

Design and Implementation of Enterprise Information Management System

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Abstract

With the development of information technology, informatization is a necessary channel for the development of enterprises. The enterprise information management system uses B/S structure, PHPStorm as a development tool, PHP as a programming language, MYSQL as a background database. The basic functions of the system include: recruitment information management, department account management, staff information management, staff flow management, etc. Through the application of this system, enterprises can more quickly query their own information, so that their own enterprise information management truly normalized.

Keywords

B/S; Enterprise Information Management; PHPStorm; MYSQL; PHP.

1. Introduction

With the change of the times and the renewal of technology, enterprises are developing rapidly in this era. As a part of computer application, enterprise information management system has incomparable advantages over manual management. Enterprise information management system is a system that a person and a computer work together to provide convenience for enterprise management, analysis, operation and decision-making. Enterprise information management system can also be said to be a model of manual procedure, analysis, planning, control and decision-making. Enterprise information management system applies computer hardware and software to collect, transmit, process, save, maintain and use information through database. Therefore, enterprise management information system is an information processing system. Network enterprise information management is being more and more widely used in the current era.

1.1. Research background and significance

Since the reform and opening up, China has become very different. In this environment, the management mode of Chinese enterprises has slowly changed. At the end of the 1990s, this is an era of the combination of planned economy and market economy. So far, China's market economy has entered the era of "new management". The essence of the era of "new management" is enterprise information management. Enterprise information management is the system of modern enterprises facing the market, which is also an era with Chinese characteristics.

1.2. Introduction to relevant technologies

1.2.1. b/s architecture

The browser, web server, application server and database server composed of multi-layer architecture are called B / S architecture. The remarkable advantage of this architecture is that the client does not need maintenance, so it is very suitable for a large number of users or

frequent changes in customer requirements. All clients in B / S architecture are browsers, so there is little need for maintenance.

1.2.2. PHP

PHP is a server-side programming language and can be directly embedded into HTML. It is a weak type object-oriented scripting language. Its syntax is close to C and Java, but it is relatively simple and easy to learn. PHP's robustness, security and high performance make it easy in the field of web development and enable Web developers to quickly realize the dynamic generation of web pages, Efficiency is self-evident.

1.2.3. MYSQL

MySQL is a safe, cross platform and efficient relational database. It can be used with PHP, Java and other languages. The logo of MySQL is a dolphin called sakila, which represents the speed, power, accuracy and excellence of MySQL database. Mysql database is small, fast and low cost. The utilization rate of MySQL database is very high, and most small and medium-sized websites. Many companies use MySQL database to reduce costs, which is inseparable from its unique advantages.

1.2.4. ThinkPHP

ThinkPHP is one of the popular frameworks for PHP. Its original intention is to simplify enterprise application development and agile web application development. Since the birth of ThinkPHP, it has been designed to be simple and useful. It has excellent performance, minimal code and high ease of use. It has its own unique functions and characteristics, object-oriented development architecture and MVC mode. Detailed and easy to understand documents are also one of the advantages of it.

2. Systems analysis

2.1. Demand analysis

Enterprise information management system is mainly used for enterprise employee information management. Its main functions include: recruitment information management, department account management, employee information management, employee flow management, etc. In the work of enterprise information management, personnel and other personnel shall maintain the basic data in the enterprise information system, and technicians shall maintain the system technology. Department account management: according to the actual situation of the current enterprise, the system administrator counts the number of all departments of the enterprise to add departments, and manages the Department data according to the changes of the enterprise department situation. Each department can apply for an account of its department, and each account can view the information of employees in the corresponding department after logging in. Employee information. In addition to the basic information, each employee also has a subordinate department. All information input and modification of employees need to be operated by personnel and other personnel. Employee flow: each flow record has its own employee. An employee has many flow records, which is a one to many relationship. The HR department adds records. When the employee status changes, records should be automatically generated in the flow table.

