
Software Requirements Specification

for

WEcare

Version 1.0

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Revision History

Name	Date	Version
WEcare	27 Dec 2017	1.0 alpha

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of the open-source software WEcare. It will explain the purpose and features of the software, the interface of the software, what the software will do and the constraints under which it must operate. This document is intended for users of the software and also potential developers.

1.2 Document Conventions

This document was created with the use of the IEEE template for the System Requirement Specification documents.

1.3 Intended Audience and Reading Suggestions

- Donors - organizations or people who are willing to donate reusable and brand new items
- Donation Acceptors - such as students who need books, shoes , clothes etc and victims of natural disasters

1.4 Product Scope

WEcare was developed as an intermediate platform which connects people who are willing to donate resources (both new and reusable) and people who are in need of those resources, facilitating them to share and request items using a client desktop application installed on their computers.

1.5 References

- IEEE Template for System Requirement Specification Documents :
<https://goo.gl/nsUFwy>

2. Overall Description

2.1 Product Perspective

WEcare is a tool that connects both donors and donation acceptors based on their requirement specifications such as quantity, urgency .

It is an open source project and it was developed to run on Windows, Mac OS X and Linux.

2.2 Product Functions

Client side:

- Signing-up (Create new accounts)
- Login
- Account settings
- Donate
- Upload profile pictures and pictures of donations
- Automatically scale images while uploading
- Check the validity of inputs
- View Others' donations
- Request for donations
- Check whether server is launched and notify for the client if it is not
- Can change the IP Address and the port according to where the server is launched
- Send an verification code to the Email
- Send a welcome Email when an account is created
- Donors can check what happen to their donations

Server side

- Login
- Turn on and off the server
- View user details
- View donation details
- Assign recipients for donations which has multiple requests
- When assigning recipients, all the details about requested users including their donation and acceptance history can be viewed.
- Automatically assign the recipient for a donation if there is only one request, after 1 month.
- Send Emails to donors and recipients when a Recipient is chosen
- Automatically setting up the database at the initial launch of the server
- Change the server port
- Change the password of the server

Request handling is done in following manner :

- ★ if there is only 1 request after 30 days of publishing the item, item is given that relevant client.
- ★ if there are more than 1 request for the same item after 30 days of publishing the item, decision is taken by the administration.
- ★ if there is no request after 30 days of publishing the item, the item will be kept until it gets a request and then it is immediately given to the client who made that request.

2.3 User Classes and Characteristics

- Donors who are willing to donate their reusable resources.
- People who are in need of certain resources who are willing to get the support of this web application to find and obtain them.
- The administrative body who will handle and oversee each and every donation made through the web application.
- Programmers who are interested in further developing the web application or fixing existing bugs.

2.4 Operating Environment

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7
- Windows 8
- Windows 10
- Mac OS X
- Linux

2.5 Design and Implementation Constraints

WEcare is developed in Java, it uses **RMI** (Remote Method Invocation) API to create a distributed application with Java and it is built on top of the NetBeans Platform. It uses a modular design where all the features are wrapped into three separate modules and the modules communicate with each other through well-written APIs.

2.6 Assumptions and Dependencies

WEcare is developed in Java and therefore it requires JVM to be on the user's system. The latest version of WEcare requires Java version 7 or higher. This applies to windows and Linux users. On mac OS X , Java is bundles with the application.

