



Design A Personalized Network Assisted Music Teaching System According to The Market Demand

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Abstract

The Internet has changed people's lives and set off a storm in the field of education and teaching. According to the needs of the mobile learning market, it is necessary to design an auxiliary teaching system for music courses and apply modern information technology in it. By using ASP.NET technology and ADO.NET technology to develop and design an auxiliary learning system for music teaching, it can help users access and learn music resources while achieving high-quality music teaching standards. The music teaching aided learning system adopts the B/S access mode, and the script language is embedded in its web page. Therefore, as long as the ADO component is used, it can help the user to interact with the system database, and the interaction result can be displayed in the form of ASP. show out. The system test also shows that by developing a personalized music-assisted teaching system, it can improve students' musical literacy and at the same time make music teaching informatization.

Keywords: ASP page; ASP.NET; B / S architecture

1 INTRODUCTION

The development of modern Internet technology has accelerated the process of educational informatization, and using modern information technology to improve and perfect the teaching system is one of the current development goals of colleges and universities, and it is also one of the development trends of Internet learning. The application of modern information technology in the design of the auxiliary teaching system for music courses can effectively meet the requirements of music teaching in the new era. In the design of auxiliary teaching system for music courses, the most important thing is ASP.NET technology. ASP.NET technology, as a programming framework based on a common language, is mainly used in web servers, and applications are built on top of it. At the same time, ASP.NET also provides a unified development model, many of which can help the design of the music course auxiliary teaching system, and because ASP.NET is compatible with ASP, it also provides a music course auxiliary teaching system. The new model enables the program to run stably.[1]

2 KEY TECHNOLOGY

2.1 ASP.NET Technology

The essence of ASP.NET technology is the program architecture built on the general language, but when ASP.NET technology is applied to the web server, the corresponding application can be established and the development model of the program can be provided. [2] And because ASP.NET technology is compatible with ASP, the resulting applications are more stable and adaptable, and can be run in all web applications. [3] The request principle of the ASP.NET technology adopted in the paper is as follows: the www server intercepts user requests, forms the inetinfo.exe process, judges its suffix, and then selects the program according to the configuration. If aspx, the file is called and sent to aspnet_wp.exe. If aspnet_wp.exe, it is called. Class library tool implementation page in net. The specific process is shown in Figure 1.

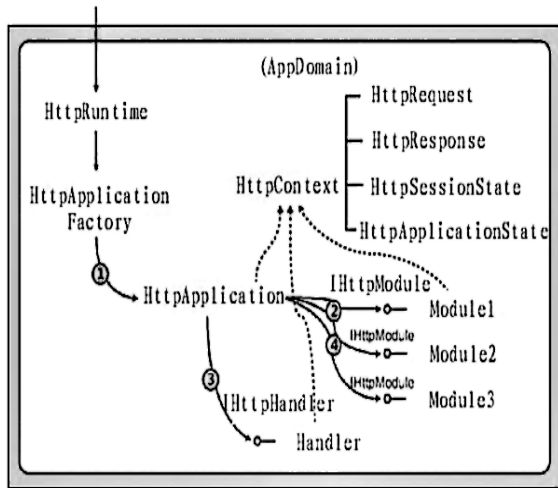


Figure 1. The Aspnet_wp.exe Flow call library

2.2 ADO.NET Technology

As a database access technology, ADO.NET has strong functionality and flexibility, has access to different types of data, and ensures consistency of operations.[4] While ADO.NET mainly uses XML as a data transmission format, and its object model is shown in Figure 2.

