Design and Implementation of College Music Education Teaching Management System

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Abstract: the Wide Application of Network Teaching and Multimedia Technology, Has Brought People Content Vivid, Fast and Convenient Information Transmission, So That Resources Show More Rich and Colorful At the Same Time, Also Put Forward Higher Requirements for Music Multimedia Resources Increasing Music Management, the Large Number of Multimedia Resources, Management Has Become a Serious Problem. Therefore, It is Necessary to Develop a Set of Scientific, Digital, Can Improve Work Efficiency and Management Efficiency, to Adapt to the Needs of the Teaching Reform of the Teaching Media Resources Management System. Music Education Teaching Management System to Achieve the Functions of the Allocation of Resources, So That the Music College Resources Optimization, Teachers, Classrooms, Curriculum, Time Allocation and Rational and Efficient Application, Solve the Music Colleges Resources Shortage, Multi-Level Management Department Status Course Arranging the Difficult Problem of Summary Results. Music Education Teaching Management System Allows Students to File Management and Performance Summary Business More Convenient and Clearer Thinking Process Timely Feedback on Student Achievement and Teaching Information, Teaching Management to Ensure Rapid Implementation, Improve Office Efficiency Registry Teachers. on the Basis of the Overall Design of the System, Divide the Function of the Website Successively, and the Sub Function Module; Then the Design and Implementation of Each Module Can Fulfill Its Function in Each Module of the Results Will Be Integrated into a Complete System. Finally, the Operation Status of the Detection System is Presented.

1. Introduction

With the Penetration of the Concept of Quality Education, General Education, and the Promulgation and Implementation of the Ministry of Education on the Strengthening of Public Art Education in Colleges and Universities, the Art Education in Colleges and Universities in Our Country Has Been Strengthened. under This Background, the Development of Music Education Teaching Management Has Entered a New Stage, and the Management of Music Education in Colleges and Universities is Moving Towards the Goal of Scientific, Standardization and Standardization [1]. Music College Music and Art Education in the Direction of the Curriculum Management, Student Records Management, is Still At the Experimental Stage, the School Music Education, Art Teaching Management, Class Division is Still in a State of Blind. the Scientific and Effective Teaching Management Mode is Very Important for the Establishment of the Music Education Discipline System, the Improvement of Teaching Quality and the Realization of the Education Goal. Effective Music Education Teaching Management is to Improve the Quality of Music Colleges and Universities to Ensure the Quality of Teaching, How to Reform and Improve the Teaching Management Model Has Been an Important Part of Music College Music Teaching Management Research and Exploration. the Teaching Management Mode of Credit System Plays a Very Important Role in the Music Colleges and Universities of Music, Realizing the Interaction between Teaching and Learning, Teaching Management and Teaching Research, and Cultivating the Compound Talents with Social Needs. However, Because of the Current Music Education Teaching Management Mode in Music Colleges is Still in Practice and Exploration, There Are Some Problems in the Running Process. in This Regard, We Should Continue to Improve the