3. External Interface Requirements

3.1 User Interfaces

3.1.1 Client Interface

1. WEcare Welcome Screen

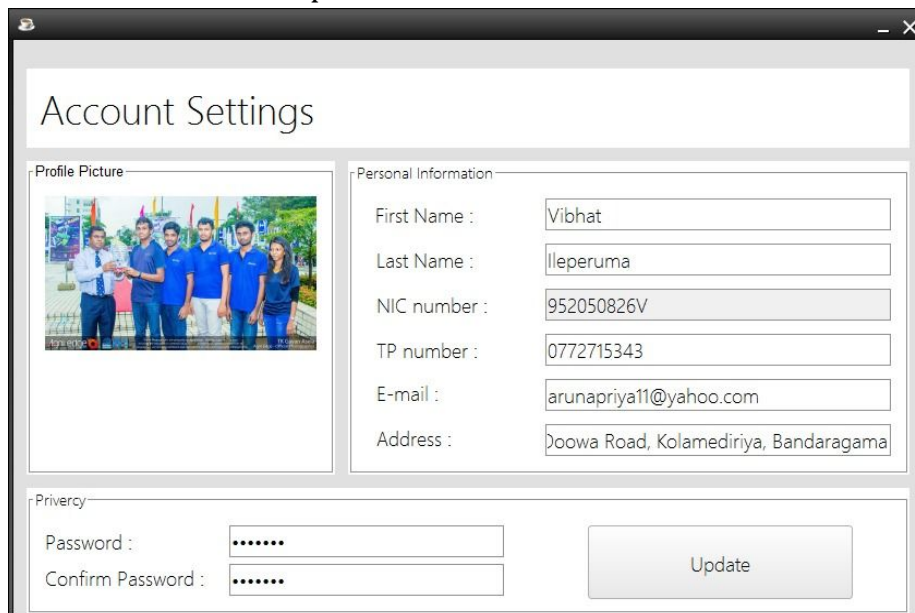
- existing users can log into their accounts here and new users can sign-up here.



The image shows a web browser window titled "WEcare". On the left, there is a large "Thanks!" message with a cartoon character. On the right, there is a "Login/SignUp" section. It contains fields for "NIC number" (with the value "952050826V") and "Password" (with masked characters "*****"). Below these fields is a "Login" button. Underneath the button, it says "or" and "New to Relief.lk ?" followed by a "Sign-Up" link.

2. New User Account Window

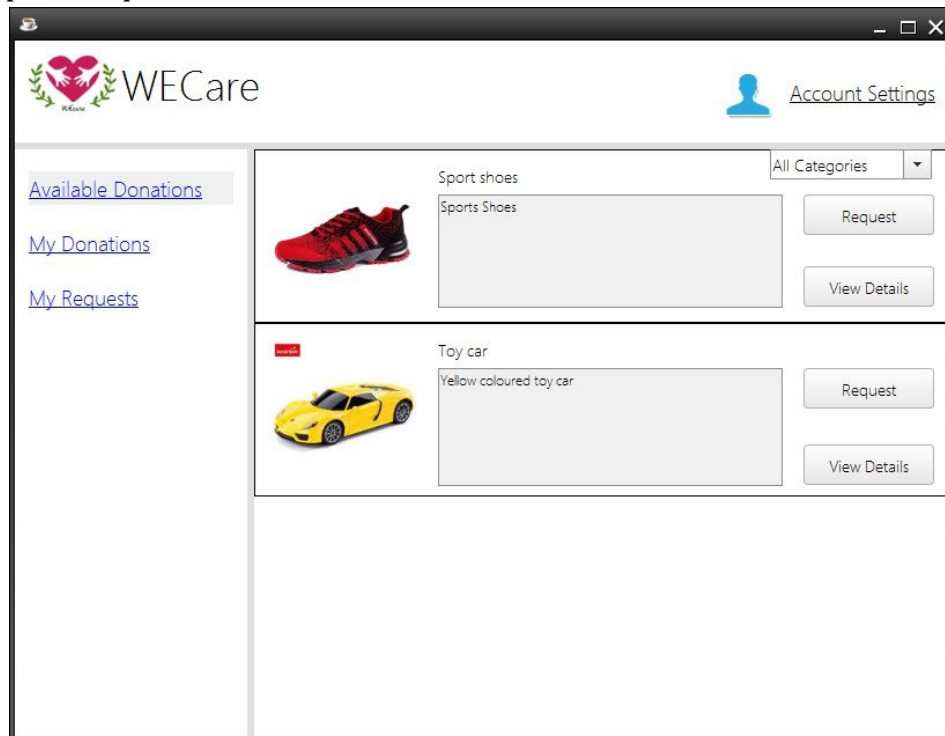
- this window captures user details and creates a new user account.



