# RecycleIT Website Development Project

## Specifications Document

Sense Software Inc.

Client: Adam Preston

**Author: Alex Malik**
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Table of Contents

# Document Versioning

| Date | Version | Author | Remarks |
|---|---|---|---|
| 09/22/2022 | 1.0 | PM- Alex Malik | Initial version |
| 10/20/2022 | 1.1 | Ekin Alaydın | Second version |

# 1. Introduction

## 1.1 Purpose

This document has been prepared to determine the requirements of the "RecycleIT" software project which is a website users will get info about the company from the relevant pages, and they can charge for their recycling materials according to the type of waste, region, and the amount of waste.

## 1.2 Scope

Everyday lots of company generate tons of waste product and these products pollute environment. This situation is danger for our world. RecycleIT offers these companies or clients to change this situation and recover the waste problem. RecycleIT enterprises offer a wide range of solutions for unsaleable finished products, liquid waste, supermarket waste, agricultural streams, by product and ingredient waste. RecycleIT offers solutions for waste products in North America with 10 facilities in different states. A new website will be developed within the scope of this project. Users will get info about the company from the related webpages, they will be able to register the website, and request a quote for their recycling needs according to the waste type, region, waste amount. Users will be able to ask questions about RecycleIT services via online chat utility. Companies serve customers through this website. These services consist of solutions for Agricultural waste, Food waste and Beverage waste. In addition to these services, companies can offer solutions to their customers according to the type of waste, region, and amount of waste in line with their requests.

## 1.3 Definitions, Acronyms, and Abbreviations

UML: Unified Modelling Language

IEEE: The Institute of Electrical and Electronics Engineers

## 1.4 References

1. "IEEE Guide for Software Requirements Specifications," in *IEEE Std 830-1984* , vol., no., pp.1-26, 10 Feb. 1984, doi: 10.1109/IEEESTD.1984.119205.

## 1.5 Overview

This SRS contains all requirements and constraints of RecycleIT project.

- Section 2 describes the general factors that affect the product and its requirements.
- Section 3 contains all the details the software developer needs to create the software.
- Section 4 defines technologies, infrastructure, performance, scalability, quality attributes, and other non-functional requirements.

# 2. General Description

## 2.1 Product Perspective

RecycleIT is a website includes info about companies which offers solutions to clients for change their waste product habits. Also, it will be accessible from any browsers such as Google Chrome, Firefox. Also, website is responsive and automatically resized when it is viewed different devices such as phones, computers, and tablets. Users can register.

## 2.2 Product Functions

1. The page where the user can register or log in is displayed. User registers or logs in
2. The user can go to the desired page by clicking the desired button on the website.
3. After the user clicks on the desired button, the selected page will be displayed.
4. If the user clicks the Services button, they are directed to the services page of the site and all services are displayed to the user.
5. If the user clicks on the Contact Us button, she/he is directed to the Contact Us page of the site, and after the necessary information is requested, she can send a message to the company she chooses.
6. If the user clicks the Online Chat button, she/he is directed to the Chat page. The user is prompted to select a company and the user can chat live with the company they choose.
7. If the user clicks the Request a Quote button, they are directed to this page, and after filling in the necessary information and entering their e-mail address, they receive feedback from the company they want.

## 2.3 User and Characteristics

RecycleIT is a website designed to facilitate the waste recycling process that can be used by anyone over the age of 18. It can be used by companies that want to evaluate their waste. The site offers solutions for food, beverages, and agricultural waste, it is necessary to take this into account. There is no need for technical knowledge and advanced computer skills.

## 2.4 General Constraints

1. RecycleIT.com website will be developed by C# .net.
2. The website should work with the same performance and integrity in all the browsers.
3. Website should be responsive and automatically resized when it is viewed in different devices like mobile, tablet, PC, etc.
4. HTTPS (HTTP over SSL) will be used for all URLs on the website. SSL certificate should be provided by the client.

5. It is expected that an average of 1000 users per day will use the application.
6. The application will be available 24 hours a day.
7. The default language of the product is English

## 2.5 Assumptions and Dependencies

Security measures such as CAPTCHA can be added to the application to ensure account access security. There may be other 3rd party apps that want to advertise to the app. More information and scenarios about this integration will be provided by the developer of the application.

