



DESIGN OF PROJECT MANAGEMENT SYSTEM BASED ON WEB TECHNOLOGY

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ABSTRACT

The project management system is the system software for project managers to manage projects specifically. In this paper, a project management system based on Web technology is designed by comparing the two-tier application model C / S and the three-tier application model B / S. The system improves the intelligence of large-scale project management, saves the management cost, and realizes the construction progress of the project, thus improving the construction efficiency of the project.

KEYWORDS

WEB technology, project management, system design, B / S, C / S.

1. INTRODUCTION

The Web is called the World Wide Web or the global information network. Web is an information publishing system running on the Internet, usually using hypermedia data information service to provide users with a graphical interface to the various text, pictures, sound, video and other information together, so that user-friendly Information about the network. As the Web is used by the Internet protocol, to provide users with information sharing and service architecture. At present, Web technology has been deep into the information system in various fields, such as news, advertising, e-commerce, information management platform.

Web is a loose distributed information system with no centralized control, no unified structure, no integrity constraint, no transaction management, no standard query language and data model, and unlimited expansion. In essence, it is a collection and synthesis of various technical and information resources [1]. It is based on the TCP / IP protocol, uses hypertext markup language to describe information resources, and implements hyperlinks through hypertext and hypermedia technologies. Through the hyperlink can be text, graphics, video, sound connected to the server, so that users interactively to quickly search a variety of information resources. Web technology provides an information service technology, which features are as follows:

(1) Easy to use

Web technology and the user's platform does not matter, regardless of the user's computer system is used in what kind of platform, can be through the Internet for information access. In addition, the Web technology is also easy to navigate graphical features, users can visit the page to see a rich color graphics, text interface, through a variety of hyperlinks to access information, so as to facilitate the user's browsing The

(2) Distributed

Generally speaking, a large number of images, audio and video will take up a lot of storage space. And Web technology is to put this information on a different site, in the browser, simply connect the link to the appropriate site users can access [2]. Through the distributed storage, Web technology to not a site in the information on the logic of unity, allowing users to see the integration of information interface, user-friendly to read.

(3) Dynamic

Because the Web site is to unite all the links, so that the site contains not only their own information, but also contains the link site information. This requires the information provider to need timely information on the site to update, in order to ensure the timeliness of information.

(4) Interactivity

Web interaction is mainly reflected in the hyperlinks, all access links are user-determined. Web through the form in the form of dynamic information from the server, the user through the form to submit a request to the server, the server can request according to the user to return the appropriate information.

(5) Developmental

Web technology has a certain degree of development. Web technology from generation to the present, from the initial simple text reading to the current e-commerce, from the original static web page to the current dynamic web page. Its version from the initial Web1.0 development to the Web2.0 and then to the current Web3.0.

2. APPLICATION MODEL ANALYSIS

In the Web technology, the application model usually refers to the structure of the system software layer, the commonly used application model has two application models and three-tier application model.

2.1 Two-tier application model C / S

Two-tier application model C / S is composed of client application and server application and middleware three parts [3]. Among them, the client application is the system user and data exchange part of the information, the server application is used to manage the resources on the server, such as a database management. Its main job is when a number of users on the same resources on the server to send access needs, the server application can optimize the management of these resources. Middleware is a component that can be selectively composed, it is optional. Its main role is

to connect the client application and server applications, you can make the two synergies to meet the user's query and access needs.

In the two-tier application model C / S mode, the entire Web system is divided into two parts, part of the client, part of the server database management system. Between the two through the structured query language for data requests. As shown in Figure 1 below.

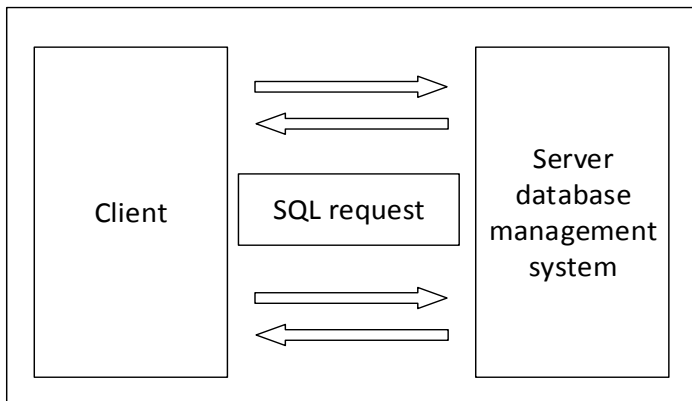


Figure 1: Two-tier application model C / S

The development of software in C / S mode has the following advantages:

- 1) Greatly reduce the workload of programming, in the system to update and maintain, you can improve the utilization of resources, reduce the cost of programming and software development.
- 2) Through the SQL request to the client part and the server part of the technology of the distribution of resources, the two sides of the load to a certain balance, so as not to increase the allocation of resources in the case, can greatly improve the performance of the computer.
- 3) Users can run applications on different computer platforms on a single client to improve customer access.
- 4) In the application needs change, you can easily expand the system program.

