Library Management System

Presented by group H

Project Overview

A library management system is a software application designed to manage all aspects of library operations, including cataloging, circulation and etc. In this project, Library Management System designed using NetBeans IDE based on Object Oriented Programming. We develop our application to a Public Library. So, we did not have various user roles, everyone who check-in and checkout are library member. And also, we decided to connect two databases which are user database and book database. Each page connected with a homepage. The library management system software helps in reducing operational costs. Managing a library manually is labor intensive and an immense amount of paperwork is involved. An automated system reduces the need for manpower and stationery. This leads to lower operational costs. The system saves time for both the user and the librarian. With just a click the user can search for the books available in the library. The automated system saves a considerable amount of time as opposed to the manual system. Our team want to make public library is a smart place as well as another library.

Requirements

Functional Requirements

User

- Allow the user to search for books based on title, publication date, author, etc. and find their location in the library.
- User should be able to check availability of the books.
- User should be able to track the book location
  (Bookshelf number and row number)

Librarian

- Librarian can add or delete the books.
- Allow the librarian to add and remove new members.
- Librarian should be able to manage the book inventory.

Technical

- The system should notify the user and librarian about the overdue books.
- The system calculates the fine for overdue books on their return.
- The system must only allow user with valid id and password to enter the system.

Non-Functional Requirements

- Fast response time
  common operations such as searching and borrowing resources.
- An efficient data storage
- The system should be reliable

- The system should be secure.
- The system should work seamlessly with different hardware and software
- Ease of use
- The system should be able to handle a large number of users and transactions simultaneously without performance degradation

Features

- Home page
     (Each page has connected to this page)
- Login page and forgot password
- Search function
- Cataloging
- Circulation
- Managing parton accounts
- Membership Management
- Statistical page
- User Databases
      (Has the details of every library member)
- Book database
     (Has the details about every book that library
 has)

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