LIBRARY MANAGEMENT SYSTEM
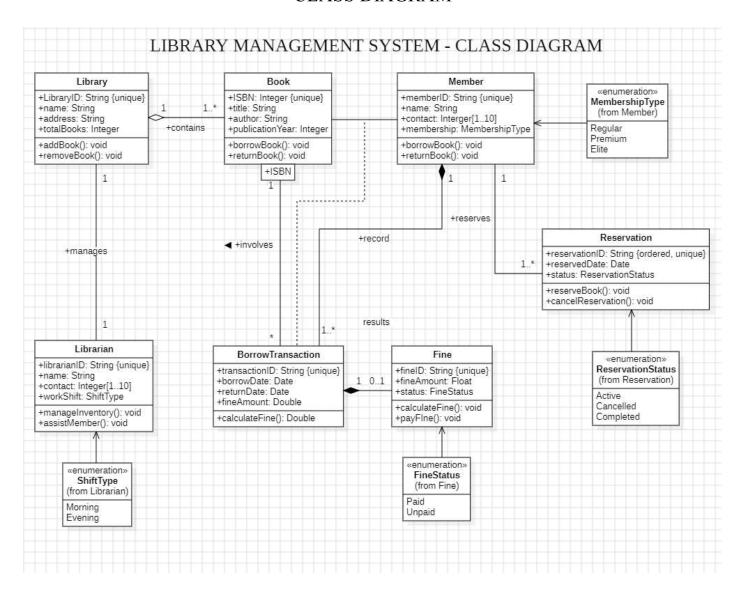
SOFTWARE REQUIREMENTS SPECIFICATION

Library Management System   30/9/24

1. Introduction

1.1 Purpose of this document:

This document outlines the requirements for the development of library management system. The purpose is to define the system's functionality, behaviours and performance that benefits the staffs and students.

1.2 Scope of the document:

It aims to automate the tasks related library management operations. This system provides some facilities like access to previous year question papers, vedio lectures, library catalogue, magazines, articles, etc.

1.3 Overview:

In general, the LMS provides all the above mentioned functionalities like it allows catalogue management, search) browse for books and articles, get access to vedio lectures. This also adds additional feature like copyrights.

2. General Descriptions:

The LMS allows the staffs and students to have easy access to library resources with good performance. It delivers all the basic facilities that are provided by LMS.

Functional Requirement:

- The system should allow for addition, modification of book details.

- Maintain correct classification of books like magazines, articles, etc maintained separately.

- Update the data (return data) automatically from the start date

- Allow easy browsing for vedio lectures based on interest.

4 Interface Requirement :

- It should provide the user with good GUI such as clearly clarified sections/modules for handling books, magazines, etc. It includes a good web based applications.

5. Performance Requirement :

- The system should provide concurrent user access without any performance degradation.

- Memory management.

6. Design Constraints :

- System should support for both desktop and mobile devices
- Must be compatible with modern web browsers.

7. Non-functional Requirements :

- The system should be robast and reliable.
- It should deliver the results within short time like the history search.

8. Schedule and Budget :

- An estimated schedule of around 6 months would be required for development and deployment.

- Budget around ₹ 125000 estimate could be done for the entire project.

  - Requirement identification: ₹ 15000
  - Design phase : ₹ 15 000
  - Development phase : ₹ 80000
  - Deployment phase : ₹ 17 500
  - Testing phase : ₹ 7 500
  - Post deployment : ₹ 2500

30/9/24

UML DIAGRAMS

CLASS DIAGRAM

LIBRARY MANAGEMENT SYSTEM - CLASS DIAGRAM

3. LIBRARY MANAGEMENT SYSTEM

Library
- LibraryID: String
- Name: String
- Address: String
- totalBooks: Int
- addBook()
- removeBook()

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BOOK
- ISBN: Int
- Title: String
- Author: String
- PublicationYear: Int
- borrowBook()
- returnBook()

Manages

Librarian
- LibrarianId: Int
- Name: String
- contact: Int
- workShift: String
- manageInventory()
- assistMember()
- updateStatus()

Member
- memberId: Int
- Name: String
- contact: Int
- membership: String
- borrowBook()
- returnBook()

Fine
- ID: String
- Amount: Double
- Status: Status
- calculateFine()
- payFine()

0..1   1
results

BorrowTransaction
- ID: String
- BorrowDate: String
- returnDate: String
- fineAmount: Double
- calculateFine()

records
1..*

Reservation
- ID: String
- Date: String
- Status: Status
- reserveBook()
- cancelReservation()

<<enumeration>>
Status
- Paid
- Unpaid

<<enumeration>>
Status
- Active
- Cancelled
- Completed