Software Requirements Specification

for

RecycleIT Website Development Project

Version 2.2

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Revision History

Name	Date	Reason For Changes	Version
SRS	25.08.2022	First Version Created	1.0
SRS	20.10.2022	Second Version Created	2.0
SRS	22.10.2022	Second Version Updated	2.1
SRS	01.11.2022	Second Version Updated	2.2

1. Introduction

1.1 Purpose

RecycleIT enterprises offer a wide range of solutions for unsaleable finished products, liquid waste, supermarket waste, agricultural streams, by product and ingredient waste.

1.2 Product Scope

The RecycleIT project will be a website that can be used to address the recycling needs of both normal users and businesses. RecycleIT will offer a wide range of solutions for finished products, liquid waste, supermarket waste, agricultural flows, byproduct and content waste that cannot be sold. On the website, both users (normal users and business owners) and companies that receive and convert recycling products will not be able to take any action on the website without opening an account. We can think of the RecycleIT project is like Hepsiburada, Trendyol and Amazon. The project will only be responsible for processing transactions and customer service, such as Amazon. The RecycleIT project will receive commission money each processed. This commission money will be fixed and will not vary by category.

Once the user has registered with the system, then the user will select a company for the product the user wants to recycle and write them photos, the price range and description of the product that is the user wants to offer. After that, if the company likes the offer, the transaction will begin and the website will follow the process. Then, the company will upload the money to the website. Once recycling products are in the hands of the company, the money will be transferred directly to the user's account. The user will be able to evaluate the company later.

1.3 Definitions, Acronyms, and Abbreviations

RecyleIT Website Development Project: RWDP

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.
2. BRUSAW, C. T., ALRED, G. and OLIU, W., Handbook of Technical Writing, New York, St. Martin's Press, 1976.

1.5 Overview

This SRS contains all requirements and constraints of RWDP 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

Users will get info about the company from the related web pages, and request a quote for their recycling needs according to the waste type, region, waste amount etc. User registration is required.

2.2 Product Functions

This product will have the following functions:

1. The user and the company will be shown a screen where they can register or sign in.

2. The user can select any category from the categories of the return.

3. After selecting, the subcategories of the category selected are shown to the user.

4. After the user finishes the category selection, the user will see the price lists for companies that do this work actively in the region.

5. If the user wishes, they can send messages to their company representatives via the website or call the phone number registered on the website.

6. If users and companies agree, transactions will be taken under the supervision of the website.

7. The company uploads the money to the website and the user delivers the necessary recycling materials to the company according to the agreement.

8. If the company confirms the transaction has been completed, the money will be transferred to the user's account.

9. Companies can add and update their actions(work) to the system.

10. After all the transactions are finished, the user can evaluate the company or write a review if desired.

11. The user will understand what they want and find an offer.

2.3 Users and Characteristics

Users and companies can use the website after registering once without paying a membership fee. Any user over the age of 18 who can use a technological device can use the RWDP.

2.4 General Constraints

a) This product will be developed for a web.
b) Users and companies must be registered to use the product.
c) The default two languages of the product will be "Turkish and English", but since other languages will be added in the future, the language infrastructure should be designed as extensible.
d) The product must support the SQL server infrastructure.
e) The uploaded images will not exceed 50 mb.
f) It is thought that 10000 people will use the product per hour and this number may increase in the future, so the product must be suitable for this.

g) Information will be retained until users delete their account.
h) The color theme of the product will be green and blue.
i) Each company will have a score. These scores will be assessed and changed by users. The assessment will be on 5.0. (5.0 is the best; 0.0 is the worst). In the beginning, each company will have a score of 5.0.
j) The number of sales that companies make will be right next to the score.
k) Company's pages have to have a section that contains users' comments.
l) If the user wishes, they can sort by recycling type, company score, the number of transactions their companies have made, or the number of comments they have made.
m) The home page will show the top 10 companies with the highest score. The number of transactions he makes within companies with the same score will be taken into account.

2.5 Assumptions and Dependencies

The security of the account information of users and admins will be provided by the software developed by the Doftdare Company. It does not allow third-party security apps.

3. The Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interface

3.1.1.1 Sign-In and Sign-Up
The login page is a place where the users and companies can log in to the website. An email address and password are received from the users or companies to log in to the system. This section is only for product entry. Image 1 is the wireframe design of the page.

