**CHAPTER 3**

**FEATURES**

**Library Management System** (LMS) is library management software for the purpose of monitoring and controlling the transactions in a library. We identify three actors. They are **member, librarian and library administrator**. We identify seven modules that handle daily transactions done in a library. They are managing library member account module, search book module, borrow book module, return book module, manage dues module, manage book record module and report generation module. The functionalities of these modules are described as follows:

1. **Manage Library Member Account Module:**

* The user with valid user name and password can access the Library Management System.
* The system displays the user account information.
* The system shall give the response for invalid username and password.
* The system allows only administrator to choose actions like removing, changing and adding user account and account information.

1. **Search Book Module:**

* The system allows the user to search for a book by using book id or title or author or publisher name as a keyword as a search criteria.
* The system displays a list of book items with title, author and publisher, which matches the search criteria.
* The system shall give the response for invalid search criteria.

1. **Borrow Book Module:**

* The system must allow librarian to check whether the membership is valid or not and respond accordingly.
* The system checks for the availability of the requested book and lets librarian to issue the book.
* The system commits the book issue data to the database as soon as the data is entered.

1. **Return Book Module:**

* The system must allow librarian to make an entry about the book returned by a valid member. System commits the book return data to the database as soon as the data is entered.

1. **Manage Dues Module:**

* The system must allow librarian to view the information about books which is borrowed and not returned yet including book id and member id.
* The system charges penalty for those books which are not returned in time.
* The system allows the librarian to clear the penalty after it is paid by the user.

1. **Manage Book Record Module:**

* The system must allow librarian and library administrator to place an order for a book based on the request of the member.
* The system must allow the librarian and library administrator to keep records of the books which includes the activities such as add details of the book, remove or update the details of the book.

1. **Report Generator Module:**

* The system has a report feature that will allow the user to generate a report showing the information of all the books borrowed or returned in a time period as per the viewing criteria by user. The information includes the number of books, the time period and the information is grouped by book categories.
* The system has a report feature that will allow the user to generate a report showing the information about all the users who have overdue books and penalty.
* The system shall generate those reports to the display, a file or a printer that is linked to the system.