

Design and Analysis of Tourism Information Management System

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Keywords: Tourism information management system; B/S structure; SQL Server 2010

Abstract: Based on the demand of service integration and information integration of tourism management, this paper designs and develops a tourism information management system. Firstly, the development background of tourism information management system is described, and then the technology and related tools used in the system development are introduced. Secondly, the demand of users, administrators and tourists is analyzed, and the overall design of the system is carried out. By sorting out the tourism information resources, the functional modules of the system are divided according to the specific content of the information involved in tourism, and the functional modules are designed in detail. The application of this system can strengthen the internal management of urban tourism, improve work efficiency and service quality.

1. Introduction

With the establishment of scientific management system and the popularization of computer modernization management mode, the use of computer-aided management emerged as the times require and developed rapidly. With the rapid development of domestic tourism industry, travel agencies need to deal with more complex problems. Nowadays, travel agencies deal with more information in a day, the efficiency of information processing is low and the error is large. Because of the large mobility of the tourism industry, it is difficult to coordinate among various departments. The development and use of the tourism information management system can help the staff get rid of the tedious manual work mode by virtue of the advantages of information technology, improve the efficiency of the management of tourism information, facilitate the timely transfer between tourists and tourism staff, and facilitate the managers and travel agencies to understand the needs of tourists timely and accurately. So that it could provide more high-quality services, tourism cities and scenic spots in the fierce competition to gain advantages, expand publicity efforts, improve publicity results.

2. Relevant technology of tourism information management system

2.1. Java Web development technology

At present, the information construction of various applications has entered the stage of Web-based application as the core. Java platform as the best platform for developing Web applications, its prospects have been promising by the industry. Java language system is huge, including a variety of technology platforms, and a variety of core technologies. MVC (Model-View-Controller) design pattern divides enterprise application into three levels: system model, display view and background controller, which correspond to data, data front-end display and data processing in enterprise system respectively. The structure of MVC mode is shown in Figure 1. By adopting MVC mode, the enterprise application system has relatively clear structure, independent content of each part, and high maintainability and expansibility of the system.

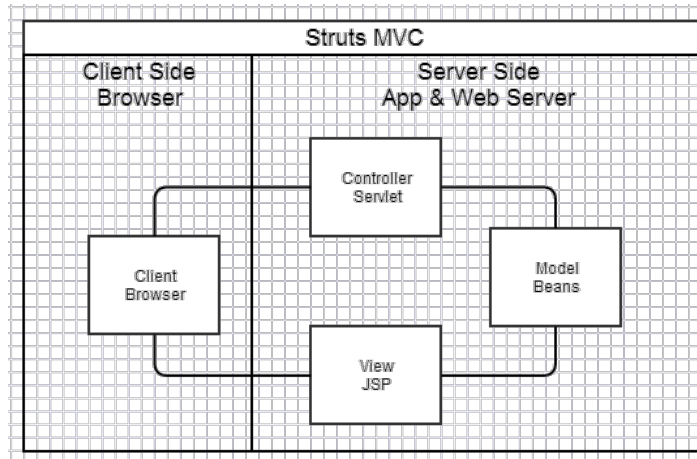


Figure 1. Basic structure of MVC mode

J2EE (Java 2 Platform, Enterprise Edition) platform is a development specification of multi-tier enterprise application system. It builds enterprise application system through multi-tier framework. The application system developed on J2EE platform generally adopts three or four layers application mode. Three layers are represented as enterprise information system layer, middle layer and client layer. When the system application is divided into four layers, the middle layer is divided into Web layer and business logic layer.

2.2. Software architecture

B/S structure is also known as browser/server architecture, which runs on the basis of Internet and is designed with Web technology.

