Demand Analysis of Houses Rental System Based on Android Platform

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Abstract

With the wide use of smart phones and the increasing number of urban floating population, the demand for houses rental is increasing rapidly. Houses rental has become an important part for some people. First, this paper analyze the demand of both renters and landlords and the performance requirement of houses rent APP softerware. After deep analysis, this paper proposes the main functions of the houses rent system based on the Android operating platform, inculding user login registration, houses source information release, rent seeking information release, and release information management, etc.

Keywords

Android operating plaform; Houses rent APP software; Demand analysis.

1. Introduction

With the development of mobile internet, smart phones, due to its ability to acqurie and process information anytime and anywhere, has become an important means for peple to obatin information. Furthermore, Android operation platform has been palying a more and more important role in the field of smart phones, because of its open source and easy-using.   Therefore, the smart phones with Android platform are popular and widely used.   So the business scope of mobile applicaitons by smart phones has penetrated into all aspects of peple's daily life [1]. Through the mobile applications on these mobile devices, people not only communicate but also deal with other aspects of work, social and entertainment. People can learn a variety of information on food, clothing, living and transportation by kinds of software applications.   Especially, in the aspect of living, due to the continuous promotion of urbanizaton process, people's demand for houses rental and sales keeps increasing. As a result, a large number of house finding and renting softwares help people select satisfied houses.

This paper analyzes the demand from both landlords and renterss, focuses on college graduates and new urban workers and designs a block diagram for a houses rental APP based on Android operating platform. The APP aims to provide the opportunity of straightly contact between landlords and renters, make the transaction more transparent and offer the user with the best quality and satisfactory service.

2. Target Customer Analysis

Nowadays, a large number of migrants swarm into several first-line and second-line cities, such as college students, new urban workers and so on. As a result, living and house rening have become an urgent problem to be solved. Many rental APP softwares emerge in an endless stream, but it is still difficult to meet the actual needs of the majority of customer groups. Taking contemporary college students as an example, when they graduate and work in cities other than their hometown, they are

faced with an important problem which is how to rent a cheap and comfortable house. At the beginning of their graduation, college graduates often only have limited income. In order to provide satisfactory houses rental information for college graduates and other migrant workers without adding burden. All renters are looking forward to a platform that does not charge any intermediary fees, has a large amount of houses information, and has direct contact with the landlord.

The goal of this paper is to analyze and design a houses rental APP software, which is mainly to meet the growing houses demand, and provide faster, convenient and affordable services for the landlords and renters. On the one hand, the houses rental APP softerware provides more comprehensive and convenient houses rental information for college graduates and other migrant workers. On the other hand, the APP can find right renters for landlords. So that landlords and renters exchange more convenient and more transparent information, and get better quality and satisfactory services.

This houses rental APP software is oriented to the floating population in urban life and the landlords who need to rent houses. The main goals are to construct houses rental resouce library and provide the renters a fast way to find more rent houses. Each user logs in to the APP after information registration, and landlords/renters can publish, modify and delete the house source information/rent seeking information. When they find the right object, they can collect the information into theire favorites in the software. At the same time, they can get the contact information such as the phone number of the renters or landlords. As a result, they can connect with each others and save the intermediary cost which exist in the traditional platform.

3. Software Demand Analysis

The demand analysis of the APP software is a very important part of APP development, which to be considered for both users and business requirement. The demand analysis analyze and decide which the functions in the APP software to be keep and which to removed. It is a process of eliminating the rough and false part and reserving the true and correct part. Therefore, we have a correct and comprehensive interpretation of the users' requirements, and complete the design of the software system on the basis of correct understanding.

3.1 Security Analysis

App software needs to have high security. At present, the insecure factors of softwares mainly include two aspects: on the one hand, the defects in the coding of software, which result in security holes and cause security risks; on the other hand, the insecure comes from external attacks and various endless hacker which may penetrate into the software. Therefore, in the software development, we should always pay attention to the security of software and comply with various network security standards.

The system security defects of an APP software is an important topic in the APP development. All kinds of security risks, including information leakage, often lead to new security problems. Therefore, in software development, the protection of information content is particularly important, so that the software can avoid possible types of security problems.

In an APP software, the security of the network can be enhanced by adding administrator supervision and information check during user registration, rating the credit rating of users and statistics of information, etc. The design and implementation of the houses rental APP is to use the administrator to ensure the information security of the software.