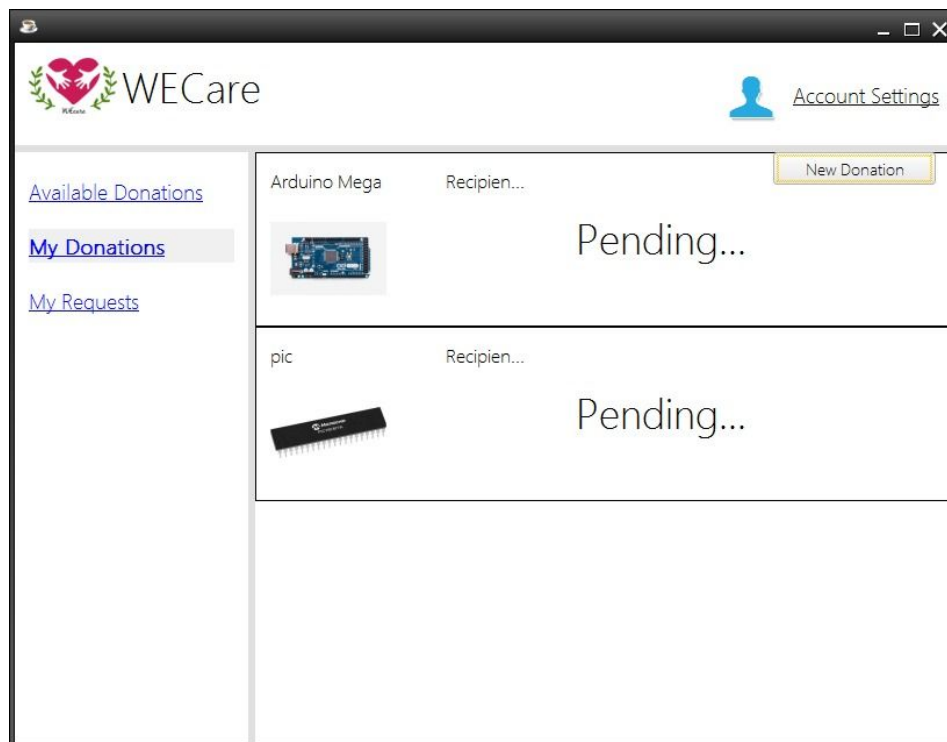
The image shows a web browser window titled "Account Settings". It is divided into two main sections: "Profile Picture" and "Personal Information". The "Profile Picture" section shows a group photo of five people. The "Personal Information" section contains fields for "First Name" (Vibhat), "Last Name" (Ileperuma), "NIC number" (952050826V), "TP number" (0772715343), "E-mail" (arunapriya11@yahoo.com), and "Address" (Doowa Road, Kolamediriya, Bandaragama). At the bottom, there is a "Privacy" section with "Password" and "Confirm Password" fields (both masked with "*****") and an "Update" button.

