**Library Management System**

Title: LibraSphere

Target Audience: Librariens

Type: B2B

Timeline: 2weeks

Total Members: 1

**Requirements:**

● The librarian can register using a sign-up page.

● The librarian can log in using their username and password.

● The system allows managing library details and book storage setup.

● The librarian can add new books with all required information.

● The librarian can add new users or members to the system.

● The system supports searching and filtering books based on different criteria.

● A book details page shows complete information about a selected book.

● Users can borrow books and the system tracks borrow and due dates.

● Books can be returned and users can give feedback or ratings.

● The librarian can manage library users and view their details.

● The system calculates fines for overdue books and stores payment details.

**Data Model:**

**RegistrationInfo: Class**

● LibrarianId: Integer

● FirstName: String

● LastName: String

● MobileNo: Long/String

● EmailId: String

● Password: String

● ConfirmPassword: String

● UserName: String

● DOB: String

**Login: Class**

● UserName: String

● Password: String

**Library: Class**

● ID: Integer

● Name: String

● Incharge: String

● Capacity: Integer

● StorageStructure: StorageStructure

● Address: String

● PhoneNo: Long/String

● WifiPassword: String

● EmailId: String

● OpeningTime: Long

● ClosingTime: Long

● NoAvailableDays: Integer

**Book: Class**

● Id: String

● Name: String

● Genre: String

● Volume: Byte

● PublishedYear: Integer

● Author: String

● NoOfCopy: Byte

● AvailableCount: Byte

**User: Class**

● UserId: String

● FirstName: String

● LastName: String

● Email: String

● MobileNumber: String

● Address: String

● DOB: String

● BorrowedBooks: List<BorrowRecord>

● Feedbacks: List<Feedback>

**BorrowRecord: Class**

● RecordId: String

● UserId: String

● BookId: String

● BorrowDate: Long

● DueDate: Long

● ReturnId: String

● FineAmount: Double

**ReturnDetails: Class**

● ReturnId: String

● BorrowRecordId: String

● ReturnDate: Long

● Feedback: Feedback

● FinePaid: Double

**Feedback: Class**

● FeedbackId: String

● UserId: String

● BookId: String

● Comments: String

● Rating: Integer (1–5)

**FinePayment: Class**

● PaymentId: String

● RecordId: String

● UserId: String

● Amount: Double

● PaymentDate: Long

● PaymentMethod: String (e.g., "Card", "UPI", "Cash")

**SearchFilter: Class**

● Name: String

● Author: String

● Genre: String

● PublishedYearFrom: Integer

● PublishedYearTo: Integer

● AvailableOnly: Boolean