Software Requirements Specification

E-Library

Version 2.0

Prepared by
Xue Wei Fan
Kai Ying Chen
Khadeeja Din

Table of Contents

1. Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the functionalities of the Ebook sharing system. This document will explain the purpose and features of the system. It will also cover system constraints, user interface, and the external behavior of the application.

1.2 Scope

The application is an E-book sharing system which provides a catalog of available E-books to read. Instead of charging for the books, users earn points and purchase books from the earned points. The application is internet independent and is accessible on any operating system.

1.3 Definitions, Acronyms, and Abbreviations

This document features some vocabulary which readers may be unfamiliar with. See Appendix A (Glossary) for a list of these terms and their definitions.

1.4 Overview

The remainder of this document includes 3 sections. The next section provides an overview of the system functionality and the use case model. The third section provides the requirements specification in detailed terms and a description of the different system interfaces. The specifications are divided as either use case or supplementary requirements. The last section includes Appendix A. Appendix A is a glossary which provides a list of terms and their definitions.

2. Overall Description

Product Perspective

This E-book Club application is a new E-book sharing system that can be used on any operating system. It is a web based application. This project consists of both the server side and client side functionalities. For the server side functionality, since this is a data-centric product it will need somewhere to store the data. A database will be used. The web portal will add and modify data. All of the database communication will go over the Internet. The client side will show the data which is the book or any information about the book to users.

Product Functions

Please check the specific requirement section for detailed information.

User Characteristics

There are three types of users that interact with the system:

1. Super-users (SU): all RU's allowed operations, new-user approval decisions, book approvals/updates and complaints processing, set up the points for different reading durations.

2. Registered users (RU): all VS's allowed operations, contribute books, read and rate/review books/reviews, send complaints to SU on book contents.

3. Visitors (VS): browse available E-book catalog and the reviews/ratings, apply to be a new RU.

Constraints

This application should work on any operating system. So responsive design should be considered in order to make it work on mobile as well. When dealing with large group of users limited memory also should be considered. The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

2.1 Assumptions and Dependencies

The hardware this app relies on are computers, tablets, and mobile phones. When users use this app they also need connect to the internet. The e-book the user purchased can only be kept in the

account of the users instead of being downloaded to the users' local computer. This app also need enough users to register and contribute books to this system.

2.2 Use-Case Description

This is the majority of the functional requirements of the system. Also include some non-functional requirements, such as user interface.
There are three types of user, super-users, registered users and visitors. The function they can use is limit.

1. **User interface**
   System should provide a user interface for all kind users
   1.1 Require home page for all kind user.
   1.2 Login page
   1.3 Registration page
   1.4 User profile page
   1.5 A page for every book
   1.6 Reading page
2. **User registration and welcome**
   Visitor can register to become a registered user.
   2.1 Require valid email address.
   2.2 Require a user name which no one used.
   2.3 Require a password
3. **User log-in**
   Registered user or super-user can log-in to their account.
   3.1 require username and password
4. **Provide a catalog of available E-books**
   System provides a catalog of available E-books for all kind of user. User can read the catalog first to decide read the book or not.
   4.1 require cover-page and summary of book
   4.2 require display number of points needed to read the book
5. **Rate/review books**
   Registered user or super-user can rate or review book if they read the book.
   5.1 Require check user read book before.
6. **Contribute book**
   Registered user or super-user can contribute book to gain points.
   6.1 Contributing user asks points to gain.
   6.2 Super user decides point to be rewarded to the contributing user.
7. **Read a book**
   Registered user or super-user can pay the point to read a book. This is the core of this system.
   7.1 Require check the user's point and the point for reading book
8. **New-user approval decisions**

Super user can check new registered.

8.1 Check the email address and username is not used.

9. **Book approvals and updates.**

   9.1 Require check if book was contribute by others

10. **Sent complaints**

    Registered user can send complaints about book.

11. **Complaint processing**

    Super user need to processing the complaints from registered user. If the complaint is very serious, e.g., copyright violations, the super user can choose to punish the contributing Registered user.