2.2. Module analysis

Every enterprise has more or less recruitment needs. The recruitment information module can add, delete, modify and view recruitment information, which will be displayed on the data foreground page and data can be exported. The department account management module can add, modify and delete department information, apply for the background account of the current department, modify and delete department account data, modify account status, reset

password and export data. The employee information management module can add, modify and delete employee information. When changing the status of an employee, the flow data of the corresponding employee will be generated, and the data can be exported. The employee flow management module can add, modify and delete employee flow data, and export data.

3. Database design

MySQL is a safe, cross platform and efficient relational database. The enterprise information management system adopts MySQL database for design and development. Due to the limited development cost and human resources of the system, the MySQL database has small scale, fast speed, low cost, and the utilization rate of MySQL database is very wide. Choosing MySQL database as the developed database is the most appropriate solution. In order to better manage information, we should not only consider the integrity of information storage, but also consider the relationship between various tables when creating tables, so that we can find information accurately and speed up the search in the future.

By analyzing the requirements of enterprise information management system, the following entity information is obtained: Department information entity, employee information entity, employee flow information entity, recruitment information entity and account information entity. Account number table and department table have a one-to-one relationship. A Department corresponds to an account number. Department table and employee table have a one to many relationship. A department has multiple employees. Employee table and employee flow table also have a one to many relationship. An employee has multiple flow information.

4. Design and implementation of main functional modules of the system

4.1. System user management

In user management, there is a super administrator with all permissions. In addition to this super administrator, other users have a role. Each role has more or less corresponding permissions to control permissions. When logging in, first query whether the data of the account entered in the database exists, then encrypt the password MD5 and compare it with the password in the database. If it is correct, check whether the status of the account is turned on to determine whether the login is successful. After the login is successful, save the account information in the session. Whenever the account performs some operations, Find the basic information of the account through the session and the permissions in the role in the database to enable the corresponding permission control.

4.2. Department account management

Each enterprise has some departments to divide the work of the whole enterprise. In the Department information, you can add, delete, modify, view, export and search the Department of the company. Each department can apply for a department account to view the employee information of the current department and modify the basic information of the employees of the current department. First, when you first enter the page, the method directly renders the page, and then the page determines whether it is an Ajax request according to the Ajax request interface. If so, obtain the number of pages, entries and search contents passed in from the front end, and then the interface queries the data of the total number of pages and the current number of pages from the database according to these data, which is returned after being processed by JSON.

When you click request an account, you determine whether there is an Ajax request. If there is no request, the page is displayed, and then view the database to see if the Department has a bound account. If so, you will return to the "bound account" page. If not, you will get a page with a bound account. If there is an Ajax request, it means a request to bind account information.

Confirm whether the two password inputs of the applied account are consistent, and then assign a role of "department account" to add an account.

Department account management can log in to the background and be separated from administrator management. Although the data is the same table, in the account table, DEP_ID field, normal background account dep_Dep of department account with ID 0_ID is the ID of the corresponding department, so the data viewed in department account management is department account data, and the normal background account data is viewed in the administrator module.

4.3. Employee information management

Employee information management stores the basic information of all employees. When an employee is added, his employment time will be recorded automatically. When the employee status is changed to resignation, his resignation time will also be recorded automatically, and the status cannot be changed back. Of course, changing the employee status will also automatically generate the employee's daily information. There is a lot of employee information, Therefore, the search function is also rich. You can search by department, name, gender, position, salary, status, employment and resignation time. When the first mock exam is done, the employee has to leave the office to modify the information. There is no parameter to the employee's status when the employee changes the information. So, the interface is processed. First, we must confirm that even if the employee is away from office, he can modify the information, but not generate the information of the flow, and the normal staff will modify the information. There is no need to change the state and generate pipeline information. Therefore, in the interface, first judge whether the employee status is transferred in and whether the status is resignation. If so, record the resignation time, and then judge whether the current status is consistent with the current status. If so, add flow information.

4.4. Employee flow management

Employee flow records the status of employees in the whole enterprise. In addition to changing the status of employees will be recorded in the flow records, you can also add employee flow records according to the actual situation. Similarly, you can search and export them by department, employee, flow description and creation time.

