Health Points

A Health and Fitness App

CSE 440 Autumn 2013

Task Analysis

Team Lead: Nicholas Johnson

Documentation Lead: Crystal Wong

Research Lead: Erick Lo

Design Lead: Ryan Hussin

Problem and Solution Overview

Health is a major concern today and for good reason. Far too many people are unmotivated or uneducated when it comes to what they eat and how much physical activity they participate in. Our app serves to solve that problem by promoting friendly competition through a system that tracks fitness levels and eating habits. When the user follows healthy habits they gain points that they can use to compete against friends. Conversely they lose points for unhealthy habits. The point system allows friendly and simple competition while also allowing tracking of habits to promote dietary and fitness related changes for the better.

Task Analysis

Who is going to use the system?

Our primary users are college students that are moderately concerned about their health and motivated enough to live healthy lives. Users are likely to draw their peers and family to use the system as well.

What task do they now perform?

Our contextual inquiry participants are aware of their food choices, but did not take any record of their food intake. As for fitness, they commit time to physical activity with a partner or a group and compete against each other. Socially, they will check for messages and updates on social networks using their phone regularly, however, they do not necessary go through all messages.

What tasks are desired?

We wanted to provide a detailed and automated food intake and physical activity monitoring system, so customers can use those data to track and improve personal health and feel rewarded when reaching goals. Secondly, customers can stay socially engaged in this process, sharing health related information with each other. Lastly, customers will have the ability to compete with others.

How are the tasks learned?

The interface will be simple enough to understand, so tasks can be learnt by exploration.

Where are the tasks performed?

The tasks can be performed anywhere, wherever they eat, exercise, etc. Basically, whenever customers need access to their own logs or their friends' information, or when they want to browse the feeds to stay on top of things.

What's the relationship between customer & data?

Data is collected automatically by sensors, specific and tailored to the customer. Customers can use this data to identify positive and negative eating and exercising habits. Activity logs are made public for customer's friends to see, but they can change this in privacy settings.

What other tools does the customer have?
The tool's customers need are a compatible mobile device to run the app and the sensor systems for data collection.

How do customers communicate with each other?
Customers can communicate with each other via the native messaging system or posting feeds.

How often are the tasks performed?
Monitoring food intake and physical activities is assumed to be performed daily or more frequently. Other task such as competing against other users will depend on how competitive the user is.

What are the time constraints on the tasks?
It is dependent on the user, there are no real time constraints. However, it should not take a long time to find the information they are looking for.

What happens when things go wrong?
When users get too competitive and exhausting themselves for more points, sensors can see users are below or above the normal food intake. Therefore points can be taken away for lack of food intake. If sensors are malfunctioning somehow disconnected, the Health Points system will be collecting extreme data or no data at all. In this case, the system will send a notification to users that recommends them to check on the sensors.

Revised Tasks

Easy Task: Managing Personal Health
Our users are health conscious, but like our contextual inquiry participants most probably do not take detailed record of their food consumption or physical activity. Their personal health record is logged and saved on the system, used for review by users anytime they want. Users find the information they need to identify their unhealthy eating and exercising habit, and then make changes accordingly. This is the basic task that users can do with our system.

Moderate Task: Browsing and Messaging on news feeds
Users seem to like being able to keep themselves socially updated all the time. They browse feeds on social networks for things that interest them and check for messages frequently. In this task, users interact with others by message feeds, as well as following their friends' feeds.

Hard Task: Being Top Dawg
Our contextual inquiry participants have all shown interest in competition; they all like to outshine one another. This task asks users to compete against each other for the healthiest body, trying to beat each other by improving their eating habits and exercise routines based on others' data.

Storyboards

1 Feed - Focused Design

Not finalized yet

Main Page

Title 7829 — User's Score

xTimmy07

> Jimmy12 passed your high score in daily fitness!

> Tammycat just earned "Calorie Counter"! +75

> You challenged Jimmy12 to a fitness duel!

Recent Events Feed

| My Account | Goals | Friends |

Home Friends

1	Jimmy 12	8612
2	Tammy Cat	7973
3	Me	7829
4	J3nni<3	6554

Leader board of friends

Search

Sort by [Score ▼]

| Groups | Challenges |

Challenge friends

Home

xTimmy07 7829

| Yesterday +87 | Today -22 |

[See Details]

Breakdown including graph, etc.

