Research and Development of Filing Management System of School Personnel Information Based on Web

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Abstract: According to the characteristic and experience of school filing management, combined with the B/S network software development tools, set of school personnel filing management system based on Web is designed and developed. It can achieve computer filing management on the school teachers, administrators, students and logistician staff, which also can explore a new method for providing better service for school filing management through the computer in the future.

Keywords Filing management, System development, B/S structure

INTRODUCTION

Time flies, we have entered the twenty-first century, it is an era with rapid development of information and digital technology, no matter where and when, the Internet penetration is so omnipresent that both in our work and in our study and daily life, which has been a powerful driving force to promote the development of society (Nitithamyong, et. al., 2006). The school information management system based on B/S structure has strong openness and scalability, with modular design, centralized management, and flexible and open platform management, the abundant information of campus information service can be provided, so as to achieve the normal school daily teaching and educational administration, by means of the information teaching management (Chen, et. al., 2007). Through the campus informationization, digitalization construction, using the characteristics of the Internet and the advantages of B/S structure, it can realize the information exchange between the various departments through the information system, so as to make full use of information and resources to improve the competitiveness of colleges and universities.

This research establishes the system functional architecture, technical framework and security architecture based on the users' requirements and the characteristics of system (Xie, *et. al.*,2016). During the period of establishing the functional structure of system, based on subsystem division principle, it can adopt the method according to the function division, the whole school filing management information system can be divided into student management system, teacher management system, information collection system, filing management and report system, namely, four subsystems (Knapp, et. al., 2001). What's more, according to the result of requirement analysis, the function of each subsystem should be cleared, so as to establish the overall function structure diagram of system.

REQUIREMENT ANALYSIS AND MODULE DESIGN

The basic business of personnel management in colleges and universities mainly includes post staffing management, recruitment management, student status management, teaching affairs management and some other business. Among them, teaching affairs management and personnel management are the most important parts of personnel management work in colleges and universities. The traditional personnel management in colleges and universities has the characteristics of simple work content, various work items, and many types of workers and so on (Qing, *et. al.*, 2015). The personnel management system that is needed by school must learn from the advanced methods of human resource management, adhering to the people-oriented design concept, by means of the advanced information technology first, committed to improving the management efficiency, so as to improve service level, and gradually realize the human resources management network, which can cover the whole campus ultimately.

The personnel management needs not only business statistic management with standard business processes, so as to ensure safe and stable operation of the business processing, but also needs the scalability and simplicity of the operation, so as to adapt itself to the needs of the mobile office users. The traditional personnel management of colleges and universities requires the realization of the various work of various teaching staff in various departments.

Educational administration department needs to set up classes and grades, so as to complete the processing of the various affairs of the semester, arranging various personnel management of the teaching and researching group, which also needs to collect and check all kinds of information and

examination materials of the students. Teachers need to confirm the curriculum, maintain the information of the students in charge, managing all kinds of testing information as well as data, dealing with all kinds of work of the teaching and researching group at the same time.

The personnel department needs to register, process and save all the staff information of the school, so it is necessary to register the recruitment and leaving situation. The financial department needs to verify the payment situation, tracing and managing the researching fund situation. If school leaders need to check and summarize the personnel information and educational information, they need to go to various departments to search and collect data for many times, which not only affects the efficiency, but also increases the possibility of the repeated work. The management of personnel business is fundamentally the management of data information, which requires data information maintenance should be of convenience and security. The objects of personnel management are various, therefore, the management methods can not be unified, the maintenance of data information integration is also an important part of personnel management business.

In order to solve the problem effectively, it is a key factor to understand the requirements of users and their risk taking. In the development of efficient solution, identifying the risk people's identity and their special needs is crucial, because of the different risks, people usually have different views and different needs for these problems, which must be taken into consideration when solve the problem, thus identifying the system service object is very important in the system. The staff took part in the system can be seen in Table 1.

Table 1 Personnel Function of School Filing Management System

Name	Simple description
Filing manager	The main operation staff of the school filing management system, performing the routine maintenance work to the system.
System maintainer	The maintenance team of the whole system is responsible for the maintenance of the system and modules, which also participates in the development of the unfinished system or module.
Student	Fill in their own files, updating and maintaining the basic information in time.
Teacher	Fill in the information and uploading the information of scientific research. Updating and maintaining the information that filled in.
Instructor	Maintain the students' status, checking the qualification of students, verifying and approving them on the internet. Maintain the student files, reviewing the file information submitted by the students, filling in the students' violation and punishment information.
Tutor	Check and confirm the status of the graduate students.
School administrators	Through the interaction with the school records management system, check the relevant departments' archives, and provide policy support for the relevant policies.
Other systems that interacted with the system	Including: the interfaces of scientific research management system, material management system as well as other systems.

The current filing management of the school includes students' individual personal information as well as their performance at school, including teachers' personal information as well as their achievement information. In order to make files richer and more authentic, a variety of information acquisition methods are adopted in the system. The management of files matching with the filing management includes students management, teachers management, information collection and filing and reporting subsystem. Each subsystem contains several functional modules.

