

Online Library Management System

Search, issue and return books from one web portal

02 | Agenda

01

Introduction

02

Literature & Gap

03

Proposed System

04

Implementation

05

Results

06

Conclusion

01

INTRODUCTI ON



KEY IDEA

**Students spend more
time finding a book than
reading it.**

Why this project matters

05 | Introduction

- College libraries manage thousands of titles and members
- Manual registers make search and tracking slow
- A web portal can automate issue, return and fines
- We designed a role-based system for students and librarians

CONTEXT

Many college libraries still track issues in paper ledgers.

06 | Problem statement

01

Slow search

No quick way to check if a book is available.

02

Lost records

Paper ledgers get damaged or misplaced.

03

Late returns

Fines are calculated by hand and often missed.

02

LITERATURE & GAP



08 | Literature survey

Study	Approach	Limitation
Koha (open source)	Full ILS suite	Complex for small colleges
Excel registers	Spreadsheet tracking	No access control
Barcode systems	Scanner-based issue	No student portal

Representative summaries — replace with your own citations.

09 | Existing vs proposed system

Existing system

- ✓ Paper ledgers and manual search
- ✓ Fines calculated by hand
- ✓ No reminders

Proposed system

- Searchable online catalogue
- Automatic fines and reminders
- Role-based dashboards

03

PROPOSED SYSTEM



11 | System architecture

01	Catalogue	Books added with ISBN and copies
02	Search	Students search and reserve
03	Circulate	Issue and return with due dates
04	Report	Stock, fines and usage reports

12 | Block diagram



Block diagram / flowchart

Every module talks through one simple, testable interface.

A three-tier web application: a responsive front end, a REST API for books, members and loans, and a relational database with scheduled jobs for reminders.

