Frontiers in Computing and Intelligent Systems
ISSN: 2832-6024 | Vol. 4, No. 3, 2023

Conference Planning and Resolution Management System

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Abstract: This paper mainly introduces the development background and significance of conference planning and resolution management system, and describes the research content of this system. Conference planning and resolution management system is not only a typical conference management system, but also focuses on overcoming the shortcomings of traditional conference mode and controlling the conference cycle. After the in-depth research and technical implementation verification of this topic, the development architecture and technical route of this system are determined, that is, the common B / S structure, JSP to write display pages, medium-sized database MySQL, the server to take tomcat, as a server container to achieve data request and return. Users do not need to download and install plug-ins or other software, but can directly realize system interaction at the browsing end, which is convenient and applicable. According to the CMM software engineering design idea, this paper discusses the realization of several key modules of conference room, conference document and conference, including the key functions of conference reservation, minutes, sign in, resolution, message release, etc. In addition, this paper also has a more detailed description of other parts of the system, such as user information, help management and other modules and the realization of the database. The key technology of this system is JSP technology and MYSQL, which has very strong practicability. It can improve the efficiency of conference organization and resolution, simplify the operation of conference management personnel, guarantee the orderly development of conference and ensure the quality of work.

Keywords: Conference System; Planning; Resolution.

1. Introduction

With the continuous penetration of the computer network, people's life and work, the way of learning is also slowly changing. The traditional way of meeting decision-making and process management generally take a manual approach, information acquisition, organization, modification, storage and other work remains in the manual stage. This way on the one hand need to spend a lot of manpower, material resources and money, interaction is more difficult, and will waste time; on the other hand, the management of the user and other information, especially with the incremental increase in the number of users, querying, modification is particularly difficult; and finally, due to the user and other information continues to increase, the storage of information has also become a problem.

The network of some developed countries has developed relatively quickly, and they have largely completed the transformation from manual to computerized management. China's computer application started relatively late, and the development of regional imbalance, there are still many areas or units using the traditional way of management, but the current computer development is faster, including the network has also been popularized, many units and users have also slowly started to contact the network management system. Throughout these systems mainly have the following characteristics:

(1) Advancedness: Realization of networked management.
(2) Universality: Basically, the same industry can be used.
(3) Convenience: Management work can be done via the web.
(4) Promptness: Timely updating of information.
(5) Extensibility: Modules can be added as needed.
(6) Safety: Encryption of unit, user and other information.

As of today, the Internet has penetrated into people's lives, smart phones, laptops, etc. have been the main tools for people to obtain information, this is an era of unlimited communication, so the use of the network for meeting decision-making and the management of the process has also become a general trend, so the development of a meeting decision-making and process management system is a must choice.

At the beginning, this paper describes the basic knowledge talked about within the system, and analyzes the system as a whole. In order to be able to make this system better and more perfect to be designed and realized, it is necessary to analyze and investigate first. Based on the previous relevant foundation, in terms of function, the new system was analyzed in detail. Then through the detailed analysis, the system design, and secondly, the system in the implementation of the feasibility of the system, I chose the JSP technology to develop and design, in the data storage, using MYSQL database, with SSH framework to design. Because JSP and MYSQL have been very mature, so in all aspects, are very reliable, safe and practical. Finally, the system is tested and released.

2. System Development Environment

2.1. JSP

JSP program uses the Java programming language, JSP technology can be encapsulated on dynamic web pages. Through tags and scripts, some resources, stored in the server-side, then its application logic, the web page can also be accessed. JSP, the separation of web page logic, and the design of the web page to show the support for component-based development, more convenient to the application

design.

When the Web server receives a request to access the JSP Web page, the first program segment to run, followed by the HTML code and run the effect of a return to the user. Through the insertion of Java files can be able to run on the database, web page redirection, etc., so as to meet the construction of web pages used in the dynamic display of the program. JSP and Servlet are the same, can be run through the server side. JSP can be run on the server side as well as Servlet, and can be viewed by the user with a browser because it can return an HTML form of text to the user, and JSP pages can be constructed with HTML programs and Java programs interspersed inside. When the server is accessed by the user, the corresponding Java code can be processed, and then the resulting HTML page will be returned to the user's browser. the key to the design of JSP is Servlet, usually, the design of Web applications, and finally through the collaboration of the Java Servlet and JSP to realize the JSP not only has the convenience of the Java program, but also the unified JSP not only has a convenient and fast Java program, but also a unified user-oriented, platform-independent danger is also relatively small, can have all the advantages of the Internet.

