

Community Personnel Management System During Epidemic

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Abstract

With the continuous evolution of THE COVID-19 epidemic, people's continuous awareness and attention to COVID-19, in order to protect people's life safety and prevent some unnecessary panic, therefore, the management of community personnel during the epidemic becomes very important. By managing the personal information and physical condition of community residents, community managers can clearly grasp the situation of residents at all times, so as to effectively prevent the further expansion of the epidemic and endanger public safety. The advantage of this system lies in the convenience of direct contact and communication between residents and managers, so that the community management department can quickly know the personal information and physical condition of every resident in the community, improve the quality and efficiency of the administrator's work, and save a lot of manpower and material costs.

Keywords

Java; MySQL; COVID-19; Community Personnel Management.

1. Introduction

The system is mainly divided into two parts, community residents and administrators, the two parts can share data can also be managed separately, in the data exchange to achieve close contact, the two parts are divided into different functions [1]. The administrator operates and manages in the system as the person in charge of the system. [2] The administrator function module mainly includes viewing the detailed information of the community, issuing and modifying the community announcement, managing the information of the community residents and dealing with the feedback information of the residents. The functional module design of resident users mainly includes the following aspects: daily physical condition report, view and modify personal information, view the latest community announcements. The administrator has the highest system authority and can view all data. The system flow chart is shown in Figure 1.

2. The system design

2.1 System feasibility analysis

(1) From the technical feasibility analysis, the community personnel management system using Java language, Java linguistics is relatively simple. The development platform uses IDEA development environment and MySQL database. These technologies can basically meet all the design requirements and complete the system design functions.

(2) From the analysis of economic feasibility, this system does not need to install any software, as long as you can access the Internet environment, in the IE browser side input access to the URL on the line, so it is economically feasible.

(3) From the analysis of operation feasibility, the system is simple in design, convenient in operation, and the operation mode of other systems is basically the same, users can quickly adapt to and use the system.

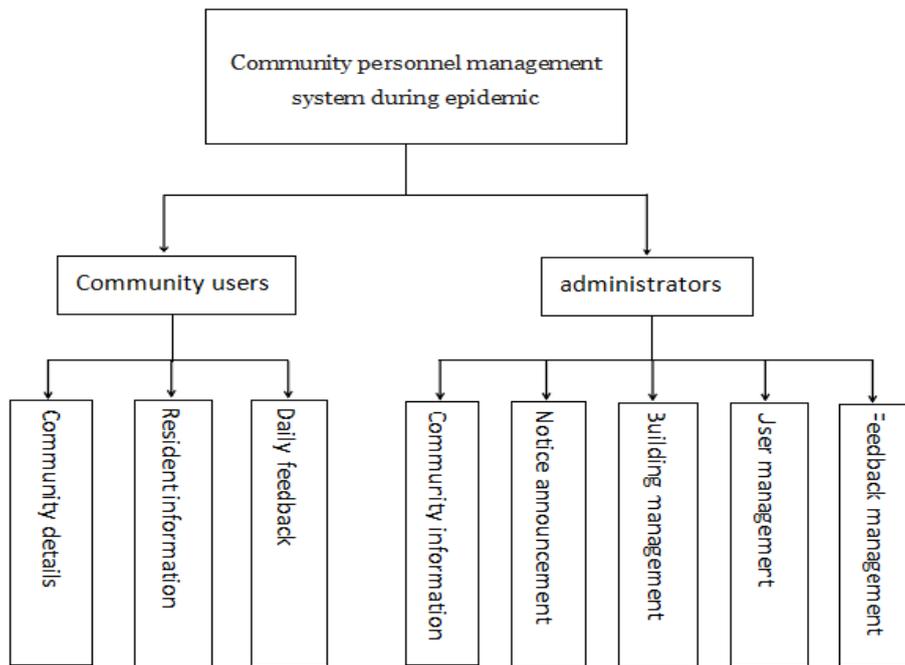


Figure 1. System flow chart

2.2 Relevant technologies involved

2.2.1 B/S framework

B/S architecture is the browser and server architecture model. It is the change or improvement of C/S architecture with the rise of Internet technology. In this architecture, the user interface is implemented through the WWW browser, little transaction logic is implemented in the front end, and the main transaction logic is implemented on the server side, forming a so-called three-tier structure. In B/S mode, users request access to many servers distributed over the network through a browser. The server processes the browser's request and returns the processing results and corresponding information to the browser. Other data processing and requests are done by the Web server.

2.2.2 JSP technology

JSP is deployed on a Web server and can respond to requests sent by clients, dynamically generating Web pages of HTML, XML or other format documents according to the content of the request, and then returning them to the requester. JSPs embed Java code and specific mutable content in static pages, using static pages as templates to dynamically generate part of the content.