Although the application of C / S mode makes the information technology has been greatly developed, but there are more or less the problem. First, due to the use of two-tier data processing structure, in the customer and the server between the little bit of direct access to the performance of underground, management complex shortcomings. Second, when a new extension occurs, the need for re-writing the program, affecting the efficiency of the program expansion. Third, the user can directly access the server, so that the security of the server on the lack of a certain degree of protection.

2.2 Three - tier application model

In order to solve some of the drawbacks of the two-tier application model, people developed a three-tier application model B / S development

environment [4]. Three-tier application model structure includes the client, Web server and database server composed of three parts. As shown in Figure 2.

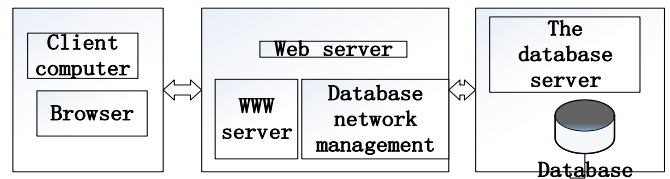


Figure 2: Three-tier application model B / S structure diagram

In the three-tier application model B / S structure, the first layer is the client, it is mainly to provide users with access interface. The second layer is the Web server, its main function is responsible for the WWW server and database management between the logical business [5]. The third layer is the database server, the main function is responsible for the database information storage and internal storage of information to optimize. It can be seen from the above figure that the three-tier application model B / S structure adds a Web server part compared to the two-tier application model C / S structure, which can process the logical unit of the application separately so that the user's access Interface and application on different logical platforms. Through this design can make the database to be shared by all users, which is the three-tier application model B / S structure and two-tier application model C / S structure of the biggest difference.

3. SYSTEM ARCHITECTURE AND DEVELOPMENT ENVIRONMENT

According to the specific background of housing project construction, according to the specific functions of each project department, the B / S structure is adopted in the system application model. In the server-side set of application software and database, set the browser access to the server system, so that users in the browser for information access. The existing presentation layer is based on the browser interface. Use JSP to write the middle layer, with Microsoft's SQL Server 2008 Chinese Enterprise Edition to write the data layer.

JSP is Java Server Pages, is sponsored by Sun Microsystems, many companies involved in the establishment of a dynamic web technology standards [6]. It uses the Java language as the scripting language to run and adds Java program snippets and JSP tags to traditional web pages. This is the JSP. JSP data interface for the standard JDBC database interface. It can quickly and easily access all the database information, but also for different information transmission between the database to provide a seamless docking, thereby improving the system operating efficiency.

When the user sends a request to the JSP page through the client, or when the server with the JSP container to read the JSP file. JSP container server will perform the translation process, the JSP file translated into a Servlet code, that is, as a Java source file. When the conversion is successful, the JSP engine calls the Java virtual machine program to compile the Java source file into the corresponding class file, the class file is a servlet program, and then create an instance of the servlet to provide services to respond to user requests. Its working principle is shown in Figure 3.

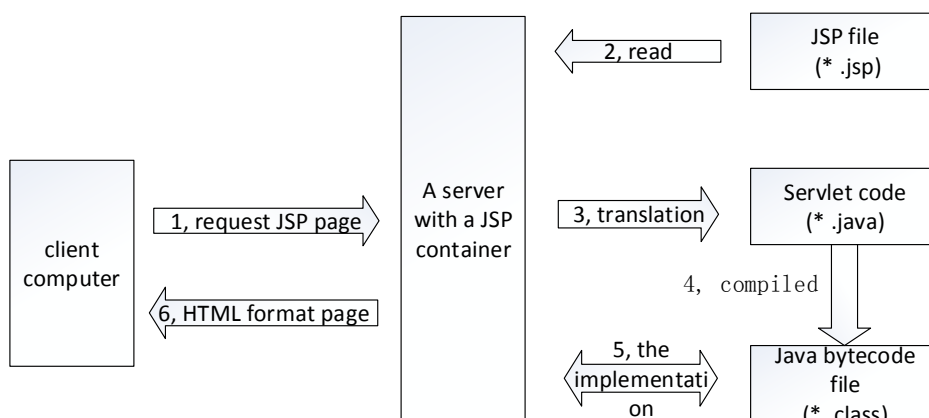


Figure 3: JSP working principle

4. CONCLUSIONS

A B / S application model with three layers of application model structure is used. The application model consists of three parts: client, Web server and database server. Using this model can greatly reduce the system development and maintenance costs, users only need to install a common browser in the client can access information, do not like the C / S model, as a different client design different browsing Device. Through the server side, the application can be authorized through the Internet, any user can access. In addition, all the programs on the model maintenance and upgrades are operating on the server, do not need to make changes to the client, which greatly reduces the system development and maintenance costs.

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