

The Design and Implementation of Graduation Thesis Management System

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ABSTRACT. *With the increasing scale of universities, a large number of students need to complete their graduation thesis every year. Graduation thesis needs to be examined and managed, while manual management is easy to make mistakes and inefficient. In order to improve the efficiency of graduation thesis management, a graduation thesis management system is developed. The system is based on Java technology, MySQL database is used to store data and deploy in the cloud. The system has been tested by function and structure, which meets the basic design requirements and can run normally.*

KEYWORDS: *Graduation thesis management, MySQL database, JSP technology, B/S structure*

1. Introduction

Due to the rapid development of the new information technology in recent years, there has been a big innovation for all walks of life [1]. Every industry has its own management system, and the education industry is not the exception. With the rapid development of the national economy and the increasing development of colleges and universities, the number of graduates is increasing year by year. The difficulty of traditional manual management of graduation theses is also increasing, which not only has a large amount of data, but also has a low efficiency and a high error rate. In recent years, the use of Internet technology to improve the quality of teaching has been favored by colleges and universities, so it is particularly important to have an efficient, fast and convenient management system. With the development of this industry, it is necessary to develop an efficient, easy to manage and simple to operate graduation thesis management system.

The main function of graduation thesis management system is to register students to select topics, upload graduation thesis and search literature. Teachers are registered to check and correct papers. Administrators are managed by backstage login. It is not only efficient, but also convenient for management, low error rate and

data analysis. Therefore, it is particularly important to develop a reasonable system to manage graduation thesis. It is not only convenient to store and organize, but also time-saving and labor-saving.

2. Requirement Analysis and Functional Design

2.1 Requirement Analysis

This system is based on the management of graduation thesis management as the center of the project, through the computer management of graduation thesis to achieve the advantages that traditional graduation thesis management does not have. For example: graduation thesis search is fast, convenient, fast, efficient, low-cost, large storage, long life, low error rate and so on. These advantages can greatly improve the management efficiency of graduation thesis. Therefore, for such a graduation thesis management system for many colleges and universities in improving the quality of teaching is still very necessary. Only for the reasonable design of the system, make the management of graduation thesis more convenient and effective. Using the advantages of Internet sharing and interaction, and with the help of database management technology, this management system is developed to meet the needs of users and make graduation thesis management more reasonable and convenient.

2.2 Introduction of Related Technologies

JSP is called Java server pages. A request called HTTP is sent from the client. After receiving the response, JSP processes the request in time and returns the result to the client [2].

Eclipse is mainly used in the development of Java, Java EE and mobile applications [3]. Eclipse includes many aspects, including debugging, testing, publishing and other functions. Support multiple database connection modes; support multiple development languages for code writing; support HTML5, Java 8, and style control support.

MySQL database is an open source relational database management system (RDBMS) [4]. In order to facilitate storage and management, it is stored on disk according to the rules specified by the data. Using the database management system, the data in the database can be effectively structured and managed.

2.3 Functional Design

There are many functions in the graduation thesis management system, but it is mainly divided into three modules: user module for students, user module for teachers, user module for administrators. User rights for students have the functions of registration, login, topic selection, online message, topic declaration, paper

upload, adding mail and so on. User rights for teachers have the functions of registration, login, subject declaration and examination, online message, adding topics and so on. User information can be managed in the background when user rights are administrators. It can add or delete user information, subject management, paper management, topic selection management, mail management and other functions.

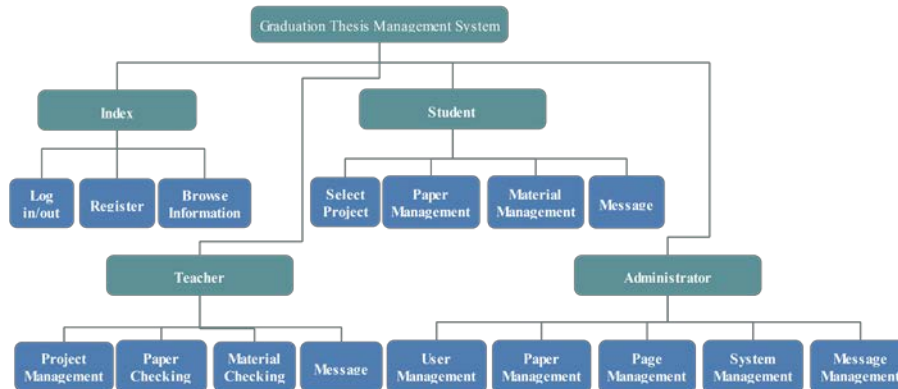


Figure. 1 Functional diagram

3. System Implementation

First of all, it enters the home page, which includes College news, online message, student style and other functions. If you want to use the graduation thesis management system, you need to log in. Enter different interfaces according to different identities. The login process is shown in the following figure.

