

Design and Realization of University Personnel Office Service Platform Based on WeChat Applet

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Abstract: Personnel management in colleges and universities is an important work, personnel department functions are complicated and important, the use of information technology can improve efficiency and accuracy. Aiming at low level of informatization of personnel office in universities and cumbersome data organization problems, we design and develop a personnel office service platform based on WeChat applet. The service platform and Python The service platform and Python background can interact with each other to realize the management function of personnel office service platform. The test shows that the personnel office service platform based on WeChat applet improves the efficiency of teaching staff and personnel managers. The test shows that the personnel office service platform based on WeChat applet improves the efficiency of teaching staff and personnel management personnel, and achieves the functions required by the design.

1. Introduction

Personnel management in colleges and universities is an important daily work. With the rapid development of higher education in recent years, personnel management in colleges and universities is becoming more and more complicated. Although the office software has been widely used in the personnel management of various universities in the past, there are still problems of data format and unified management of data, and most of them are based on computer terminals, and less are based on mobile terminals. At the same time, there are relatively independent information management and daily personnel management in office software, which causes a lot of difficulties in information management and statistics. With the rapid development of mobile phones and other mobile terminals, people's office can be carried out anytime and anywhere, which greatly improves the efficiency of automated office, while reducing the workload of staff and personnel management personnel. The college personnel office service platform aims to build a network personnel system, open to the faculty and staff of the whole school, and centralize all departments, departmental system administrators and clerical personnel to work together on a unified network system. The platform not only improves the function and level of personnel services, but also provides more accurate and convenient personalized services to the majority of staff [1,2]. Based on the analysis and investigation of personnel management needs, this paper designs the personnel office service platform by using wechat mini program according to the actual situation and specific business process of the school in personnel management. Attendance, talent introduction, teachers, labor and capital, professional title evaluation, personnel transfer, etc. are important business of personnel

management. The personnel office service platform integrates and merges these businesses, so as to realize the automation and process of each business.

2. System Design

2.1 System architecture design

In the system design, WeChat applet and server side are two components of the platform. Based on the underlying support of WeChat platform, WeChat applets can be run on mobile devices such as mobile phones and tablets. Therefore, it has the ability to be used without time and location restrictions, and is simple and fast to run. The development of WeChat applets mainly adopts WeChat developer tools and HBuilder, and the server side includes two parts: the background management system and Web Service service. Among them, the background management system has the modules of maintaining staff information, information audit, user rights management, Q&A, etc., and can realise the editing, importing and exporting of background data. In order to realise the interaction between the background data processing and the mobile applet, Web Service Service is used to provide the database access interface.

2.2 System Function Design

In order to better serve the staff, this paper divides the personnel office service platform into two modules on the basis of demand analysis, including multi-party information and main topic service. The overall functional structure of the design is shown in Figure 1.

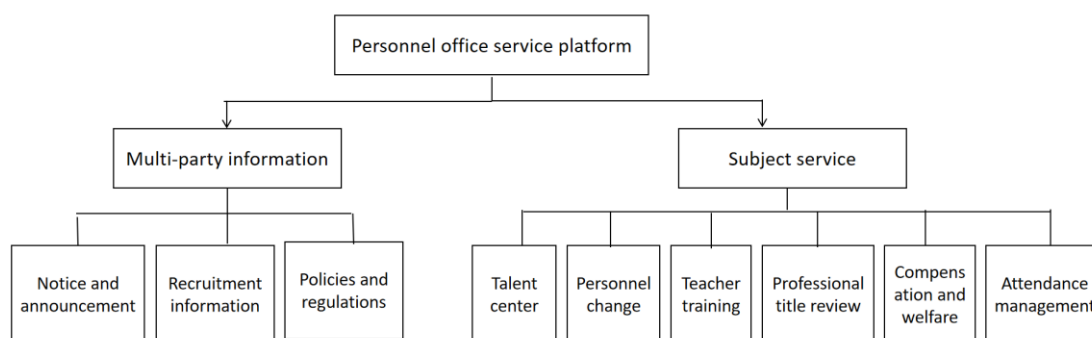


Figure 1: Function module diagram of personnel office service platform

Multi-party information module is mainly to provide various types of information for faculty and staff. The main function is to issue various notices through the network, such as social insurance and provident fund adjustment, professional title evaluation, talent recruitment results publicity, wage standard adjustment, etc. Every year, each secondary college reports according to the talent needs of the college, which is reviewed and summarized by the personnel department of the school, and then studied and discussed by the leading department of the school to carry out the publicity work of talent recruitment. Promulgate some policies of the school or the province, such as the measures for the management of staff attendance, the measures for the management of staff retirement and reemployment, and the regulations for the management of education and further education.