3. Main User Interface

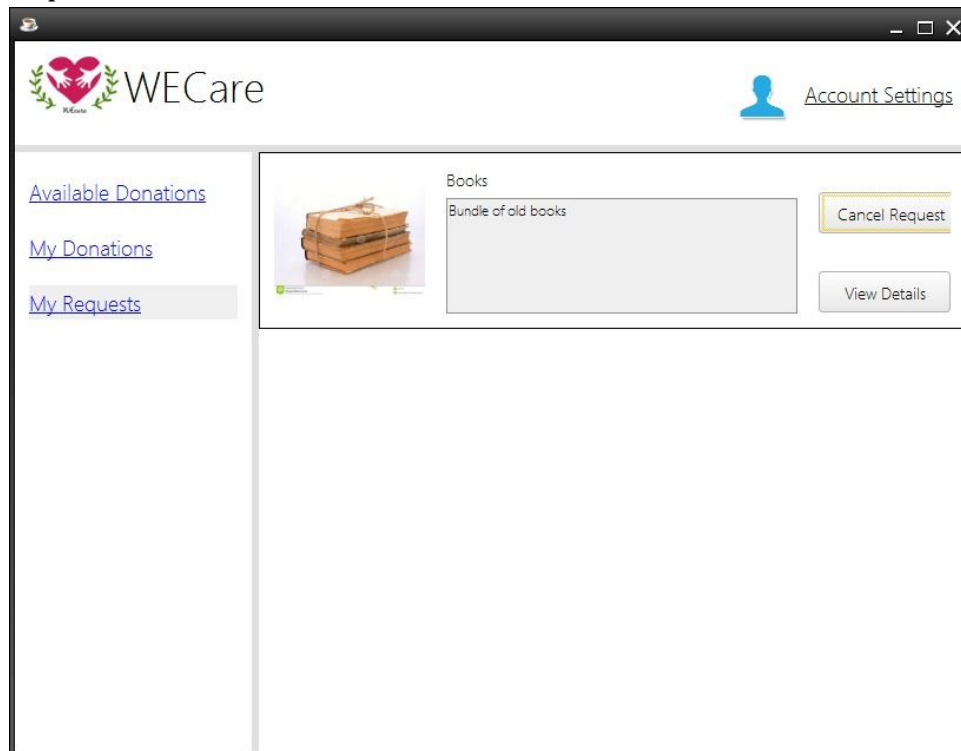
- Available Donations - all the available donations are displayed here. Users can place requests on available items.



- My Donations - all donations made by the user are displayed here. New donations can be added from here.

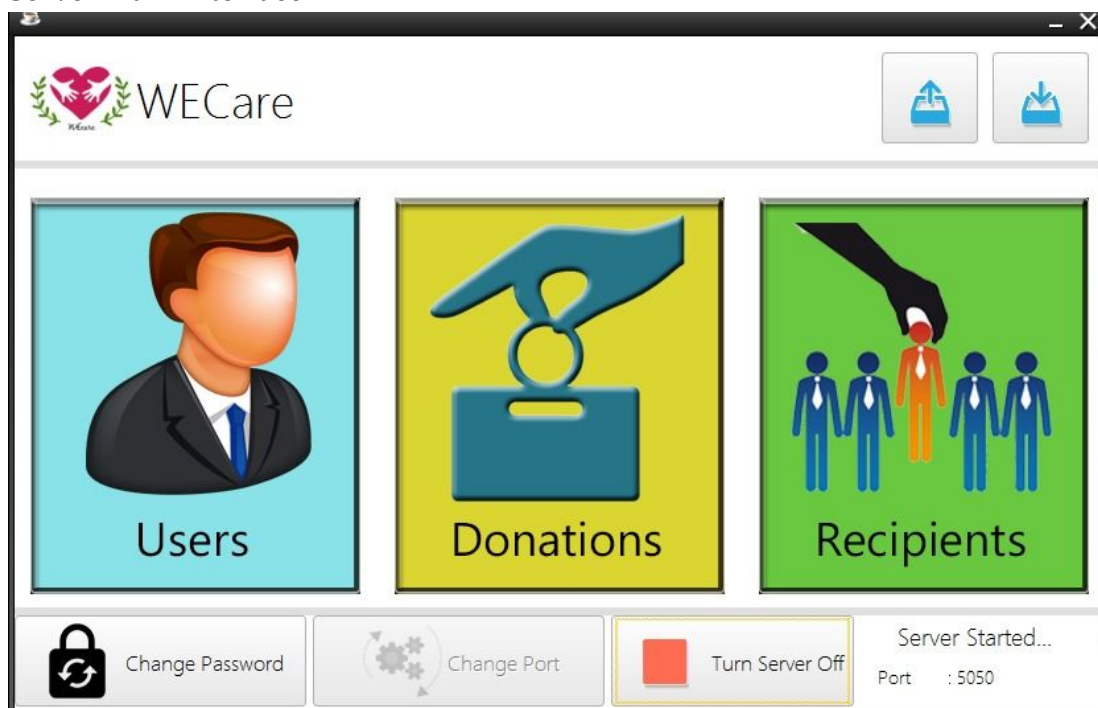


- My Requests - all the requests placed by the user are displayed here. Placed requests can be canceled here.