The registration page is where the user or company is registered in the system. Here, user's name, last name, email, password, and phone number are received; and registration is performed. The information required for the user and the company to perform transactions is obtained after the system is registered. Bank account information, address, and user profile photo for users; transactions they do for companies, company information, and company visuals are taken later. Image 2 is the wireframe design of the page.
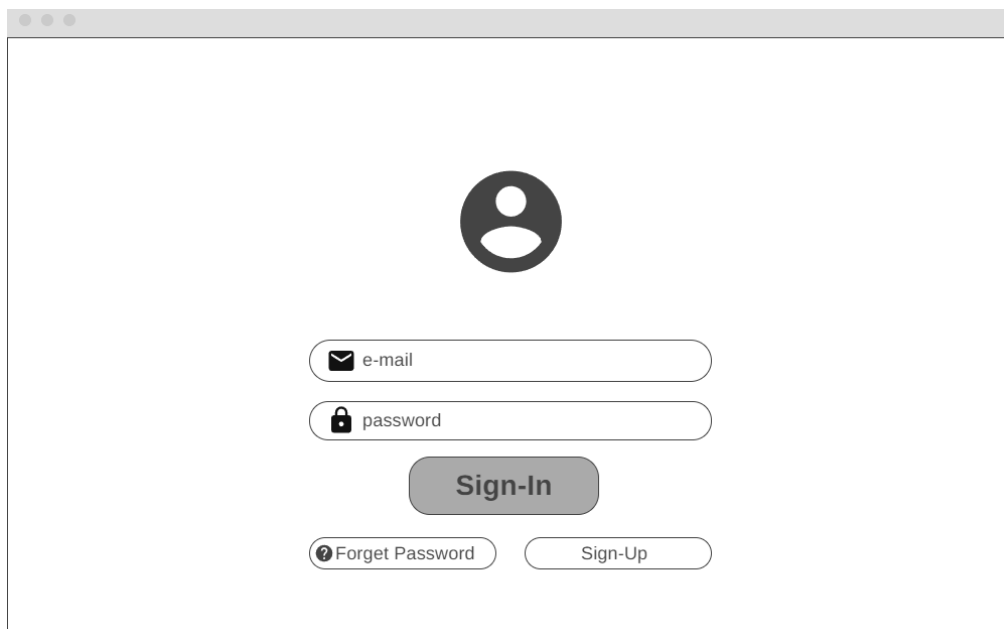

Image 1: Sign-In Page Wireframe

Image 2: Sign-Up Page Wireframe

3.1.1.2 Home Page

On the home page, the user will be able to see 10 companies currently with the highest score on the system. This information is located at the top of the page. Just below is the slider, which shows the recycling categories. User can click here to see a list of companies that serve in the category that users choose. On the left-bottom side of the page, is a slider with beautiful comments that other users have already made about the website. Next to that, there are sections that allow users to quickly access their messages, bank accounts, and offers. Image 3 is the wireframe design of the home page.

