Hindawi
International Journal of Antennas and Propagation
Volume 2024, Article ID 9872025, 1 page
https://doi.org/10.1155/2024/9872025

Retraction

Retracted: Design of the School-Enterprise Cooperation Management Information Platform Based on the B/S Architecture

International Journal of Antennas and Propagation

Received 23 January 2024; Accepted 23 January 2024; Published 24 January 2024

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Manipulated or compromised peer review

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

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[1] Q. Zhang, "Design of the School-Enterprise Cooperation Management Information Platform Based on the B/S Architecture," *International Journal of Antennas and Propagation*, vol. 2021, Article ID 2651936, 7 pages, 2021.

Hindawi
International Journal of Antennas and Propagation
Volume 2021, Article ID 2651936, 7 pages
https://doi.org/10.1155/2021/2651936

Research Article

Design of the School-Enterprise Cooperation Management Information Platform Based on the B/S Architecture

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Received 18 August 2021; Revised 29 September 2021; Accepted 8 October 2021; Published 31 October 2021

Academic Editor: Fangqing Wen

The SEC teaching management platform provides a good support for school-enterprise cooperation. This paper conducts research on the SEC management information platform based on the B/S architecture. On the basis of the analysis of the relevant functional needs of the system, the overall functional framework of the system includes the college management platform, enterprise management platform, resource-sharing platform, and user login platform, then the B/S architecture is used to develop the SEC teaching management platform, and the test experiments of the SEC teaching management platform are carried out. The maximum number of concurrent tests shows that the maximum number of concurrencies of the platform is 989. Through the system response time test, the system response time is between 0.2 and 0.45, which meets the system response time requirements. In the CPU use test, the CPU share of the system was between 25% and 31%, meeting the needs of the system. From the above experimental results, the system is relatively high.

1. Introduction

With the rapid development of our country's information technology industry, various information technology-related enterprises continue to develop and grow, and the demand for employment is increasing year by year because colleges have undertaken most of the talent training work [1, 2]. However, from the analysis of the employment situation of students in recent years, the employment situation of students is not optimistic, and the pressure of students' employment is increasing [3, 4]. By investigating the reasons of some talent training objectives in universities and the actual situation of enterprise recruitment, in universities, the school wants self-taught students to seamlessly connect with businesses [5, 6]. In enterprises, talents who can work smoothly are needed, and students who need to work are turned into employees who can operate business for the successful realization of SEC for both parties. However, the development of this work did not develop smoothly in the university. This is mainly reflected in the difficulty in achieving cooperation and difficulty in determining and implementing the cooperation plan. Therefore, it is particularly important to build a school-enterprise information management collaboration platform [7, 8].

Regarding the research on the SEC management information platform, some researchers used the UML method to analyze the system functions from the perspective of SEC talent training information and constructed the internet and SEC talent training model [9]. From the perspective of system management, the problems existing in system management at this stage are explained, and relevant suggestions and countermeasures to deepen SEC are put forward to effectively play the role of the SEC management information platform [10]. Some researchers have integrated the human resource training model and system design of SEC and put forward an information management idea based on the SaaS MOOC platform. First, the overall system architecture is designed, then the needs of the system are analyzed, the system thinking map is drawn, and Alibaba Cloud, Apache, PHP, MySQL, and other tools are used to realize the development of the platform [11]. Researchers have also designed a system of innovation and entrepreneurship training management based on SEC. The system uses B/S architecture technology to realize the basic

management of user training for students. Users can provide information to colleges and students. Management of basic information can also realize the information management of student training management [12].

This paper studies the SEC management information platform based on the B/S architecture, expounds the significance of developing the SEC information platform based on related documents, and expounds the necessity of the information platform design. Have a comprehensive understanding of the application of the B/S architecture, then design the SEC management information platform based on the B/S architecture, and test the designed platform to verify the effectiveness of the platform.

2. Research on the Information Platform of SEC Management

2.1. The Significance of the Development of a SEC Management Information Platform

(1) The school-enterprise joint running of schools has achieved a win-win complementarity between the school and the enterprise. On the one hand, the school trains graduates who can be employed, provides services for enterprises, and contributes to the development of enterprises. The school is guided by the needs of enterprises, which can enable students to quickly adapt to the needs of enterprises, and the economic and social benefits of enterprises will be greatly improved. On the other hand, for higher vocational colleges, this not only ensures the employment of students but also expands the social influence and further enhances the image of universities. At the same time, the company submitted the talent training requirements, providing a guarantee for the school's practical teaching. School-enterprise cooperation can introduce the latest commercial, scientific, and technological achievements into vocational teaching, making the curriculum and content more advanced, applicable, and relevant. The new knowledge, new technology, and new business concepts can be timely integrated into the teaching content so that better development of the curriculum can be made. The cooperation between the school and the company school has fundamentally broken the exclusive social status of education and enhanced the training of students' work adaptability and comprehensive quality. For schools and enterprises, this is a win-win and complementary engineering.

