The Online Bookstore

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Abstract. Nowadays, the network plays an import role in people's life. In the process of the improvement of the people's living standard, people's demands of the life's quality and efficiency is more higher, the traditional bookstore's inconvenience gradually emerge, and the online bookstore has gradually be used in public. The online bookstore is a revolution of book industry. The traditional bookstores' operation time, address and space is limited, so the types of books and books to find received a degree of restriction. But the online bookstore broke the management mode of traditional bookstore, as long as you have a computer, you can buy the book anywhere, saving time and effort, shortening the time of book selection link effectively. The online bookstore system based on the principle of provides convenience and service to people.

1 Introduction

1.1 Research Background

The Internet has been favored by more and more people for its high efficiency and richness, and e-commerce has emerged[1]. The online bookstore is a form of e-commerce and book sales industry in one form, it has many advantages, such as: Bookstore size is relatively small, cost savings; transaction activities can be anytime, anywhere, improve service efficiency[2], The information is complete, more convenient retrieval [3], the new book information on the new, consumers can see in a timely manner, trading activities can be launched immediately, so online bookstore in today's era of development is extremely rapid. Online bookstore system is the main function of the trading platform for the site, consumers can connect to the Internet through the computer into the online bookstore and then check the book information, if you need to purchase should be registered landing, select their own books, submit orders and pay Operation to complete the entire book ordering process, to achieve online transactions.

1.2 The Purpose and Significance of The Project

With the online bookstore system, consumers do not need to blindly go to various places to find their own books, but only in a computer connected to the Internet log on online bookstore system[4], in the search box, type you want to find Of the book information retrieval, you can efficiently know whether the site has its own books, if you can online direct purchase, if not, you can change the home bookstore to continue to search or provide advice to the seller in order to supply, This greatly facilitates every consumer, saving time and labor.

The online bookstore system can not only reduce costs, save time, space, to bring convenience to everyone, but also to promote the development of the logistics industry, serve three purposes, mutual benefit. More importantly, in today's world, the increasingly close ties between countries, more frequent exchanges, the economy tends to globalization, which promote the future development of online bookstore system has some practical significance.

1.3 Technology and Development Environment

The system uses the JSP and Servlet technology, with C3P0 connection pool to connect to the development of MySQL database, the front interface design is to use Dreamweaver CS6 to achieve, and the page effects using the JavaScript language and its library function jQuery, enhanced User interaction with the interface experience[5-6].

2 Demand analysis

2.1 Analysis of Current Situation

The development of online bookstores in China has gone through four stages: the embryonic stage, the development stage, the mature stage, and the prosperous stage[7]. In recent years, the types of online bookstores are varied, including online bookstore, book sales online bookstore, information service online bookstore, etc. At the same time, online bookstore business model also has a variety of situations: BTOB mode, BTOC mode, BBC mode[7].

2.2 System User Analysis

The online bookstore's main users are divided into two categories, one is the front user, one is the background user. Front-end users are mainly customers who consume online bookstores. Front-end users can register, login, query, join shopping cart, place orders, submit orders, modify personal information, confirm receipt and add comments on the website. And add, modify or delete the book classification; add, modify or delete the book information, manage the order information and reply to the user's comments. The user is the administrator, the administrator to play the role of overall planning, master and control the front information and so on.

2.3 System function analysis

The online bookstore is opened in the network, not a physical store but a virtual store. In order to improve the efficiency of the query, the site can not only use a single condition query, but also can use multiple conditions to achieve accurate query, the query will be added after the shopping cart function, the query function, And then you can purchase to submit orders, generate orders and payment to complete the entire purchase process function, the user can submit orders before the order to modify, when the seller after the shipment can also confirm the receipt of the operation to complete the transaction , After the completion of the transaction the user can comment on the corresponding book, the other unregistered users can not purchase books or add to the shopping cart operation, the user must first register as a member of the bookstore, log in before the above operations. In addition to the foreground function, the need for background management, administrators can log in through the corresponding Web site background, after the classification of the book catalog and book information to add, modify and delete, but also the order information management, Such as the cancellation of unpaid or unpaid orders, the payment of orders for delivery operations, etc., can also reply to the user's comments, you can reply to each comment, and the client's book details page is displayed.