Image 3: Home Page Wireframe

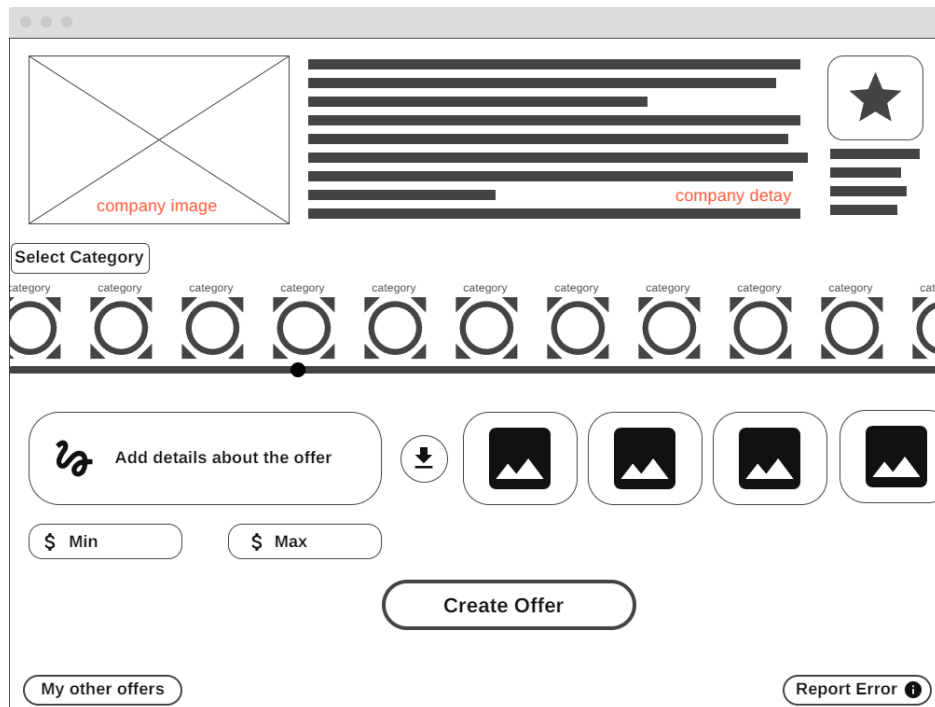doftdare company

3.1.1.3 Request a Quote Page

The user can access on this page, after select any category or company. Here, the user can access the company's images and detail about the company. At the top right corner of the page, the user can see the company's score and the total number of sales the company has made so far. Below this information is the recycling categories that this company currently serves. The user can select any category and proceed with the operation. The user can detail the offer she/he will make on this page. The user can enter information about the offer in text. The user can upload images for the offer. A price range can be entered for the offer. And after the user is done all this, she/he can send the offer to the company. Image 4 is the wireframe design of the request a quote page.
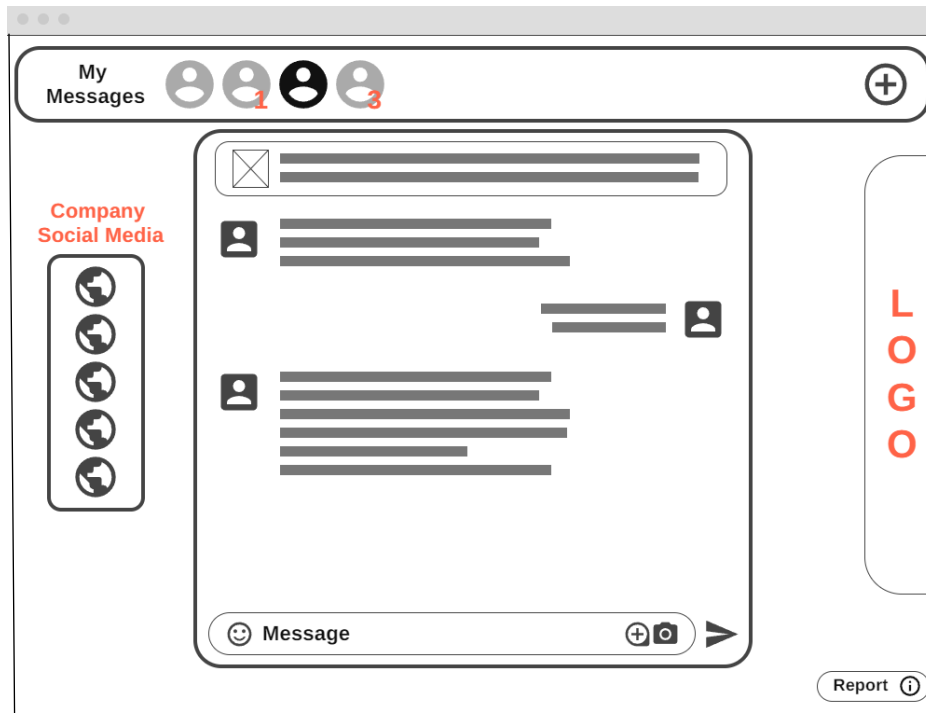
Image 4: Request a Quote Page Wireframe