Considering that there are many employee flow records, if the associated employee table is associated with the Department table, the query rate will be affected. We extract the Department table separately. The data found in the interface is the data of the associated employee table. Because there is not much data in the Department table, the front-end separately requests Ajax to obtain the Department data, and then before displaying each flow record, Match his department ID data with department data.

4.5. Current department employee information management

If the first mock exam is the first mock exam, the ID will not be displayed. Because the backstage account is not related to the Department's account. This module is mainly for the account of the Department. According to the distribution of the authority, after the department account is registered, it can only view the information of its own department staff, or distribute more authority to the department account according to the actual situation.

4.6. Recruitment Information Management

Recruitment information is indispensable to an enterprise information management system. The editing of recruitment information is complex and needs to be edited by an editor. When designing and adding recruitment information, the recruitment name is a normal form input box, and the recruitment content uses a built-in editor in the framework. After submission, when the interface accepts data and stores it in the database, add more current time, When

modifying, query according to the incoming ID before modifying and deleting. Similarly, query whether the data exists in the database according to the incoming ID before deleting. When the page is displayed, you can search according to the current recruitment name and creation time. Of course, the data can also be exported. When displayed in the foreground, there are similarities with the background. Paging search is available, and you can also view the current recruitment information.

5. System test

System testing is to find out the defects and errors during development, commonly known as bugs. When modifying the bugs of the system, although bugs cannot be completely avoided, it is also necessary to ensure that the system runs correctly and effectively with the least bugs as far as possible. As each project is nearing completion, it requires a lot of attempts to use it in various possible situations. Through a variety of tests, we can understand the shortcomings of the system, which functions can not be realized, and which performance can be optimized. In fact, in the process of program development, we need to pay special attention to the testing and improvement of modules. Every time we finish a relevant module, we should refresh the page to see whether it can be realized. In the process of doing this project, we have carried out relevant performance tests between the completion gaps of each module. The purpose of the test is to better display the system and make the enterprise information management system achieve the expected effect. Each functional module of the whole system can cooperate closely, the implementation effect is perfect and the pursuit of stability.

References

- [1] Li Xiuzhen. Research on thinkphp5 framework based on MVC [J]. Modern information technology, 2020, 4 (14): 90-92
- [2] Chang Na. Blog design and development based on thinkphp5 framework [J]. Digital technology and application, 2017,1 (10): 171-172
- [3] Xiong Hui. Web dynamic web page design based on PHP technology and MySQL database technology [J]. Information recording materials, 2021, 22 (01): 115-116
- [4] Zhao Longhai. Development of adaptive learning system based on PHP [J]. Modern vocational education, 2021,1 (04): 180-181
- [5] Su Tianyi, Yu Mingzhen. Design and implementation of university laboratory management system based on PHP [J]. China management informatization, 2021, 24 (02): 198-199
- [6] Wang Huajun, Li Hongbo. Research on practical training and teaching of PHP + MySQL website construction course based on project work order [J]. Science, technology and economy guide, 2021, 29 (02): 166-168
- [7] Lian ruoreng. Technical analysis and Application Research of computer software development [J]. Information recording materials, 2021, 22 (01): 103-104
- [8] Zhu Yingfang. Development of online fresh food mall based on PHP and MySQL [J]. Journal of Jiangsu Engineering Vocational and technical college, 2020,20 (04): 11-14
- [9] Mark Story. How to find and fix performance problems in PHP applications[J]. Info World.com, 2021, 1(01):111-114.
- [10] Kyle Goslin, Markus Hofmann. Applied User Data Collection and Analysis Using JavaScript and PHP [J]. CRC Press, 2021, 1(01):101-104.
- [11] Samthomas Raphael, Kuldeep Baban Vayadande. Quarantine Management System using PHP and MYSQL [J]. Journal of Trend in Scientific Research and Development, 2020,5(1):65-66.
- [12] Bob Brown, Bob Brown. DNS provider ChangeIP cites MySQL database crash for days-long outage [J]. Network World (Online), 2016,19(5):47-58.