Design and Implementation of Agritourism System Based On .NET

Xin-Lei JIN\textsuperscript{a}, Ruo-Nan SUN\textsuperscript{b}, Na ZHANG\textsuperscript{c,*}

College of Computer and Information Engineering, Beijing University of Agriculture, Beijing, China
\textsuperscript{a}jinxinlei0000@163.com, \textsuperscript{b}597369409@qq.com, \textsuperscript{c}zhangna@bua.edu.cn
\textsuperscript{*}Corresponding author

Keywords: Agricultural Tourism, Picking Appointment, Computer Technology, ASP.NET.

Abstract. With the development of science and technology and the improvement of people’s living standard, leisure agriculture has become an indispensable part of people’s life. In this paper, it raises the system design ideas based on. Net agricultural sightseeing picking reservation, introduces a system based on asp.net online picking booking design and implementation. Respectively from the system function design, the overall design, the database design these three parts to carry on the elaboration. The whole system includes front desk booking systems used by consumers, and background management system used by administrators, consists of staff management, merchandise management, cashier management, and other functions, and provides convenient greatly for consumers to purchase and management personnel operation.

Introduction

With the development of computer technology and the popularity of Internet applications, the Internet has become an important source of access to information, and e-commerce has gradually penetrated into people’s daily lives [1]. At the same time, due to the accelerated process of urbanization and the rapid increase of population, the pressure of fast pace of life makes people want to go to the countryside to enjoy the temporary leisure and quiet. As a result, the agricultural sightseeing picking system is a kind of commercial information system with interactive function, which is a window between the orchard and the consumer. It will makes consumers and businesses closely combined together, uses the industrial management mode to manage the whole industrial chain including the prenatal, middle and postpartum links of agriculture. Its aim is to achieve the sustained and stable growth of agricultural production and farmers’ income, to ease the pressure on consumers’ lives, and to increase the taste of people’s life.

System Function Design

Agricultural sightseeing picking system based on .NET is applicable to the general public and the management of agricultural garden. According to the real-time situation of fruits and vegetables, the management personnel release the corresponding commodity information. Then the user can inquire the commodity information through the system and make the corresponding
goods booking conveniently. The overall design of the system is divided into the user login function, view the fruit information function, online booking function, comments function and background management function for administrator.

**User Login Function**

When users browse the home page, click on the register, fill in the registration member’s information, to facilitate the administrator to manage. The consumer login system by the account and password which will be used for fruit and vegetable picking appointment in the future.

**Check the Fruit Information Function**

Through the system, users can check the information of the goods and the fruit and vegetable in the orchard. For example: the garden has apple trees, the user can got the information of the specific varieties of trees, the date when the apple is ripe, the price of the apple, and can make an appointment or not, etc..

**Online Reservation Function**

Browsing through the commodity information, users can make an appointment of already ripe fruits and vegetables. Clicking Order, users input the order quantity, and fill in the corresponding order information, such as: name, contact information, etc. After system calculates the total price automatically, you confirm the price, the order set up.

**Comment Function**

Users can give their advices to the administrator of the garden or publish their own picking experience and so on by comment function, which will enable users to make better communications with enterprises and other users.

**Administrator Background Management Functions**

The system administrator can manage the information of fruits, vegetables, user, message and news.

**Overall Design of the System**

**System Framework**

This system is divided into two parts: the foreground and the background. The main function of the front desk is to make an appointment for the goods from the Internet. And the background’s function is the management of all kinds of information by the administrator. The overall framework design of the system is shown in Fig. 1.
**Key Technology**

1) Hardware environment and configuration: the system of the client computer hardware does not have specific requirements, the higher the computer configuration, the better the performance of the network, the customer at the time of operation, the system performance is more likely to show.

