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Design and Implementation of Enterprise Recruitment Mini Program

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Abstract: Since the 21st century, the Internet has been updated and developed at an alarming speed. At the same time, WeChat applets are constantly improving and introducing new functions. Develop an enterprise recruitment system based on WeChat applets for the majority of job seekers and recruiter users, provide job seekers with easy-to-reach employment opportunities, and provide a convenient and clear screening environment for job seekers. The front-end part of the applet is developed using WeChat developer tools, and the back-end system is developed using MyEclipse. Use Spring Boot + Spring MVC framework, implemented in Java language. Data is managed using MySql database. The function of this company's recruitment applet is similar to the ordinary traditional native recruitment APP. It achieves basic functions such as job search, job search, collection of jobs, delivery of resumes, viewing of the job search process, recruitment of job information, screening of job resumes, notification of interviews, etc.

Keywords: Mini-program; recruitment; WeChat developer tools; MyEclipse

1 Introduction

The WeChat mini program is a lightweight APP. It does not need to download and install to achieve the native interactive operation effect of APP software, and it can exit without uninstalling after use. Compared with the native APP, it does not send messages to users, and there is no subscription relationship. This is more humane. Users do not need to worry about the problem of insufficient mobile phone memory due to too large installation packages or too many applications. Compared with H5, the mini program is closer to the native APP, smooth and smooth, and compared with the web page, the mini program can perform various experience operations. This optimized resource tool with "efficiency acceleration" will lead us to a brand new Internet era [1]. The WeChat applet only requires users to scan the QR code, find and share with friends to open the application. At the same time, pull down the chat interface to find the historical usage records of the applet, which is convenient for users to return to the original interface anytime, anywhere. WeChat applets are everywhere and can be used anytime, anywhere. Realized the dream of "at your fingertips" in the mouth of Zhang Xiaolong, the "father of WeChat" [2].

WeChat mini programs have these functions: Firstly, mini program supports dialogue sharing, and you can directly forward and share the mini program to a single friend or WeChat group in WeChat. When a friend opens the sharing page, it is real-time information, and there is no need to start the mini program again. Secondly, mini programs can be searched at the entrance of the Mini Program in the "Discover" page of WeChat, and users can search for the mini program they need by entering the mini

program or brand name [3]. Moreover, mini programs and WeChat official accounts can be associated with each other, and each official account can currently be associated with up to 5 mini programs.

2 Background

Since the 21st century, the Internet has been updated and developed at an astonishing speed. At the same time, WeChat applets are constantly improving and introducing new functions. As the leading social platform at present, WeChat already has more than 1 billion users. With many free traffic entrances, the mini programs can import traffic to the maximum. Companies using small programs will have the opportunity to gain more users and markets, and then help more companies and service providers resume their own brand [4].

With the rapid development of the Internet and the popularity of the Internet today, considering the limitations of recruitment locations, recruitment costs and human flow, more and more employers choose to recruit online, and more and more job seekers choose to submit resumes online. Since 2003, more and more domestic companies have begun to use online recruitment, especially in 2004, 90% of the world's top 500 companies in China are using online recruitment [5]. For job seekers, the influence of the Internet on job hunting methods and job hunting behaviors is also not to be underestimated. According to statistics, more than 18 million people submit their resumes on Monster.com every year [6]. While the online recruitment system continues to attract social attention, coupled with the continuous improvement of WeChat applet functions, many native recruitment apps, such as Zhilian Recruitment, BOSS Direct Employment and other recruitment systems, have begun to develop corresponding WeChat applets. All you need is to have a mobile phone and a WeChat account [7]. After the recruiter releases the job information, the job seeker can browse the required job information anytime and anywhere, and send resumes. Through the small program, the native APP is simplified, and some necessary functions are clear at a glance, such as job search, resume delivery, and job search progress in the job seeker module [8]. It can be described as simple but not simple.

Although it is called the WeChat Mini Program for Enterprise Recruitment, job seekers and recruiters are two indispensable user types in the recruitment process. Therefore, on the basis of referring to most recruitment mini-programs, this mini-program combines the job search system with the recruitment system. Provide job seekers with a resume framework, and job seekers fill in the information that must be filled in during the job search process. Carry out job selection and resume delivery. Recruiters publish recruitment information, screen job candidates and notify them in the background management system. At the interview. In this small program, there is no very complicated operation function, but it is not too simple. In addition to the basic functions provided in most small programs (such as authorized login, add, delete, change, and view), job seekers can retrieve their job requirements. Enter keywords to search for the job requirements released by the recruiter and submit your resume, and query the job search process; the recruiter can filter the resume information by entering the job title. You can inquire about the personal information of job applicants and notify them of the interview. Keep the two in touch and interact.

3 Development Environment and Technology

3.1 Development Environment

Table 1 will introduce the specific software and hardware environment and test environment for the development of corporate recruitment mini-programs.

