

COEN 285 Term Project

Fall 2015

Team 3 (Ashwini, Ben, Hinsien, Khushali)

Designing Software that Increases
Happiness for Obesity Patients

Agenda

- Background
- Project problem and Solution
- Process
- Key Insights
- Use Cases
- Activity Diagrams
- UI mockup screens
- Key lessons

Background

- Obesity is
 - Defined as having a BMI over 30
 - 67% of American adults are **overweight**
 - 30% of American adults are **obese**
- The estimated cost of obesity for the U.S. in 2003 was nearly **380 million dollars** (NIH)

Trends

- Obesity prevalence has doubled since the late 1970s

Prevalence (%) Trend of Overweight, Obesity and Severe Obesity in U.S. Adults

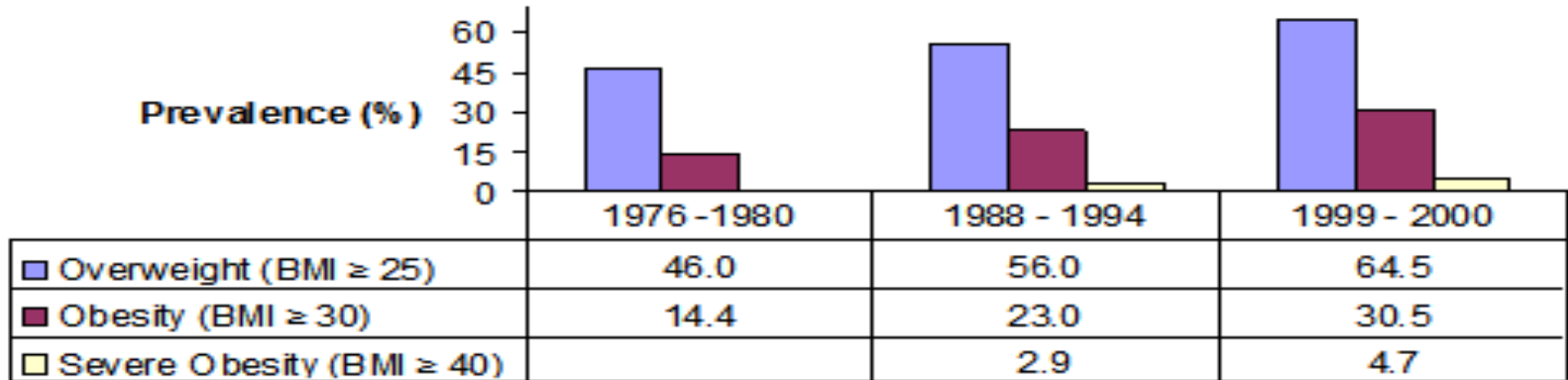


Figure adapted from Flegal et al. JAMA 2002

What is Happiness?



It Depends On Who You Ask...

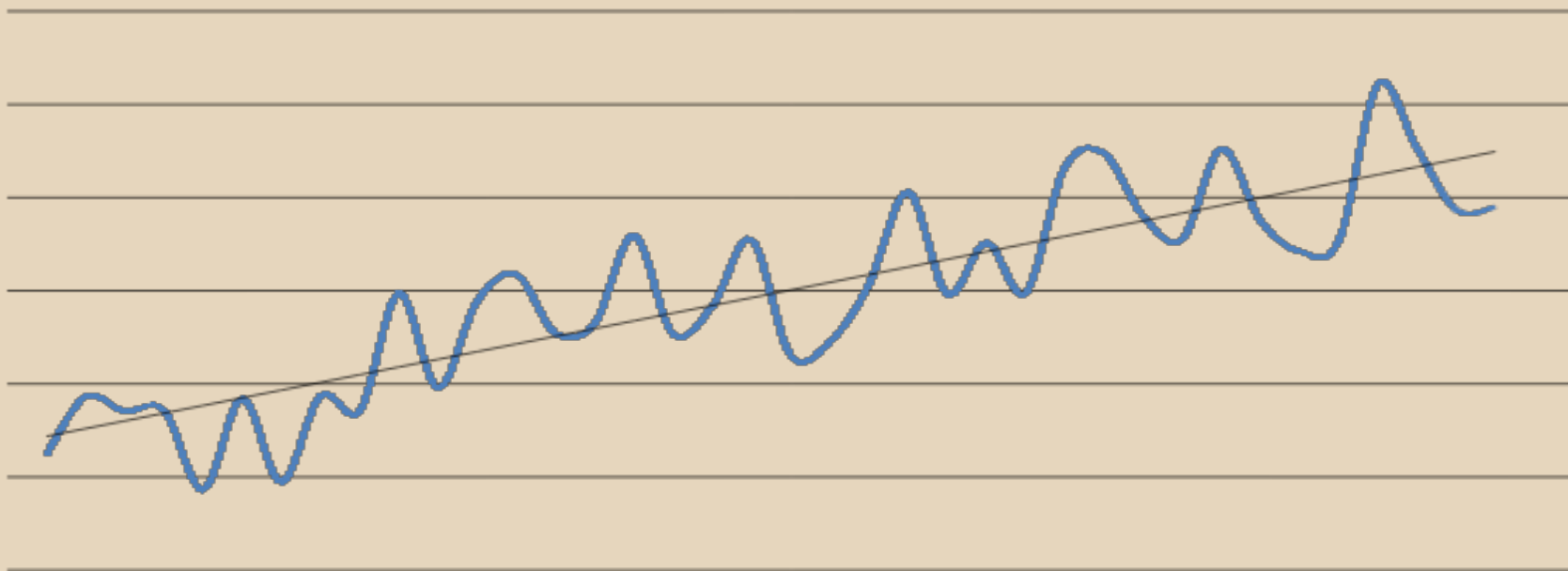
- Can be defined as flourishing or satisfaction
- Can be defined as an emotion
- Can be defined as the combination of both

How Do We Increase Happiness?

