Design of Online Meal Ordering System

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Abstract

The development of the online meal ordering system has solved the deficiency of traditional dining ,which makes people can stay at home to enjoy the high quality service. This system has proceeded the market demand analysis, adopted C/S mode to make design, research and development, and has exploited the online meal ordering system on the basis of .Net, The system used SQL sever2005 and Visual Studio2010,among which the foreground has achieved the function of user registration, log in and add to cart while the background has realized the management of user, product and order. The system used the black-box testing method to test cases and has obtained the desired results.

Keywords

Online reservation; The management information system; SQL sever2005.

1. Introduction

With the rapid development of science and technology, computer technology and information technology are increasingly mature, and the Internet has become the best way and channel for people to obtain information, which has brought huge impact on people's dining life, and also has irreplaceable effect on people's dining habits. It is imperative to design an online food ordering system to meet and facilitate people's living needs.

2. Research background and significance

As a new consumption mode, online meal ordering system can order a delicious food for friends and relatives or oneself whenever and wherever possible. Its development has provided great business opportunities for the catering industry and will achieve significant success in the competition of the catering industry.

This system adopts the object-oriented software development method, and analyzes, designs and realizes according to the basic steps of software engineering. However, the system mainly realizes the basic function of online ordering for a small restaurant, and some functions are not enough. With the improvement of people's living standards, the system still needs further improvement and improvement to meet the high standards and diversified food demands.

3. Related technology introduction

The design and development of this system is carried out in B/S mode, with database SQL Server 2005 as the background platform, Microsoft Visual Studio2010 as the program development platform, and C# language as the system development language for the construction of program code. The front desk of the system mainly realizes the users' login and registration as well as the functions of browsing and adding the food information to the shopping cart. The main object is the customer, while the background comprehensive management realizes the addition and management of system users, the addition and query of food and beverage, and the management of customers and orders, and the main object is the management personnel. The related technologies of the system are described below.

3.1 B/S

B/S (Browser/Server) structure is based on Browser and Server structure, which is an improvement of C/S structure with the development of technology. The B/S structure allows users to browse all kinds of restaurant information directly through the browser without the need to download the client, and the main transaction logic is implemented on the server side, which simplifies the workload of the computer, reduces the cost of system maintenance and upgrading, and reduces the cost of catering enterprises.

In view of the current domestic scientific and technological level, the application of B/S structure is relatively easy to grasp, and the cost is relatively low. It is a one-time application development that enables different people from different places to access and operate common databases in different ways (such as LAN/WAN/Internet), thus effectively protecting management access rights and data platforms and making server databases more secure.

3.2 Visual Studio 2010

Visual Studio is a development environment launched by Microsoft. It has grown from the Visual Studio97 version to the current Visual Studio2005 version. The development environment of this system adopts Microsoft Visual Studio 2010, which is more prominent and convenient for debugging than other versions. Some debugging information and program status are automatically tracked and implemented to the developers intelligently, and with good scalability and compatibility, it provides support for multi-language development.

3.3 SQL Server 2005

SQL Server 2005 is a database management system. It is also a software launched by Microsoft. It is a comprehensive database platform with full WEB support. Database SQL Server 2005 provides a more secure and reliable storage capability that allows us to build and manage high-performance data applications.

4. System demand analysis and design

4.1 Demand analysis

According to the data obtained, and some customers of different ages were asked to know their dining demands. As the development of the computer network has been rapidly to every household, people's dependence on the network has become more and more serious, in the face of the development of the online ordering of meals also play an important role. Through related investigation, the following system requirements are summarized.

4.2 System structure design

According to the characteristics of the online ordering system, the system can be divided into two modules: the front-end user interface and the back-end management interface.

4.3 System function module design

Front desk user interface member login module, including the functions of user registration and user login, mainly to the user can log in to complete the online reservation system order business, all sorts of module, we can see in the center of the dining restaurant food graphic information and price, system modules can know all kinds of food, selected their favorite products to join in the shopping cart, can see people in reservation record module products.

There are systematic user additions in the background management interface, where new users can be added. In the system user management, each administrator user can be managed, deleted and added, and catering can be added and inquired, so as to update food products online in a timely manner and ensure that each food can be ordered and taken off shelves in a timely manner. At the same time, we can manage customers and delete all kinds of information of customers. Finally, we can manage orders. Above, we can check customer information, order information and order time, and timely deal with them to avoid wrong orders. Exit the background management module. Click the exit button to exit the background management interface.

