Abstract: With the continuous development of China's artistic creation, type and number of college students and the creation of works of art exhibits increasing, management is also increasing, only the use of advanced management tools and methods, the use of information technology integration, in order to implement the whole process of scientific and standardized management of the exhibits, the exhibits quality, data security, the implementation of effective monitoring to reduce the demand of the exhibits, exhibits the risk, realize the sharing of resources of the user exhibits. In fact, these works regardless of the school, teachers, and students have a lot of useful value, so this issue is to solve this problem, the design of architectural art online display platform. In this way, schools can promote research the school achievement, teachers can guide students to promote their grades, students can show their work, promote exchanges between students, promote students interest in writing. This system uses the platform development technology based on J2EE, using the Struts framework technology, combined with JSP technology, the foreground and background, using SQL Server 2012 as the database server, this system adopts B/S mode, using MVC model, the students of the architectural works of art, through image processing the collected and processing, and then stored in the database, after the call, the display on the page. This system is developed based on My Eclipse, written by java language code, at the same time the front page is written by JSP technology, web technology will use the combination of the front page can access and related operation of the construction works of art information in the database, after the end of system development, the system will be deployed on the server so, the system can access in the browser. This paper through the requirements analysis, feasibility analysis, and the system is divided into foreground and background display management mode, to determine the system's design principles, development environment, research methods, described in detail the design and implementation of system in after system development, unit testing and integration testing was carried out on the system. The system can run normally, finally completed and implementation of construction works of art online display system design. The development and use of the system, to solve our school do not have their own construction works of art history online display platform, one hand to facilitate the school management of large construction works of art exhibition, on the other hand, promote the students' creative passion. The development and use of the system, a wealth of exhibits management mode, the display of the exhibits and exhibition management, improve the maintenance efficiency and reduce the cost of expenditure. In the use of the system, the system can be used to organize the exhibition and reuse, reduce the layout of the exhibition hall, save the occupation of public space, save a lot of manpower and material resources. By displaying different types and forms of exhibits, the sharing of resources, data management and real time communication of art works are realized. To achieve the art exhibits at any time and place through the platform, breaking the limitations of time and space, and from the perspective of security and loss to better protect the original works.

Keywords: architectural art works; online display system; J2EE technology; MVC architecture; system design

1. Introduction

The rapid development of modern society, driven by the rapid development of the construction industry, which is engaged in the architectural design are also gradually increased, especially in the universities, there are many teachers and students engaged in research on architectural design. In this process, it will be very natural to produce a lot of architectural works of art. Students in this need to hand in their homework or the exchange of students, as well as teachers and students of the construction of art works to the whole school or the whole society of the show. At this time, students have to do their own work, and then sent to the teacher marking, the communication between students, also can bring heavy work [1]. In particular, if the school is organizing large-scale construction works of art exhibition, the school will have to design good site, good service, and then organize the layout of the venue, teachers and students also had to put his architectural works of art are ready, and then into the site for people to visit. This to all aspects of personnel inconvenience, and the scope of the impact is not great, the effect is not very good, so it is proposed to give teachers and students to design a building art works online display platform. In the rapid development of computer technology, web technology processes, application of image and graphics technology, so that it can be moved to the line under construction works of art line, through the early works collection, use of graphics technology, and give each piece of work with the relevant description, can also be a voice, also or video, so upload the information to the construction works of art platform, realizes to display online, which greatly improves the interaction between teachers and students, exchanges, of course, schools can also use this platform to open the exhibition or open competition, so as to improve the efficiency of various aspects, convenient everyone. With the continuous progress, forming and application of Internet technology and multimedia video technology, Web is widely applied; the network has become an important part of our education, a number of Industrial Science and technology, finance, culture etc. The Internet includes information from text, audio and video, images and other types of information, providing a platform for all kinds of users with practical application and value. Online display system as an important part of network application of works of art, is intuitive, convenient to use and rich forms, it realizes the information directly and efficiently transfer, with gradually understanding and concern people display technology and application of the online application and development, it is also more widely and rapidly. In addition, it is a very important way for people to obtain information resources, to facilitate the majority of network users, so that people can cross the boundaries of time and space to share a large number of information resources. In recent years, with the development of Internet technology [2], the exchange of human information from a single media transition to the development of multimedia and multimedia real-time transmission, and there have been many streaming media technology and software platform, real-time multimedia conferencing system, VOD system, remote education system and remote medical system, such as real-time virtual environment system the multimedia playback and application system. Streaming media is a kind of real-time transmission of audio and video based on broadband technology, with the rapid development of China's broadband network, especially recently making relevant "12th Five-Year" plan, being studied to determine the objectives, policies and measures of broadband development, the government is actively recommended into the national strategic level to promote broadband network infrastructure, are constantly upgrading and the increase of network bandwidth, provides a good supporting platform for improving the transmission of multimedia data. The schematic diagram of the online exhibition system of architectural art works is shown in Figure 1. Architectural art works online display platform is based on Web application technology, web technology is currently based on the rapid development of the application, so that the traditional application areas have begun to apply this technology to re-design and development. At present, the application of this aspect abroad has been mature, and it has been applied in various fields, and it is more systematic, more perfect and more professional. Compared with the domestic, there are some works of art online display platform, basically achieved a similar display function, received a certain effect. However, compared to the national institutions of higher learning, most of these colleges and universities have not their own display platform. In universities, there are a lot of course design and extracurricular practice, contests and other works, including works of art, which requires schools to organize some shows, to complete these works show, in this process, requires the approval of
the school, arrange the exhibition site and some other related matters, and special personnel to the exhibition in the exhibition, after the work is very difficult to continue to survive, but also not conducive to long-term development, in this regard, the need for such an online platform to complete the task.