- The brain is programmed to measure **relative** happiness
- Emotions will go up and down but are mostly uncontrollable (but we do try)
- The best we can do is increase our satisfaction or quality of life

The Ideal Case

- Keep moving forward



The Problem

- Obesity patients all share one common problem, Obesity
- We don't need a survey to tell us this
- If we can solve obesity, other problems will be fixed
- We're not here to fix symptoms

The Solution

- Our Goal is to solve the root of the problem
- Obesity is for the most part a self-treated disease
 - Diet and Exercise
- The problem then shifts to a problem of motivation, social support and environmental factors
- Our surveys focus on these three areas to determine the leading problem and how to fix it

The Process

- Conduct Ethnography qualitative research
- To collect direct information from people who are being obese in their naturalistic setting
- Provide you a detailed and rich database for further investigation and writing
- Help to study obese people closer than other forms of research.

Data Collection Methods

- ❑ Surveys
 - Programmed survey
 - Conduct the survey
 - Received 74 responses

Data Collection Methods

- ❏ Interviews
 - Conduct two web interviews via Google Hangout
 - Conduct structured interview
 - Record answers and transcribed them for interviewees' validation and refinement

Steps in Conducting Ethnography

- Specify problem statement
- Selecting research setting
- Gaining access
- Presenting oneself
- Gathering and recording information
- Brainstorm and analyze on research notes and collected data
- Proposed solution

Present Findings

- Some of the survey result area



Present Findings

*31) 30. Please tell us how you think your life may be different if obesity was not a part of it. Please enter a response.

ID	Responses (61)	View
10764701	I would still be working and earning a full salary. My obesity and trickle down conditions forced an early retirement. I would still be driving and be able to be freely independant to come and go as I please. I would be able to travel. On my bucket list is a trip to the British Isles to visit my ancient roots, but as is, I can barely stand long enough to walk through the drug store. I have my passport and funds for the trip, but will not impose on someone to push me all around the places I want to travel to, up and down hills, etc. I would have better range of motion and physical endurance to enjoy sex even more tha I already do. (You are never to old!)	View
10764740	Q	View
10764852	More energy, less negative thoughts. Less stress on my family.	View
10764886	My joints ache constantly which make me very tired so I don't have a lot of energy to do much besides work.	View
10764898	It is different as I'm no longer obese, I've lost well over 100lbs with about 20 more to make goal. Life is easier and more fun.	View
10764943	http://www.youtube.com/watch?v=7lhcbyplHQ	View
10764988	I am now an ideal weight since the surgery. There are soo many things that are different now. I am healthier and able to do more. I am happier as well and my depression has demished. I was on BP meds, Gerd meds, pre-diabetic, took 3 types of anxiety meds, and had a horrible back problem, poor eye sight, sleep problems, to name a few. I still have high BP which runs in the family but the rest of my medical issues have been resolved.	View
10764997	i will be more active	View
10765014	I feel like I would be more confident and energetic. I would have accomplished more of my goals.	View
10765058	More active in sports or life	View
10765087	Mentally I would feel better	View
10765090	N/A	View
10765133	Oh gosh I would definately not have the aches and pains that I do, I would feel alot younger and flexible. I wouldn't be afraid anymore!	View
10765211	I don't think I would ever stop moving if I could move freely.	View
10765218	-I would have more friends. -I would be more active and enjoy doing physical things outside. -I wouldn't have as many health risks. -I would feel happier.	View
10765220	I think my life would be very much the same as it is now that i am down to a healthy weight again...active, fun, much less pain. I never identified as "fat" and my friends don't really notice much of a difference, but I am 90 pounds lighter than I was a year ago, and I feel so much more energy!	View
10765222	More active, ability to do things the rest of society takes for granted.	View
10765239	Freedom to choice in every area of my life.	View
10765252	I will be able to do anything I want to physically. This means being more active with my spouse and children.	View

