

Library Management System

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Introduction

The Library Management System is an application to manage various tasks such as check out and check in of books, adding the borrowers and fine management of the books.

Functions:

1. Search Books based on keywords.
2. Select the book and checkout if available.
3. Check in the book.
4. Pay fines for books checked in after the due date.
5. Add borrowers.

Architecture

To implement the system, various schemas were build which are described below:

1. Book
The book table contains the isbn, title and availability of book. Here, isbn acts as the primary key of the table.
2. Book Authors
The Book_Authors table contains the Author_id and isbn number of the book written by the author. Here, Author_id and isbn act as the primary key.
3. Authors
The Authors table contains the Author_id and name of the author. Here, Author_id is the primary key.
4. Borrower
The Borrower table contains the card_id, SSN, Name, Address and phone number of the Borrower. Here, card_id is the primary key.
5. Book Loans
The Book_Loans table contains the Loan_id, ISBN, Card_Id, Date_out, Due_date and Date_in of the book loans. Here, Loan_id is the primary key.
6. Fines
The Fines table contains the Loan_id and Fine_Amount of the book loans. Here, Loan_id is the primary key.

The application is built on **MVC**(Model View Control) Architecture.

Libraries and Software Used

Software Used: Wamp(Apache, MySQL, php)

Database: MySQL

Language: php, JavaScript, HTML, CSS, SQL

Libraries: Bootstrap