

Project Proposal

Group Members

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Class: BSSE 5A

Project: Library Management System

Course: Software Construction and Developement

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Introduction:

This proposal outlines the development of a Library Management System (LMS) website using the Waterfall Model. The primary objective of this system is to efficiently manage library resources, streamline operations, and provide a user-friendly interface for both librarians and patrons. This system will be designed to handle tasks such as cataloging, circulation, reservations, and reporting.

Methodology: Waterfall Model

The Waterfall Model is chosen for this project due to its structured approach, which is suitable for projects with well-defined requirements and a clear scope. The development process will be divided into distinct phases: Requirements, Design, Implementation, Deployment.

Functional Requirements

User Roles

1. Admin

- Add, edit, and delete books and library resources.
- Manage user accounts.
- Generate reports and statistics.
- Configure system settings.

2. Librarian

- Check-in/check-out books.
- Manage reservations and holds.
- Update patron information.
- Generate overdue notices.

3. Patron

- Search and browse the catalog.
- Reserve books.
- View due dates and loan history.
- Update personal information.

Features

User Authentication

- Secure login and registration for librarians and patrons.
- Role-based access control.

Catalog Management

- Add, edit, and delete books and other library resources.
- Categorize resources by genre, author, and publication date.
- Search and filter options for patrons to find books easily.

Circulation Management

- Check-in/check-out books.
- Track due dates and send overdue notices.
- Handle book reservations and holds.

Reporting and Statistics

- Generate reports on book circulation, inventory, and patron activity.
- View statistical data to aid in decision-making.

User Profile Management

- Update personal information.
- View loan history and due dates.

Database

- The system will utilize a relational database to store and manage data efficiently. The database schema will consist of tables for books, patrons, transactions, reservations, and more.

Technology Stack

- Front-End: HTML5, CSS3, JavaScript, React.js
- Back-End: Php
- Database: MySQL
- Version Control: Git

Timeline

- **Requirements Phase:** 1 weeks
- **Design Phase:** 3 weeks
- **Implementation Phase:** 7 weeks
- **Deployment Phase:** 1 weeks

Conclusion

This proposal outlines the development of a Library Management System website using the Waterfall Model. The system will address the functional requirements and features mentioned, providing a robust solution for efficient library resource management. We look forward to your approval and collaboration on this project.