

Design and Implementation of House Rental System

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Abstract

With the rapid development of modern society, the mobility of personnel among cities has increased, the pace of life is fast, and the demand for housing rental has further expanded. The traditional rental sub process, that is, to find a housing intermediary or landlord by yourself, is very inefficient, it is difficult to choose a house to your satisfaction, and it is difficult to guarantee the security of the house supply. At the same time, it is difficult for the landlord to find a suitable tenant, and it is difficult to have a fast and effective management of the rented house. The house rental management system came into being. The system is developed based on SSM technology and has good support for the separation of front and rear ends. The system administrator manages the user module, which can better control the published houses and the situation of the publisher, so as to avoid risks. The house rental management module can display the advantages of each house on the shelf, Thus, the combination of rent and management provides users with a relatively complete rental platform.

Keywords

House Leasing; SpringMVC; MyBatis; MySQL; B / S Mode.

1. Introduction

With the rapid development of modern society, the mobility of migrant workers among major cities in China has increased, and the demand for housing rental has further expanded. Compared with the traditional rental sub process, that is, to find a housing intermediary or landlord by yourself, the efficiency is very low, it is difficult to choose a satisfactory house, and it is difficult to guarantee the security of the house supply. At the same time, it is difficult for the landlord to find a suitable tenant, and it is difficult to have a fast and effective management of the rented house. If, on the one hand, tenants can directly see the housing supply, rent and other elements of the place they want to rent for their reference, so as to select the favorite house, on the other hand, landlords can expose their housing supply to more people, so as to make it easier to rent out the house, reduce the window period and obtain more income, it is very urgent [1-2].

The house rental system is based on Java language, adopts SSM (Spring + spring MVC + MyBatis) framework, uses MySQL database to store data, and builds a management information system about house and its rental business. On the one hand, tenants can directly see the housing source and rent of the place they want to rent for their reference, so as to choose the house they want. On the other hand, landlords can expose their houses to more people, so it is easier to rent out the house, reduce the window period and obtain more income. It greatly improves the efficiency of renting houses and creates a win-win environment for tenants and landlords.

2. Feasibility and Requirement Analysis

2.1. Feasibility Analysis

The system is developed by using the mainstream SSM framework technology, combined with the rough data storage function of MySQL, which can quickly realize the system. The functions of each part are displayed in detail. Users can complete house viewing, leasing, leasing and other operations in the system according to their own needs. The function setting of the system refers to the mode of common systems. Reduce user learning costs. The system development uses the SSM framework. Compared with the traditional development, the performance has also been greatly improved. Users can use the system conveniently and quickly anytime, anywhere.

2.2. Requirement Analysis

The main functions of the system include housing information display management, housing lease contract management, role management and user management.

(1) House information display management

Housing information display refers to the rental information released by users, which must include the basic information of the house, including type, contact information, area where the house is located, house release title, house address, house price (XX Yuan / month), house area, floor where the house is located, house direction, house type, house decoration, house description and house picture. Users can view the abbreviated information of houses in the listing list. After the administrator has reviewed the listing information and confirmed that there is no illegal information, click allow publishing, and the listing can be released for other users to view. This can not only display the real listing for users to select, but also avoid other risks caused by some users publishing illegal information. After the user publishes the listing information, you can also choose to delete it. The administrator can also delete and modify the listing information.

(2) House lease contract management

Through the house lease list, users can view their lease status, contract status and termination status. Administrators can view listings that are being rented. In this way, the house leasing of users can be more standardized, the rights and interests of users can be protected, the rights and interests of homeowners can also be protected, and unnecessary disputes can be reduced. By filling in the key information of the house, the system will generate a contract according to the existing information. After confirmation by both parties, the contract will be signed and take effect. When the user signs the contract, it makes the house lease more standardized and ensures the change of management constraints of both parties.

(3) Role management

When the administrator reviews the house, it is inevitable that there are some inconsistencies. When other users see false houses and titles, they can choose to report. After receiving the report information, the administrator will deal with the reported users and houses, so as to make the house lease more standardized. This gives the administrator a lot of authority. Compared with the traditional house rental website, the backstage information management of house supply is not very standardized. Thus, the house source information is not updated in time, resulting in a lot of misunderstandings between tenants and landlords. The development method of this system makes this problem solved easily. Each set of houses can be published only after being reviewed by the administrator. When the administrator finds that there are problems with the unpublished houses, he can choose not to publish the houses. In addition, the administrator can ban the house again later. In addition to banning listings, administrators can also blackmail those who publish the false or even illegal listings. When the person is

hacked, his account can no longer log in to the system. In this way, the authenticity and security of housing information are solved from the root.

