

Software Requirements Specification For E-Book Sharing System

Version 2.0

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Software Requirements Specification

1) Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a comprehensive description of the functionalities of the E-book Sharing System. Through the use of natural language and use-case diagrams, this document will highlight each of the system's features. It will identify the functions that the program will use and the users that will have access to these functions.

1.2 Scope

The E-book Sharing System is designed to introduce a new way of sharing and reviewing E-books. Potential scenarios include uploading E-books to the system for others to read, the accumulation of points in order to read a book, and the search through an online catalog of available books.

1.3 Definitions, Acronyms, and Abbreviations

- Visitors (VS) : Any user that is using the application but hasn't been registered with the system to fully use its key features.
- Registered Users (RU) : Any user that is registered with the system and has been granted permission to use the core features of the application such as contributing E-books and reading a book.
- Super-Users (SU) : Any user that administers the system. They are given the authority of approving the registration for new users, setting up points for reading

duration, processing of complaints, etc. They are also allowed to do all of RU's operations.

- Points : A form of resource that Registered and Super Users use in order to be able to read a book.
- E-books : Books that have been made available to be read online.
- Blacklisted : A user who has been ejected from the system and rendered unable to register due to violating the rules/regulations of the system.

1.4 Overview

In the remainder of the Software Requirements Specification, the document will go into depth on application itself. The product features that are provided by the system will be listed and brief descriptions of each feature will be given. A Use-case diagram will be included within the document to showcase the various users that will be accessing the system. From the use-case diagram, one will be able to see the functions that each of the users are able to interact with. Assumptions/Dependencies in which the system will be based on will be stated. Ultimately software requirements for the features will be given in sufficient detail to provide designers with a clear idea on how the system should be built.

2) Overall Description

2.1 Product Features

Main Features

1. Catalog of books

- Have a variety of E-books available
- Each book will have a cover page and summary
- All users can view stats of the books
- Points are necessary to read the books

2. Reading Books

- To read a book the RU must have at least the amount of points required to read the book
- Once an RU starts to read, a timer will be set based on points spent
- RU can close the book and the timer will stop. Timer will restart when RU opens book again
- When timer runs out, the book closes

3. Reviews and Ratings

- RU can review and rate book only if RU has read it
- RU rating is weighted based on how long RU has read the book

4. Book Contribution

- When RU contributes a book, RU can request points for it
- SU determines how many points the contribution is worth
- If SU accepts the requested points, RU is notified of the reward
- Contribution is denied if SU believes the contribution is worth less than the points requested

5. Bad Word Complaints

- RU can pick bad words and have the ability to search for these words in the E-books
- RU can complain if bad words appear after reading or upon search

- When filing a complaint, RU must include reason for it

6. **Punishments**

- E-book with 3 complaints is removed and points will be deducted from the account of the RU who contributed the book with an additional 100 point deduction as penalty
- SU can punish RU if a complaint is serious, e.g. copyright violations
- RU with books removed twice or contributed a copyrighted book will be removed from the system and blacklisted
- E-books that have not been read for a certain time period will be removed and RU will have 5 points deducted from their account

Additional Features

- When the RU logs into the system, 5 recommended books will appear based on previous reads. If RU has not read any books yet, the most popular books will appear
- RU can invite another RU to read a book together, If accepted, they will split the points and the reading time for the book
- RU can check reading history and stats for account
- RU who contributed book will gain a percentage of points that reader has spent to read book

2.2 Use-Case Model Survey

The use case diagram describes which users have access to the functionality of the software. Super Users have access to all functions, while Registered Users are slightly restricted while Visitors and extremely limited. The following use cases are:

Register User: An account is created in the system by registering with an unique username and password.

Browse System: The E-book catalog is browsed through and any book can be picked to look its reviews, ratings and stats.

Account Login: A user logs into the system by inputting his username and password in the login window.

Contribute Book: A logged-in user has the option of uploading books to the system, however these books cannot be copyrighted. Along with the book itself, the book's information such as the title, author, and summary must be provided. An amount of points can be requested as an award for the contribution.

Review Contribution: Each new book is reviewed before being added into the catalog. Based on the size of the text in the book, the points required for purchasing the book are determined. The contribution can be rejected if the requested amount of points is unreasonable or the book violates the copyright rules.

Read Book: In order to read a book, the book is purchased with points. A timer is set based on the points spent and this keeps track of how long the book can be opened. The contributor of the book will gain 5% of the points that reader spent.

Rate and Review: Users can give rating and reviews for books they have read only. The system calculates the weight on these ratings and reviews based on how much time was actually spent on reading the book.

Complain/Punish User: Complaints against books or other users can be made by filling and submitting an form.

Search Words: A user can enter text into a search bar, which will be on the book page. The text will then be searched through the book content.

Remove Book: A book that hasn't been read for a certain time period will be removed from the system. 5 points are then removed from the contributor's account.

