

HealthMate

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Problem and Solution Overview

Problem Overview

It is difficult for someone without professional training to design a suitable workout routine to reach a specific goal and to keep track of the progress he/she is making towards that goal.

Solution Overview

A system that collects information about the user's goal and their progress in order to give precise workout recommendations to the user in order to reach the goal in the minimum amount of time possible.

Task Analysis Questions

Who is going to use the system?

The application is mainly designed to serve people who have a goal in mind, regularly workout, but would like to get professional help reaching their goal.

What tasks do they now perform?

From our contextual inquiry, we realized that people normally have a goal but do not have a specific plan to achieve the goal. Their workout routines highly depend on the availability of machines and their conditions. Also, memory is only mean to track their progress.

What tasks are desired?

Base on contextual inquiry result, people desire applications that help them choose the right workout routines, go through each exercise, and track their progress. Also, they would like to have a way to find people with similar workout interests for better motivations and social interactions.

How are the tasks learned?

The tasks that the application offer-choosing workout routine, collecting training data, making recommendations based on the data, and tracking progress-are designed to complement the tasks that people normally perform in gym. Also, the application is designed to be specific to the contexts that users are in. When users first start the application, it will help them choose the right workout routines base on their goals, preference, health data such as weight and height. Once the initial setup is done, the application will list the tasks that users need to complete for the days and it will be

almost transparent to user activities throughout the gym using location tracking or manual inputs. For instance, it will tell users what next to do and relevant tools and information for the specific task(exercise).

Where are the tasks performed?

All of these tasks are intended to enhance the user's experience in a gym while working out.

What is the relationship between customers & data?

It can only be accessed on the phone with HealthMate installed. Progress data is also uploaded and saved on the server to prevent data loss.

What other tools does the customer have?

Training data is crucial information for gym customers to better facilitate their exercises. Originally, such training data can be obtained from both machines and trainers. Training machines such as running machines tell customers how much calories they have burned and distance they have ran. Data from machines has been a good quantitative data that customers can leverage to scale their progress. On the other hands, trainers have been good sources of qualitative data. Trainers observe customers' exercise patterns and details to personalize training and give personal advices. For instance, trainers can tell customers do bench-press if lacking muscle exercises and show customers how to do them. Both types of data are equally important and crucial for customers to succeed in achieving their exercise goals. HealthMate focuses on automating data collection and personalize training based on the data and user inputs. Data collection can be as easy as carrying cell phones and wear sensor-enabled sports clothes.

We provide the customer the ability to record their progress data and display it in a way that will help them achieve their goals, connect them with other users so they can either train together or motivate one another. And our application gives advice to the customer to better help their workout goals. We give the customer the tools to be more efficient and effective.

How do customers communicate with each other?

Base on contextual inquiry, people are interested in finding friends or people with similar interests to workout together because that make their exercise more motivating and fun. Currently, in order for people to workout with friends, they have to either contact them earlier to arrange a time to meet in the gym or accidentally meet in the

gym. Furthermore, it is hardly possible to find new people with similar interests to workout together. The application focuses on not only connecting friends within the gym but also helping them find people with similar interests.

How often are the tasks performed?

Weight lifting and running are the most frequently performed tasks for most customers based on our contextual inquiry. Tasks are performed once every twenty minutes or so depending on the activity of the user. They may want to record information every 5 minutes, or be fine with inputting information after one “set” of workouts that would take about twenty minutes.

What are the time constraints on the tasks?

Since most of the tasks have to be done in about half an hour, and the average time a customer spends working out is an hour, the customer can do at least 3 of our tasks which could cover our 3 main features of our app. Other tasks have minor priority.

What happens when things go wrong?

Since our data is stored in the cloud, the worst that could happen is that the application would crash as a reason of a bug and in that case, all data will remain untouched and the customer will be able to access this data once the bug is fixed.

Revised Tasks

Setting goals and choosing a workout routine

This task allows users to set their goals and our system help users find the most suitable workout routine. Even for one goal, there could be many ways to achieve it. HealthMate take users' current health data(such as height and weight) and exercise preferences into considerations.

