**Requirements Document**

|  |  |
| --- | --- |
| Course | CIS 4911 |
| System | (IBM) Track and keep score of and compute a group's sustainability efforts |
| Team | Jorge McGarry  Monica Del Prado |
| Date | 9-8-2014 |
| Instructor | Masoud Sadjadi |
| Mentor | Juan Caraballo |

**Version: 2.00**

Table of Contents

Overview 3

1. Introduction 3

1.1 Problem Definition. 3

1.2 Scope of system 4

1.3 Terminology - Definitions, acronyms, and abbreviations. 4

1.4 Overview of document 4

2. Current System 5

3. Project Plan 5

3.1 Project organization – assignment of roles for this deliverable. 5

3.2 Work breakdown – identification of milestones and deliverables (refer to project schedule in Appendix A and the diary in appendix B). 6

3.3 Cost Estimate – cost to develop the software system. 6

4. Proposed System Requirements 6

4.1 Functional Requirements – describes high-level functionality 6

4.2 Analysis of System Requirements 6

4.2.1 Scenarios 6

4.2.2 Use case model 9

4.2.3 Static model e.g., object diagrams, class diagram 10

4.2.4 Dynamic model e.g., sequence diagrams or state machines 10

5. Glossary - define terms used in document, especially domain specific terms. 10

6. Appendix 10

6.1 Appendix A - Complete use cases 10

6.2 Appendix B - Use case diagram using UML 10

6.3 Appendix C - Static UML diagram 10

6.4 Appendix D - Dynamic UML diagrams 10

6.5 Appendix E - User Interface designs. 10

6.6 Appendix F - Diary of meeting and tasks. 10

7. References 10

# Overview

The main goal of the project is to develop a software application that entices people to recycle and keeps track of their efforts. The application will also have a “competitive spirit” built in, which means that recycling efforts will be compared against other registered users and groups. Users who excel in recycling will be provided some sort of reward in order to entice them in continuing the recycling behavior.

# Introduction

The Introduction provides a description about the system that will be built and the need of building such system. It will also provide a description of the expectations about the main system functionalities. Finally, it will provide a brief description of the rest of the document.

## Problem Definition.

Currently, there is no software application that tracks and compares people’s recycling efforts. We want to build an application that tracks recycling efforts and encourages people to use it by providing a competitive approach.

Since recycling and keeping track are completely voluntary we also want to build in some sort of reward aspect into the application, to entice people to keep track of their efforts.

## Scope of system

The system will allow companies, colleges, communities and any group of persons to keep track of their recycling efforts. The system will validate, track and reward recycling initiatives. The system will be available for personal use. The system will have a competitive aspect, which will encourage the use of the application.

Additionally, the system will encourage its use by providing a redemption dollar value to the recycling efforts, which are based on current Container Deposit Legislation.

## Terminology - Definitions, acronyms, and abbreviations.

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Guest User | A user that has not created an account in the system |
| Registered User | A user that has created an account in the system |
| Group Owner | A user that created a group is automatically that group’s owner |
| Group Member | A registered user that joined a group. |

## Overview of document

In Section 2 we will go over what is currently being done in terms of recycling efforts. Since there is no real software behind recycling efforts done by individuals, the manual process being done will be explained.

In Section 3

In Section 4

In Section 5

In Section 6

In Section 7

# Current System

From my brief research, I combed the WWW in regards to what behavior is related to recycling.

The earliest form of recycling that comes to mind, is not the big blue bins I have sitting in front of my yard as I write this. Rather, it is being 8 years old and standing in front of a supermarket with a very slow line of about 15 people in front of me. These 15 people had about 4 huge trash bags of nothing but aluminum soda cans that they slowly pushed into a machine, one by one. The ultimate goal you was to collect 5 cents per can.

Today I’m 36 and I still find these same people at the gas station rummaging through the green trash bin for cans (among other things).

Before I did my research I assumed the 5 cents was given because that is the value of the scrap metal amount, but I was wrong. The 5 cents is for the cost of doing business of recycling the bottles by the bottling company. There is actual legislation in place for doing such a thing, commonly called, Container Deposit Legislation (see <http://en.wikipedia.org/wiki/Container_deposit_legislation>). Unfortunately, in the United States, the law is not a federal matter, it is a state matter, and so only a few states have passed it. Fortunately, even though no law has been passed, the bottling companies still abide by it in most states.

# Project Plan

Introduce the project plan section (one or two paragraphs)

## Project organization

Monica del Prado will work on user scenarios and use cases.

Jorge McGarry will work on design of website and mobile application mock up.

Monica del Prado will work on

## Work breakdown – identification of milestones and deliverables (refer to project schedule in Appendix A and the diary in appendix B).

## Cost Estimate

# Proposed System Requirements

Introduce the chapter (one or two paragraphs)

## Functional Requirements – describes high-level functionality

The system shall:

* **Allow**
* Usability:
* Reliability:
* Performance:
* Supportability:

## Analysis of System Requirements

Analysis models – contains the complete functional specification and is mainly for the designers and programmers. This section describes the diagrams in the Appendices B - D and validates the models against the use cases.