2) Microsoft Visual Studio (referred to as VS) is a complete set of development tools, the target code written in Microsoft support for all platforms. Visual Basic, Visual C++, Visual C# and Visual J# all use the same integrated development environment (IDE), the use of this IDE can be shared tools and help to create a hybrid language solutions. In addition, these languages use the Framework.NET function, through this framework can be used to simplify the Web XML application and Web Services ASP development of key technologies. [2]

3) Server SQL 2008 is a relational database management system (DBMS), which was published and popularized by Microsoft company in 2008. It provides a more comprehensive database platform. Its advantages include: strong function, high performance, good security, easy to operate, easy to maintain, etc., in the enterprise level support, business intelligence applications, management and development efficiency and other aspects have strong ability. It is based on the client / server model of a new generation of large-scale relational database management system, is currently one of the most widely used DBMS. [3]

4) ASP. Net is Microsoft programming framework based on a common language, ASP. Net, is almost entirely based on components and modules, using Microsoft Visual studio.Net, dreamwaver, etc. a variety of tools development, greatly accelerate the development efficiency, has good scalability [4].
Database Design of the System

Database is the latest technology of data management, and it is the soul and foundation of software development. Therefore, the design and implementation of the database design and implementation of the whole system plays a vital role in the design and implementation of the system.

Database E-R Diagram Design

The reservation system of agricultural picking mainly consists of five entities, including users, administrators, fruits, reservations and messages. The user is scheduled to generate an appointment order, and can make a comment. Administrator to respond to the user’s message, and manage user information and fruit information. The database E-R diagram of the system is shown in Figure 2.

Database Table Design

(1) User information table: used to save the user’s basic information, including user name, password, name, gender, contact phone, e-mail, address.
(2) Fruit and vegetable information table: used to preserve the fruit and vegetable of basic information, including the number, category ID, name, price, price, the, the pictures, inventory, the number of days.
(3) Fruits and vegetables category information table: used to preserve the information of the category of fruits and vegetables, including category number, category name.
(4) Order entry information table: used to save the order entry information, including fruits and vegetables number, order number, name of fruits and vegetables, picking the number of fruits and vegetables, unit price, total price.
(5) Order form information: used to save information of user generated orders, including order run, subscriber number, purchase order status, order address, order name, order time and order the telephone, the amount of the total price, and notes.
(6) Reservation order information sheet: used to save user generated booking information, including booking order number, subscriber number, booking order status, picking address, picking fruits and vegetables name, name picking, picking time, picking a person to person call, and notes.

(7) Message comments: used to save the user’s message, including the user number, message number, message time, message content.

Database Design Association

After each data table design, it is needed to design the link between the various data tables. The relationship between tables depends mainly on the primary and foreign keys associated with. In this database, it mainly contains the following links:

(1) The user and the reservation order is one to many relations, indicates that a user may generate many reservations and the order form, but each one and the order form can only be a user generated.

(2) Reservation orders and fruits are one to one relationship, said an appointment can only have a single fruit.

(3) The user and the message is a pair of relations, said that a user can publish a number of messages, and a message can only be released by a user.

The database design of the system is shown in Fig. 3.

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Figure 3. The Database Design of the System.
Summary
The agricultural tourism picking reservation system to achieve some basic functions picking management, such as storage management, a database management, product information management, sales management and query functions. For the average agricultural tourism picking garden it is still very real and very strong practical significance. For example, in the sale of fruits and vegetables or modify some kind of fruit information, the associated inventory and information table is also modified to achieve the real-time data. At the same time, each module has the function of inquiry, which is used to control the dynamic and the latest information of the goods in real time. When a certain amount of goods to the level of early warning, the system will issue a shortage of inventory warning, to remind the administrator to purchase.

The system also has the following characteristics: Extended performance, as well as quick and easy manipulation capabilities. System is relatively safe and reliable, user management authority is very clear. The system uses the appropriate technology, has a good safety rigor, improve the system’s feature set, more friendly interface process, saving a lot of manpower and financial resources, but also reduces the operating costs of agricultural tourism picking garden. Generally speaking, this system is a system which is suitable for the small and medium-sized agricultural sightseeing garden. It is through the front desk and the database, the original is more cumbersome, time-consuming and error-prone work becomes simple and convenient.

References