Table 1: Development environment of corporate recruitment mini programs

Hardware environment	System type: x64-based computer
	CPU: Intel(R) Core(TM) i5-7200U CPU @2.50 GHz 2710 Mhz, 2 cores, 4 logical processors
	Installed physical memory (RMA): 4.00 GB
Software Environment	Operating system name: Microsoft Windows 10 Home Edition
	Development tools: WeChat developer tools (stable version 1.02.2004020)
	Database: MySql
Test environment	MyEclipse Huawei nova 3 Huawei nova 5 pro iPhone 8p

Next, the preparations for the development of small programs in the software environment and the use of small program development tools will be shown.

Developers first need to register a small program account on the WeChat public platform and complete the basic information of the small program. After completing the preparatory work, you can download and install the official small program exclusive development tool-"WeChat Developer Tool". It integrates functions such as development and debugging, compiled code and program release, so that developers can complete their work more efficiently. After the download is completed, the code of the small program can be viewed and edited by creating a project. You can test and simulate the display effect of the applet on the mobile terminal in "Debug".

3.2 Main Development Technology

The system is divided into front-end and back-end. The front end is a small program interface, mainly built by WeChat developer tools. The backstage is part of the information management system, which mainly uses MyEclipse for Java development. Use MyBatis, Spring Boot, Spring MVC framework and Maven for development. Use MySql to design and manage databases.

The architecture system of the whole applet is divided into two parts: the logic layer and the view layer. The applet provides its own view layer description languages WXML and WXSS, as well as a JavaScript-based logic layer framework, and provides a data transmission and event system between the view layer and the logic layer, allowing developers to focus on data and logic [9] .

There are many software in database applications, such as Sql Server database, Oracle database, etc. The reason why MySql database was chosen as the development tool for this small program is because in comparison, MySql database has certain advantages in terms of speed, cost, and space [10]. Suitable for ordinary personal development [11]. In order to facilitate the download and use, in this development process, the PHP method and the visualization Navicat tool are used to download and use the MySql database [12].

MyEclipse is a development tool that supports Java language and comes with multiple frameworks. The convenience of MyEclipse is that it can automatically fill in the code for developers who are not technically sophisticated. This is also a very user-friendly aspect of MyEclipse [13].

Spring Boot is a brand new lightweight framework designed based on the Spring framework, which is a simplified version of the Spring framework [14]. It reduces a lot of development, configuration and other work, providing convenient conditions for development.

MVC, namely Model View Controller, is an abbreviation of model-view-controller, and is a classic software development design model. Spring MVC is composed of three parts: model, view and controller [15].

MyBatis is a persistence layer framework that integrates SQL queries, stored procedure calls and advanced mapping [16]. It encapsulates almost all manually set JDBC code, and maps Java's POJPs to records in the database through simple XML configuration and annotations. The build tool used in the development of this small program is Maven.

4 Demand Analysis of Corporate Recruitment Mini Programs

4.1 Task Overview

Nowadays, with the increasing demand for employment, more and more college graduates have difficulty finding jobs. Offline recruitment is no longer sufficient to meet the needs of job seekers and employers. Moreover, the recruitment and selection process of human resources is very important to enterprises. These enterprises must not only survive in the market, but also increase their position in the market during operation. In order to meet the requirements of recruiters and job seekers, in the current rapid development of the Internet, an online platform serving job seekers and recruiters has been developed through the WeChat applet. Provide online job search for job seekers and online management for recruiters. In turn, it provides job seekers with a comprehensive job selection space and an effective way for recruiters to disseminate information and select outstanding talents. It is convenient for job seekers and recruiters.
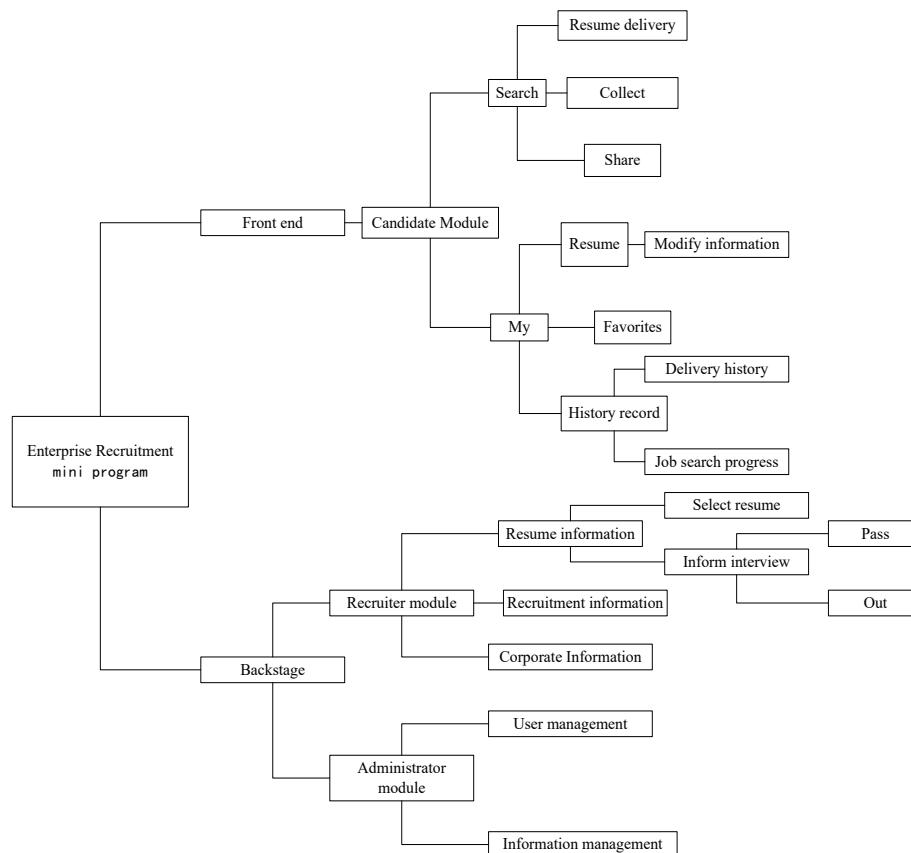