12. **Set up the points for different reading durations.**
13. **Search for bad word**

    System has a function to search for bad words in the book. Any registered user can have their choice of bad words

14. **Add or subtract point**

    Super user can add or subtract point from the registered user.

15. **Book recommended**

    Every time a registered user log into the system, 5 books that are similar to the ones s/he read before will be recommended. If a registered user never read any book, then the top five books that were most read in the system will be recommended.

16. **A registered users can invite another registered user to read a book**

    Registered users can invite another registered user to read a book, once accepted, they both can read the book for their purchased time, and they split the asking points.

17. **Check history**

    Each registered users can check his/her reading history/stats, including a visitors, can browse the stats for each book.

18. **Book with no one read**

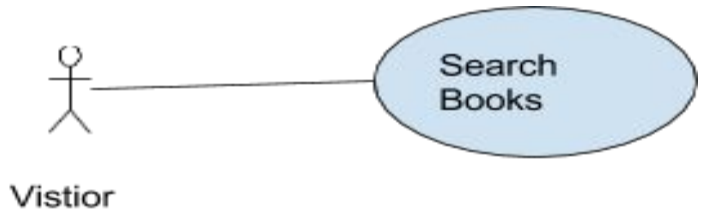
    A book that no one read for a certain time will be removed and 5 points are deducted from the contributing user.

3. Specific Requirements

This section of the software requirements specification contains use-case and supplementary requirements. Use-case means the majority of the functional requirements of the system. These functions must be implemented in order to have a fully-functioning application. Supplementary specifications mean additional requirements. The application will work without these additional requirements. These additional requirements will provide extra functionality, so those function will be add if time permits.

3. 1 Use-Case Model Survey

Use case: **Search E-books**
Diagram:

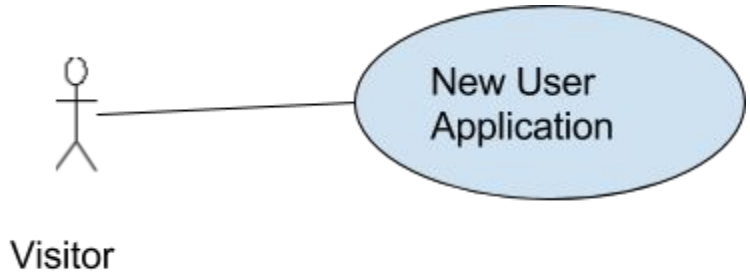


Brief Description
The visitor accesses the E-book club system, searches for an e-book and the reviews/ratings.

Initial Step-By-Step Description
Before this use case can be initiated, the Visitor has already accessed the E-book sharing Website.

1. The Visitor chooses to search by author name, category, or keyword.
2. The system displays the choices to the visitor.

Use case: **New user registration**
Diagram:

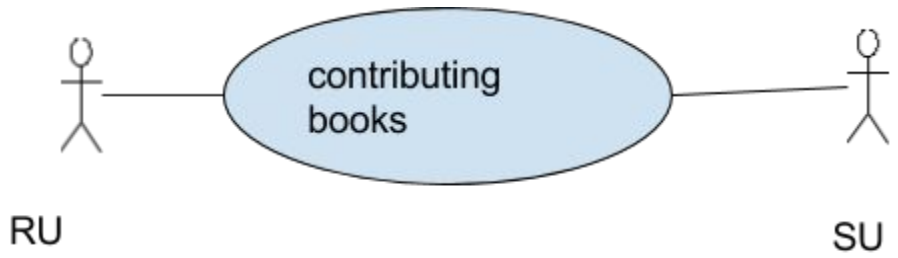


Brief Description
The visitor accesses the E-book club system, apply to be a new RU.

Initial Step-By-Step Description
Before this use case can be initiated, the Visitor has already accessed the E-book sharing Website.

