Design and Implementation of Children's Book Management System Based on Asp.Net Technology

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Abstract. with the Rapid Development and Popularization of Computer and Network Technology, Today's Society is Developing in an All-Round Way. In today's Society, the Amount of Information is Increasing Rapidly in Several Stages Every Day. In this Information Explosion Society, Information Automation Management Has Become the Trend of Today's Society. Books as an Important Carrier of Information, with the Development of Information Technology, the Types and Quantity of Books Have Also Changed Greatly, and Growing At a Very Fast Speed. How to Find, Borrow and Return Books More Efficiently and Quickly Has Become a Difficult Problem in Book Management. the Popularization of Computer and the Development of Network Technology Have Brought an Opportunity for This Problem. This Paper Analyzes the Design of the Management System Based on the Physical Structure of B/s and Introduces in Detail the Development Tools, System Function Requirements and System Software and Hardware Requirements for the Realization of the Web Management System of Children's Books. the System Has Been Realized by Developing Technology and Tools, Which Ensures the Normal Operation of the System, Realizes the Integrated Function of Information Service of the Library, Increases the Working Efficiency of the Management Personnel, Facilitates the Reading Demand of the Majority of Children, Reduces the Maintenance Cost of the Library, and Makes the Library Develop Towards the Modernization of Information Technology.

1. Introduction

With the development of computer and network technology, electronic information automatic management has become a trend of modern society. In this information explosion society, as the information carrier, books, documents and other materials have also become the growth of geometric data. The variety and quantity of books are also growing rapidly. As a result, the management of books becomes more and more difficult. The popularity and development of computers have brought opportunities to this demand, especially in today's highly developed network, information-based book management has been able to assist or even replace a single manual management, providing people with more effective book management experience[1]. At the end of the 20th century, with the deepening of reform and opening up, the library of our country has also entered the transition period, and gradually entered the era of automation. At the same time, with the rapid development of colleges and universities and the wide application of information technology, university library information construction has also made great achievements[2]. Before the introduction of the library management system, in the process of the implementation of the library management, inevitably exposed a lot of shortcomings and shortcomings: for the librarian, the workload is large, the work is tedious, the efficiency is low, easy to make mistakes and it is difficult to find the cause of the problem after
making mistakes[3]. For ordinary readers, it is difficult to find books, and the procedures for borrowing and returning books are tedious. In order to maintain the normal operation of the library, the librarians are facing great pressure. The early manual management method can not meet the normal needs. Therefore, it is very necessary to realize library information management with the help of computer and network.

2. Related Works
At the end of the 20th century, the research on the library management system has been popularized and applied in several large libraries in China, and has made phased progress. For the consideration of network application, involving all aspects of library management system, the system has good scalability, which can meet different application environments, such as the exploration and research of other modes of big data storage management and information sharing system, personalized service and automatic service, and expand the application in the related fields of publishing industry and e-commerce[4]. Therefore, the efficiency of the system is improved, and the security and stability of the system are guaranteed. In our country, the research of library management system technology started late, there are some limitations, making most of the library management system can meet the relatively simple function, and there are still some deficiencies in the performance and security of the overall system architecture. Therefore, in the future for a long time, the library management system will be improved and improved[5].

At present, most foreign library management systems adopt advanced architecture and UNIX standard execution[6], most of the systems can run in different operating systems, support multi vendor servers; independently develop the database system adlib library; based on the hierarchical and network database system. With the development of information technology, the library needs to manage all kinds of digital resources in addition to the normal library. In this respect, the main library automation system of foreign manufacturers is to use information and software technology, the relevant content is mapped to the similar traditional literature digital resources, integrated application to the newly developed system, increase the function of the system, and provide better services for the readers. These systems and technologies represent the development trend of library management system in the future. Compared with the foreign library management system, it has a long way to realize the automation of the domestic library management system, which needs continuous research.

3. Children's Book Management System Implementation Technology

3.1 Application of Asp.Net Technology in Children's Library
An upgrade version of ASP developed by Microsoft is asp.net technology. Microsoft not only upgrades ASP, but also adds a new scripting language to asp.net. ASP is the abbreviation of active server pages. As a part of. Net architecture, ASP makes programming more concise and convenient. With the help of asp.net's ease of use, it is convenient for all kinds of people to design networks easily. Using asp.net technology can significantly improve the management efficiency of the library, provide real-time and effective data transmission information, reduce the maintenance cost of the library, improve the management level, and realize the information automation construction of the library management system, as shown in Figure 1. When running in CLR library, asp.net and. Net framework are integrated into a whole. Asp.net provides the basic module of network application, which is based on. Net framework. Asp.net uses HTML code for editing and application. These HTML codes run in the web server. The web server analyzes and calculates the HTML code of the code, and feeds back the results to the user's browser in the form of HTML code, which is displayed in the form of visual operation on the browser, which provides the programmer with a variety of development types. Asp.net also adds code optimization program, which reduces the workload of programming, improves the stability of the system and reduces the failure rate. Asp.net is a compiler, which is compatible with all kinds of computer programming languages, such as visual basic, C++, C language and other languages for program compilation and development. C language is the basic language of asp.net
program. Although programmers can use other computer languages to compile and develop programs, it is more efficient and natural to use C language. So when using asp.net to develop programs, they usually use C language to develop applications[7].

