HealthMate

Team
Team members and roles

> Jehad Affoneh - *General Manager*
> Will Beebe - *Testing Lead*
> YoonSung Hong - *Documentation Lead*
> Panharith Thong - *Design Lead*

Problem and Solution Overview

Problem Overview
Although setting up a goal is easy, finding the right workout routine to reach that goal is not. With multiple factors going into the decision of what workout to do next, achieving this goal becomes a complex task usually reserved for a professional trainer. This complexity comes from the difficulty of properly tracking the progress towards that goal and providing the right, user-specific recommendations based on that progress to better achieve the goal.

Solution Overview
To combat the complexity of achieving a specific goal, we are going to design a system where the user needs to know very little. What it means to be healthy is defined differently from person to person so we do not attempt to define that in our solution. Our solution is merely a way to more effectively help users achieve *a* goal. We do not differentiate between various fitness levels. We help users achieve a goal with a fun achievement-based approach where users can see live progress toward a goal.

Contextual Inquiry Participants

The clients of HealthMate will be daily customers of any gymnasium. To design an application that fulfills user's needs and behavior, it is crucial to study them in the context.
We conducted initial contextual inquiry at IMA because it is a large sports complex with variety of programs that allows us to comprehend many aspects of gymnasium contexts and user behavior. For the future inquiry, we plan to interview trainers to obtain knowledge and insights that can add values to our recommendation system.

Person A
Starting the inquiry, we wanted to be able to get a basic understanding of a person's requirements when using such an application. We started by interviewing a 22 years old male UW student who frequently exercises at the IMA. By observing the way he chose what to do next he gave us an important insight into the way a user thinks about their workout routine. Although he had a goal in mind, he did not really have a workout plan and his decisions were mainly based on the availability of machines. Although the participant had the specific of running 4:45 miles in his mind, he didn't really track his progress in any other way rather than trying to run that distance every few weeks as an experiment to see if his practices has worked out.

Person B
The second participant was a 21 years old UW male student who weighs 140lbs and has a height of 5 feet 9". He goes to the IMA 3 times a week. His goal is to stay in shape and to take a break from studying. He mostly goes to workout alone and usually do running and swimming until he's tired. We observed him doing weight lifting and asked him what he was doing at each steps of the exercise. He also went running on the treadmill for 1 mile and followed him through other unilateral and stretching exercises he did. We wrote down relevant steps what exercises he did and asked questions as to what he is doing and the reasoning behind using each machine.

Person C
The third participant is a senior student 23 years old, 144lbs and 5 feet 6 inches tall. He plays basketball, workouts regularly and has good knowledge about routines. Furthermore, he takes a good care of his nutrition by eating healthy food and health supplementary like vitamins and proteins. He knows how to arrange exercise routines to use different parts of body. We observed him doing bench press, decline dumbbell bench press, decline push-up, dumbbell fly, dumbbell pull-over and dumbbell push-up. We asked him to explain why does such exercises, what routines he have for each exercise, and how his exercise helps him reach his goal.

Contextual Inquiry Results

Common among participants
After interviewing and observing the participants, we noticed a few common important things. Among all participants, their goal is to workout very often, about 3 times a week. They all workout alone but they would prefer to workout with a partner. Most of them don't have specific workout routines or stick to the same routine every time they go to the IMA. They usually do weight lifting and running because those are popular among men's workout exercises. They also don't have a simple and easy way to track their progress to reach their goal other than remembering the calories burned and miles run or the number of reps they did from the last time. In fact, they workout until they are tired which is on average about an hour of working out. When asked what would be useful to them, they immediately like to have workout routines and detailed steps showing them how to do a certain exercise or use a specific machine for a specific body part.

Person A
The first interview gave a few important ideas. The participant had a short-term goal when running which is doing 4:45 a mile. Depending on whom he is with and how busy the weight room is, he prefers a workout machine to another. Also when asked about using a personal trainer before, he said he would like to get one if he could afford it so he can get a personalized workout plan to achieve his workout goal. Furthermore he works out until a certain time or until he is exhausted. Lastly, he prefers to go workout with a friend rather than alone because it is much more motivating.

Person B
The second interviewee gave us important insights in people with unbalanced workout habits. We noticed that weight training is normally not in his everyday workout routine and furthermore he only does 3 workout exercises on a regular basis. We asked about his workout behavior, and he told us that he does not want to try new exercises and

machines that he has no experience of because he is worried that doing exercise in wrong way will rather be harmful or cause injuries. He will like to have friends and trainers tell him exactly what to exercise to do and how to do them.

Person C
The third interviewee was very different from two other interviewees in that he is active and knowledgeable in exercise routines and nutrition. More importantly, he seems to have specific long-term and short-term goals and know how to achieve them through different exercises. He told us that he became knowledgeable in exercising because he consider health as the first priority in his life and he likes to have a good body build. Although he feels that he is quite knowledgeable and self-motivated, he would like to have friends with similar interests or trainers with further expertise to motivate and help him exercising.

Existing and New Tasks

Existing Tasks
Along with interviews at IMA, we observed users in IMA to find the tasks performed by them. Although the users have different goals for their exercise, we found quite a lot of tasks that are common among them. On the other hands, we found some tasks that are totally distinguishable from others. Indeed, some people have goals that are different from many others.

