Original Research Article

Based on JAVEE online shopping system

Xinming Yang, Zhenchao He, Yuehui Tan

Computer Technology College, Shenzhen Engineering University, Guangdong, China

ABSTRACT

E-commerce system (online shopping platform) in internet has been very widely used, for example, Taobao, Dangdang and so on. With the rapid development and popularization of network information, online shopping has become a modern life of fashion, but also to people's lives has brought a very large convenience. This paper mainly describes a simulation of the Dangdang system part of the function of the software. The website uses javaee, struts2, MySQL database, jQuery, Hibernate, MyEclipse development environment development is completed, using the advanced MVC design pattern, reducing the coupling between the various components, so that we designed the Dangdang site easier to maintain and manage. Dangdang achieved the user registration and login, the main interface and category browsing, merchandise purchase, the number of changes and delete, order confirmation, fill in the delivery address, and generate orders and other functions.

KEYWORDS: MVC; JSP; MYSQL Based Query; Dangdang

1. Introduction

The development of network technology is more and more mature, and closer to people's daily life. People through the network to obtain information, transfer information, publish information, through the network to find people, friends, and blind date, through the network to trade, sales, and transfer. All of these aspects happen at our side, especially online shopping online shopping platform, by the majority of consumer favorite. It completely changed the traditional consumption patterns, as long as you open the computer, gently click the mouse, homes will be able to buy affordable and affordable products. One of the benefits of network development is to provide people with a great convenience, today's online shopping has been very common.

2. System analysis

2.1. Demand analysis

Dangdang shopping platform to provide high-quality, more efficient and more convenient way to shop, not only can be used for the realization of online shopping function, and the purchase of goods on the more rational management of goods, information, sales of goods also has user management, shopping cart, order management and other functions, very rich website content. The system is divided into registered users and unregistered users that visitors, the site will be based on different levels of users in the purchase of goods to enjoy different preferential policies.

Visitors can only view the product information in the system, the order of goods. But cannot be settled, but enjoy the local shopping cart to save the function, the user needs their own goods into the shopping cart, before confirmation, you can shopping goods in the second choice. After the user confirms the purchase (select all the goods in the shopping cart), the system generates a purchase order for the registered user. Through the shopping cart can be a one-time bulk purchase of multiple goods, and no need to record the order to your computer at any time to save and view the goods you want to buy, in short, the shopping cart for the majority of users to bring convenience, registered users in the shopping process or after the end of shopping, you can write off their account to ensure the security of the account.

2.2. Feasibility analysis

With the improvement of people's living standards, internet technology development is maturing, the number of Internet users in China is also increasing. In the network operation and use to be popular at the same time, people's...
demand for new things is also increasing, this time on the need for a more convenient way to meet the growing shopping needs, based on this we designed the Dangdang system.

The system not only meet the needs of the otaku house women, but also for the busy working people to save the shopping time, there is a convenient online shopping is the purchase of things than the mall to buy more affordable. Today, online shopping has become a necessary product for the development of e-commerce, it represents the progress of science and technology, but also for people to bring unpredictable benefits, at the same time also indirectly let the people around the world have a communication goods experience of the platform.

The main purpose of designing and implementing Dangdang system is to provide a platform for all kinds of people to buy books online to meet people's needs.

3. System overall design

3.1. Project planning

Dangdang site is a more complete in the function of the online shopping platform. The entire site will be divided into user management, product browsing, shopping cart, and order generation of four relatively large children.

User management program

The user management program will implement the following functional requirements: user registration, verification code mail delivery, user login, and so on.

Product browsing program

Product browsing program will achieve the following functional requirements: the main interface of the display, the user login status changes, subordinate product category browsing and so on.

Shopping cart program

The shopping cart program will achieve the following functional requirements: product purchase and display, quantity change and delete, price, statistics, shopping products recovery, and so on.

Order generation program

The order generation program will achieve the following functional requirements: order confirmation, fill in shipping address and generate order.