Tracking progress and making recommendations

This task helps users gather workout data for HealthMate to give recommended workout routines. Furthermore, it provides a way for the users to keep track of their progress towards set goals. Users can have multiple goals and each workout progress can be applied to multiple goals.

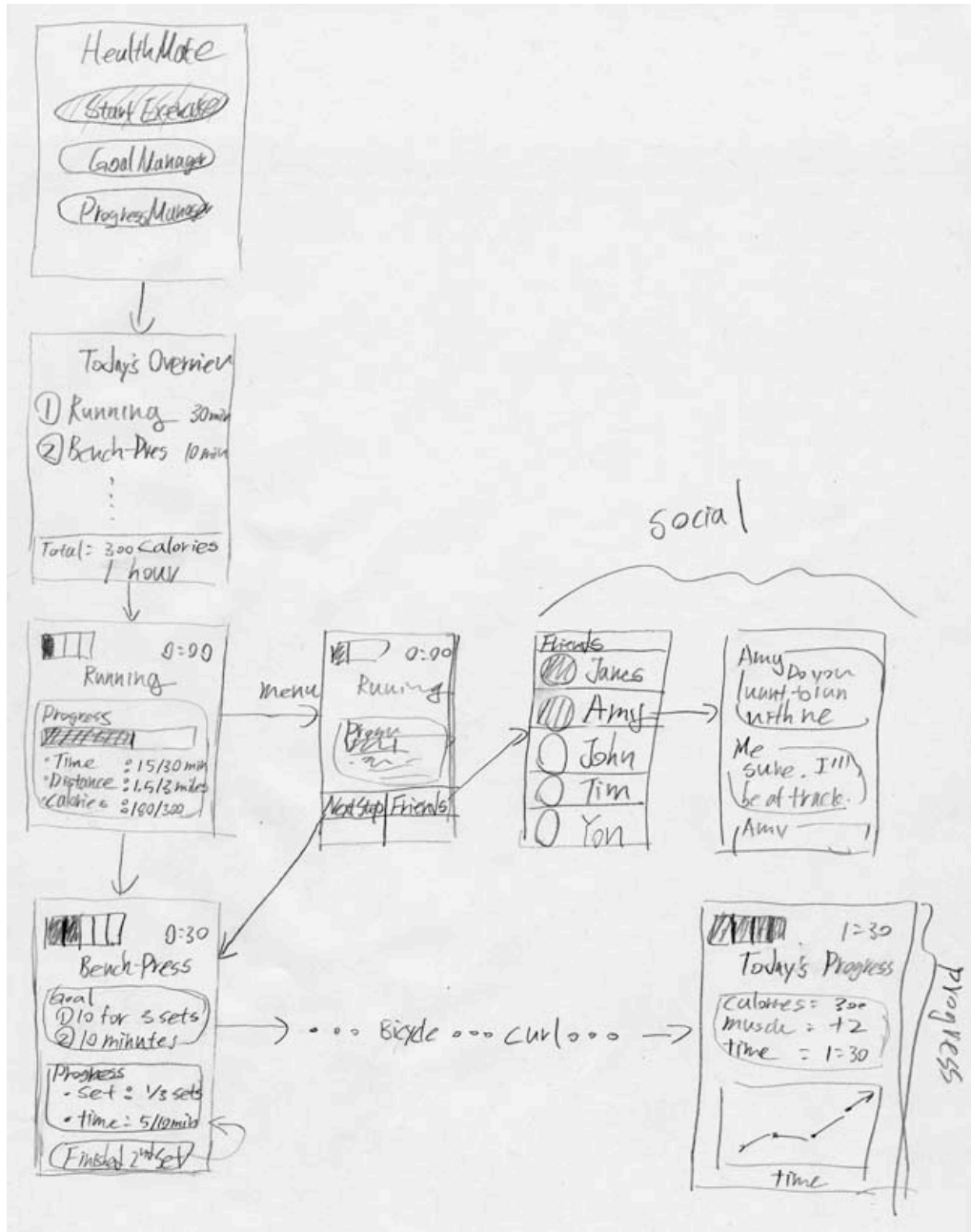
Finding people with similar interests

This task enables users find people with similar interests in the gym. From the contextual inquiry, we learned that people demand to work with similar workout interests because it is more motivating and helpful.

