System Requirement Specification

Scrap-Vend

**Version No.: 01**

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B. Document Release History

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Version No** | **Release Date** | **Prepared By** | **Reviewed By** | **Approved By** | **Reason for next Release** |
| 1 | 1.0 | 13-03-19 | Poornima Varshney  Aishwarya Phulwani  Saif Ali  Mohammad Noman |  |  |  |

**1 Introduction**

A software requirements specification (**SRS**) is a detailed description of a software system to be developed with its functional and non-functional requirements. The **SRS** is developed based on the agreement between customer and contractors. It may include the use cases of how the user is going to interact with the software system.

* 1. **Purpose**

The purpose of Software Requirements Specifications (SRS) is to fully document the specifications and requirements for the Scrap Vend. The audience of this SRS will be the clients who want the software to be built and the technical professionals developing the software.

* 1. **Scope**

The objective of our project is for areas where it is difficult to find local Scrap venders, and for the societies where it is difficult for scrap vendors to reach. The website will allow users to create and maintain individual secured accounts. The website makes selling scrap quicker, easier, and more convenient.

* 1. **Definitions, Acronyms, and Abbreviations.**

This document uses the following definitions, acronyms, and abbreviations:

|  |  |
| --- | --- |
| IEEE | Institute of Electrical and Electronics Engineers |
| SRS | software requirements specification |
| S-V | Scrap-Vend |

* 1. **References**

|  |  |
| --- | --- |
| Reference | Last visited on |
| IEEE Std 830-1998   (https://web.cs.dal.ca/~hawkey/3130/srs\_template-ieee) |  |
|  |  |
|  |  |
|  |  |

* 1. **Overview**

The rest of the SRS is organized as follows:

* Section 2 is an overall description of the project.

* Section 3 the specific requirements

**2.  Overall Description**

**2.1. Product Perspective**

This product is an entirely new product. It is not a component of a larger system. The online Scrap Vend system will interact with a Google pay account for the processing system in order to sell their scrap from the website. The system will also interact with the S-V’s Inventory database, which records the number of pickups of the user available in the inventory.

**2.2. Product Functions**

The following list of function descriptions explains the major features of the Scrap vend.

**2.2.1. Account Registration**

The registration function shall allow users to create secure accounts. The account will track the username, Email Id, Mobile No, address and password.

**2.2.2. Account Login**

The account login function shall allow account members to enter their username and password. Once verified, users will be able toaccess account history, sell the scraps, and update their account information.

**2.2.3. Rate Chart**

The rate chart function shows the prices of all the scrap items per unit.

**2.2.4. Book Pickup**

The Book Pickup function provides the user to book a pickup of their scrap and schedule their pick up.

**2.2.5. Cancel Pickup**

The cancel pickup function allows users to cancel their pickup of the scrap.

**2.2.6. Contact Us**

The contact us function shall give users the store address, telephone number, email address, and its location on a map.

**2.2.8. Help**

The help function shall give the user an overview of how to use the different functions listed above.

**2.3. User Characteristics**

Users of the website must possess a minimal educational level which conforms to entrance standards. Users of the website must know how to navigate in a website.

**2.4. Constraints**

The constraint on the services and functions of the system is that the software product must conform to disclaimer policy.

**` 2.5. Assumptions and Dependencies**

Since the S-V is only accessible through the Internet, it is assumed that the end user has a connection to the Internet. It is also assumed that the user has a web browser able to display the website. (i.e. Microsoft Internet Explorer 4+ or compatible browser)

**2.6. Apportioning of Requirements**

There are no requirements that may be delayed until future versions of the system.

**3. Specific Requirements**

**3.1. External Interface Requirement**

**3.1.1. System Interfaces:**

The system will interface with the following systems:

A pickup scheduling system: The system will allocate a pickup boy when any user schedules a pickup. The selected pickup boy will be assigned according to the nearest to the user.

A pickup Inventory Database: The system will interact with the database of pickup records and details of the pickups.

