**B2B2C Platform of National Featured Agricultural Products Design Based on iOS**

Shen-hong LEI¹, Xin-yi CHEN², Xiang-he MENG³ and Tao XU⁴,*

¹Northwest University for Nationalities, National languages Information Technology Research Institute, Lanzhou city, Gansu Province, China

²Key Lab of China's National Linguistic Information Technology Northwest University for Nationalities, China

³Northwest University for Nationalities, National Languages Information Technology Research Institute, Lanzhou City, Gansu Province, China

⁴Northwest University for Nationalities, Key Laboratory of National language Intelligent Processing, Gansu Province, China

*Corresponding author

**Keywords:** iOS system, B2B2C mode, National language.

**Abstract.** With developing of e-commerce mode, most e-commerce platform only support Chinese browsing interface however development of minority language browsing interface in e-commerce development is neglected. This paper constructed static multilingual approach based on iOS B2B2C e-commerce platform of the Web client system, established a connection between the database and B2B2C platform by database technology. Completing the national featured agricultural products displaying, searching, inquiry, trading, and other functions on iOS e-commerce platform. Through testing on small server website, the Web client system has certain development value and practical value. With the high-speed development of e-commerce, author believes that the platform design achievement will be used widely in the ethnic minority areas.

**Introduction**

In recent years E-commerce has been widely used and national featured of agricultural products also receive the welcome. With the popularity of apple's mobile devices, more and more people begin to use apple mobile devices, how to complete national featured agricultural product trade platform using in mobile apple device has become a problem which need to be solved. Traditional multi-language interface of Web platform use static method and dynamic language method, but the dynamic language pages technology connect to a database server take a long time and the time overhead is very large, security is not good, vulnerable, difficult to maintain, expansion mode is bad. Combined this platform with the actual needs, this article used the static language technology.

Considered to improve the performance of apple mobile phone, enhance national featured of the platform, and insure the safe running of the multi-language in this system. This article design an application software run on iOS devices, this software is mainly used for exhibition and trade of featured agricultural products.

The users who often shopping online use their familiar way to go shopping easily. Most of people’s native language is Chinese, Normally the website displays Chinese. But the number of the minority areas people is largely who used national language, this phenomenon lead that people rarely uses the Internet for shopping. In view of the above problems, this article designed a multilingual trading platform expand the ethnic minority areas people number of e-commerce users. When a user logs into web page by personal information what will compare with information of sqllite databases, at the same time to provide with a WebApi interface to users, database through server sends the data to the users, the user can browse relevant related pages and related transactions. The research content of this article is to develop a web client system, which is mobile application software which used in iOS.
This article detailed introduced the design and implementation of the process of agricultural products based on the national featured of iOS B2B2C platform and the database design method and multi-language platform implementation technology in detail. Finally, each function of every module to illustrate the operational the principle.

**Overall Framework Design Platform**

The national agricultural B2B2C platform design mainly includes two parts: the iOS client and database server.

iOS client mainly provides browsing interface is the most important function of the platform, including the landing pages, merchandise display pages, the transaction main pages.

The database server mainly contains the local database SQLite and the network database MySQL. Local database is mainly used to store client cache data, the network database is mainly used for storing data of users, product and product transactions and so on. National featured of agricultural products platform as shown in Figure 1:

![National characteristic agricultural platform](image)

Figure 1. National featured of agricultural products.

B2B2C platform of national featured agricultural products design based on iOS mainly consists of three parts: the login pages, merchandise display pages and trading pages. What’s more, the login pages is mainly used to detect the legitimacy of user’s information to provide users with the registration function and retrieve the password function, while providing users with switching language features to facilitate the use of ethnic areas. The merchandise display page mainly displays the featured agricultural product information, including names, the price, the reference picture and so on. The trading pages uses third-party software Alipay to provide payment functionality.

**Login Interface Design**

Login pages is the first step for users to achieve network transactions. This page is not only designed to ensure the realization of the basic functions, but also give users a Conciseness, fast experience. Based on the national featured of agricultural products B2B2C B2B iOS platform login page has shown in Figure 2:

![Featured agricultural login screen](image)

Figure 2. Featured agricultural login screen.

Login pages in order to ensure system fluency and simplicity, mainly Consists of the two UILabel, 5 UIButton, 2 UITextField composition. At the same time, in order to ensure system availability, in the
beginning adding UIScrollView to ensure that users input the information will pop-up analog keyboard.

Login pages key feature is the multi-language switch, sqlite database table stored in different language versions of data content, the user according to their customary language to switch, the language, the change will enroll into the controller. When the user selects a language, the controller sends a notification of the language modification to the controller. After the controller receives the language modification notification, it will set the language to be modified.

**Featured of Agricultural Products Display Page Design**

The basic content of the above describes the login page design process. When the user input the user name and password and clicks the login button, the page will jump to the agricultural information display page. The following content is agricultural products display page design process in detail. The Tibetan information display page is shown in Figure 3:

![Figure 3. The information display page.](image)

First of all, in the design of the interface, taking into account the content of this page display more than one screen cannot display all the contents, the system selected UIScrollView design to display page. To complete the page has more user-friendly experience, the system page also increased the content offset and content inset attributes, the page can roll back user-friendly. At the same time, in the design of the page to select the background color, which moderate tone-based, this will enhance the user experience of layering.