Theme services mainly include six modules: Talent Centre, Personnel Changes, Attendance Management, Teacher Training, Title Review, and Salary and Benefits.

(1) Talent Centre. Candidates can submit their CVs online, and at the same time, they can track the review process and print the passes, etc. The administrators can review the information of CVs

submitted online and print the passes. Managers can review the information of candidates submitting resumes online, conduct qualification examination and summarise the results, maintain written tests, interviews and hiring information online, support the setup of pass information, and can generate examination room assignments according to the examination room information with one click. Individual faculty members can make online declaration of talent projects and check the progress of review in the system, which supports online review, including review by Personnel Office, review by secondary units, review by parallel departments, etc. It also includes the establishment of talent pool, and the summary of results. It also includes the establishment of talent pool, which contains master (doctoral) student tutors, young and middle-aged backbone teachers at all levels, and various types of talent projects at all levels.

(2) Personnel Changes. For the management of personnel changes, it is mainly to review the basic situation of the staff, involving the entry of basic information of the staff, annual assessment, rewards and punishments and basic information of the family. The basic information of the personnel includes name, gender, date of birth, degree, title and title, place of residence, graduated college, learning and training experience and work experience. Can realize the view, modify, filter, download and other functions. Faculty and staff can apply online for retirement, reemployment, on-campus transfer, on-campus loan, transfer resignation and new staff entry procedures. Individual faculty members can submit job appointment applications online in the system, and timely view the feedback of the result of post grading. The system administrator can conduct online audit, update the personal file information of the faculty and staff, query and record various personnel changes of the faculty and staff in real time (since entering the school), and give users different rights to carry out corresponding business management services [3].

(3) Teacher Training. It arranges teacher training programmes for teachers and staff, and from time to time releases information on training and examinations related to teacher training through the Internet to assist teachers to participate in them. If teachers participate in relevant training, the list will be confirmed according to relevant policy documents, etc., and relevant application materials will be preliminarily examined to ensure that teachers will not be tossed back and forth because of relevant policies. Faculty members can apply for and enquire about relevant training and advanced training (e.g. advanced study visits) on the platform, and it is up to the management to determine and verify whether they are ultimately recognised or not. Administrators can manage and maintain the training and further education information of faculty members, with the authority and functions of adding, deleting, inquiring and statistics.

(4) Title Review. Individual faculty members can realise the functions of online title declaration, submitting relevant electronic materials, checking the progress of review and checking the information of title review of the whole university in the system. Administrators can conduct preliminary review online to facilitate communication with teachers in advance to prepare for offline qualification. Evaluators can review relevant title evaluation materials online to prepare for further offline voting. Managers regularly review and maintain title information.

(5) Salary and Benefits. Salary and welfare is a module that is used more by faculty members and involves the rights and interests of every faculty member. The platform provides self-service enquiry on salary, specific details and historical bills for the staff, and the adjustment of salary standard can be enquired according to the year. Administrators can generate or paste and import batch update personal salary information; online view, modify the post salary, salary scale, performance pay and other salary standards can be achieved by viewing various types of salary statements, can automatically generate annual salary report, salary statistics and other customised forms based on the information in the system. Through statistics and analysis of salary data, school management can analyse the past salary situation to make decisions on future annual budgets.

(6) Attendance Management. The application provides the service of recording the attendance

information of the teaching staff, not only through the departmental administrator to report the monthly attendance record of the unit for statistics, but also through the personal leave record to generate monthly attendance information. On-line application for leave cancellation of teaching staff, teaching staff can submit online application for leave cancellation by mobile phone, approved by the relevant leaders and upload the supporting materials; you can query your own attendance information through the system, if there is an error, you can give feedback. The administrator can check, approve, return or update the application according to the actual situation.

3. System function realization

Similar to the development language and development process of Web development, the system is developed based on wechat developer tools. The mini program framework includes a view layer and a logic layer. The view layer is used to render the page and consists of the view layer description Language WXML (WeiXin Markup Language) and view layer Style WXSS(WeiXin Style Sheets). JavaScript language is used to design and process business logic at the logical level [4-6]. At the heart of the applet framework is a responsive data-binding system that makes it very easy to keep data and views in sync. The background program of the small program is developed in Python, a cross-platform programming language, and Django, a high-security, flexible and convenient tool in Python Web framework, whose MTV (Model-Template-View) mode is very suitable for layered development of applications [7].