3 System feasibility analysis

3.1 Economic viability

An economic feasibility analysis is a criterion for determining the final market position of a website. Good economic feasibility analysis is helpful for project implementation and management.

In this system development process, the technology used, from the database to the development tools, and then to the server are free, so the cost of the development of the system is only invested in time and effort, therefore, the system is economical.

3.2 Operational feasibility

The system's user platform is for those interested in books of all types of personnel, the interface is simple, the use of B / S visual interface, the user simply enter the book you want to search or related information to query, great convenience The user's view, reflects the human side. The system is based on the B / S architecture of an application, to achieve the page layer, business logic layer and data storage layer separation, the system is more stable and flexible [14].

In summary：This system is completely feasible.

4 The system design

4.1 System function design

The main functions of the online bookstore system modules are divided into two categories, one for the consumer demand for books on the front of the functional modules, and the other is for the administrator of the background function modules.

Order management is an overlapping part of two functional modules. Throughout the system, the order of the system has five states, namely 1,2,3,4 and 5 state. 1 status is waiting for the payment status, indicating that the order has just been generated yet payment; 2 state is waiting for the delivery status, indicating that the order has been paid but the administrator has not shipped; 3 state is waiting for confirmation, that the administrator has But the consumer has not confirmed the receipt; 4 state is the transaction successful state, that the administrator shipped, the consumer has

confirmed receipt, once the order for the 4 state, the status of the order can not be changed; The order is canceled and the order can be canceled in the background only if the orders are in the 1 and 2 states. In the background, the order is canceled.

4.1.1 The functions of the foreground module

（1）User Registration Login：Users can register as a member, the user can become a member after login, modify personal information, modify the password and exit.

（2）Category display：In the left navigation bar displays the primary classification name of the book and the secondary classification contained in the primary classification, and the corresponding secondary book information is under the secondary classification.

（3）Book display：Search for books by title or keyword, search for books by advanced query (by title, author, and publisher), search books by category, view book details, and more.

（4）Shopping Cart Management：Putting the book what you are interested in or want to buy to add to the shopping cart for later viewing, in the shopping cart can modify the number of books, delete the shopping cart book information can be deleted individually or batch delete.

（5）Order Management：Generate an order by submitting an order, review the details of an existing order, confirm receipt of the goods after the seller has shipped, and cancel the order in the correct order. After the transaction is successful, you can evaluate the book and display it under the Book Details page.

4.1.2 Background module function

（1）Classification management: View classification, add a classification of secondary classification, modify the primary classification of secondary classification, delete the primary classification of secondary classification.

（2）Book Management：Background administrators have the same functionality as foreground users in searching for books, but administrators can also control book information such as adding books, editing book information, and deleting book information.

（3）Order Management：View orders by order status, view order details, can cancel orders before they are shipped, and can be shipped after buyer payment.

（4）Comment Management：Administrators can see all the reviews of the book by the consumer, and can add a reply to any one of the reviews and display it under the Book Details page.

