PROPOSAL

CPSC 471 - Database Management Systems

LIBRARY MANAGEMENT SYSTEM

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INTRODUCTION

Library Management System is a system which will help users to issue, request, reserve and check availability of any book in the Library, making using the library easier and hassle free. The main problem that we are aiming to solve is to make requesting and issuing books from the library more convenient for people which traditionally took a long time and was stressful. The solution is to implement an online library management system which can track each book's availability and reserve and issue the books online, instead of going to the library every time.

In a pandemic like we are in today, where people cannot travel much to libraries, most libraries have switched operating over the phone which is very inconvenient, it would be safer and easier for them to issue or return books online. In the later of the report, we have briefly described the problem and its history, with some references to already existing solutions and how we can improve those. We have also described why we think this problem needs to be solved and our motivation behind it.

PROBLEM

Traditionally, issuing books and returning them to the library was done in-person, which sometimes was very stressful due to long waiting times and no information on availability of the books. It would be very interesting to develop a library management system that would help people to issue or return books without the wastage of time by doing that over the phone.

It would be a challenge to make it efficient so people save time and make the interface also easily understandable.

This problem is pretty major, especially in pandemic situations like this where the people are restricted to travel and on top of that, as many buildings like libraries are closed down or allowed to a limited number of people. So when issuing or returning books most people have to do that over the phone which is pretty inefficient due to the large number of people and limited staff. This results in long waiting times on the call resulting in wastage of time.

There are similar systems to one we propose. A similar system is referenced below [1]. It deals with the tracking of book details in the library like their cost and the number of books available and all of this information stored on a database. But there are some improvements that need to be done, like our solution will also keep record of the book's issues and returns along with all the details of the person.

PROPOSED SOLUTION

This project will achieve an online, hassle free solution for a library management system for the TFDL. Our database will contain books: their availability, number of copies, description, location, author. As well as students: their name, id, books checked out, return dates. With this database students will be easily able to search for books, check all required information about it that they need, and reserve the book.

The main feature about this project is that you can reserve the book through the software, and it will update the database to reflect this reservation. Students can check which books they have checked out, as well as their return dates. Furthermore students can check the database for all books, search for specific books, and check out books availability, copies, description, and location. Also, they can see who has issued any particular book they are looking for, and for how long the book is issued.

MOTIVATION

We believe that this solution will save the time that people waste over the phone while issuing or returning books. Due to the current pandemic, it is more needed currently to have a better online book management system for the library. Time is being wasted having to phone in to check for a book's availability, and for reserving or returning a book. The current system is inefficient for students where there is so limited staff for a huge number of students resulting in

long waiting times over the phone. The project is unique as it will bring convenience for students and save their time. Not only due to the current pandemic, but in the future when society returns to normal students will be easily able to reserve books online without the need of phoning in or waiting in the line like traditional times.

CONCLUSION

In a pandemic like we are in today, where people cannot travel much to libraries, most libraries have switched operating over the phone which is very inconvenient, it would be safer and easier for them to issue or return books online. A better library management system is needed to solve this problem. This project will achieve an online, hassle free solution for a library management system for the TFDL. The database and software will allow students to easily search for books and reserve or return books online, eliminating the requirement of having to do these time consuming tasks over the phone.

This project will be fully complete before December 9th 2020. Along the way multiple deliverables will be completed. Intermediate reports will be delivered periodically; October 20 a detailed extended/expanded ERD and all related assumptions with the basic requirements for our design, November 4 a logical relation model, November 25 initial draft of the programming part. Lastly before the project is completed, a demonstration will be presented of our fully completed project and API along with it.

REFERENCE(S)

1. https://www.slideshare.net/RohithRohith3/a-mini-project-on-designing-a-database-for-library-management-system-using-mysql