3.1.2 Server Interface











1. Server Main Interface



2. User Sub-interface

User Details					
First Name	Last Name	NIC number	TP Number	E-mail	Address
Sandali	Jayawera	781241456v	1566526191	ncdsjn	csdcd
Chathuri	Jayaweera	891245789V	778945128	cdsc@yahoo....	bcsdk, cdscs
Isuru	Nuwanthilaka	951234789V	774856123	xjsni@yahoo....	csj j llkm
Vibhat	Ileperuma	952050826V	772715343	arunapriya11...	146B, Doowa ...
Chandula	Nethamal	952648748V	778941577	nxsxaj@gmail...	123A, da, scvy...
Lochana	Chathuranga	952648794V	778941526	nxsxaj@yaho...	123A, da, scvy...
Vibhath	Ileperuma	952650795V	772715343	nxxzz@gmail....	123A, da, scvy...

3. Donations Sub-interface

Donation Details		
Donation	Donar	Recipient
 <p>Arduino Mega</p> <p>~1 year. Power regulator is not working.</p>	 <p>Vibhat Ileperuma</p>	No Recipient
 <p>pic</p> <p>Pic 16F877A</p>	 <p>Vibhat Ileperuma</p>	No Recipient
 <p>Books</p> <p>Bundle of old books</p>	 <p>Sandali Jayawera</p>	No Recipient
 <p>Sport shoes</p> <p>Sports Shoes</p>	 <p>Sandali Jayawera</p>	No Recipient
 <p>Toy car</p> <p>Yellow coloured toy car</p>	 <p>Chathuri</p>	

4. Recipients Sub-interface

The screenshot displays the 'Choose Recipients' interface. It features a header with the title 'Choose Recipients'. Below the header, there are two tabs: 'Donation' and 'Requests'. The 'Donation' tab is active, showing a list of items for donation. The first item is 'Arduino' with a sub-item 'Arduino Mega Board.' and a small image of the board. The second item is 'GPS module' with a sub-item 'S module. Compass module is included.' and a small image of the module. The 'Requests' tab is also visible, showing a list of recipients. Each recipient has a small photo, a name, and two buttons: 'Choose' and 'View Details'. The recipients listed are Lochana, Chathuranga, Isuru, Nuwanthilaka, Vibhath, Ileperuma, Isuru, and Nuwanthilaka.

3.2 Hardware Interfaces

The minimum hardware requirements of WEcare client programs are a 266 Megahertz processor (minimum Pentium 2), 128 megabytes of RAM, disk space - 124 megabytes for JRE, 2 megabytes for Java Update.

To handle the database we need a sql server that requires a minimum of 6 Gigabytes of available hard-disk space, minimum x64 Processor , 1.4 GHz but 2.0 GHz or faster is recommended . It is expected to handle 1000 users daily but for a bigger network with higher traffic , additional resources are required.

3.3 Software Interfaces

WEcare does not require any specific software installed on the computer. However, it is always recommended to use latest network drivers.