Storyboards

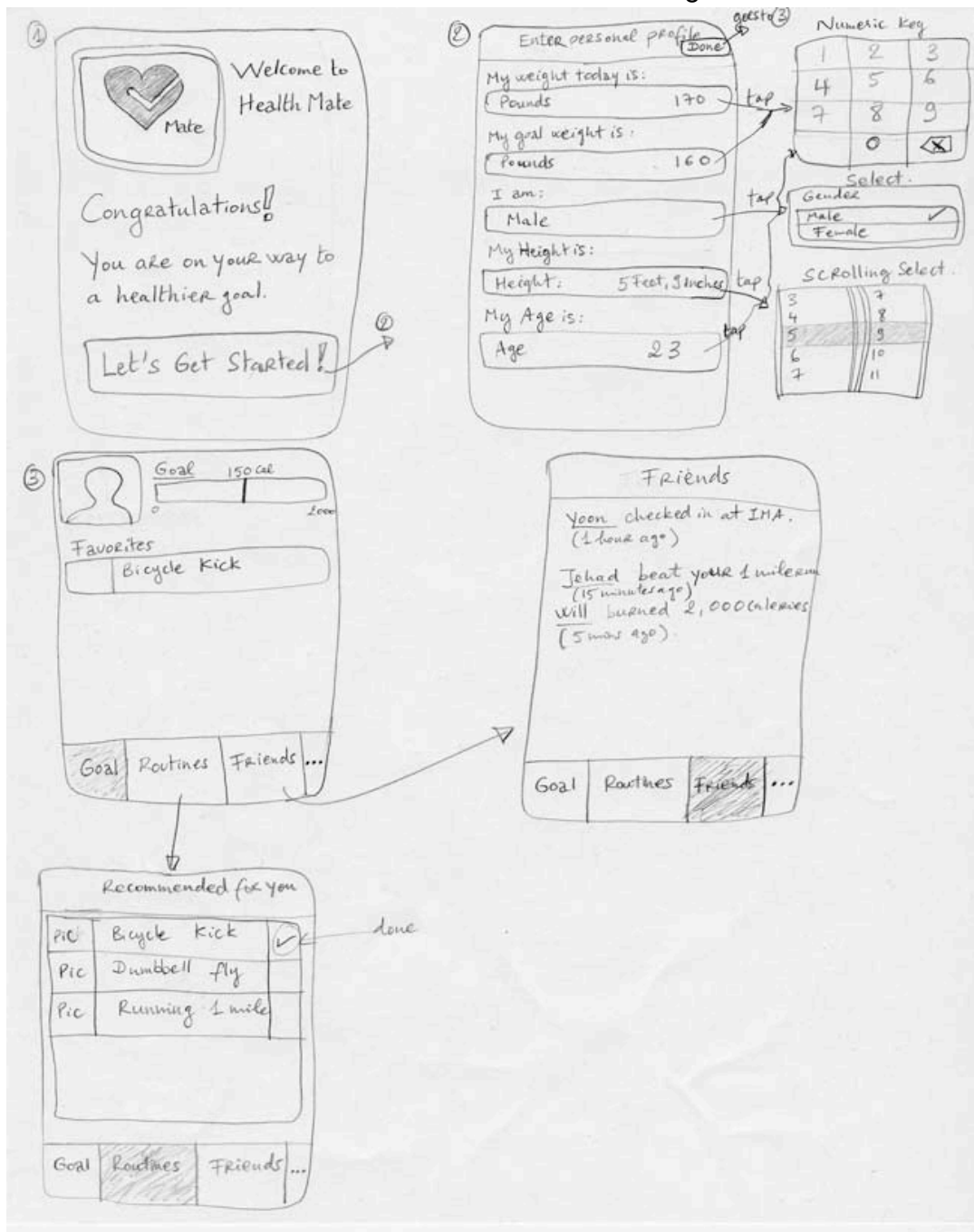
Event-Driven Interface

Event-Driven interface focuses on providing customers the most relevant features on the screen for specific events and contexts, and progressing with customers as their state changes. Such context-specific interfaces help customers focus on their current activity. The interface design is intended to be like virtual trainer or friend(mate) that customers do exercise with.



