

Design and Analysis of Campus Dormitory Management System Based on Java

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ABSTRACT. *The system is convenient for university management to a certain extent, and the system also makes a detailed introduction. Through the above functions of the system, the dormitory management department can realize the daily management of students' dormitory information, that is, it is convenient for the dormitory management personnel to master the situation of students' accommodation and dormitory distribution in a timely and comprehensive way; It provides users (management users and general users, such as students) with some simple data query and output of various information, etc. ; at the same time, it realizes quick and convenient retrieval; it also carries out daily management such as dormitory arrangement for new students.*

KEY WORD: *JSP, MVC, SQL, Server2008, Eclipse*

1. Introduction

Colleges and universities have always been the source of science and technology. In today's social development, the status of universities is more prominent. With the continuous increase of population, the number of people on campus is also increasing, and it is very inconvenient to manage. With the transition from elite education to mass education in China, the scale of universities is becoming larger and larger, and the number of people is increasing. Therefore, the traditional manual management can not meet the requirements of the current situation, so it is very necessary to apply the network information technology to the management. Yes. The development of College Students' dormitory management system mainly includes the development of foreground user interface and background database. For the establishment and maintenance of background database, it is required to establish a database with strong data consistency and integrity and good data security. [1] For the development of front-end application program, it is required that the application program can provide powerful data manipulation function, friendly interface and easy to use. This system uses Java as the development language of the front user interface, while the backstage database uses mysql. Since ancient times, China has a large population, which facilitates the management of dormitories and meets the daily management of universities. Based on this background, the management system of

College Students's dormitory is developed, which involves the arrangement of students's accommodation, the management of dormitory, the rational use of dormitory, the management of building number and the management of accommodation related contents. [2]

1.1 Functional requirements analysis

The main realization is the student dormitory management system, in the design of the system, should be as close to the daily life of students as possible, convenient for managers to carry out the actual operation. The system has the following functions under the operation:

- 1) The system requires the login to enter the system center by inputting the account number and password.
- 2) The system can add and delete the redundant room number according to the actual situation for effective management, which is convenient for the system administrator to manage.
- 3) The system provides the students's registration information, the information of changing dormitories and returning dormitories.
- 4) The system provides students's information query function and statistical function.
- 5) The system can modify, delete and click to query the user account.
- 6) The system provides the management function of student absence.
- 7) The system provides administrator rights.

2. System design

2.1 Architecture

Dormitory management system is an integral part of the campus internal information platform, the main information personnel are students, only login in the campus can access the dormitory management system. The system data and the background are synchronized and updated constantly. Local application system includes local gateway control center and local application server group, and remote backup system includes remote gateway control center and backup server group.

2.2 Overall design

Database design is divided into four campuses: demand analysis, conceptual structure design, logical structure design, physical structure design, database implementation, database operation and maintenance. In the dormitory system structure, the control center module structure is similar, the backup server and application server structure is simple and symmetrical.

The task of conceptual structure design is to generalize the requirements specification generated in the requirement analysis stage into a data model that does not depend on any specific machinery, namely conceptual model, according to specific methods. The conceptual model frees the designer's attention from the complicated implementation details, and only focuses on the organization structure and processing mode of the most important information. From the demand analysis, we can see that there are several entities in the system, student entity: used to display the attributes of students, including student name, student gender, student number, dormitory number, check-in date, etc. Administrator entity: it is used to display the properties of the dormitory management, including the administrator number, name, student registration of the building under its jurisdiction, etc. the visitor entity is used for visitor information, including visitor number, visitor name, length of visit, leave, user name, password and user rights, etc. [3]

System security: the system is developed to facilitate the management of College Students's dormitories, which is convenient for unified management. It is mainly managed by administrators and ordinary users and students. Only by inputting the correct student number and password, can the system enter the platform system of the University, which is also for the security of the school.

Database selection: due to the large number of university students, the use of more data tables is also relatively large, also considering the shortcomings of many places, the change of students's basic information is large, the number of changes in information, I choose MySQL as the database development.

2.3 Data system requirements

User information management: manage and use system user information. Dormitory management: mainly for each dormitory room number, number of personnel, student number, etc. to carry out careful statistics. Student information mainly includes the following aspects: student number, name, gender, class, school leaving status, building number, dormitory, number, whether there is a computer, date of enrollment, date of birth and major studied. Dormitory management: manage the login information of students who leave school and return to dormitory. Item in and out information management: manage holidays, winter and summer holidays and other holidays. When students go home, they should record the items in and out, improve the safety of dormitory items, and prevent others from losing things.

2.4 Application system

Application system: it is to create a complete backup application system on the basis of data dormitory management. It is mainly divided into three levels: management mode, business model and software system. Business model reflects the advanced management mode in the enterprise, and directly represents the behavior of software system. The reconfigurability of business model is the key factor affecting the reconfiguration ability of enterprise application system. Traditional enterprise

modeling methods, such as cim2osa, GRA I / GIM and so on, usually focus on how to use different views to describe the enterprise completely, less considering the dynamic of the model itself.

3. System module introduction

According to the project planning and design, the system management module is a module with more functions in the whole system, covering building number administrator, student management, dormitory management core code, occupancy management, etc. In order to show all the functions, login as SD and display the operation of the system. [4]

3.1 Building number administrator

Therefore, it is not limited to the management module of the school dormitory. The main functions of the system are to query and delete the user's personal information in the system, such as querying and deleting the user's password, etc.

3.2 Student management

In the system management module, it is necessary to realize the student management function. To achieve this function, a series of functions such as initial data, query, modify, delete pagination, import and export excel are used to add student information. This function includes: new role, role modification, role deletion, role query, information paging and advanced search function. [5]

3.3 Dormitory management

The menu management function covers the basic functions of adding, deleting, saving and exiting, but also has the functions of click query. These functions are mainly operated by the administrator, which facilitates the overall management and operation of the dormitory.

3.4 Visitor registration

The module mainly realizes the visitor information management, mainly for the visitor information registration, and the school to the visitor information view. Detailed description: record the following main information: name, relationship with the interviewee, name, number, duration of visit, name of the interviewee, etc. When the students to be visited come in and out of the dormitory with valuable goods, they need to register out of the building. When the visitor's information is recorded incorrectly, the relevant information can be modified.

4. Conclusion

4.1 Problem description

The page will reload and refresh the interface every time it jumps, so the consumption of resources is relatively large, and with the gradual increase of users, this problem will become more and more obvious. [4]So we will use ajax technology. Ajax directly reads data from the database to achieve local refresh. Generally speaking, AJAX will be used with JSON. Because the JSP page in the project is written by itself, the type of the data passed in should be considered.

4.2 Problem analysis

The system needs at least one host as the server, and the host should access the Internet with independent IP. If necessary, you can apply for domain name binding for this IP. The specific system requirements are as follows: 1. Windows XP or windows 2. 2000 SQL Server 200 database server 3. JRE 1. 4. 2 03 or higher Java runtime environment 5. Tomcat 5. 0. 28 or higher application server.

4.3 Solutions

The simple description of College Students' dormitory management system: the dormitory management system adopts the conventional data management method, and operates the database according to the characteristics of dormitory information management, such as adding, deleting, modifying and querying data. Data flow.

Compared with the existing manual management system. Dormitory management system is conducive to the centralized and effective management of data. Compared with manual management, the system occupies a small space, is easy to update, easy to backup, more secure, can effectively achieve various queries, convenient for school management and service.

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