3.1.1.4 Chat

This page contains messages that the user makes with the companies. Here, the user can ask them(companies) directly about anything that's on their mind. All messages written here are recorded by the website. It is also controlled by the website. If any bad expression or condition is seen in the messages, the user can send it to the website by clicking on the button at the bottom of the page. The website also takes action by doing the necessary reviews. The user can access the company's social media accounts when they are messaging with the company. Image 5 is the wireframe design of chat page.
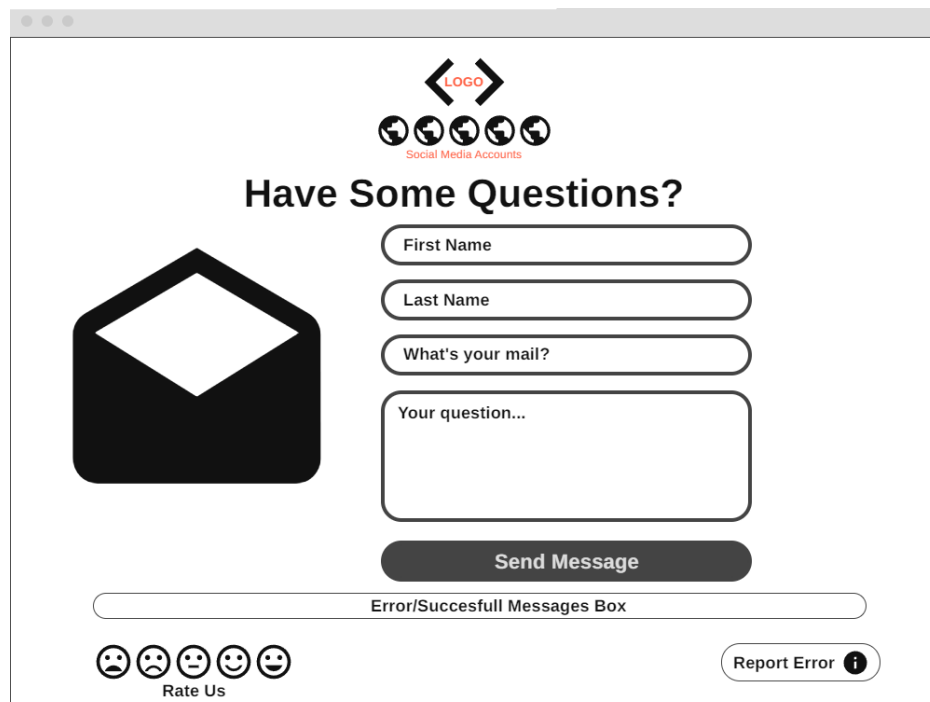
Image 5: Chat Page Wireframe

3.1.1.5 Contact Us Page

On this page, the user can directly ask their suggestions about the website, any bad situation or question that is stuck in his/her head on the website. There is no need to register with the system to use this page. The user can contact the website here by entering their name, last name, email address and question that is attached to their mind. The user can also evaluate the website on this page. Image 6 is the wireframe design of contact us page.
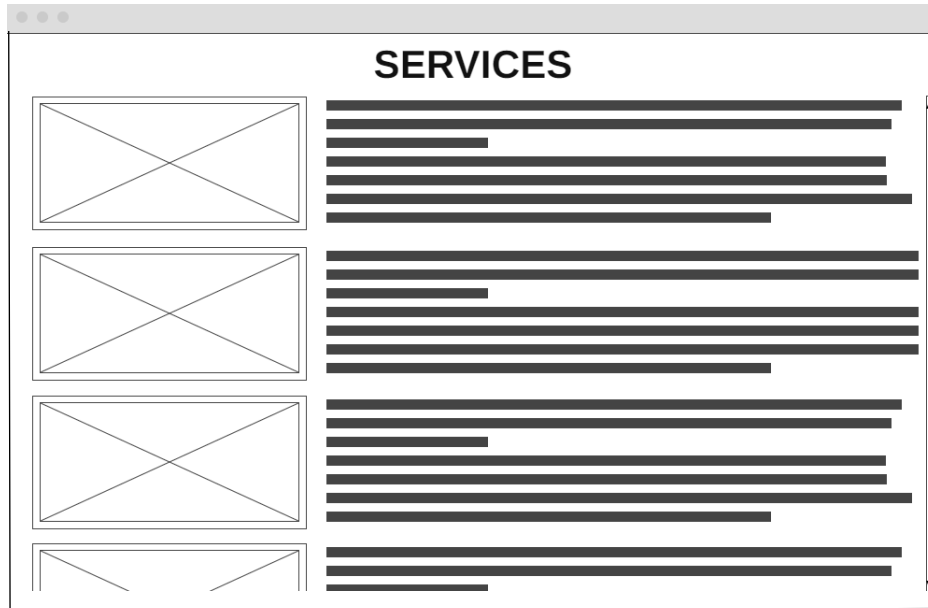
Image 6: Contact Us Page Wireframe

3.1.1.6 Services Page

The user can see a list of services that they can currently receive on this page. The user can select any services to access detailed information about that service. Image 7 is the wireframe design of services page.

Image 7: Services Page Wireframe

3.1.2 Hardware Interfaces

There are no interfaces.

3.1.3 Software Interfaces

There are no interfaces

3.1.4 Communications Interfaces

This product has account-based authorization or authentication. User and company do not use the product without creating an account. The only important content here is the account information of the user and company. These will be given priority security.

