

**<Game Title>**

***An iOS Fitness RPG***

A Major Qualifying Project Report

submitted to the faculty of

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**Abstract**

Through the use of the iPhone’s new M7 chip, in conjunction with iBeacon Bluetooth devices, we created an iPhone role-playing game that is meant to encourage players to have a healthier lifestyle. The player engages in a real world role-playing game experience where the way they exercise in reality impacts their digital avatar’s traits and abilities. The goal of this game is to encourage exercise through in-game benefits to the player’s character, with the hope of eventually changing the player’s lifestyle to incorporate more exercise.

**Acknowledgements**

Our project could not have been completed without assistance from the following Ritsumeikan University students and faculty:

* Professor Noma:
* Wakao Asuka: Assisted us with learning the Xcode IDE as well as the iBeacon device to iPhone connection process.
* Kohno Hitomi: Responsible for our game’s art assets, she played a vital role in making our game have the look and feel we desired.

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Through gameplay

Through exercise

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Requirements to learn attack

The math

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Trait values vs. level

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Picture of enemy

Growth rate of each trait value and resulting tables

Original Art Request

Design based on …

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**Introduction**

**Project Proposal and Purpose:**

The original idea for the project came from our (Maxwell Perlman’s and Stefan Alexander’s) love of traditional role-playing games and Japanese role-playing games. Our original proposal was the following:

*Through the use of phone based GPS technology, players can form a party of people in order to complete quests and defeat monsters. Players will be able to see the characters of those located close to them and are able to group together in order to become stronger. Providing a method for players to experience a Dungeons and Dragons level of fantasy immersion, possibly including a way for players to design adventures for their friends, while connecting it to real-world locations and objects could lead to a very deep immersive fantasy experience.*

Professor Noma then proposed that we adapt our idea to be a game that encourages the players to exercise and become healthier. Additionally, Professor Noma then stated that he wanted us to use iBeacon Bluetooth devices in our project in some respect.

After discussing these ideas form Professor Noma, we adapted our ideas in order to include these proposals. These proposals had a very large impact on the final vision we had for the game. First, we realized that we would have to design a way for the exercise habits of players to impact their avatar. Secondly, we had determined exactly how we would design multiplayer gameplay, thanks to the iBeacon devices. Once we had determined these things, we began the development of our game.

The following section will cover the entire development of the game from start to finish. Simultaneously with development, design decisions, both high and low level, were being made.

**Gameplay Inspirations and Related Works**

**RPG and JRPG Genres**

Heavily inspired by the role-playing and Japanese role playing game genres, we quickly realized that we wanted the game to feature major elements from these genres most importantly a turn based combat system as well as elements of exploration. The following games in this genre were major inspirations for the games design: The Final Fantasy series, Bravely Default, etc.

**Ingress**

Ingress is an augmented reality multiplayer game. Players are divided into two teams (blue and green) and these teams compete to take over the world. Players use their cell phones in order to set up virtual towers and capture areas of the earth. Players try to increase the power and range of their own faction’s control of are while waging war on the opposing faction. Ingress was a major inspiration to us because of its excellent mapping of real world locations to meaningful in-game locations. However, there were many aspects of Ingress that we felt were poorly designed or did not encourage the behavior that should be adapted while engaging in a game that takes place in the real world. Our goal is to provide an experience with a similar use of real world locations while at the same time not allowing this type of behavior during gameplay, specifically playing the game while driving.

**Dungeons and Dragons**

Dungeons and Dragons is a tabletop role-playing game that is played by groups of four to eight people. Normally featuring very limited physical resources; typically a player has nothing but a set of dice and sheet of paper with their character’s information. Guided by a non-playing person, known as a dungeon master, players band together to travel through fantasy worlds and dungeons to fight monsters, discover treasure, and even engage in conversation with non-player characters. We found inspiration through Dungeons and Dragons due to high level of immersion, to those who enjoy it, its high level of cooperative play, extremely deep and dynamic character creation mechanisms, and dynamic difficulty (set forth by both the game and the dungeon master). One of the major downsides to a game such as Dungeons and Dragons, which our game hopes to avoid, is the sedentariness of the players of the game. Typical a session of Dungeons and Dragons lasts between two and six hours, almost all of which consist of the players sitting down. Although our game will not provide the deep storytelling experience that Dungeons and Dragons does, we believe that due to the requirement of exercise for the progression of gameplay, our game will be able to achieve a high level of immersion.

**Find Mii**

Find Mii is a game built into the Nintendo 3DS handheld system. By leaving their system’s network on and keeping the system in sleep mode, a player carrying their system around with them during their day-to-day activities can collect other players. They can then use these players in order to defeat monsters and collect treasure, which can be seen by other players. We found Fine Mii to be a great inspiration it’s both its multiplayer gameplay mechanics as well as its simplicity. The only factor of Find Mii that we wish to avoid in our game is that the game does not actively encourage the player actually going out into the real world to play the game; players typically only play the game at the end of the day after having collected people.

**Development**

**Design**

**Initial Design Decisions**

**Understand our Audience**

The first thing we had to define before we began the design and development processes was for what audience we are developing our game. Who would be downloading our game: young children, teenagers, college students, adults, or the elderly? Why are the players playing it: a desire for a deep gameplay experience, an enjoyment for augmented reality games, encouragement to begin exercising and walking more? We quickly realized that our target audience is young adults and adults who are looking for something to entertain them while they exercise. Some are more interested in the gameplay while others are looking for a gamified version of a pedometer. Understanding this, along with our game being targeted, initially, towards Japan and eventually the US, was the first major step in beginning the design and development process.

**Japanese Audience**

One of the first real decisions made was to develop this game for iOS. In recent history, iPhone games have become exceedingly popular, especially amongst people in our target audience, ages sixteen to people in their mid forties. That, combined with the omnipresence of iPhones on a national scale was more than enough to inform our decision and push towards developing for iOS.

Soon after deciding to develop for iOS we encountered an issue: How do we plan to store a player’s data? Do we make the data transferable to other devices or do we restrict it to a single device and not allow a person with multiple devices to use both for the game? We decided that players should be able to play the game on as many devices as possible, however this means that we need to store all of a players data on either Apple’s server or our own.

Deprecated Game Center

Managing expectations

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**Gameplay Guide**

**Timeline**

**Produced Materials**

**Reference Materials**