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System through in-Depth Study, Give Full Play to the Role of Music Education Teaching Management Model. This is a Major Issue Facing the Music Education in Colleges and Universities, and is Also a New Field of Teaching Management Theory. Therefore, in Order to Ensure the Music College Student Achievement is True and Accurate, to Minimize the Interference of Human Factors, We Will Design and Implement a Set of College Music Education Teaching Management System, through the Statistic Calculation, Simplified the System Performance Summary Process, and in Accordance with the Unified Accounting Standards, to Ensure That the Objective and Performance Information Justice. and through the College Music Education Teaching Management System to Achieve the Comprehensive Management of Student Records Information, Music Colleges and Universities to Provide a Convenient Tool for Music Education and Teaching Management, Improve Management Efficiency. with the Increasing Demand for the Management of Multimedia Resources, the Number of Multimedia Resources Has Become a Serious Problem. Therefore, to Develop a Set of Scientific, Digital, Can Improve the Work Efficiency and Management Efficiency, to Adapt to the Teaching of Media Resource Management System Needs Teaching Reform of Art Colleges, It is Necessary to the Media Resources Management System as a Resource Management Platform, Provides a Perfect Platform for Resource Management, All Types of Video Data Audio Data, Image Data Storage and Use, on the Platform to Ensure the Information Released At the Same Time, Meet the Users to Upload, Download and Use the Resource Requirements, Meet All Kinds of Information, Delete, Check, Close the Administrator to Send the Request, and the Hardware and Software Resources Assets Management Requirements. through the Call, to the Teachers and the Students and Other Campus Users, Use and Storage of Teaching Media Resources Has Brought Great Convenience, Realize the Efficient Management of Teaching Resources of Art Colleges At Present, with the Rapid Development of the Internet and the Tide of Reform Step Forward: Teaching Media Resources Management Art Colleges Are Facing More Difficult the Challenge. the Traditional Teaching Media Resource Management Mode is Not High, and the Utilization Rate is Low. Relying on Manpower Management Operations, in Some Areas, Time-Consuming Repetitive Efforts, Reform and Development Trends on Higher Education Cannot Meet All the Needs. as a Complex System Engineering, University Teaching Media Resources Management System Should Be Based on the Core Part of the Management Work in the Form of Research; an Important Guarantee to Complete the Tasks and Improve the Quality of Education as a Key University Students, Media Management is the Management of Multimedia Resources, Which Will Enable the University Teaching Media Resources Management System Work Intelligent, More Standardized, More Scientific, More Valuable is the Establishment of Effective Management System of Teaching Resources, Teaching Resources of Digital University. the University Music Education Teaching Management System Integrated Student Records Management, Student Achievement Management, Faculty Curriculum Classes, Class Management System Management and Other Modules, So the Teaching Management System of University Music Education Has a Strong Practical and Advanced. Music Education Teaching Management System in High Transaction Processing Mechanism and Information Management Mode Provides Direct Evaluation Data for Music Educational Management Work, in Order to Improve the Efficiency of Teaching Administration and Provide an Important Reference for Promoting the Reform of University Teaching of Music Class [2]. the University Music Education Teaching Management System to Achieve Unified Identity Authentication, Data Sharing, Music Class of University Educational Administration Work Assistant, University Music Education and the Traditional Teaching Mode Diagram as Shown in Figure 1, the Multimedia Teaching Model of College Music Diagram Shown in Figure 2.



Fig.1 The Sketch Map of Traditional Music Education and Teaching Mode in Colleges and Universities.

Because the Structure of Some Oa and Popular Communication Software is Not Compatible with Each Other, Not Easy to Use, in Accordance with the Teaching of Media Resource Management and the Use of the Requirements, Even If We Have a Certain Number and Size of the Software, But Because Some Users of Traditional Office Automation Software, Lack of Interest and Sense of Dependence, So That Resource Management Application the Traditional Way is Very Difficult. This is Why a Lot of College Computer Management Center is Equipped with a Large Number of Manpower, But the Actual Effect of Management is Very Small, with the Development of Computer Technology to the Management of Constantly Updated, Teaching Media Resources Management System in Accordance with the Actual Situation of Our School's Teaching is to Establish Efficient Media Resource Management is Very Important. the Wide Application of Network Teaching and Multimedia Technology, Has Brought People Content Vivid, Fast and Convenient Information Transmission, So That Resources Show More Rich and Colorful At the Same Time, Also Put Forward Higher Requirements for the Management of Multimedia Resources is Increasing, the Large Number of Multimedia Resources, Management is Increasingly Becoming a Serious the Problem. Therefore, It is Necessary to Develop a Set of Scientific, Digital, Can Improve Work Efficiency and Management Efficiency, to Adapt to the Needs of the Teaching Reform of the Teaching Media Resources Management System. Based on the Analysis of the Overall Requirements of the College Music Education Management System, This Paper Puts Forward the Framework of the System. after That, the Detailed Module Design and Database Design Are Carried out in the Framework of the Architecture. through the Relationship between the Core Business Class and the Core Business Objects, Each Module is Described in the Form of Time Series. Completion of College Music Education Teaching Management System to Achieve the Process, in the Realization of the Key Technologies and Methods Used in the Description of the System Involved in the Key Modules Are Also Displayed. in Addition, the Test System is Used to Test the Music Education Teaching Management System in Colleges and Universities [3].



Fig.2 Schematic Diagram of the Multimedia Teaching Model of College Music.