2.2. JavaScript

JavaScript is an object- and situation-driven and relatively low-risk user-side scripting language that can also be used extensively for user-side web design. It can also be used extensively as a scripting language for client-side web design, generally to add dynamic functionality to HTML web pages, such as providing feedback on all user actions. One of the key roles of JavaScript is its object-oriented functionality, which enables a more direct, systematic, and reusable approach to program design based on object-based program development. Interactive web pages can be designed using JavaScript based on HTML programs, which can be used to achieve a timely, dynamic and interactive relationship between the web page and the client. In this way the web page can present very rich information and very good-looking content. Many of the designs in this system use JavaScript technology.

2.3. MYSQL

MySQL is a multi-user, multi-threaded server, using SQL database, database management system is based on SQL client as well as server model of the relationship, its advantages are powerful features, easy to operate, easy to manage, reliable and secure, faster running, multi-threaded, cross-platform, fully networked, stability, etc., is very suitable for the Web site or other application software, in database back-end development. In addition, using many languages, members can write and access programs for MySQL databases. MySQL databases are also open-source, and developers are increasingly preferring to use MySQL relational databases, and the range of applications is being pushed wide. This is due to the speed and ease of use, and it is also used by developers of database back-ends for Web sites or applications.

2.4. B/S Structure

B/S structure has three main layers, respectively, for the data layer, control logic layer and view layer. Users through the view layer, let the control layer call the data layer of data, so as to achieve the whole access process. The three layers are independent of each other, easy to maintain, safe to use, and the three layers have to call each other to improve efficiency.

3. System Development Process

Conference decision-making and process management system development, the first demand analysis, and then the overall design of the system planning, design of the system functional modules, database selection, etc. The development process of this system is shown in Figure 1.

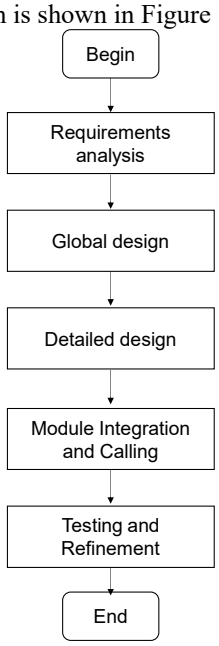

Figure 1. System Development Flowchart

In order to ensure the security of the system, you must log in to the system in order to use the system to manage system information. After the user opens and enters the system, it will first display the login interface, enter the correct user's name and password, the system automatically detects the information, if the information is correct, then the user will enter the system function interface to operate, otherwise, it will prompt the error cannot be logged in. Administrators can add information to the conference room information, departmental information, etc. Users can also add information within their own authority, after entering the information, the system will verify the information and data entered on its own, if the information is correct, it will be added to the database, if the information is incorrect, it will be prompted to re-enter the information. Administrators can modify information on meeting room information, departmental information, etc. Users can also modify the information within their own authority, first of all, enter the interface to modify the information, enter the data to modify the information, the system carries out the judgment and verification of the data, modify the information is legal, then modify the success of the information is updated to the database, the information is not legal, then the modification fails to re-enter. Administrators can delete information on meeting room information, department information, etc. After selecting the information to be deleted and clicking on the Delete button, the system will ask if it is OK.

4. System Use Case Analysis

The core user in the system is the system administrator, who logs in and manages the backend system through the administrator menu. The main functions are: user information management, department management and meeting management. The administrator example is shown in Figure 2.

