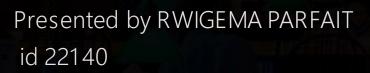# Library Management System Documentation

Welcome to the Library Management System Documentation, a comprehensive guide for library administrators and librarians. This document aims to provide detailed insights into the structure, functionality, and implementation of the system, covering all aspects of library operations and management.

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Project Overview

1   **Efficiency**

The system aims to streamline and automate library operations, making processes more efficient.

User-Friendly

2

Designed to be intuitive and easy to use for both administrators and library users.

3   **Automation**

Automation of administrative tasks, reducing manual efforts and errors.

Database Schema

User Table

The User table stores comprehensive details of library users, including their contact information and role within the system.

BorrowBook Table

Tracks the borrowing history of users, enabling efficient management of book lending and returns.

Claim Table

Manages user-submitted claims and requests, providing a structured approach for query resolution.

System Architecture

1 Client-Server Model

Implements a client-server architecture with a web-based front end interacting with the backend database.

2 Technologies Used

Utilizes thymeleaf, JavaScript, springboot, PostgreSQL, and JWT for secure user authentication.

Functionality

1

User Management

Efficiently manage user registrations, permissions, and role assignments within the system.

2

Book Borrowing

Enables seamless book borrowing processes, including tracking borrow dates and return statuses.

3

Claims and Requests

Facilitates the submission and resolution of claims and user requests, ensuring streamlined query handling.

User Roles and Permissions

▶ User Roles

Data Flow

User Registration and Authentication

Enables new user registrations and provides a secure authentication process for access to the system.

Book Borrowing Process

Guides users through the process of borrowing books, tracking borrow and return dates seamlessly.

Claim Submission

Facilitates the submission and tracking of claims and requests, ensuring timely resolutions.

Interfaces

User Interface	Interactive and user-friendly interface for users to navigate and access library resources.
Admin Interface	Comprehensive dashboard and controls for administrators to manage system functionalities efficiently.

Security Measures

▶ Secure Communication