

Research and Design of Education and Teaching Resource Management System based on ASP.NET Technology

Jin Xin

Science and Technology College Gannan Normal University, Ganzhou, China

jinxingn@163.com

Keywords: Teaching; system design; database technology; ASP.NET technology; B/S structure

Abstract: The informatization of career education is an important foundation and part of the reform of career education. The construction of professional education resource library is one of the important contents of professional education informatization construction. There is a lack of unified planning for the construction of teaching resource pool in higher vocational colleges in China. The system software construction investment is less, and the content is not system; Teacher education information technology and teaching strategy application level is not high, and there are slow development and other problems. This topic elaborates how to use the base. NET architecture, and SQL Server as the background database system, the development of teaching resource library platform design and implementation process. Based on the actual situation of Zaozhuang Vocational College of Science and Technology, this paper makes a comprehensive analysis on the demand of teaching resource management system, establishes a set of teaching resource management system for education teaching in our college, and improves the informatization level of education teaching. This paper analyzes the situation and existing problems of the construction of education teaching resource library in China. Research related technologies required for system development, include Ajax technologies. NET technology, and ADO. NET technology. The demand analysis of the system, the realization of the structural model and functional module are described in detail. The system is used for testing in the Department of Information Engineering of the college. Its functions are normal, and it basically meets the needs of normal teaching and course construction

1. Introduction

With the rapid development of computer network technology and the expansion of application scope, computer network has penetrated into every aspect of people's life. In recent years, China's vocational education has been an unprecedented development, the scale of higher vocational colleges have expanded year by year, the number of students has increased year by year, and the teaching resources are becoming increasingly tense. Faced with such a huge amount of information, how to do a good job of standardization of information management has become one of the key management of colleges and universities. As the main means of the development of educational information, the network puts forward new challenges to the traditional teaching management methods. Education and teaching management has begun to consider and establish a new educational and teaching management platform based on the school network resources, which is not limited by time and space [1]. This makes the daily management of education become an inevitable trend from manual operation to paperless and networked development. Students from the preparatory school to live until graduation, each student's information will be in the admissions office, the city government and the registry file. But because some students drop out or turn professional, and the school teaching management is still in the manual stage, coupled with the departments did not communicate in time, it will lead to some statistical data is inaccurate. Because of the large number of students, the management and query of these data is becoming more and more inconvenient, and it is not conducive to data sharing. Education and teaching management

platform "is a computer network information management system, using the browser / server architecture to construct the information management platform of Daqing technician college daily teaching based on (B/S), remote office, remote office education management school. Meet the school now and in the future of information collection, storage, processing, organization, management and utilization of high demand, information resources integration and sharing, centralized management, unified information resources, in the dean's office, city admissions office and the relevant information is accurate, and the exchange of information, teaching management provides a fast and efficient electronic means, finally to further improve the management level of managers at all levels and work efficiency, reduce the burden of work [2].

2. Key technologies involved in the system

C is dedicated to #. NET object-oriented programming language, which allows programmers to quickly develop various applications. The inherent nature of the NET platform makes it an efficient, secure, and flexible modern programming language. The net platform provides a large number of tools and services that can be used to maximize the development and use of computing and communication capabilities. This is the use of C language can be used to design # component of Web services, it can be called the Internet, it can run in any programming language on any operating system. Using namespace (namespace) in the C # organization program. We can use namespaces as classes, just like a folder that contains files. The Microsoft Corp provides thousands of base classes and users can customize it. If a base class is placed in namespaces, conflicts can be prevented in the name. Because namespaces can reduce errors and reuse code, hierarchical organizations make it easier for program members to spread to another program. When accessing a database in the ASP.NET web page, you need to import the corresponding namespace, which is more convenient to use the ADO.NET class. If you access the server's SQL database, you need to import the following classes in the namespace: system data and customer system.data.sql. Web applications provide dynamic information, which is the architecture of three or more layers of the browser / server (Browser / server, called B / S) structure. Here, the server refers to the Web server and the database server, and all the applications are stored in the Web server, and the client's identity can determine what the browser displays [3]. Through the database server, a large amount of information is allocated on the web server for dynamic management, so that the published information is interactive, dynamic and real-time.