Figure 1: Overall design framework

Fig. 1 shows the overall design framework of the small program. As can be seen from the framework diagram, the enterprise recruitment applet is divided into three modules: job seeker module, recruiter module and administrator module. The difference is that the job seeker module belongs to the front-end part, while the recruiter and administrator modules belong to the back-end management part. The administrator can authorize recruiters to log in to the system and perform operations such as information release. After the recruiter is authorized to log in, he can publish job information. Filter resumes by job title, select relevant resumes and contact for interview.

4.2 Analysis of Functional Requirements of Corporate Recruitment Mini-Programs

According to the functional requirements of many online recruitment systems, the company's recruitment applet is divided into two systems. One is the WeChat authorized login interface connected to the job search applet, and the other is the back-end management system connected to recruiters and administrators. Three different users divide the system into three modules.

The job seeker is authorized to log in to the mini program through WeChat. After entering the mini program, search for keywords (position, work location or company name) to find the corresponding job information [17]. After finding the desired position, you can then view the detailed information of the position, bookmark the position or post your resume. Candidates can edit their resumes in the "My" interface. You can view the jobs you have collected. Job seekers can also see their delivery history and job search progress in their job search records.

The person in charge of the employer enters the mini program management system by entering the user name and password. The recruiter's account information is added and managed by the system administrator. After entering the background management system, specific information will be released from the unit position as needed. Publish talent information to the resume information database. After finding the information of candidates who meet the application requirements, they can contact the applicant for an interview. The interview results are divided into pass and fail. Once the system administrator is connected to the back-end management system, users can be added. The users here are corporate users. After the administrator gives the recruiter account information, the recruiter can post information online. At the same time, the administrator can add and modify the recruiter's corporate information.

4.3 Analysis of Non-Functional Requirements of Corporate Recruitment Mini-Programs

The corporate recruitment applet is a system used by people from all walks of life, and the overall interface style should be simple. The function division of each module is simple and clear, and the user will not spend too much time studying the functions of the applet for the first time because of the bells and whistles of the interface, and it is easy to use. The interface adopts a minimalist style, the colors are simple and generous but not too gorgeous, which is suitable for business use. So it meets usability requirements.

Due to the large number of recruits and job seekers, the entire mini program should be able to support 300 users at the same time. When the user uses the corporate recruitment applet, the page response time for query and screening operations cannot exceed 5 seconds, and other operations cannot exceed 3 seconds. Ensure that users meet their own needs in the shortest time. So it meets performance requirements.

Personal privacy is undoubtedly the most important thing in today's society. For job recruitment, personal information and corporate information need to be protected. This Recruitment higher security needs of small programs. In this small program, there must be a complete information security mechanism, distinguish user permissions through roles, and achieve the principle of minimizing privileges. So it meets Security requirements.

