SYNOPSIS

Project Title : LIBRARY BOOK MANAGEMENT SYSTEM
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ABSTRACT

Libraries often face challenges in manual book management, such as delayed book searches, inaccurate entries, and lack of real-time availability information. These problems create inefficiency and inconvenience for both users and librarians.

This project aims to develop a modern **Library Book Management System** that automates the handling of books, user records and transaction history. The system is built using **Next.js** and **TypeScript** which provide a responsive and dynamic user interface. **MongoDB** is used to store and manage book data securely in a structured manner. Users can search books online, check availability and request for issuing, while librarians can add, update, and track book details efficiently.

By reducing human error, speeding up processing time, and introducing instant data accessibility, the system significantly enhances resource management and library operations. In conclusion, this system is a scalable and smart solution for modern digital libraries that improves productivity and user satisfaction.

STUDENT SIGNATURE GUIDE SIGNATURE

TOOLS & TECHNOLOGIES

Frontend	:	Next.js, TypeScript, HTML, CSS
Backend	:	Next.js API (Node.js)
Database	:	MongoDB
Server	:	Localhost / Online Deployment
Version Control	:	Git & GitHub
IDE	:	VS Code

MODULES

1. Student Module

- Students can **login** and access their account
- View list of **available books** in the library
- **Request a book** for issuing
- View **request status** (Approved / Rejected / Pending)
- View **library hours** assigned by admin
- View list of **borrowed books**
- View **return date & time** given by the librarian

2. Admin / Library Staff Module

- Admin can **login** securely
- Approve or reject **book request** from students
- **Add new books** with details
- **Edit** book information (title, author, quantity etc.)
- **Delete** unwanted or damaged books
- Update **library hours** for students

- When issuing a book, **update return date & time**
- Manage student requests and track borrowed books

3. Book Management Module

- Store full book details such as:
    - Book ID
    - Title & Author
    - Category / Department
    - Available Copies
- Display available books to students
- Update availability after issue or return

4. Issue & Return Tracking Module

- Record which student has borrowed which book
- Maintain return date/time records