2.1 ASP.NET overview



Fig.1 ASP.NET startup interface

ASP. NET is The NET framework is a Microsoft technology, is a kind of embedded in the pages of the script, through the Internet server server script technology, it can be dynamically created on the Web server again through HTTP file request. Server page active (dynamic server page), running in IIS (information server, Internet service, is the development of Web Windows server) program. ASP. The net is ASP's predecessor, was launched on iis2.0 (Windows NT 3.51), and at the time of the launch of ADO 1, IIS 3 (Windows NT 4) has become the vigorous development of popular development tools in the application server, Microsoft to create a special visualinter Dev development tools, 19942000, ASP technology has become one of the key technologies to promote

the Microsoft Windows NT 4 platform, tens of thousands of this ASP site, began to appear on the network like bamboo shoots after a spring rain. Its simplicity and high degree of customization is one of the reasons for its rapid rise. However, the disadvantages of ASP are emerging: process oriented programming methods make maintenance difficult, especially for large ASP applications. Explanations in VBScript or JScript languages make performance less fully available. Scalability, because the infrastructure is unrestricted, and although COM components are available, some special functions, such as file upload, are not built from the built-in support and need to seek control over the third party controls.

2.2 Database technology

In today's connected world, data and data management system must be provided to the user, to ensure the safety of SQL Server in 2005 users and IT professionals, reduce downtime, improve application performance and scalability, security control more closely to the interests of the. The server SQL 2005 also contains many new and improved features to help the IT team work more effectively. SQL Server to manage and monitor SQL Server relational database, integration services, analysis services, reporting services, notification service, distributed server and database SQL Mobile greatly simplifies the complexity of the management of 2005 by providing an integrated management console. Database administrators can also perform the following tasks: writing and executing queries, looking at server objects, managing objects, monitoring system activity, and viewing online help. The SQL Server management tool set includes a T-SQL, MDX, XMLA, and server, mobile SQL version, and so on, complete the editing and management of the script, the storage process of the development environment. A set of management tools is easily integrated with source code control, at the same time management tool set also includes tools for scheduling server agent SQL operation and maintenance plan, in order to realize the automation of daily maintenance and operation tasks. Management and scripting are integrated into a single tool that has the ability to manage all types of server objects and provides greater productivity for database administrators [4].

2.3 Introduction to B/S architecture

B/S structure (Browser / server / Browser / server mode), web is the rise of a network structure pattern, web browser is the most important application software of client. The model combines client and system functions to implement the key part of the server, simplifying the development, maintenance and use of the system. The client only needs to install a browser (browser, 'bra, Z, 'bra, Z) browser, such as Netscape, Navigator, and Internet Explorer server, which installs SQL, Server, Oracle, and MySQL databases. The browser interacts with the database through the server Web. Because of the various problems existing in the client / server structure, people have proposed an application architecture B/S (Browser / server) model based on the three structure (layer) on the original structure. The browser / server architecture is the rise of the Internet and is an improvement on the client / server architecture. In essence, the browser / server architecture is a client / server structure, it can be seen as the traditional two tier client / server mode and a special case, the development server structure model of three layers client / in Web applications. Easy to maintain and upgrade. At present, the software system is more and more frequent, and the products of B/S architecture are more and more convenient. A slightly larger unit, the system administrator if running in hundreds or even tens of thousands of tens of thousands of computer needs, efficiency and workload is the B/S structure as can be imagined, but the software only needs the management server, all the client browser only, do not need to do any maintenance. Regardless of size, number of branches will not increase the maintenance and upgrade of any workload, all the operation only needs a server; if is remote, only need to connect to the network server can realize remote maintenance, updating and sharing. Therefore, customers are becoming more and more "thin", and the server is becoming more and more "fat", which is the main direction of the development of information technology in the future. In the future, software upgrades and maintenance will become increasingly easy, and the use of it will become increasingly simple, this is the user's manpower, material, time, cost savings is obvious, amazing. Therefore, the way to maintain and upgrade the

revolution is thin clients and fat servers..