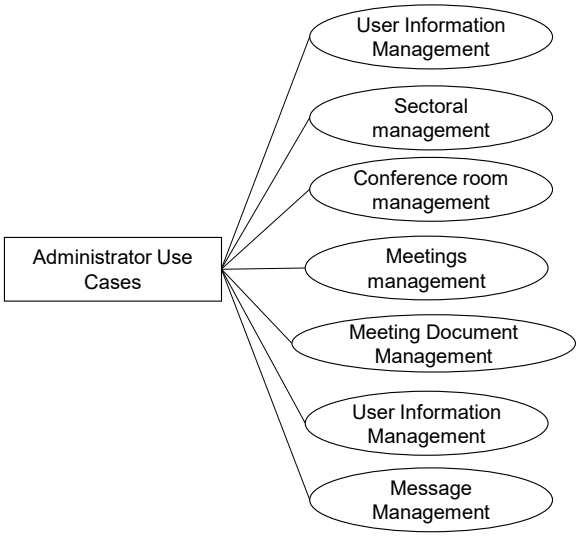

Figure 2. Administrator Use Case Diagram

Users can enter the system for personal information management and meeting management. User examples are shown in Figure 3.

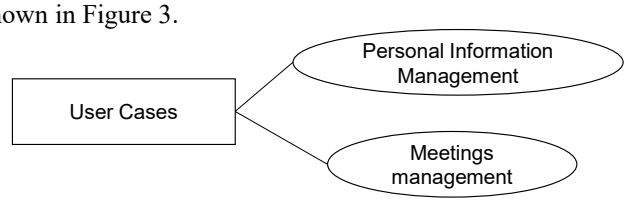

Figure 3. User's use case diagram

5. System Design

5.1. Schematic Design

After analyzing the system, we start the designing of the system, which consists of general design and detailed design. The overall design is just a general design, after the overall design, we are able to delineate some things of the system, such as files, documents, data and so on. And roughly divide the modules of the program, and the function. But it is just a preliminary classification, not really realized.

For a project, we can carry out a number of overall designs, through comparison, including performance comparison, cost comparison, benefit comparison, to finalize an optimal design solution, selecting an excellent overall design can reduce development costs and increase the company's efficiency, from this point of view, the overall design is still very important.

Conference decision-making and process management system working principle diagram shown in Figure 4.

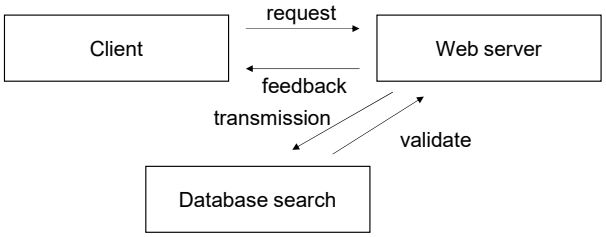

Figure 4. System working principle diagram

The system architecture diagram belongs to the system design stage, the system architecture diagram is only a product of this stage, the overall architecture of the system determines the pattern of the whole system, is the foundation of the system.

The overall design of the system architecture is a process of subdividing a huge task into multiple small tasks, which are segmented and combined together to form a complete task. It works in specific steps:

(1) The system is broken down into multiple sub-modules.
(2) Pre-engineered functionality for each sub-module.
(3) Design of logical relationships between sub-modules.
(4) Design of the interface of each module and the transfer of information between modules.

Throughout the design process, in order to identify possible specific solutions to reach each small final goal, for each small goal, we must first understand some relevant information about the requirements analysis. Then the initial design of the system, and its gradual optimization, design a specific achievable system framework.

The administrator manages adding, deleting, changing and checking the account information and basic information of the users, manages and monitors the authority of the information on the system help page, the department information and the conference room information, approves or cancels the meeting reservation application, publishes notices and manages the resolution situation. The administrator can manage the approval or cancellation of meeting reservation applications, issue notices and resolutions, operate meeting-related documents, and view users' messages.

Participants can view and modify their personal information. Meeting management includes meeting reservation, voting meeting management includes meeting booking, voting, signing in, checking notices, checking meeting room information, and users can also download documents related to the corresponding meeting.

Administrator subsystem modules include: user information management, adding, deleting and checking user information; help management, adding, deleting and checking help information on the home page; departmental management, adding, deleting and checking various departments of the enterprise; conference room management, adding, deleting and checking conference room information; conference document management, uploading and deleting relevant conference documents; conference management, approving and canceling conference appointments, releasing conference notices, adding, deleting and checking resolution information; message management, managing messages for all users.