3.1 Database

In order to realize the data information storage and management of personnel office system, the background management system of personnel office is designed. As shown in Figure 2, the system includes three functional modules: user management, graphic management and view management. The background management system of personnel office can realize the functions of adding, deleting, modifying, querying, etc., so as to manage the background data. The specific functions are shown in Table 1.

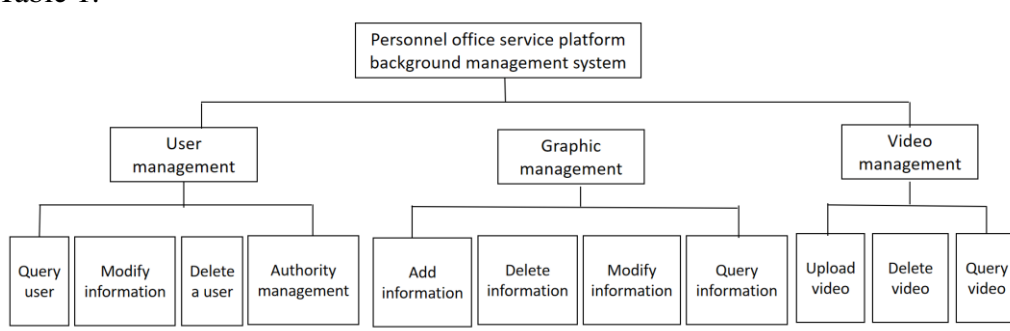


Figure 2: Architecture diagram of background management system of personnel office service platform

Table 1: Personnel office background management system module

Number	Nodule	Main function
1	User management	Rights management, add, delete users and related more delicate modification, query
2	Graphic management	Add and delete pictures, documents and other information
3	Video management	Video upload, query and delete

The system uses SQL Server 2017 database to store data, which can well support Python data analysis and machine learning and other functions. The tables of this system database include user table, personnel information table, graphic information table, information information table, label table and so on.

3.2 Home page and knowledge content realization

The main part of the homepage interface of the personnel office service platform applet consists of nine module entrances. At the top, the Swiper slider view container is used to rotate three pictures, thus displaying a poster rotation. Home, Messages and Personal Centre are placed in the bottom navigation bar. Page jumps are implemented using the Navigator component. In the personnel change page, teachers can choose the service according to their needs, submit the documents, and administrators with different permissions can carry out the initial review and review.

Teachers' training interface is in the style of tiled icons, teachers can enrol online, sign in, view the progress of learning, and so on. The payroll and welfare interface is divided into two parts: office services and enquiry services. Teachers can apply for bank card changes, issue income certificates and enquire about salary payment details according to their needs.

3.3 Implementation of other modules

Title review module page design includes title declaration, review conditions, review process, review information, review costs. The title declaration page uses radio component to select whether it is continuous declaration, upload materials and submit using button component. The picker component was used for the date of birth, the time when the highest degree was obtained, and the time when the current title was obtained. The department, highest degree, current title, and proposed position are input box components. Set the upload data button, you can upload the original image or compressed image, and record the uploaded file information in the MySQL database.

The design of the login interface uses the input box component input to realise the user name and password box, and sets up the login box button, by identifying the QR code, the user can log in the system entrance. The role of the unbound user as a visitor, you can browse to some open information, if you want to operate further, you need to register, submit an application to the administrator, after agreeing to open the corresponding permissions. When registering, you need to fill in your personal information, which can be bound with your WeChat account. The system administrator sets different permissions for different functions of the faculty and staff, and in order to improve the security of the information, the password in the system is in cipher text.

In the designed Talent Centre interface, candidates log in to register, fill in personal information, add, amend job information, upload CVs, and set up to receive information from the recruitment department. Recruitment department management can add and modify recruitment information, receive candidates' resumes, and preliminarily review candidates' personal information. Employees can apply for talent projects, and experts can conduct online preliminary examination and review to make preparations for offline qualification examination.

4. Conclusion

Combined with the actual needs of the university staff and the current situation of personnel office services, a WeChat applet-based university personnel office service platform is designed. Designed a WeChat small programme based on the university personnel office service platform, including multi-party information and various theme services and other functions. It contains

multiple information and various theme services and other functions. And build personnel office background management system for data storage and management. After practice, the system not only improves the office efficiency of the university personnel office, but also can use and save effective information and reduce unnecessary repetitive work.

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