(4) User management

When necessary, the administrator can choose to block a specific user. After the administrator blocks the user, the user will not be able to log in to the house rental system. At the same time, the administrator can also see the mailbox, nickname and other information when the user is registered. These methods can better standardize user behavior, so as to make the system run more healthily.

3. Development Technologies and Ystem Impltmention

3.1. Development Technologies

The system adopts MVC mode and is implemented based on SSM framework. MVC improves code reusability and usability. On the other hand, it reduces the life cycle cost of software products, provides faster deployment and improves code stability [3]. Spring MVC is a lightweight framework that supports various architectures and decouples functions [4]. Spring MVC can not only configure various frameworks, but also provide users with the function of uploading or downloading files. The house rental system uses the reverse function of MyBatis. When MyBatis configures the data connection information and successfully imports the relevant information of the house rental form, it will automatically generate POJO files and general mapper files according to the table structure [5].

3.2. System Design

The administrator platform management module is mainly used to manage published listings, blocked users, view user information and view house lease contracts. The functions of user listings information display module mainly include listings information release, listings information display, revocation of published listings, and listing management. The functional module diagram of the system is shown in Figure 1.

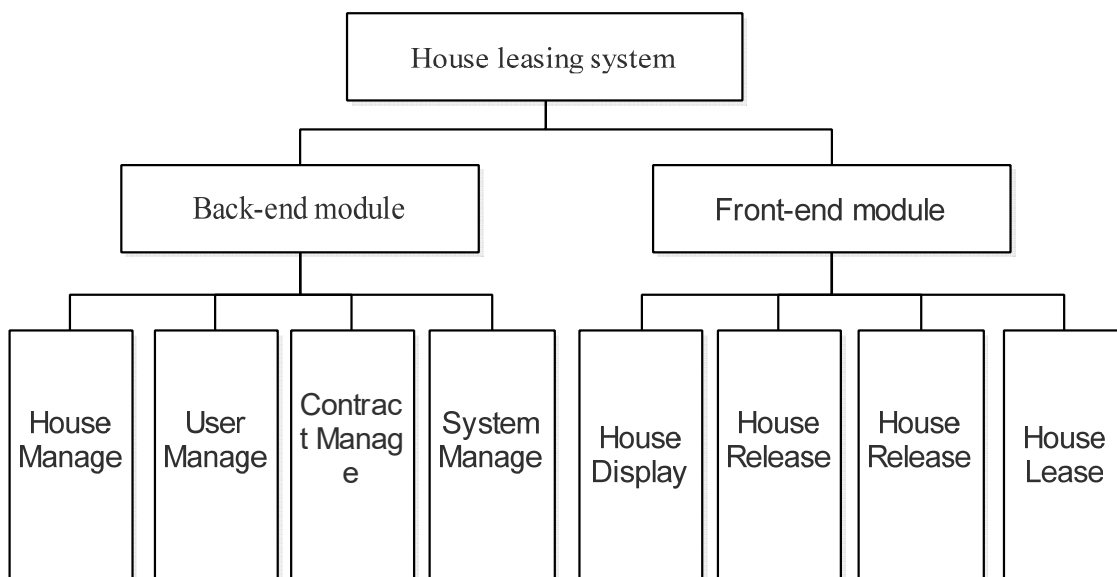


Figure 1. The functional module diagrams

3.3. System Implementation

The system uses SSM (Spring + spring MVC + mybatis) framework to realize the MVC mode, and through this framework to realize the combination of Ajax and elemnt UI to complete the page display. When the user sends a request, the system will judge the permission and enter the core

dispatcherservlet of spring MVC to receive the user's request. He / she will scan the comments under each file through the spring.xml configuration file, match the request and enter the corresponding controller. The controller will return the view or JSON data according to the business layer, That is, jump to the page or partially refresh the page. For example, when a teacher inquires the score, he will first determine the authority of the teacher, enter the control layer of the authority, match the corresponding business according to the annotation, then call the database and save the data to return to the view.

