Design and Implementation of Housing Intermediary Enterprises Management System

Xiaodi Wang, Jie Meng and Yuan Zhang

ABSTRACT

With the increasing development of information technology, it is a hot topic to carry out the scientific, comprehensive and efficient management of the complex and complicated archives management. At present, enterprises and institutions in order to enhance their competitiveness, all units customize and purchase various business applications in high-tech scientific, standardized management. As a manager of a real estate agency, real estate intermediary business management process and information data are needed to know as plain as pointing to their hand. This paper mainly discusses the theoretical basis and design idea of housing intermediary enterprises system, and discusses the development process of the database management software. This paper mainly used the .NET Framework, SQL Server database management system and high-level programming C# development language to develop a housing intermediary enterprises system to satisfy basic business needs. This paper introduced demand analysis of the housing intermediary management system, key technologies of software system development, Client / Server Mode relational database, database analysis, system design, and system future development update.

REQUIREMENTS ANALYSIS

The requirement analysis of housing intermediary enterprises system mainly carries on the work from the two aspects of functional requirements and non-functional requirements. Functional requirements include the actual investigation of the enterprise, and combine with the actual business customer needs to design corresponding functional modules. Housing intermediary management system described in this paper mainly includes five function modules, which are user basic information management, inquiry management, employee information management, rental management and system management. Housing intermediary enterprises system non-functional requirements must reach the scalability requirements, ensure data security and stability, flexible process daily
tasks and problems, and be able to provide reliable data information storage services.

SYSTEM ANALYSIS AND KEY TECHNOLOGIES

(1) SQL Server database profile

SQL Server is a relational network database management system of Microsoft Corp., which supports XML and Internet standards, and has Web based analyzing ability. Because of its powerful function and easy operation, it has been increasingly favored by database users. Microsoft SQL Server 2000 is one of the most widely used database systems, and it is the most widely used server in small and medium enterprises. SQL Server has the functions of distributed database and data warehouse management, supports the C/S architecture, and has the ability of distributed transaction processing and online analytical processing. In addition, SQL Server has a powerful data management capabilities, it provides a wealth management tools to support data security management, integrity management and job management.

(2) C# language development program introduction

C# is an object-oriented programming language developed by Microsoft Corp., which runs on.NET Framework. C# advanced programming language design and development inherited the advantages of C language and C++ language. It improves the code development efficiency and compilation efficiency, provides more interfaces and services, and has become the most popular software development in the field of high-level programming and development language.

(3) Framework.NET brief introduction

.NET Framework is a software development platform launched by Microsoft Corp.. It supports the object-oriented technology, provides the public class and the basic class which can be called, provides the corresponding interface and service, advances the code reuse rate and development efficiency, reduces development time, and enhances work efficiency.

.NET Framework can provide a safe and stable software developing systems, unsafe code to debug and compile in the sandbox, it will not have any impact on stable code, to ensure the code safety and stability.

DATABASE ANALYSIS AND DESIGN

According to the system analysis and function design of housing intermediary management system, it mainly includes employee information entity, customer information entity, housing entity, inquiry intention entity, expense information entity. Housing information entities expressed specific information of renting housing, such as housing number, property name, decoration information, architecture, story, building age and so on.

The software system database design needs analysis and reference software system results, feasibility analysis, to ensure data unity and security information. Design structure in database, a variety of data tables in the database system design as needed. A brief primary coverage analysis of entity relationship model is shown in Figure 1:
For rental demand customers with rental demand information entity express their intent information of rental sources, including intention number, customer ID, house type, decoration information, story, direction, housing application, etc.. The E-R diagram of the entity is shown in Figure 2:

According to the entity E-R diagram, main database table structure design:
(1) Customer information table (TB - user): including customer ID, name, gender, date of birth, home phone number, mobile phone number, email, ID number, customer type, house number, recording date.
(2) Housing information table (tb_house): including the house number, name, room number, house property, decoration information, rental price, story number, construction area, customer ID.
(3) Housing rental demand table (tbjntent): including intention number, customer ID, room number, house block, decoration information, story number, number, rental price, house application number, etc..
(4) Collect fees information table (tb_moneyAndInfo): Including cost number, fee amount, employee number, employee name, house number, date of payment, remarks, housing rental person ID, housing rental person name, phone number, housing rental demand person ID, etc..

SYSTEM DESIGN

In the software engineering development process, during software system design phase, according to important steps of software system and the main content of system software design, to provide the required result analysis and feasibility analysis, and combined with practical use of environmental design of customer software system, basic functional structure of software system are designed and identified main business processes of major software systems. Software system design can ensure software system development process to avoid some unclear problems, so that it can determine high quality software system through defining functional blocks and development plans in each phase.

According to system module analysis and design of housing intermediary management system, the specific function structure diagram shown in figure 3:

![Main function structure diagram](image)

*Figure 3. Main function structure diagram.*
SUMMARY AND OUTLOOK

The housing intermediary enterprises system can meet the functional needs of users and be processed steadily through the system analysis, system design and system development stage. Through understanding of housing intermediary enterprises related business operation flow, we put forward some ideas and prospects for future development and software system upgrading:

1. In the future, housing intermediary enterprises development is faster and faster, with business volume increasing, data storage and data processing speed of software system becomes higher, it is necessary to provide large storing of software system and optimized processing speed. We can adopt distributed processing and big data processing technology to ensure software system data processing speed and accuracy rate.

2. In housing intermediary management system, there are some deficiencies in human-computer interaction and system interface design, and operation interface is monotonous simple.

3. After the software system is delivered to customers, it is also necessary to investigate operation of software system on a regular basis, and visit customer experience software system to analyze running state, maintain and upgrade software system according to user's requirement.

REFERENCES