# 3. The Specific Requirements

## 3.1 External Interface Requirements

### 3.1.1 User Interfaces

#### *3.1.1.1 Homepage*


**Figure 1 Homepage**

Homepage is the page that users will see when they first enter the page. The required fields on the page are: The map image with the activity areas marked, the explanation part describing the purpose of the site and the name of the companies, the buttons with which users can log in to the application.

### *3.1.1.2 Sign Up Page*

The sign-up page is the page where users will register to the application.
Required fields on this page: Username, username, Email address, password, username, phone number and address.
After users enter this information, they register on the site.

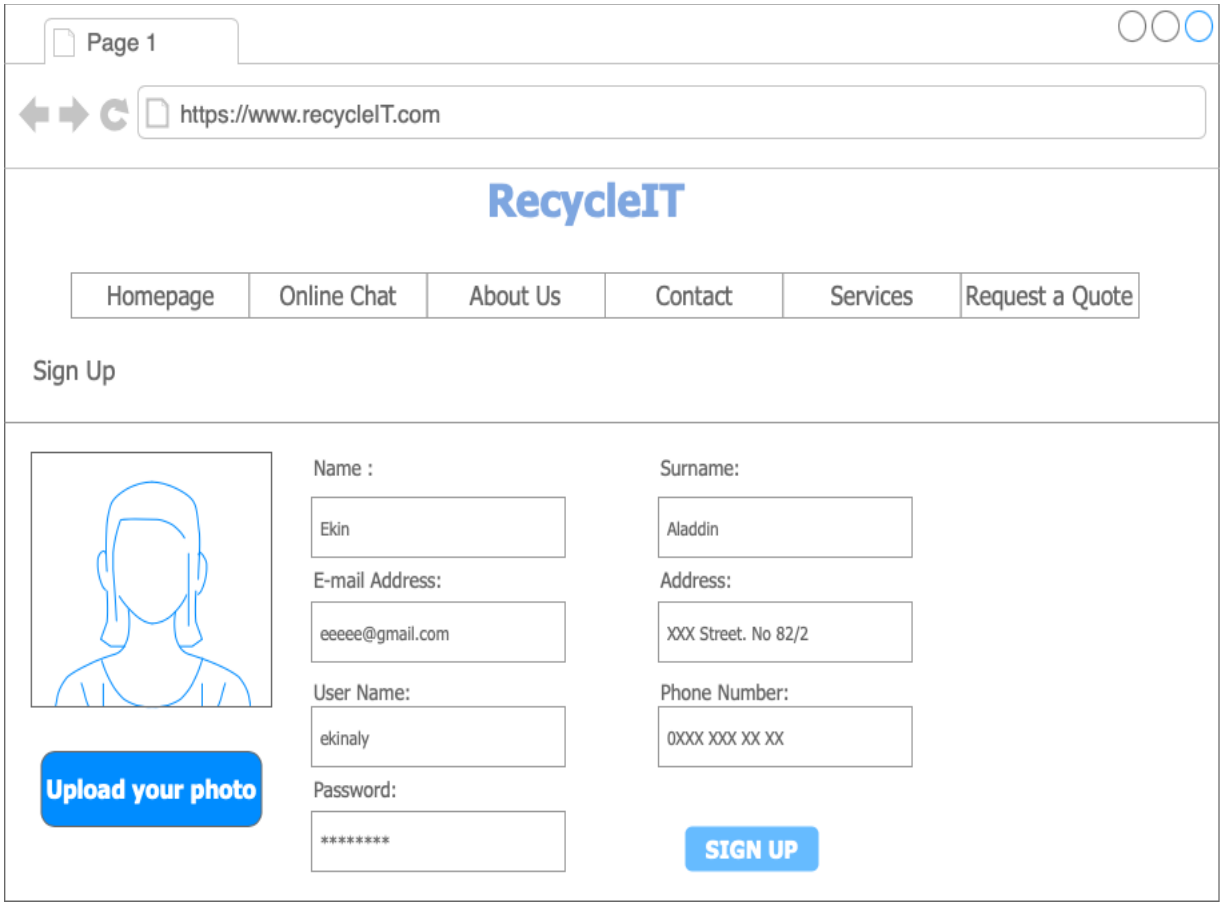



**Figure 2 Sign Up Page**

### *3.1.1.3 Contact Us Page*

Thanks to the Contact Us page, users can send a message to the company they choose.
Required fields on the page: username, surname, email address, phone number and address.
The selected company button and the message to be sent.

