

BeaveRun



Part 1: Problem Analysis

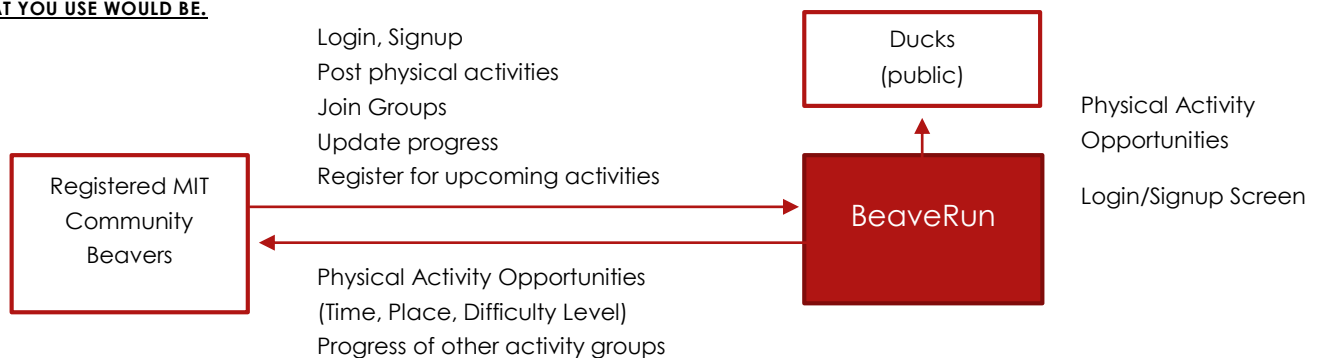
PURPOSE: TAKE THE APPLICATION YOU'VE PICKED AND IDENTIFY ITS PURPOSES, NAMELY WHAT THE APPLICATION IS FOR. YOUR AIM IS EVENTUALLY TO HAVE A SHORT LIST OF ABOUT 3 TO 5 PURPOSES, EACH STATED WITH AS MUCH CLARITY AND SUCCINCTNESS AS YOU CAN MUSTER. YOU SHOULD THEN PLACE THESE PURPOSES IN A PRIORITY ORDER. THIS IS HOW YOU WILL RETAIN CONTROL OF YOUR DEVELOPMENT IF IT THREATENS TO BECOME MORE COMPLEX THAN YOU ANTICIPATED.

BeaveRun is an app that helps MIT students take advantage of MIT's fitness resources in a collaborative setting. It is a social platform for connecting with other MIT students to work-out, motivate one another, and build friendships based on healthy habits. The top 4 purposes of the application, in order of importance are:

1. Provide an engaging outlet for sharing physical activities within the MIT community
2. Give a sense of personal goals and progress tracking for individuals and groups
3. Encourage non-academic group activities
4. Allow users to encourage overall physical fitness and sustained community wellness

Working out alone is difficult. Few people have the constitution to regularly work out alone over long stretches of time. Even when we are able to muster up the will to work out, we often have poorly defined goals, inaccurate tracking, and little motivation or encouragement. However, when several members of a community come together to achieve a common goal, we are able to reach heights we previously never thought were possible. This is the very identity of BeaveRun, an application designed to maximize encouragement surrounding physical fitness and wellness at MIT. On BeaveRun, students and faculty will be able to track their progress, share it with others, coordinate workouts, send encouraging messages, and promote overall fitness on campus. Along with the well-known health benefits of physical activity working out can also be a social activity allowing people to take a break from their tough schedules.