Student Management Subsystem

Student management subsystem is an important part of the school filing management system. It directly provides service for student management, monitoring and managing it. All the students' work can be assisted by this subsystem.

Teacher Management Subsystem

Teacher management subsystem can realize the management of teacher's information, after teacher's logging and filling in the corresponding content, after the investigation and verification by the system administrator, it can generate teacher's archives, including personal information, auxiliary information management, which can realize the dynamic management of teachers.

Information Collection Subsystem

Information collection subsystem is a special module in the filing management subsystem. It is mainly about the peripheral equipment, the information collection function can be improved and enriched the generated filing system, system can reserve many system interfaces, which can realize the attendance, registration and other functions. It also can connect the educational system and enrollment

system to form a more complete system.

Filing and Reporting Subsystem

Filing and reporting is a very complicated matter, which often have to fill in many statistical live foot report, in the earlier time,all was manual typesetting and manual printing, this system can realize the report generation, all can fill in and make statistics on the internet. This is both convenient and quick.

SYSTEM DEVELOPMENT

In order to meet the requirement of the system in the multi users access system, which can need to support mobile access system, scalability and other non functional requirements of the system. The design and implementation of the system can adopt the design of B/S structure based on web. The technical architecture of the system is implemented with the popular SSH framework, and SSH can represent three frameworks in J2EE project, namely, Spring+Stmts+Hibemate.

System Implementation Process under SSH Framework

Before the popular framework, the use of Java can achieve the Web application that is a huge time-consuming project.SSH framework integrates the main implementation function of presentation layer, business logic layer and persistence layer, which can simplify the programmer's encoding work. The main work that Stlllts is responsible for in frame are as follows: managing users' requests and responses; using the controller agent to call business logic and other processing logic; handling exceptions thrown from the other layers; offering display model; verifying the user's interface. While the main work that Spring business layer is responsible for in the framework areas follows:managing all kinds of affairs, reserving the interface of the other layers, increasing the loose coupling between the presentation layer and persistence layer, so that they are not directly communicated with each other, managing the process from the business logic to persistence layer. Hibemate persistence layer can play the role of the related function to data operation in the framework: querying the relevant information and wrapping it as the object of HQL. HQL is very similar to SQL, however table and columns in SQL are replaced by Object and its fields, so as to save, update, delete information and store them in the database.

The Establishing Process in Eclipse

The system code can be implemented by using Eclipse IDE, and the whole system can be established in Eclipse, shown in Table 2.

Table 2 The Establishing Process of SSH Frame

The implementation process of establishing SSH frame by Eclipse
1. Realize Hibernate3.2+Spring2.5 support in combination way,delete the hibemate.cfg.xml file, modify the content of the applicationContext.xml file, increase the setting of SessionFactory and dataSource.
2. Generate the POJO class and the corresponding mapping file through the wizard of Eclipse.
3. Modify the content of <property name= "mappingResources" > element in applicationContext.xml.
4. Write DAO interface and implementation class.
5. Modify applicationContext.xml file, increase the configuration of DAO implementation class.
6. Combine Struts2 and Spring2.5, modify web.xml file, increase the filter configuration needed by struts2.
7. Increase Struts2 corresponding class library, increase the configuration jar package of Struts2 and Spring .
8. Copy Struts.xml file to the root directory if src, and then modify Struts.xml file, with constant configuration.
9. Modify web.xml file, configure the monitor of Spring, as well as the context variables, and increase the setting of the OpenSessionInViewFilter.
10. Write to action class.
11. Configure Struts.xml file.
12. Modify applicationContext.xml
13. Write JSP file.
14. Load and run the operating item.

There are two ways to design deployment architecture of the application management system based on Web, which are centralized type and distributed type. The application management system based on Web can solve the difficulty of multi-user's concurrent accessing the system, which also can reduce the cost and pressure of system maintenance.

As for centralized architecture, the core is to manage data of the core data server. The whole system can use one data center, at the same time, the other systems in school can also share the data center. Centralized data placement can reduce the difficulty of system deployment, so as to reduce the cost of system deployment. Centralized deployment framework can provide a good support for data sharing and data consistency. Centralized deployment structure is more suitable for enterprises and institutions with relatively simple business, while the amount of data is not so large.

Distributed deployment structure is to put different data on different enterprise data servers, and at the same time the system backup redundancy work can be better. The structure of distributed deployment is expensive, but its stability, data security, and its support for the concurrent accessing are much better.

CONCLUSION

In this paper, it analyzes, designs and implements the school filing management system on the school information platform. Filing management can have a direct effect on the efficiency and quality of the unit as well as the department. This system integrates the classification and realizes data sharing the original school department system through the filing management, which greatly improves the utilization rate of the data files, save both the tangible and intangible resources greatly, at the same time, it also improves the corresponding business process, so as to improve the school's comprehensive work as well as management efficiency.

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