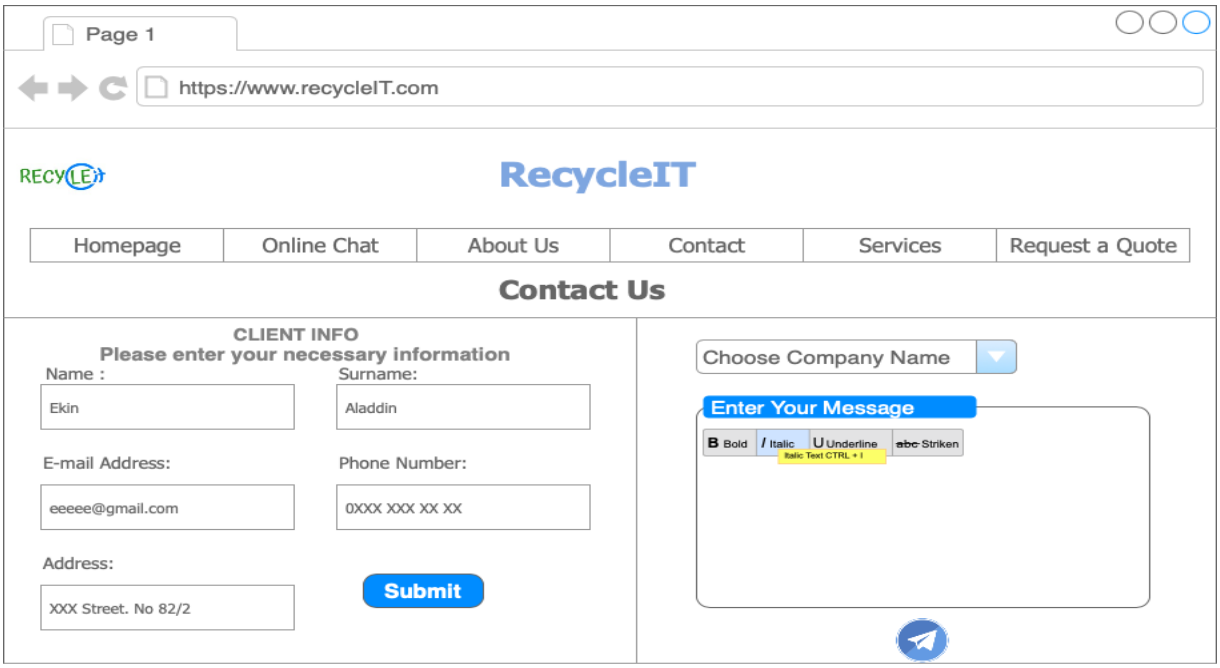



**Figure 3 Contact Us Page**

### *3.1.1.4 Chat Page*

Thanks to the chat page, users will be able to chat live with the company they choose and ask their questions.
Required fields on the page: Company selection button and messaging area.

