
Software Requirements Specification

for

Book Store

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of Book Store software. Book Store is an E-commerce website for book sale and purchase. This Software Requirement Specification will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints, interface and interactions with other external applications. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the development team.

1.2 Document Conventions

This document follows the IEEE Software Requirement Specification format. The main topic are written in bold letters and whole numbered while the subtopics are decimal numbered. The glossary presents the entire list of acronyms used in the document. This .document is written using Times New Roman font and 12 font size.

1.3 Intended Audience and Reading Suggestions

This document is intended for customers, software managers, software developers and Software Engineering course instructor Miss Raksha. The remainder of this document includes four chapters and appendixes. The second one provides an overview of the system functionality and system interaction with other systems. This chapter also introduces different types of stakeholders and their interaction with the system. Further, the chapter also mentions the system constraints and assumptions about the product. The third chapter provides the requirements specification in detailed terms and a description of the different system interfaces. Different specification techniques are used in order to specify therequirements more precisely for different audiences. The fourth chapter presents the functional requirements and the fifth mentions the non-functional requirements. The glossary in Appendix A will provide the meanings for all abbreviations used in the document.

1.4 Product Scope

The software system being developed is called Book Store. Book Store is an e-commerce website which provides a platform for users to buy or sell books.

Book Store will maintain a catalog of available books. The system allows the users to browse, search the catalog, addition of books to the shopping cart and addition of books to the selling cart(facilitates selling of old books). The users can register with their personal details. The customers are allowed to order books on his/her shopping cart. The ordered books will be delivered to their address. The customer can also view his profile and purchase history. It should also provide special administrative rights to the managers to manage the inventory with CRUD (create, Retrieve, update, delete) functionality with regard to books in the system and to keep the system accurate.

The purpose of this Book Store is to provide the customers an easy-to-use application to buy books. The customers are also provided an option to sell the old books at a cheaper price. Above all, we hope to provide a comfortable user experience along with the best pricing available.

1.5 References

IEEE Software Engineering Standards Committee, "IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications", October 20, 1998.

2. Overall Description

2.1 Product Perspective

E-commerce is fast gaining ground as an accepted and used business paradigm. The objective of this project is to develop a general purpose e-commerce application for purchasing books. The user is also provided an option to sell the books bought at a cheaper price. This may be considered as an add-on to the existing traditional shopping applications.

The web application will maintain the information of users, managers and the books for sale.

2.2 Product Functions

Book Store is an online book store which supports a number of functions for both customers and administrators. Each of the function is listed below :

- Maintain data associated with the inventory
 - Title, Author, Price, Quantity in stock and ISBN
- Maintain records of each customer
 - User name, First Name, Last Name, Password, Address, City, State, Zip, Email ID, Account Balance
- Allows new users to register
- Allows customers and administrators to log in and out of the system
- Display the catalog of books in alphabetical order
- Provide the search result for books based on the query by the customer
- Users can add one or more selected books to the shopping cart
- Customers can add old books bought to the selling cart
- Customers are allowed to purchase books added to the shopping cart
- Provide acknowledgement of order to the customers.
- Maintaining the profile and purchase history of each customers.
- The manager is notified the books that are out of stock.

2.3 User Classes and Characteristics

There are two types of users who will use the software.

1. Customers: The customers can search for books they want to purchase and also supply the necessary information about the books they would like to sell. They can order books of their interest.
2. Administrator: The administrators manage the overall system so that there is no incorrect information within it. The administrators are given special permission to add, delete or edit details of the books.

NOTE: A user who is a customer may also be a system administrator and vice versa.

2.4 Operating Environment

Operating environment for the Book Store is as listed below.

- Operating System: Windows, Linux, Android
- Internet access
- Web browser

2.5 Design and Implementation Constraints

A centralized database management system will be used so the web portal application will be constrained by the capacity of the database. Since the database is shared between many applications it may be forced to queue incoming requests and therefore increase the time it takes to fetch data. Restricts huge amount of data because the entire data will be stored in a single system and hence the storage space will be limited to available system memory.

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.

Credit card processing are not considered by the software.

There will be no actual book ordering but the customer will be provided an acknowledgement receipt for confirmation of order.

2.6 User Documentation

A section of the website will be devoted to mention the purpose and working of the site. We will also provide help section to discuss regarding the software issues.

2.7 Assumptions and Dependencies

TBD

3. External Interface Requirements

3.1 User Interfaces

A user of the Book Store application should see the log-in page when he/she opens the application. If the user has not registered, he/she should be able to do that on the register page.

Once the user logs in using his/her credentials he/she should be able to see the search page where the entire catalog will be displayed and search results are updated when the user submits a search query.

Every user should have a profile page where they can edit their e-mail address, phone number and password. Users can also view their transaction history in their profile page.

Once a user selects an item, that item will be added to the shopping cart. From the shopping cart he/she can proceed to order the item. A user will also be able to add books to a shopping cart which may be bought by other users at a cheaper price.

3.2 Hardware Interfaces

TBD

3.3 Software Interfaces

Book Store application will be developed using Python Django framework. MySQL database will be used to store the details of the users and the inventory.

