

Lappeenranta University of Technology
School of Business and Management
Degree Program in Computer Science

LTC-Otso Code Camp - Fall 2016 Project Report

MINT(Move It Now And Then)

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Introduction

In this code camp organized by Lappeenranta University of Technology, a business case related to health and well being sector was given by LTC OTSO. We were supposed to brainstorm to develop an idea and an app that can engage, encourage user to do some activity that can promote their health and well being.

The case was about creating an enticing app that in a way encourages the user to do some physical activity like jogging, swimming, sleeping, playing sport regularly, so that the user remains healthy and fit. The app for the case could be a mobile or a web app and JQuery Mobile was recommended for the frontend.

MINT App as a Solution:

Idea

After first round of brainstorming on the first day of the code camp, we ended up with two ideas. First one was about indicating the user about season changes and the second one was about making an app the integrates data from all fitness related activities and converts it into calorie points. After the 2nd round of brainstorming, we have decided to go with the later idea as it had options to gamify better and thus entice the user to do more fitness activity. Further brainstorming sessions led to the complete idea of the app called MINT(move it now and then)

MINT is an app that will encourage user to do more physically activity in daily life and entice the user to using the app using the concept of gamification. It is an an application for companies that take care of their employees' health and want to motivate them through rewards. For the fitness, the amount of sleep, the adherence of breaks and the learning about health issues (how to treat sick colleagues) each user/employee gets points and will then be ranked among all employees and receive rewards for a certain amount of collected points. The app will receive data about the fitness and sleeping rhythm of the workers from their normally used fitness or running apps and sleeping tracker, since most of them have their own favorite app. The adherence of breaks will be checked through scanning a QR code next to the coffee machine or

the bench outside. Workers can learn about what they should consider in case of a flu or about a sickness (like diabetics) of a colleague and get advised how to support him. Through the ranking workers can compete with their colleagues and get rewards from the company like a free day, free food at the canteen, massages or books in order to motivate them to improve their health.

Motivation

Nowadays there are many applications that are related to tracking fitness and sport activities. Statistical findings show:

- Only around 20% of the population takes a lot of care about their health and around 50% of the population worry about their health → high potential to address more people who are also willing to change something
- 33% of the 18-39 year old and 25% of the 40-59 year old would do more sport activities if it would be financially rewarded by the company
- 41% of the 18-39 year old and 36% of the 40-59 year old would do more sport activities if it would be financially supported by the health insurance (◇ provide the app to health insurances)
- 26% of the 18-39 year old and 19% of the 40-59 year old would do more sport activities for better career prospects[1]

Therefore we see a high potential in motivating people through company's rewards to use their own fitness, sport and sleeping apps in order to improve their health.

Technical Part

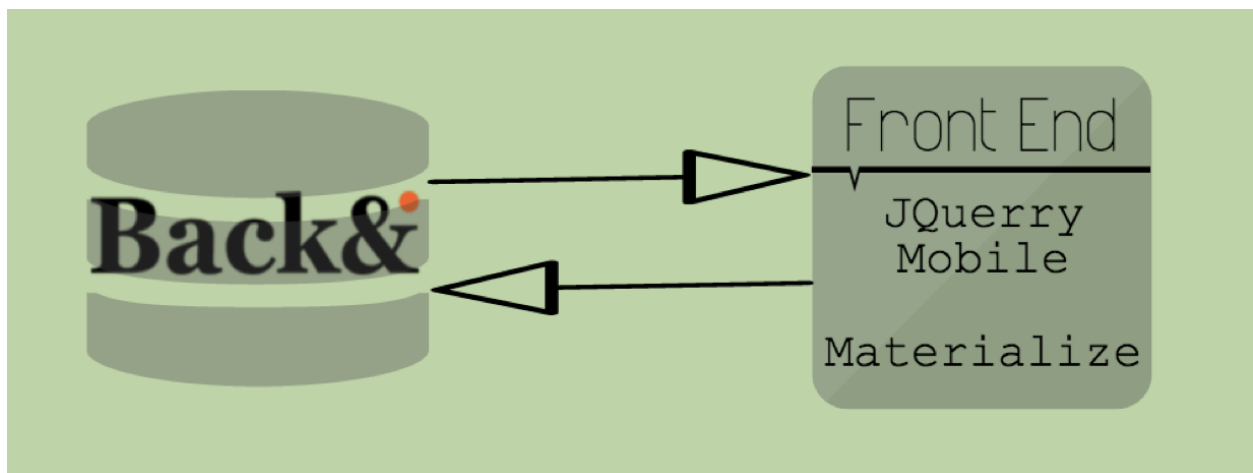
For the technical part of the idea, we decided to develop a responsive web application. We hosted the code in Cloud9, which is also where we built it. Cloud9 let us have an Apache server for testing, we used it because it was easy to develop on it, but since we are just using the frontend calling to the database, we don't need any server at all.