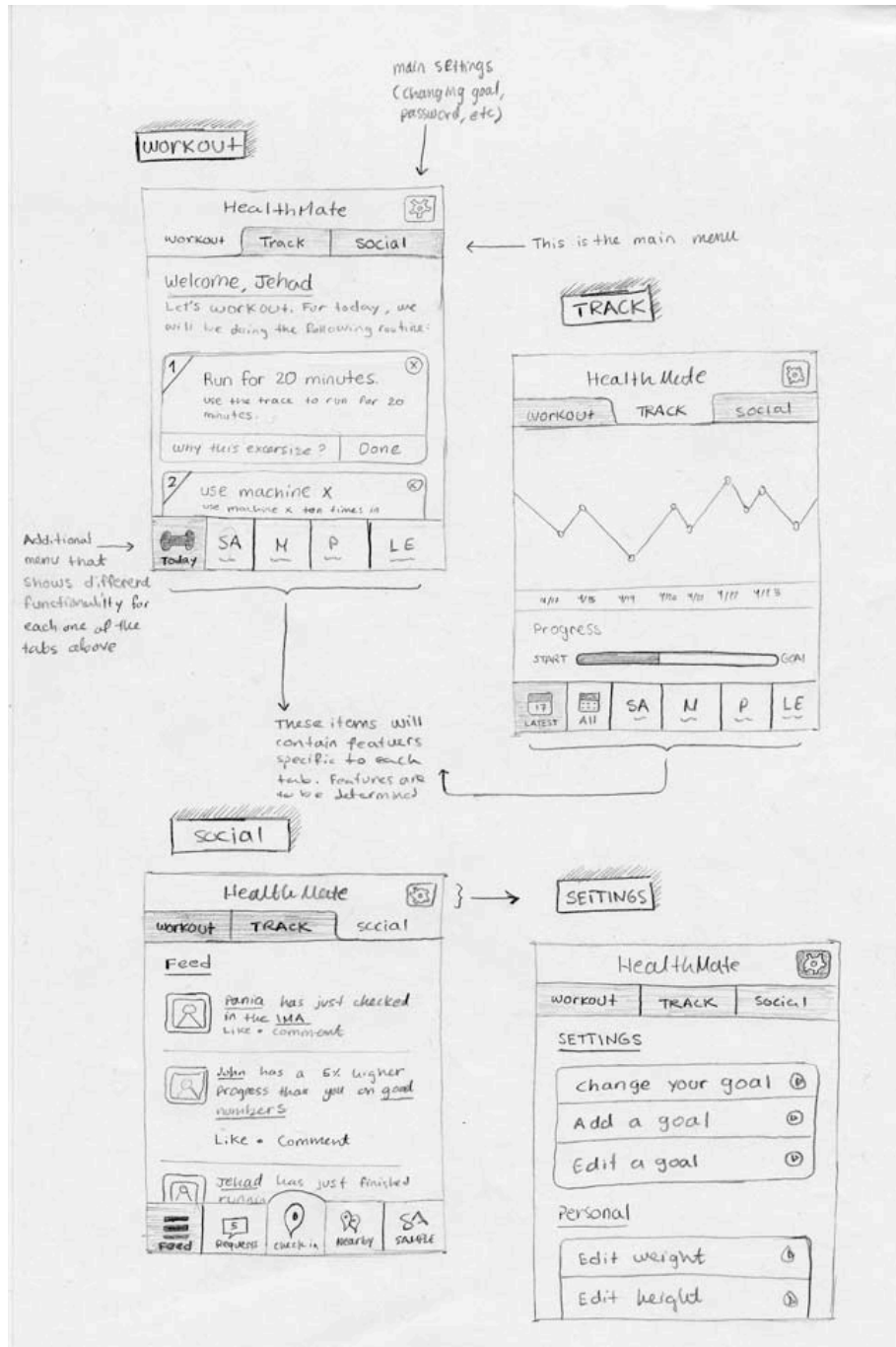
One tab away Interface

One tab away interface provides an easy way for first time customers to set their personal profile information like a personal trainer would need in order to figure out the right routines and goals. You can also set and see your goal, your profile, and your recommended workout routines based on your goals and current progress all one tab away. Moreover, the customer can check friends' feeds on another tab. The important tabs are shown at the bottom of the screen for easier navigation.