3.4 Communications Interfaces

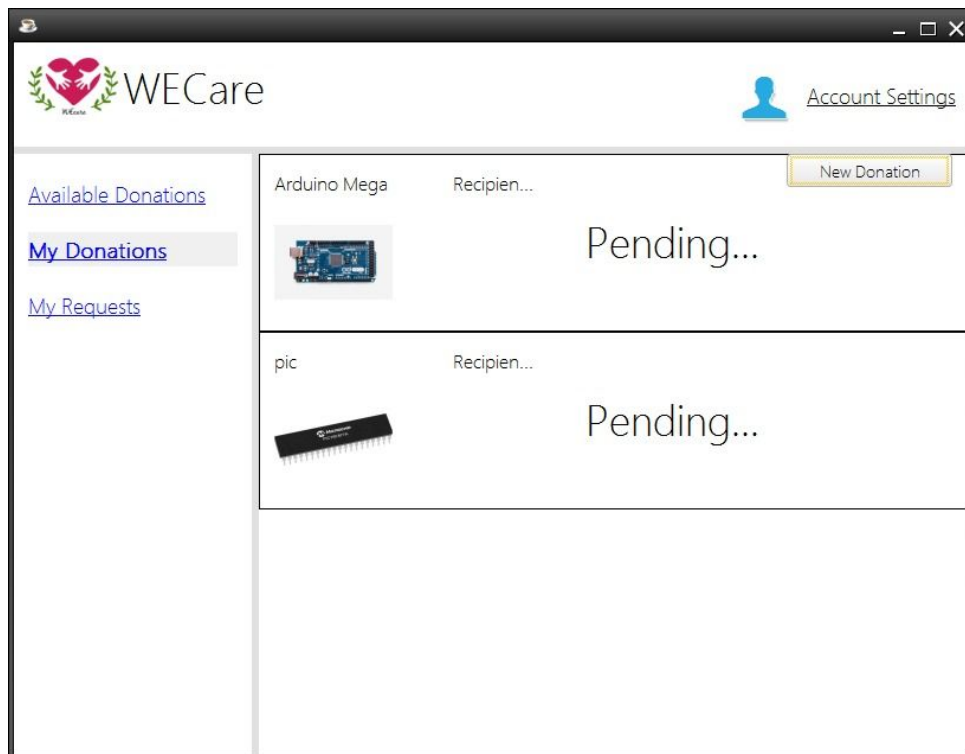
WEcare requires an active internet connection to properly access all functions available in the interface. Further, new updates of the software are installed via internet after notifying to the user and getting their permission.

4. System Features

This section demonstrates WEcare's most prominent features and explains how they can be used. However, it is essential to make a user account prior to access following features.