In the corner of the page joined the View, sub-View with a label and button, label to obtain the current page title information, always displayed at the top of this page. Button title is set and add the background icon, button is the function is that the user according to their own preferences to set the display information. The bottom of the display page also adds view, in the view to add home button, back button, forward button and personal center button. When the user clicks the home button, the system returns to the home page. Design forward and backward buttons to facilitate the user operate the interface. Personal center settings mainly enable users to see their personal information, for example, name, gender, account number, telephone, the user can modify the information according to the actual situation which is conducive to user information management. Adding these buttons will help enhance user experience and increase the number of platform users.

**Featured Agricultural Products Trading Interface Design**

After the completion of the above functional module design, based on the national featured of the B2B2C platform for agricultural products need to solve a key technology which is the user and the platform for financial transactions. The fund transaction finishes the function that the user pays the platform to purchase the agricultural product expense.

In the existing technology, the more mature payment software are Alibaba Alipay, QQ TenPay, 360 security payments, Baidu payment, Jingdong wallet and other payment software. They share the
featured of security, fast and secure. In the platform design, the choice is to provide users with an interface through the transaction interface API, the user through the interface, you can use Alipay online payment.

To achieve this functionality, design platform with the help of third-party software-Alipay. In the development process, the first step is to create API application, settled in an open platform, and then applied to the sandbox for testing, and finally applied in the application on-line. In the client-side only need to create a View page, call the background server URL and pass the relevant parameters, you can pay online, the cost of implementation is low, and Alipay has communication encryption, anti-out single, anti-repeat payment and other security measures. Thus based on iOS of the national featured of agricultural products B2B2C platform transactions needn’t to regard to security issues. When the user successfully paid, the client-side will send a report to the server information, the server will notify the operator to orders.

Database Design

SQLite is an open source embedded relational database, has the advantages of is a self-contained, zero configuration, support services and so on. It is characterized by a high degree of portability, easy to use, structure compact, efficient and reliable. Unlike other database management systems, SQLite is easy to install and run. In most cases, SQLite binaries can be created, connected and used, as long as SQLite binaries are available. in the MAC environment SQLite database can be created, enter the “sqlite3 APTP.d;” command in the terminal, that is, create an APTP database, and then create a table in the database, create table admin (ID integer primary key, name text) and so on. SQLite database is mainly used for local client to store data.

MySQL is an open source relational database management system (RDBMS), MySQL database system is the most commonly used database management language (Structured Query Language) for database management. Use the MySQL database, you must use x-code to connect the database, firstly the connection process is to create a database and open the database, specify the port number 3306. In the MySQL database, first create a new APP table, and after respectively insert the four new fields into table, these four fields are commodity number, commodity name, price, picture, setting the commodity number as the primary key. The command is create table APTP(id int(4) not null primary key auto_increment, Name char(50) not null , price double(6,2) default null , price blob). Table 1 shows the commodity display database.

Table 1. MySQL database table design.

<table>
<thead>
<tr>
<th>Name</th>
<th>ID</th>
<th>Price</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bing Er</td>
<td>001</td>
<td>8.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Guizhou special local product</td>
<td>002</td>
<td>8.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Neurasthenia taro</td>
<td>003</td>
<td>4.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Highland barley</td>
<td>004</td>
<td>2.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Sichuan orange</td>
<td>005</td>
<td>2.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Local eggs</td>
<td>006</td>
<td>1.00yuan/Bag</td>
<td></td>
</tr>
<tr>
<td>Mushroom</td>
<td>007</td>
<td>36.00yuan/kg</td>
<td></td>
</tr>
<tr>
<td>Partridge tea</td>
<td>008</td>
<td>62.00yuan/kg</td>
<td></td>
</tr>
</tbody>
</table>

Similarly, you need to create a user table, the table is mainly used for storing user personal information, user transaction log, product sales table, sales price list, customer order form and other forms.
Conclusions

At present, the web client trading platform has not been put into practical application, but through the test on the machine, the results show that this platform has good stability and strong practicability. With the aid of this platform Chinese users can always shopping on the Internet, at the same time the user who use of minority language can also use this platform for online shopping. This will solve our country people who live in minority areas to bring inconvenience online shopping.

You can image, if the platform into the e-commerce platform. Minority areas people never leave home can enjoy the benefits of electronic commerce. The users registered login pages to browse commodity display pages. The way will protect the security of the user's personal privacy and personal information. In information display page, the users according to their choosing goods to click the buy button, after the success of the payment, transaction information will be immediately sent to the server, at the same time the servers will send the information to the merchants, finally deliver the goods by logistics companies. Although this platform is not put into the market, believe that with national support to ethnic minorities, the platform design scheme will be applied widely and brings convenient to the ethnic minority areas conveniently.

Acknowledgement

AUTHOR: Shen-hong Lei (1991-), male, postgraduate, research orientation is Intelligent Information Service System. This research is supported by National Science-technology Support Plan Projects (NO. 2015BAD29B01).

This research is supported by the Fundamental Research Funds for the Central Universities (NO. Yxm2015189).

References