2. Key Technologies Involved in the System

2.1 Introduction and Design of Mvc Framework

MVC full name is Model View Controller (model) is the model view controller (view) -(controller) abbreviation, a software design model, a business logic and data display interface, tissue isolation method code, business logic will be gathered in a component inside, and improvement in interface and customization user interaction at the same time, do not need to write business logic. MVC is uniquely developed to map the traditional input, processing, and output functions in a logical graphical user interface. MVC is present in desktop applications, M refers to the business model, V refers to the user interface, C controller is used, and the purpose of MVC is to achieve code separation of M and V, so that a program can use different forms of expression. For example, a group of statistical data can be used respectively, histogram, pie chart to express. The purpose of C is to ensure that the synchronization of M and V, once the M changes, V should be synchronized update. A view is an interface that users see and interact with. For the old Web application, the view is composed of a HTML element in the new interface, Web application, HTML is still in the view plays an important role, but some new technology including Adobe Flash and they emerge in an endless stream, like XHTML, XML/XSL, WML and Web services.MVC and some other mark-up language is good it can deal with many different views for the application. There is no real processing in the view, whether the data is stored online or an employee list, as the view, it is just as a way to output data and allow users to manipulate. Enterprise data and business rules. In the three parts of MVC, the model has the most processing tasks. For example, it may be used to handle the database such as EJBs and ColdFusion Components component object, model the data returned is neutral, that is the model and data format independent, such a model can provide data for multiple views, as applied to the model code only write once can be reused multiple views so, to reduce duplication of code. The controller accepts the user's input and invokes model and view to accomplish the user's requirement, so when you click the Web page hyperlink and send the HTML form, the controller itself does not output anything and do anything. It simply receives the request and decides which model component to process the request, and then determines which view to display the returned data. The framework, the design model of the two concepts are always confused, in fact, there is still a difference between them. The framework is usually code reuse, and the design pattern is design reuse, architecture is between the two parts, part of the code reuse, part of the design reuse, and sometimes analysis can also be reused. There are three levels of reuse in

software production: internal reuse, i.e. in the same application can use the public abstract block; code reuse, is universal modules into a library or tool set can be used for multiple applications and in the field; application framework reuse, which provides general or ready-made basis structure for the special field, in order to obtain the highest level of reuse. Although the framework and design patterns are similar, they are fundamentally different. Design pattern is to appear repeatedly in some environment problems and describe the solution to solve this problem, it is more abstract framework; framework can be expressed in code, can be directly executed or on mode multiplexing, only instance to use code representation; design pattern is smaller than the frame elements, one or more design patterns often contain a frame, the frame is always for a particular application, but the same pattern can be suitable for various applications. It can be said that the framework is software, and the design model is the knowledge of software [4]. The model is self - contained and is separated from the controller and view, so it is easy to change the data layer and business rules of the application. If the database is transplanted from MySQL to Oracle, or change the data source based on RDBMS to LDAP, just change the model. Once the model is correctly implemented, the view will be displayed correctly, regardless of the data from the database or the LDAP server. Because the three parts of the application of MVC are independent of each other, and one of them will not affect the other two, it can be used to construct a good loose coupling component. In the framework of the ASP.NET MVC did not own control, the page shows the full back to write HTML code era. Fortunately, in the ASP.Net MVC framework also comes with HtmlHelper and UrlHelper two help classes. Also in the MvcContrib expansion project has extended some help, so that we not only can only use the full HTML program to display the page, you can use these to help the class to complete, but in the end still have to run HTML code generation, MVC frame structure diagram as shown in Figure 3.



Fig.3 Schematic Diagram of Mvc Frame Structure.

2.2 Analysis and Design of J2ee Framework

J2EE is a completely different from the traditional application of the development of technical architecture, including many components, mainly to simplify and standardize the development and deployment of application systems, and thus improve the portability, security and reuse value. J2EE is a set of core technical specifications and guidelines, which contains various components, service architecture and technical level, common standards and specifications are made between different platforms, all based on the J2EE architecture, there is a good compatibility between enterprises to solve the past the back-end information products are not compatible with each other, inside or