A Payment processing system: The will calculate the amount of money to be sent to the user according to the amount of scrap that has been picked from him/her and generates a payment. And also keeps the record of the amount to the database.

**3.1.2. User Interfaces:**

The system will provide the ability for users to access the S-V online via the Internet. There will be two different user interfaces that will accompany this website: one for the general users and the administrator.

* **General users** will be allowed to login after they have registered once and can be allowed to see the price list in which the rate at which they can sell their scrap. They can also book or schedule pickup according to their ease. They are also allowed to see the history of their pickups.
* **The administrator** will be required to log in at all times. However, they will have limit access via the web-interface only being able to pull predefined reports and alter the price list values depending on the market situation. The administrators will have to login to a host machine inside the S-V network in order to build reports and ensure backups are running.

**3.1.3. Hardware Interfaces requirements:**

|  |  |  |  |
| --- | --- | --- | --- |
| Windows | Windows XP | Windows Vista | Windows XP SP2 (FF 13) |
| Processor Windows | 233 Mhz | 1-GHz | Pentium 4 or above |
| Process Mac | N/A | N/A | Intel |
| Min RAM | 64 MB (XP) | N/A | N/A |
| Recommended RAM | 512 MB | 512 MB | 512 MB |
| Min Disk Space | 150 MB (XP), 70 (Vista) | N/A | N/A |
| Rec. Disk Space | 70 Mb | 70 Mb | 200 MB |
| Rec. Disk Space 64-bit | 120 MB | 120 MB | N/A |

**3.1.4. Software Interfaces requirements:**

Interact supports the latest browsers (see below) running in Windows with a minimum processor of 1Ghz and 500MB RAM:

* Microsoft Internet Explorer
* Google Chrome
* Firefox

**3.1.5. Communication Interfaces:**

* DSL Modem
* DSL/Broadband Filter
* Firewall and NAT Router
* Computer Firewalls
* ICS (Internet Connection Sharing)
* Network Hub
* Network Bridge
* Network Switch
* Wireless access point

**3.2. FUNCTIONAL REQUIREMENTS**

**3.2.1.** **Stimulus: Click “Register” Button: Account Registration**

1. The system shall allow a non-registered user to create a secure account.
2. The system shall require the following information from the user

Name, location, etc.

1. The system shall ask the user for a username and password.
2. The system shall confirm that username and password are acceptable.
3. The system shall store the information in the database.

**3.2.2. Stimulus: Click “Login” Button: Account Login**

1. The system shall allow a registered user to login into their account with their username and password.
2. The system shall verify the username and password and the user will be considered “logged in”.

**3.2.3. Stimulus: Click “Rate chart” Button: View price list**

1. The system will show the prices of all the scrap items per unit with their image.
2. This will help the user to view the prices of different material and

the amount of money which they can receive for their scrap.

**3.2.4. Stimulus: Click “Book Pickup”Button: Booking pickup**

1. The system shall allow the user to book a pickup of the scrap at their homes.
2. The system shall allow the user to enter the preferred time for the pickup.
3. The system shall allow the user to enter the rough idea of the total quantity of the scrap he wants to sell.

**3.2.5. Stimulus: Click “Cancel pickup “Button: Cancel pickup**

1. The system shall allow the user to cancel the booked pickup.
2. The system shall allow the user to enter the reason for the cancellation of the pickup.

**3.2.6. Stimulus: Click “Your Contribution “Button: Your Contribution**

1. The system shall allow the users to view the total contribution made by them by selling the recyclables and contribute to saving energy and other resources.
2. This will encourage users to sell more and more scrap and earn more and save more.

**3.2.7. Stimulus: Click “Contact us “Button: Contact us**

1. The system shall allow a user to view various methods of contacting

the store.

1. The system shall display the store address, telephone number, email address, and directions on how to get to the store.
2. The system should also display a map showing the location of the store.

