CIE406 – Keamanan Informasi
Final Project Case Analysis
Library Management System
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1. Introduction
This project implements a secure Library Management System using Laravel 12 and Filament v3. It enables admins to manage books and users to borrow/return books, with strict role-based access and basic security policies.

2. Technology Stack
- PHP 8.3
- Laravel 12 (latest version)
- Filament v3
- SQLite (simple file-based database for demo)

3. Roles & Features
- Admin: Full access to manage books and users
- User: Can view, borrow, and return books
- Filament Admin Panel: For efficient backend interface

4. Design Justification
Laravel was chosen for its robust routing, authentication, and middleware capabilities. Filament was added to rapidly generate secure admin pages. SQLite keeps deployment lightweight.

5. Security Highlights
- Passwords are hashed using bcrypt
- Access to admin routes is protected by middleware
- Validation rules are enforced in all forms
- Sensitive actions (borrow/return) are logged

6. Conclusion
This system meets the basic requirements of a secure, role-based library system suitable for academic or small business use. It demonstrates key principles of information security covered in the CIE406 course.