### Scenarios

|  |  |  |
| --- | --- | --- |
| **Type of User** | **Scenario** | **Solution** |
| Guest User | A user that is not registered in the system, accesses the website or mobile application and has the ability to create an account. | The user opens the registration form on the Home Page, inputs personal information such as first and last name, email, and selects a username and password and creates the account. |
| Registered User | A user that created an account already needs to log in to the system. | The user enters his/her username and password and after correct validation of the information. The user accesses the Landing Page |
| Registered User | A user logs in to the system and has the ability to edit the account profile | On the Landing Page, the user opens the Edit Profile page where he/she is able to change the information provided when he/she registered the account. |
| Registered User | A user can search groups by group name. | On the Joined Groups page, the user can open the Join a Group page, the user has the ability to search groups by group name and see the overall activity of the group (dashboard). |
| Registered User | A user can send a request to join a group. | On the Joined Groups page, the user can open the Join a Group page and he/she has the ability to join a group by searching the group he/she wants to join and sending a request to the group administrator. |
| Registered User | A user can check his/her recycling activity. | On the Landing Page, the user has the ability to open My Efforts page and it will display their individual recycling efforts. |
| Registered User | A user can search items he/she has recycled by name, SKU, and description. | On My Efforts page, the user can search items by name, SKU, and description. |
| Registered User | A user can create a new group and become the owner/administrator of the group. | On the Landing Page, the user can access the My Groups page, and open Create My Group page and registers a new company, school, or other type of participant group. |
| Registered User | A user can log individual recycling actions. | ONLY ON MOBILE APP |
| Registered User | A user can log recycling actions for a specific group. | ONLY ON MOBILE APP |
| Registered User | A user can see recycling locations near by. | On the Landing Page, the user has the ability to open the Recycling Locations page and search recycling centers nearby to his/her location. |
| Registered User | A registered user can add new recyclable items. | On the Landing Page, the user will have the ability to open the Create Recyclable Item page and add a new item (will need approval from site administrator) |
| Group Member | A user can view the group(s) he/she has joined. | On the Landing Page, the user opens the Joined Groups page and has the ability to view an overall dashboard with the contribution of each group. |
| Group Member | A user can view the recycling activity of a specific group he/she has joined. | On the Joined Groups page, the user selects a group and has the ability to view the activity (dashboard and saving ticker) of the selected team. |
| Group Member | User can view the members of a group he/she has joined. | On the Joined Groups page, the user selects a group and has the ability to view to view the members of the selected group (ranking). |
| Group Member | A user that joined a group can see his/her recycling details related to that group. | On the Joined Groups page, the user can select one group on the dashboard and it will display the information related to that group. |
| Group Member | A user can view the group(s) he/she has joined. | On the Landing Page, the user has access to view the Joined Groups page, which shows a dashboard with a summary of the overall activity of the groups he/she has joined. |
| Group Member | A user can see recycling locations of a specific group. | On Recycling Locations page, in addition to recycling locations near by, the user can see recycling locations that correspond to a specific group he/she belongs to. |
| Group Administrator | A user can view the overall information of group(s) of which he/she is owner. | On the Landing Page, the user accesses the My Groups page and has the ability to see a dashboard with the group’s activity of the group(s) he is owner of. |
| Group Administrator | A user can edit the information of a group of which he/she is owner. | On My Groups page, the user can select a group and open Edit My Group page and change the details of the group he/she created. The details will be the same that he/she entered when the group was created. |
| Group Administrator | A user can view/remove members of a group of which he/she is owner. | On My Groups page, the user can select a group and open View Members of this group page and when the information is displayed, the user can delete members of the group. |
| Group Administrator | A user can search members of a group of which he/she is owner. | On View Members page, the user will have the ability to search members by first name, last name and email. The information displayed will include name, volume recycled and total redemption value. |
| Group Administrator | A group owner can accept/decline requests of users that want to join a group. | On the Group Overview Page, the user selects a group and can open View Requests page for this group where he/she can either accept a request or decline it. |

### Use case model

|  |  |
| --- | --- |
| Use Case ID |  |
| Description |  |
| Actor |  |
| Pre-conditions |  |
| Steps |  |
| Post-Conditions |  |
| Exceptions |  |

**Security Use Cases**

|  |  |
| --- | --- |
| Use Case ID |  |
| Description |  |
| Actor |  |
| Pre-conditions |  |
| Steps |  |
| Post-Conditions |  |
| Exceptions |  |

### Static model e.g., object diagrams, class diagram

### Dynamic model e.g., sequence diagrams or state machines

# Glossary - define terms used in document, especially domain specific terms.

# Appendix

## Appendix A - Complete use cases

## Appendix B - Use case diagram using UML

## Appendix C - Static UML diagram

## Appendix D - Dynamic UML diagrams

## Appendix E - User Interface designs.





## Appendix F - Diary of meeting and tasks.

|  |  |  |
| --- | --- | --- |
| Date | Attendants | Agenda |
| 09/14/14 | Monica del Prado  Jorge McGarry | Refine website mockup, create mobile application mockup. Start Requirement Document |

# References

***Please email me the UML diagram in one file before the presentation.***