Using two menus

This design uses the main menu at the top to move between the three main tasks of the application (collecting data through the workout tab, tracking progress through the track tab, and the social aspect of the application through the social tab). In addition, the menu at the bottom, which is a regular iPhone menu, acts as a sub-menu for the chosen tab.



Selected Interface Design

We selected an interface that combined multiple aspects of each of the three different interfaces above with a focus on the two menu user interface. Using the app for the first time, you are given the chance to either sign up for a user account or sign in if you have previously signed up. After signing up, the user is asked to choose a goal from a list of suggested goals or describe a different goal to be added. Following that, the user is prompted to spend a minute or two entering their basic information in order for HealthMate to be able to recommend the best workout routines depending on the information provided.

We decided to go with this approach because based off of our observations and interviews the most common feedback was that people do not know if what they are doing is getting them any closer to their goal. Our design is very user-driven but directive at the same time. When we need information from the user (such as height, weight, age, etc...) we do so in a convenient and easy-to-understand way so as to not burden the user. We want as many aspects of the application as possible to be based off of user-input without asking something every five seconds. We demonstrate this below.

First-Time Use

Functionality

- Get necessary information about the user
- Minimal steps to get started and see results

Usability

Once the user finishes adding their basic information, they are able to use the basic three tasks of the application starting with the workout routine. Although the user has not yet used the application, HealthMate will recommend a first workout routine for the user to try next time they go to the gym. As the user progresses toward their goal and enters information along the way HealthMate will be able to provide more specific workout suggestions.

HealthMate®

First time?

Sign Up

Sign in

what is HealthMate?

— sign in →
(after typing
in your username
and password)
signing in for first
time!

HealthMate

choose a goal

Run

Shape

Smiling

Health

after choosing
a goal

HealthMate

Enter basic info:

Height:

Weight:

Something

Else:

Submit

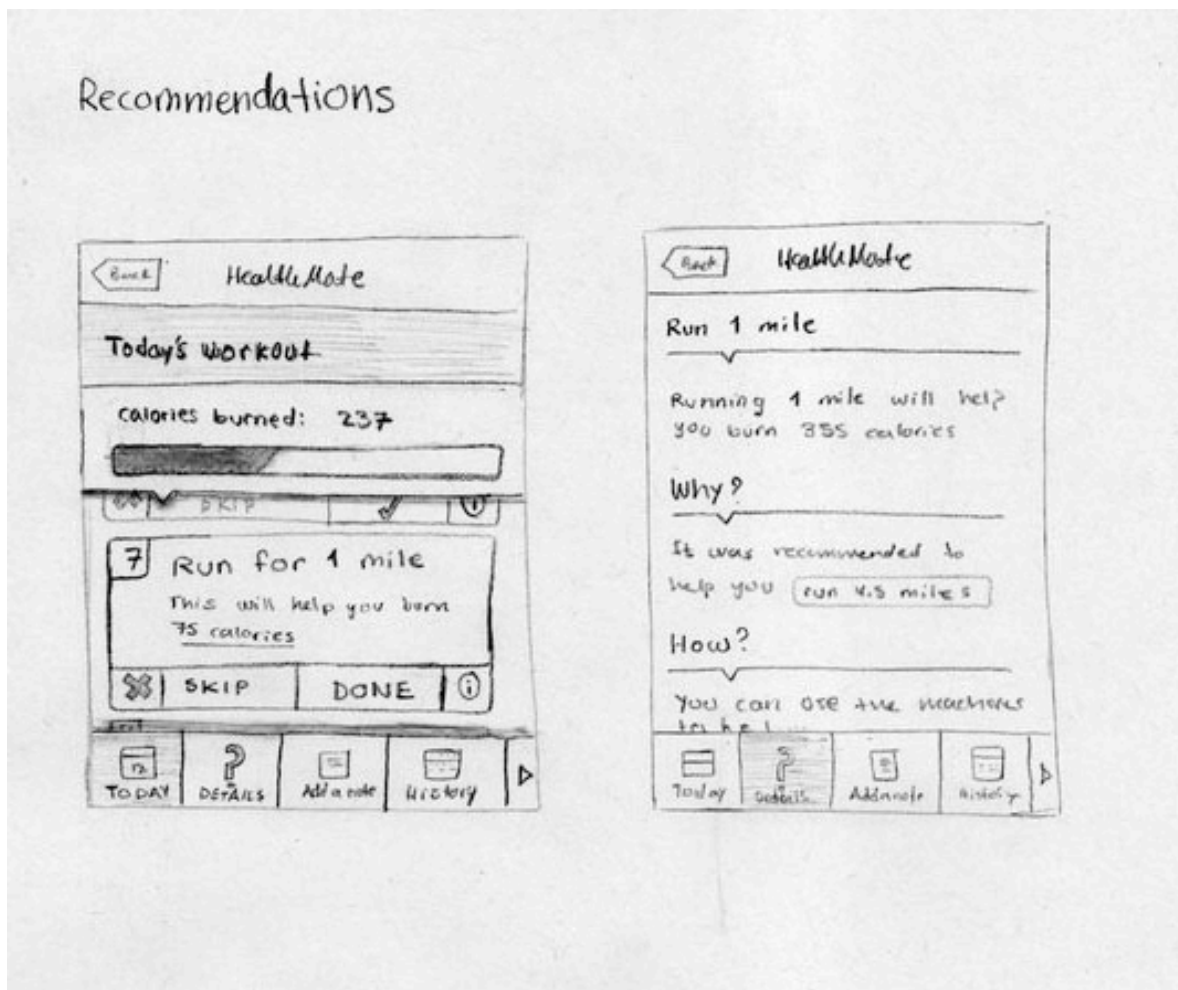
Recommended Workouts

Functionality

- Provides step by step workout instructions to the user
- Gives additional information explaining how the recommendation fits the user

Usability

Once the user is at the gym, the device will connect with the machines at the gym providing a step by step recommendation system for the user throughout their workout. The user is able to see the full workout schedule for today in addition to a specific screen describing the current task and its progress. The goal is to provide the user with “fresh” information that will benefit them *now*. HealthMate collects live information so as to best help the user achieve their current workout goal.