Key Insights

4 Response Categories

- Background
- Lifestyle
- Diet/Fitness
- Motivation

Key Insights - Background

- Identity
- Home Life
- Work Life
- Personal Relationships



Key Insights - Lifestyle

- Hobbies
- Activities
- Patient Challenges



Key Insights - Diet/Fitness

- Perspective
- Regimen
- Hardships



Key Insights - Motivation

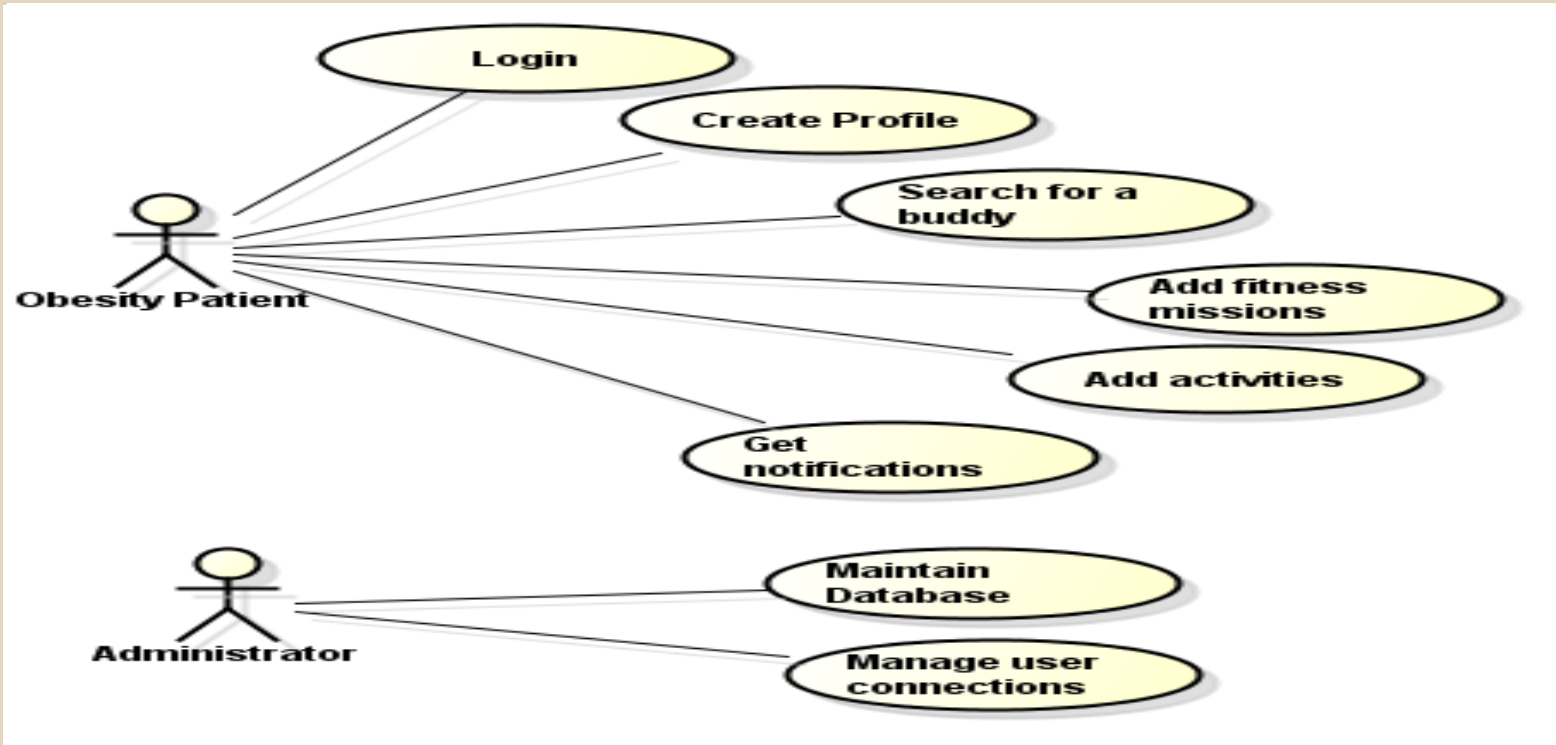
- Friends/Family
- Fellow Patients
- Workout Buddy