3.2. Functional modules

Dangdang is an online shopping platform. This paper discusses the design of Dangdang website, process control, business logic model and data model design and processing. The site can provide users to register log, e-mail automatically send, display all kinds of books on the shelves of information, hot ranking, category list, shopping cart management, order management and other functions. Most of the above functions are in the user login state work, non-registered users can only page product browsing and other basic functions.

Which user management module is not as part of the main function of this site, background management is only necessary when the site added in the back of the design process will be simply mentioned. In addition, it also provides transaction management functions, the use of interceptor components to achieve, which in the concurrency control to ensure the integrity of the data and security play a significant role. The corresponding implementation of the specific function is shown in the following table:

Table 1 Website Menu

<table>
<thead>
<tr>
<th>Entity</th>
<th>User</th>
<th>Product</th>
<th>Category</th>
<th>Book</th>
<th>Cart</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>Register email</td>
<td>Get products</td>
<td>Get categories</td>
<td>Booklist</td>
<td>Buy</td>
<td>Save to order</td>
</tr>
<tr>
<td></td>
<td>Unique</td>
<td>Get hot books</td>
<td>Cates (pid)</td>
<td>Get books</td>
<td>Delete pro</td>
<td>Get order</td>
</tr>
<tr>
<td></td>
<td>Verify code</td>
<td></td>
<td></td>
<td></td>
<td>Modify pro</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Verify login</td>
<td></td>
<td></td>
<td></td>
<td>Recovery pro</td>
<td></td>
</tr>
</tbody>
</table>
4. Database design

4.1. Introduction to the MySql database

MySQL is a sophisticated SQL database management system, although it is not an open source product, but in some cases you are free to use. Because of its powerful features, flexibility, rich programming application interface and sophisticated system structure, by the majority of free software enthusiasts and even commercial software users of all ages, especially with Apache and PHP, for the establishment of a database based on the dynamic website with powerful driving force.

4.2. MySql features and roles

MySQL is a true multi-user, multi-threaded SQL database. SQL is the world's most popular and standardized database language. MySQL is a client / server architecture implementation, which consists of a server daemon MySQL and many different client programs and libraries.

MySQL main goal is fast, robust and easy to use. The main function of the MySQL database is only to organize and manage very large or complex information and WEB-based inventory query requests not only to provide information to customers, but also for your own use of the database to provide services.

4.3. The overall E_R design of the database

![Database E_R diagram]

Figure 1 Database E_R diagram
4.4. Database list

Table 2 Database list

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Relationship Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>User information</td>
<td>Register the user's mailbox, password, level, IP and other information</td>
</tr>
<tr>
<td>2</td>
<td>Shipping address information</td>
<td>Contains the delivery person, delivery address, user contact information and other information</td>
</tr>
<tr>
<td>3</td>
<td>Category information</td>
<td>Product display order, Chinese and English name, the parent class and other information</td>
</tr>
<tr>
<td>4</td>
<td>Book information</td>
<td>Author, publisher, author profile, directory and other information</td>
</tr>
<tr>
<td>5</td>
<td>Product information</td>
<td>Product name, description, price, product images and other information</td>
</tr>
<tr>
<td>6</td>
<td>Categories and products corresponding relationship</td>
<td>Product ID, category ID and other information</td>
</tr>
<tr>
<td>7</td>
<td>Order information</td>
<td>User ID, order time, total price, shipping address and other information</td>
</tr>
<tr>
<td>8</td>
<td>Order details</td>
<td>Product name, price, purchase quantity, total price and other information</td>
</tr>
</tbody>
</table>