4.2 Logical Structure Design of System Database

According to the functional design of the system, by analyzing the system structure and requirements, we can know that the system should have 8 data tables.Users(T_user), a catagory of books (t_category), a book list (t_book), a shopping list (t_cartitem), an order form (t_order), an order entry table (t_orderitem), an administrator table (t_admin) and a comment table (T_comment), the difference between the eight tables, linked with each other, together constitute the system's database module. A partial data tables are given below:

Table 1. t_user.

num ber	name	type	status	Primary key	Foreign key
1	uid	char(32)	not null	Y	
2	loginname	varchar(50)	default null		
3	loginpass	varchar(50)	default null		
4	eamail	varchar（50）	default null		
5	address	varchar(80)	not null	5	address
6	name	varchar(20)	default null	6	name

| 7 | tel | varc har(2 0) | not null | 7 | tel |

Table 2. t_category.

num ber	name	type	status	Primar y key	Foreign key
1	cid	varc har(3 2)	not null	Y	
2	cnam e	varc har(5 0)	unique		
3	pid	char(32)	default null		Y
4	desc	varc har(1 00)	default null		
5	order By	int(1 1)	auto_in crement		

5 System detailed design and implementation

5.1 Build the development environment

（1）operating system：Windows 7.

（2） software：MyEclipse 10、Dreamweaver CS6、MySQL、Navicat Lite for MySQL.

（3）Server software：Tomcat 6.0.

（4）Browser：IE、360、Firefox、Google.

5.2 System modules to achieve the foreground

（1）Front page Index module

Index module includes three main parts, the use of embedded frame technology, using the traditional "factory" glyph web framework, the location were on, left, in between the modules linked to each other to form the home page.

Upper part of the realization: the upper contains and contains two parts, is also divided into upper and lower, the upper part of the user's menu is mainly a series of links, according to the user's login status display different information, the user is not logged in display "Welcome to the bookstore", "Home", "Member Login" and "registered members", and the user logs on display "Congratulations on your membership of the bookstore," "Member Name", "Home" Shopping Cart, My Orders, Modify Personal Information, and Exit options.

The left part of the realization of the left: the left part of the entire page, showing all the books classification, including the primary, secondary classification, when the user clicks on a classification will display the current classification of all the two sub-categories, Accurate search function, mainly through the title, author and publisher of these three options integrated search.

Central to achieve: Central is the main part of the site, book information, order information, shopping cart information and other core content will be displayed in the middle part. In the middle of the middle part of the default display database information in the database to display the list; the top of the default display is a picture of some recommended books for rotation, click on the picture will jump to the details of the corresponding book interface, and the following shows the default The list of all the books in the database is sorted by default in one field in the database, four books per line, and a total of 12 books per page.

(2) Comment module

When the transaction is successful, you can evaluate the operation, published after the success of the evaluation will be in the front of the corresponding book details page under the comments part of the show.

5.3 System Modules to Achieve the Background

（1）Background classification management module

Administrators can log on to the background system to manage the classification of books, can add, modify, delete the primary and secondary classification.

The code for adding a two-level classification is as follows:

```
public String addChildPre(HttpServletRequest req, HttpServletResponse resp)
     throws ServletException, IOException {
     String pid = req.getParameter("pid");
     List<Category> parents = categoryService.findParents();
     req.setAttribute("pid", pid);
     req.setAttribute("parents", parents);
     return "f:/adminjsps/admin/category/add2.jsp";
}
public String addChild(HttpServletRequest req, HttpServletResponse resp)
     throws ServletException, IOException {
     Category child = CommonUtils.toBean(req.getParameterMap(), Category.class);
     child.setCid(CommonUtils.uuid());
     String pid = req.getParameter("pid");
     Category parent = new Category();
     parent.setCid(pid);
     child.setParent(parent);
     categoryService.add(child);
     return findAll(req, resp);}
```

6 Summary

The system is a general hobby for reading and books on the needs of the consumer customer base, with a certain degree of practical online bookstore system. It is mainly different from the traditional physical bookstores, to overcome a series of physical bookstores limited variety, fixed location, limited space and narrow sales channels and other issues, for people to purchase the book has brought convenience.

Online bookstore system not only can easily find the information and purchase books, and the operating conditions are simple, user-friendly, to a large extent to solve real-life problems in the purchase of books, but the design of the system because of the completion time Of the restrictions, some of the functions of the system is not perfect, but the basic functions have been achieved.

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