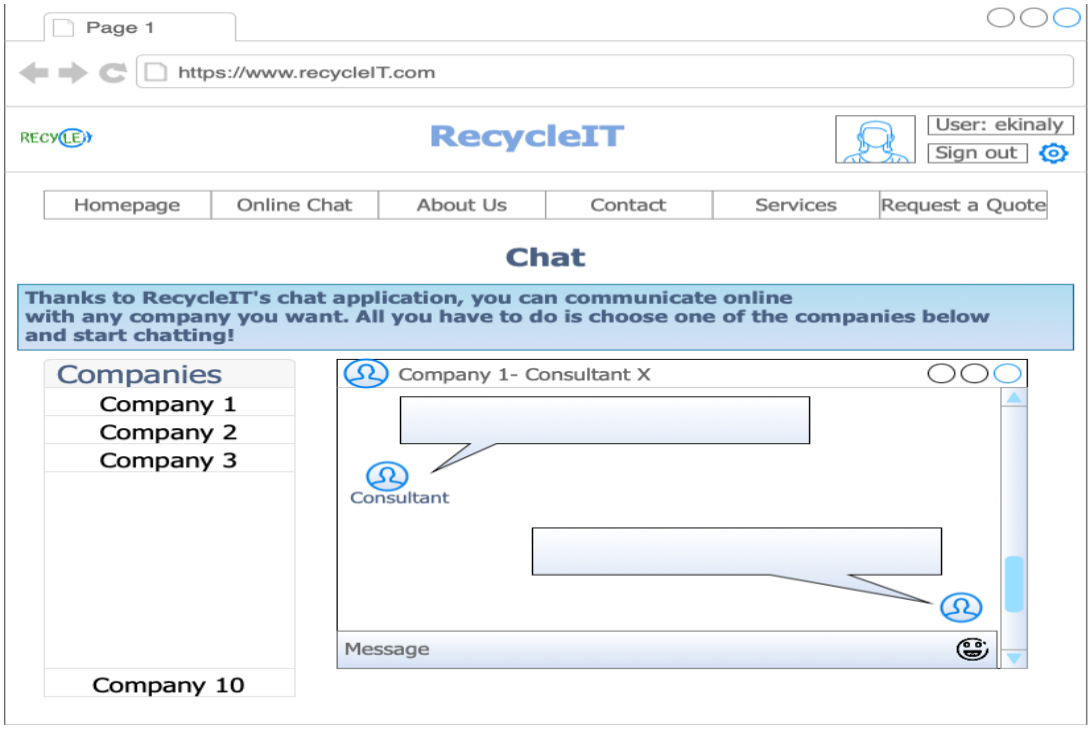



**Figure 4 Chat Page**

### *3.1.1.5 Request a Quote Page*

Thanks to the Request a Quote page, users will be able to request a quote from the company they choose.
Required fields on the page: Waste type, region, company selection button and button for entering the amount of waste. Customer's Email address