**3.2.8. Stimulus: Click “How we work “Button: How we work**

1. The system shall contain a video clip which will show the steps of how to use the system.
2. The system shall help the user in understanding how to book a pickup.
3. The system shall help the user to understand the whole working of the system.

**3.2.9. Stimulus: Click “Feedback” Button: Feedback**

1. The system shall allow the user to give feedback of the pickup.
2. This will help to improve the service provided t the users.

**3.2.10. Stimulus: Click "Update Account Information" Button: Update Account Information**

1. The system shall allow a user to update the information in their account.
2. The user shall be allowed to view and change their name, mailing address, pickup address, contact number.
3. The user shall be able to change their password by entering the old one once, and a new one twice.

**3.2.11. Stimulus: Click "Help" Button: Help**

1. The system shall allow the user to view an overview of how to use the various operations defined above.
2. The system must allow the user to select one of the operations by name.
3. The system shall then display information on how to use that operation.

**3.2.12. Stimulus: Click "Logout" Button: Account Logout**

1. The system shall allow the registered and logged-in user to exit his/her account so that access to operations requiring a user to be logged in is now disabled.

**3.3. Performance Requirements**

The performance requirements are as follows:

* System login/logout shall take less than 5 seconds.
* Scheduling or booking shall be processed within 10 seconds.
* The system shall support 10,000 simultaneous users.

**3.4. Logical Structure of the Data**

The following two sections show the different types of information used by various functions and the overall data model, respectively.

**3.4.1. Types of Information Used**

The types of information used by various functions of the website:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| **Function** | **Types of Information Used** |
| Account Registration | User information (name, mailing address, contact number, username, and password) |
| Account login | User information (user name, and password) |
| Search | Scrap information (types, rates ) |
| Checkout | Scrap information (number on hand) |
| Update Account info. | Updated User information (name, mailing address, contact number, username, and password) |
| View account | Purchase history information (quantity) |
| Sale history | A confirmation number, date of sale, type of scrap, the price paid for scrap, the total amount of scrap sold. |

**3.4.1. Types of Information Used**

The following diagram describes the attributes and the types of data that is to be stored in the Database:

**3.5. Design Constraints**

The Scrap-vend shall conform to the following design constraints:

* Able to support PC, Mac platforms.
* System logs out a user after a ten-minute inactivity period.
* System supports all web browsers (i.e. graphical, non-graphical).

**3.5.1. Standards Compliance**

The Scrap-vend will follow existing standards and regulations, which are stated in the disclaimer policy.

**3.6. Software System Attributes**

**3.6.1. Reliability**

The average time to failure shall be 30 days. In the event that a server does crash, a backup server will be up and running within the hour.

**3.6.2. Availability**

The Scrap-vend shall be available to users 24 hours a day, 7 days a week, with the exception of being down for maintenance no more than one hour a week. If the system crashes, it should be back up within one hour.

**3.6.3. Security**

Users will be able to access only their own personal information and not that of other users. Purchases will be handled through a secure server to ensure the protection of user’s credit card and personal information.

**3.6.4. Maintainability**

Any updates or defect fixes shall be able to be made on server-side computers only without any patches required by the user.

**3.6.5. Portability**

N/A

**3.7 Organizing the Specific Requirements**

**3.7.1. User Class**

Every person with a computer/Smart Phone and internet connection are able to use our website.

There can be one characteristic for users as follow:

* 1. Users: Normal users who use the website to book a pick up.

**3.7.2. Stimulus**

A person uses our website when the pickup boy wants to visit on a given location for picking up scrap.

**3.7.3. Response**

Once the person request for their desired choice our website works as follows:

1. Booking the pickup: Once the person request for this choice the location is provided to the pickup boy on the promised date and time with all the mentioned activities.
2. Requesting a pickup: Once the person request for this choice, user can request for a customized pickup according to their own comfort and if it could be provided by the organizer then it would be accepted or else rejected.
   1. **Additional Comments**

N/A

**4. Supporting Information**

N/A