3.2 Reliability Analysis

For a mature software, its reliability is very important. The reliability is closely related to the utilization of software itself. The basic definitiaon of software reliability is the probability of system failure under the dual regulation of time conditions. So the reliability of software indicates the correctness of a program to perform its function according to the user's requirements and design goals. This requires that a reliable program should be correct, complete, consistent and robust.

The design and implementation of the completed houses rental APP can stably save the houses source information and the houses rental information, and ensure the orderly and stable operation of its functional modules, so as to effectively serve the landlords and renters with reliability.

3.3 Compatibility Analysis

An APP software should be compatible with the Android operating paltform versions of all brands of smart phones, and provide users with comprehensive and detailed services, so as to facilitate the subsequent expansion and application of the APP. The software compatibility test can verify the degree of dependence between the software and its dependent running environment. Furthermore, The compatibility of an APP represents whether it can coexist peacefully with other types of related software and lead to system crash.

3.4 Maturity Analysis

Nowadays, software development is becoming more and more common. The number of houses rental softwares is also increasing. Maturity is an indispensable part of software requirement analysis. The overall coordination ability of each functional module of the software and the comfort in the whole process of using the software reflect the maturity of the software. The mature APP software can take into account the needs of all aspects of users.

4. Software Functions Design

In order to meet the needs of urban floating population for houses rental and to solve the problem of excessive idle houses in the city, this project designs and implements a houses rental APP application platform, which is of great practical significance for both renters and loadlands. The houses rental APP focuses on four main functions as shown in Fig. 1.
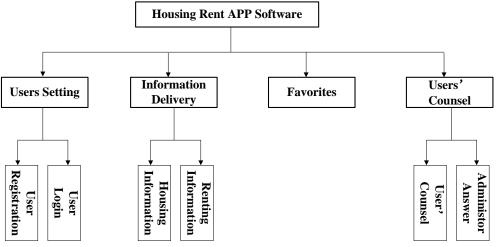

Fig.1 The block diagram of houses rent APP functions design

4.1 Users Registration and Login

The registered users can log into the system after entering the account password in the main interface. The unregistered users can register on the registration page by selecting the registration function option. In addition, one user needs a unique name when registering, so it is necessary to check whether the user name is a unique function, that is, to complete the information retrieval corresponding to the database when the account is registered, and the registered account cannot be registered repeatedly. The registration information includes user name, account password, apartment number, contact number and other information. There are restrictions on the length and specification of each item, and the registration can be completed only after the information completely entered.

4.2 Houses Information

After entering the houses rental system, the main interface has four functional modules: Houses source information, rent seeking information, my collection, and my release. Only registered login

landlords can view the published information in the information publishing interface, and publish the information on the platform. And then the landlords can click the publishing function option in the list of houses source information, and publish its own idle house source information to the house source information of the system, including the information that must be published: the geographical location, renting price, occupancy time, room pictures, and contact information, etc. There is a description information option, which can publish the featured information in the content module. After the information is released successfully, the renters can view the function module of the houses source information through the houses rental APP platform, display the details of the houses source information list, and then complete the following functions: collection, message, telephone contact.

4.3 Rent Seeking Information

The renters logged in can view the published information and publish the houses seeking information on the platform after entering the houses rental system. To publish the rent seeking information, the renters need to click the publish function option in the rent seeking information list. Thus the rent seekers can publish ideal houses source information. The information that must be published includes: the location, the price and the time of check-in, contact information, etc.

4.4 Favorites

When the rent seekers or landloads found the appropriate rent information, they can add the information released by the other party to the favorites for subsequent contact.

4.5 Users Counseling

This module enables the information exchange between the renters and the landlords. If the renters have any questions, they can leave a message to the landlords. And then the landlords can reply in time after seeing the information, making the transaction more convenient and quick. In the follow-up development process, the new telephone contact function can make the two sides reach a deeper level of matching communication.

5. Software Functions Design

This paper mainly describes the analysis of the demand problems on the houses renting APP system design. By the understanding of the system the target customers, demand analysis and system functions design, this paper completes the overall demand analysis of the APP software. The paper analyze the basic requirements of security, reliability, compatibility and maturity in the system design. Based on the demand anylissi, the paper proposes the key points of each functional module and make the system practicability and follow-up scalability.

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