4.5. Logical structure design

Table 3 logical structure design

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Relationship name</th>
<th>Relationship between the name of the relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>User information</td>
<td>ID, email, nickname, password, level, verification status, verification code, last login time, IP</td>
</tr>
<tr>
<td>2</td>
<td>Shipping address information</td>
<td>ID, user ID, delivery person, delivery address, postal code, mobile phone number, seat number</td>
</tr>
<tr>
<td>3</td>
<td>Category information</td>
<td>ID, display order, English name, Chinese name, description, parent class item</td>
</tr>
<tr>
<td>4</td>
<td>Book information</td>
<td>Author, publisher, - publication time, word number, version, total number of pages, printing time, printing times, book number, author, catalog</td>
</tr>
<tr>
<td>5</td>
<td>Product information</td>
<td>ID, product name, product description, add time, fixed price, current price, key search, whether to delete, product picture</td>
</tr>
<tr>
<td>6</td>
<td>Categories and products corresponding relationship</td>
<td>ID, product ID, category ID</td>
</tr>
<tr>
<td>7</td>
<td>Order information</td>
<td>User ID, user status, order time, order description, total price, shipping address, delivery name, zip code, cell phone number, seat number</td>
</tr>
<tr>
<td>8</td>
<td>Order details</td>
<td>ID, order ID, product name, price of Dangdang, purchase quantity, total price</td>
</tr>
</tbody>
</table>

4.6. Physical structure design

Table 4 User Table

<table>
<thead>
<tr>
<th>Table name</th>
<th>d_user</th>
<th>entity name</th>
<th>user table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary key</td>
<td>ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Field Name</td>
<td>Field Description</td>
<td>Type</td>
</tr>
</tbody>
</table>

4
Table 5 Delivery Address Table

<table>
<thead>
<tr>
<th>No.</th>
<th>Field Name</th>
<th>Field Description</th>
<th>Type</th>
<th>Bit Number</th>
<th>Attribute</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>ID</td>
<td>Int</td>
<td>12</td>
<td>Non-empty</td>
<td>identification</td>
</tr>
<tr>
<td></td>
<td>User_ID</td>
<td>User ID</td>
<td>Int</td>
<td>11</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Full_address</td>
<td>Vendor</td>
<td>Varchar</td>
<td>200</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Postal_code</td>
<td>Zip code</td>
<td>Varchar</td>
<td>8</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Mobile</td>
<td>Phone number</td>
<td>Varchar</td>
<td>15</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Phone</td>
<td>Number</td>
<td>Varchar</td>
<td>20</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 Category Table

<table>
<thead>
<tr>
<th>No.</th>
<th>Field Name</th>
<th>Field Description</th>
<th>Type</th>
<th>Bit Number</th>
<th>Attribute</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>id</td>
<td>Int</td>
<td>12</td>
<td>Non-empty</td>
<td>identification</td>
</tr>
<tr>
<td>2</td>
<td>Turn</td>
<td>Display sequence</td>
<td>Int</td>
<td>10</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>En_name</td>
<td>English name</td>
<td>Varchar</td>
<td>200</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Name</td>
<td>Chinese name</td>
<td>Varchar</td>
<td>200</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Description</td>
<td>Type description</td>
<td>Double</td>
<td>200</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Parent_id</td>
<td>Parent class id</td>
<td>Int</td>
<td>10</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 Book List

<table>
<thead>
<tr>
<th>No.</th>
<th>Field Name</th>
<th>Field Description</th>
<th>Type</th>
<th>Bit number</th>
<th>Attitudes</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>User id</td>
<td>int</td>
<td>12</td>
<td>Non-empty</td>
<td>Identification</td>
</tr>
<tr>
<td>2</td>
<td>Author</td>
<td>Author</td>
<td>varchar</td>
<td>200</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Publishing</td>
<td>Publisher</td>
<td>varchar</td>
<td>200</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>publish_time</td>
<td>Publication time</td>
<td>bigint</td>
<td>20</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>word_number</td>
<td>Number</td>
<td>varchar</td>
<td>15</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>which edition</td>
<td>Version</td>
<td>varchar</td>
<td>15</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>total_page</td>
<td>Total page</td>
<td>varchar</td>
<td>15</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>print_time</td>
<td>Printing time</td>
<td>int</td>
<td>20</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>print_number</td>
<td>Prints</td>
<td>varchar</td>
<td>15</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>
Based on JAVAEE online shopping system