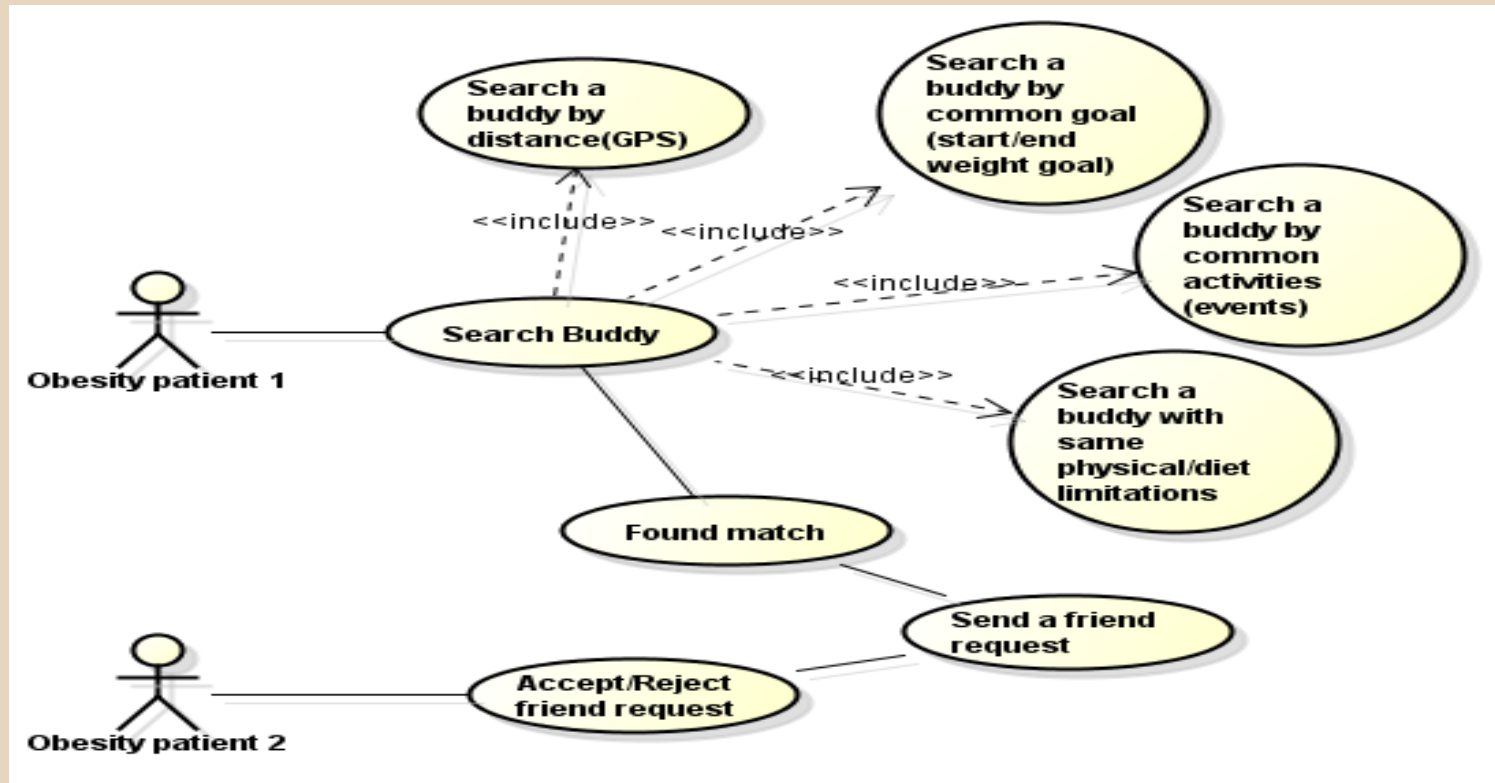
Problem and Proposed Solution

- *Obesity patients feel that they're trapped in their own bodies by their medical condition.*
- *With proper emotional support, patients believe they can change.*

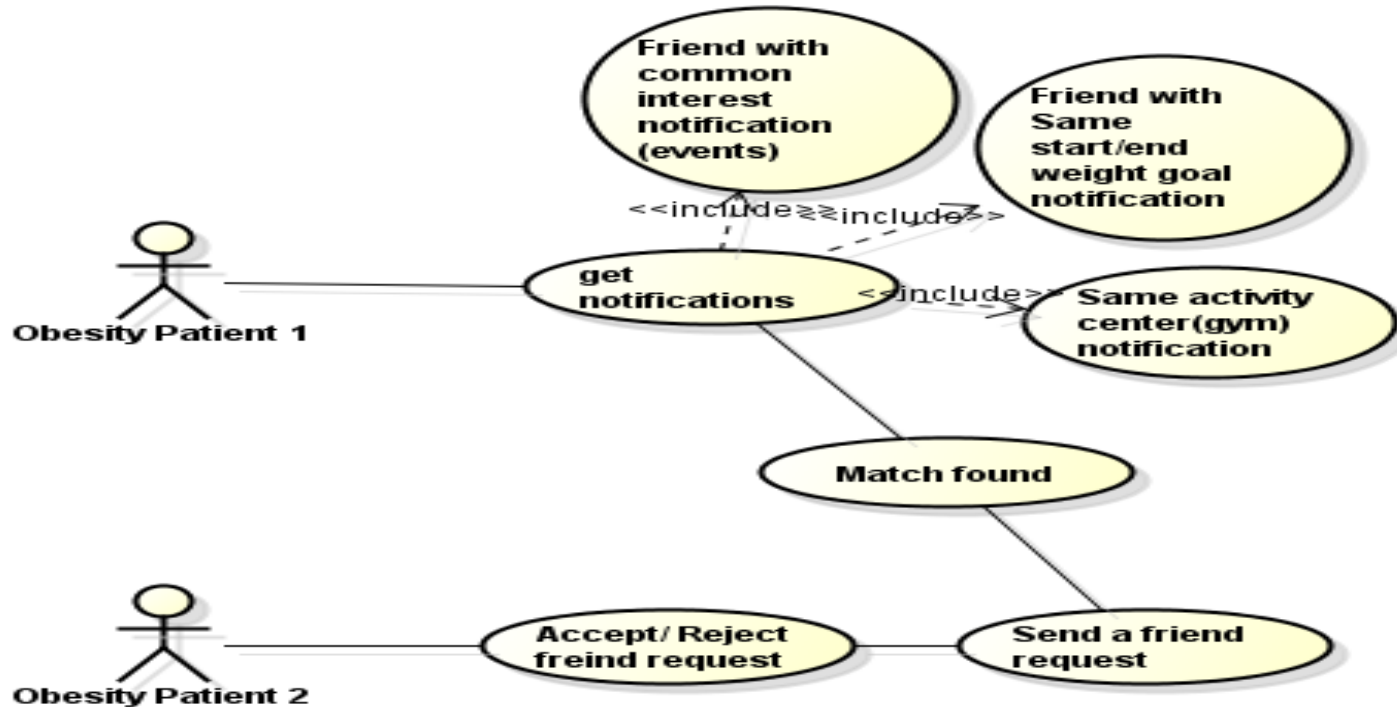
Use Case 1: General Patient, Admin activities