↓ Expands into this space

| Fitness Center | Nutrition Center | Options |

Home Goals

Showcased Achievements

Marathon	+200
I Lift!	+125
6 Week Diet	+125

User chooses to show-off these

All Achievements

Fitness	35/200
Nutrition	23/180
Other	30/110

| Workout Plan | Diet |

2: Fitness/Nutrition Split Design

Main Page

Title

xTimmy07

7829

Fitness	Nutrition
4479	3350
+70	- 65
[Details]	[Details]
[Workout Plan]	[Diet Plan]

My Account	Friends

Nutrition Details

3350 points · · · ·

Nutrition Subtotal

Yesterday	Today
Calorie Counter Completed +75	Big Mac -100
Stuck to Diet +50	Side Salad +35
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Recent Point gains and losses

[Graph View]
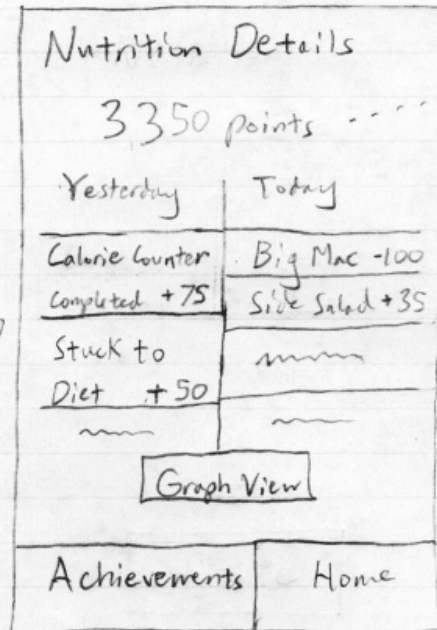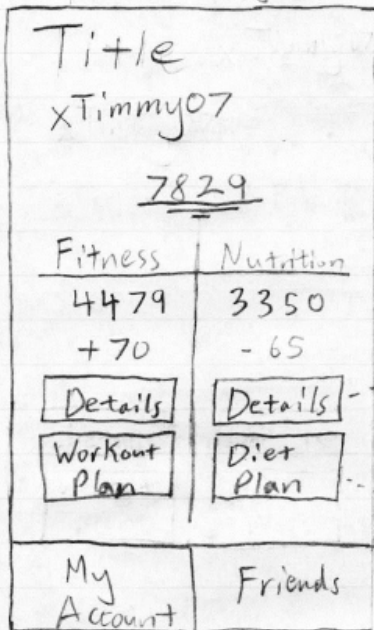
Achievements	Home

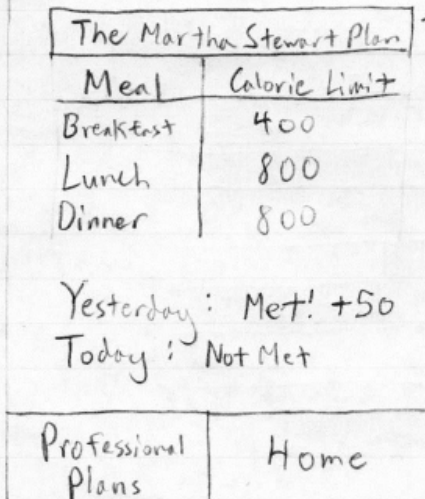↓ Goes to nutrition-related achievements

Friends:
- Recent Events Feed
- Leader boards
- Similar to screen from Design #1

My Account:
- Achievements
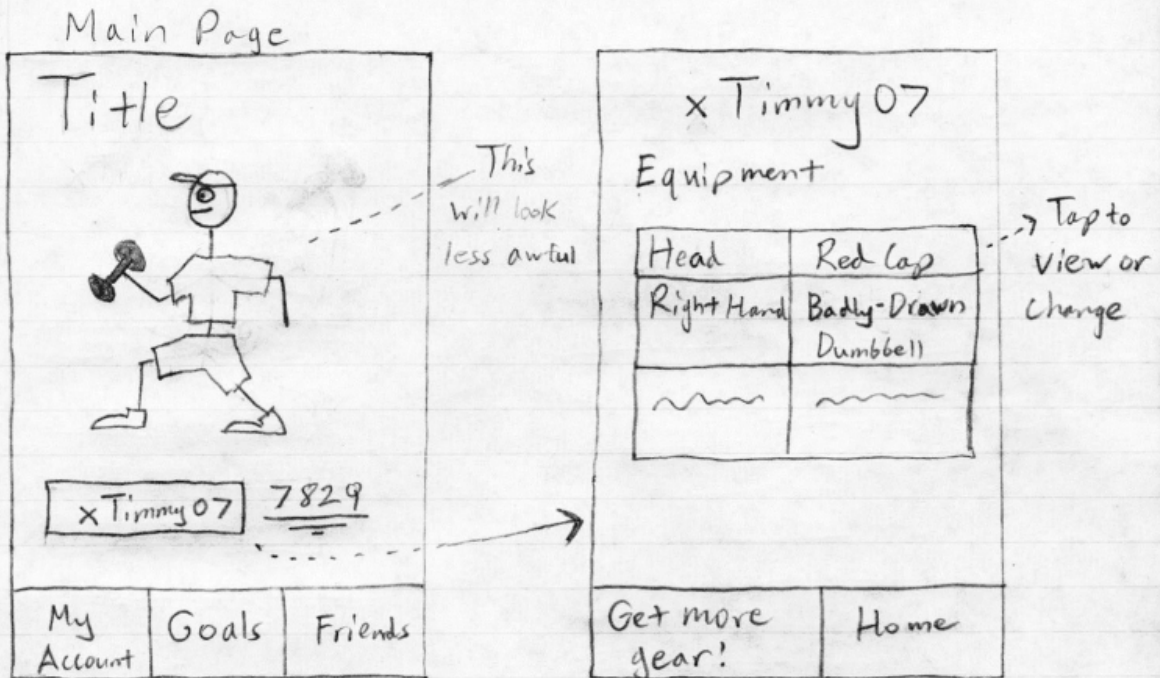- Options
- Personal Feed