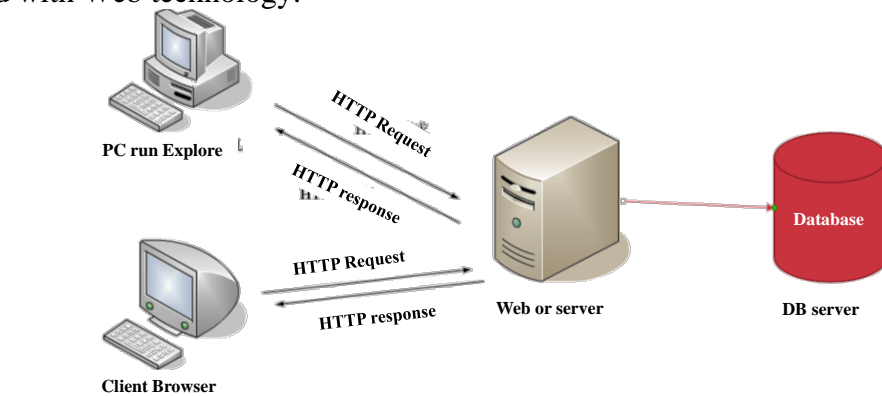


Figure 2. Basic structure of B/S

This structure is very different from C/S structure. It uses browser as the client program and reduces the difficulty of software system design. Most of the application systems developed at present is based on B/S structure. The application system design under this structure is relatively simple, and the developed system is relatively simple to use. In the Internet environment, users can use browsers to complete their operations. Figure 2 shows a schematic diagram of the B/S structure.

3. Design of the tourism information management system

3.1. Tourism information management system architecture

Using the popular B/S structure of Web application and Java technology to develop the system has certain flexibility in system design and high efficiency in system development. In the presentation layer, users of the system can use various browsers to access the front or back-end interfaces of the tourism information management system, and realize specific data interaction and business processing functions. In the application layer, using Java technology and J2EE platform can realize the unified development of the front and back of the tourism information management

system. In the application layer, the logic realization is completed, which constitutes the specific functions of the system. At the same time, the application logic interface layer interacting with the user interface and the database interface standard accessing the system database are designed to realize the good interaction with the user interface and data. In the data layer, SQL Server 2010 is applied to store, manage and maintain the business and processing data in the system.

The tourism information management system constructed in this paper adopts three-tier B/S structure, so the network architecture as shown in Figure 3 is used in the design of the network architecture. Users and administrators of the system can use any computer connected to the Internet. Through browser and Http protocol, they can access the system functions. There is no need to install any client programs on the client.

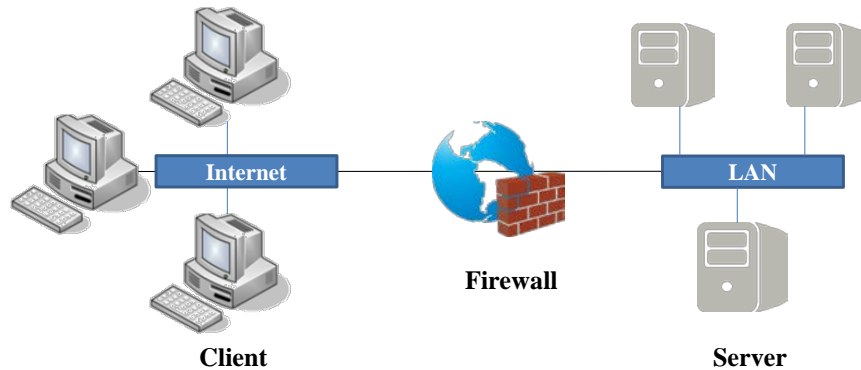


Figure 3. Network architecture of tourism information management system

3.2. Functional structure of tourism information management system

When designing the functional structure of the system, the main functional modules of the system should be defined. In the system designed in this paper, the functions are divided into two parts: front-end display and back-end management, namely, the back-end maintenance and front-end retrieval of scenic spot information; the back-end maintenance and front-end display retrieval of tourist routes; the back-end maintenance of hotel information; and the front-end retrieval and reservation. Local traffic means aircraft, train, bus, background maintenance of local bus and car rental service information, retrieval and reservation at the front desk, and background definition and exchange at the front desk of the forum. In addition, in order to realize the security of system access, it also provides the management function of system users. The overall functional structure of the system is shown in Figure 4.