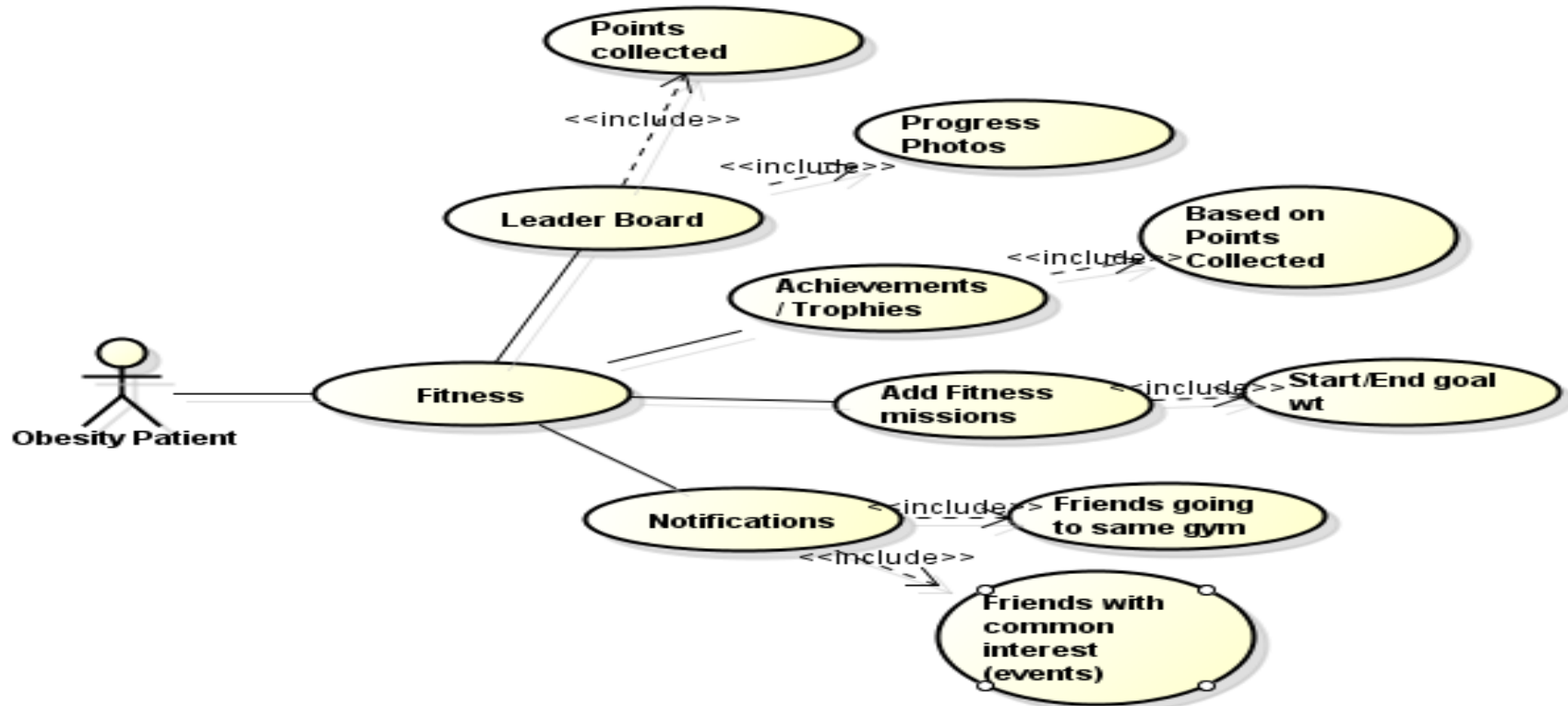
Use Case 2: Search a Buddy



Use Case 3: Get Notifications

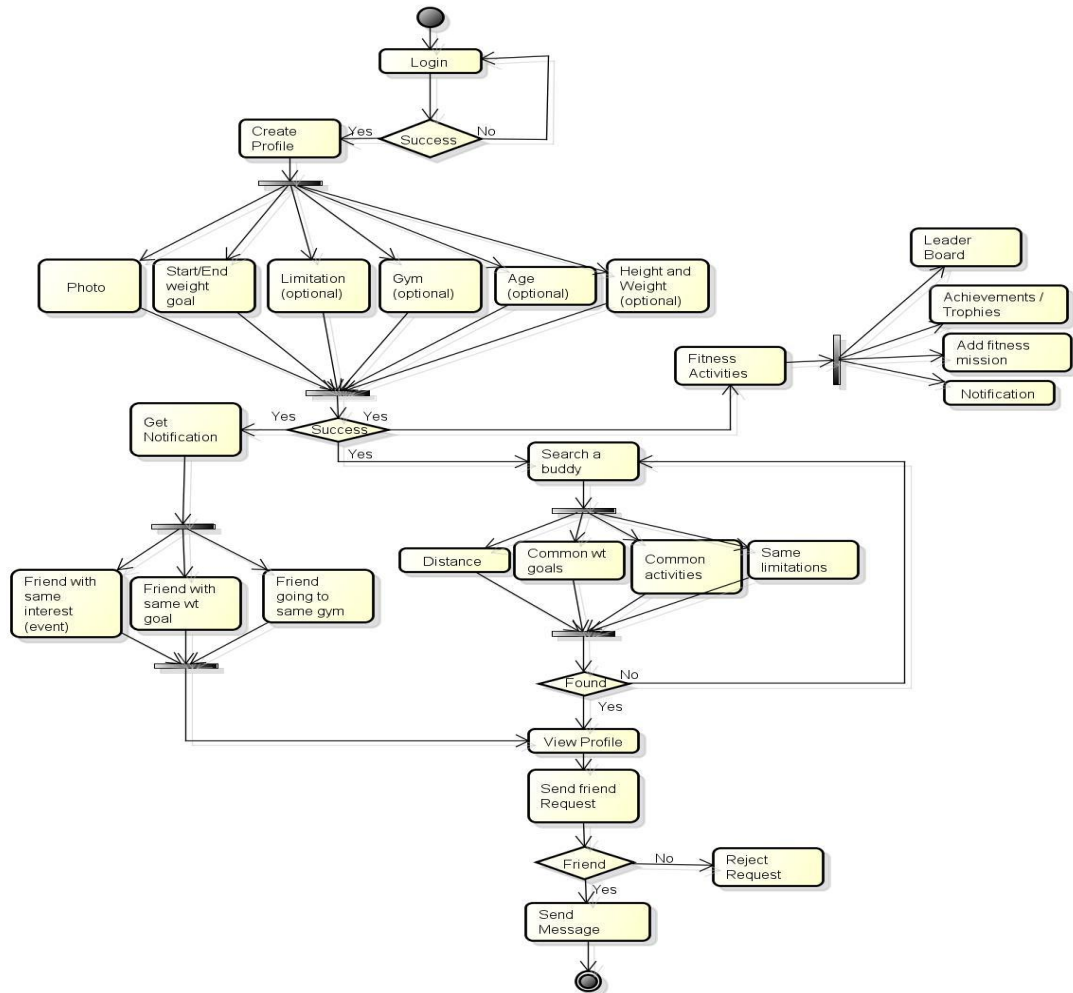


Use Case 4: Fitness Activities



Activity Diagram

actObesity Patient Activity Diagram0

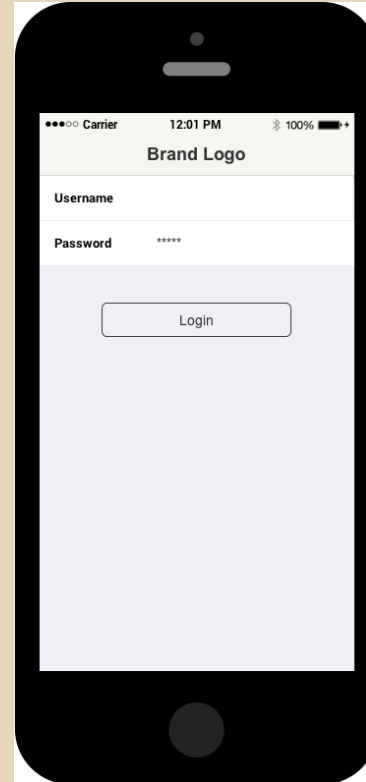
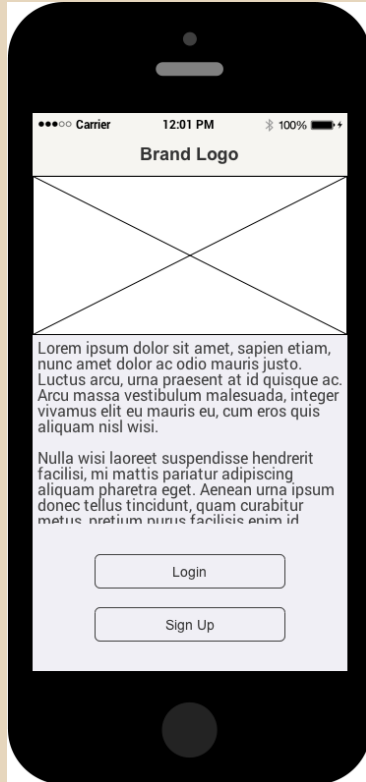


UI Mockup - Sitemap

- Welcome
 - Login
 - Sign Up
- Menu
 - Find
 - ResultPage
 - ResultList
 - Notifications
 - Profile
 - Achievements
 - Leaderboard
 - BuddyList
 - MissionList
 - EventList
 - Activity



UI Mockup - Welcome/Login



UI Mockup - New Account

Carrier 12:01 PM 100%

Brand Logo

Username

Enter username

Password

Enter password

My Weight Desired Weight

Enter weight in lbs. Enter weight in lbs.

Photo

Take a picture

Select a picture

Additional Options...