User subsystem modules are: personal information management to achieve the management of basic information including passwords, modify information; meeting management as the core function of user rights, the user can carry out a series of operations since the reservation to the resolution; meeting document management to download the administrator uploaded the relevant meeting documents.

5.2. Detailed Design

Conference planning and resolution management system is divided into the following modules for development: login and registration, user information management, help management, department management, conference room management, meeting management, meeting document management, message management, so as to realize a series of operations carried out by the conference process from planning to resolution. The role of this system is divided into

two roles: participant and administrator. When logging into the system, you can choose different roles to enter the system, and the system privileges they have are not the same. The administrator has the system privileges of user information management, help management, department management, conference room management, message management, meeting management, meeting document management, while the participant user has the privileges of personal information management, meeting management, meeting document management.

The Conference Planning and Resolution Management System (CPRMS) architecture adopts the B/S model, which is the browser/server model commonly used in web development. The system is also developed based on the JSP architecture, which embeds Java code and specific changes into a static page to dynamically generate parts of the page using the static page as a template. JSP introduces XML tags called "JSP Actions" to invoke built-in functionality. Alternatively, you can create libraries of JSP tags and use them like standard HTML or XML tags. Tag libraries enhance functionality and server performance, and are not limited by cross-platform issues. JSP files are converted to more primitive Servlet code at runtime by their compilers. JSP compilers can compile JSP files into Servlets written in Java code, which can then be compiled by the Java compiler into fast-executing binary machine code, or they can be compiled directly to binary code. binary code.

In the development of this system, the JSP page is written for front-end display, the user interacts with the system when the form passes the request to the Tomcat server, the Tomcat engine sends out the request, and the controller Servlet corresponding to the request is written for conversion, compilation, and execution, and the related Service method is called to realize the operation results, return the Model update object and update the corresponding data in the database. The Model update object is returned and the corresponding data in the database is updated, and at the same time, the response is returned to the user, and the browser HTTP parses the display.

This system uses MySQL as the system database, MySQL is a relational database management system, relational databases store data in different tables instead of putting all the data in one big repository, which increases the speed and improves the flexibility. MySQL uses SQL language, which is the most commonly used standardized language for accessing databases. MySQL software adopts a dual-licensing policy, which is divided into community edition and commercial edition. MySQL software adopts a dual-license policy and is divided into a community edition and a commercial edition. Because of its small size, high speed, low total cost of ownership, and especially its open-source feature, MySQL is generally chosen as the website database for the development of small and medium-sized websites. In this system, it mainly stores and manages user information, help information, conference room information, meeting information, resolution information, and department information to realize the interactive operation of users on the database data. Users with two different roles enter the system with different permissions and add, modify, query, and delete the database data according to the permissions.

Table 1. Database table

1	administrator
2	department
3	room
4	message
5	sign
6	notice
7	user
8	appointment
9	file
10	resolution
11	vote

The system database has 11 data tables, each table contains different information according to the needs of the system, but the data tables are interconnected, the database uses the correlation between the tables to realize the data operation quickly and efficiently. The database utilizes the correlation between tables to achieve fast and efficient data operation. The detailed design of some of the important tables is given below:

Table 2. Management table

admin_id	int
admin_account	varchar
admin_password	varchar
admin_role	varchar

Table 3. Department table

department_id	int
department_name	varchar
department_content	varchar

Table 4. Room table

room_id	int
room_name	varchar
room_content	varchar
room_state	varchar

Table 5. Message table

message_id	int
user_account	varchar
message_qq	varchar
message_tel	varchar
message_content	varchar
message_date	date

Table 6. Sign table

sign_id	int
user_account	varchar
sign_state	varchar
sign_time	varchar
appointment_title	varchar

Table 7. Appointment table

appointment_id	int
appointment_title	varchar
user_account	varchar
user_number	varchar
apointment_state	varchar
appontment_content	varchar
appointment_date	date

Table 8. Resolution table

resolution_id	int
appointment_title	varchar
resolution_number	varchar
resolution_date	varchar
resolution_amount	varchar
resolution_state	varchar

6. System Implementation

6.1. Database Implementation

The Conference Planning and Resolution Management System database uses MySQL, and database management is done using the MySQL-Front tool for intuitive data management. When connecting to the system, the JDBC driver of Mysql is used, and Connection is utilized for connection. Users through the JSP implementation of page operations in the Tomcat server for parsing, and then call the background written sql call function, thus realizing the user and data interaction. In the process of database table implementation, first open MySQL-Front, select the server, port number, and create a new database; secondly, open the sql editor in the directory, write database table statements and insert data.