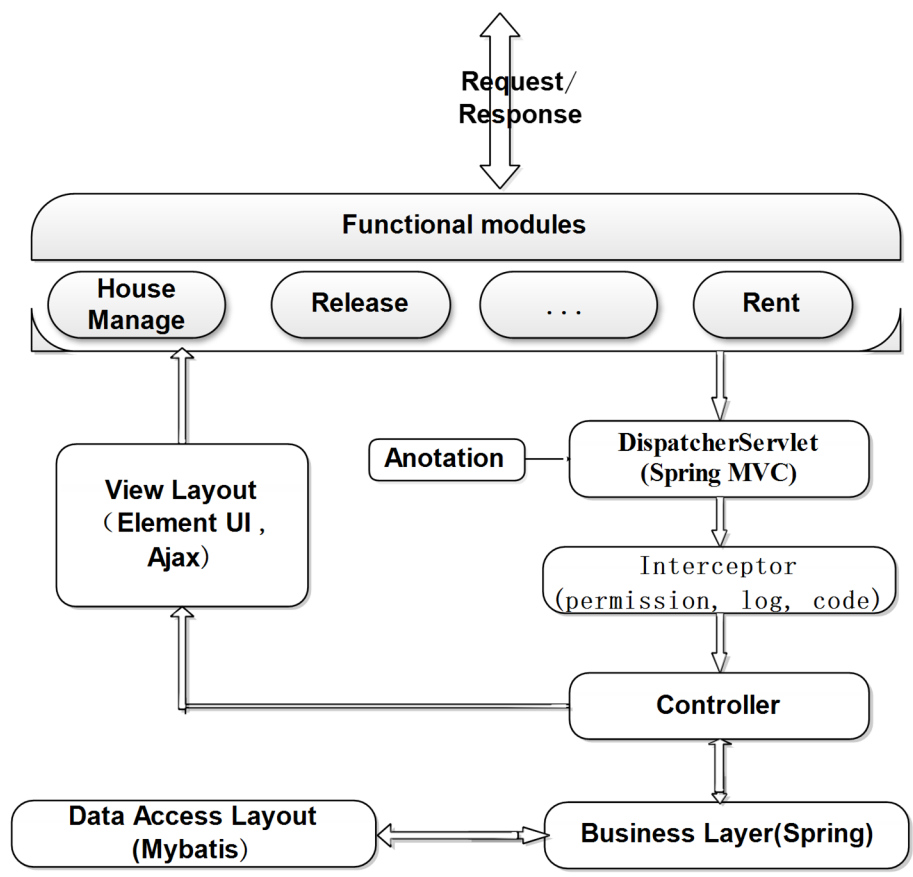


Figure 2. System development process

3.4. Technical Difficulties

In the actual operation, the system extracts data from the low-performance server, which is restricted by capital and hardware conditions. The system and database are deployed on the same server, which is difficult to ensure the reliability of the server, and the server has also experienced hardware failure. Once the server fails again and the data cannot be recovered, it will bring great inconvenience to the system. Therefore, a module of automatic backup and remote storage of database and integral attachments is realized. The module is completed through the daemon program, which regularly backs up the database and compresses the attachment files (incremental, only compresses the newly added attachments after the last backup). After the backup, the files are uploaded to the administrator's mailbox through java mail. Daemon program also provides monitoring function. When the server sends an exception, it will restart the database and web server according to the type of error, and upload the exception to the administrator's mailbox.

In many places, the system needs to output data into Excel files, save them locally and provide users with the option to download them. The system uses the open-source project Apache POI library, which provides APIs for Java programs to read and write documents in Microsoft Office format [6].

4. Conclusion

Due to the timeliness of housing rental information, demand and supply are in a dynamic process. There are often tenants who can't get effective and real rental information, and landlords can't find reliable tenants who are willing to rent at a reasonable price. Through this system, the needs of some tenants and landlords can be alleviated, so as to create benefits. Compared with the traditional housing rental website, the information feedback is not timely and the housing information is wrong or false. This system makes good use of the audit authority of the administrator and the user reporting feedback mechanism to reduce the listing of false, illegal and illegal housing, so that users have a more reassuring choice without considering any unsafe factors. In addition, the administrator can not only block the listing, but also directly block the account when the person who publishes the false listing is bad or even illegal. Similarly, the administrator can lift the ban on the blocked account. When the authenticity of all houses is guaranteed, tenants can safely choose the house they want to rent to achieve the original design intention of the system.

Acknowledgments

This work was financially supported by the young academic leaders of Jiangsu colleges and universities QingLan project, excellent teaching team of Jiangsu colleges and universities QingLan project (Innovative teaching team of software technology specialty).

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