Create Account

Carrier 12:01 PM 100%

Brand Logo

Quirky Quote

Say something quirky about yourself

Age

Enter age

Activities

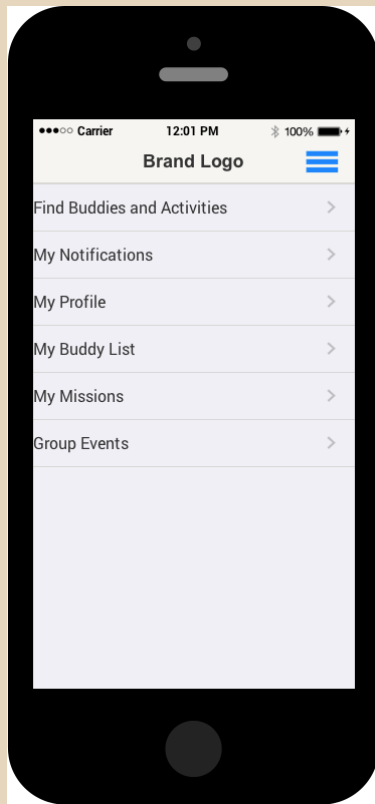
Limitations

Gym

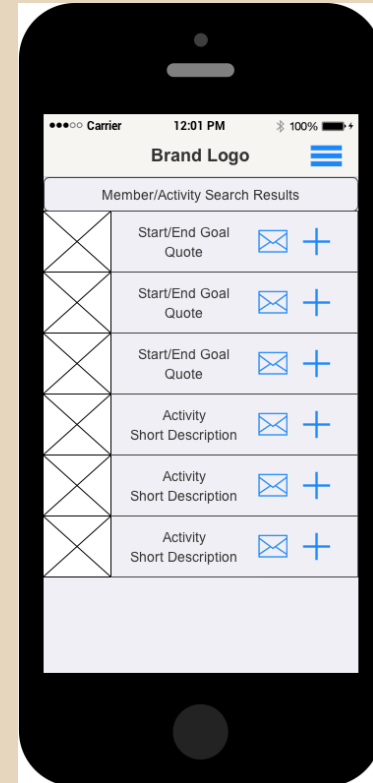
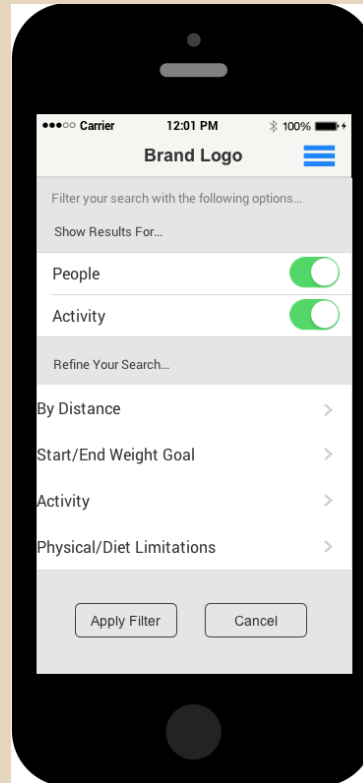
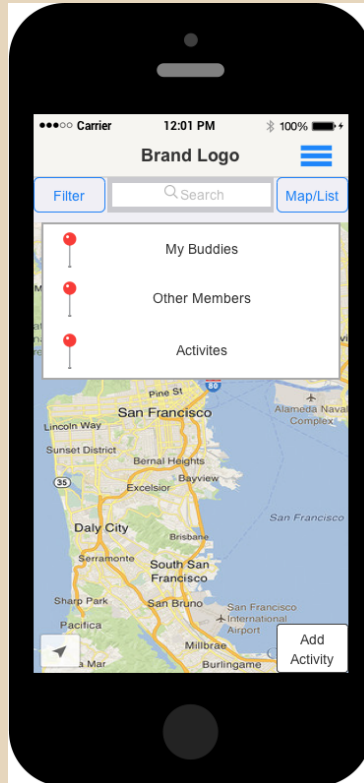
Enter gym name

Back

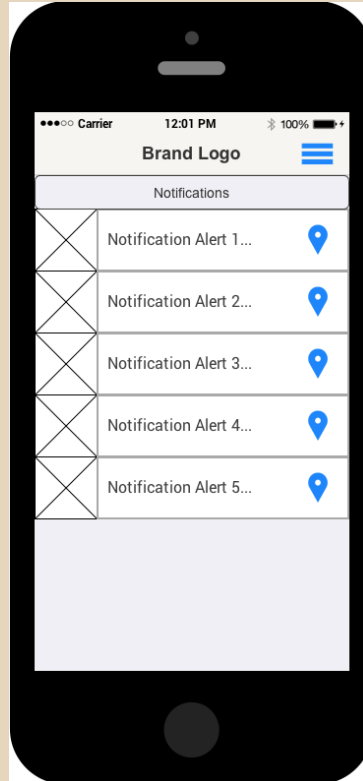
UI Mockup - Menu



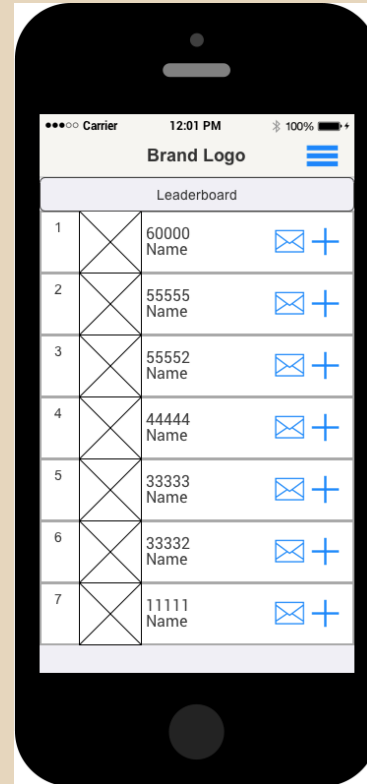
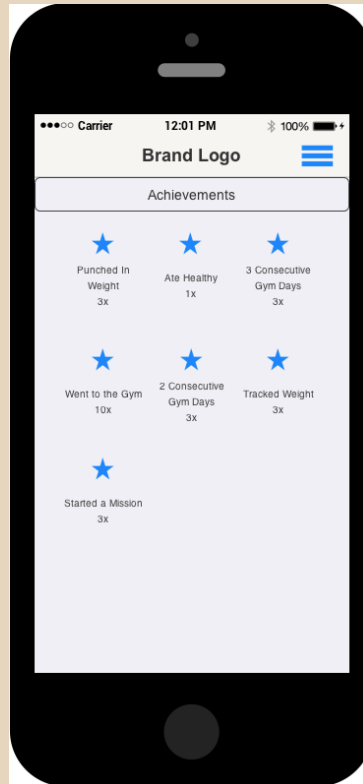
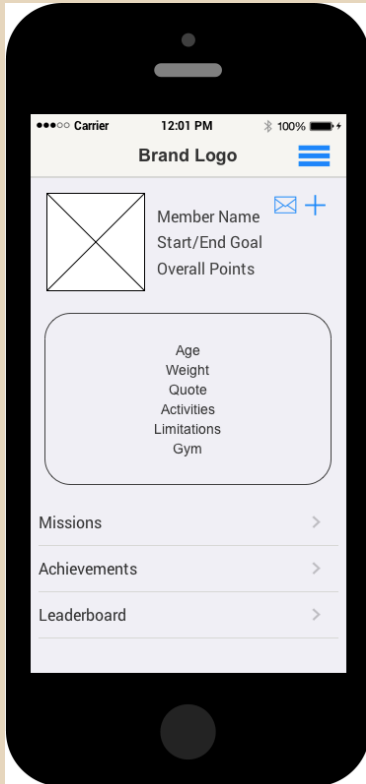
UI Mockup - Find Buddies/Activities



