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Development of Intelligent Flower Shop Management System Based on MIS

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Abstract. In view of the fact that the traditional way of flower shop information management is based on manual processing of paper media such as text and forms, manual calculations are often used to count and verify the order of flowers. Data processing is tedious and error-prone. Therefore, this design uses ASP technology and IIS technology, combined with database SQL Server 2008, using Visual Studio 2010 development tools, designed and implemented a dynamic intelligent flower shop management system based on MIS. The system makes the flower sales management work standardized, systematic and procedural, avoids arbitrariness, improves the speed and accuracy of sales, and timely, accurately and effectively inquiries about and revise orders and flowers. The low operating costs of on-line flower shops, short cycle of capital turnover, and faster information updates are more conducive to market development.

1. Introduction

Flower consumption is becoming more and more prosperous in recent years. Besides the useful and benefit with tools, it can make people enjoy their eyes and beautify their homes [4-6]. It can also develop people's imagination and make people more implicit and taste when they communicate with each other [1]. It is very feasible to take account of the long-term market share of the system and the rate of short-term capital return to seize the market, to meet the theme of individual consumption, and to drive other products with flowers as a pilot, and eventually to form a market with the advantages of intelligent flower shop management system. Intelligent flower shop management system arises at the historic moment.

The designed intelligent flower shop management system is an e-commerce platform. Through it, consumers can browse a series of consumer information, such as flower information, special flowers and promotion activities. Consumers can easily find the flowers they need, pictures and text introduction. For consumers, it is possible to "shop" at home, order not to be restricted by time; to get a lot of flower information, to buy flowers that are not in the local area; it is more convenient to pay for cash on the Internet; from order, The purchase of goods to the door does not need to be on the scene, both time-saving and labour-saving; as the intelligent flower shop management system saves a series of expenses, such as storefront, employee and storage, the total price is cheaper than the same flower in the traditional flower shop [2]. The intelligent flower shop management system breaks through the barriers of traditional business. It has great attraction and influence to consumers, enterprises and the market. In the new economic period, it is no doubt an ideal model to achieve "multi win" effect [3].
2. System Business Process
It is convenient and quick for users to do shopping on the Internet, so the system needs to be able to quickly search for the information that they want to know in a large number of product information. Moreover, because there may be many people who are not familiar with the online shopping process, the system operation process should be simple and easy to use. Therefore, the system front desk should be simple and easy for users to use.

The system administrator plays a very important role in the design system, such as the management of flowers, order management, registration of user management and so on, and the system should be clear and clear in the face of a large amount of information, and the administrator can easily find the necessary management categories. In order to realize these requirements, the design should be fully functional, friendly interface, clear module division; so that the system administrators do not need computer expertise can be convenient and quick management of the design system.

3. System Analysis

3.1. System Organization Structure and Role Analysis
The online flower management system based on MIS: the server handles and passes the data to the database. The system only needs to read the data directly from the database, and visualizations and management of the data. The system is mainly divided into three roles (as shown in table 1): anonymous users, memberships, system administrator. The system management process is: anonymous users through the browsing of flowers, and then decide whether to register, in order to execute the order and other more business, eventually managed by the system administrator.

| Character classification | Permissions or features |
|--------------------------|------------------------|
| System administrator     | The user with the highest privilege can set the addition, deletion, and permission of registered users, and is responsible for the management of the entire system, such as functions of flower management, order processing, and statistical sales. |
| Memberships              | Members have the functions of modifying, inquiring personal registration materials, placing orders, checking shopping cart and leaving messages. |
| Anonymous Users          | You can only perform browsing and clicking on flowers to view flower details, registration functions. |

3.2. System Service Scenario Description
Users purchase flowers through the network. The data of the front-end users is transmitted to the back-end server via the network. After the server processes the data, the data is stored in a large-scale database to be called. The Web server reads information from the database, making it easy for users of the system's three types of roles to query and use it.

A typical Florist management system includes two levels of authority: anonymous users and members, system administrators. The permissions, order processing and sales statistics of anonymous users and members, and sales statistics are entered into the database by the administrator and the users log in to MIS according to their privileges, and can perform functional operations such as viewing and browsing information. The system administrator has the operation of querying and browsing the system access record, and at the same time, statistics the sales situation.

4. System Design

4.1. Overall Functional Structure Design
During the entire construction process, the system follows the design principles of the top-down, top-level and hierarchical module structure, it is divided into several subsystems, and the subsystem is further divided into several modules to establish the compositional structure among the modules in the
system. The relationship between function and existence is based on the principle of a group of programs with high cohesion, low coupling, input/output, logic function, running program, and internal data. In structured system design, modules are generally divided according to functions. The division of reasonable functional modules can greatly reduce duplication of labor, increase the efficiency of development work, and increase the maintainability of the system. Based on the system analysis, the online flower management system is realized by the client module and the server management module. The former mainly includes user registration, user login, flower search, shopping cart, order inquiry, user message, and the latest announcement, special flowers and other major modules, the latter's main function is to achieve the maintenance and management of the system, such as the addition of flowers, delete, recommendations, orders and other management. The functional structure of the flower management system is shown in Figure 1.