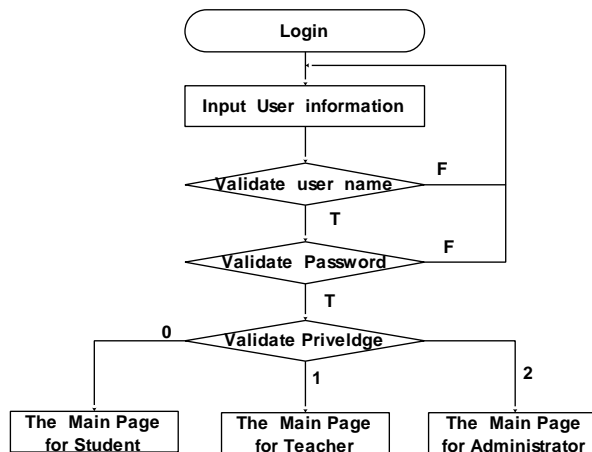


Figure. 2 The flowchart of login

The system uses SSM (Spring + Spring MVC + MyBatis) framework to realize MVC mode[5-6], and through this framework to achieve Ajax and Echarts combined to complete the page display, the overall process is shown in Figure 3.

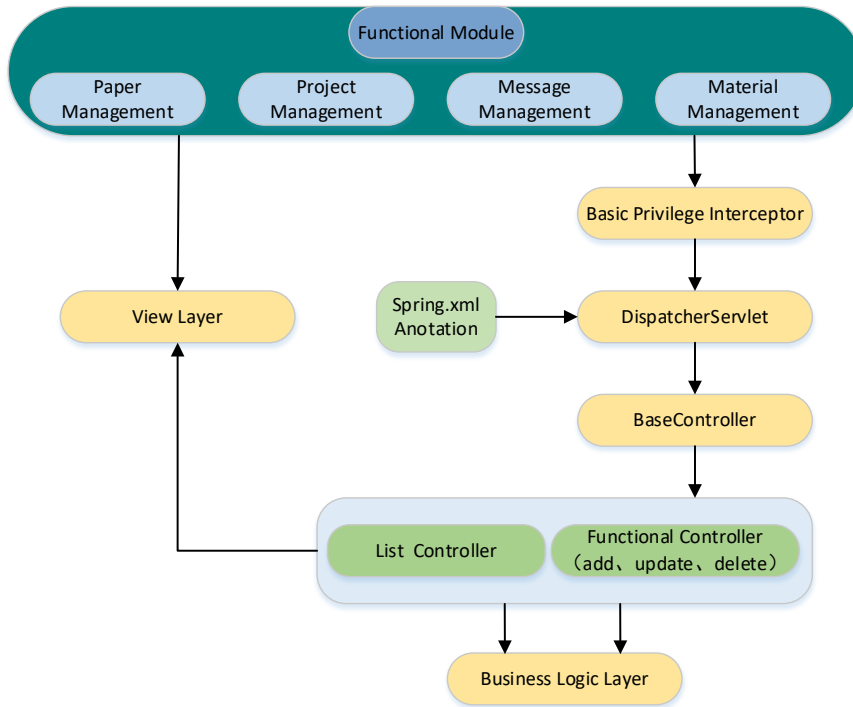


Figure. 3 MVC framework

Users make requests, and an interceptor judge the permission. If the request is permit, the core Dispatcher Servlet of Spring MVC start to receive user requests, scan the annotations under a file through the Spring.xml configuration files, and matches the requests into the corresponding controller.

Students enter the topic selection interface to view the topic information, and can search the topic number, work number and name to see the detailed topic information. Students can add topic information to the project declaration interface, which is as follows:

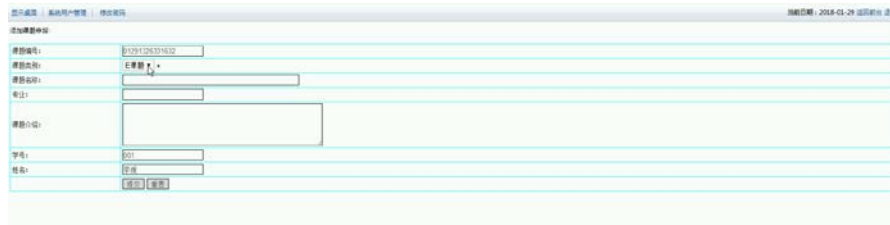


Figure. 4 The interface of upload paper

4. System Testing

The significance of testing is to express the process of identifying the accuracy, completeness and security of the program, and to compare the predicted output with the actual output in the running process [7]. The program is operated many times under the limited requirements, and the errors in the program are found and the design conditions are estimated. This system tests the functions of adding users, modifying user information and deleting users in user information.

The design of this system is expected to basically meet the requirements, can input the correct information, judge the wrong information and prompt the wrong information, so the graduation thesis management system passed the test.

5. Conclusion

Based on B/S structure, a graduation thesis management system is built to provide convenient management for teachers and students. Eclipse software is used as development environment, MySQL database is used to store data, JSP technology is used to complete user login, administrator user management, subject declaration management, manuscript management, mail management and topic selection management. Li. The interface of the system is simple and easy to understand. The development and implementation of this graduation thesis management system is to facilitate the management of graduation thesis by teachers and students, and to change the complexity, low efficiency and high error rate of traditional manual management.

Acknowledgements

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