

Research on Mobile Terminal of Group Purchase Comment System based on APICloud

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Abstract

In order to solve the problem of difficulty and long cycle in the development of traditional e-commerce group purchase review software, a group purchase review design scheme based on APICloud is proposed, which gives full play to the advantages of mobile cross-platform tools. The group purchase comment mobile system uses advanced cloud integration technology to provide users with peripheral information services. Whether from the user's point of view or the developer's point of view, the system designed in this paper will provide great convenience.

Keywords

group purchase comments; APICloud; offline cache; template engine; API interface.

1. Background

With the development of the times, the difficulty and pressure of the development and design of the traditional e-commerce group purchase comment software are increasing. The development of a native application needs to adapt to a variety of platforms, which increases the difficulty of development, and many small and medium-sized enterprises are deterred. Using a mixed-mode mobile application based on web technology can well solve the dilemma faced by traditional development. It combines the advantages of good interaction experience of native application and cross platform development of web application, which improves the performance of application system and shortens the development cycle.

2. Introduction of APICloud Platform

APICloud provides a mixed development platform with the characteristics of cloud integration. Using Web technologies such as HTML/CSS and JavaScript, the system can be developed only once and can be used across platforms. At the same time, it adapts to the two mainstream mobile systems of Android and IOS[1]. Compared with other cross-platform tools in China, most of the frameworks run slowly and the UI components are single, but APICloud solves these problems very well. By encapsulating the required functional modules through JS, it can achieve almost all the native functions and support local debugging and real-machine debugging. Users can choose the cloud database provided by APICloud, without having to purchase servers, domain names and other services, reducing development overhead.

3. Design and Analysis of the System

3.1. Overall System Architecture

The overall system uses MVC three-tier architecture, M refers to the model, V refers to the view, C refers to the controller. In the process of system application, the controller receives

the request, and the model processes the request and returns the data, which is displayed to the user in the mobile interface. In data processing, `api.ajax` is used to request network data, and the appropriate timeout time is set, and the corresponding processing logic code should be written for the abnormal cases of timeout and request failure. For pages whose content needs to be loaded after the completion of the ajax request, a progress status prompt should be displayed to improve the user experience [2]. The development tool uses APICloud Studio 2, which is based on the open source Atom editor. Create a project in the cloud, open APICloud Studio 2, log in, retrieve the project and check it out locally for coding design, associate git for project management, and support real phone testing. When the project is completed, you can submit it to the cloud for project packaging to generate the corresponding apk file.

3.2. Design and Implementation of Functional Modules

The system designed in this paper is mainly divided into three functional modules: commodity search and browsing, user information management and evaluation feedback management. APICloud platform encapsulates a large number of reusable cross-platform engines and modules. Developers in mobile development, mainly to write H5 code, supplemented by native modules and engine API. In this system, the `mcm` module provided by APICloud is used to realize mobile cloud storage and data cloud services, the `fs` module is used to realize the basic file management operation of app, and the `mam` module is used to realize the version management and cloud repair of the application.

In the commodity search and browsing module, the system uses the positioning function to remind the user to turn on the positioning authority when it is installed for the first time, so that the user can easily search the surrounding high-quality commodity information. The system provides three search methods: click keyword search, user input search, voice search and scan image search to enhance user experience and facilitate users to use. The realization of this function module uses `api` expansion module, including `bMap` which encapsulates Baidu map SDK, two-dimensional code scanning module `FNScanner`, voice recognition module `SpeechRecognizer`, local database module `db`.

In the user information management module, first of all, users need to register with their mailbox or phone, and then log in and use it. Users who are not logged in do not have administrative privileges. In this module, you can manage users' orders, group purchase coupons, collections and recent browsing records. With the support of this function module, users can easily view and manage their own information.

In the evaluation feedback management module, users can evaluate the business services, through feedback, can provide reference for other users and increase the interactive experience.

3.3. UI Module Design

The system uses the five components of APICloud to design the architecture of App, and the system project window uses the structure of `window+frame`. `Window` stores static title, navigation bar, footer and other parts that do not need to be updated frequently, while `frame` stores parts that need to be updated in real time in response to user actions. The window that the system automatically opens after the engine initialization is the root window, and then loads the home window, login registration window, personal center window and shop merchandise window.

The home page window displays the home page header and commodity classification, realizes the commodity list through `layout-framegroup`, and embeds multiple `frame` to realize the commodity list display, city selection list, order summary information display and broadcast push respectively.

The login window realizes the login function, and the registration window realizes the registration function.

The personal center window displays the personal center page header and footer, and designs multiple frames to show the personal center content, including my order content display, my group purchase coupon content display, my favorite content display, and the general setting content display.

The merchandise window of the store displays the header and footer of the commodity information page, and several frames are designed to realize the display of search, location, group purchase, discovery and so on.

4. Realization of Key Technologies

4.1. Offline Caching Mechanism of APICloud

Caching of resources can bring better user experience. When users are used online, offline caching not only improves the speed of users' access, but also saves users' mobile traffic. For example, in this system, the user login registration information, personal data information does not need to load the data in the database in the remote server, but uses the offline cache technology to cache these picture and text information locally.

4.2. The Use of Template Engine

The separation of the interface and data can separate the rendering of the interface from the storage of the data, and realize the background rendering of the interface, so the interface can achieve more special effects and stability will be increased. JavaScript template engine plays an important role in the separation of data and interface.

The system uses doT template engine, good rendering performance, can directly support the original writing, does not rely on other library files.

5. Conclusion

Starting from the problems existing in the traditional development mode, the mobile group purchase review system developed by the system using the cross-platform framework of APICloud can provide peripheral information services for users. From the user's point of view, the APP will bring great convenience. From the developer's point of view, the mixed development mode can simplify the development and reduce the cost. Therefore, it has a broad market prospect and application prospect.

References

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