<table>
<thead>
<tr>
<th>No.</th>
<th>Field name</th>
<th>Field description</th>
<th>Type</th>
<th>Bit number</th>
<th>Attitudes</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>User id</td>
<td>int</td>
<td>12</td>
<td>Non-empty</td>
<td>Identification</td>
</tr>
<tr>
<td>2</td>
<td>product_name</td>
<td>Product name</td>
<td>varchar</td>
<td>100</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Description</td>
<td>Product description</td>
<td>varchar</td>
<td>100</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>add_time</td>
<td>Add time</td>
<td>bigint</td>
<td>20</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>fixed_price</td>
<td>Fixed price</td>
<td>double</td>
<td>Default</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>dang_price</td>
<td>Dangdang price</td>
<td>double</td>
<td>Default</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Keywords</td>
<td>Critical search</td>
<td>varchar</td>
<td>200</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>has_deleted</td>
<td>Whether to delete</td>
<td>int</td>
<td>1</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>product_pic</td>
<td>Product Image</td>
<td>varchar</td>
<td>200</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>

Table 9 Category and product correspondence

<table>
<thead>
<tr>
<th>No.</th>
<th>Field name</th>
<th>Field description</th>
<th>Type</th>
<th>Bit number</th>
<th>Attitudes</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>id</td>
<td>int</td>
<td>12</td>
<td>Non-empty</td>
<td>Identification</td>
</tr>
<tr>
<td>2</td>
<td>product_id</td>
<td>Product id</td>
<td>int</td>
<td>10</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>cat_id</td>
<td>Class id</td>
<td>int</td>
<td>10</td>
<td>Non-empty</td>
<td></td>
</tr>
</tbody>
</table>

Table 10 Order Table

<table>
<thead>
<tr>
<th>No.</th>
<th>Field name</th>
<th>Field description</th>
<th>Type</th>
<th>Bit number</th>
<th>Attitudes</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id</td>
<td>id</td>
<td>int</td>
<td>10</td>
<td>Non-empty</td>
<td>Identification</td>
</tr>
<tr>
<td>2</td>
<td>user_id</td>
<td>User id</td>
<td>int</td>
<td>10</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Status</td>
<td>User status</td>
<td>int</td>
<td>10</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>order_time</td>
<td>Order time</td>
<td>bigint</td>
<td>20</td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>order_desc</td>
<td>Order description</td>
<td>varchar</td>
<td>100</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>total_price</td>
<td>Total price</td>
<td>double</td>
<td></td>
<td>Non-empty</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>receive_name</td>
<td>Shipping name</td>
<td>varchar</td>
<td>100</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>full_address</td>
<td>Shipping address</td>
<td>varchar</td>
<td>200</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>postal_code</td>
<td>Zip code</td>
<td>varchar</td>
<td>8</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mobile</td>
<td>Phone code</td>
<td>varchar</td>
<td>20</td>
<td>Empty</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Phone</td>
<td>Number</td>
<td>varchar</td>
<td>20</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>

Table 11 Order schedules
<table>
<thead>
<tr>
<th>Table name</th>
<th>d_item</th>
<th>Entity name</th>
<th>Order list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary key</td>
<td>Id</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Field name</td>
<td>Field description</td>
<td>Type</td>
</tr>
<tr>
<td>1</td>
<td>id</td>
<td>id</td>
<td>Int</td>
</tr>
<tr>
<td>2</td>
<td>order_id</td>
<td>Order id</td>
<td>Int</td>
</tr>
<tr>
<td>3</td>
<td>product_id</td>
<td>Product id</td>
<td>Int</td>
</tr>
<tr>
<td>4</td>
<td>product_name</td>
<td>Product name</td>
<td>varchar</td>
</tr>
<tr>
<td>5</td>
<td>dang_price</td>
<td>Dangdang price</td>
<td>Double</td>
</tr>
<tr>
<td>6</td>
<td>product_num</td>
<td>Number of products</td>
<td>Int</td>
</tr>
<tr>
<td>7</td>
<td>Amount</td>
<td>Total price</td>
<td>Double</td>
</tr>
</tbody>
</table>