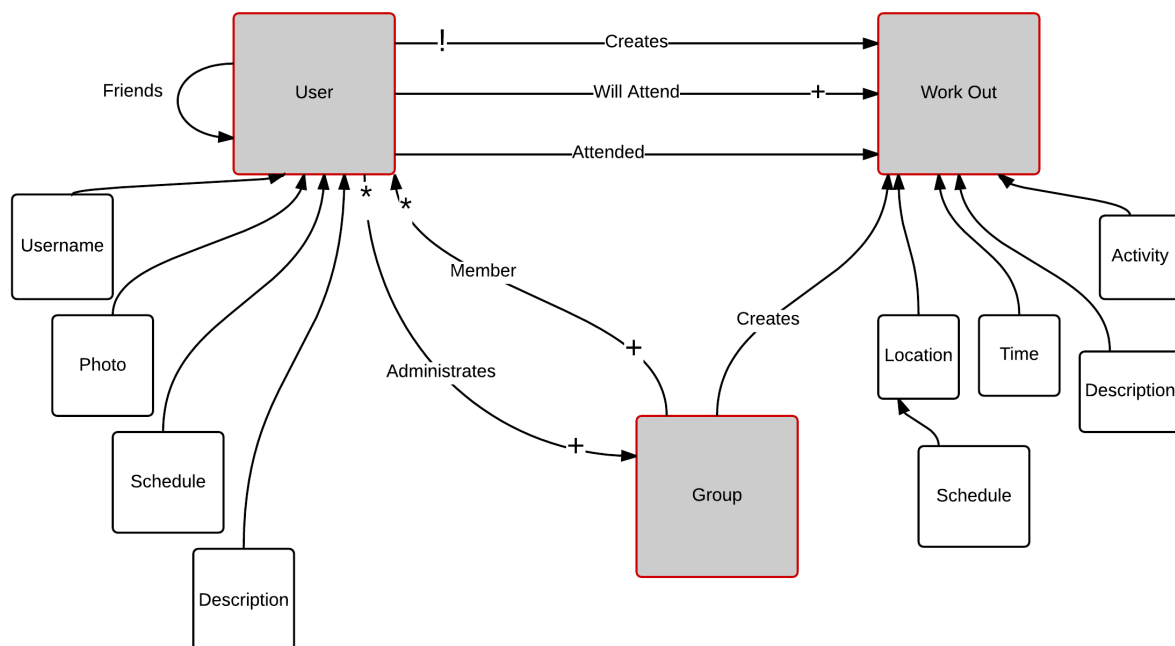
CONTEXT: CONSIDER THE CONTEXT IN WHICH YOUR APPLICATION WILL OPERATE, AND DRAW A CONTEXT DIAGRAM SHOWING THE APPLICATION AND THE EXTERNAL AGENTS IT INTERACTS WITH. DOCUMENT THE EXTENT TO WHICH YOU WILL RELY ON ANY PROPERTIES OF THESE EXTERNAL AGENTS. A SOFTWARE FRAMEWORK (SUCH AS MONGOOSE) IS NOT AN EXTERNAL AGENT, BUT A WEB SERVICE THAT YOU USE WOULD BE.



CONCEPTS: DEVELOP A LIST OF KEY CONCEPTS THAT WILL FORM THE BASIS OF YOUR APPLICATION, WITH AN INDICATION FOR EACH CONCEPT OF WHICH PURPOSE OR PURPOSES MOTIVATE IT, AND EXPLANATIONS OF ANY NON-TRIVIAL CONCEPTS.

PURPOSE	CONCEPT
<p><u>PROVIDE ENGAGING OUTLET FOR SHARING PHYSICAL ACTIVITY</u></p> <p><u>ENCOURAGE NON-ACADEMIC GROUP ACTIVITIES</u></p> <p><u>GIVE A SENSE OF PERSONAL GOALS</u></p> <p><u>ALLOW USERS TO ENCOURAGE OVERALL PHYSICAL FITNESS</u></p> <p><u>GIVE A SENSE OF PERSONAL GOALS</u></p> <p><u>PROVIDE ENGAGING OUTLET FOR SHARING PHYSICAL ACTIVITY</u></p>	<p>WORKOUT AN ALL PURPOSE EVENT. THE USER POSTS A TIME, A PLACE, AND A DESCRIPTION OF THE ACTIVITY. ACTIVITIES DO NOT ALL HAVE TO BE WORKOUTS. TO ENCOURAGE PEOPLE TO MEET OTHERS, THE WORKOUTS WILL TREND BASED OF THE NUMBER OF PEOPLE REGISTER.</p> <p>USER ACTIVITY CALENDAR A CALENDAR ON USER'S PROFILE SHOWING EVENTS THAT THE USER IS PARTICIPATING IN WITHIN THE NEXT WEEK</p> <p>TREE-STUMPS USERS GET TREE-STUMPS(POINTS) BASED OFF OF THE FREQUENCY, DURATION, NUMBER OF OTHER PEOPLE THEY WORKED OUT WITH.</p> <p>BEAVER COLONIES USER GROUPS SHARE ATHLETIC INTERESTS. USERS CAN POST WORKOUTS FOR THE ENTIRE COMMUNITY OR WITHIN A GROUP.</p>

DATA MODEL: BUILD A DATA MODEL THAT INCORPORATES YOUR CONCEPTS, AND SHOWS WHAT THE ESSENTIAL DATA ELEMENTS AND RELATIONSHIPS ARE. FOR ANY ELEMENTS THAT ARE OBSCURE, PROVIDE A VERY BRIEF "DESIGNATION" THAT EXPLAINS WHAT THEY MEAN.