For the database, we used Backand, as they propose. We had some problems modeling the database on it, but it has really easy to use, so for this project it wasn't bad at all. As we need

some hard data, and we didn't have server, we made four API's for the "tough" queries we needed in the Backand platform.

For the frontend, we used jQuery because it is easy enough to work with without knowing to much frontend development. Angular or Ionic could be better option, but had to many things so we preferred to use this technology instead of the others because it was faster for us. Also, jQuery is not very "beautiful" for us, so we added Materialize to the frontend to make it more usable and modern. We chose it because it simulates android UI, Material.

To represent the data, jQuery helped us a lot because the ajax queries are really simple. We didn't have time enough to change all these queries with the real user access token, so some of them are using the anonymous token, which is the same but not very secure for the users.



Implementation

Based on the idea to integrate data from various fitness activities, we figured that we need following components in the app

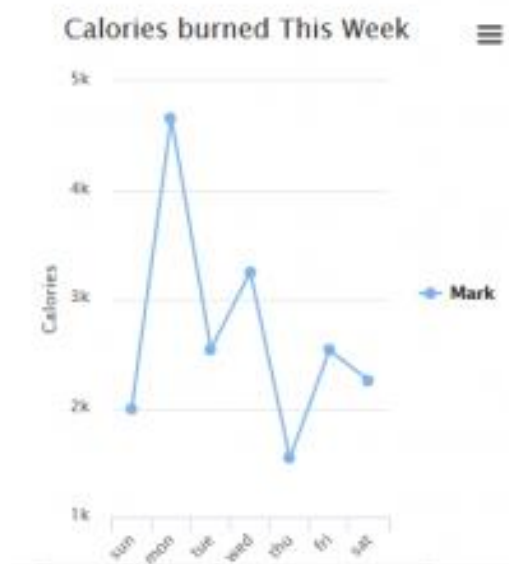
Login And Create Account: To create an account as user and use the details to login to the account. User table will be update, once a user creates an account

Dashboard/Homepage: A page with links to all the feature components of the app like :

Fitness : A page where user can integrate with fitness apps like fitbit and see his fitness activity in terms of points and graphs. Here we tried to integrate, Runkeeper API, which we were not able to finish.

Sleep : A page where user can integrate with sleeping apps and monitor his health score based on the data from sleeping app. This also shows both numbers and graphs

Id	Name	Calories Burned This Week
5	Lucy Smith	10



Break : A page with options to track QR codes and convert them to fitness points. This can be used to convert healthy breaks at work to points.