3.4 Communications Interfaces

Communication requirements include e-mail, web browser, network server communication protocols, e-form, HTTP(Hyper Text Transfer Protocol). Encryption mechanisms will be used to store the password in the database.

4. System Features

4.1 User Registration and login

4.1.1 Description and Priority

User registration allows users of this software to register. Users include customers and managers. Registered users have to login before proceeding to transaction.

4.1.2 Stimulus/Response Sequences

Upon requesting to register, the user has to fill the registration form in order to register. The user has to enter the credentials before logging into his/her account.

4.1.3 Functional Requirements

REQ-1: The user has to provide his/her personal details including user name, first name, last name, address, city, state, zip, email id and password.

REQ-2: The system has to check the entered details and register only when the user name is not repeated.

REQ-3: Email verification to be carried in order to validate the user details.

REQ-4: When the user name and password is right the user should be successfully logged into his/her account.

REQ-5: Logout functionality should be provided as well.

4.2 Search for a book

4.1.1 Description and Priority

Search Result should be good enough according to the user query.

4.1.2 Stimulus/Response Sequences

When the customer enters the search query the search results are displayed.

4.1.3 Functional Requirements

REQ-1: Appropriate search results should be displayed.

REQ-2: Entire catalog of books available should be displayed on request to access.

REQ-3: Provide options for adding a particular book to the shopping cart.

4.3 Shopping Cart

4.1.1 Description and Priority

Shopping cart contains the books to be bought by the customer.

4.1.2 Stimulus/Response Sequences

When the customer adds the book to the cart the present shopping cart is displayed to the user.

4.1.3 Functional Requirements

REQ-1: The customer should be able to add or remove books from his/her cart.

REQ-2: The customer can order books currently present on cart by providing the address of shipping and other necessary details.

REQ-3: A customer can add more than one book to the shopping cart.

REQ-4: The user can be provided special discounts based on number of transactions or festive offers, etc.

4.4 Selling Cart

4.1.1 Description and Priority

Selling cart contains the books to be sold by the customer.

4.1.2 Stimulus/Response Sequences

When the customer adds the book to the cart the present selling cart is displayed to the user.

4.1.3 Functional Requirements

REQ-1: The customer should be able to add or remove books from his/her cart.

REQ-2: A customer can add more than one book to the selling cart.

REQ-3: Once the book on a cart is bought by another customer the account balance of the owner has to be updated and the book bought has to be collected from the owner.

4.5 Order book(s)

4.1.1 Description and Priority

The books on the shopping cart can be ordered by a customer.

4.1.2 Stimulus/Response Sequences

The books on the shopping cart can be ordered.

4.1.3 Functional Requirements

REQ-1: The order form takes in delivery address and other details.

REQ-2: The acknowledgement receipt is given to the user.

4.6 Profile Check

4.1.1 Description and Priority

The customers and managers should be able to view and edit their profile page.

4.1.2 Stimulus/Response Sequences

A user can check his profile details when the view profile option is clicked.

4.1.3 Functional Requirements

REQ-1: The customers should be able to view their profile.

REQ-2: The customer can edit their personal details and as well as change password.

REQ-3: The account balance and the entire transaction history will be displayed.

4.7 Manager activities

4.1.1 Description and Priority

The manager is given special rights to maintain the catalog.

4.1.2 Stimulus/Response Sequences

When the customer adds the book to the cart the present selling cart is displayed to the user.

4.1.3 Functional Requirements

REQ-1: The manager can add books from the catalog.

REQ-2: The manager can update the quantity in stock and edit other details of a book.

REQ-3: The manager should be able to view the books that are out of stock which have to be ordered immediately.

REQ-4: The manager can delete book from the catalog.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The website should be capable of maintaining high load conditions.

The results displayed in a list view should be user-friendly and easy to access with just one click.

The account balance of customers has to be correctly updated after each transaction.

5.2 Safety Requirements

In case the damaged old books are returned then the amount will not be credited to the user selling that book instead it will be returned back.

5.3 Security Requirements

User identity authentication is required to place order and to add books in shopping and selling cart. Security mechanisms should be used to encrypt passwords before storing in the database.

New users registering should have their emails verified for further usage.

5.4 Software Quality Attributes

Availability: The website should be available 24*7 hours a week. The books should be available and once a book goes out of stock it should be ordered for more copies as soon as possible by the manager.

Correctness: Information presented about the inventory must be correct and the ordered books have to be delivered at the right location. Account balance of each user has to be correct.

Maintainability: The administrator should maintain the catalog of books, database, reorder of books which are out of stock.

Adaptability: Adaptability issues may occur when used with different screen sizes. Hence the website should be adaptable to different screen sizes such as that of mobile phones, etc. Page responsive designs are necessary.

Security: The system must try to verify users before registering and allowing access for further service.

5.5 Business Rules

The administrator has the discretionary power to remove an user under valid reasons.

The customer should not be able to access the database and will not be given the administrative rights.

6. Other Requirements

TBD

Appendix A: Glossary

REQ – requirement

Appendix B: Analysis Models

TBD

Appendix C: To Be Determined List

Assumptions and Dependencies
Hardware Interfaces
Other requirements
Analysis Models