
Software Requirements Specification for Personal Library System

Version 1.0



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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to describe the requirements for Personal Library System. The document gives descriptions about the functional and non-functional requirements of the system. The system will provide a user-friendly environment to manage the collection of books owned by an individual.

1.2 Product Scope

An individual can have a lot of books and it becomes difficult to manage them. This product will provide a system to manage the collection of books owned by an individual. It will provide information about the details of the books owned, about the friends who have borrowed the books and which books they have borrowed. It will also store information regarding the books borrowed by the owner from others.

1.3 References

- IEEE SRS template
- Fundamentals of Software Engineering by Rajib Mall.

2. Overall Description

2.1 Product Functions

The major functions of the product will be as follows:-

- Owner registration and login
- Store the details of the books owned by the owner
- Register users who can borrow books

- When a book is borrowed, information such as book details, borrower details, date of borrowing will be stored, and when book is returned, data to be updated
- Display the details of the persons against whom books are outstanding
- Display details of the books borrowed by the owner and details of the friend from whom book was borrowed

2.2 Operating Environment

The product will be operating in Windows environment. It will be an online system and will be compatible with major web browsers especially Google Chrome.

2.3 Design and Implementation Constraints

The design and implementation constraints will be that the system must have internet connection and also system must be able to connect to the database for retrieving and updating the data.

2.4 Assumptions and Dependencies

The information regarding user details, book details and details about the issue of the books must be stored in a database which will be accessible by the system.

3. External Interface Requirements

3.1 User Interfaces

The system should provide interactive Graphical User Interface for the user to perform the operations easily. There will be a menu where all the options will be present through which the user can move to any desired window.

- Owner registration and login - The owner must register in the system and then can login with the username and password.
- Search and manage books - The owner can view all the books. The owner can search for any particular book and also add new book.
- Categories view - The owner can view the different categories of books available and also the books under each category. He can add and edit categories.
- Details of books issued and borrowers - The owner can view the details of the books issued and the borrowers.
- Details of books borrowed - The owner can view the books he has borrowed and the details of the friend from whom he has borrowed.

3.2 Hardware Interfaces

Intel Core i3, 2GB RAM

3.3 Software Interfaces

Since the product will be an online system, a web browser such as Google Chrome will be required. Java will be required for creating the interface and MySQL will be required for the database.

3.4 Communications Interfaces

The Personal Library System will be connected to the internet.

4. System Features

4.1 Owner registration and login

- The owner must first register in the system with name, username, password and mobile number.
- Once the owner is registered, he can login into the system with his username and password.

4.2 Manage details of friends

- A friend must be registered in the system before he can be lent a book. The registration data would include the name of the friend, his address, landline number, and mobile number.
- The owner should be able to update the details of the registered friends when the friend's registration details change.

4.3 Manage details of books

- The owner should be able to add details of books. The details of the books such as name of the book, name of the author, year of publication, date of purchase, price, and publisher must be entered.
- A book is to be given a unique serial number by the computer which would be written by the owner on the book.
- The owner should be able to edit details of the book.
- The owner should be able to arrange books by categories and add and edit categories.
- The owner should be able to check the total number of books in the personal library and should also be able to see the books under different categories.

4.4 Search Book

- The owner should be able to search book based on book id, title or by author name.
- The owner should be able to check the availability of any book.

4.5 Display details of friends against whom books are outstanding

- The owner should be able to see the details of the friends against whom books are outstanding - name, address, and telephone numbers.

- The system should also display the titles of the outstanding books and the date on which the books were issued.

4.6 Manage details about the issue of books

- Before a friend is issued a book, the various books outstanding against him also with the date of issue are displayed.
- When a friend is issued a book, the date of issue and the details of the book (such as unique serial number and title) are stored.
- When a friend returns a book, the date of return is stored and the book is removed from the list of the books outstanding against him.

4.7 Manage details of the books borrowed by the owner

- When the owner borrows books from his friends, the details regarding the title of books borrowed, friend from whom book was borrowed and the date borrowed should be stored by the system.
- When the owner returns a book, the return details of books should be stored.
- The owner should also be able to see all the books that he has borrowed from various friends.

5. Other Non-functional Requirements

5.1 Performance Requirements

- The performance of the system will be fast, accurate and reliable. The system will handle expected errors in ways that will prevent loss of information.
- The system should be able to handle large amount of data and while connecting with the database to retrieve and update data, should ensure that the data is not lost.

5.2 Software Quality Attributes

- Usability - To perform any operations and to understand the functioning of software will be easy.
- Reliability - The system will be reliable.
- Security - The owner needs to login into the system to access the data.

6. Other Requirements

A database management system must be available.