

SRS DOCUMENT

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

Borrowing books, returning books or viewing the available books at the Book Banks is currently done manually wherein a person has to go to the Book Bank in person and check the availability of the books and borrow the books if they book is available. So, the customer need not come to the Book Bank and go empty handed if the book is not available. The Book Bank Manager checks the membership number of the customer and allows the member to check out the book and then the Manager updates the database.

This Software Requirements Specification provides a complete description of all the functions and specifications of the Book Bank System. The expected audience of this document is the faculty of the Book Bank, including the faculty who will use this system, and the developer.

1.2 Document Conventions

The remainder of this document is two chapters, the first providing a full description of the project for the administrator of the book bank. It lists all the functions performed by the Book Bank System. The second chapter concerns details of each of the system functions and actions in detail for the software developers' assistance. These two sections are cross-referenced by topic; to increase understanding by both groups involved.

1.3 Intended Audience and Reading Suggestions

The software can be used by the everyone who wants to borrow a book from the book bank offering online services. Hence the user can block a book and later collect it from the book bank when it is convenient for the user or request it to be delivered to the doorstep after making an online payment.

1.4 Product Scope

The Online Book Bank System provides the members of the Book Bank and the owner of the book bank with book information, online blocking of books and other facilities which are listed below

- The software allows the members to block the books they are willing to buy/rent
- The system is running all day, it also allows new users to register and create new account
- The users are also have the ability to change their profile information including contact details and password of the account whenever needed
- The system keeps track of the books that are sold and the books that are taken on rent
- The system creates a catalog of the rented out books and maintains it
- The online book bank system automatically updates the database every time a book is returned
- The system allows the user to search for a book based on the title, author, and publication

1.5 Glossary

TERM	DEFINITION
Bill statement	The receipt, which has the details of the book borrowed and the customer's information.
SRS	Software Requirements Specification
PIN	Personal Identification Number

1.6 References

[IEEE] The applicable IEEE standards are published in "IEEE Standards Collection," 2001 edition.

2. Overall Description

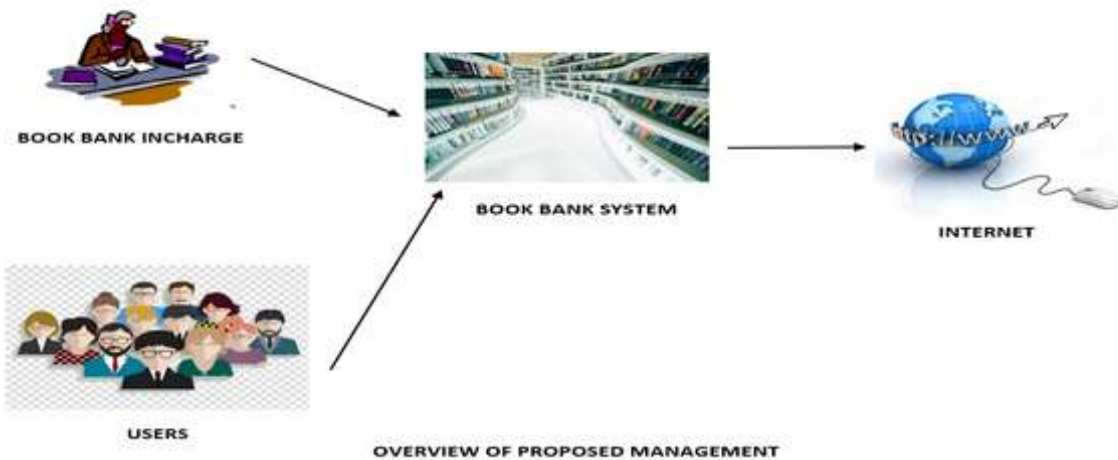
The book bank system involves the interaction between the customer and the book bank, it reads the book-id to be lent, sold or rented and updates its database.

2.1 Product Perspective

The Online Book Bank System is a package to be used by Book Banks to improve the efficiency of the Book Bank Managers, other employees and users. The Book Bank System to be developed benefits greatly the members and the Manager of the various Book Banks. The system provides books catalogue and information about the books to members and helps them to decide on the books to borrow. The Book Bank Manager keeps track of the details of the books and its availability. He can keep the information updated all the time so that the members get the updated information all the time.

The complete overview of the system is as shown below in the overview diagram: The product to be developed has interactions with the users: Book Bank Manager and the members.

The product has to interact with the other systems like: Internet.



2.2 Product Functions

The Online Book Bank System provides online real time information about the books available in the Book Bank and the user information. The Product functions are more or less the same as described in the product perspective. The functions of the system include the system providing different types of services based on the type of users [Member/Manager].

- The member should be provided with the updated information about the books catalog.
- Provisions for the members to borrow the books they want, if all the other required rules hold good.
- The member is given a provision to check his account information and change the account information any time in the given valid period.
- The members are provided with the books availability list and allowed to choose the books, which they want to borrow in the coming up days.

- The Book Bank Manager can get the information about the members who have borrowed or returned the books.
- The Book Bank Manager is provided with interfaces to add/delete the books available in the book catalog.
- The members when completing the book borrowing or returning process, the due to be paid by the member must be calculated and the information about the member and the due amount is notified to the customer.

