**LIBRARY MANAGEMENT SYSTEM**

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Software Requirements Specification

Document

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**1.Introduction**

**1.1 Purpose**

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library. This project has many features which are generally not available in normal library management systems like facility of admin login through which the admin can monitor the whole system. The librarian after logging into his account can generate various option such as new student ,new book, issue book and return book details. Overall this project of ours is being developed to help staff of library to maintain the library in the best way possible and also reduce the human efforts.

**1.2 Scope**

This application can be easily implemented under various situations. We can add new features as and when we require. Reusability is possible as and when require in this application. There is flexibility in all the modules.

**• Extensibility:** This software is extendable in ways that its original developers may not expect. The following principles enhances extensibility like hide data structure, avoid traversing multiple links or methods, avoid case statements on object type and distinguish public and private operations.

**• Reusability:** Reusability is possible as and when require in this application. We can update it next version. Reusable software reduces design, coding and testing cost by amortizing effort over several designs. Reducing the amount of code also simplifies understanding, which increases the likelihood that the code is correct. We follow up both types of reusability: Sharing of newly written code within a project and reuse of previously written code on new projects.

**• Understandability:** A method is understandable if someone other than the creator of the method can understand the code (as well as the creator after a time lapse). We use the method, which small and coherent helps to accomplish this.

**• Cost-effectiveness:** Its cost is under the budget and make within given time period. It is desirable to aim for a system with a minimum cost subject to the condition that it must satisfy the entire requirement.

Scope of this document is to put down the requirements, clearly identifying the information needed by the user, the source of the information and outputs expected from the system.

**1.3 References**

* www.javatpoint.com%library-management-system-in-java-swing
* www.code-projects.org%library-management-system-in-java

**1.4 Overview**

This project aims at development of a Library Management System that facilitates the Librarians to manage books and students can log in to their account and lend the books.

This project includes the following functions:

1) Add Books

2) Remove Books

3) Log In for Librarian and student

4) Student can Search for Books

**2. The Overall Description**

**2.1 Product Perspective**

The main objective of the Library Management system is organizing and managing the library tasks. Library is place where all kind of books are available. This is a web base application and only a registered user can access the application. Library Management system is developed to automate the task of entering the records of new book and retrieving the details of book available in the library. This system contains list of all the books. Using this system user can issue book to the library member, maintain their records, and can checks how many book are issued and how many books are available in the library. This system provides separate interface and login for librarian, students and faculties. Librarian can modify database. Using the library management system, user can also maintain the late fine of library member who return the issued book after the due date.

**2.2 Product Features**

There are two different users who will be using this product:

* Librarian who will be acting as the administrator student of the University who will be accessing the Library online.

The privileges of the Librarian are:

* Can login to their accounts
* Can add or remove books
* Can issue a book to the student
* Can view the different books available in the Library
* Can view the details of the books returned by the students
* Can access all the accounts of the students
* Can maintain the late fine of the students who returned the books after the due date

The features available to the Students are:

* Can login to their accounts
* Can view the different books available in the Library
* Can search for a particular book
* Can view the books issued to him
* Can view the history of books issued to him previously.

**2.3 User Characteristics**

The functional areas of the project are accesible for the users of the system, based on their roles, are students (users) and the librarian (owner).

* Students who will be using the features provided through accessing the library online.
* Librarian who is the administrator of the library management system will have all the privileges provided by the system.

**2.4 Constraints**

The student or librarian using the system must have an account in the library, only then, they can access the Library. To use this Java compiler version 1.6 and above is required.

**3. System Features**

**3.1 External Interfaces**

A Database is required for managing the library and is intended to store, retrieve, update, and manipulate information related to university which include

* Books availability
* Staff information
* Student details
* Accounts
* Calculation of fines

**3.2 Functions**

The functions of the system can known by the students who are the users and the librarian who is the administrator. The librarian and the student can login and logout. When they log into the Library system, the system will check for validity of login .If the Login and password are valid, the response to this action is different for for the student and librarian.The administrator will be able to modify, view, add, deleting and all other functions that can be performed on the database. The user can view the details of the books issued to him previously and can search for new books.

**3.3 Hardware Interfaces**

Server Side:

* Operating System: Windows 9x/xp ,Windows ME
* Processor: Intel Pentium Dual Core T2370, 1.73 GHz
* RAM: 256 Mb or more
* Hard Drive: 10 GB or more

Client side:

* Operating System:Windows 9x or above,MAC
* Processor: Intel Pentium Dual Core T2370, 1.73 GHz
* RAM: 256 Mb or more

**3.4 Software Interfaces**

* Operating System: Windows XP with Service Pack 3(CHT)
* Compiler : JAVA 1.6