3.2 Functional Requirements

In this part, the functional requirements for the "RWDP" project will be defined by system features and the major services provided by the product. The use-case diagram below (Image 8) demonstrates the users and their operations in high level.

Image 8: RWDP Use-Case Diagram

Image 9: RWDP Data Model

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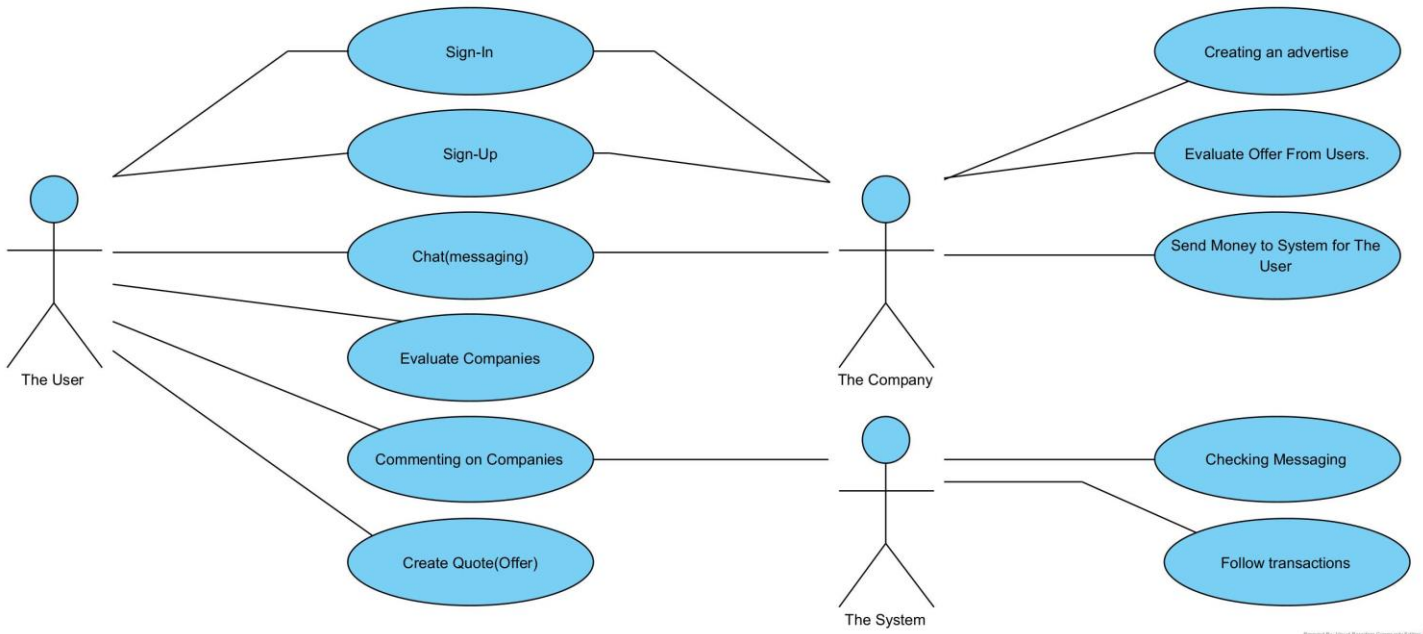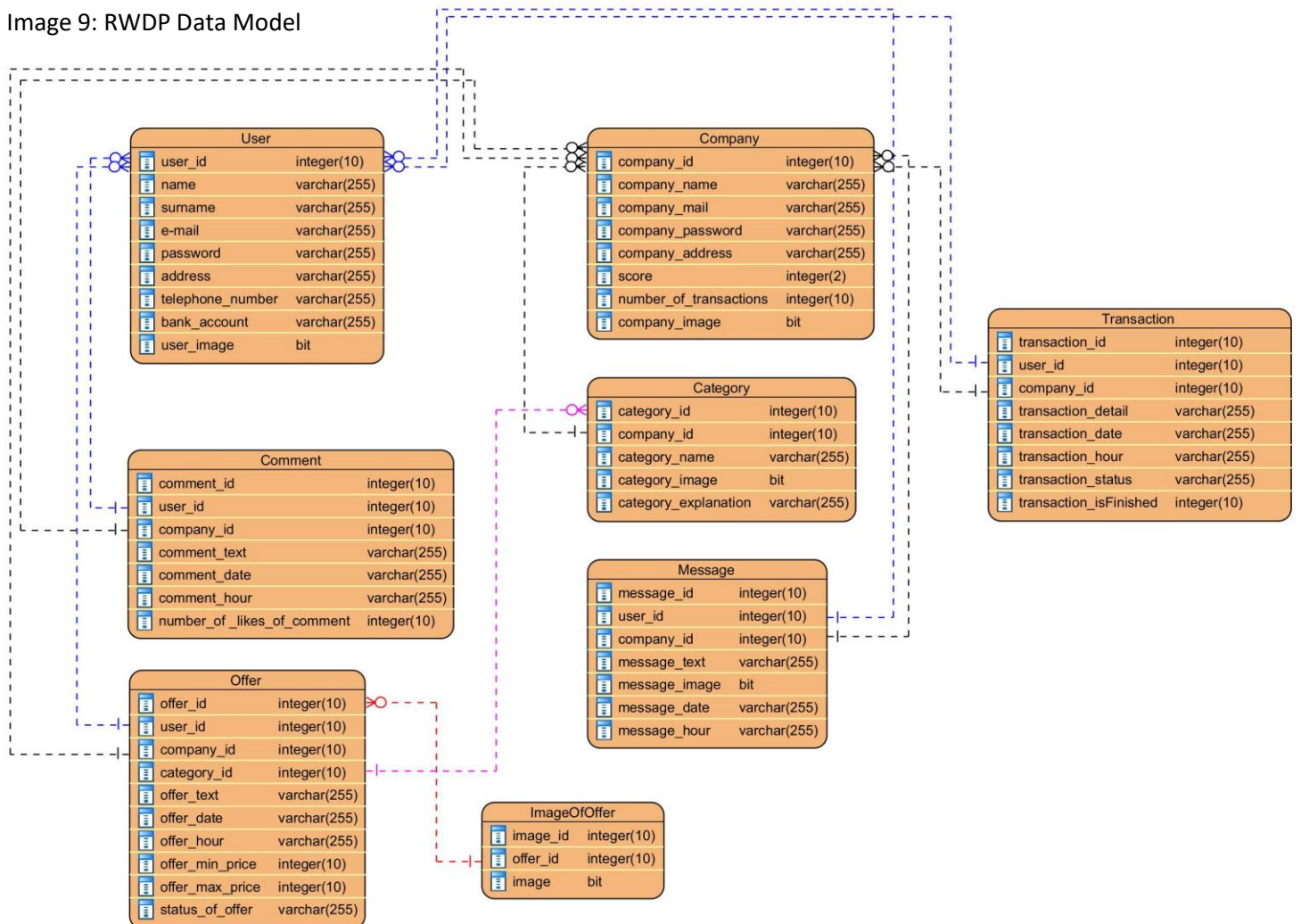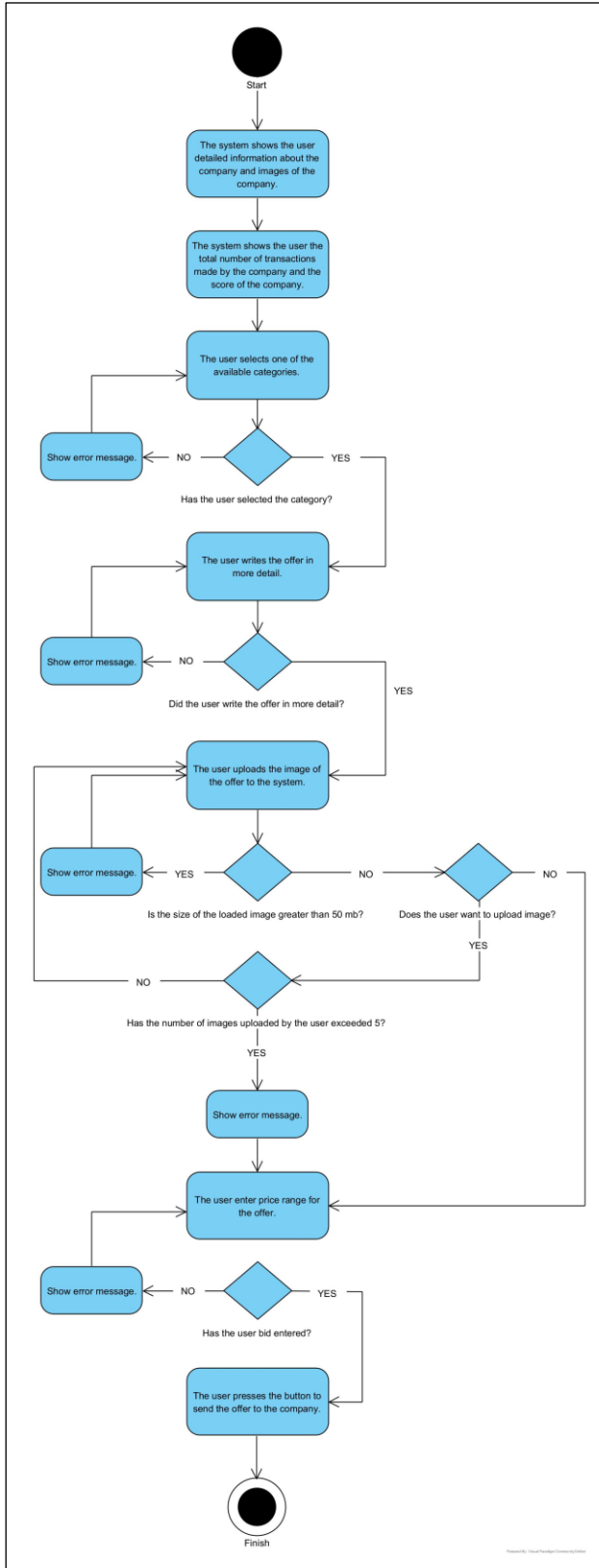
3.2.1 Request a Quote