5 Database

Fig. 2 shows the entity connection E-R diagram of the applet. The attributes of the system super administrator are user name and password. The administrator manages job applicants and recruiter

information, and one administrator can manage multiple user information and multiple enterprise information. Enterprise information includes: company name, company profile, industry label, scale, company address, and benefits. Job seekers and recruiters have two attributes: username and password. The job seeker changes the resume, and the job seeker can change the resume multiple times. The resume includes attributes such as the applicant's name, gender, age, job-seeking intention, contact information, internship/work experience, certificates obtained, and self-introduction. A recruiter can post multiple recruitment information. The attributes of recruitment information include job title, job requirements, job location and salary [18].
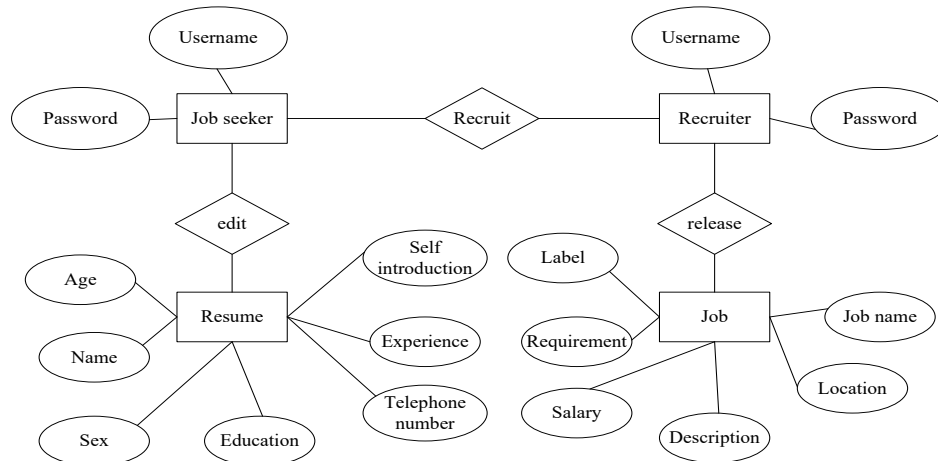
Figure 2: E-R diagram

6 System Implementation of Corporate Recruitment Applet

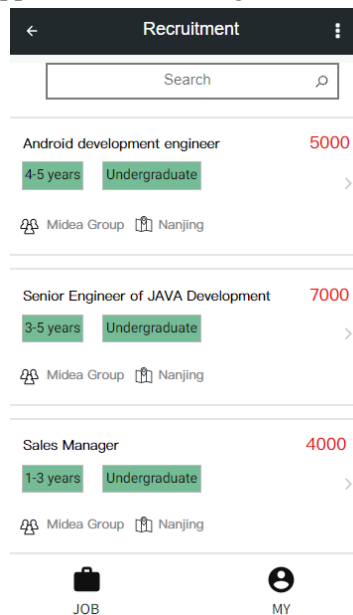The homepage interface of the applet is shown in Fig. 3.

Figure 3: Homepage interface

Job seekers can search by entering job title, work location, and company name. The job details interface is shown in Fig. 4.
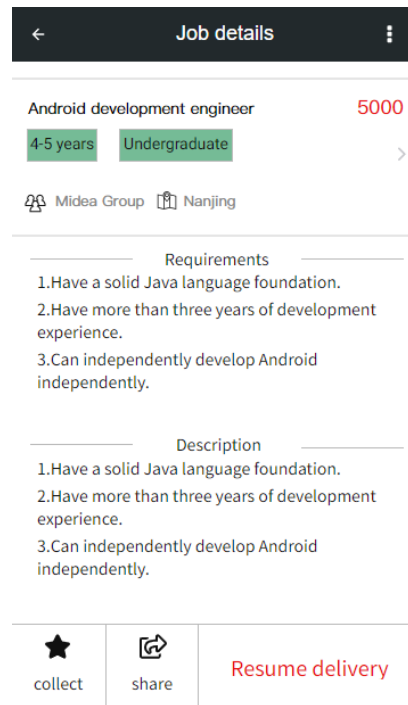
Figure 4: Job details interface

7 Conclusion

Because the author's technical and literary skills are limited, and time is limited. Therefore, this small program and paper will inevitably have deficiencies [19]. In the corporate recruitment applet, although most of the basic functions of recruitment software include login, job search, resume delivery, information release, query screening, etc., the front-end part failed to achieve identity information verification, fill in information verification, and contact online customer service. Delete the delivery history of failed interviews and other functions. The background part cannot realize the functions of online written examination and email contact. Compared with some existing online recruitment systems, the resume part will have some shortcomings [20]. For example, ID photos cannot be uploaded, attachments cannot be uploaded, and resume editing space is limited. The company profile also has its shortcomings, for example, there is no company image information, company specific location coordinates, etc.

Since this small program is mainly used for company recruitment, the overall style is relatively simple. Users may not be satisfied with the background color, design style, etc. The development time is short and the development technology is limited. Many rich and colorful functions have not yet been realized, but the necessary functions in the recruitment process can already meet the needs of most users. If the above problems occur, the author apologizes [21]. I hope professional teachers and user friends will point out the shortcomings and inform the author. In the future, if time permits, the function of this applet will be improved to better serve most users.

Conflicts of Interest: The authors declare that they have no conflicts of interest to report regarding the present study.

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