4.4 Database design

Taking SQL Server2005 database as the design of background database of this system, we created a database of online meal ordering, which contains four tables, one is the front desk user registration information table, one is the background management information table, one is added to the shopping cart information table, and one is the information data table of online meal ordering

5. Implementation of online meal ordering system

5.1 Implementation of the front desk interface design

The system front stage function mainly realizes four modules: user registration module, catering center module, system introduction module and system reservation record module.

User registration module mainly is to know the user information, users need to fill out a nickname, password, name, phone, id information such as the user is real-name authentication, if not to register to become the member of the restaurant, the user can only understand some restaurant information and cannot be predetermined, add to cart and then can't complete the online order business.

The system reservation record module enables users to clearly know which dishes they have ordered, including their user name, catering number, catering name, catering picture display, catering price, order time and other details. If they are not satisfied with the dishes, they can also delete them. Convenient for the majority of users to choose their favorite food, can also know in advance the total price of selected dishes, ready enough funds.

The picture and text of the catering center module show the food features of the restaurant, from which you can see all the food in the restaurant listed, and it can also make users understand the detailed information of each food, including the name, number, price and content of the food.

The system introduction module can enable us to understand the details of the restaurant in more detail, such as its geographical location, decoration style, service attitude, the department of the restaurant, restaurant introduction and other information, so that users can feel the details of the restaurant without having to visit the site, so as to save users' time and improve the efficiency of users and the restaurant.

5.2 Implementation of background management function

The main function of the catering add module is to add food, which is convenient for restaurants to add new food, and timely update online, providing users with the latest food and beverage information, including dish number, dish name, dish price, category, dish picture and dish introduction.

The main function of the order management module is to manage the orders placed by users. All the orders that have been submitted are listed above. After the orders are completed, the administrator can delete the useless orders, which is convenient for handling the orders placed by other users.

The main function of the system user addition module is to add multiple administrators, which mainly includes the addition of general administrators and super administrators. The system user management module mainly displays the information of all administrators in the background, including user name, password, role and adding time. The function is to view all administrators in the background and then delete them. The restaurant query module shows the list of all the food. The main function is to check all the food items on the shelves of the restaurant and their detailed information. If the food items need to be removed, they can be deleted. The customer management module mainly displays the information list of registered members of this restaurant. The main function is to manage the user membership information and delete it, including the user's nickname, password, name, phone number and registration time, etc., to facilitate the administrator to manage the restaurant members. Exit module click exit button to exit the website background page.

6. Test the online meal ordering system

6.1 System interface test

The purpose of system testing is to ensure system performance, which is relatively important in software work. System interface test mainly tests whether the overall interface layout is beautiful, tidy and reasonable. Its standard is very much, specific standard depends on instance.

6.2 Functional testing

System function test is a very important content, the main test system function can run normally. If you already know what functions the product should have, you can check whether each function can be used normally through testing. This system adopts this testing method, namely black box testing method, to test each function of the system from the corresponding relation between input data and output data. The test results showed that only the correct commands could be input to operate normally. After the black box test, the system found that all functions could operate normally. The foreground could realize the user login and registration function, and the background could realize the system's user addition, user management, food addition and query functions.

7. Summary

After several months of efforts, continuous revision and testing, the final draft of this paper was finally completed. In this design, I deeply felt the gap between theory and practice, but also deepened my understanding of ASP.NET technology and SQL Server 2005 database technology, and improved my ability to analyze and solve problems.

The online ordering system is a management system developed and designed based on the demand of ordering. The system USES SQL server 2005 for database management and Microsoft Visual Studio 2010 as the front and back stage design, mainly completing the design and development of several modules of user registration, catering center, system introduction, system reservation record and background management, and basically realizing the expected goal through the system test. However, there are still many imperfections. For example, the foreground picture is not very beautiful, and there are many dynamic functions that are not considered. The backstage management and catering query modules can only be deleted and cannot be modified, which brings some limitations. In view of the above problems, we will continue to improve in the future study and work, looking forward to doing better in the future, so that the online meal ordering system can be put into use in the future.

The new consumption mode of ordering food online will go deep into People's Daily life, which is closely related to it and will have more development space. Its design and realization will be more perfect in the future development.

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