1. The Visitor apply to be a new RU.
2. Once approved, visitor becomes a RU.

Use case: **Contribute Books**
Diagram:



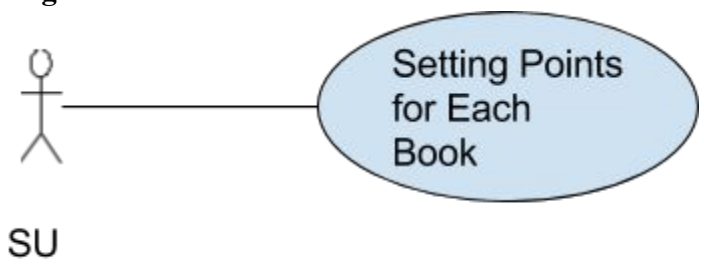
Brief Description
The RU either submits an original book or resubmits an used E-book.

Initial Step-By-Step Description
Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1. The RU request the points A she/he wants as a return for contributing his E-book and upload his E-book and submit.
2. The System uses the HTML to sent to SU for authentication
3. The SU gives a number of points B for the contribution and email to the RU
4. If A < B, the RU will be notified for approval, if not, the contribution will be denied

Use case: **Setting points**

Diagram:



Brief Description

1.The SU provide a catalog of available E-books, a cover-page and summary of each book to be displayed in the catalog, and the number of points needed to read the book for a certain time.

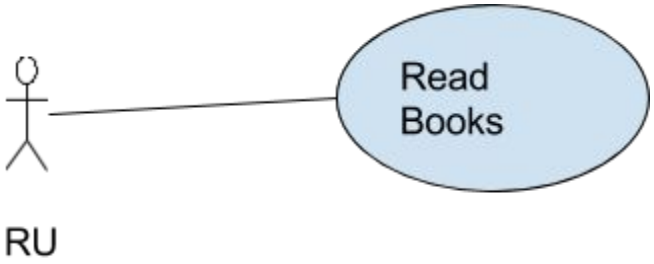
Initial Step-By-Step Description

Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1.The SU provides a catalog of available E-books, each E-book should have a cover-page and summary to be displayed in the catalog, and the number of points needed to read the book for a certain time, e.g., 10 pts for 10 min, 20 for 30 min and 30 for 1 hour (in your system the time units should be seconds instead of minutes to make it easy to test).

Use case: **Read Books**

Diagram:



Brief Description

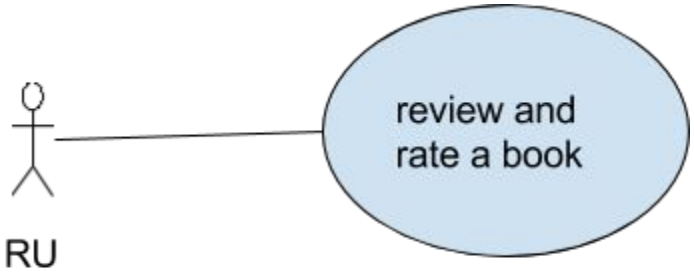
RU can read books if he has the point needed to read the book.

Initial Step-By-Step Description

Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1. The RU selects the book he want to read and choose the time he want to read.
2. The system deducts the point immediately after the RU choose the book and time period.
3. The RU can close the book before the purchased time comes or the system will close the book when the time comes.

Use case: **Review and rate a book**
Diagram:



Brief Description
RU can review and rate a book.

Initial Step-By-Step Description
Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1. The RU can review and rate a book only if s/he read it before. e2.the rating of an RU who reads the book with
2. Each review and rating is weighted by the amount of time the reviewer reads the book hours should have a larger confidence that that by another RU who only read it 10 min.