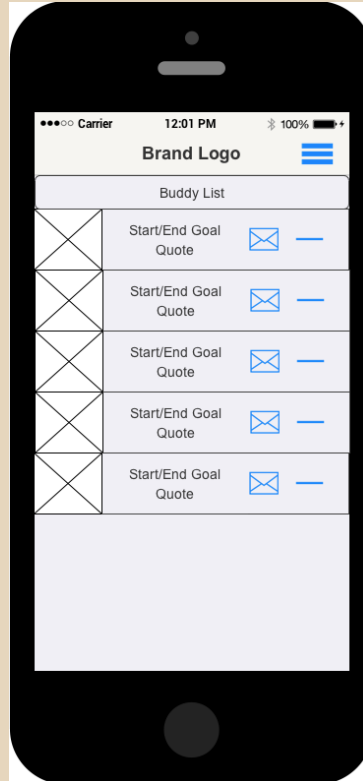
UI Mockup - Notifications



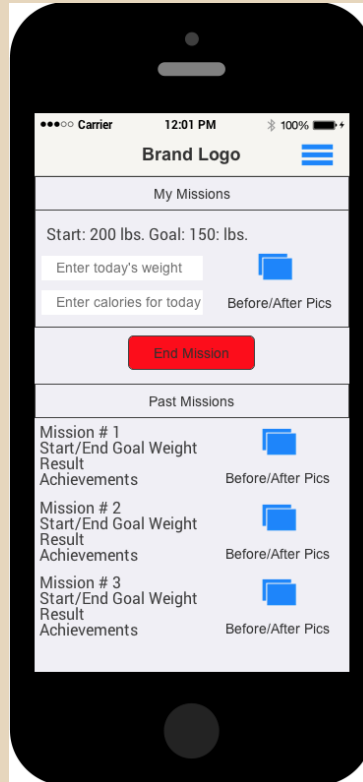
UI Mockup - Profile



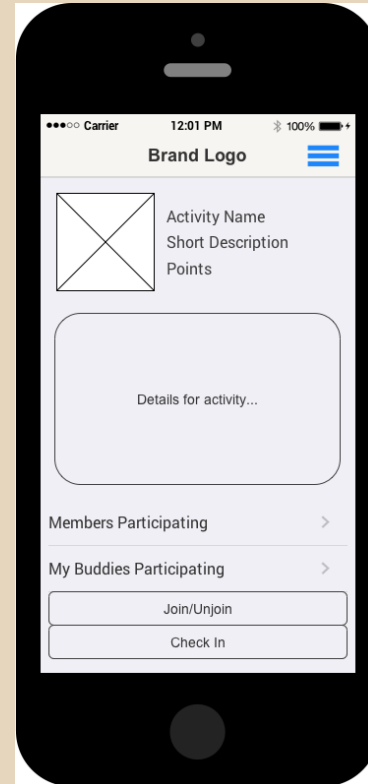
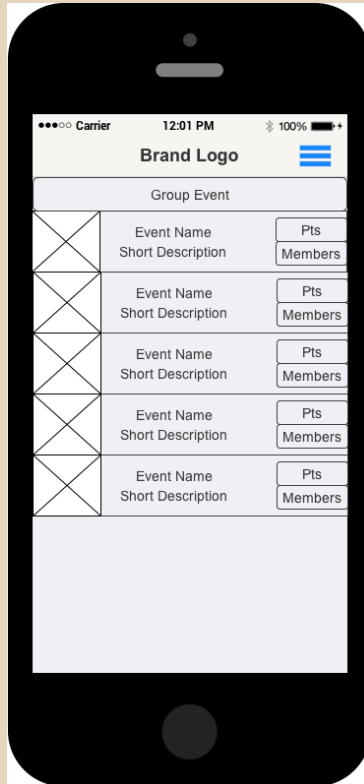
UI Mockup - Buddy List



UI Mockup - Missions



UI Mockup - Group Events



Key Lessons

Challenges

- How and where to contact patients
- Asking the right questions the first time
- Create something interesting
- Balancing product simplicity and usefulness
- Representing user's needs the right way

Thank You!