Tracking Progress

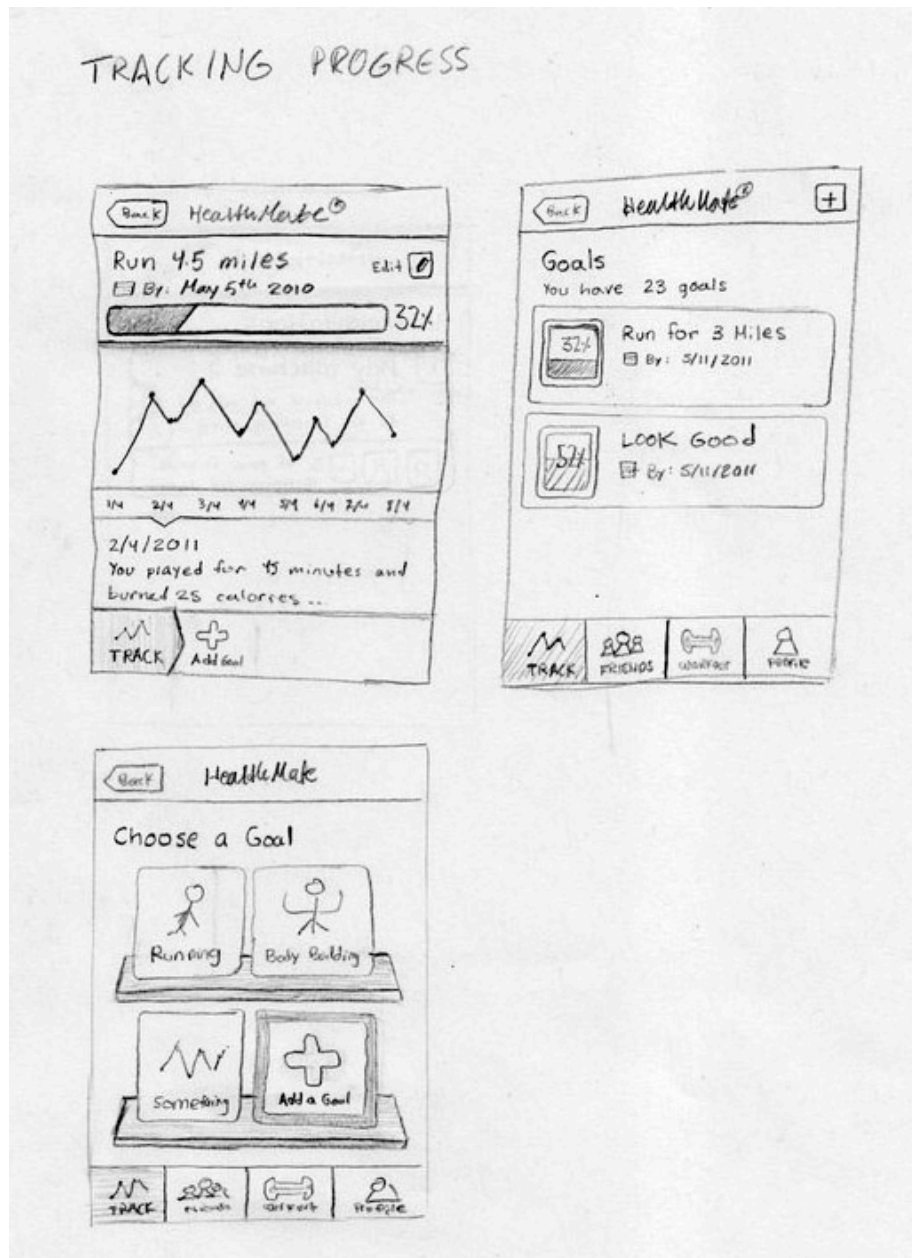
Functionality

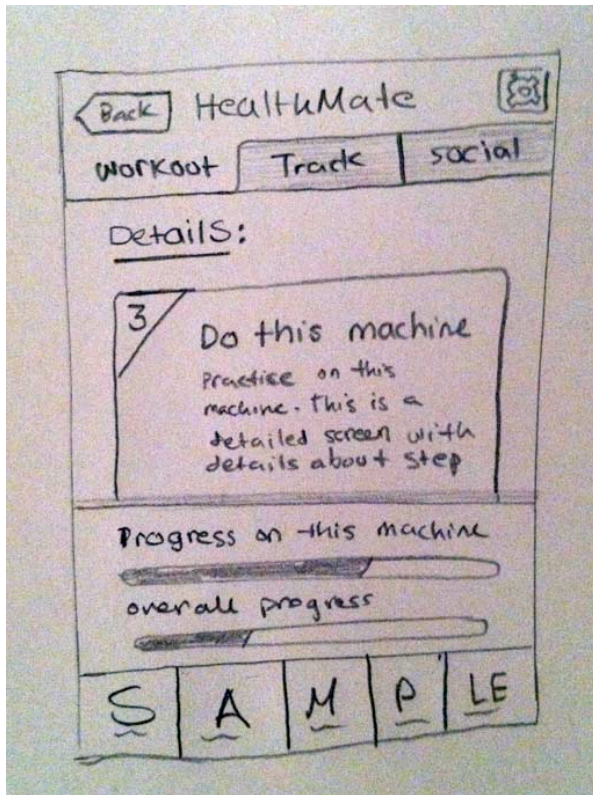
- Allow the user to input live information

Usability

Our service to the user will be live, specific recommendations based off of them. To do this we need to be able to collect information and determine their progress over time from that data to a specific goal. The more information the user inputs the better suggestions we can provide them so we wanted to make this process clean and easy.