Browse History/Stats: Users can browse through their history/stats on their account page, which contains the books they have read before, the books they had contributed to the system, and the number of points accumulated.

Share Book: An user can invite another user to read a book together.

Blacklist User: A user is blacklisted when his username and password is placed on blacklist. That specific user will be blocked from ever logging into his account.

2.3 Assumptions and Dependencies

Time Dependencies

Within the given time for the development of the E-book Sharing System, the majority of it will be spend on developing the main features of the system. The implementation of these features are necessary in order for the system to be used to its highest capacity and for it to provide the greatest user experience. Among the features that will be implemented, there will be functions that aren't essential to the system as a whole. Depending on the time left available to develop these functions, they may or may not be implemented into the system near the ending of the design phase.

Hardware Dependencies

The E-book Sharing System is a website, otherwise seen as an internet based system. Thus, in order to fully use the features provided by the system, a relatively decent modem and/or router would be necessary. These hardware will provide the internet access needed to open the webpage.

3) Specific Requirements

3.1 Main Feature

Catalog of books

Users that are using the system will be presented with a menu on their screen. Within the menu, users are able to access the catalog that displays a list of books that have been contributed to the system. By clicking on a book, the user will be redirected to a page that contains a brief description of the book along with its stats. In addition, Registered Users and Super Users will be able to read the book if they have sufficient points.

Stimulus/Response Sequences

Step 1: The menu is displayed on the screen. It doesn't matter if the user is logged in or not.

Step 2: The user goes to the main menu and clicks on the menu bar labeled as Catalog.

Step 3: The user is redirected to the catalog page. If user is logged in and has read books, recommended list of book will appear at the top.

Step 4: Each book will have rating and other statistics that can be viewed by any viewer.

User Requirements

If users find a book that they would like to read, then they must log in to the system. Otherwise if they don't have an account, visitors would need to create an account beforehand.

System Requirements

The system must maintain a database of books that have been contributed to the system. The system must also be able to recommend books to reader based on previous reads and be able to display statistics for each book in the catalog.

Reading Books

As Registered Users/Super Users contribute books to the system, they will accumulate points. These points can be spent on reading books. The amount of points that will be spent reading a book for a specific amount of time has been determined by the Super Users beforehand. As soon as the Registered/Super User begins to read a book, a timer will appear indicating the amount of time that the user have left to read the book. Once the timer has ran out, the book will automatically close. On the other hand, if the user were to close the book before the time has come to an end, then the timer will stop counting down. The timer will restart at where it left off if the user opens the book again. A user will also have option to split the time and the cost with another user by sending them a request. The Registered User who contributed the book will receive additional points based on the points that the reader is spending.

Stimulus/Response Sequences

Step 1: A Registered/Super User is logged into the system and see the desired book in which they wish to read.

Step 2: The user clicks on the option to read a book.

Step 3: The user is prompted to indicate the number of points he/she would like to spend and will have the option to invite another user.

Step 4: The user is taken to a new page to begin reading the book and the contributor receives additional points.

Step 5: The timer appears and begins to count down.

User Requirements

The users themselves need to input the amount of points they would like to spend to read the book. The user can also decide to invite another user to read the book with them.

System Requirements

The system must make sure that any user must be logged in and have the required amount of points before allowing a user to read a book. System must also send the request to another user if the original user sends them a request. The contributor will also receive extra points from the system based on points spent by user.

Reviews and Rating

Registered Users/Super Users will have the ability to read review and rate books that they have read. They can only review and rate after they have read the book. Each book has an overall rating which is a weighted average all the rating from users. The weighted average is based on the time spent reading a book.

Stimulus/Response Sequences

Step 1: A Registered/Super User is logged into the system and see the desired in which they wish to read.

Step 2: The user clicks on the option to review and rate.

Step 3: The user is prompted to indicate how many stars to give the book and given space to write a review.

Step 4: Overall rating is updated.

User Requirements

The users need to input the stars that they wish to rate the book with and has the choice to give a written review of the book

System Requirements

The system must make sure that any user must be logged in and the user has spent time reading the book.

Book Contribution

Registered Users and Super Users have the option to upload books to the system. Books that are uploaded must not violate the rules on copyrighted books. Any books that are uploaded will be reviewed by a Super User. Registered Users, who have contributed a book to the system, may request for points to be given to them upon contributing a book. Ultimately, the Super-User will determine the amount of points to be given to the Registered User.

Stimulus/Response Sequences

Step 1: A Registered/Super User is logged into the system and have a book in which they want to upload.

Step 2: The user clicks on the option to upload a book.

Step 3: The user is prompted to indicate how many points he/she would like to get for uploading a book.

Step 4: The user uploads the book onto the system and awaits for a Super User to award him with a certain amount of points.

User Requirements

The users need to input the amount of points they would like to receive for having contributed a book. In addition, users must browse through their computer to upload the required book.

