

## Research on Development and Design of Enterprise Management System Based on C/S Architecture

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**Abstract.** Under the Intelligent Management Environment, in order to promote the enterprise management efficiency and release the enterprise management cost, it is necessary to construct the modern enterprise management system based on the intelligent technology, to realize the intelligent upgrade and all-round development of enterprise management. C/S structure is an open mode, which can improve the efficiency of enterprise management. By studying the present situation of enterprise management, deeply discussing and analyzing the enterprise management, this paper puts forward an enterprise management system with C/S structure, to realize the automatic management of enterprise management, such as data collection, information inquiry and data statistics process, and improve the efficiency of enterprise management in an all-round way.

**Keywords:** C/S architecture, Enterprise management, System development, Design research

In the development and design of enterprise management software systems, we need to take full account of the cost budget, must be based on the actual budget of the enterprise, must not increase the cost budget of the enterprise, hinder the development of other projects of the enterprise, must be able to do the decision, combined with the enterprise situation, the development and design of their own software system.

### 1 C/S ARCHITECTURE OVERVIEW

C/S structure is a well-known Client and Server structure, it is a software system architecture, through it can make full use of the advantages of the hardware environment at both ends, the task can be reasonably distributed to the Client and Server side to achieve, reduce the communication overhead of the system. At present, most application software system is a two-tier structure in the form of Client/Server, because the current software application system is developing to the distributed Web application, Web and Client/Server applications can do the same business processing, different modules share logical components; therefore, both internal and external users can access new and existing application systems and extend the new application systems through the logic in the existing application systems. This is the development direction of application system at present.

The C/S structure is the abbreviation of Client/Server or Client/Server mode. Client and Server are often on two computers which are far away from each other, the Server program's task is to receive the service request from the client program, process it accordingly, and return the result to the client program. Although the traditional C/S architecture adopts the open mode, it is only open at the level of system development. In the specific application, no matter it is Client side or Server side, it also needs the specific software support. The software with C/S structure needs to develop different versions of the software for different operating systems, and the product update is very fast, it is difficult to adapt to more than 100 computers LAN users.

The development of enterprise management software system should be easy to implement, easy to operate, easy for staff to use, the development of enterprise management software system to meet the future expansion needs of enterprises; It is also important to develop the enterprise management software system after sales. The enterprise management system will update and iterate new functions according to the development of the enterprise.

## **2 DEVELOPMENT CONTENT OF ENTERPRISE MANAGEMENT SYSTEM BASED ON C/S ARCHITECTURE**

### **2.1 The design content of the enterprise internal staff operation platform**

The design of the content of the enterprise employee information processing platform is mainly an operation platform set up for the employee's work demand. The specific design content is divided into the following content: first, the financial management operation platform, as the name implies, the design of this platform mainly aims at the financial data processing work of the staff in the Financial Department of the enterprise, and is mainly provided by the software technology suppliers such as Youyou and xinzhongda. Second, the production staff operating platform, this operating platform is mainly suitable for the department staff who assume the responsibility of production. The main development content includes production scheduling coefficient, water automatic control coefficient and other special control production process operating platform; According to the basic responsibilities of the Business Department, a business management system is designed, which includes report form management, Bill Management, charge management, meter reading management, file management, account management and system management It also includes auxiliary dispatch system, scientific dispatch system or transportation and distribution management system to ensure the orderly and scientific development of transportation activities. Third, the data sharing platform, the main purpose of designing this platform is for enterprises to release information to the outside world, such as enterprises to partner units to send consumer invoices, consumer water related information data, as well as consumer address and other relevant information. Fourthly, OA office system, namely office automation subsystem, this platform mainly involves real-time communication, document transmission, including off-site office, personal data storage and office meetings, etc. , the main purpose of designing this platform is to reduce the management cost and improve the management efficiency.

### **2.2 Design content for external customer operating platform**

This operation platform is designed to facilitate the basic consumer inquiry consumer information. Enterprises through and Pay-through, unionpay and other cooperation to achieve the convenience of consumers to pay water. In addition, consumers can also inquire about water consumption through the customer operating platform, and make relevant suggestions or suggestions for improvement to enterprises, specifically including message service, online communication services, mail services and language services and other related services. The design of this platform realizes the smooth communication between the two sides, improves the customer's service satisfaction and improves the service quality of the enterprise.

### **2.3 Business management information system development process**

The first step is system planning and feasibility analysis. As the development of information system is a systems engineering with high complexity, large investment and long development cycle, modern management ideas and methods should be introduced into the establishment of information system, even to follow the new management model and reorganization of the business process, which will have a profound impact on business management, so before the

development, it should be based on the development of Information Technology, Enterprise Environment and Enterprise Development Strategy for a comprehensive system planning and feasibility analysis.

Step Two, system analysis. After the system development work starts formally, the first stage work is the system analysis. Its main purpose is to make a detailed survey of the current system in order to fully grasp the overall and real situation of the current system, to analyze the information needs of users, and to put forward a logical model of the new system on this basis.

Step 3, system design. After the system analysis report is reviewed and approved by experts and users, the development work enters the system design stage. Its main objective is to determine the physical implementation of the new system on the basis of the approved system analysis report, taking into account the actual technical, economic and operational conditions.

