

****Library Management System V2 - Project Report****

****1. Introduction****

The Library Management System V2 is a web-based application designed to streamline the process of managing and accessing e-books within a library environment. This report outlines the core functionalities, frameworks utilized, and the approach taken to develop the system.

****2. Problem Definition****

The primary goal of the Library Management System V2 is to provide an efficient platform for users to request, access, and manage e-books, while also enabling librarians to oversee the library's operations effectively.

****3. Frameworks and Technologies Used****

- Flask for API development
- VueJS for the user interface
- Jinja2 templates for rendering dynamic content
- SQLite for database management
- Redis for caching
- Celery for batch job management

****4. Core Functionality****

****4.1 Librarian Dashboard****

Provides librarians with a centralized interface to manage sections, e-books, users, and system settings.

****4.2 User Authentication****

Utilizes Flask Security or JWT Token Based Authentication for secure user authentication. General users can register and log in using their email or username.

****4.3 General User Functionalities****

- View all existing sections and e-books
- Request and return e-books
- Limit of 5 e-books per user
- Access duration for e-books with automatic revocation after a specified period
- Provide feedback for e-books

****4.4 Librarian Functionalities****

- Issue and revoke access to e-books for users
- Edit existing sections and e-books
- Monitor status of issued e-books and users

****4.5 Search Functionality****

Allows users to search for sections and e-books based on various criteria such as section name, author, etc.

****4.6 Daily Reminder Jobs****

Sends daily reminders to users who haven't visited the app, encouraging them to engage with the platform.

****4.7 Monthly Activity Report****

Generates and sends monthly progress reports to users via email, detailing issued sections and e-books, received ratings, etc.

****5. Recommended Features****

- Download e-books as PDF for a price
- APIs for interaction with sections and books
- CRUD operations on e-books
- Additional APIs for creating graphs for librarian dashboard

****6. Optional Features****

- Styling and aesthetics enhancement
- Subscriptions or paid versions of the app
- Ability to read books aloud using text-to-speech technology

****7. Evaluation Criteria****

- Submission of a detailed project report including system design
- Submission of all code on the designated portal
- A brief explanatory video demonstrating the implementation and extra features
- Live demo during the viva, including any requested changes
- Ability to answer questions related to the project and relevant course material

****8. Conclusion****

The Library Management System V2 provides a comprehensive solution for managing e-books within a library setting. By leveraging modern frameworks and technologies, the system offers robust functionality for both users and librarians, enhancing the overall experience of accessing digital content.

****End of Report****