In view of the art works of various colleges and universities show the way, not only time-consuming and laborious, but also cannot guarantee the safety of the works. Therefore, it is necessary to design a construction works of art online display platform, but also various colleges and universities to exhibit the development trend, so universities to bring new vitality, help teachers and students of the creation, and help the school publicity, so after the mature will help colleges and universities in the country to promote the application. And how to set up an online for more and more diverse forms of artistic works, unified, convenient browsing works has certain protection function works display system has become a key problem to face in our work. From the influence of the development of new media technology on Colleges and universities, will integrate the writings, photos, video works scanned, creation, animation creation, creation of songs such as a variety of works forms of media to a unified platform for online display, is a new field of contemporary universities actively explore. From the point of view of property rights protection information, streaming media technology applied to the comprehensive works display platform[3], the user cannot download the network media files, not free to spread the creative art unique content, the media for information property rights can play a certain role in the protection of security. At the same time the rapid development and extensive use of information technology has quietly changed people's reading habits. As the active thinking, innovation and leading the frontiers of knowledge, teachers and students of information especially the multimedia information needs more and more, the homes will be able to browse to the online school outstanding works, everyone holds a positive attitude and look deeply and accept such a system early on the line. With the development of modern science and technology, the application of digital display technology will be ubiquitous; the application of network video on demand in all sectors of society has been more and more attention. Video on demand is a kind of modern technology of multimedia audio and video applications, and it is a new technology which is combined with information exchange and communication technology. At the same time it is a kind of business information, refer to the use of interactive, convenient network technology for real-time interaction with images and sound transmission, meet the user can interact with diversified programs and access a remote server saved. Due to the current domestic Internet bandwidth is limited, to a certain extent limits the video on demand in the field of Internet development. Streaming media technology is the organic combination of network technology video / audio technology, as a contemporary novel network multimedia transmission means of communication, the superior solution of video and audio data through Internet transmission problems. With the continuous development of technology, streaming media technology has been applied to video audio and video and a variety of multimedia on demand platform and system[4].

2. Key technologies involved in the system

2.1 MVC design pattern

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 has been 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 number of statistical data can be used to represent histogram, pie chart. The purpose of C is to ensure that the M and V synchronization, once the M changes, V should be synchronized with the update. Model view controller (MVC) is a kind of software design pattern, which was invented by PARC Smalltalk in 1980s, and has been widely used, in programming language Xerox 80. Later was recommended for Oracle's Sun Java EE platform design model, and is more and more popular with the use of ColdFusion and PHP developer's welcome. Model view controller model is a useful tool kit, it has many advantages, but there are some disadvantages. Framework, design patterns are always easy to confuse the two concepts, in fact, there is still a difference between them. Framework is usually code reuse, and design patterns are design reuse, architecture is somewhere between the two, part of the code reuse, design reuse, sometimes analysis can be reused. There are three levels of reuse in software production: internal reuse [5], 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, but 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 the software, and the design model is the knowledge of software. Apache is part of the Struts software foundation Jakarta project. The main architecture design and developer of the Struts framework is R.McClanahan Craig. Struts are the undisputed king of the Web MVC Java framework. After more than nine years of development, Struts has gradually grown into a stable and mature framework, and occupies the largest market share in the MVC framework. But some of the technical characteristics of Struts have lagged behind the emerging MVC framework. In the face of MVC Spring, Webwork2 these designs more sophisticated, more scalable framework, Struts has been an unprecedented challenge. But from the point of view of product development, Struts is still the most secure option. The schematic diagram of MVC design pattern is shown in Figure 2.
2.2 Introduction of fault type classification