2.2.3 Database SQL Server software technology

SQL Server is a relational database management system introduced by Microsoft Corporation. It is easy to use and highly integrated. SQL Server is a comprehensive database platform that provides enterprise-level data management using integrated business intelligence tools. Its database engine provides more secure and reliable storage for relational and structured data, thus providing highly available, high-performance data for business building and management

2.2.4 Tomcat Server

Technology Tomcat server is a free and open source Web application server. It is used in small - and medium-sized systems and where there are not many concurrent users. The Tomcat server is the core of the Jakarta project. The latest Servlet and JSP specifications can always be found in Tomcat, especially since Tomcat is a lightweight application server with free, stable, advanced technology and cross-platform capabilities. As a Web server, the Tomcat server has become the first choice for developing, learning, and debugging JSP applications.

2.2.5 Platform operating environment

The operating system: win10; The database:MySQL; The server: Tomcat 7.0.

2.3 Database table design

The design of the database table needs special attention to two points: first, the database is an important part of the design of the system, affecting the operation of the system, so we should pay attention to the establishment of the database; Secondly, in order to ensure the correctness of the database, it is necessary to standardize in the design. The database table of this system design mainly contains the following several database tables: mainly contains resident information table, health feedback table, community information table.

Table 1. Resident information form

name	data type	instructions	name	data type	instructions
res_id (primary key)	int	auto_increment	res_id_card	varchar	number
res_name	varchar	full name	res_password	varchar	password
res_phone	varchar	phone number	res_sex	varchar	sex

Table 2. Health status feedback form

name	data type	instructions	name	data type	instructions
Id (primary key)	int	auto_increment	res_first_aid	varchar	first aid
res_id	int	Householdnumber	health	varchar	health
temperature	varchar	temperature	create_time	varchar	Feedback date

Table 3. Community information form

name	data type	instructions	name	data type	instructions
com_id (primary key)	int	auto_increment	com_count	int	population
com_name	varchar	Community name	com_phone	varchar	number

3. Demonstration of experimental results

(1) The login interface is as shown in the Figure 2. The user enters the login interface, selects login according to the identity, enters the account and password, and clicks the login function to enter the main interface of the system. If the login fails, the system prompts an error message.

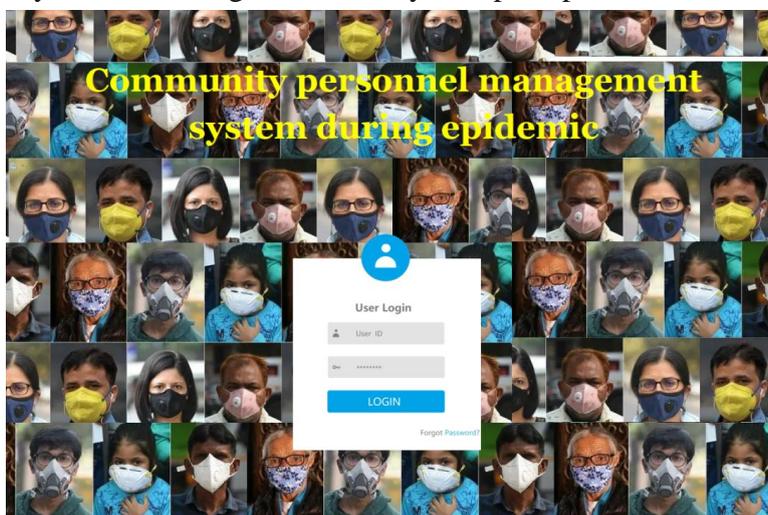


Figure 2. User login interface

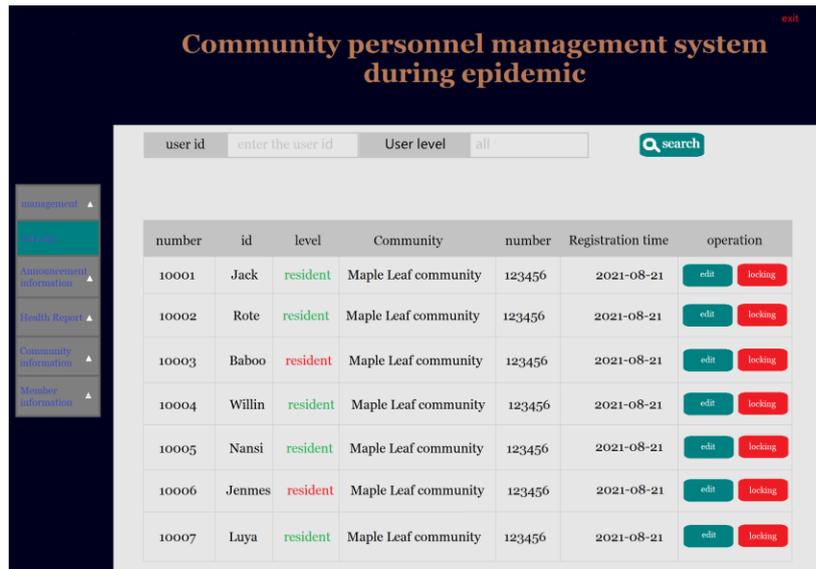


Figure 3. The system interface

(2) Login is successful, and the user interface is displayed as shown in Figure 3. Administrators can manage community information, release notices and announcements, management building, property management, view feedback, user management exit operations; Residents can view the details of the community, view the details of the property, fill in the daily feedback, view the notice and announcement, view personal information to exit the system and other operations.