Figure 1 Development of Children's Book Management System Based on Asp.Net

3.2 Sql Server Database Design of Children's Library

Database technology is a technology that organizes and manages data through computers, and provides applications with fast query, modification and deletion of data. According to the different perspectives of database observation, the database is divided into three layers: physical data layer, conceptual data layer and user data layer. The physical data layer is the bottom layer of the database, which is the original data stored directly on the physical device. The concept data layer refers to the logical representation of the database. User data layer refers to the database that users can operate directly. Through relational database, we can realize data sharing, reduce data redundancy, ensure the logical and physical independence of data, realize the centralized control of data, ensure the consistency and maintainability of data, and ensure the safety and reliability of data. At the same time, through the method provided by the database system, we can find and repair the fault in time, to prevent the data from being damaged, resulting in data loss or leakage.

SQL server is a relational database management system developed by Microsoft. Its structure is shown in Figure 2. The database management system has the characteristics of C/S architecture, cross operating system platform, multi-core processing support, web support, XML Extensible markup language support, and Internet query ability. At the same time, it has a good test record in scalability and reliability. The system is a complete and comprehensive database analysis system. The database system is a large-scale database product designed by Microsoft for enterprise platform[8]. This product redefines the database field and specification, and adds many enterprise and feature functions, such as data mining, automation, and business intelligence. It is in good accordance with the future development trend of database. SQL Server 2005 database engine has both structural and relational characteristics of data. It provides a more secure guarantee when building a large and efficient database application.
4. Design of Children's Book Management System Based on Asp.Net Technology

The improvement of children's library management system plays an important role in Teachers' teaching and scientific research. To improve the management and service level of the library management system, we can improve the digital management mode of the library management through the construction of the children's library management system. In view of the insufficient performance and function modules of the domestic library management system to ensure the safety of data, this system realizes the design of the library management system based on asp.net based on the analysis of the business process of the children's library management system. This system uses the method of statistics and analysis of library information resources to rationalize the collection, classification and management of library information to improve the query function of the library. Readers can easily query the required information, reduce the work of librarians, improving the work efficiency and quality. On the whole, there are fundamental changes in the working style of librarians, which even change the reading habits of readers and improve the utilization rate of books. Through a large number of data mining and analysis about the library management system, help the library to achieve the centralized maintenance and management of electronic information. Among them, under the framework of the whole range of library management system, information construction plays a key role.
role. This paper also considers the expansibility of the system and the support of digital multimedia resources, trying to build a management book system model based on asp.net to adapt to the operation mechanism of digital library, as shown in Figure 4.

Figure 4 System Structure Of Children's Book Management System Based on Asp.Net Technology

3.1 Children's book management

The management process of children's books mainly refers to the systematic processing process of Librarians in the library from the beginning of book purchasing to book putting on shelves.

3.2 Child reader management

Only when the reader logs in to the system can he see his own information and the information of collection resources. Therefore, readers need to log in to the system first, and contact the system administrator for handling when the login is unsuccessful. After successful login, readers can view and process their personal information, including basic personal information and personal borrowing information. Readers can also query the library's book resources, including the introduction of library information, digital resource information, etc.

3.3 Children's books borrowing

When the reader is borrowing children's books, the circulation librarian needs to scan the reader's borrowing card information first. If the scanning is not successful, the system administrator needs to be contacted for processing. After the scanning is successful, you can view the borrowing information of the readers in the system, judge whether the readers can borrow according to the borrowing information of the readers, and if not, give the reasons why the readers can't borrow.

Return of children's books. When returning children's books, the librarian needs to scan the reader's borrowing card information first, transfer out the reader's borrowing information in the system, and then judge whether the books borrowed by the reader are overdue. If there is a children's book reservation, the readers who make the reservation first will be prompted with information.

5. Conclusion

Starting from the development history of the library and the requirements of the book management, this paper designs the book management system from the functions required by the daily management. The realization of the web management system for children's books are introduced in detail Demand, develop on the demand of the system, expound the development goal and the work flow of the related module, and use the related development technology and development tools to realize the system, and
pass the system test, ensure the normal operation of the system, realize the integrated function of
the library information service, increase the work efficiency of the management personnel, and facilitate
the wide range. The reading demand of the big children reduces the maintenance cost of the library and
makes the library develop towards the modernization of information technology. We use the network
information tools to develop the web management system of children's books. The database and
module are designed and implemented, and the overall design of the paper is completed.

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