DELIVERABLES THE CHECKLIST ITEMS REQUIRED ARE: ALL OF THE OVERVIEW, DESIGN MODEL AND CHALLENGES SUBDIVISIONS OF THE DESIGN AREA. THE CHALLENGES OBVIOUSLY NEED ADDRESS ONLY DESIGN CHALLENGES THAT ARISE IN THIS PHASE. GRADING DIRECTIONS ARE NOT REQUIRED.

OVERVIEW

MOTIVATION

BRIEF DESCRIPTION OF SYSTEM TO BE BUILT

BeaveRun is an app that helps MIT students take advantage of MIT's fitness resources in a collaborative setting. It is a social platform for posting your want-to-do activities with information about the activity, location, difficulty level and having other MIT students reach out for participation. It is a way to enforce your work-out habits by means of involving other students, as well as a great way to make friends.

KEY PURPOSES (WHAT PROBLEMS DOES IT SOLVE? WHY SHOULD IT EXIST?)

The actual purposes of the application are listed on page 1. More generally, the vision behind this application is to enforce healthy habits and social interaction – two things MIT students often miss out on.

EACH PURPOSE SUMMARIZED IN A SHORT SENTENCE AND THEN EXPLAINED

See page 1.

DEFICIENCIES OF EXISTING SOLUTIONS (IF RELEVANT)

Currently, MIT offers its facilities to students and offers team sports and physical education classes. However, these are offered on week-days and do not encourage students to work on fitness together outside of class or teams. Many students do not participate in organized team sports, but want a work-out buddy for weekend activities. This app is meant to fill this gap.

CONTEXT DIAGRAM

See page 1.

DESIGN MODEL

CONCEPTS

See page 2.

DATA MODEL DATA MODEL OF APPLICATION STATE

See page 2.

ANTICIPATED CHALLENGES

Problem	Possible Choices
User Authentication: We will need a way to make sure users are a part of the MIT community.	We can accomplish this by email authentication that requires an MIT email address or by using touchstone.
Locations: We will need to a way for users to tag locations of workouts. We could use a location service like google maps or just a list of MIT specific locations.	Matching events to users: We will need a system to match events to users. We can do database queries based off of users favorite activities, friends, location, and available times. If we have time we could build a more complex recommendation system.

CHALLENGES TO DATE

Problem	Options	Choice
Selecting the primary purpose of application	<ol style="list-style-type: none"> 1. Encouraging individual fitness and creating a program that caters to the main user 2. Social platform for bringing students together for work outs 3. A platform for MIT to organize physical events 	Choice 2: solutions to the first choice already exists. A user for choice 3 would be difficult to find. Choice 2 provides a useful application for the student demographic and fulfills the need to have the ability to connect with students for healthy activities.
What is the main interaction that will happen in this app?	<ol style="list-style-type: none"> 1. User updates his/her profile and uses his/her profile to make announcements and had postings delivered to private box 2. User interacts with the public wall and his/her profile gets updated as a result 	Choice 2 provides a more interactive feel to the app, making it a more social platform. If the primary method of interaction is user's profile, then the element of the community will be gone. Therefore, the profile will be used as a tracker for the user, but will not be the primary mode of interaction. Most of the interaction should happen on the public page, and by public I mean the page that is visible by all students (not unregistered public)
Should there be a section for unregistered users?	<ol style="list-style-type: none"> 1. Login/signup screen only 2. Informational Screen and login/signup 3. Full interactive site 	The website is meant to be a resource for the MIT community. It would a liability for us to connect MIT students with strangers outside of the community. Therefore, option 3 was disregarded. Option 1 is too unwelcoming for students who have not yet registered and prospective students. Therefore, option 2 is used in this document.