6.2. Login Registration Module Implementation

The functions realized in this module are user/administrator login and user registration. As shown in Figure 5, when a user enters his account, password and selects a role to log in, the form passes the information to the backend, verifies it with the database information, and logs in to the respective sub-system if the verification is successful. At the same time, session is used to record the information. If the account and password information does not match, the user's name or password is wrong and the login fails. The user registration function is designed in a similar way, but the difference is that after successful registration, the data is written to the database for using.

Figure 5. Login Registration Screen

6.3. Subsystem Function Realization

After the administrator enters the account password and logs in successfully, he/she enters the administrator subsystem interface as shown in Figure 6. The interface is mainly divided into two areas, the left column is the function operation selection column, and the right side is the detailed content operation area of each function management. The realized administrator functions are user information management, help management, department management, conference room management, meeting management, meeting document management and message management. Administrators can operate the functions according to the actual flow of the meeting.

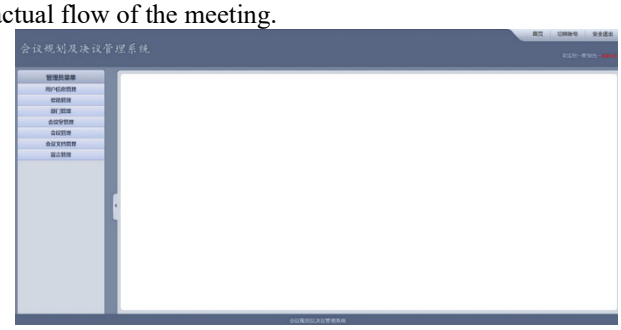

Figure 6. Administrator Subsystem Main Interface

As shown in Figure 7, the user successfully enters the subsystem interface through account password verification, the left side is the menu function column that the user can choose, and the right side is the function specific operation area. The main functional modules of the user subsystem are personal information management, meeting management and meeting document management. The user's meeting management privileges and meeting document management privileges are different from the administrator's privileges, and the user's meeting management mainly includes meeting reservation, resolution information, meeting notification, check-in information and meeting room information, and the meeting document includes query and document download.

Figure 7. User Subsystem Interface

7. Conclusion

This thesis introduces the process of designing and realizing the conference planning and resolution management system. In the preparation and writing process of the thesis, through the market-oriented research on the conference demand of the current domestic small and medium-sized enterprises, we have deeply contacted the cases of the current various industries that have utilized the Internet technology to innovate their respective conference modes. Concluded that the traditional mode of domestic small and medium-sized meeting will be combined with the Internet to realize a big step forward in efficiency improvement. This is the initial intention of this system development.

This system uses JSP to edit the page, Tomcat as a Web server, but also a Servlet container, Servlet is responsible for accepting requests and responding to the data, the database takes JDBC driver to connect to MySQL. This system basically realizes the expected functions and is divided into two user roles, i.e., administrator and ordinary user. After logging into the system, users can have the rights to modify their basic information, submit meeting appointments, view notices, sign in, vote, download meeting documents, leave messages, etc. Administrators have the rights to enter the system and manage the general operation of user information, departmental information, meeting room information, help information, message information, upload and download meeting documents, review/cancel the appointment, publish notices, and manage the operation of the resolution information.

After entering the system, the administrator mainly has the rights to manage the general operation of user information, department information, meeting room information, help information and message information, upload and download meeting documents, and manage the operation of meeting reservation, such as auditing/canceling, releasing notices and resolution information.

The system is easy to use and has good practicality. At the same time, there are still a lot of places where the system can be improved and extended, such as the integration of message boards and help pages, the real-time improvement of the check-in function, the integration and distribution of departmental and user information, and the visualization aspect of the minutes board and so on. The current system is suitable for domestic small and medium-sized enterprises to carry out the needs of regular meetings.

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