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INTELLIGENT LIBRARY MANAGEMENT SYSTEM

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This project is a fully functional, stable, and reliable Intelligent Library Management System (ILMS), which uses the Spring Boot framework (a Java-based framework following the Model-View-Controller (MVC) pattern, offering rapid development and embedded server support), MySQL (an open-source relational database management system that provides efficient data storage and retrieval, supports multi-user concurrency, and is widely used in enterprise applications), and Vue.js (a progressive front-end framework for building reactive, component-based user interfaces with modern tooling).

The Intelligent Library Management System is an open platform that centralizes access to physical and digital library resources, including books, journals, multimedia materials, and research databases. It serves students, researchers, librarians, and public users by streamlining resource discovery, borrowing workflows, and administrative tasks. Users can search, reserve, and manage resources anytime, reducing operational costs and improving accessibility. Librarians can curate collections, track usage analytics, and automate administrative processes.

Core System Features:

1. User Authentication: Secure registration/login with email verification and password reset.
2. Resource Search: Multi-criteria search (title, author, keyword) with filters (year, availability).
3. Borrowing Management: Self-service checkouts/returns. Automated due-date reminders via SMS/email. Fine calculation for overdue items.
4. Admin Dashboard: Manage user roles and permissions. Add/update/delete books and digital resources. Generate reports (e.g., popular books, user activity).
5. Digital Access: Download eBooks, stream educational content, and access online journals.
6. Smart Recommendations: Collaborative filtering suggests books based on user behavior.

References

1. SpringBoot Documentation [Electronic resource]. – Access mode: https://spring.io/projects/spring-boot. – Access date: 15.04.2025.
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3. Vue.js Official Guide [Electronic resource]. – Access mode: https://vuejs.org/guide/. – Access date: 25.04.2025.