(2) The key to the success or failure of vocational training and teaching: only with the recognition and participation of enterprises, vocational training can always pay attention to the society's demand for technical application talents in the process of talent training and can ensure the pertinence and application of talent training. In order to improve the relevance of vocational training and social economy and enhance the practicality of occupations, vocational colleges need to understand the market economy's requirements for specific professional teams and the ever-changing needs of knowledge, quality, technology, and abilities after employment. Targeted arrangements, curriculum, and textbook updates have created a professional-focused teaching system. Through communication with enterprises, higher vocational colleges can connect education goals and employment standards, curriculum settings and corporate needs, and skills' training and job requirements, and the cutting-edge information support that enterprises can provide has a higher starting point and certainty. The forward-looking nature has effectively improved the professional adaptability of vocational training.

(3) Using this network platform can promote cooperation and interaction between universities, promote the promotion and transformation of scientific and technological achievements of universities, and promote cooperation between the industry, university, and research.

(4) Efforts have been made to create a professional information platform for the exchange and placement of batch professional graduates and order education and training between colleges and enterprises and realize the zero-distance and low-cost information transmission between schools and enterprises and serving students' employment.

2.2. Application of the B/S Architecture in the SEC Management Information Platform. In terms of B/S architecture, the software installation and maintenance can be completed on the server side at the same time, and corresponding modifications can also be made. With this structure, the client can be used without the client app, and upgrade operations can be performed during operation. The reason is that, at this time, the user only needs to access the browser to make all the modules work. For the structure of the system, it provides the most realistic and developmental basis. Through this foundation, it can provide networking, integrated services, and online services for heterogeneous applications, heterogeneous networks, and heterogeneous machines.

2.3. Platform Search Algorithm. The attribute words in the attribute set are not representative. If an accurate attribute word weight can be calculated from it, it needs to be evaluated using an attribute selection algorithm. This evaluation process uses the construction evaluation function. After the evaluation of this function, a representative set of feature words and their corresponding weights will be obtained. Therefore, an important central factor in the process is the evaluation function. This paper mainly studies two commonly used evaluation functions.

(1) Information gain method: (1) count the number of positive and negative classified documents: N, N_z. (2) Count the number of occurrences of positive

documents for each word (A), the number of occurrences of negative documents (B), positive documents and negative documents Times C and D do not appear. (3) The formula for calculating information entropy (1) is as follows. (4) Calculate the information gain of each word. (5) Sort each word according to the information gain value from large to small, and select the top K, the word is the feature, and K is the feature dimension

$$\text{Entropy}(S) = -\left(\frac{N_1}{N_1+N_2}\right)\log\left(\frac{N_1}{N_1+N_2}\right) + \frac{N_2}{N_1+N_2}\log\left(\frac{N_2}{N_1+N_2}\right). \quad (1)$$

(2) Mutual information method: it is mainly based on the probability that a feature and category coexist to measure the relevance of a feature and category. For a feature t and category c, the calculation formula of mutual information is expressed as follows:

$$\text{MI}(t,c) = \log\frac{p(t,c)}{p(t)\times p(c)} = \log\frac{p(t|c)}{p(t)}, \quad (2)$$

where $p(t, c)$ represents the probability of the text containing attribute t and category c in the training set, $p(t)$ represents the probability of text containing attribute t in the training set, and $p(c)$ represents the category probability of text c in the training set. The attribute t has a higher probability of appearing in category c, while the probability of appearing in other categories is lower, that is, attribute t and category c; if the correlation is large, the mutual information value MI (t, c) will be obtained. Sort each word according to the information gain value from high to low, and select the first few words K as the attribute.

3. Design of a SEC Management Information Platform Based on the B/S Architecture

3.1. System Requirements' Analysis

(1) Query function: the SEC information service platform has designed user sections such as personal job hunting intentions, collaborative recruitment, SEC, promotion of scientific and technological achievements, technical requirements, and batches. Expert information database and other user modules are convenient for different users to ask questions according to their needs. In the corresponding information, the platform has created a variety of effective query modules.

(2) Functional navigation: in order to make the target user feel more perfect when navigating, the design of the platform application adopts page rotation and sorting editing methods, which can effectively navigate the information released on the platform.

(3) Management function: the back-end maintenance administrator of the school-enterprise collaborative information service platform must perform effective authentication when processing and deleting platform data information. When deleting data information, one needs to back up the deleted content to avoid accidental deletion. At the same time, any modification and deletion operations must be recorded.

(4) User management: according to the division of labor, the authorized administrators at all levels of the platform system have different levels of data and information management permissions, such as repair and deletion, which also include the supervision of the back-end administrator and back-end maintenance.

(5) Help feedback: includes specific operating system issues of the platform, sent to the platform through messages and emails.

3.2. Overall System Architecture. According to the aforementioned system function requirement analysis, the overall architecture of the SEC management information platform is proposed as shown in Figure 1.

3.3. College Management Platform. School management is applied to enterprise users. The user groups are teaching quality support supervisors and teaching quality support teachers. They are mainly used to initialize the information of each partner institution, set professional information, grade information, class information, and student information, and set up the enterprise and the distribution of contact personnel among various institutions.