outside the enterprise to communicate the dilemma. The difference between the J2EE component and the "standard" Java class is that it is assembled in a J2EE application, with a fixed format and compliance with the J2EE specification, which is managed by the J2EE server. The J2EE specification is defined as J2EE components: the client application and the applet is running on the client components; Java Servlet and Java Server Pages (JSP) is a Web component running on the server; Enterprise Java Bean (EJB) component is a business component running on the server. It is very important to make use of the existing enterprise information system investment rather than to develop the overall plan because the enterprise must adapt to the new business demand. In this way, a gradual (rather than radical, completely negative) way to build on the existing system on the server side platform mechanism is required by the company. J2EE architecture can take full advantage of the user's original investment, such as some companies use BEA Tuxedo, IBM CICS, IBM Encina, Inprise VisiBroker and Netscape Application Server. This has become possible because J2EE has a wide range of industry support and a number of important 'Enterprise Computing' areas of supplier involvement. Each vendor provides an upgrade path for existing customers without the use of existing investments into the portable J2EE domain. Since the J2EE based products can be run on almost any operating system and hardware configuration, the existing operating system and hardware can also be retained. J2EE is able to develop portable programs deployed in heterogeneous environments. J2EE based applications do not rely on any specific operating system, middleware, hardware. Therefore, a reasonable design of the J2EE based on the development of the program can be deployed on a variety of platforms. This is very important in a typical heterogeneous enterprise computing environment. J2EE standard also allows customers to order J2EE compatible third party off the shelf components, to deploy them to a heterogeneous environment, saving the cost of the entire program by themselves [5]. A server platform must be able to operate all day to meet the needs of the company's customers and partners. Because INTERNET is global and ubiquitous, it can cause serious damage even if it is scheduled to stop at night. If the accident shutdown, it will have disastrous consequences. J2EE is deployed to a reliable operating environment that supports long-term availability. Some J2EE deployed in the WINDOWS environment, customers can also choose a robust (stability) better operating system such as Sun Solaris, IBM OS/390. The best robust operating system can achieve 99.999% availability or just 5 minutes of downtime per year. This is an ideal choice for real-time business systems. J2EE Management (Transaction Management) model allows you to specify the relationship between all methods of the formation of a transaction between, so that all the methods in a transaction are treated as a single unit. When enterprise bean activation in the client, the container involved in a management affairs. Because there is a container managed transaction, it is not necessary to encode the boundaries of transactions in enterprise bean. The code required to control distributed transactions can be very complex. You only need to declare the transaction properties of enterprise bean in the layout description file, rather than writing and debugging complex code. The container will read this file and handle the transaction for this enterprise bean for you. JNDI addressing (JNDI Lookup) services provide a unified interface to multiple names and directory services within an enterprise, so that application components can access the name and directory services. The Web container manages the execution of JSP pages and Servlet components in all J2EE applications. Web components and their containers are running on the J2EE server. The application client container manages the execution of the application client component in all J2EE applications. Application clients and their containers run on the J2EE server. The Applet container is a combination of the web browser and the Java plug-in that runs on the client machine, as shown in Figure 4 of the J2EE framework. J2EE uses a multi-layer distributed application model, the application logic is divided into components according to functions, and each application component is distributed on different machines according to their layers. In fact, sun J2EE design of the original intention was to address the two layer model (client/server) of the drawbacks in the traditional mode, the client is bloated play too much role, in this mode, the first deployment time is relatively easy, but difficult to upgrade or improve the extensibility and is not ideal. Often based on a proprietary protocol, usually in a database protocol. It makes it very difficult to reuse business logic and interface logic.



Fig.4 Schematic Diagram of J2ee Frame Structure.

