



# ***Online Book Renting Application***

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# ***Software Requirements Specification***

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*Revision History*

| <i>Name</i> | <i>Date</i> | <i>Reason For Changes</i> | <i>Version</i> |
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|             |             |                           |                |
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# 1. Introduction

## 1.1 Purpose

- *This is Software Requirement Specification document for a web application called "Online Book Rental Service".*
- *The primary purpose of this project is to facilitate the user to rent books online for a period of time on a predefined payment basis.*
- *It also enables users to donate their books if they are no longer useful to them.*

## 1.2 Document Conventions

*IEEE standards and typographical conventions were followed when writing this SRS.*

*The priorities for higher-level requirements are assumed to be inherited by detailed requirements.*

*Some of the requirement statements have its own priority.*

## 1.3 Intended Audience and Reading Suggestions

*The primarily intended readers of the document are:*

- *Developers: It serves them as a reference for design and implementation.*
- *Users: Enables them to check whether the specified requirements are met or not.*
- *Testers: Serves the purpose of a base, so that they will test the implementation of the project according to the document.*

*Recommended flow of reading would be just to follow the sequence in which the document is drafted.*

## 1.4 Product Scope

*The project is web-based platform which is accessible 24/7.*

*It is convenient and easy-to-use web application.*

*Users can avail following services:*

- *Can register themselves.*
- *Can explore and search wide range of books for renting.*
- *Can request a book if unavailable.*
- *Can track their order.*
- *Can cancel their order.*
- *Can give rating and provide their valuable feedback.*
- *Can donate the books.*

*These services make it more flexible and convenient environment for the purpose.*

*Hence the application can be considered as dependable and trustable choice because of its flexibility in availability of books and their corresponding prices.*

## **1.5 References**

*The document corresponds to IEEE standards,*

*source of IEEE template:- [https://web.cs.dal.ca/~hawkey/3130/srs\\_template-ieee.doc](https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc)*

## **2.Overall Description**

### **2.1 Product Perspective**

*Our project is follow on of “online book rentals type projects”. It is a stand alone project and does not depend on any other software. It runs on web-portal only and all its features are accustomed only to web version.*

*Since this is a data centric project,it will need somewhere to store the data (such as information about books,users etc), for this purpose database is used. As our application mainly deals with data,to execute all the features it has to communicate with the database.*

- *To execute the service of process of renting books, web application requests the user to provide the name of book and duration for which he wants to rent the book, which in turn communicates with database to get info of books, so that user selects and confirms the order.*
- *To executive the service of process of donating, web application requests the user to provide the details of book (such as title, author, edition, publication etc), after which the received details get stored in the database so that the admin accepts the request and sends an executive to collect the the book.*
- *The above mentioned details (was previously “These”) are the main aspects of our web application.*

## **2.2 Product Functions**

- **Login / sign-up:** Allow user to create an account if he/she doesn't have one or sign in into their account to continue their transaction.
- **Search:** User can search for a book by its author's name or book name.
- **Donate:** User can donate his/her books
- **Request:** User can request for a book if it is unavailable.
- **Track\_order:** User can know about the status of order. i.e (date of dispatch, date of arrival)
- **Feedback:** User can provide his/her rating based on their delivery and condition of book.
- **Cancel\_order:** User can cancel his/her order if they want.

## 2.3 User Classes and Characteristics

| <i>Class</i> | <i>Characteristic</i>                                   | <i>Function</i>   |
|--------------|---|---|
| <i>Admin</i> | <i>The one who maintains the website</i>                | <i>Accepts the request for canceling</i><br><i>Provides details of order tracking</i><br><i>(Here , what about adding/deleting users)</i> |
| <i>User</i>  | <i>The class of members who use the web application</i> | <i>Search</i><br><i>Donate</i><br><i>Request</i><br><i>Track_order</i><br><i>Cancel_order</i><br><i>Provide feedback</i>                  |



## 2.4 Operating Environment

*Operating environment for our project is as listed below.*

- *distributed database*
- *client/server system*
- *Operating system: Windows, Linux*
- *database: mysql + database*
- *platform: Java*
- *Browser: supports all browsers.*

## 2.5 Design and Implementation Constraints

*Language: Entire presentation of website is/will be in English(only).*

*Limited Servers and data: The number of servers available to us is very less, so there is restriction for (previously was "to") data storage.*

## 2.6 User Documentation

- *Provides links, which has decent information about the usage of application.*
- *Provides 'Help' column in our website which has brief description of the application*

## 2.7 Assumptions and Dependencies

- *Default Payment mode is only COD (Cash On Delivery). Other Payment modes will be tested after the completion of project if there is time left.*

## 3. External Interface Requirements

### 3.1 User Interfaces

- Front-end software:- html, css, javascript,php.
- Back-end software:- Mysql , Ruby with rails .

The front-end of our project is completely based on html,css ,javascript and php. Very little of back-end deals with php and is mostly based on mysql,ruby on rails.

### 3.2 Hardware Interfaces

- Windows and linux devices
- A browser which supports html, CSS , javascript.

*Supported devices include desktops (containing windows or any linux operating systems). We do not plan to release an android version of the product , instead android devices can open them normally through the standard browsers present with them.*

### 3.3 Software Interfaces

The softwares required and the versions used for this project are:-

1. Windows 10
2. Ubuntu 16.0.4
3. Sql (Mysql v 5.7)

Windows has been used for its best support and user friendliness. Ubuntu has been used to implement the backend(sql) where Mysql has already been installed. For sql we used Mysql for its ease of usage and understanding.