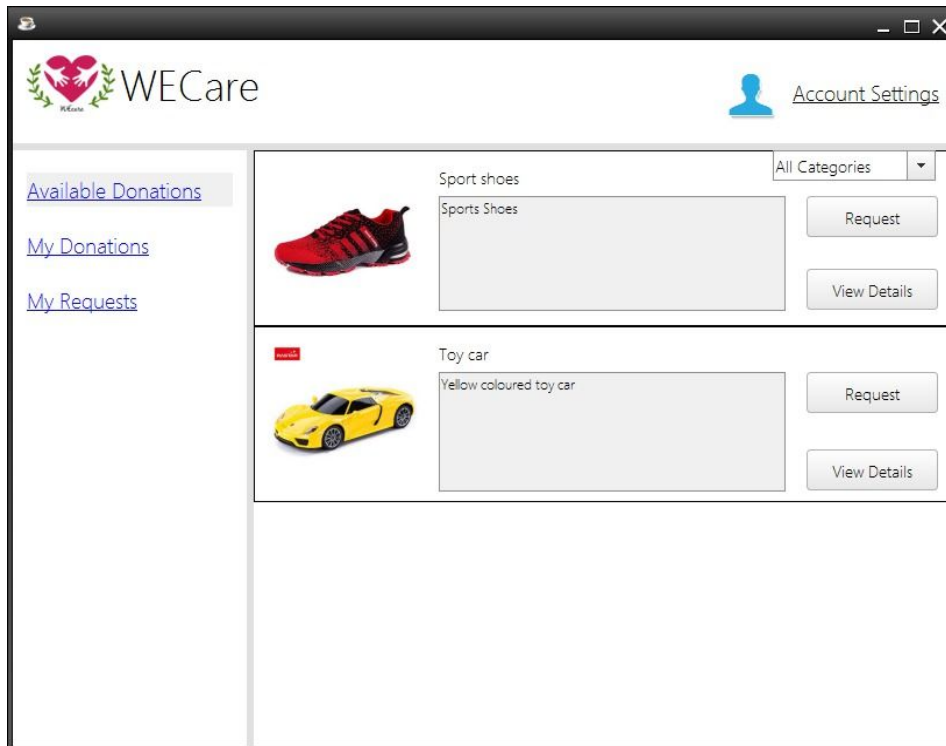
4.1 Donating items

Log into the account > My Donations > New Donation



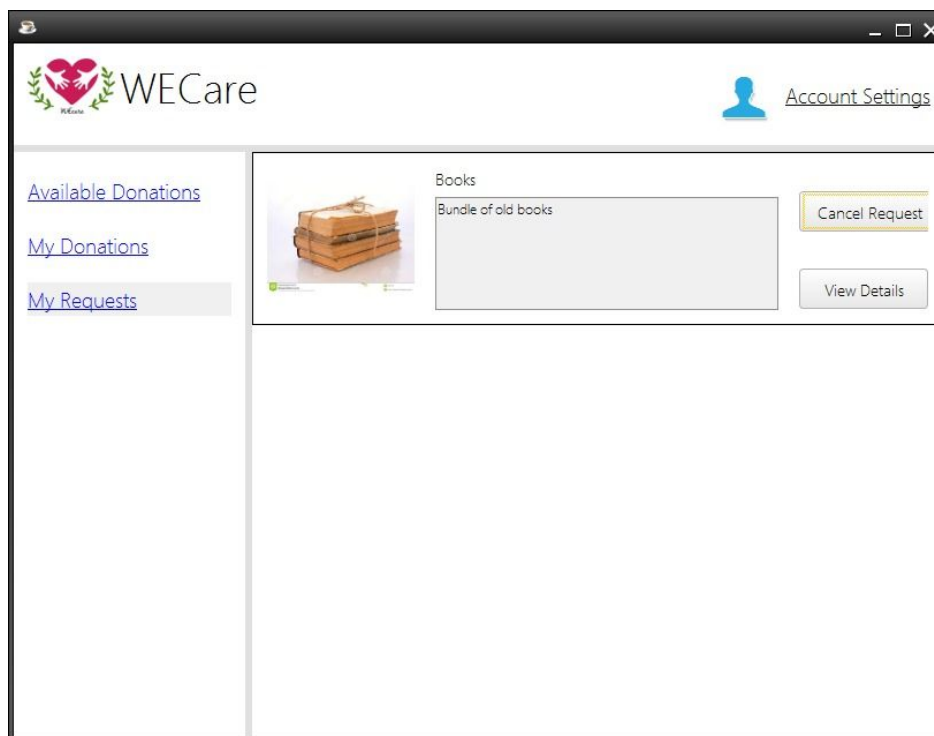
4.2 Requesting items

Log into the account > Available Donations > Select item > Request



4.3 Cancel requests

Log into the account > My Requests > Select item > Cancel Request



5. Other Nonfunctional Requirements

5.1 Performance Requirements

WEcare requires a system with at least a 266 Megahertz CPU, 128 megabytes of RAM, disk space of 124 megabytes for JRE and 2 megabytes for Java Update.

An internet connection of at least 512 kbps upload and download rate is recommended for smooth functionality of the software. Otherwise, users may have to experience a considerable delay in accessing available functions.

5.2 Safety Requirements

To ensure prominent actions taken by the users and as well as administration, relevant party is notified by emails in following cases.

when,

- a new user account is created by a user - user is notified
- a new item is added to the donating item list - donor is notified
- a new request is made on an item - needy is notified
- a requested item gets approved - both donor and needy are notified

When creating a new user account by inserting user information, error messages are displayed for the wrong user inputs.

5.3 Security Requirements

WEcare has given a higher priority for security and following rules has been implemented for higher security and as well as to protect user privacy.

- Each user of this application (both Donors and Needy) should be required to create a user account by providing necessary identity verifications before being able to use the web application.
- The aforementioned identity verifications should include a clear user photograph, clear photograph of NIC , confirmation about the requirements.
- The information of all the users (both Donors and Needy) should be accessible exclusively for the administrative body.

5.4 Software Quality Attributes

WEcare provides a simple user interface where any user can easily access functions available in the interface without any prior knowledge. However, users must have basic computer literacy.

5.5 Business Rules

- WEcare is a non-profit project
- No trading, promoting brands allowed
- In case of any misuse of the application, the administrative body should be able to disable the relevant user accounts and blacklist the relevant users.