Cinema ticketing system

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1. **Introduction**
   1. **Research background**

With the continuous expansion and development of the Internet, the computer network has been deeply into all walks of life, each field. Compared with the traditional business model, modern e-commerce has many incomparable advantages such as low cost, high efficiency, rapid response to market changes and personalized services. Commodity trading activities in people's real life are simulated by the implementation of e-commerce through the Internet. This way of trading enables products to be traded around the world and provides consumers with a variety of choices. Social life rhythm speeding up, a lot of trivial matters such as social people busy with work, want to go to the multiplex to watch movies every time after the query to a recent hit movie, each film screenings and other information, and then people can start booking, but often wait in line for a long time before the found themselves to watch the film ticket has been sold out, or does not have proper seat to watch. With the rapid development of the film industry, one of the inevitable problems is the increasing demand for movie tickets. In particular, when some high-profile blockbusters are shown, many audiences respond that it is very difficult to buy movie tickets, and some people can only choose to watch the midnight screening. In some big cities, there are even people queuing up early in the morning to grab tickets. Some viewers said they could buy tickets in such a long line, but they did not have the right to choose their seats freely.

Using the convenience of the Internet, people can buy the movie tickets they need online in real time. In this way to avoid the traditional way to buy tickets to bring people a long journey, long time queuing fatigue. Secondly, the online theater booking system will be people's actual ticket purchase mode through the network image simulation, people in the online ticket purchase, such as immersive, can choose their own movie tickets at any time, which includes the type of movie, broadcast time, seats and other information. It simulates the traditional mode of selling tickets on the network, so that people can buy all kinds of tickets they need without going out of the house. It is fast and convenient, in line with the fast-paced life style of modern people. By making it easier to book tickets online, the film industry can grow faster and better by reducing the number of customers who fail to buy tickets on the spot.

* 1. **System development significance**

First, it takes advantage of the convenience of the Internet, allowing people to buy their travel tickets online in real time. In this way to avoid the traditional way to buy tickets to bring people a long journey, long time queuing fatigue.

Secondly, the online booking system will be people's actual ticket mode through the network image simulation, people, online booking such as immersive, and can choose their own movie tickets at any time, including the type of film, the number of seats, and so on.

Thirdly, online booking system can greatly reduce the actual transaction time of buying tickets and improve work efficiency.

Finally, the online booking system can share the data information completely in a timely manner to the user, the user doesn't have to query by telephone want specific ticket information can be got, such not only improves the service quality of enterprise, and more practical solution to the ticket office/outlets telephone counseling, accounts table query, booking business acceptance and other issues, such as to improve the satisfaction of user to service.

* 1. **The purpose of the system**

(1) Fully functional

(2) Easy to operate

(3) Flexible universal

(4) Beautiful interface

1. **System analysis**
   1. **Technical feasibility**

The foreground of the system mainly uses HTML /JSP, JavaScript, CSS, jQuery and other technologies. jQuery is a fast, compact JavaScript library that makes it easier to process HTML documents, events, animate, and provide Ajax interactions to Web site.

The background of the system uses SSM framework technology, database Connection using DBCP database Connection pool technology (Connection pool technology can better use of database resources, speed up response, avoid the database data non-stop read and change, frequent establishment of Connection).

The SSM framework adopted by the system is Spring4+SpringMVC4+ MyBatis3 framework, in which SpringMVC is the foundation of the whole system MVC, responsible for the project control flow, such as processing page request, return to the required interface;

Spring is responsible for dependency injection, injecting service classes into the control layer, and injecting DAO classes into service classes.

MyBatis is responsible for the operation of the database layer, and the SQL operation of adding, deleting, modifying and checking each database table.

Users in the case of not logged in can browse the page, when the need to book the case of the user through the registration of the account after logging in the system, the user can log in the movie ticket booking and purchase.This part uses JSP to design the page and the classification, through the database to create the relevant table, so that it can be easily viewed, modified or deleted.The highest authority of the system plays an important role in the system, and the design administrator has the highest authority.The administrator can complete the maintenance and management of the website, use the function of the authority in the database to set the authority for the administrator, the administrator can add and delete the movie information, can also process the order information, and the administrator can also manage the user information.

* 1. **Operating environment feasibility**

Enter the background through the front link, and then enter the user’s name and password through the login interface, enter the background management after the successful verification of the database operation, enter the operation completely by the mouse and keyboard to input, the user experience is very good. The operating system is Windows 10 with a low blue screen frequency.

* 1. **Software feasibility**

**2.3.1 System development language (JSP)**

JSP (full name JavaServer Pages) is a kind of dynamic web technology standard created by Sun Microsystems. JSP is deployed on the network server, can respond to the request sent by the client, and dynamically generate the Web page of HTML, XML or other format documents according to the request content, and then return to the requester. JSP technology uses Java language as scripting language to provide services for users' HTTP requests, and can deal with complex business requirements together with other Java programs on the server.

JSP JAVA code and specific content changes embedded in the static page, static page as a template to achieve dynamic generation of part of the content. JSP introduces XML tags called "JSP actions" that invoke built-in functions. Alternatively, people can create libraries of JSP tags and then use them as if they were standard HTML or XML tags. Tag libraries can enhance functionality and server performance without being limited by cross-platform issues. The JSP file is converted to rawer Servlet code by its compiler at run time. The JSP compiler can compile JSP files into servlets written in Java code, which are then compiled by the Java compiler into binary machine code that can be executed quickly, or directly into binary code.

**2.3.2 System development tools**

(1) Eclipse

(2) MySQL 8.0

**2.4 Demand analysis**

Demand analysis is an important part of software design. This stage makes a comprehensive investigation of the application of the booking system to determine the objectives of the system, and analyzes the basic data and data processing requirements required by the system, so as to determine the needs of users. The main functions of the system are movie information browsing, movie ticket booking, dynamic update of movie information. The movie information includes the movie outline and the latest movie, and the movie is divided into different types for display, so that users can order movie tickets according to their favorite types. Reservations can operate on the quantity ordered and can order different movies together. The home page places the user login and registration in a prominent place, reducing the number of steps. If user need to have a specific purpose to buy the movie can be directly in the home page search into the corresponding movie page. Administrators can operate each module displayed in the foreground through the menu, and when it needs to be modified, they only need to find and modify it, saving a lot of time. The system is divided into foreground and background: the foreground is mainly used for user registration and login system, online order tickets, movie information query and modify personal data; The background is mainly used for administrators to process user orders, update movie categories and modify movie preview information.

Function module requirements of each part of the system:

(1) User registration: add user detailed information to facilitate user login and order management.

(2) User login: responsible for the login of ordinary users after the completion of user registration.

(3) Movie browsing: view the movies that users are interested in in the system.

(4) Movie ordering: booking and purchasing the movie tickets of the movie you want to watch.

(5) Movie query: if you want to directly watch the movie, you can query according to the movie name.

(6) Order modification: it can be modified after the completion of the order.

(7) modify the password: for the safety of users, the password needs to be modified regularly, according to the original password to modify.

(8) modify personal information: personal information changes should be updated in time, so as to better serve customers.

(9) Exit: In order not to disclose the privacy of customers, it is necessary to exit the system safely after using it.

(10) Administrator functions: manage the release and update of information on the front desk, be responsible for the security of user accounts, and handle user orders.

**2.5 Database design**

**2.5.1 E-R diagram**

(1) administrator

admin

(2) user

user

(3) ticket

ticket

**2.5.2 Database logic design**