2.3 Analysis and Design of B/s Model

B/S structure (Browser / server mode), is a WEB after the rise of a network structure model, WEB browser is the most important client application software. This model unifies the client, and the core part of the system function is realized on the server, which simplifies the development, maintenance and use of the system. The client just install a browser (Browser ['bra Z. ['bra Z]] the), such as Netscape Navigator or Internet Explorer, SQL Server, Oracle server installation and MYSQL database. The browser interacts with the database by Web Server. Because of the various problems of Client/Server structure, people have put forward a kind of application system structure browser / server (Browser/Server) structure with three layers mode (3-Tier) on the basis of it. With the rise of the Internet, the Browser/Server structure is an improvement to the Client/Server structure. In essence, the Browser/Server structure is a Client/Server structure; it can be regarded as a special case of application of a model consists of two layers of Client/Server structure and the development of the traditional mode of three layers Client/Server structure on Web. Browser/Server structure is mainly used to mature Web browser technology: combining multiple browser scripting language and ActiveX technology, using a standard web browser to achieve the original need powerful special software to realize the complexity, while saving development costs [6]. The biggest advantage of B/S is that you can operate anywhere without installing any special software, as long as there is a computer can access the Internet, the client zero installation, zero maintenance. System expansion is very easy. More and more use of B/S structure, especially by the demand to promote the development of AJAX technology, the program can also carry on partial processing on the client computer, thus greatly reduce the burden on the server; and to increase the interactivity, can carry on the partial refresh. Simple maintenance and upgrade. At present, the improvement and upgrading of the software system is more and more frequent, and the products of the B/S architecture are obviously more convenient. On a slightly larger unit, system managers if needed in the hundreds or even thousands of computer running back and forth between efficiency and workload is, as can be imagined, but only need B/S software management server on the line, all the client browser only, this need not do any maintenance. Regardless of size, number of branch will not increase any maintenance workload, all the operation only for the server; if it is remote, only need to connect server network can realize the maintenance, upgrading and remote sharing. So more and more thin client, and the server more fat is the mainstream direction of the future development of information technology. In the future, software upgrades and maintenance will be easier and easier to use, which is the user's human, material, time, cost savings is obvious, amazing. Therefore, the maintenance and upgrade of the revolution is the "thin" client, "fat" server. As we all know, windows on the desktop almost dominate the world, the browser has become a standard

configuration, but in the server operating system windows is not in absolute dominance. The current trend is where the use of B/S architecture application management software, just install on the Linux server can be, and high security. So the server operating system is the choice of many, no matter which kind of operating system can make most people use windows as a desktop computer operating system is not affected, which makes the most popular free Linux operating system developed rapidly, in addition to the Linux operating system is free, even the database is free of charge, the choice is very popular. Because the structure is no longer needed special client software, so the technical maintenance personnel from the heavy installation, configuration and upgrade and maintenance work freed, can focus on the server program update work. At the same time, the use of Web browser as the client software, user-friendly, the new system does not require users to learn from scratch every time. Moreover, the three layer model, the layer and the layer is independent of each other, the change of any layer does not affect the other layers of the original function, so the use of different manufacturers of products to form a better system performance. In short, Browser/Server three layer structure model to make up for the defects of Client/Server two layer structure mode of the traditional fundamentally, is a profound change in application system, B/S mode structure diagram as shown in Figure 5. One of the most basic requirements of the OA system for Office software is the ability to embed the browser. Usually the OA system is used for the Java system, through the Applet can seamlessly run in the browser, with document templates apply, mark keeping, document domain, electronic signature and other commonly used functions, and can realize the function substitution in the OA system. Either the JSP or ASP page can call the Applet method by JavaScript, through the Applet method and then call the Evermore Integrated Office API Office to complete the operation. For the OA system based on J2EE architecture, embedded and call Evermore Integrated Office is like a duck, very convenient. Remote monitoring system platform based on J2ee B/S structure, through the WEB way to provide human-computer interaction interface, convenient for remote maintenance and upgrading of the system, convenient for users to log on to the system platform anytime, anywhere. The only one set of center hardware and software, and the center of less investment in equipment, remote maintenance convenient, especially suitable for the provincial or municipal network, is also suitable for networking in a single city and industry projects. Under the support of national policy transactionoffirenetworking develops quickly, the scale of the system will be more and more, in order to adapt to the rapid development of fire control system, the whole system is required to continuously complete the upgrade of the system use case. Our products in the design, the main server and network equipment using modular structure, the hardware platform can be modular assembly. The platform products provide a good type of business expansion and the expansion of business scale, to ensure that the system can quickly and easily introduce new hardware and software system, can increase the volume of business services and dynamic deployment of computer to improve the processing capacity of the system.



Fig.5 Schematic Diagram of B/s Mode Structure.

