Network Mall System Inb/S Mode

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Abstract: In order to realize the network Mall system in b/S mode , we need the strong support of the background database, the administrator verifies the registration information, collects the user information, and the large amount of data such as the related table obtained by the analysis is managed by the database management system.

Keywords: Network mall; JSP; Mysq L

1. Introduction

With the rapid development of Internet technology and the advent of the Internet era, network information will also change today's society. The management of all walks of life on the internet is gradually tending to the trend of standardization and networking. The degree of informationization of the online mall system in b/S mode reflects the application of Internet and information technology in operation and management, as well as the replacement of traditional business models with modern tools [1-3]. There is no doubt that using network information management to update the model will be more advanced, more efficient, more scientific, and the exchange of information will be faster [4-6].

Network Mall system based on e-commerce platform, that is, save time, labor saving, but also save costs, Reduce the rental of stores, shorten the middle link of sales. Especially with the growing maturity of the logistics market, the increasing number of Internet users, network shopping malls greatly facilitate shopping, whether for sellers or buyers are a very good thing [7-9]. Especially for consumers, without leaving the home, they can purchase the required products from the website according to their own needs or popular trends. The function of the physical mall has been completely moved online, allowing buyers and sellers to trade without meeting, to achieve consumer online shopping, online transactions between merchants and online electronic payments, as well as a variety of online activities.

b/S The main modules of the Network Mall system under the mode include user registration, login, product information view, commodity purchase, order view, product message evaluation and other functions. The administrator has the corresponding operation permission to the background, the administrator in the system is mainly in order to store and manage and maintain all kinds of information of the website securely and effectively, and can manage and update the user information management, category information management, announcement infor-

mation management, message information management and so on.

1.1. Purpose of development and significance

B/S Mode of Network Mall system The research is to be able to better meet the needs of users, for users to save time to achieve time-saving and efficient purposes. Subversion of the traditional business model, in the Internet through b/S Mode Network Mall system, and according to their own needs can be online to view commodity information, online trading, etc., to achieve the user can complete the entire shopping operation without leaving the home.

In this paper, b/S mode under the Network Mall system mainly involved in the program, database and computer technology. Covering a large range of knowledge, can greatly improve the efficiency of the system personnel, increase the user's understanding of things and control ability, cultivate users to study scientific methods, independent thinking, courage to forge ahead, explore innovation, for the future study and work to do a good foundation.

1.2. Research content of the subject

This topic is in b/S mode after the development of the network Mall system, according to the functional content embodied in the program will be translated into a text expression process. What kind of background environment is developed for this system, what is the significance of the development of the system, and what technologies are used in the development of the system? During the design period, the system needs to take into account the problems and solutions in the user's use process, and then analyze the needs of the users. The system design stage needs to analyze the function module of the system, and secondly, according to the corresponding function to design the database table. After the preparation of the pre-work is completed, the development of each function module of the system.

2. Theory of System Development

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2.1. Hibernate

Hibernate A very Lightweight object encapsulation of JDBC allows programmers to manipulate the database using object programming thinking [4]. Using the Hibernate database, we do not have to write Too many SQL statements, its bottom layer is to help us encapsulate, the most basic operation statement can be called directly. It operates directly on the object.

2.2. Struts

Struts It is an application framework of development source code based ON MVC Classic design Pattern [5], which by putting servlets JSP [6] Java Bean, custom tags, and information resources are integrated into a unified framework That provides a highly Configurable MVC development model for Web development. At this point, the code is more concise, the front-end page and the background control code is well separated, the code is also highly coupled.

2.3. Spring

Spring Provides a consistent approach to managing business Objects [7] and encourages the injection of good habits for interface programming rather than class programming. Spring is primarily dealing with connectivity issues between front-end and background databases [8]. Spring is more flexible, closer to interface-oriented programming, and less dependent between code.

2.4. My eclipse

My eclipse The editor provided by this platform is visual, convenient for programmers to encode and program configuration, and the most important thing is that visual editing can allow programmers to shorten coding time and improve coding efficiency. My Eclipse It does not restrict application servers, but can perform test operations on tasks on different application servers. My eclipse also provides a number of servers and connectors to monitor the operation of the application, and the application servers Deployed on my eclipse have Glassfish and Tomcat , among others, My eclipse can provide my eclipse Tomcat and Derby servers on top of the task for extreme testing. The software for the development and selection of this program is my eclipse.