(3) The back-end code of the system is shown in Figure 4

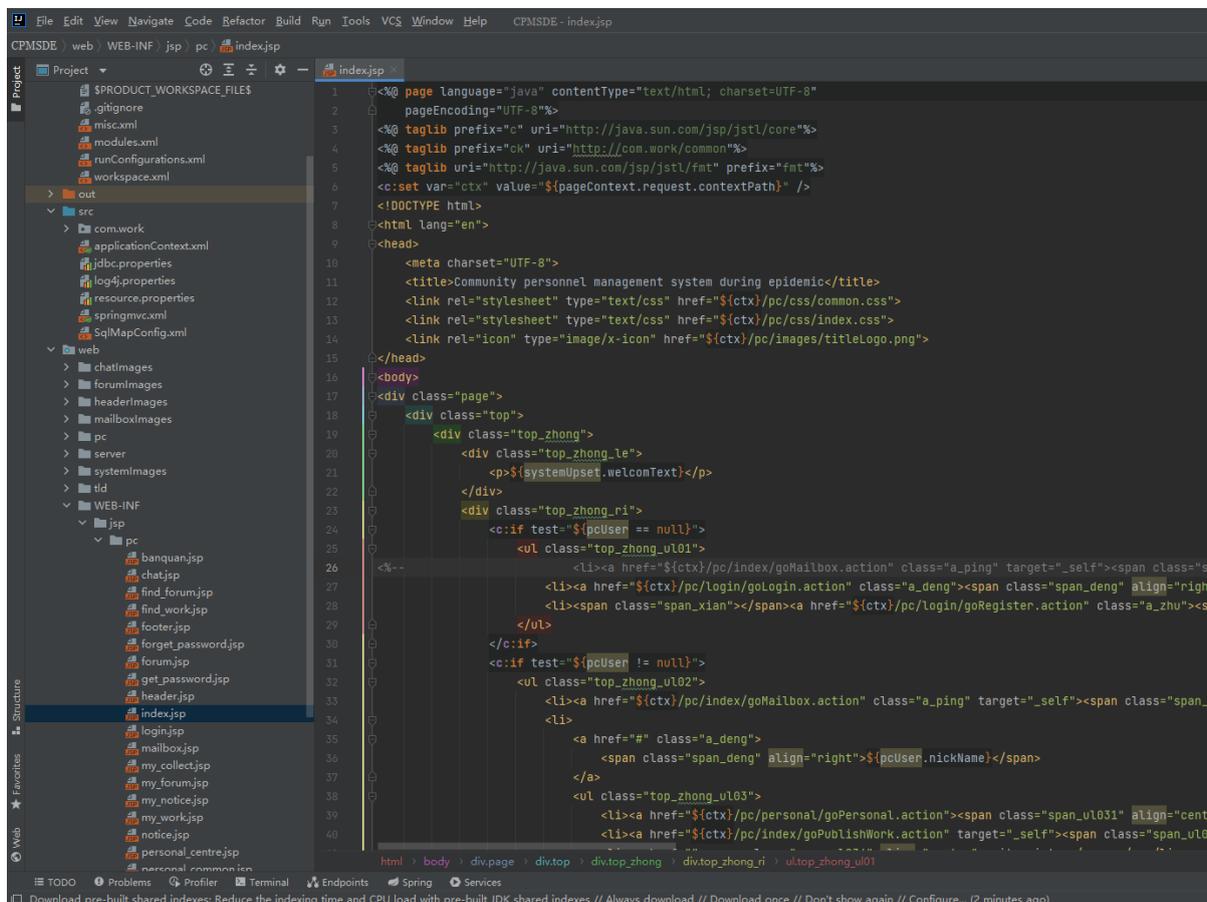


Figure 4. System background source interface

4. Conclusion

Through strict testing according to the test plan, it is found that the system can pass the test in logic and function, and each module of the system can normally meet the community management function during the epidemic. After the platform is put into operation. Community members can timely report their health status at home, and they can quickly contact the administrator once they feel unwell, avoiding the possibility of cross-infection accidents caused by going to the hospital alone, which greatly saves the consumption of epidemic prevention and control resources. Each function design of the whole system is reasonable, the interface is simple, reflecting the humanized design style.

References

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