3. System Requirements Analysis and Design

3.1 System Requirements Analysis

According to the business process, we need to divide the website into foreground, background and database. The structural design of the media resource management system includes the basic operations such as adding, modifying, deleting, querying, statistics, sorting and printing. Foreground contains more modules, and different types. It can be designed to optimize the structure of the form to facilitate access to the information needed. The design of the structure of the front of the form, but also for the preparation of the program behind the framework. The system is divided into functional modules, and modules to achieve the design is based on the structure of the. The background of the system is mainly used to manage the information and data of the whole website. The information displayed on the front desk should be maintained in the background. In this way, in addition to the design of the background management interface, in order to facilitate the work of the administrator, you can interface to the management of a page. Therefore, each management interface will serve as the main management interface branch. After designing the structure of the foreground and background of the website, the database is added to the structure [7]. The background will update the data written to the database, and then the database will be taken out of the database and display. The teaching management system of music education college education and teaching management can be said to be a comprehensive system, it integrates the student records management, student achievement management, faculty curriculum classes, class management system management and other modules, so the college music education teaching management system has strong practical and advanced. Music education teaching management is the core work of music colleges and universities. Music education teaching management system is a typical database application, covering the various functional components of the music class teaching management business, from the class division management, information query, file finishing course application development, and other aspects of the formation of a summary of results of management mode, the full support of the wide area network office mode music class the music class, can greatly reduce the manual labor of educational administration in Colleges and universities. The analysis of the functional requirements is as follows: the dean of the academic affairs office has passed the authentication to the rear window. The main window of the system to provide users with five functions to choose class management, student records management, curriculum management, performance management. According to the system architecture, reasonable planning function demand analysis technology and system architecture, improve the music college music education, art training, educational administration management level, has a significant effect on training to improve the overall quality of talent to build high brand music colleges has far-reaching significance. Music education teaching management system in high transaction processing mechanism and information management mode provides direct evaluation data for music educational management work, in order to improve the efficiency of teaching administration and provide an important reference for promoting the reform of university teaching of music class. The college music education and teaching management system to achieve a unified identity authentication, data sharing, music colleges and universities is an effective assistant. The main task of the system management module is to maintain the normal operation of college music education management system and important data security settings, including new users, modify the login password, re login, etc. In addition the system management includes the basic information management education and teaching management, mainly including faculty, professional and other basic information to add, modify, delete, query, the system administrator is the basis for the use of the system in each module according to the basic information, mainly on the teaching management system of University Music Education faculty, classes and data dictionary information are described. System management, use case intention as shown in Figure 6, the main users of the system management role is a system administrator, have add delete and modify the basic information of the specific rights. The system uses a unified identity authentication, the user login system with different identity, only to see the identity of the corresponding function. The function of this module

is to realize the class management of university school music class management work, including the division of the class to add, query, this function modules depend on each other, to complete the management of university music class. The main functions of the music class of College Students' personal information management work of the student file management function, including students to modify personal information, registry teacher's management files, registry teachers of school management and other functions, and basic situation of the school's rapid inquiry and understanding of music college management is convenient. Among them, the basic information, file information, student status information management refers to the information to add, modify, delete, query. Set up the curriculum management module of music colleges for each class, the selection can be set to music and art teaching various courses of the curriculum management module, to facilitate the music class teaching material management department and Dean of the teaching management staff. This module includes the curriculum table, the initialization of classroom resources and classes and other functions.



Fig.6 System Management Use Case Diagram.