3. System Analysis

3.1. System design objectives

In today's society more and more rapid pace of life, people's demand for time efficiency is also more and more high, due to busy work cannot spare time for the field view of goods, so that the b/S mode of network Mall system requirements, the fastest way is to use the computer network, The combination of online commodity trading and computer network, the formation of B/S mode network mall system, not only improve learning efficiency, expand visibility, but also for the end users to provide convenient and efficient service.

The task of requirements analysis is to fully understand the general situation of the system, to clarify the various needs of the user, and then to determine the function of the new system on the basis of the detailed investigation of the object to be processed by the reality. The new system must take full account of possible future expansion and changes.

3.2. System feasibility analysis

3.2.1. Feasibility analysis of operation

The system's login interface is simple and friendly, using the Common Interface window login interface, and the development of the website is more commonly used JSP technology. These policies make it impossible for users to quickly familiarize themselves with the system and master the operating methods of the system without a long time. In addition, in order to facilitate the system management maintenance personnel, users log on to the system will give some hints, making the whole system more humane, user operation is simpler and more convenient.

3.2.2. Feasibility analysis

To survive in the long term, you must first have a good system platform, and secondly need to have a sound management, and then adopt a scientific approach to achieve sustainable development, and finally keep pace with the times, continuous reform, so that time to adapt to changes in society. The most important thing is to ensure that scientific management methods are the only way to gain competitiveness for long-term development.

3.2.3. Technical feasibility analysis.

Hardware feasibility analysis:
There are no special requirements for the hardware requirements of the system, which can be easily implemented only in the ordinary hardware configuration, but it is necessary to ensure that the system is working properly and has a high degree of efficiency. If there is particularly low hardware, it can lead to low performance and low efficiency of the system, resulting in a smooth operation of the entire system. This is very easy to implement in terms of the current configuration of personal computers. Therefore, the development of this system is feasible in terms of hardware.
Software feasibility analysis:
JSP Technology provides a common mechanism for similar interface dynamic models, with a more focused design. In addition, the use of the Java language can be easily implemented to modularize and store information. In addition, code reuse, can also be a good embodiment. Therefore, considering the actual situation of

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the system, the choice of JSP as the development technology of this system. Through the above analysis, the design and implementation of the system is feasible in software.

4. Legal Feasibility

This b/S Mode Network Mall system is its own design of the management system, has a great practical significance. The development of environmental software and the use of the database are open source code, so the development of this system and ordinary system software design is very different, there are no infringement and other issues, it is completely feasible in law. In a word, the design of a b/s Mode Network Mall system has the advantages of high efficiency, simple operation, reduce costs and so on, so it is very necessary to establish a b/s Mode Network Mall system. Therefore, we have carried out four aspects of the feasibility study, we can see that the development of the system is no problem.

4.1. System function analysis and description

Using b/S mode, the user of the network Mall system is divided into the permissions sub module of two roles for administrators and users.

The main functions that administrators can use are: Modifying login password, user information management, category information management, commodity information management, announcement information management, message information management and so on.

Users can realize the view of product information, system announcements, message boards, user registration, login, merchandise trading and so on.

4.2. Development environment

The system develops the environment, the operating system uses Windows10, the server uses the Tomcat7 server, the database uses the MySQL5.5, the development tool uses the Myeclipse10, The browser uses IE11.

5. System Design

The system uses MVC design patterns, namely the representation layer, the business logic layer, and the data layer, and only modifies the business logic layer when the business logic needs to be extended, and the other two tiers do not require any changes.

5.1. Software structure design

5.1.1. System structure flowchart

5.2. Data structure design

In conceptual design, there are usually four methods:
Top-down, bottom-up, gradual expansion, hybrid strategy, that is, a combination of top-down and bottom-up, to design a global concept with a top-down strategy. The framework of the structure, with which it integrates the local conceptual structures designed by the bottom-up strategy for the skeleton.