5. **Dangdang website design process**

In this chapter, we will elaborate on our page, in order to make clear ideas, we use the following order: visitors -> users -> administrators, each user has the rights of tourists, and on this basis to increase belong to their own rights, the administrator also has all the rights of ordinary users, and on this basis to increase the right to meet their own roles.

5.1. **User registration process**

User fill in registration information - automatic legitimacy verification - user information is persistent and send an email verification code - email verification - successful registration

The registration page is as follows:

The following are the same as the Figure 2 user registration page map

The core code is:

```javascript
// Mailbox format validation
if(!patt.test(txtEmail)){
    $('#email-info').html('mailbox format error');
    return false;
}

// Uniqueness verification
$.post('validEmail.action',
    {email:txtEmail},
    function(data){
        if(data){
            $('#email-info').html('<img src='../images/wrong.gif'/>');
            flag.email=true;
        }
    }
    // Mailbox format validation
    if(!patt.test(txtEmail)){
        $('#email-info').html('mailbox format error');
        return false;
    }
    // Uniqueness verification
    $.post('validEmail.action',
    {email:txtEmail},
    function(data){
        if(data){
            $('#email-info').html('<img src='../images/wrong.gif'/>');
            flag.email=true;
        }
    }
    }else{
    $('#email-info').html('<img src='../images/right.gif'/>');
    flag.email=true;
    }
```
// password verification
var pwdreg=/^[\@A-Za-z0-9!#$%^&*\(\){\}\-\~ ]{6,22}$/;
if(!pwdreg.test(txtpwd))
flag.password=false;
else
flag.password=true;

// Mailbox verification code verification
public String execute() throws Exception{
UserDAO userdao=new HibernateUserDAO();
if(userdao.findByEmail(email)==null){
ok=false;//available
}
else{
ok=true;//non-available
return Action.SUCCESS;
}

5.2. User login process

Login Information - Legality Validation - Mailbox Verification Status - Login Successful
The core code is:

// mailbox, password is correct
if(Dbuser!=null&&Dbuser.getPassword().equals(password)&&Dbuser.getIsEmailVerify().equals(Constant.VERIFY_YES)){
    session.put("mUser", Dbuser);//session
    System.out.println("";
    return Action.SUCCESS;
}
// Is the mailbox validated?
else if(Dbuser!=null&&Dbuser.getPassword().equals(password)&&Dbuser.getIsEmailVerify().equals(Constant.VERIFY_NO)){
    session.put("user", Dbuser);
    System.out.println("";
// return to the mailbox verification interface
return "AgainVerify";
}
// Successful login, enter the main interface
else{
    System.out.println("";
    return Action.LOGIN;
5.3. **Product browsing process**

Main.jsp - editor recommended; main.jsp - selling books;
Main.jsp - the latest books; main.jsp - new book hot list
Main.jsp - Category Browse - Sub category tab display
Product browsing interface is as follows:
The following are the same as the
Figure 4 product browsing interface
The core code is:
The following are the same as the '

// new book hot
IMainDAO dao = new MainImplDAO();
List<Product> allHots = new ArrayList<Product>();
long now = System.currentTimeMillis() + 30*24*60*60*1000;
for(int i=0; i<dao.findHots().size(); i++){
    if(dao.findHots().get(i).getAddTime()>now){
        allHots.add(dao.findHots().get(i));
    }
}
setNewhots(allHots);
return “main_new_hot”; // new book shelves
IMainDAO dao = new MainImplDAO();
products = dao.newProducts();
return “main_new”; // selling books
IMainDAO dao = new MainImplDAO();
    List<Product> newhots = new ArrayList<Product>();
    for(int i=0; i<4; i++){
        newhots.add(dao.findHots().get(i));
    }
    setHots(newhots);
    return “main_hot”; // Browse by category
IMainDAO dao = new MainImplDAO();
List<Category> all = dao.findCategories();
categories = findByParentId(1, all);
for(Category cat : categories){
    cat.setSubItems(findByParentId(cat.getId(), all));
}
return “main_category”; // pagination
<s:if test=”page<=1”>
<div class="list_r_title_text3a”>
  <img src=’../images/page_up_gray.gif” />
5.4. Shopping cart