3.2 System Scheme Design

Because this system is a comprehensive system of music education in Colleges and universities teaching management, the basic model of design target management system in the teaching of music education will eventually complete music colleges located in the main business. For the college music education teaching management system is a comprehensive system of music class management of university students, the educational management system for music colleges, according to the business process, need to be divided into foreground, background and website database. The structural design of the media resource management system includes the basic operations such as adding, modifying, deleting, querying, statistics, sorting and printing. Foreground contains more modules, and different types. It can be designed to optimize the structure of the form to facilitate access to the information needed. The design of the structure of the front of the form, but also for the preparation of the program behind the framework. The system is divided into functional modules, and modules to achieve the design is based on the structure of the. The background of the system is mainly used to manage the information and data of the whole website [8]. The information displayed on the front desk should be maintained in the background. In this way, in addition to the design of the background management interface, in order to facilitate the work of the administrator, you can interface to the management of a page. Therefore, each management interface will serve as the main management interface branch. After designing the structure of the foreground and background of the website, the database is added to the structure. The background will update the data written to the database, and then the database will be taken out of the database and display. The architecture of the Internet and web applications. The Internet application, the application node browser running this kind of node can be called browser; database node database management system and database storage will remain unchanged, so it is still known as the database server. Client / server network nodes and data nodes all over the world, and to establish a link between the global application nodes and data nodes, a specialized interface node called a network node. With the deepening of reform, school education, school scale continues to expand, the original manual management is not only the workload and efficiency is not satisfactory. Therefore, the traditional school management methods cannot meet the needs of the development of colleges and universities. With the further development of educational reform, the educational administrative department will be asked to provide more information. This requires the use of scientific methods to manage academic information. The emergence of modern information technology and network technology and the development of the modernization of education management, the introduction of a new definition of the use of information technology and network technology, has changed the traditional mode of teaching media resources management, is the inevitable trend of educational development. To establish a set of perfect teaching media resources management system, teaching management can not only greatly improve work efficiency, and the establishment of a complete set of information database, and other management information system closely, relaxed, structured, accurately complete the teaching management work of the whole school. UML is a powerful visual language, analysis of object oriented system, it uses a mature modelling technique, is widely applied in various fields, various models of it can help developers better understand business processes, establish a more reliable, more perfect system model, users and developers description of the problem, in order to achieve consistent understanding, in order to reduce the semantic differences, to ensure the correctness of the analysis. This paper uses the teaching media resources management system modelling UML, teaching media resource management system is complex, a visual representation of simple and clear graphics, design and development of educational management system, to provide the necessary reference model, business logic processing flow diagram as shown in Figure 7, the Department of teaching management and students can get by Chengdu University radio, any level of teachers teaching media resources management system for film and television school, system administrator of the system can be very flexible and rapid assessment of these data collection, statistical analysis, sorting, and the conclusion of the assessment results[9]. The system administrator port, the administrator gives important information in a timely manner. Managers should always pay attention to maintaining the media data processing, including data and information to add, delete, modify, and audit. The large amount of data stored in the database is directly shared by the system, but for many users, the performance of the database system is a valuable resource for the effectiveness of information system security protection measures.



Fig.7 Schematic Diagram of System Business Logic Processing.

3.3 System Function Module Design

The registration function module is used to enter, delete, modify user registration information and submit the application for registration. When the user first login first to register on the website to become a member, users can upload, download, search on the web media resources, basic information must fill in the registration page for some users, such as user name, password, telephone number and other information. Conditional deletion of data can be combined through multimedia data resources in various fields. The data can be freely chosen for the media type, and the radio can also choose or select. Can not only delete the database record level data; you can delete the server side of the corresponding multimedia resource data. When the user first login first to register on the website, users can become a member in the shopping site, the basic information of the registration page must fill in some users, such as user name, password, telephone number and other information. User login window is set on the home page, mainly used to receive user input user name and password. Click "register" button, will be submitted to the user/index.htm page; click "login" button, the system will enter the username and password verification, if there is a user name and password data in the table shows the successful landing, and return to the home page, otherwise the error message. In the process of designing the module function of the system, in order to make the designed function module work well, there must be a large number of internal data function modules. This means that a perfect database plays an important role, in other words, the database design is a key technology, which directly affects the establishment of database and its application system can be built successfully. The work flow difference between the human brain and the computer work flow is: the human brain in the understanding of things experienced when the objective things reflected in the human brain, the brain of the thing analysis, definition, classification and a series of procedures after entering into the information world. The information in the computer world, it is the objective information about things from the reality, through the database, information stored in the database according to the analysis, finally displayed in the real world [10]. The design of the database in a particular hardware environment or database management information system environment, according to the principle of software engineering, created a database model, and the establishment of a database that stores data and its application to meet the needs of different types of different types of users (such as: the information requirements and processing requirements). In the field of database, we often use the database system as the database application system. Users in the use of the system, the user needs to input the operation, the system immediately mobilize the corresponding modules and databases to meet the needs of users. Simply speaking, the whole system of business process is instructions issued by the user, so a process system receives user commands and transfer module and the database corresponding to complete user instructions. The input course management module is based on the learning plan of each school year, combined with the actual situation of the school, teachers and students. In the whole design process, the use of visual design tools to make graphical user interface programming becomes very simple. The use of visual tools in the interface to draw a graphical interface, in order to see and get, the system automatically generates the interface code, and there is no need to do these interface generation program code. The application of interface management system of music education and teaching of colleges and universities is integrated with the core functions of music colleges, the music colleges from the class management, student records management, curriculum management, performance management and other system specific functions, in addition, in the system management module can ensure the security of the system. The teacher can use the user name and password to log in, through the identification of the identity of the music education and management system into the corresponding function of the operating interface, otherwise not allowed to enter. Authority management is an important support module system management; users are assigned different roles in the system of rights management relationship between the system roles and resources of the corresponding well when users log in different roles for the different functions of the operating system. The design uses the mechanism of resource, role and user three levels of management, flexible for the user to specify the role, for the role of the designated access to resources, so that the user's permission to become configurable.