### 3.4 Communications Interfaces

*This project supports all types of web browsers. Simple electronic forms for the online renting ,cancellation and donation are being used.*

## 4. System Features

*This section contains all the features implemented in the system.*

### 4.1 Request Book

*The user can request for a book if he/she does not find the book they were looking for the admin includes the book requested within a specific amount of time mentioned beforehand.*

#### 4.1.1 Description and Priority

*The books requested by the user gets included in the website so it allows them to access a wide range of books.*

*It's a major priority for any book rental system because, if the books that the user was looking for is not found then there is no scope for improvement in the project.*

*There is always an incremental growth in the application because of this feature.*

#### 4.1.2 Stimulus/Response Sequences

*There is a separate portal through which the users can request for the books that they are looking for. Only admin can get the access of these requests and act accordingly.*

*The Admin specifies the time period required for him/her to make the book available for the user.*

#### 4.1.3 Functional Requirements

*There are various functional requirements associated with this feature.*

*A google form is required for the user to request a book from and that must be accessible by the admin.*

*If the user is requesting for some book that was already present in the website it should give an error saying already present.*

*This request book portal should contain all the books requested by that specific user and the it should also contain the time at which they will be made available.*

## **4.2 Track order**

*The User can track the status order by logging into their accounts where the current order is present along with all his previous orders ,so that they can check their previous orders also*

### **4.2.1 Description and Priority**

*User can get real time updates of his order , so he can be readily available to collect his delivery.*

*Tracking order is one of the few features that is not present in many .Including it in our project .Including it in our project differentiates us from many other websites.*

*There is always an incremental growth in the application because of this feature.*

### **4.2.2 Stimulus/Response Sequences**

*User can find all the orders that have been placed and for the current orders , there is an option to track the order where order can be tracked.*

*User can make himself readily available at the time of delivery mentioned in the page.*

### **4.2.3 Functional Requirements**

*There are various functional requirements associated with this feature.*

*If there is any delay in delivery of the book, there must be a notification about that.*

*Admin can change the book's status of delivery(like reached or ready for delivery etc.).*

*This portal must specify the present location of delivery like if it is in a facility or is it out for delivery etc.*

## **4.3 Extend renting time**

User can extend the return status of the book that has been ordered by using extension option which is available in their account.

### **4.3.1 Description and Priority**

*User may want to extend the return date of their order due to many issues, so there will be an option in their account to do the same.*

*Extend renting time is one of the few features that is not present in many .Including it in our project differentiates us from many other companies.*

*There is always an incremental growth in the application because of this feature.*

### **4.3.2 Stimulus/Response Sequences**

*User can extend the delivery*

*User can make himself readily available at the time of delivery mentioned in the page.*

### **4.3.3 Functional Requirements**

*There are various functional requirements associated with this feature.*

*User must be provided with an option to extend their delivery date.*

*The new delivery date must be provided after the user has opted for extended rent date.*

## **4.4 Extend delivery date**

Admin is able to extend the delivery date or cancel the order in case of unexpected issues.

### **4.4.1 Description and Priority**

*Admin may want to delay the delivery of the order due to many reasons. This change in delivery date can be done here.*

*This is a much required feature because circumstances may change very frequently. This is not a compulsory but a viable option in times of need.*

*This may sometimes bring in downfall of the application but this is a very much required option .*

## **4.5 View Orders**

Admin can view all the orders that have been placed .

## **4.6 Add To Cart**

*Users can add items or books that they want into the cart.*

## **4.7 View/Manage Cart**

*User can manage the cart by removing unwanted books or by going into the delivery page.*

## **4.8 Request Books**

*If user is not able to find their required book, they can request the book with the admin.*

## **4.9 Delete Users/Books**

*Admin is able to delete worn or torn books from the database. He can also remove users if required.*

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

*Request book : For this feature we need a timer to start when the book is requested to when the book will be made available. For this we need a clock generic so that even when the application is closed it runs in the background.*

### 5.2 Safety Requirements

*All the books must be accounted for. So the admin can add a criteria where the caution money could be collected before hand incase of any damage or lost book replacement. The details of the user is collected in the database. So if there is a damaged or a lost book case the users should pay a fine to the delivery agent.*

### 5.3 Security Requirements

*As they say do not judge a book by its cover so the summary is displayed in the web application where user can read the summary, look at the rating. These will help the user to buy a book. The web application can determine the similar books to be displayed to the user. All these passwords are securely stored in the database through encryption so that every users data remains private.*

### 5.4 Software Quality Attributes

*Admin can add books and remove books at will and he/she is able to view all the orders placed.*

*Admin checks for the book quality and ensures it is ready to use before it goes online.*

*Admin can postpone or prepone a delivery on his/her will.*

*Admin can remove the users on his will because of his/her account authentication failure*

*Admin can also view all the users using the website.*

## 5.5 Business Rules

*Every business has its own rules ours does as well. These are some of the rule associated with our project:*

- 1. All users must sign up in order to rent a book.*
- 2. Users should provide the credentials correctly. So they should always remember them.*
- 3. Every user must provide the details correctly in order for them to receive the book.*
- 4. Book renting price is subjected to change.*
- 5. The time period of the return/request book is subjected to change.*
- 6. The delivery time is also subjected to change.*
- 7. The user has an option of paying by card/cash once the book is delivered to them.*

## 6. Other Requirements

*The admin could assign prices to the books donated to him and place them in the website. Also the check will be done to see if the books are in good condition or not. If not in good condition the books will be repaired and placed on the website. These are all internal legal and reuse objectives that will be taken before the books are made available to everyone.*