3.2.1.1 Description and Priority

Users send their offerings to companies here. Firms review the offer and return to users. The information held here is monitored and recorded by the system. Therefore, this information must be kept safe.

Image 10: Request a Quote Activity Diagram

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3.2.1.2 Stimulus/Response Sequences

Sequences of user actions and system responses is listed below:

1. User: Select any company
2. System: Show image and detail of company
3. System: Show score of company
4. User: Select one of the available categories
5. System: Warn the user if she/he did not select any category (Please select a category to continue the proceed!)
6. User: Write offer in more detail
7. System: Warn the user if she/he did not write (Please write your offer(quote) in more detail to continue the operation!)
8. User: Upload images for offer(quote)
9. System: Warn the user if loaded image greater than 50 mb (The image cannot be larger than 50 mb!)
10. System: Warn the user if number of photos exceeds 5 (Only 5 photos can be uploaded!)
11. User: Enter price range
12. System: Warn the user if she/he did not enter price range (Please enter the price range to proceed!)
13. User: Click "Create Offer"
14. System: Create new offer

3.2.1.3 Functional Requirements for Request a Quote

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

REQ-1: The system shows image and detail of company to the user.

REQ-2: The system shows score of company and number process.

REQ-3: The user selects one of the available categories.

REQ-4: The system warns the user if she/he did not select any category.

REQ-5: The user writes offer in more detail.

REQ-6: The system warns the user if she/he did not write anything.

REQ-7: The user uploads images.

REQ-8: The system warns loaded image greater than 50 mb and number of photos exceeds 5.

REQ-9: The user enters price range.