2.3 User Classes and Characteristics

The users of the system are members, Manager of the Book Bank and the administrators who maintain the system. The members and the Book Bank Manager are assumed to have basic knowledge of the computers and Internet browsing. The administrators of the system are expected to have more knowledge of the internals of the system and are able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface, users manual, online help and the guide to install and maintain the system must be sufficient to educate the users on how to use the system without any problems.

2.4 Operating Environment

This Book Bank System works fine in internet browsers such as Mozilla Firefox and Google Chrome and windows operating system.

2.5 Design and Implementation Constraints

- The information of all the books and the users must be stored in a database and is accessible by the Online Book Bank System.
- The customer must be able to access the information from any device with Internet browsing capabilities and Internet connection.
- The database used in the Book Bank must be compatible with the interface of the Online Book Bank Management System.
- The payment process must be secure and be available in 2 modes online or payment at the Book Bank.
- The users must be able to update personal and account information at any time.

2.6 User Documentation

Help menu is provided which explains the working of the menu and different functions in the website. The nature of these systems is unique to application development as they combine

aspects of programming with aspects of technical writing. Online help is provided for each and every feature provided by the system.

The User Manual describes the use of the system to the Book Bank Manager and employees. The user manual should be available as hard copy as well as an online help.

2.7 Assumptions and Dependencies

- The users have sufficient knowledge of computers.
- The computer should have Internet connection and Internet server capabilities.
- The users know the English language, as the user interface will be provided in English.
- The product can access the information of the members from the database.
- The software only implements the selecting and blocking of the book in the online mode that is the user interface allows the customer to search and select the book and then block the book for rent.
- The payment is either made in online or physical mode.
- The customer is supposed to physically approach the book bank in order to get the books and make the physical payment.
- The online payment gateway will be a third party software.

3. External Interface Requirements

3.1 User Interfaces

- **Customer and System Interface**

The customer will be able to view all the information regarding the books currently available in the book bank including the cover page, title, author, publishing year and edition no.

The customer can customize the search based on his/her requirements or area of interest or the desired domain.

The customer can then proceed to block the book, so that he can go and physically collect the book when time permits and hence need worry of the availability of the book.

The customer can also change/update/delete the contact information, and personal details at any point of time.

- **Book bank Manager and System Interface**

The manager will be able to keep track of the books that are blocked and the books that are currently out of stock and can also view the books that are being desired by the customers

At the time of physical delivery of the books to the custom the manager will verify the personal information of the customer and then receive payment and deliver the books

The manager will be able to view the view the information of the customers whose deadline for returning of the books are approaching and during the time of return to check the condition of the books and then update the details of the quality of the book on the system

- **Admin and System Interface**

The admin can view the database make manual updates and changes to information stored in the database.

Authenticate user information, so that the information is not misused and is always secure

Can view the no of books currently in store, no of books that have been rented and the no of books sold so far

3.2 Hardware Interfaces

The existing Local Area Network (LAN) will be used for collecting data from the users and also for updating the Catalogue

3.3 Software Interfaces

A firewall will be used with the server to prevent unauthorized access to the system.

3.4 Communications Interfaces

The Online Book Bank Management System will be connected to the World Wide Web.

4. System Features

The services provided by the system include viewing the books and its related information and then block the book for further processing, the customer can also update their personal informational and password.

4.1 View, Search and block the books

4.1.1 Description and Priority

The main purpose of the system is to allow the customer to perform a customized search and select the desired book and if it is currently available the customer can block the book so that he can collect it later

4.1.2 Stimulus/Response Sequences

The customer can search the book by title, author, publication, or domain of interest by entering the keyword in the search bar, and hence the books will be filtered accordingly, the user can then scroll to view all the books corresponding to the search constrain and can view the details by clicking the desired choice

4.1.3 Functional Requirements

The system works entirely on the world wide web and hence the software requirements are limited to the browser version.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.1.1 Response Time

The information page should be available within a minute using a 56k modem. The access time for a mobile device should be less than a minute. The system should respond to the member in not more than five seconds from the time of the request submittal. The system can take more time depending on size of data being processed.

5.1.2 Throughput

The number of transactions is directly dependent on the number of users, the users may be the book bank in-charge, people accessing books and also the people who buy books, return books and check online book bank account.

5.1.3 Capacity

The system is capable of handling 200 users at a time.

5.1.4 Resource Utilization

The resources are modified according the transactions requested by the user.

5.2 Safety Requirements

The database might crash at any point due to virus or operating system failure. Hence proper backing up of data at regular intervals is necessary for the data to not be lost. Proper alternate power supply like inverter has to be present for operation during power failure.

5.3 Security Requirements

5.3.1 Modification

Different actor will have different login. Customers will not be able to make changes to the data. Different users will have their own constraints according to the role played.

5.3.2 Passwords

System should be a secured database. Different users will have their own passwords to check transactions taken place from their account. The password should not be hackable. Proper authentication should be provided.

5.4 Software Quality Attributes

Multiple users may access the database but only the book bank in-charge can modify the datas. The quality of the database should be in such a way that it would be easy for the users to operate the data. It should be easy for the user to download and install the system.

5.5 Business Rules

A business rule is anything that captures and implements business policies and practices. A rule can enforce business policy, make a decision, or infer new data from existing data. This includes the rules and regulations that the System users should abide by. This includes the cost of the project and the discount offers provided. The users should avoid illegal rules and protocols. Neither admin nor member should cross the rules and regulations.