**Software Requirements Specification**

**For**

**Book Rental Application**

**(My Book)**

**Version 1.0**

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6. **Introduction**
   1. **Purpose**

The Book Rental Application is intended to facilitate users to rent books for a certain period. It will enable users to search a wide range of books of their own choice for rent. The book renting process will be online and delivery based so users don’t need any physical participation for renting a book.

* 1. **Document Convention**
* Convention for main title
  + Font Face : Arial
  + Font Style : Bold
  + Font Size : 32
* Convention for main and sub headings
  + Font Face : Times New Roman
  + Font Style : Bold
  + Font Size : 18
* Convention for body
* Font Face : Times New Roman
* Font Style : Normal
* Font Size : 14
  1. **Intended Audience**
* Users
* Developers
* Authority
  1. **Product Scope**
* User registration and profile management facility.
* Secure login and authentication.
* Easy and quick searching mechanism for a particular book.
* Suggest most rented books along with the book details at home page.
* User can add book(s) in a cart and can remove it from the cart.
* User can place order at a specified address.
* User can choose a package for renting book(s) for a certain period.
* Maintain database of users with their purchase history.
* Site authorities will be responsible for internal affairs like processing orders, order status, safe home delivery.

1. **Product Perspective**
   1. **Product Perspective**

This is a stand-alone project and does not depend on availability of any other software. It runs on web browser only and all its features are accustomed only to web version.

This is a data centric project so it will need somewhere to store data such as book details, user details, order details etc. For the purpose database is used. This application mainly deals with data to execute all its features, it must communicate with the database.

To execute the process of renting books, application requests the user to provide the name of book which he/she, which in turn communicate with database to get book details so that user can select a duration for which he/she wants to rent the book and confirm the order.

* 1. **Product Functions**
* The main function of this application is to make books rented easily.
* A user can create account to use the application. User can login into its account and can update details like name, email, contact, address or can delete account.
* A user can browse through the application and choose books to rent in a cart. The cart details can be viewed and books can be removed from the cart.
* To proceed with the purchase user needs to choose a package which define a period for which user wants to rent the book.
  1. **User Classes and Characteristics**

|  |  |  |
| --- | --- | --- |
| **Class** | **Characteristic** | **Function** |
| Admin | The one who manages the website | Can add, update or delete book from the database.  Can view user details.  Can view order status and order details. |
| User | The one who use the web application | Can sign up or login.  Can manage profile.  Can browse books.  Can add/remove book from cart.  Can choose package and place an order. |

* 1. **Operating Environment**
* Operating System : Windows, Linux or MacOS
* Browser : All browsers with the latest version
* Hardware : Hard Disk 40GB, RAM 4 GB
* Internet : Stable internet connection
  1. **Design and Implementation Constraints**

This is an online web application that will includes purchasing of the products. At the time of checkout, the books will be available in the cart. At the that time, more information will be needed to complete the transaction. The asked will be asked for the shipping address, a shipping option and payment information that could card credit card details or other available options.

* 1. **Assumptions and Dependencies**
* Assumptions are :
* The code should be error free and readable.
* The system should provide fast access to the database.
* Default payment mode is only COD (Cash On Delivery). Other payment modes can be provided later.
* The end user (Admin) should have proper understanding of the application.
* Users may access from any computer that has internet browsing capabilities and stable internet connection.
* Users must have their correct credentials to use the application and perform actions.
* Dependencies are :
* The specific hardware and software.
* Project requirements and specifications.
* Database for storing information of users, books and orders.

1. **External Interface Requirements**
   1. **User Interface**

* User can login, sign up, view, browse, add to card and place the order
* Admin can add, edit, delete books along with details from the application.
  1. **Hardware Interface**
* Operating System : Windows, Linux or MacOS
* Browser : All browsers with the latest version
* Memory : Hard Disk 40GB, RAM 4 GB
* Processor : Pentium(R) Dual-Core or Higher
  1. **Software Interface**
* Front-end : HTML5, CSS3, JavaScript, Bootstrap, Angular
* Back-end : Node.js, Express
* Database : MongoDB
* Tools : Visual Studio Code, Git, GitHub
  1. **Communication Interface**

The customer must be connected to the internet to access the web application. The internet must be stable and with a good bandwidth.

1. **Functional Requirements**
   1. **Registration**

For the first time, a user needs to create an account or register itself for accessing the application and its features. For creating an account user will be asked for their details which may include name, contact, email and password etc.

* 1. **Profile Management**

An already logged in user has access to their profile where they can view the details. User also can update their details like name, contact, email etc.

* 1. **Login**

If a user already has their account created, he/she doesn’t need to create another account. They can simply login the application with their credentials like username/email and password which user have given while creating an account.

* 1. **Search Bar**

A user can browser for a particular book by using the search bar functionality. User can simply search for a book by putting book name into search bar and the searched book will be visible to user along with the book details.

* 1. **Cart**

For renting a book, user needs to add the book in cart. A cart will be provided to every user. User also can remove the book from cart before placing an order.

* 1. **My Orders**

This holds the details of placed order along with the selected package and the status of the order. User can also see their previous orders history here.

* 1. **Package and Order**

Before renting a book, user needs to select a plan or package which will specify the duration for which user wants to rent the item. After selecting a specific package user can place order by providing details like shipping address, shipping mode etc.

* 1. **Admin Access**

Admin will be responsible for providing books on the application. Admin can login on the application with their credentials. Admin can add, update or delete the book details. Admin also can assess database so he/she can view the user and order details.

1. **Other Non-Functional Requirements**
   1. **Performance Requirements**

For a good performance of the application, user must be connected to a stable and high internet connection.

* 1. **Safety Requirements**

The database may get crushed at any time due to virus or some failure. Therefor it is required to take the database backup after a specific period of time so that the data can be restored.

Admins of the application must ensure that the books will be delivered in a good condition and safely to the user.

Database has details of all the users and orders, so in case of any damage or lost of the book, required fine could be asked from the user.

* 1. **Security Requirements**

The details of user will be stored in a database which is confidential to the application. Thus the database will only be accessible to authenticated and authorized user to keep the user data safe.

A user only can read, search and rent for a book. They can’t modify book details.

At the time of login, user credentials must be required as a mandatory to thing for securing the application from unauthorized access.

* 1. **Software Quality Attributes**

Application may have more than one admin, all of them will have right to add, update and delete book details. They also can have same right for viewing database information but the rights on the database operations may be different.

* 1. **Business Rules**
* All users including admin must sign up/login to the application.
* User can only access their information in profile section.
* All users must provide details correctly for the smooth delivery experience.
* Book renting price is subjected to change.
* User can only rent at most two books with any package.
* The time period of return/request book is subjected to change.
* Admin has right to restrict the user in case of unwanted activity.