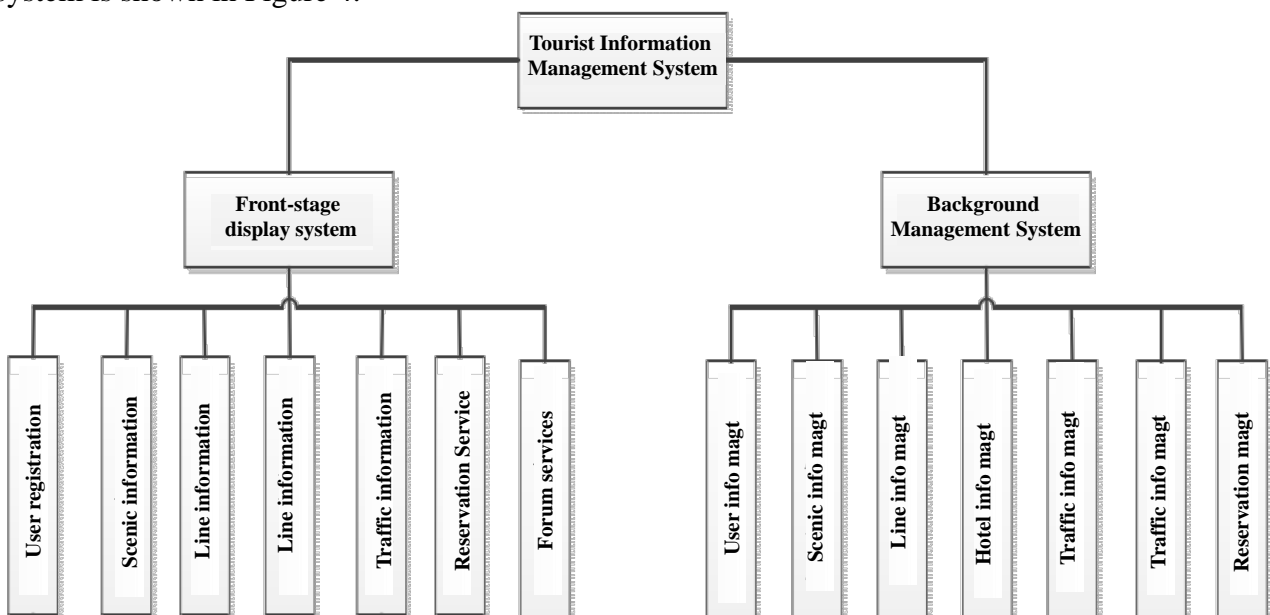


Figure 4. Functional structure of the tourism information management system

The application server of tourism information management system realizes the core function and business processing in the system. The application server is usually located in the same LAN with the database service which stores the tourism data information, and interacts through the LAN connection.

4. Conclusions

The tourism information management system in this paper is analyzed and designed according to the development process and principle of software engineering. It uses three-tier B/S architecture, Java platform-based development tools, and SQL Server 2010 as background database management platform to develop the system. The development and use of tourism information management system can improve the management efficiency of tourism information, expand publicity, improve publicity effect, facilitate tourists to get tourism information in time, and improve the service quality of tourism practitioners, so that they can gain advantages in the fierce competition.

References

- [1] Lu Lina. JaveEE Actual War [M]. Economic Science Press, 2010:210-235.
- [2] Huang Tiejun. Introduction to Tourism Management Information System[M]. Beijing: Machinery Industry Press, 2016:71-102.
- [3] Gan Jichu. Research on Information System Development Technology[J]. Computer Design Engineering. 2010.44(23):25-55.
- [4] Xue Huacheng. Management Information System [J]. Beijing: Tsinghua University Press, 2011. (6): 22-25.
- [5] Li Haijun. Analysis and Design of Tourism Service Information System[J]. E-commerce, 2017 (7).