System Requirements

The system must update the database of books that have been contributed to the system in order to reflect the addition of the new book.

Bad Words Complaints

Registered Users/Super Users will have the option to search a book for certain words. This search can search for bad words, and the user will have the option to complain about this at anytime. User must include reason for complaint and complaint will be processed through the Super User

Stimulus/Response Sequences

Step 1: A Registered/Super User is logged into the system.

Step 2: User can click on the search function and type words to be searched. Program will display occurrences of the word

Step 3: User has option to complain by clicking complaint button

Step 4: User will be redirected to a complaint page that will prompt them to input reason for complaint and additional information

Step 5: Complaint will be sent to Super User to be verified

User Requirements

The users themselves need to pick words to be search including bad words. The user must also choose to send a complaint and then describe reason for complaint

System Requirements

The system must make sure that any user must be logged in and send the complaints to the Super User. The number of complaints will be counted for punishment purposes.

Punishments

Registered users are liable for punishments given by the Super users. Users, who are allowed to read, that have not read their selected book for a certain time period will have their book removed and receive 5 points deduction on their accounts. If a book receives 3 complaints, the user who contributed the book will have points deducted from their account. Registered users that had their contributed books removed at least twice or contributed a copyrighted book will be removed from the system and blacklisted. Blacklisted users can no longer keep an account in the system.

Stimulus/Response Sequences

Step 1: If a book has remained unview for a long period of time the book is removed and the user gets 5 points deducted.

Step 2: If a book received 3 complaints, the user contributor will receive 100 points deduction penalty. Super user will decide the additional point deduction.

Step 3: Super users will blacklist users who had their contributed books removed at least twice or contributed a copyrighted book that was removed from the system.

User Requirements

The users need to have points in their accounts in order to be deducted. User information is needed for punishment and blacklisting.

System Requirements

The system must keep track of the number of complaints each user has and the number of their contributed books removed. The system also checks the copyrights of each contributed books. In addition, the system holds a list of users who have been blacklisted.

3.2 Use-Case Reports

The user case diagram has 3 users. The 3 users are Visitors, Registered Users, and Super Users. Super Users work behind the scenes and have access to all functions. Registered Users and the main users for this site as they will be the majority of the people who use it. Visitors simply have the ability to browse and have very limited functionality on the site. The user interaction with each use case is given below.

Register User: Visitors can create an account by registering in the system with an unique username and password.

Browse System: All users can browse through the E-book catalog and look at a book's reviews, ratings and stats.

Account Login: Registered Users and Super Users logs into their account by inputting their unique username and password in the login window. If given username and password can't be found in the system or is on the blacklist, then user is prompted back to the login window.

Contribute Book: Registered Users and Super Users are allowed to upload books to the system and must provide the book's information and the number of points wanted as an reward for contributing the book.

Review Contribution: Super Users review the new contributed book. The Super User can be reject the book if the contributing user is asking for too many points or if the book is copyrighted. If the user contributor asked for too many points, then a message is sent to the user contributor to evaluate the point amount. If the book is accepted as a contribution, the Super User assigns the points amount required to purchase the book based on its text amount. Then the book is added to the eBook catalog and then the requested points are added to the contributor's account.

Read Book: A Registered or Super User can read a book by purchasing the book with points. After the purchase, every time the user opens the book, the timer will start counting down. Every time, the user closes the book before the timer ends, the timer will stop moving until the book is opened again. Once the time runs out or the user finishes reading book, the book is returned to the system.

Rate and Review: Registered and Super Users can give rating and reviews for books they have read only. The weight on these ratings and reviews depends on how much time was actually spent on reading the book. The system calculates and updates the new overall rating of the book on its page with the new rating addition.

Complain/Punish User: Registered Users and Super Users can file complaints against books or other users can be made by filling and submitting an form. A Super User will then review the complaint and if it is considered to be valid, then punishment can occur. If more than 3 complaints are filed against a book, then the Super User removes the book and points are deducted from the contributing user. If a serious complaint is filed against an user, punishment can occur in the form of points removal.

Search Words: Registered and Super Users can search through the text of the book by typing in some text into the search bar. The search results will show in a new window. If matches were found for bad words, the user can then send a complaint from the window.

Remove Book: Super Users can remove books from the system that hasn't been read for a certain time period and 5 points are then removed from the contributor's account.

Browse History/Stats: Registered Users and Super Users can browse through their history/stats.

Share Book: Registered and Super Users can invite another Registered User or Super User to read a book together. If the invite is accepted, then the points needed and the reading time for the book will be split between them. If the invite is rejected, then the invitor is informed of this decision and the invite is dropped.

Blacklist User: If a Registered or Super User had at least two of his contributed books removed or contributed a copyrighted book then the user is blacklisted from the system. The contributed book is removed. That specific user will be blocked from ever logging into his account.

