Library Management Program for Hong Duc University

ICTU Student 205
Thai Nguyen University of Information and Communication Technology
Thai Nguyen University, Thai Nguyen, Vietnam
student205@ictu.edu.vn

***Abstract*—This thesis presents the development of a library management program for Huong Du University, utilizing Visual Basic.NET and SQL Server. The program addresses practical issues in library management, including user authentication, book updates, and overdue fines management. The author discusses the necessity of a new system and potential future developments, such as internet connectivity and an electronic library system. The program successfully implements various functionalities, such as user authentication, book updates, and overdue fines management, and can handle a large number of books and support multiple users simultaneously. The author suggests further research to improve the program, including internet connectivity and an electronic library system.**

***Index Terms*—Visual Basic.NET, SQL Server, Library Management, User Authentication, Overdue Fines, Database Management**

I. Introduction

The thesis introduces the development of a library management program for Huong Du University, emphasizing the importance of such a system in facilitating efficient library operations and meeting the increasing needs of readers. The program is built using Visual Basic.NET and SQL Server, providing a practical solution for managing library resources. The author conducted a thorough examination of the current state of library management at Huong Du University, identifying practical issues and the need for a new system. The program includes features such as user authentication, book updates, and overdue fines management, which are essential for efficient library operations [1].

II. Methods

The methods section details the construction of the program, including the design of the main interface, the implementation of various functionalities such as user authentication, book updates, and overdue fines management, and the integration of SQL Server for database management. The program was developed using Visual Basic.NET, a popular programming language for Windows applications. The author utilized SQL Server for database management, ensuring data integrity and efficient data retrieval. The program was tested through various scenarios to ensure its functionality and reliability [1].

Supervisor: ICTU Teacher 139, Thai Nguyen University of Information and Communication Technology.

III. Results

The program successfully addresses practical issues in library management, including user authentication, book updates, and overdue fines management. It includes features such as automatic fine calculation and user-friendly interfaces. The program can handle a large number of books and supports multiple users accessing the system simultaneously. The author tested the program through various scenarios, including user authentication, book updates, and overdue fines management, and found that it performed well in all tested scenarios. However, the program has not been evaluated for its performance in a real-world setting [1].

IV. Discussion

The discussion highlights the practical applications of the developed program, such as its ability to manage a large number of books and support multiple users. The author also suggests potential future developments, including internet connectivity and an electronic library system. The program has successfully addressed practical issues in library management, but there is still room for improvement. The author suggests further research to improve the program, including internet connectivity and an electronic library system, to enhance the user experience and efficiency of the library management system [1]. Earlier ICTU undergraduate work by Đỗ Thành Kiên addressed library management system [10].

V. Conclusion

The thesis concludes that the developed program effectively addresses practical issues in library management and provides a user-friendly solution. The author suggests further research to improve the program, including internet connectivity and an electronic library system. The program has successfully implemented various functionalities, such as user authentication, book updates, and overdue fines management, and can handle a large number of books and support multiple users simultaneously. However, the program has not been evaluated for its performance in a real-world setting, and further research is needed to improve its functionality and efficiency [1].

References

[1] ICTU Student 205, ”Library Management Program for Hong Duc University,” internal undergraduate thesis (original in Vietnamese), Thai Nguyen University of Information and Communication Technology, 2010.

[2] PHƯƠNG LAN - Visual Basic.NET - Kỹ Xảo Lập Trình - Nhà Xuất Bản Phương Đông - Năm 2006
[3] HOÀNG ĐỨC HẢI, PHẠM HỮU KHANG - Kỹ Thuật Lập Trình Ứng Dụng Chuyên Nghiệp ViSual Basic.Net Tập 1- Nhà Xuất Bản Lao Động Xã Hội - Năm 2004
[4] NGUYỄN VĂN HOÀI - Các Bài Tập Lập Trình Visual Basic.Net - Nhà Xuất Bản Thống Kê - Năm 2005
[5] ĐẬU QUANG TUẤN - Tự Học Lập Trình Cơ Sở Dữ Liệu SQL Server 2000 & Visual Basic.Net - Nhà Xuất Bản Giao Thông Vận Tải - 6/2005
[6] NGUYỄN VĂN BA - Phân Tích và Thiết Kế Hệ Thống Thông Tin - Nhà Xuất Bản Đại Học Quốc Gia Hà Nội - Năm 2004
[7] PHẠM MINH TUẤN - Giáo Trình Phân Tích Thiết Kế Hệ Thống Thông Tin Quản Lý - Nhà Xuất Bản Hà Nội - Năm 2005
[8] TÔ VĂN NAM - Giáo Trình Phân Tích Thiết Kế Hệ Thống Thông Tin Quản Lý - Nhà Xuất Bản Giáo Dục - Năm 2008
[9] ĐINH THẾ HIỂN - Phân Tích Thiết Kế Hệ Thống Thông Tin Quản Lý - Nhà Xuất Bản Thống Kê - 6/2002
[10] Đỗ Thành Kiên, ”Library Management System Development,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2008.