Diet Plan

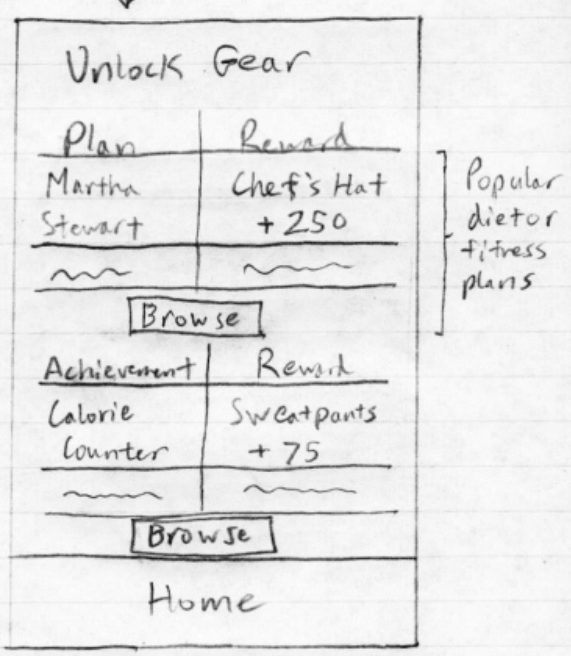[The Martha Stewart Plan] - - → Click to view details

Meal	Calorie Limit
Breakfast	400
Lunch	800
Dinner	800

Yesterday: Met! +50
Today: Not Met

Professional Plans	Home

3: Avatar Design

Main Page

Title

This will look less awful

x Timmy 07   7829

| My Account | Goals | Friends |

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x Timmy 07
Equipment

Head	Red Cap
Right Hand	Badly-Drawn Dumbbell
~~	~~

Tap to view or change

| Get more gear! | Home |

Similar to previous designs

My Account:
- Recent Events feed
- Personal point details
- Achievements
- Similar to previous designs

Unlock Gear

Plan	Reward
Martha Stewart	Chef's Hat + 250
~~	~~

[Browse]

Popular diet or fitness plans

Achievement	Reward
Calorie Counter	Sweatpants + 75
~~	~~

[Browse]

Home

Design of Selected Interface

We have decided to use Design 1 - the feed-focused design.

Reasoning for Choice
Overall, we feel that Design 1 is the most intuitive and simple of our designs, and that having the main feature of the home screen be a recent events feed should engage the user's interest immediately and make them feel more invested in the application. Allowing users to challenge each other and easily track their progress in relation to their friends should promote competition and motivate users to be healthier. The fitness and nutrition split emphasized by the second design seemed like it would be an unnecessary amount of complication to add to the home screen, and would detract from the value of the overall composite score (making competition more difficult). The avatar-focused design could be a good way to motivate users, but once again it seemed to add a lot of unnecessary complexity. It would be difficult to accurately compare between different users and compete with them when the main measure of their progress is a personalized avatar. This design cuts through the complexity – competition between friends should be the main focus of the application.

Functionality Summary
The purpose of this design is to engage the user immediately by showing them recent point gains that their friends have earned. This is the first thing that displays, so it is very quick and easy to see recent events. Users can keep track of exactly how they are gaining and losing health points from their account screen so that they can make informed decisions about their fitness and nutrition. In addition they can see data on their performance over time - so that they can see when they start to be less healthy and correct it quickly.

Another way that Health Points motivates its users to be healthy is with Achievements that award bonus Health Points. These offer short-term goals and incentives for users to exercise and eat well, and complement the overall health point score. Users can show off their proudest achievements to their friends for bragging rights. In addition, they can also gain bonus points by choosing and following a workout plan and a diet plan, which are built using information from nutritionists and fitness professionals.