13 | Technology stack

01

React

Responsive web front
end

02

Node.js

REST API and
business logic

03

MySQL

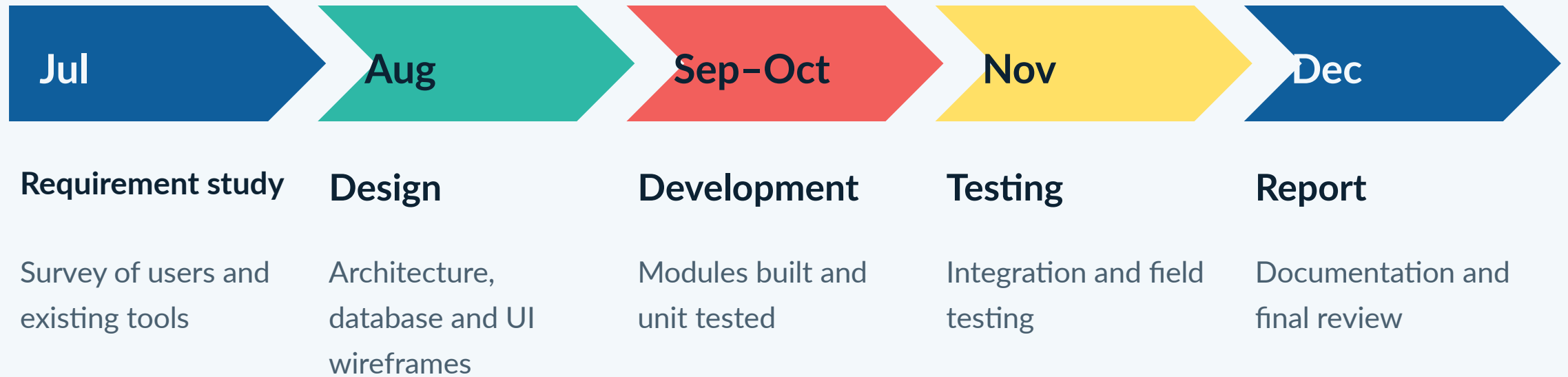
Books, members and
loans

04

Nodemailer

Due-date reminder
emails

14 | Project timeline



15 | Implementation snapshots



Image 1

Catalogue search

Filters by subject and availability



Image 2

Issue desk

Librarian issues a book in two clicks

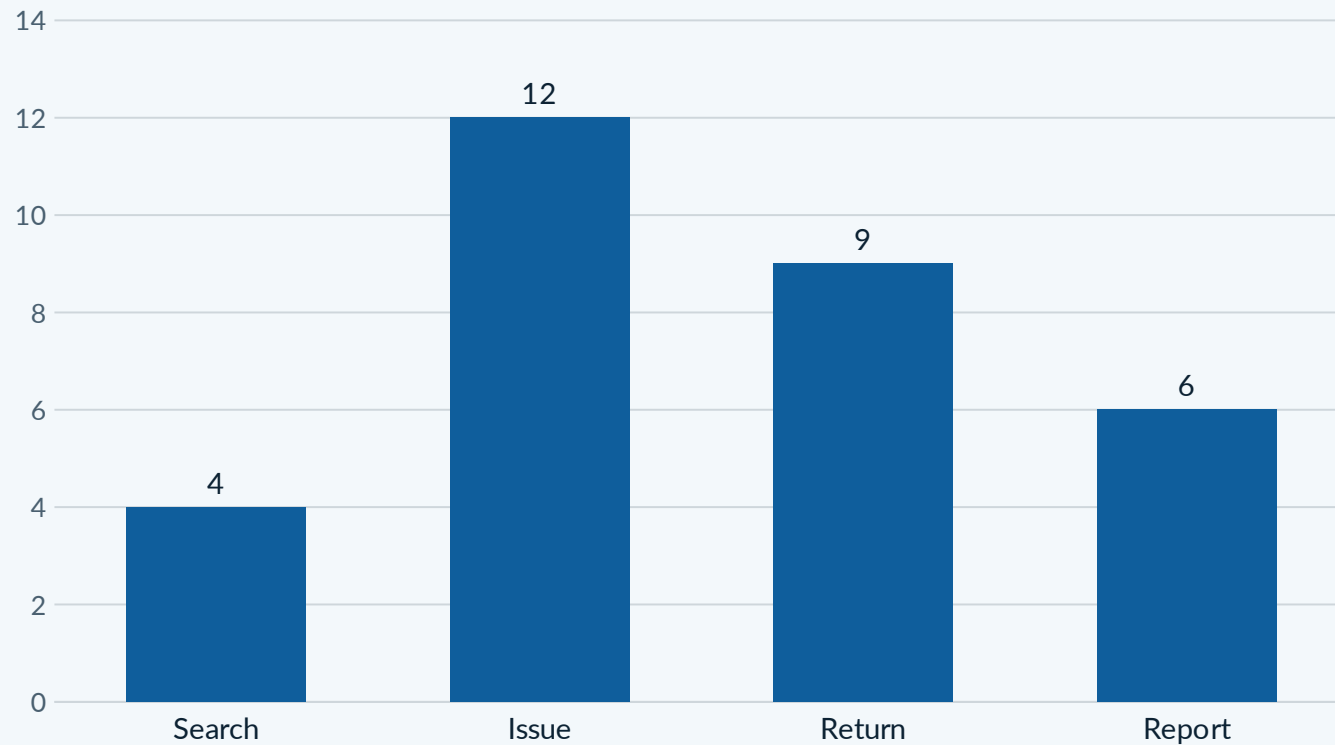


Image 3

Student account

Loans, due dates and fines

16 | Results



Sample data for illustration — replace with your own figures.

5x

faster issue and return

Common library tasks now take seconds instead of minutes at the counter.

17 | Key outcomes

5x

faster counter tasks

100%

loans tracked digitally

Daily

automatic reminders

Figures from our test setup (sample data).

04

CONCLUSION



19 | Conclusion

- The portal replaces slow paper processes
- Automatic fines and reminders reduce late returns
- Reports help plan purchases

20 | Future scope

01

Mobile app

Scan a book to issue it

02

E-books

Digital lending section

03

Recommendations

Suggest books by course

21 | References

- [1] A. Author, “Title of the paper,” Journal Name, vol. 12, pp. 1–10, 2023.
- [2] B. Author and C. Author, Book Title, 2nd ed. Publisher, 2022.
- [3] D. Author, “Conference paper title,” in Proc. Conference, 2024.
- [4] Official documentation of the tools used (accessed 2025).

Thank you

Questions and suggestions are welcome.

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