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LAB-02

1. Library Management System:

1. Introduction:

1.1. Purpose of the document - This document outlines the requirements for Automated Library Management System.

1.2. Scope - The system is the digital approach to the manual procedures of library management including book catalog, books availability, issue and return, damage complaints and fine payment.

1.3. Overview - The system provides the users a platform to check availability of books on genre and lodge of for issue of the books and the staff can manage return of books and fine payment.

2. General Description:

The system allows the user with interactive UI to see the list of available books stored in database, from which the user can lend or rent the books. The staff can manage with admin login.

3. Functional Requirements:

(i) User / staff admin login.
(ii) Books catalog showing availability.
(iii) Filter books based on genre and popularity.
(iv) Authorization slip generation for lent books.
(v) Staff management of books for return.
(vi) Damage complaint and fine payment.

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4. Interface requirements:

(i) UI Interface - Responsive web page with interactive UI for users.

(ii) Database interface - real-time data fetching from database storage with commited changes.

(iii) Payment gateway - secure gateway channel for fine payment.

5. Performance Requirements:

(i) Scalability - Should allow multiple users to browse through real-time book availability.

(ii) Security - Secure gateway for fine payment.

(iii) Availability - All the books must be available in database connection.

6. Design constraints:

Must comply with payment card merchants and UPI for payment. Design scalability can be obtained by multiple server authorization.

7. Non-Functional Requirements:

(i) Scalability - Allows multiple users to browse through real-time books availability.

(ii) Speed - The data fetching and display should take minimum CPU serve time.

(iii) Security - secure gateway for fine payments.

8. Preliminary schedule and budget:

Development is estimated to take 9 months with a budget of $190,000 considering integration with library. Requirements phase ($25,000), Design and implementation ($45,000), Verification and validation ($100000), evolution and maintenance ($20000).