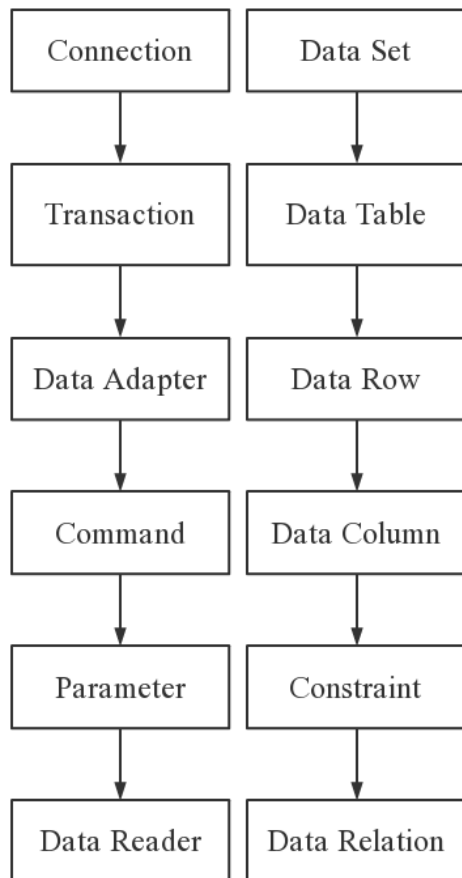


Figure 2. The The ADO.NET object model

3 FUNCTION ANALYSIS OF THE MUSIC-AIDED TEACHING SYSTEM

Combined with the actual situation of the current music course teaching, [5] the use role of the music auxiliary teaching system can be divided into three categories: teachers, students and administrators. This example as shown in the figure below.[6]

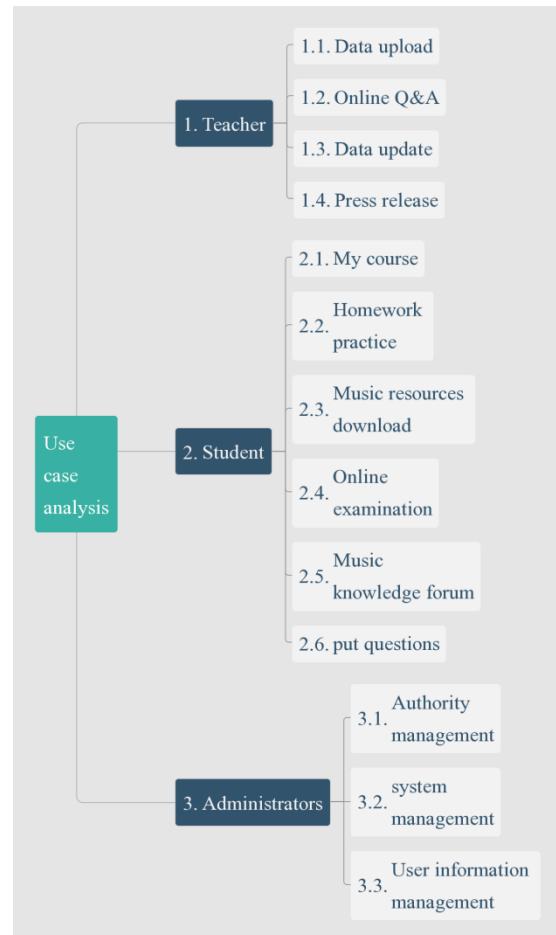


Figure 3. Analysis of the total system use cases

According to the above use case analysis, the system function design can be divided into five modules (as shown in the figure below), namely, [7] information release, document management, teaching resources, auxiliary teaching and system management. Among them, [8] the news release is for all users, and the announcement is only for the system registered users. Document management mainly refers to the system document review, submission, deletion. Teaching resource management includes the management of teaching resources. Auxiliary teaching and system management are aimed at examination courses and system authority.[9]

