

Library Management System

Built with MVC – ASP.NET CORE

Objective:

To develop a library management system that tracks book checkouts, returns, and calculates penalties for overdue books.

Project Description:

The Library Management System is a comprehensive solution for managing the books, users, and transactions within a library. It will enable librarians to handle tasks such as book checkouts, returns, and penalty calculations for overdue items. The system will also include a search function to help librarians find books by various filters like title, author, or genre. Additionally, it provides member management, allowing members to view their borrowing history and track their due dates and penalties. The application will be developed using ASP.NET Core with MVC architecture and Entity Framework for database management. The frontend will be built with HTML, CSS, and JavaScript, ensuring an intuitive and responsive user experience. SQL Server will serve as the database for managing library data.

Technologies Used:

- ASP.NET Core for backend development and API handling
- MVC (Model-View-Controller) for application architecture
- Entity Framework for database management and ORM (Object-Relational Mapping)
- User Authentication for managing librarian and member access
- SQL Server for storing books, users, and transaction data
- HTML, CSS, JavaScript for frontend development

Collaborators:

1. (Full-Stack): Project coordination, authentication, and integration.
Name: Mohamed Mohsen Mohamed
2. (Database & Models): Design database, implement Entity Framework models, and CRUD operations.
Name: Khaled Elashry Ahmed
3. (Controllers & Business Logic): Write controller logic and implement business rules (borrowing, penalties).
Name: Maxim Mamdouh Salib
4. (Views & Front-End): Develop the UI using Razor views and ensure front-end responsiveness.
Name: Shehab El-Din Ashraf Hussein
5. (Testing & Documentation): Write unit/integration tests and document the project structure.
Name: Enjy Boushra Tawfik