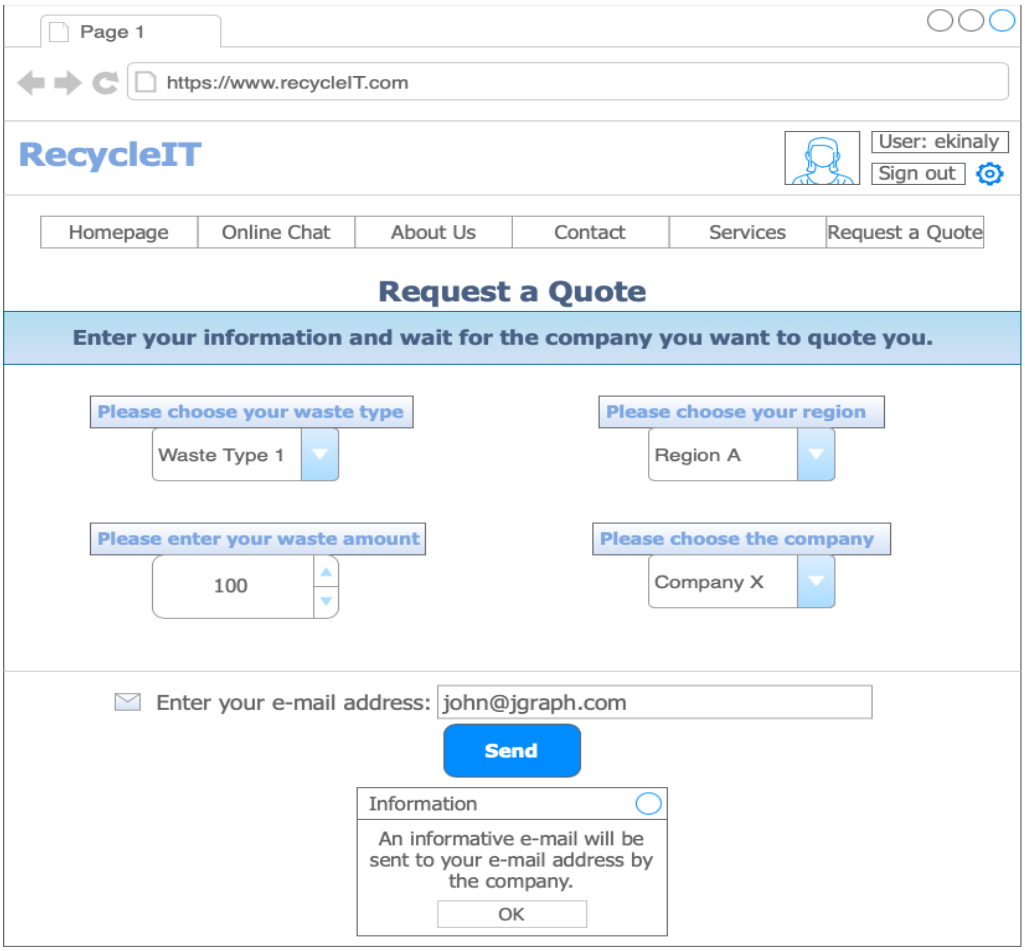



**Figure 5 Request a Quote Page**

### *3.1.1.6 Services Page*

Thanks to the Services page, users will be able to view the types of services they can receive.
Required fields on the page: 3 different titles and descriptions where service types are specified.