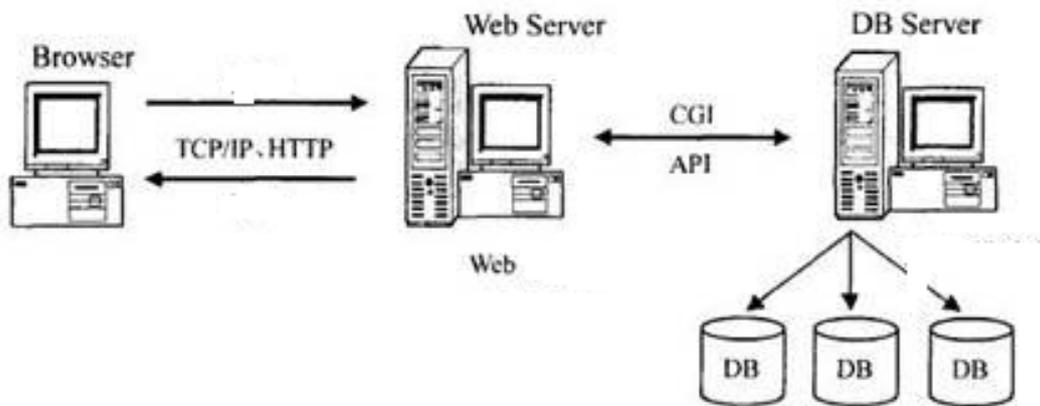


Fig.2 Schematic diagram of B/S architecture

3. System implementation

The three layer structure of the entire business system software is divided into the presentation layer, business logic layer, data access layer, and some even have to carefully, by decomposing the code to spread business details and different functions out of the design and development of the system, there are conducive to the maintenance and expansion system. A hierarchical structure is a solution to a problem. In many cases, development is meant to reuse something common and abstract some abstract layers. If we separate data objects, entities, and methods in order to deliver data to multiple layers, such as models. Some commonly used general auxiliary methods and tools, such as data validation, cache processing, encryption and decryption processing, in order to make each layer between reuse and separate use as separate modules, such as calling the. Each Web application must store more than one setting associated with the application, which is used to run. The Web.config configuration file system that is connected to the database of related information, which is a XML file located in the root directory of the web site. Directory management interface, regcatalog.aspx call, business logic layer, system.cs directory class, directory information management, business logic class access data access layer class, db.cs directory. The directory db.cs class calls the database stored procedure Getsys tab, deletes the directory, updates the directory, inserts the directory, and implements data selection, log query, update, insert and delete operations for database tables [5].

4. Conclusion

The informatization of career education is an important foundation and part of the reform of career education. The construction of professional education resource library is one of the important contents of professional education informatization construction. There is a lack of unified planning for the construction of teaching resource pool in higher vocational colleges in China. The system software construction investment is less, the content is not system; Teacher education information technology and teaching strategy application level is not high, slow development and other problems. This topic elaborates how to use the base. NET architecture, and SQL Server as the background database system, the development of teaching resource library platform design and implementation process. The author participated in the design and development of the system, and learned about software engineering, web design, ASP. NET and other written knowledge are fully applied to the system design and development. Through the selection of the software development environment of the system, the determination of the software architecture, and the testing of the software, a comprehensive understanding and understanding of software engineering knowledge has been gained, and software system development skills have been well exercised and improved.

References

- [1] Shen Renhong. Teaching strategy: the core of remote multimedia teaching [J]. Journal of Chongqing Normal University (PHILOSOPHY AND SOCIAL SCIENCE EDITION). 2009 (05).
- [2] Jiang Yuan. Modern distance education [J]. Teaching Design Research Journal of Higher Correspondence Education (PHILOSOPHY AND SOCIAL SCIENCES) 2009 (05).
- [3] Wang Rulong Liu Chun, Shakespeare sago, and implementation of [J]. computer and information technology class algorithm intelligent college row. 2008 (03).
- [4] Miao Miao. Multimedia teaching technology research [J]. Fujian computer. 2008 (05).
- [5] Zhao Juzhong. Design and development of network courses based on classroom teaching [J]. university laboratory work study. 2008 (01)