J2EE is a completely different from the traditional application development technology architecture, including many components, mainly to simplify and standardize the development and deployment of application system, and then improve the portability, security and reuse value. At present, there are 3 versions of the Java 2 platform, which is suitable for small devices and smart card Java 2 platform Micro Version (Java 2 Platform Micro Edition, J2ME), suitable for desktop Java 2 Platform Standard Edition (Java 2 Platform Standard Edition, J2SE) is used to create the server application and service. Java 2 Platform Enterprise Edition (Java 2 Platform Enterprise Edition, J2EE). J2EE is a system architecture that uses Java 2 platform to simplify the complex issues related to the development, deployment and management of enterprise solutions. The standard version of the foundation of the J2EE technology is the core of the Java platform or Java 2 platform[6], J2EE not only consolidate the many advantages of the Standard Version, such as "write once, run anywhere" characteristics, easy access to the database JDBC API, and CORBA technology can be applied in Internet in the protection of data security mode, but also provide the EJB (Enterprise JavaBeans), Java Servlets API, JSP (Java Server Pages) and the full support of XML technology. Its ultimate goal is to become a business developer can significantly shorten the market time of the system structure. J2EE technology has won the media attention is one of the reasons EJB. They provide a framework for the development and implementation of distributed business logic, which significantly simplifies the development of enterprise class applications with scalable and highly complex. The EJB specification defines when and how EJB components interact with their containers. The container is responsible for providing public services such as directory services, transaction management, security, resource buffer pools, and fault tolerance. But it is worth noting here is that EJB is not the only way to achieve J2EE. It is due to the openness of J2EE, so that some vendors can be a way to achieve the same purpose in parallel with the EJB. With the support of IDL Java, developers can integrate Java and CORBA together. They can create a Java object and make it available in ORB CORBA, or they can also create a Java class and serve as a client for the CORBA object that is launched with the other ORB. The latter approach provides another way through which Java can be used to integrate your new application with the old system. As JavaEE of the whole technical system, it is undoubtedly very complex [7], which is also a feature of enterprise applications. At the beginning of the popular JavaEE related technologies in the country, are probably the JSP/Servlet and their technical basis for the various types of free web framework. In this regard, JavaEE technology for the development of the Internet application is undoubtedly too complicated. But on the other hand, the popularity of the Web development framework is also started by JavaEE, which has its credit for JavaEE. But anyway, JavaEE is obviously not for the Internet application. But its contribution in the field of Web application development still cannot be ignored. In the traditional enterprise application areas, spring and Hibernate framework provides a more flexible, simple and rapid development framework, JavaEE is clearly behind them. The schematic diagram of J2EE application is shown in Figure 3.