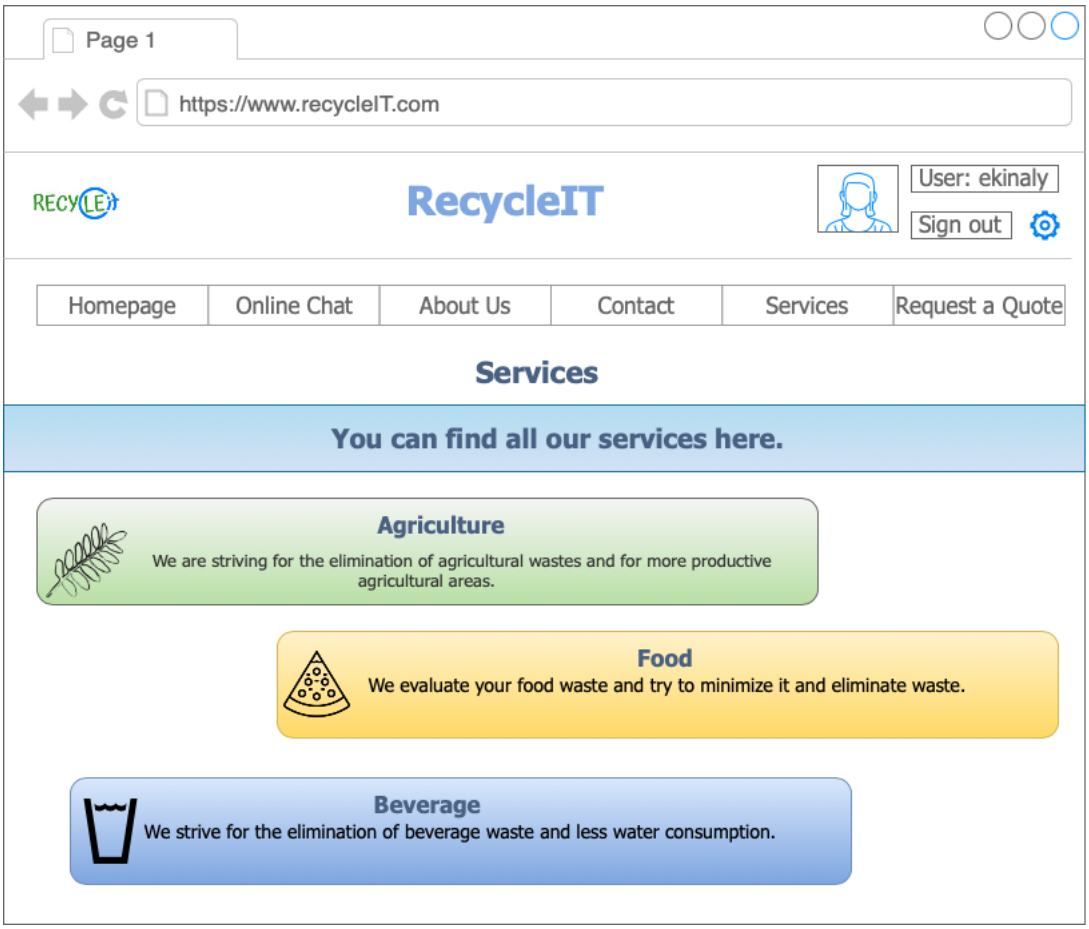



**Figure 6 Services Page**

### 3.1.2 Communications Interfaces

This product has account-based authorization or authentication process. At the registration stage, the user is required to share their contact information. Safe storage of this information is an important priority. Secure transmission, storage and access should be considered in design time as a part of software architecture.

## 3.2 Functional Requirements

In this section, the functional requirements for the “RecycleIT” project will be defined with the system features and the main services provided by the product. The use case diagram (Figure 7), which indicates the user and their operations, and the data model (Figure 8), which includes the high-level data information required for the project, are shown below.