To help this process we provide them with many already defined goal subjects such as “running, weight lifting, muscle-building, etc...” where they can then specify a time / weight constraint. Having accurate records and providing user-specific advice is the goal of this aspect of our system.





Throughout the process and after finishing the workout, the user has access to a screen with full information about their progress so far. That includes their progress to each of the goals they specified in addition to their progress in the current workout if it has not been finished.

This live-feedback is both motivating and important to the user because it directly combats the most commonly expressed user-problem of not knowing what to do for a general workout and especially what to do that would help them achieve a specific goal. This screen is one of the most important screens in our design.

Social Aspect

Functionality

- Connect users with similar workout goals
- Motivate users by being able to see similar-goaled user's progress

Usability

One of the best motivations to working out, is having someone with the same profile, goal, or schedule to workout with. Our "Social" tab presented on the top of the interface provides this kind of functionality enabling the user to gain the motivation to frequently visit the gym as recommended by the app.

The "Social" part of HealthMate is built around the idea of "checking in" at the place you are currently at building a profile overtime of the places you frequent and since HealthMate knows your basic information, it will be able to recommend people with similar profiles or goals without compromising your private data.

social aspect

HealthMate[®]

Back Feed Nearby[Ⓜ] Get to Know

Ambar C. has reached his goal of running a mile

5/11/2011 Comment Like

Paria is at the IMA weight room

5/11/2011 Comment Like

Armon needs an IMA body!

Feed Check in Friends Plan Event

HealthMate[®]

Back Add a friend

Friend's username

Friends on Facebook?

Friends on Twitter?

Feed Check in Friends Plan Event

HealthMate

Choose a friend

What?

Description

Where?

Zip code

Next >

Feed Check in Friends Plan Event

HealthMate

Choose a date

4 April

30	31	1	2	3	4
5	6	7	8	9	10
11	12	13	14	15	▶

Choose time

HOURS:minutes AM

SEND EVENT REQUEST

Feed Check in Friends Plan Event

Scenarios

We expect that HealthMate will be used in many different ways to help people achieve their goal. Below are few scenarios that represent the way we expect people to interact with the core functionality of our application.

Workout Plan

Personalized Workout Plan

John is a computer science student at the University of Washington. Although he has tons of homework to finish every week, he makes sure he goes to the IMA four times a week. John has a goal in mind, losing 10 pounds by June because he wants to look in shape for his summer vacation at the beach.

Before using HealthMate, John used to simply read multiple online resources to understand more about the workout routines required to lose weight. Although his goal is very specific, the resources he was able to find were not specific to his case, and did not help as much.

When John told his friend Stephanie, she recommended that John start using HealthMate immediately. With a simple set up process, the application collected basic information about his weight, height, and other preferences and recommended a workout routine for the next time she visits the IMA.

Workout Experience

Data Collecting + Recommendations + Progress

Once John arrived at the IMA, his phone displayed a step by step workout routine for today. The device also connected with the machines at the IMA and started collecting information about John's workout and his progress. The app recommended a specific workout routine for John and helped him go through each step of that routine by providing a detailed view of each step that does not only show him the progress for that step but also the right way to use the machine or exercise.

When he arrived home, John was able to get a detailed view of his progress. He was able to look at charts and data that compared his workout today with other workouts during this week, this month, and in the past few months to help him improve. He was

also able to see the expected date he will be reaching his goal and other goals that he can add to his list which could be achieved at the same time.

Socializing

Matching People base on Interests

While the app has been working great for John, the amount of homework he has to do has been increasing which makes it harder for him to be motivated to go to the IMA. His friend James, however, makes sure John is on schedule. John and James met through the “Social” task of HealthMate, they both have a very similar profile and they both plan to lose weight in the next couple of months. Without sharing any information about their private information, the application was able to connect them together when they were both working out at the IMA.