Design and Implementation of Campus Assistant APP

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Abstract: With the development of mobile's market, applications of mobile also begin to have its own development. Our system is about the design and development of a campus assistant software based on Android platform, which designed for college students. The emergence of campus APP has greatly solved the convenient problems related to life and learning of contemporary college students, also the related applications such as message notification and map application have become mainstream counseling.

Keywords: Internet; Campus assistant; Helper software; Campus APP

1. Introduction

Internet is an important component of the new generation of information technology. In recent years, the internet of things in China has been developed very rapidly, and it has brought great changes to our ways of life. With the rapid development of Internet technology and the iteration of wireless network updating, the vigorous development of 4G network technology, the improvement of hardware makes people use smart phones to browse information more quickly and conveniently (for more details see[1-5]). Android is a free and open source operating system based on Linux. It can be played on backward mobile phones before. It can be done on Android platform, and it can do better. The interface effect is more dazzling, and the user experience is better. As a result, a large number of software and value-added services based on Android platform are emerging in the market, such as Calendar Reminder software, library management system and stock query system, etc. These application software systems designed for specific users greatly improve people's quality of life (as in[6-7]). Therefore, it is necessary to develop a campus assistant based on Android platform. Students can log in to the campus assistant APP, which can check the map of the school and its surroundings, the outbound route, food, housing, transportation, and information, etc. To a large extent, it solves the students' daily problems. For students, they can stay at dormitories or classrooms, and can also enjoy a lot of online services. Nowadays, in view of the application market, there are relatively independent systems, each solution is also independent, and the complete system is relatively perfect, which resolves most of the problems of students on campus; however, the major platforms have relatively perfect systems for solving single problems, and relatively few centralized solutions are available, so the problems faced by domestic college students come to the same end in different ways. Less than a relatively complete system to summarize (as in [8]).

2. Preliminary

This project team is based on the design and implementation of campus assistant based on Android platform. It mainly studies the feasibility of the design and implementation of campus assistant based on Android platform. It is familiar with the construction and integration of Android system framework, and carries out system design and system test on the platform, and integrates the relatively independent functions. However, this process is based on Android platform, the development of app, the function of specific, to achieve the interaction of functions. Campus APP is the integration of major practical functions.

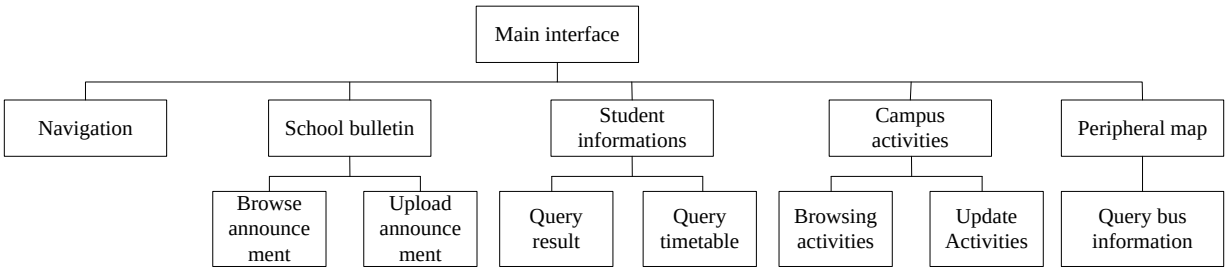

Figure 1. System functional structure diagram

3. Things We Have Done

In our long time of app productions, we have realized the following functions successively:

The design and connection of the APP login interface, the traditional APP login, regardless of registration and binding, for security considerations, but to a large extent limited the login, and extended the login time and steps. We use pre-binding with campus login, which eliminates redundant login steps in the login interface and directly accesses with school number and login password. The database directly connects to the school database, which greatly enhances the security. In the process of design and understanding, we know that the database of the school is managed by SQL database, and its performance and security guarantee the safe operation of our APP.

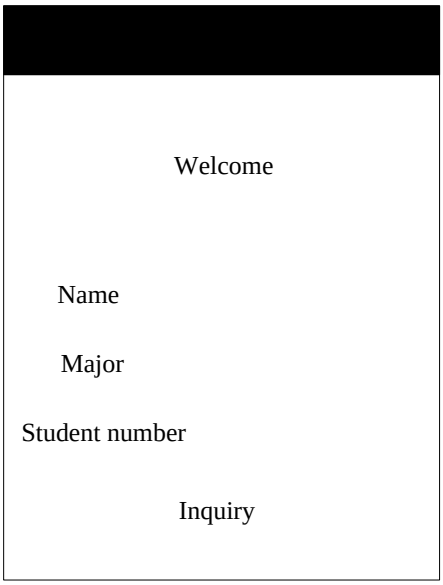

Figure 2. The login interface

This design and implementation of the map periphery, whether new or old campus, we adopt the location search, access map interface, and scan according to the appearance of the map to your location 200 meters around the position, so as to improve the accuracy of poison. Our map interface mainly realizes the search and access of the surrounding traffic and food sites, and improves the comfort of customers based on customer experience. At the beginning of the design, we consider the optimal path. After research and investigation, if there is a road strength from one vertex to another in a graph, the length of the path is called the number of edges passing through the path, which is equal to the number of vertices on the path minus 1. Since there may be multiple paths from one vertex to another, the number of edges passing through each path may be different, that is, the length of the path is different. The shortest path (that is, the least number of edges passing) is called the shortest path, and its length is called the shortest path length or the shortest distance. We adopt the Floyd algorithm. The Floyd algorithm is very powerful and can deal with many problems. The complexity is O (n ^ 3). Through the above algorithm, we gradually improve the function of map interface.

The design and implementation of direct access to the school notice board and the announcement of campus announcement are public announcements or public announcements of major events by schools and groups. Its existence, we can better know the school notice and all kinds of similar time news. In the past, news notifications need cumbersome clicks on the page to enter. Compared with it, our app page can enter directly, without any more tedious steps. It is more convenient and fast to enter the page we want to see.

Through the project production, students and teachers can reduce the time and energy to find relevant content, and search related content with their own faster efficiency.

In view of the global popularity of smart phones and the changing trend of campus information, the development of information mobility in Colleges and universities is bound to become the focus of the construction of colleges and universities in the near future. Campus application based on Andrioid platform has been more and more widely used. Mobile card, mobile library and other services are also gradually popular. The popularization of smart phones has become an irreversible trend (see[9-11]). As a leader of the times, colleges and universities should guide and make good use of this tool so that this new thing can serve the education of colleges and universities and develop more practical tools for college students.

Through the research of this topic, we can provide some suggestions or help for the later to promote the campus information mobility; provide some guidance and reference for the later who plan to use Android platform to build the campus mobile application, so that the process of campus information mobility can be followed, and can be used as a basis for future projects.

4. Acknowledgment

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