2.3 JSP technology introduction

JSP Chinese name java server page, which is simply a simplified Servlet design, which is advocated by Microsystems Sun Company, many companies involved in the establishment of a dynamic web technology standards. JSP technology somewhat similar to ASP technology it is in the traditional HTML web (a subset of Standard Generalized Markup Language (* .htm) file, *.html) into the Java program (Scriptlet) and JSP marker (tag), thus forming the JSP file, the suffix (* .jsp). JSP development with the Web application is cross platform, both in the Linux running, but also in other operating systems to run. It implements the HTML syntax Java (extended by <, % > form). JSP, like Servlet, is executed at the server side. Usually returned to the client is a HTML text, so the client can browse as long as there is a browser. JSP technology using Java programming language class tags XML and script lets, to encapsulate the processing logic of dynamic web pages. Web pages can also be accessed through the tags and script lets resources in the server application logic. JSP page logic and web design of the display separation, support for reusable component based design, so that the development of Web based applications become quickly and easily. JSP (Pages Java Server) is a dynamic page technology; it is the main purpose of the logic is separated from the Servlet. Servlet Java is the technical foundation of JSP, and the development of large-scale Web application requires Servlet Java and JSP to complete. JSP has a simple and easy to use Java technology, fully object-oriented, platform independent and safe and reliable, mainly for all the characteristics of the internet. One of the main features of JSP 2 is its support for language expression. The JSTL expression language can easily access the implicit object and JavaBeans component of JSP by using the tag format [8]. The core tag of JSTL provides the process and loop control
function. Homemade tag also has the function of the function, so basically all scriptlet can achieve the function can be replaced by the JSTL. In JSP 2, it is recommended to use EL as far as possible to make the JSTL format more consistent. JSP 2 added a new API that creates a custom tag, and javax.servlet.jsp.tagext.SimpleTag defines the interface to implement a simple tag. And JSP 1.2 in the existing interface is different; the SimpleTag interface does not use the doStartTag and doEndTag methods, and provides a simple doTag method. This method is used only once when the tag is called. The need to achieve in a homemade marking all the logical process, circulation and marked body evaluation is realized in this method. In this respect, Iteration Tag and Simple Tag can achieve the same effect. But the Simple Tag method and the processing cycle is much simpler. In Simple Tag there is also used to set the setJspBody content of the JSP and getJspBody methods. Web container will use the setJspBody method to define a JspFragment object that represents the content of the JSP. Implementation of SimpleTag tag program can be in the doTag method according to the need to call the getJspBody. Invoke method repeatedly to deal with JSP content. One of the main functions of JSP 2.0 is the fragment JSP, which is the basic feature of the JSP tag attribute that can be deferred to handle JSP containers. We know that the general JSP is the first to evaluate the properties of the JSP tag, and then use these properties when dealing with the JSP tag, and fragment JSP provides a dynamic attribute. That is, these properties can be changed when the JSP is processed by the tag. JSP needs to define such properties as javax.servlet.jsp.tagext.JspFragment type. When the JSP tag is set to this form, the property of the tag is actually a process similar to that of the tag. In the process of implementing a tag, the tag attribute can be repeatedly evaluated repeatedly. This usage is called fragment JSP [9]. Fragment JSP can also be defined in a SimpleTag processing program used in the homemade tag action. As the previous example shows, getJspBody returns a JspFragment object and can be used repeatedly in the doTag method. It should be noted that the use of fragment JSP can only have a general text and action JSP, cannot have scriptlet and scriptlet expressions. JSP related schematic diagram shown in Figure 4 and 5.

![Figure 4. Schematic diagram of JSP work.](image)

![Figure 5. Schematic diagram of JSP scope.](image)

### 2.4 Schematic diagram of B/S architecture

B/S structure (Browser/Server, browser / server mode), WEB is the rise of a network structure mode; WEB browser is the client's most important application software. This model unifies the client, the system function realizes the key part to the server, has simplified the system development, the maintenance and the use. 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 through the Server Web with the database for data interaction. Because of the various problems existing in Client/Server structure, people put forward a kind of application system structure browser / server (Browser/Server) structure with three layer mode (3-Tier) on the basis of its original structure. Browser/Server structure is the rise of the Internet, a kind of improvement on the structure of Client/Server. 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 of 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. B/S the biggest advantage is that it can be operated in any place without installing any special software, as long as there is a computer can access the Internet, the client zero installation, zero maintenance. The expansion of the system 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 out 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. Easy maintenance and upgrade. At present, the software system has become more and more frequent, and the product of B/S architecture is more and 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[10], upgrading and remote sharing. So the client is more and more "thin", and the server is more and more "fat" is the main direction of the development of information technology in the future. In the future, software upgrades and maintenance will be more and easier, and the use of it will be more and simpler, this is the user's manpower, material, time, cost savings is obvious, amazing. Therefore, the way to maintain and upgrade the revolution is the "thin" client, "fat" server. Cost reduction, select more. We all know that windows on the desktop computer almost dominate the world, the web browser has become the standard configuration, but the server operating system on the windows is not in the absolute dominance. The current trend is where the use of B/S architecture application management software, just installed 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. The original Client/Server structure into Browser/Server structure, the client's pressure is greatly reduced, the load is balanced to the server. 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 client software, friendly interface, the newly developed system does not require the user to learn from scratch every time. Moreover, the three layer model, layer and layer are independent of each other; any layer of change does not affect other layers of the original function, so the product can be used with different manufacturers to form a better performance of the system. In short, the three layer model of Browser/Server structure fundamentally makes up for the traditional two layer model of the Client/Server structure of the defect, is a profound change in the application system architecture. The schematic diagram of B/S architecture is shown in Figure 6.