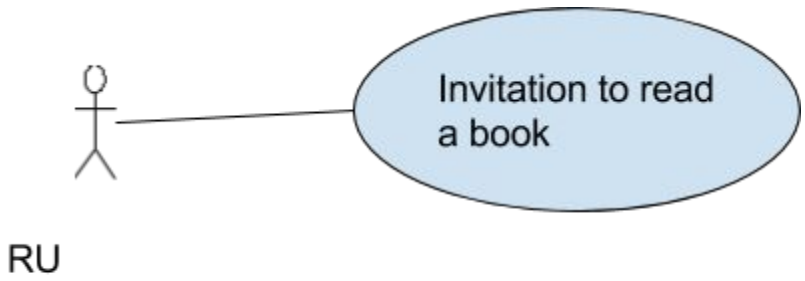
Use case: **Bad Word Search**
Diagram:

Brief Description
Any RU can have their own choice of bad words, the RU can complain the book based on his/her search. An RU can also complain a book after s/he read the book.

Initial Step-By-Step Description
Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1. Any RU can have their own choice of bad words, the RU can complain the book based on his/her search. An RU can also complain a book after s/he read the book.
2.A book receiving 3 complaints will be removed automatically, the point B for this book when the RU contributed this book will be deducted from his/her account with additional -100 points as penalty.
3. If the complaint is very serious, e.g., copyright violations, the SU can choose to punish the contributing RU even with only 1 complaint. An RU whose books are removed twice or who contributed one copyrighted book will be ejected from the system and put in the blacklist who can never register again.

Use case: **Invitation to read a book**
Diagram:



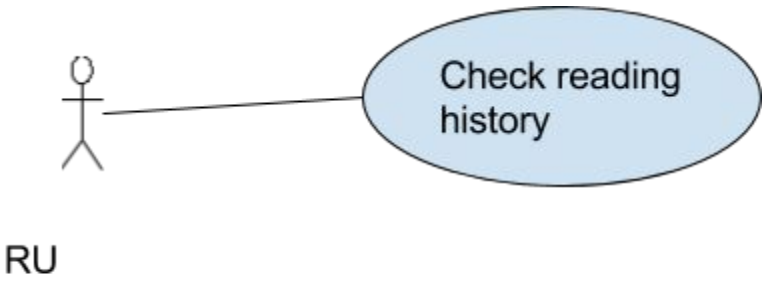
Brief Description

An RU can invite another RU to read a book, once accepted, they both can read the book for their purchased time, and they split the asking points.

Initial Step-By-Step Description
Before this use case can be initiated, the RU has already entered his E-book sharing club account.

1. An RU can invite another RU to read a book through email or chat
2. The invitee can accept the invitation or not.
3. Once accepted they will share the time.

Use case: **Check reading history**
Diagram:



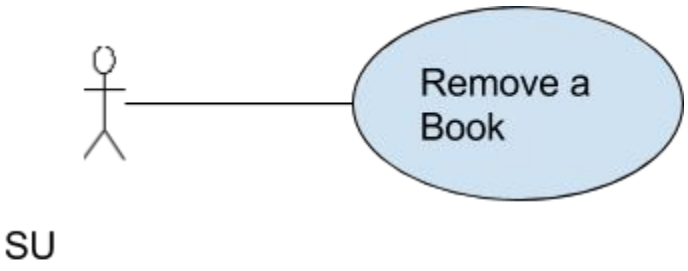
Brief Description

Each RU can check his/her reading history/stats; any one, including a VS, can browse the stats for each book.

Initial Step-By-Step Description

Before this use case can be initiated, the RU has already entered his E-book sharing club account.

Use case: **Remove a book**
Diagram:



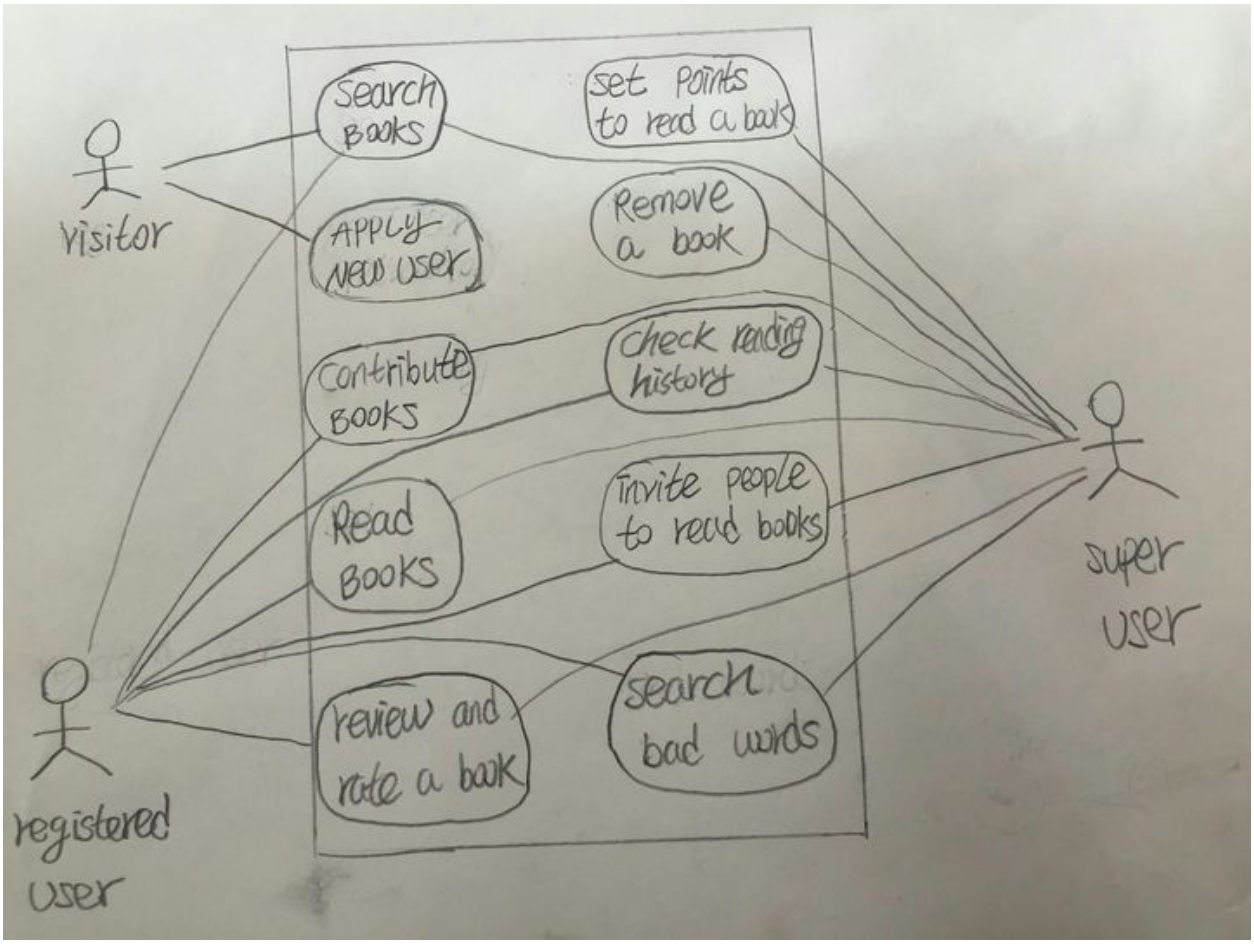
Brief Description

A book that no one read for a certain time will be removed.

Initial Step-By-Step Description

Before this use case can be initiated, the SU has already entered his E-book sharing club account.

1. A book that nobody read for 3 months will be removed and 5 points are deducted from the contributing RU.



Use Case Interaction Diagram

3.2 Supplementary Requirements

These are additional requirements. The application will work more friendly with these functions.

1. Review or rate book
   Each review and rating is weighted by the amount of time the reviewer reads the book—the rating of an RU who reads the book with 2 hours should have a larger confidence that that by another RU who only read it 10 min.

4. Supporting Information

4.1 Appendix A Glossary

Points

Points are a means of trading books on the E-book Club. Users earn points by contributing new books, and use these points to purchase other books for reading.

Book approval

Book approval is the process of rewarding points to the contributing user of any new book. If the SU determined points are less than the contributing user demanded points, the book is approved and added to the catalog.