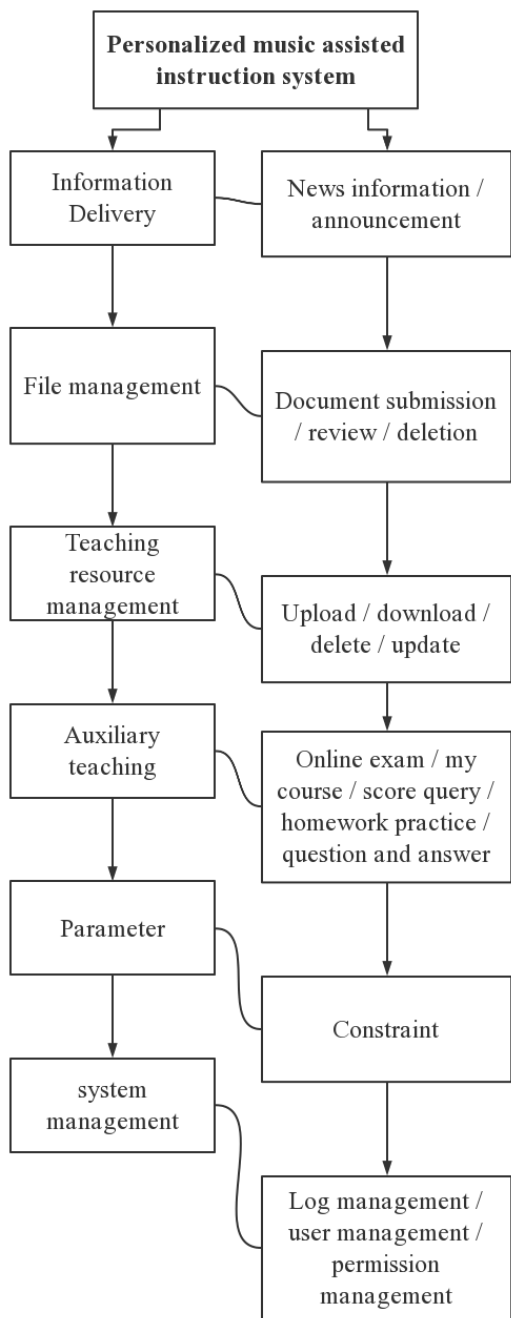


Figure 4. Analysis of the system functional requirements

4 OVERALL SYSTEM ARCHITECTURE DESIGN DECIDE THE SYSTEM

Operation is the system architecture, if the system architecture is not stable,[10] the system operation will be affected by the corresponding factors, and by comparing C / S and B / C mode, B / S mode stands out in the system architecture process,[11] whether from the system maintenance cost or system development cost perspective, B / S mode is the optimal choice.

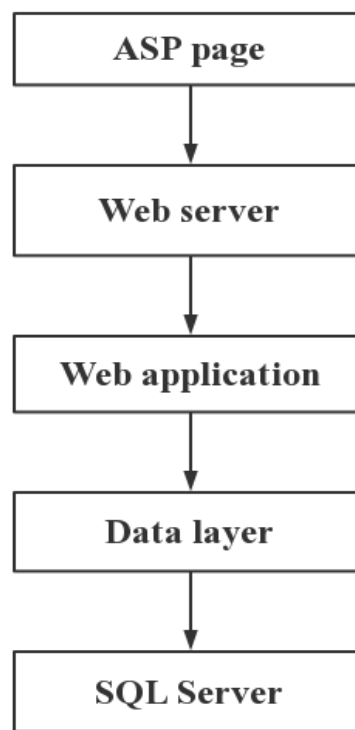


Figure 5. System architecture design

5 DATABASE CONCEPTUAL STRUCTURE DESIGN

The conceptual structure design of the database plays a key role in the system operation. By extracting the data concepts and forming the structure model, [12] the conceptual structure can be designed for the database. In order to realize the development of the relational database and combine the functional requirements of the music-assisted teaching system, the overall E-R relationship diagram is shown below. [13]

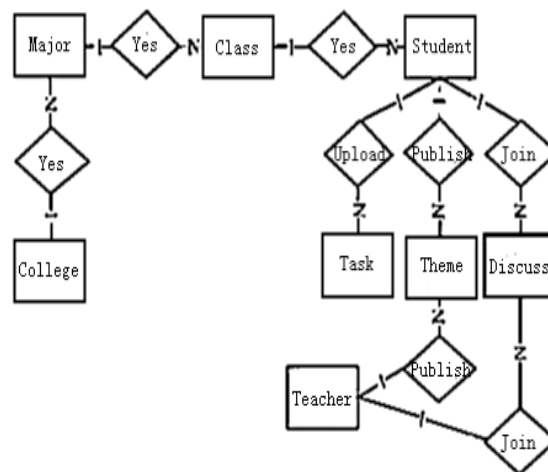


Figure 6. System E-R diagram

6 SYSTEM TESTING

6.1 System development environment deployment

System development and test has certain requirements for the server hardware system, such as the memory should be above 2G, the CPU is Intel 5, and to separately configure data services and application services, the data hard disk needs to improve the rate of data storage according to the way of disk array. When choosing the development tool, the visual studio is dominated.[14]

6.2 System test

System test is mainly divided into performance test, functional test and overall test, taking the login module test as an example. First, you need to enter the user name in the system user box, and enter the user name that does not exist, and then enter the password "123456", then the system will prompt "your operation fails".[15]

7 CONCLUSION

Through ASP.NET+ADO.NET technology, this paper realizes the development of music-assisted teaching system and the browsing of the system by smart phone. Only by building a personalized network-assisted music teaching system can we adapt to the needs of the current music teaching reform, provide students with sufficient learning space, and improve the quality and efficiency of teaching. Next, we need to further study the application of information technology in the design of personalized network-assisted teaching system, and optimize the system performance while ensuring the stable operation of the system.

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