3. System requirement analysis

3.1 An overview of system requirements analysis

The design demand of this system is to build a display platform for architectural art works. This system is for the school teachers and students, mainly to show the construction works of art, later can be expanded to provide effective display for the organization of the Exhibition Department of the school, teachers and students can upload their works to the display system, the system is not limited to the exhibition bureau, teachers and students can also display platform works through online communication. In this system, we created the management function of the personal upload architecture art works, and the users can query, delete and other requirements. Schools and other related management system users can grasp the situation in a timely manner, the analysis of the distribution of the current data, at the same time to show the work of the summary, analysis, in order to better guide the exhibition. The main function of the demand analysis is to analyze the problem of the user to tell the system developers or system designers. It is mainly to tell you what to do, not to tell you how to do it. It is the first step in a system or software development, as a first step it has an important role. The result of requirement analysis is the requirement analysis. Demand analysis, need to express to prepare reaction or on behalf of the user the most fundamental requirement or desire, can not only consider the problem from the angle of the basic needs of users, but also need to take into account the user does not take into account the problem. Its direct impact will result in the following outline design, logical design, physical design, operation and maintenance of the workload. If you deviate from the user's needs, then the follow-up to do the work needs to be re-designed and implemented. Needs analysis of main tasks is to analyze the user in the actual process, the user of the object and the need to deal with the data and the user's workflow and other information, developers or system designers need to fully understand the user in the present work the work habits or workflow, clear user requirements for further communication, or through several exchanges in the way to fully understand the fundamental or the needs of users. In the demand analysis stage, the problem is the need to pay special attention to the user in the working environment of the data and the data processing flow, obtained the three basic requirements of database users: one is the information requirements; two is the processing requirements; three is the data security and integrity requirements.
3.2 Feasibility analysis of the system

Analysis of the feasibility of the system contains many analysis modules, this section is mainly three important aspects which are analyzed, on behalf of the three aspects are: the cost of technology is feasible, have what problem and the subsequent operation and maintenance is feasible. In most cases, these three aspects are important to determine whether a system is feasible or not. 1) Economic feasibility analysis: the subject of the construction art display system can replace the traditional display system, introduce the workers' expenses, save the cost, therefore, the cost is more cost-effective. 2) technical feasibility study: computer technology change rapidly, emerge in an endless stream of new technology, Web technology, after decades of development has been on stabilization and improvement in the Web technology, launched by the SUN JSP technology is particularly outstanding, has won the praise of developers. This topic presents the architectural art display system and is based on the browser and server mode, this mode of development and implementation of the technology is not a problem, and the author also has a certain project development experience, B/S mode/C/S mode which is different from the traditional structure, and the safety of Java development language, the development module of database access, and the importance of the information system of encryption, all users of the system only need to use a browser to access and related operations, the system does not need the hardware and software platform is very complex and many complex configuration, a PC machine can meet the needs of the ordinary, more convenient to use; the user use the system for data input, judgment and detection such as the date format enter the information system of the front and back of the user submitted, the age is in accordance with the specification, to ensure compliance with requirements to add data to the database, reduce the system pressure; as the building art exhibition system uses the B/S architecture design, so all the system data exchange are carried out in the network, reduce the client the task and pressure; reduce the user manual input, try to let users use the selection box to choose, reduce user input error, security Secondly, this topic mainly uses the JSP technology and database technology to realize all the functions needed. JSP is a dynamic web page to achieve the standard. It is the main difference between the traditional HTML pages: in the static page to add some Java code and some of the unique JSP tags, you can form a simple JSP page development. Which was added to the Java code in the static web page can have a variety of different functions, the basic function can carry out the database crud task can access to other pages including all established all functions of dynamic web page need. But the request and task logic related systems are handed over to the server, the server returns the user to view in the browser on the result of this model largely reduce the pressure of server, reduce the client due to software installation or configuration requirements. Even if the average client does not have any software installed on the machine, the user can access the system as long as there is any browser and JSP technology to facilitate easy to learn, for the development of this system is very effective. Therefore, JSP technology to realize the function of this system is more than sufficient. Therefore, the technology is relatively mature; the subject of the proposed system can be achieved. 3) Operation feasibility analysis: due to the early demand analysis shows that the work has been doing better, but also the system processing and captures a lot of exception handling, so the development of the system and the maintenance work is relatively difficult. On the one hand, there is a complex business processing, system maintenance and operation personnel only daily management and monitoring of the system, especially in the current computer technology popularization, the demand is not very high, after a short-term training can adapt to. In addition, the main business processes of the system design are more familiar with the traditional staff, the operation is handier. Therefore, the operation is not a big problem.