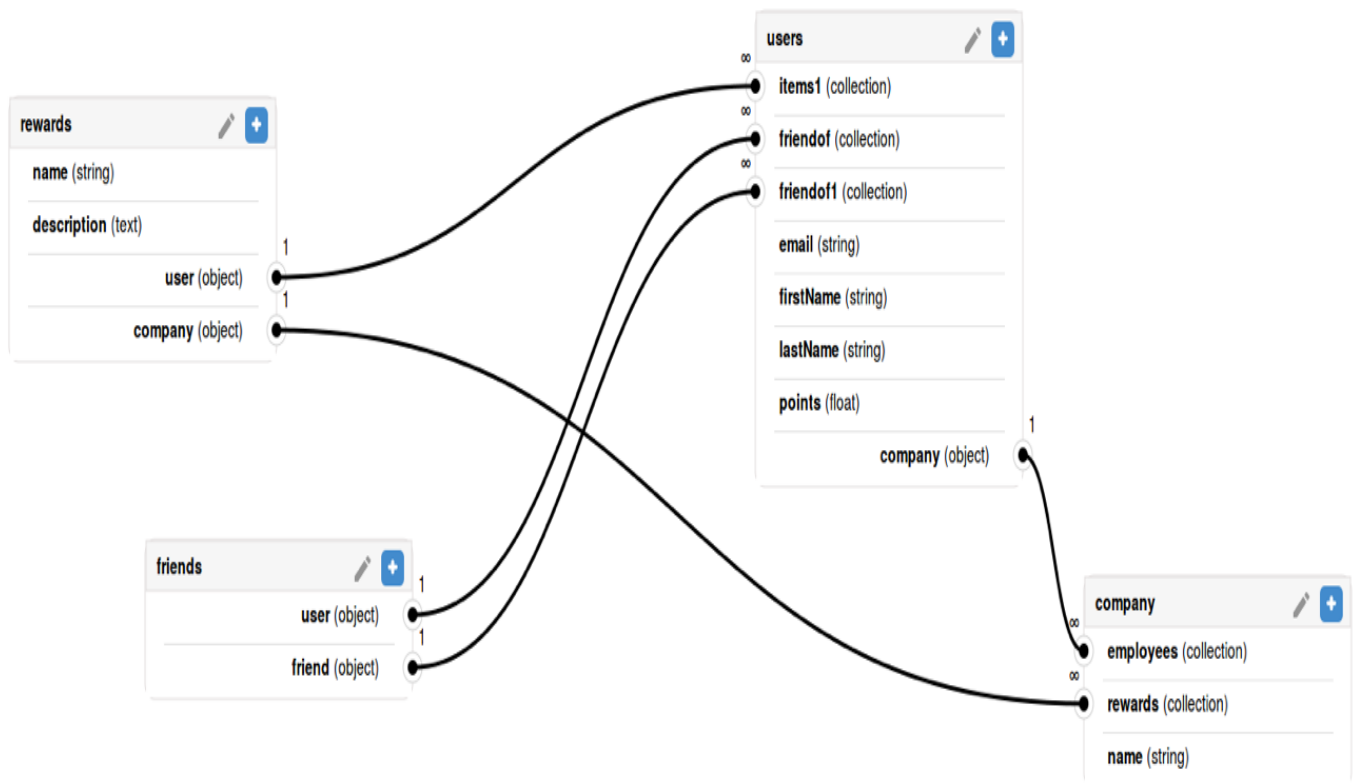
Quizzes: A page with quizzes for the user to check his knowledge on health related issues. Answering quizzes correctly will be converted to points.

Ranking: All the data from other components like fitness, quizzes, break, sleep can be converted to points and those points are used here to evaluate user fitness score and check rankings in a group. This page also has an option to add a friend to the group and challenge them



Rewards Page: A page where user can use his earned fitness points to get certain benefits from the company. We have options like get half day leave with 150 points, get a book for 20 points. User can click on get a book and his account will be deducted by 20 points.

Next important thing we needed for the app was database model. We created our tables in the following way and integrated them with our front page components. Changes done in the front page components like fitness, quizzes would update our database tables and thus helping the ranking component to show top scorer among a group. Same concept was implemented on the rewards page, but here after using a reward, points from the user points will be deducted as shown on rewards page



Test with Friends: After we had some rounds of testing done, as a part of our user experience test, we asked couple of our friends who are completely outsiders to the code camp and business case to check the app and tell us what they feel about app. We collected some feedbacks like change of button sizes and did the required changes.

Future Development:

For the future developments, we primarily thought about integrating APIs from apps like runkeeper and gadgets like Fitbit.

To make the system secure and scalable.

To increase the look of the app with proper user experience research

To integrate image recognition and evaluate healthy eating of the user.

References:

[1] Statistiken und Studien aus über 18.000 Quellen, accessed 28 October 2016, <
<https://de.statista.com>>