data we pushed was stored on Firebase.
* We discovered a lot of bugs in our application by attempting to “break” it. For example, logging in, pressing the back button (without ever formally logging out), and logging back in caused the app to crash. By testing these edge cases, we were able to uncover bugs in our code and resolve them.

**What could be improved:**

* We had trouble coordinating the different work that had to be done. Since some of the functionalities were dependent on other functionalities, this created issues when one individual was implementing his work. These interdependencies hindered our productivity because one member was unable to use the functionality that he needed because it was not yet completed by another member. To resolve this, we gave the other team member work on another part of the app. Another way to improve this would have been to split our tasks more evenly.