3.3 Functional analysis of the system

Construction works of art online display system, the relevant operation mainly includes the display of works and the background design and database, upload is one of the core functions of the system, the administrator to upload construction works of art management, users can upload works, to own work for maintenance, the administrator can view the user and management of works. This system mainly faces three kinds of user roles: in the school student, teacher and system management personnel. Different user roles have different permissions. Students and teachers, you can browse the architectural works of art information, query their own interest in the works, as well as upload their own works, but also to their favorite works, such as the operation of a message. System administrator, responsible for the stable operation of the system, the system users, works, the message to maintain. Web based on the development of the system is an essential function of registration, the function can be a good distinction between the user's rights, and the system is also a kind of protection. Non registered users can only browse the works of architectural art, cannot be related to the work of the operation of the message. Only registered users can leave a message to the work. In this system, the user can click on the registration, registration of a series of input information, and after successful registration, get a username and password, and then log on this system; you can upload your own to show the construction works of art, you can browse the message in time for their favorite works. This system of construction works of art on display, the display time requires the module be arranged, three types of construction works of art on display, which is in accordance with the exhibits types, format, display time. There are various types of exhibits, some students love to their favorite architectural works of art pictures show, this show is the picture type works; some students love the film, on the formation of video, this is the type of video works show; some students love the works made in the form of a slide, the slide is types of works. At the same time in the display of time, on the display of the work is also the time of the exhibition. The need for personal information in the system of management, the user registration, the need for their information updates, it is necessary to use personal information management module, but also for the management of personal work, to be able to upload their own architectural works of art, can modify their own construction works of art, but also delete their own architectural art works. This module will need to include personal information management, personal work management (upload, modify, delete) module, etc. Maintain the latest information by using related operations, Query is an essential function of a system, the query can save the user's time to find the target, but also very good for the construction of the work of art search. In the process of the application of the system, building works of art will be more and more, it is required to be able to quickly find the works. This module provides information on the name of the building works of art, architectural art, system administrator to manage the entire system operation. When the registered users to upload the wrong, or not the right message, you need to work on the management of the message for the management. System administrators to register the user management, daily operation management, but also on the security of the system to make maintenance. This module is mainly for the administrator to maintain the use of the work of management, management of the message and other maintenance management. This system will leave a space for the interaction between teachers and students on the design of message mode, so that when users see their love works, and the author of the work when you want to interact, you can show in the following works, the works of the message. So when the author of the work of the system, you will see the comment, and then respond to it, the formation of interaction. This module is mainly to provide the majority of teachers and students of their favorite works of the message, the realization of online interaction, to facilitate the exchange of teachers and students of architectural art.