4. System Implementation and Testing

The role of the maintenance process, users have permission to add new roles, modify the current role, delete the existing role selection function module, system of request processing, after processing the results back to the role of maintaining the display page. Class query implementation process, you can first select the query conditions, and then click on the query to send a query request. Class control system to receive the user query conditions, query database corresponding to the class information. After the query to determine whether there is a corresponding record, the page shows the results of the class query. When the new school, after the completion of the new school enrolment, the page through the JavaScript page form data validation. Send a new request after the correct format. Students file management system to control the class receives form student data, the same record exists in the database to determine if there is need to fill in, otherwise, will form the corresponding data to the data, the status information of new operating results return value display page, and learn new information from close request. The basic maintenance of the course is mainly by the school administrators and school administrators to maintain the curriculum, including ads, delete, modify, query courses. School administrators can maintain the entire school curriculum, the school administrators to maintain their respective courses. The course information query process, choose to delete the course information sent after the request to delete the list of programs, the system should be removed according to the course of receiving primary key success tips delete results, operation results show that the page closed after deleting instructions. The goal of the music education management system in Colleges and universities is to implement the program in order to find out the errors in the program. In the teaching of music education in Colleges and universities management system of this test, it is also the purpose of system testing based on test, a test that is not to prove the design and implementation of the system is no loophole, but to find some problems in the system, in order to deal with these problems better, so the teaching management system of university music education development, to meet the needs of college music class. In the testing of this system, is the use of white box testing to design test cases, during the test, because the conditions, not all in accordance with the test rules by the third party testing, design process and testing method by writing. The testing of each module assembled into a complete system is called system testing [11]. The design process of testing system, encoding the existence of dynamic characteristics of detecting system error detection meet predetermined requirements, system function, software design process to meet user needs and systems widely exist in problem in error, or the user needs to itself is a problem. A complete system is not working independently. He needs a combination of system testing and system testing, through the coordination and management of the system to complete the final test of the system called integration testing. The acceptance test is the last test operation before the software is deployed. The purpose of the acceptance test is to ensure that the software is ready, and that the end user can use it to perform the functions and tasks of the software. The acceptance test is divided into: Alpha test and Beta test, to the user experience, experience the detection results through the above test, this system in the user login, information management, information query, class selection, scheduling and many other operations are in accordance with the previous idea of operation, realize the development of target management the system of teaching music education in Colleges and universities. The main test is whether the system meets the original design concept. In the test, each functional module is accord with the specific needs of various users for the task of operating tests for each function module; the final result is the final result of the test and the expected results in the same system login interface diagram as shown in Figure 8.

Ointonoo	2
priveres	6
Email	
Password	
Login	1
Forgot your password?	

Fig.8 Schematic Diagram of the System Login Interface.

5. Conclusion

This system uses the principle of software engineering, through the system requirements analysis, system design and detailed design, system implementation and testing, completed the college music education teaching management system. In the course of the development of music education and management system in Colleges and universities, the system is developed according to the steps of the system development. The system inside the realization of teaching management function, its friendly interface, more perfect function, use convenient, safe and efficient, can make the information of student records, scores sharing, registry teachers make summary of the work automation, improve the efficiency of college music office. This system has the advantages of simple operation, easy to learn, easy to understand, easy to master, and friendly interface, the system is stable, fast, relative to the ground traditional teaching resources management system is to improve the work efficiency, reduce the presence of errors. JSP designed by the system, fully embodies the powerful features of JSP, and its high practical value. Its interface is simple and intuitive, so that it is easy to operate; even if the computer is not strong staff can easily get started. In general, the system is more practical, can meet the needs of academic staff, teachers and students of the three requirements, at the same time, the system of each subsystem in the versatility and maintainability also reflects their own background database management system of the respective advantages.

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