**Figure 1.** Functional structure of the system

4.2. **IIS with ASP Technology to Integrate**

The design of client / server structure is almost parallel to the related technologies of Web, and they are independent of each other and can’t be integrated design. Now we use IIS+ASP to form the middle layer of the three layer Web structure, combine the client / server structure closely with the Web, and complete the integrated output function of the front and back ends, making the development of the Web site more convenient and more powerful.

Using IIS+ASP technology to integrate the powerful benefits of Web front end can be summed up as follows:

1. Reduce the cost of building and maintenance
2. Speed up online process
3. Application software concentrates on the server side development management
4. Front end can use any browser (IE, Netscape...).
5. The backend can access any database (SQL, Access...)
6. Can be developed using any scripting language (VBScript, JavaScript, PERL...)

4.3. **Database Design**

Database design is a technology for researching databases and their application systems. It aims to establish the process of establishing databases on existing database management systems. The key issue in database design is how to set up a data model [7-10]. Database design is mainly based on the following aspects considerations.

4.3.1. **Database Analysis.** According to the analysis of system requirements, the database should contain the administrator information sheet, payment information sheet, flower information sheet, member information sheet, news information sheet, and order information sheet (as shown in Table 2).
### Table 2. Data table information

| Data table name                          | Field number | Fields                                                                 |
|------------------------------------------|--------------|------------------------------------------------------------------------|
| Administrator information table          | 3            | number(admin_id), name(admin_name), password(admin_pass)              |
| Payment information table                | 5            | name(user_name), date(hw_date), user-number(user_id), name(fukuan_method), payment method(fukuan_method), account number(fukuan_content), number(hw_id), type(sort_id), original-price(hw_views), current-price(hw_buys), name(hw_name), picture(hw_pic), quantity(hw_quantity), recommendation(adminreconmm), bargain-price(promotion) |
| Flower information table                 | 9            | number(user_id), name(user_name), password(user_pass), name(hw_name), picture(hw_pic), quantity(hw_quantity), recommendation(adminreconmm), bargain-price(promotion) |
| Membership information table             | 8            | number(user_id), name(user_name), password(user_pass), email(user_mail), address(user_adds), phone(user_tel), registration-time(user_regtime), postcode(user_postcode) |
| News information table                   | 5            | number(news_id), type(newsclass_id), title(news_title), content(news_content), date(news_date) |
| Order information table                  | 8            | Order-number(id), name(customerName), address(address), postcode(code), telephone(phone), date(createDate), email(email), status(state) |

### 4.3.2. Database Structure Design

The process of abstracting the user requirements obtained from the requirement analysis to the information structure, that is, the conceptual model is conceptual structure design, which is the key to the entire database design. How the conceptual data model completely and correctly reflects the actual situation in place of how it is implemented in the database [11]. This data model can truly reflect the actual situation required by the user and is an intuitive database structure model that can be easily understood by people. At the same time, it is also a relatively stable and unified data model, which is rarely changed under normal circumstances. Conceptual data establishes a bridge between users and designers is the basis for designing database structures [12]. Through the requirement analysis and data information description of the online flower management system database, the entity-linkage (E-R) diagram representation is used to describe the relationship between the entities [13]. The system E-R diagram is shown in Figure 2.

**Figure 2. The system E-R diagram**
5. Development and Implementation of the System
The system has three levels of access rights, and the specific functional structure is shown in Figure 3. The front desk is the user to browse the entire flowers online, search the relevant flowers according to the requirements, and the operation of the registration for the flowers after the membership, after the end of shopping to generate order information view function.

![Figure 3. System function diagram](image)

5.1 The System Implementation
The system's home page (Figure 4), as the main interface to users. Users can browse the information released by the administrator, search for flowers information, can register to become members and complete the purchase of flowers, the message to the system, check shopping cart and so on. User registration module completes the registration function of the front desk user, only registered members can buy flowers [14-15] on the network through the system, online order page, such as the shopping cart Module, it can realize the temporary storage function of the shopping cart, and the members can put the flowers in the shopping cart. The clerk can change the number of flowers in the shopping cart or delete the flowers in the shopping cart. When the registered users finish shopping, they can submit the flowers in the shopping cart to the online order. After receiving the order, the administrator handles the flowers ordered by the user. After that, users can query the status of orders and understand the processing of orders. The user message module completes the function of the user's message on the Internet. The user can leave a message on the system's advice, advice, complaint, feedback and other information [16]. After the message, the administrator can view the user's message in the background, so as to facilitate the interaction between the administrator and the user.
Figure 4. The system main interface

6. Conclusion
This study makes full use of and combines the latest information technology. Design and implement a dynamic intelligent flower shop management system based on MIS. Online stores have unparalleled advantages of traditional stores, such as low operating costs, limited regional restrictions and time constraints, and less market expansion. The system is developed in B/S mode. The user sends the request to the server distributed on the network through the browser, the server handles the request of the browser and returns the information. The integration of IIS and ASP technology in the development of MIS and the unified management of various service functions of the system can easily build a convenient and intelligent flower shop management system. At present, online stores on Internet are increasing at an amazing speed. Online shopping is becoming the first choice for modern people. The flower shop management system can help you open web pages with the help of developed networks and modern technology and technology to complete the browsing and ordering of flowers.

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