E-commerce sites generally have a shopping cart function, it must be designed and functional, convenient. To design a shopping cart, you must analyze what functions the shopping cart should have. Design a shopping cart generally to write a class, on behalf of a shopping cart items. The system prepares an item category CartItem that contains three attributes: the number of goods, the merchandise entity, whether to buy, the cart defines a property Map<Integer, CartItem> represents all the items in the current shopping cart. The functions of the shopping cart include the number of goods to modify, delete, restore the list, clearing, clearing, automatic statistical pricing and other functions, shopping cart function.

If the user does not login click settlement, it will prompt the user to log on after the operation. In the process of correction of number, we should pay attention to the user to enter the illegal input of illegal figures, if the input content is non-digital content, it will prompt the number, if the input content is not logical, if it is less than zero number, you will be prompted to enter the correct number. If the input format is correct, click on the settlement will enter the next interface.

The core code is:

```java
//Add to cart
if (cart == null) {
    cart = (IcartService) Factory.newInstance("IcartService");
    cart.load(CookieUtil.findValue("cart", httpRequest));
    session.put("cart", cart);
    addState = cart.buy(pid);
    session.put("cart", cart);
    // delete and add to the recovery bar
    cart.deletePro(pid);
```
CookieUtil.addCookie("cart", cart.store(), response);
for(CartItem item : cart.getItems()){
    if(item.getIsDel().equals("N"))
    {
        items.add(item);
        continue;
    }
    store.add(item);
// Revert to the shopping cart
if(cart == null)
{
    cart = (IcartService)Factory.newInstance("IcartService");
    cart.recoveryPro(pid);
}

5.5. Order flow

Order display - fill in shipping address - order successful - continue to browse the main interface
The order interface is:
The following are the same as the
Figure 7 order delivery address interface
The core code is:
The following are the same as the
// address drop-down list location implementation
ReceiveAddress receive = dao.getReceives(user.getId());
if(receive != null){
    if(index == 2){
        old = false;
        oldReceive = receive;
        old = true;
        System.out.println
        return "address_form";
    }
    // The order list is displayed
    for(CartItem item : cart.getItems()){
        if(item.getIsDel().equals("N")){
            items.add(item);
        }
    return "order_info";
}

6. Conclusions

Our Dangdang network uses B / S architecture design, the use of jdk1.6.0_10 operating environment, based on
JAVAEE and MySQL database server and MVC implementation framework developed online shopping site. This site
has user registration and login, the main interface and category browsing, merchandise purchase, the number of changes
and delete, order confirmation, fill in the delivery address, generate orders and other functions. Users cannot visit the
state and browse the purchase of goods, after landing can be a shopping cart goods settlement and orders and other
operations.

After seven consecutive days of jsp + servlet + html + jquery + dom + javascript small web project development, my
Dangdang basic completion of the required functions, although not very perfect, but has been very rewarding, so that
their own coding has been exercise, so that their vision is also open a lot.
The web project design and implementation, mainly let me master the web development process and standard mvc development model, learn some of the jquery methods and effects, such as $.ajax(), $.Post() and other methods. Let me understand the powerful jquery, which later prepared to reinforce the java foundation, a lot of java web practice, through the internet to understand more cutting-edge technology, more on the times, add yourself, improve the lack of.

References

2. Mysql database API, javaee, struts2 and other technical help documents
5. Xiang Jie Java. Web development, electronic version