4. Design and implementation of the system

This system is architectural art works online display system, is based on the development of web, based on web related technologies, relatively mature, can be very good to meet the needs of the development of J2EE, the design pattern, MVC development, the display layer, control layer separate development, not only conducive to the current development and maintenance is also beneficial to later. The use of B/S model development, so that users can access through the browser, the database using Server SQL 2012
the system in detail. This requires modular development in detail, this is not only conducive to the function division, but also conducive to the development of relevant operations on the Internet, such as browsing, query and other construction works of art. This system uses the B/S development model, the traditional development, is the need for a separate client program, which requires a different environment for system, separate time-consuming, and now the development of the client, based on the development of the B/S model, do not need to open a separate client, is based on the browser's development so, as long as the relevant web technical support, will be able to complete the development of the front desk, it can get the important energy for the background, development of the server, the support for the front. Based on the development of B/S, there is no need to maintain the needs of the client, so that it is necessary to reduce the unnecessary development. This system is based on the development of web, the use of the relevant web technology, system architecture is the user through the browser sends a Request, and then through the JSP passed to the Java Bean, Java Bean by interacting with the database, the user needs from the database, after Java Bean, passed to JSP, JSP to the user in the Response, it is displayed to the user through the browser. The architecture design of the system is shown in Figure 7. This system is established for our construction works of art online display platform, to meet the needs of teachers and students online display, but also to adapt to the requirements of the school show, the system should be able to complete a good online display. First of all, the system has strong practicability, the system must be simple and easy to use, whether teachers, students and school management personnel, related operations in the training situation, and to highlight the main function of system, for the construction works of art exhibition provides rapid method. Secondly, the system should be maintained, in the development of the current web development technology to choose well, to be able to keep up with the current development, with the maintenance of the future. Finally, the system to ensure security and stability, the system should be able to stable operation, the system to save the user's data, to have a backup of the data, to prevent the collapse of the system, the loss of data. When users log in or upload, the data should be encrypted to prevent leakage of user data. In the process of system development, in addition to the importance of the preparation of the code, but also to do a good job of document management. This system adopts the web development of new technology in the design process, based on the development of J2EE, in the process of development, requires modular development in detail, this is not only conducive to the function division, but also conducive to the development of relevant persons, can clearly see the overall and module of the system, division modular according to the required functions, the modular design of the system in detail.

![Figure 7. Schematic diagram of system architecture.](image)

In order to better serve the school teachers and students, the system designed the user login registration module, using the real name registration system, so that users can also facilitate the self-management, and access to the problem. The user can login after successful registration and related operations, user registration, to choose their own easy to remember, familiar with the account or password, to prevent password forget after several modifications, inconvenient and memory. The design of user registration module, to consider the technical details of registered users, because it is to be registered by the browser, to consider some functions of the browser, whether to save the login page username and password, whether forward or backward browser will affect the user registration, but also consider the problem of browser cache. At the time of registration, the registration information can be set to the user name, the number of students or the teacher's job number, name, age, school, e-mail and other relevant information. So after the success of the registration, the system will create an account for each registered user to complete the user's login, you can log on to complete the further operation. Registered users are divided into two kinds of users, one is ordinary users, the other is the system administrator users, these two users are not the same rights, and the operation of the content is not the same. Users browse the construction works of art, is a function of the system is essential, whether registered users or non-registered users can browse, this is mainly to create convenience for the exhibition held in the school, and online browsing works are not necessarily registered users, so it is necessary to conduct the design. The system in order to facilitate the user's use, designed the user query function, that is, the user's search function, search function in a system is a very important function. On the one hand, it is convenient for the users to quickly find what they want to browse the works, save a lot of time, on the other hand, with the increase of system users, upload the construction works of art will be more and more, the data stored in the database will be more and more, if you do not design the search function, the user experience will not well, more importantly, can very quickly find you want to see the works. The upload function of architectural art works is one of the most important functions of this system, only the registered users can upload the works to display the works. When the user is registered, enter the upload module, the construction of the works of art. In this system, users can upload 3D works of art, photography, art works of art and other types of art works of art. Personal information management module includes the management of personal information and personal works to manage these two main modules. To carry out personal information management, the first is to register the user, so the user first in the system to register, to obtain a user name and password, login the system, in order to carry out the relevant operation. The login screen of the system is shown in Figure 8.

![Figure 8. System login interface.](image)
5. Summary and Prospect

In the face of the lack of social construction works of art online display platform, based on the functional requirements of J2EE, the construction works of art online display system based on structure design, system implementation and other aspects of the in-depth research and implementation. This paper adopts three layer model of MVC system development, using the design model based on B/S architecture, using Struts framework, using Java language, JSP technology has completed the architectural works of art online display system, which provides convenience for the students to show their architectural works of art. According to the construction works of art online display system needs analysis, functional design, system development, web application development technology to achieve the construction works of art online display system the construction works of art exhibition, the background of the works, works, works management update message, user management and other functions. The application of Struts framework based on J2EE platform; improve the efficiency of the development, saving the time of development. The construction works of art online display system, solve the problem of school organization exhibition, enhance teachers and students through the works of communication space, to a certain extent, and stimulate students' creative passion, while saving the time management of construction works of art.

Acknowledgment

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression, “One of us (R.B.G.) thanks . . .” Instead, try “R.B.G. thanks”. Put applicable sponsor acknowledgments here; DO NOT place them on the first page of your paper or as a footnote.

References