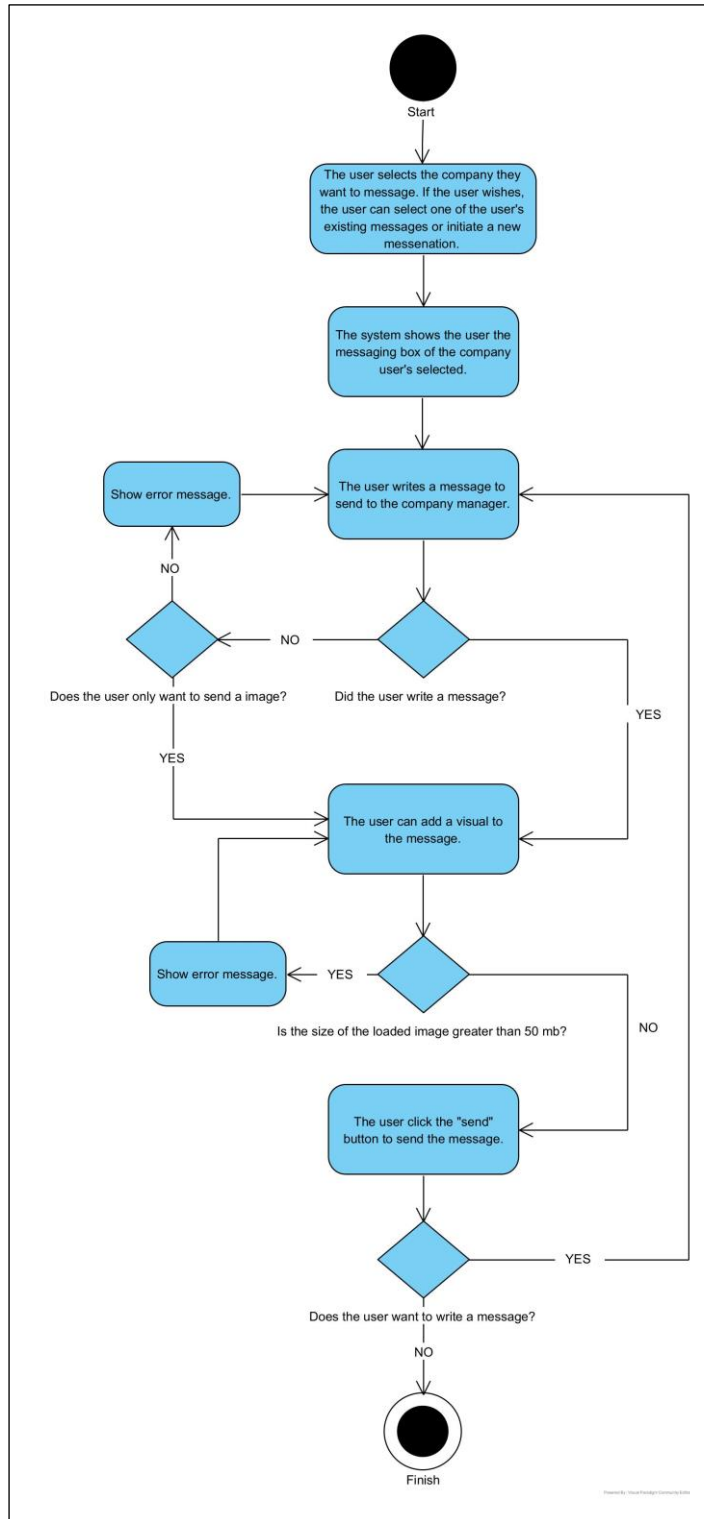REQ-10: The system warns the user if she/he did not enter price range.

REQ-11: The user clicks "Create Offer" to send offer to the company.

3.2.2 Chat (Messaging)

3.2.2.1 Description and Priority

Users and companies are messaging here. The information held here is monitored and recorded by the system. Therefore, this information must be kept safe.

Image 11: Chat Activity Diagram

3.2.2.2 Stimulus/Response Sequences

Sequences of user actions and system responses is listed below:

1. User: Select company to send message
2. System: Show message box of selected company to user
3. User: Write anything to send message to company
4. System: Warn the user if she/he did not upload and file (image, word, txt, etc.) and write anything (Please write anything to send message!)
5. User: Upload file (image, word, txt, etc.)
6. System: Warn the user if loaded image greater than 50 mb (The image cannot be larger than 50 mb!)
7. User: Click "Send Message"
8. System: Send message

3.2.2.3 Functional Requirements for Chat

Functional requirements associated with the "Chat" feature is listed below:

REQ-1: The user selects any company to send message.

REQ-2: The system shows message box of selected company to the user.

REQ-3: The user writes anything to send message.

REQ-4: The system warns the user if she/he did not upload and file (image, word, txt) and write anything.

REQ-5: If the user wants, she/he uploads file to send message.

REQ-6: The system warns the user if loaded image greater than 50 mb.

REQ-7: The user clicks "Send Message" to send message to company.

4. Other Non-functional Requirements

4.1 Performance Requirements

- System should be able to process 10000 orders per hour.
- Maximum data size will be 50 MB.
- Maximum number of images will be 5.
- The score of the companies should be made out of 5.0 (0.0-5.0).

All the performance measurements should be set according to the maximum data size and max order frequency to make the product available under any circumstances.

4.2 Security Requirements

This product should only work in data transfer and security products made by Doftdare Software Company. Any data transferred to or from the server should be encrypted. Decryption key should not be stored in the server.

4.3 Software Quality Attributes

Product should have following quality attributes:

- ability to achieve the purpose with the least effort and time,

- easy to use,

- easy to remember,

- satisfying design in the first use,

- allowing the users to take back their mistakes,

- preventing mistakes

- a pleasant user experience.