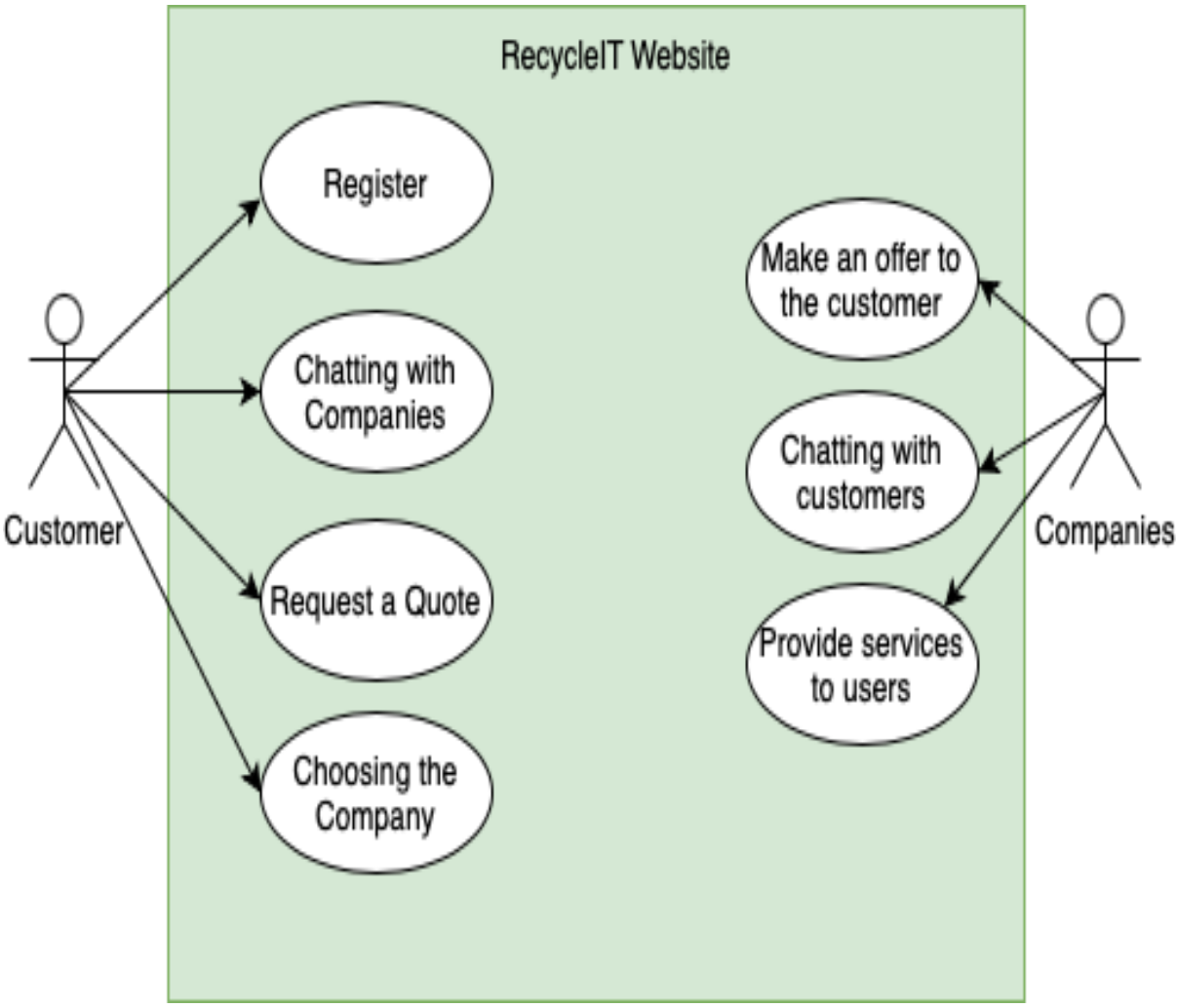



**Figure 7 RecycleIT Use Case Diagram**

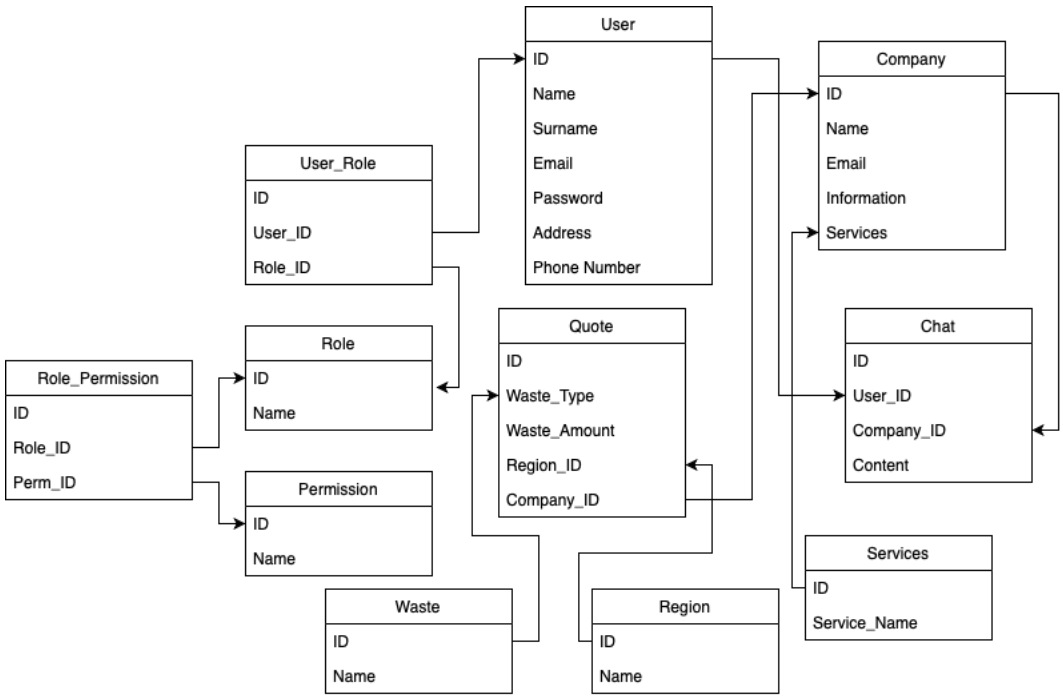



**Figure 8 RecycleIT Data Model**

## 3.2.1 Chat Operation

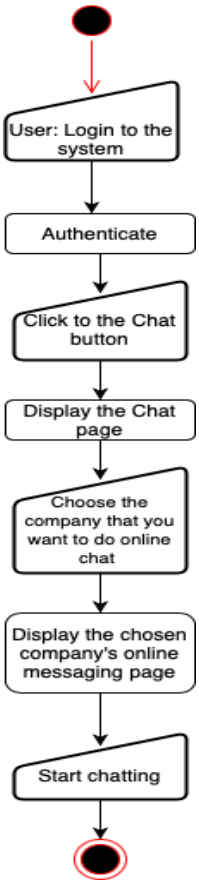
### *3.2.1.1 Description and Priority*

This feature allows users to chat with the company they choose. It is a high priority and essential feature.