- ♦ **Common tasks performed by many**
  1. Chest exercises for a certain number of reps at a given weight
  2. Run for a certain time or distance.
  3. Workout for at least an hour.
  4. Stretch after running.
  5. Arm exercise for a number of reps.
  6. Lift weights without a spotter.

During the observation, we found a couple of interesting categories of people(sharing the same goal). For instance, senior users of IMA have totally different goals from most of students in IMA.

- ♦ **Tasks performed by seniors**
  1. Sustained light exercise, no "maxing out."
  2. Stay in the Sauna for 30 minutes
  3. Swim in the pool (slowest lane)

- ♦ **Tasks performed by class-takers**
  1. Change to uniform or appropriate clothes
  2. Gather at the assigned rooms and meet with classmates
  3. Learn specific sports such as Judo, Kendo, and Taekwondo from trainers

- ♦ **Tasks performed by outdoor-sports users**
  1. Checkout equipments(balls or racquets) from IMA
  2. Make réservations on courts or fields
  3. Play outdoor(soccer, tennis, and lacrosse)

New Tasks

After carefully analyzing the feedback we got from our interviews we reached the conclusion that the three most important tasks a user would like to perform in order to reach their goal are:

1. Tracking their daily progress to achieve that goal
2. Step by step recommendations of what workout routine is next in order to achieve that goal
3. And finally, a way to interact with other users with the same goal or profile as a way to motivate each other to reach that goal.

Although these tasks might seem obvious, none of the users who we interviewed has actually found a way to perform them other than assuming results and building their workout routines depending on what they understand or have read. For the average user this process is incredibly unstructured and usually has no specific direction. We distilled the above tasks from our interviews and observations because we feel that these would be the most useful for the average gym-goer. By providing a structure we are enabling users to get a better workout and become more effective at achieving their goals.

- **Tracking Daily Progress**
  One of the most requested features was tracking one's progress depending on the goals they assigned one they start working out. This does not only give the user a motivation to continue working out but it also gives the user the opportunity to get detailed information about their workout giving them the chance to be able to get an informed decision to what their next goal should be.
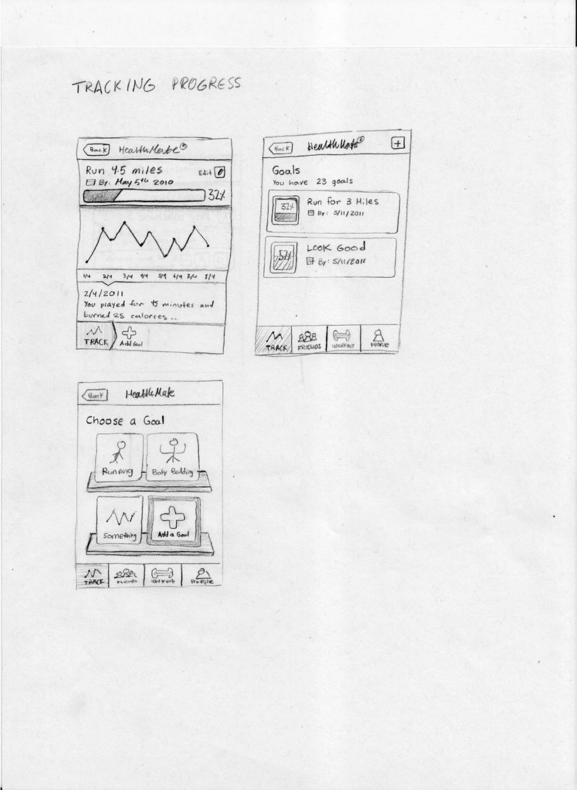
- **Recommendations of Workout Routines**
  Most of the users we interviewed had a goal in mind. However, reaching that goal by understanding the right workout routine to do was a complex process that required their knowledge of different workout routines, their knowledge of their daily progress, and to know the precise time they should spend on each part of that routine. Since this information is not easy to gather or understand, the app will be providing an easy to use recommendation system that will help the user go through a full workout routine by following simple steps. The workout routine suggested by the app will take into account the user's previous workouts, their goal, basic info they provided to the app, and will learn from the way they progress.

- **The Social Aspect**
  We found that there is a strong influence of a user's social circle on their exercise habits. A user is more likely to go to the gym if they go with a friend or if they know their friend is working out. To take advantage of this strong positive social influence, we incorporated a social network into our solution. Users can add other users as "friends" and see when they are working out, their goals, and the progress they have made. It was our idea that this will make users more diligent in going to the gym.

TRACKING PROGRESS

Social Feature
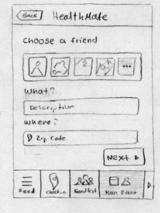
Workout Recommendations

Recommendations

Screen 1 (left):

Back | HealthMate

Today's workout

Calories burned: 237

[progress bar] SKIP

7 | Run for 1 mile
This will help you burn 75 calories

SKIP | DONE | (i)

TODAY | DETAILS | Add a note | History | ▷

Screen 2 (right):

Back | HealthMate

Run 1 mile

Running 1 mile will help you burn 355 calories

Why?

It was recommended to help you [run 4.5 miles]

How?

You can use the machines to help...

Today | Details | Add a note | History | ▷