

WIPRO NGA Program – Java FSD Angular

Capstone Project Presentation – 23rd Sept 2024

Project Title Here - Library Management System

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Problem Statement-

Develop a Library Management System with Angular for the frontend and Spring Boot for the backend, utilizing a microservices architecture. Implement CRUD operations for books, user booking management, and ensure real-time availability while optimizing performance and creating thorough documentation.



Project Structure -

Frontend: Developed using Angular, HTML5, CSS3, and Javascript.

Component: User Management, Book Listings, Borrowing, Notification.

Backend: Spring Boot Microservice Architecture.

RESTful APIs for communication between frontend and backend.

Database: MySQL for managing Users, Books, Borrowing details.

API Gateway: Manages Routing, authentication and cross-cutting concerns.

Technology Stack Used -

Frontend: Angular, TypeScript, HTML5, CSS3

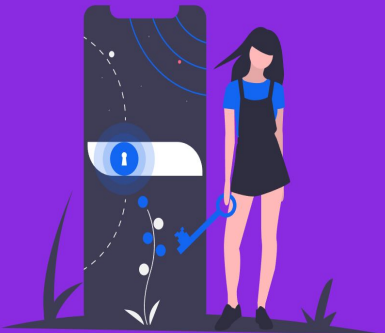
Backend: Spring Boot (Java), RESTful APIs

Database: MySQL

Tools: Maven, Git, Postman (for testing)

Demo of the Project -

LibraryManagement Home Show All Books Show All Borrowings Show All Users Logout



Email

Password

Sign in

LibraryManagement Home Show All Books Show All Borrowings Show All Users Logout

LIBRARY BOOKS

ADD NEW BOOK TO LIBRARY

ID	Name	Author	Quantity	Update	Delete
3	Concept of Physics	HC Verma	3	<button>UpdateBook</button>	<button>Delete</button>
4	Maths	RD Sharma	2	<button>UpdateBook</button>	<button>Delete</button>

LibraryManagement Home Show All Books Show All Borrowings Show All Users Logout

BORROWED LIBRARY BOOKS

ADD NEW BOOK TO LIBRARY BORROWED BOOKS

BorrowId	BookID	UserId	returnDate	borrowDate	returned	Update	Delete	Update Return
3	4	1	2024-09-24	2024-09-23	true	<button>UpdateBook</button>	<button>Delete</button>	<button>UPDATE RETURN</button>

LibraryManagement Home Show All Books Show All Borrowings Show All Users Logout

Users

ADD NEW USER TO LIBRARY

ID	Name	Email	Update	Delete
2	Sameer	sam.mansuri1999@gmail.com	<button>UpdateUser</button>	<button>Delete</button>

Future Scope of the Project -

Mobile Application Integration:

- Develop a mobile app version for Android and iOS to allow users to manage their library accounts and books on the go.

AI-Based Book Recommendations:

- Integrate AI/ML algorithms to provide personalized book recommendations based on user borrowing history and preferences.

Multi-Language Support:

- Add support for multiple languages to make the system more accessible to a wider user base, especially in diverse regions.