### *3.2.1.2 Stimulus/Response Sequence*

***Sequences of user actions and system responses is listed below:***

1. User: Click to the Online Chat button.
2. System: Display the Chat page
3. User: Choose the company that you want to do online chat
4. System: Save the choice.
5. System: Report the choice to company's consultant for chatting.
6. System: Display the chosen company's online messaging panel.
7. User: Start chatting
8. System: Save the chat.




#### *3.2.1.3 Functional Requirements for Chatting*

Functional requirements associated with the “Chatting” feature is listed below:
REQ-1: User will be able to click on the “Online Chat” button
REQ-2: The system will be able to display the “Chat” page
REQ-3: User will be able to choose intended company in this page to using buttons. System will be able to save this choice.
REQ-4: The system will open the messaging panel of the company selected by the user. The system will show the user the typing area and the name of the company, as well as the emojis that the user can use.
REQ-5: The user will be able to write a message and send the message with the enter key.
REQ-6: System will be able to save all messages.
REQ-7: User will be able click the “Quit” button and the system will close the page

**Figure 9 Chatting Activity Diagram**

## 3.2.2 Request a Quote Operation

### *3.2.2.1 Description and Priority*

This feature allows users to request a quote from the company of their choice. It is a high priority and essential feature.

### *3.2.2.2 Stimulus/Response Sequences*

***Sequences of user actions and system responses is listed below:***

1. User: Click to the Request a Quote button.
2. System: Display the Request a Quote page
3. User: Choose the waste type that you want to recycle
4. System: Save the choice.
5. User: Choose the region that you live in.
6. System: Save the choice.
7. User: Choose the waste amount that you want to recycle.
8. System: Save the choice.
9. User: Choose the company that you want to request a quote.

10. System: Save the choice.
11. User: Enter e-mail address.
12. System: Save the e-mail address.
13. System: Send user's information to chosen company
14. System: Display the information message.

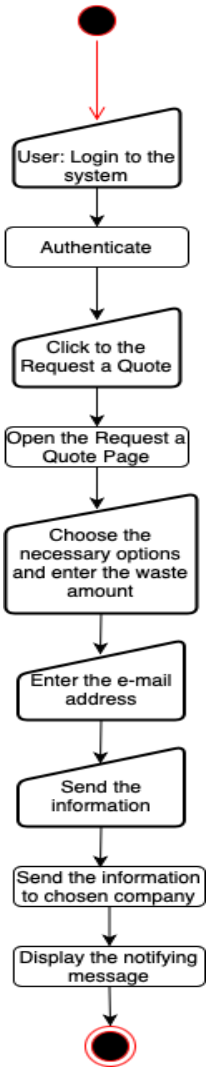



**Figure 10 Request a Quote Activity Diagram**

### *3.2.2.3 Functional Requirements for Request a Quote*

Functional requirements associated with the "Request a Quote" feature is listed below:

REQ-1: User will be able to click on the "Request a Quote" button

REQ-2: The system will be able to display the "Request a Quote" page

REQ-3: User will be able to choose waste type in this page to using buttons. System will be able to save this choice.

REQ-4: User will be able to choose region in this page to using buttons. System will be able to save this choice.

REQ-5: User will be able to choose waste amount in this page to using buttons. System will be able to save this choice.

REQ-6: User will be able to choose company in this page to using buttons. System will be able to save this choice.

REQ-7: Users will be able to enter their e-mail address and system should save e-mail address

REQ-8: System should send all saved information to the company that users choose

REQ-9: System should display an information message that the user's information has been sent.

REQ-10: User will be able click the "Quit" button and the system will close the page

# 4. Other Nonfunctional Requirements

## 4.1 Performance Requirements

- The system should be able to administer 1000 users per day.

To make the product usable in all conditions, all performance measures must be adjusted for the maximum frequency of test solutions and the maximum number of user logins.

## 4.2 Security Requirements

Any personal data in the server should be encrypted and cannot be shared. Captcha can be added to the application to protect spam accounts and passwords.

## 4.3 Software Quality Attributes

Product should have following quality attributes:

- Easy to use,
- Easy to remember,
- Ability to achieve the purpose with the least effort and time,
- An enjoyable user experience,
- Satisfying design in the first use,
- Allowing the users to take back their mistakes,
- Preventing mistakes