Step 4, program design. After the overall design of Management Information System is completed, it is necessary to determine the specific implementation method of the subsystem and each module in order to truly establish a perfect management information system. In order to set up each function module of the system, we must carry on the program design. In the past, defining a program was an algorithm plus a data structure, and programming was the process of describing an algorithm using a given statement command.

Step 5, implement the system. The system implementation phase is the process of putting the new system into practice. If the system analysis and design is equivalent to the general manufacturing product design phase, then the system implementation is equivalent to the production of the product manufacturing, inspection phase. So this is the real production of application software, and put it into operation stage, is an important stage of system development.

Step 6, system management and maintenance. After the system switch is completed and put into normal operation, it enters the management and maintenance phase of the system. Its aim is to ensure the safe, normal and reliable operation of the information system, and to evaluate the system, improve and improve the performance of the system constantly, so as to give full play to the role of the system.

### **3 DESIGN OF ENTERPRISE MANAGEMENT SYSTEM BASED ON C/S ARCHITECTURE**

#### **3.1 System requirements analysis**

Performance Requirements: the whole system should be easy to operate, user-friendly, easy to maintain. Database requires stable operation, fast execution speed and high data security. The software system itself runs to the computer hardware platform and the operating system platform request moderate. Functional Requirements: system functions mainly include the following aspects: information management. Including staff information management, user information management and department information management, log management, system management.

#### **3.2 System module design**

##### *3.2.1 Staff basic information management.*

This function module mainly completes the management of a large number of basic information of employees, including the sub-modules of employee information input, employee information deletion, employee information modification, etc., the main goal is to assist the enterprise management personnel to manage the new and old employee's massive information, in the past the massive scattered information unification centralizes in the database.

### *3.2.2 Staff basic information statistical enquiry.*

This function module mainly provides to the administrator to query the details of staff information, help the manager to quickly locate staff according to the conditions and statistical analysis of staff information. Through this function module, managers can be a large number of staff details of statistics, such as age analysis, seniority analysis and so on.

### *3.2.3 Basic departmental information management.*

This function module is mainly provided to the administrator of the company's Department classification statistics. The completion of the company's new departments or streamlined departments to complete the addition or deletion of other functions.

### *3.2.4 User information management.*

This functional module is mainly to provide the administrator with the authority to manage the enterprise. Set up the legal user to manage the whole management system. Has the ability to add or remove or modify administrative users.

### *3.2.5 Account management.*

This function module manages the account in the system, encrypts the user's password and stores it, which is mainly set up for security, and uses role-based permission control to distinguish users.

### *3.2.6 Log management.*

This function module will log the user logon and log out of the system and the operation of the record for the time needed to track the query.

### *3.2.7 Login system*

This module realizes the system user's safe login, the protection system only accepts the legal authorization user's access. User Requirements: because this management system is mainly for most of the management of the management of the internal development of the company, it is only available to the management staff, that is to say the user role is unitary, they are the administrator of the system, enjoy equal authority. System administrator allows you to query, edit, delete, and add new users to a user profile. Legitimate users can log on to the system after the overall operation of the system.

## **3.3 System design principles**

### *3.3.1 Usability principles.*

We should try our best to meet the needs of the actual work, fully consider the practicality of data processing in every business level and every management link, and consider satisfying the production and management of the customer as the first element.

### *3.3.2 Extensibility and maintainability principles.*

In order to adapt to the future development, MIS system should have good expansibility and maintainability. The software design is as modular as possible, component-based, is the application system can be flexible configuration, adapt to different situations.

### 3.3.3 Safety and reliability principles.

The design of application software and database system should be safe and reliable to prevent the intrusion of illegal users. The database backup strategy is appropriate in case of catastrophic failure.

### 3.3.4 User interface principles.

Graphical principle: user interface design should be beautiful. The user interface should be intuitive, clear and well organized. To achieve easy to learn, easy to use, easy to manage.

### 3.3.5 Database design principles.

The design of a database should reflect consistency, integrity, security, scalability, and normalization.

## 3.4 System design and operation

C/S system development framework for teams or individuals in. NET environment, developers do not need to repeatedly build the basic functions and software architecture, the framework itself provides a powerful function library and development package, these eight years of successful application in hundreds of software development teams and enterprises, framework technology mature, stable and reliable architecture. Enterprise version of the code generator can automatically generate interface (FORM), business layer (BLL), data layer (Dal), Model (Model) and business engineering module (DLL-RRB- source code).

To develop a new system, we only need to generate data forms, develop query interfaces and reports, and develop a framework to provide a variety of data forms and report development templates as reference samples, in the future, we will provide intelligent components to generate reports automatically and improve development efficiency. The core development tool of the development framework-Code Generator (code generator) , enterprises only need to follow the guidance, according to the operating procedures can quickly complete the development of a data form, code generator automatically generate add, DELETE, change, check and other functional source code, in terms of development efficiency, a high degree of recognition and recognition is the highest domestic counterparts.

## 4 CONCLUSION

Enterprise management systems undergo rigorous technical validation and system testing, such as stress testing, and hundreds of users experience and recognition. After years of iterative upgrades and architectural refinements, the latest version is stable, with a rich, versatile collection of useful examples and rewritten development documentation, to facilitate in-depth study of the core technology framework for developers.

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