The most important component of Health Points is how it promotes competition between friends. Users can check how they are doing in relation to their friends on a leaderboard which ranks them by health points. They can also join groups (for example a gym class or school club) to keep track of their progress within the group. They can view their friends' profiles to see further details about them and their achievements and challenge them to beat their scores in various categories for bonus points. They can also view their current challenges to and from their friends for another way to compete.

Interface Description
The home screen of the application displays the application name, the username, and their current score at the top. The main body of the page is taken up by a feed of recent point gains

and losses and achievement earnings from both the user and his/her friends. This is sorted in chronological order, with more recent events near the top. At the bottom, there is a navigation section with buttons that go to the "My Account," "Goals," and "Friends" pages.

In the "My Account" section, the user's points gained/lost today and yesterday are displayed, with a button that allows for more detailed information to be displayed. The more detailed information will include a graph of point gains over the last week or month, and a detailed breakdown of how points were gained and lost in recent days. At the bottom there is a navigation bar with buttons for "Fitness Center," "Nutrition Center," and "Options." The fitness and nutrition centers are where users can sign up for a fitness plan or a diet plan. The options section contains all of the relevant settings – volume, privacy settings, etc.

In the "Goals" section, there is first an area for showcased achievements, then an area for navigating all other achievements. Showcased achievements are chosen by the user by tapping a spot on this menu, which will bring up the overall list. The other achievements are broken into sections by their relevant topics – currently they are organized into "fitness," "nutrition," and "other." At the bottom of this are buttons leading to nutrition and diet plans, which are discussed above.

In the "Friends" section, there is a leaderboard that sorts all of a users' friends by how many points they have. All of the users' friends are in this list, and can be scrolled to with a scrollbar. Alternatively, there is a field to search for a username, and a drop-down menu to select another sorting method. Clicking on a name in this list will bring up that person's profile, which will show some of their recent large point gains and their showcased achievements and will allow them to issue a challenge to that friend. At the bottom of this page, there are buttons for "Groups" and "Challenges." The group section will bring up similar leaderboards specific to groups that the user is in. They can also view all challenges they are currently involved with and their progress in them.

Scenarios

Managing Personal Health

Timmy is 21 years old and currently a UW student who is fairly conscious of his health. He is in Phi Iota Tau fraternity, commonly known as FIT, and loves to watch sports with his friends. It is fall quarter and that only means Husky football on Saturdays and NFL Sundays. On an average day throughout the week, Timmy tries to eat three balanced meals and work out on a regular basis. However, when he opens the app and reviews his score for the week, he begins to notice that Saturday and Sundays are becoming detrimental to his health. Reading through his food consumption log on his account page, Timmy realizes that on Saturday he consumed several beers and alcoholic beverages and ate a couple hotdogs and fries for lunch and missed dinner because the game was at 6:00pm. The physical activity log also indicates that his physical activity level was minimal since he decided watch the game at home on Saturday and Sunday instead of visiting the gym.Timmy then decides to institute a plan where he exercises every morning before school and substitute all the unhealthy snacks with more nutritious ones. After a week, Timmy is able to see how his new workout goals help increase his point total and his

overall health.

Browsing and Messaging on news feeds
Tammy is 20 years old and a student at the UW studying Communications. She lives in the dorms and spends most of her down time at Odegaard browsing her Facebook and doing homework. Tammy is interesting in event planning and organizing and she loves to stay in tuned with everything that is going on. Her news feed is packed with posts from groups that she is associated with, friends sharing information, and events that are coming up. However, much of the information is irrelevant to her and she only pays attention to a few people who post regularly. She also loves to share recipes and health information, as well as workout plans. Tammy wants to follow her friends' posts on their news feeds, so she used the filter function to filter out information that she is not interested in. As Tammy browses the feeds, she found a post that is of particular interest to her, saying "Heading to the IMA, its gym time :)" with a picture of her friend is her workout clothes. Tammy has been studying for her midterms and a trip to the gym would help her relax a bit. Therefore, Tammy left a message asking her friend when she is going so she can tag along. Her friend replies to her message and they headed to the gym together.

Being Top Dawg
Jimmy is one of Timmy's fraternity brothers in the FIT house. Jimmy is a very competitive individual in everything that he does. He loves to compete in intramural sports, and hates losing. Jimmy loves to workout with his best friend Timmy, and they go to the gym regularly. They push each other and try to improve slightly each time. They use each other as motivation to eat healthy and improve their physicality.

Jimmy and Timmy both uses this app to track their nutrition intake and physical activities, they have decided to compete against one another to see who can get a higher score on the leaderboard this week. Since Jimmy is so determined to win, he spent the time to compare Timmy and his own data. He found out that he is sometimes overworking his body while Timmy always gets the right amount of exercise only. He also found out that Timmy has not been eating healthily lately. Jimmy made changes to his workout routine and eating habits based on this information and he finally beat Timmy's high score on the leaderboard.