In the physical structure design phase, the first two steps are taken:

Determine the physical structure of the database, in the relational database mainly refers to the access method and storage structure. The evaluation of physical structure is time and space efficiency.

The correct relational pattern access method is selected, which is commonly used: Access indexing method, cluster access, HASH access method and so on.

5.2.1. Database table design

Database design is the technology of establishing database and its application system, which is the core technology in the development and construction of information system. Because of the complexity of database application Systems, database design becomes extremely complex in order to support the operation of related programs. Therefore, the best design cannot be achieved overnight, but only a "repeated search, gradual refinement" process. That is, the process of planning and structured the data objects in the database and the relationships between those data objects.

Table 1. Database design

Column name	Data type	Length	Constraints
Id	Varchar	50	Primary Key
Username	Varchar	50	Default Null
Userpw	Varchar	50	Default Null
Userrealname	Varchar	50	Default Null
Usersex	Varchar	50	Default Null
Userage	Int	10	Default Null
Useraddress	Varchar	50	Default Null
Usertel	Varchar	50	Default Null
Useremail	Varchar	50	Default Null
Usertype	Varchar	255	Default Null

6. System Implementation

6.1. User access page implementation

6.1.1. Mall home

Visitors can be through the online mall platform into the home page, system announcements, commodity information, System message Board, user registration, user login, Shopping cart, order management and other functional modules to view.

6.1.2. Product info

Product Info, Through the product thumbnail click to enter to view the product details, through the interface can view the product number, item name, item description, item price, item quantity, remaining quantity, purchase quantity and other information to purchase, by selecting the quantity and then making the purchase, the successful order submission will show the order submission success interface, Displays information such as order number, next order date, receipt account, receipt name, contact number, shipping address, payment method, total amount, etc.

6.1.3. System announcements

System announcement, through the interface can view the announcement title and release time and other information, users through the announcement title can click into the announcement information Content details interface, announcement release time, announcement details and other information.

6.1.4. User registration

User registration, by filling in the account number, password, name, gender, age, address, telephone, mailbox and other information after completing the selection to determine, after the successful registration of users, through the account number, password to log in.

6.1.5. User login and personal center

After the user login is successful, you can view the shopping cart management, message board, my order and other details, my order, through the interface can view the order number, place order time, receipt account, receipt name, contact telephone number, shipping address, payment method, total amount and other information, can also be detailed through the order to view the details of the product.

6.2. Background feature implementation

6.2.1. Admin login

Admin login through their own account number and password, account number and password cannot have any errors, otherwise the login will fail.

6.2.2. Administrators maintain background data

After the administrator login is successful, you can modify the login password, user information management, category information management, commodity information management, announcement information management, message information management, such as modification and maintenance operations, commodity information management through the list can view the product number, name, picture, price, quantity, The remaining quantity and other information to choose to delete and other operations.

6.2.3. Add an announcement

Add the announcement, by filling in the information title, information content, release time and other information to fill in the accurate after the selection of the submission.

6.2.4. User publishing products

Users through login into their own background operations, you can view my information, my goods, post goods, sales information, such as maintenance operations, release product information, select product categories, fill in product numbers, product names, simple introduction, picture upload information completed after the selection of the submission.

6.2.5. Maintain sales of goods

Sales information, through the list can view the product name, quantity, order number, place order time, receipt account, receipt name, contact telephone, shipping address, payment method, status and other information to view the operation.

7. Analysis of System Test Results

This system tests the environment, the operating system uses Windows10, the server uses the Tomcat7 server, the database uses the MySQL5.5, the development tool uses the Myeclipse10, The browser uses IE11.

Using Myeclipse10 to open the program that has completed the development, start the Tomcat7 server, through the IE11 Browser for the site browsing and viewing operations, the system interface design basically meet the requirements, The overall feeling is still relatively clear, functional plate above in the test period are tested one after another, basically did not find the function of the operation logic problems and content implementation problems, so the program can meet the user requirements of the document requirements of the content.

8. Conclusion

Most of the modules of the system have been implemented, programming knowledge and software concepts do not complete the task, it must also clarify how the system works and what kind of process it is. Only by figuring out these things can a useful, logical and easy-to-use system be developed.

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