3.4. Enterprise Management Platform. Companies can effectively retain the specific information and data they publish on the system platform, and they can also apply for the first-stage talents including the needs of graduates and experts. Including points of operation are as follows: input and release of graduate student requirements information and maintain relevant information on the needs of college graduates in the province (including modification, deletion, cancellation, and release of information).

3.5. Resource-Sharing Platform. After individuals, companies, or college members have released their personal job search, corporate recruitment, result recommendation, technical requirements, and other related information in their management module, ordinary users can choose among personal job search, corporate recruitment, and recommendation results. One can also query and search information in the technical requirements column, talent database, information center, and expert teachers. For example, the talent search in the personal job search column can be searched by position, gender, graduation time, etc. In the corporate recruitment column, one can search for positions by company or by position or by industry classification.

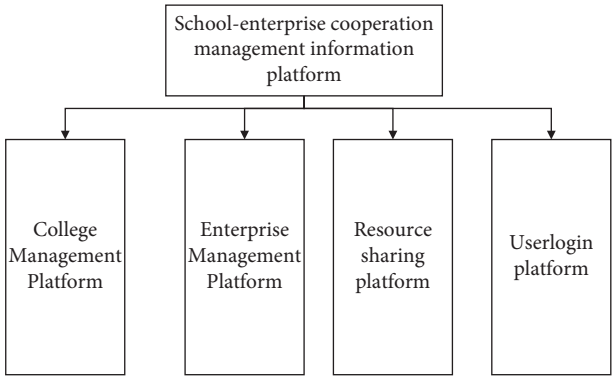

Figure 1: System overall architecture diagram.

3.6. User Login Platform

(1) Except for administrators, enterprise users, university users, and individual users must register and log in through the system home page to complete their specific functions. After the user enters the user name and password and selects the user type, the system searches for the user based on the entered data and judges whether it is a registered legal user based on the user name and password. If you meet the requirements, you can log in to the system management page after passing the authentication. At the same time, write the user name and user role in the Session, and the corresponding section will be automatically uploaded according to the user's type and permissions, and the corresponding page will be inserted to create a unique personalized service for your members. User registration and management can be completed through a browser, which greatly simplifies the traditional customer-based management methods.

3.7. Platform Architecture. The school-enterprise collaborative service platform technology adopts relatively mature J2EE technology and B/S architecture for research and development. The system is divided into four levels: system user access level, technology application level, information data resource level, and application network level. The network layer is the basic network facilities and hardware and software infrastructure that support the operation of the business platform. The data resource level is the main level of the project construction content. The main purpose of data resources is to share and interact with the data and information uploaded by each target user in accordance with the system standards and to create a database for the SEC information service platform: cooperative enterprise database, professional and technical personnel database, application equipment database, scientific and technological achievements' database, and data resource databases such as cooperative enterprise databases. The application layer should provide various applications for colleges, enterprises, governments, and park users, mainly college management platforms, enterprise management platforms, resource-sharing platforms, and user docking platforms. The access layer is to centrally display the information of each application system through the website platform and WeChat platform and create different default access interfaces for different users. The schematic diagram is shown in Figure 2.

4. Based on the Detection of the SEC Management Information Platform Based on the B/S Architecture

4.1. Performance Testing. It mainly conducted detailed performance tests on the SEC teaching management platform in terms of the maximum concurrent access and the response time of the system.

4.2. Analysis of the Experimental Results of the Maximum Concurrent Number Detection. This article uses Apache ab as a stress test tool to detect the maximum number of concurrencies of the SEC teaching management platform designed in this article. The relevant experimental data results are shown in Table 1.

It can be seen from Table 1 that 90% of the responders of the system are 907, 95% of the responders are 931, and the maximum concurrent number of 99% is 989. It can be seen that the maximum concurrent number of the system is better, close to the high-performance number of 1100 responders.

4.3. System Response Time. The response time performance test is mainly for the data throughput operation when the amount of data is large. For example, the information retrieval of the large amount of data involved in this system, the import and export operations of a large amount of data, and the upload and download operations of a large amount of resources all require big data. Quantity test is shown in Table 2.

4.3.1. Response Time Performance Test. The system was tested repeatedly for 3 times, and the response time of 200 users, 400 users, 600 users, and 800 users was calculated each time. The relevant data results are shown in Table 3.

It can be seen from Figure 3 that when the system has 200 users, the system response time is about 0.3 s. When there are 800 users, the average response time is 0.45 s. The corresponding response time is shown in Table 2. It can be seen that the response time is relatively short.

4.3.2. CPU Usage. The system is subjected to 3 repeated experimental tests, and the CPU usage rates of 200 users, 400 users, 600 users, and 800 users are calculated each time. The relevant data results are shown in Table 4.

It can be seen from Figure 4 that when the system has 200 users, the average CPU usage rate of the system is 25%, and when there are 800 users, the average CPU usage rate of the system is 31%, which corresponds to the CPU usage rate in Table 2. The comparison shows that the system CPU usage is still relatively low.

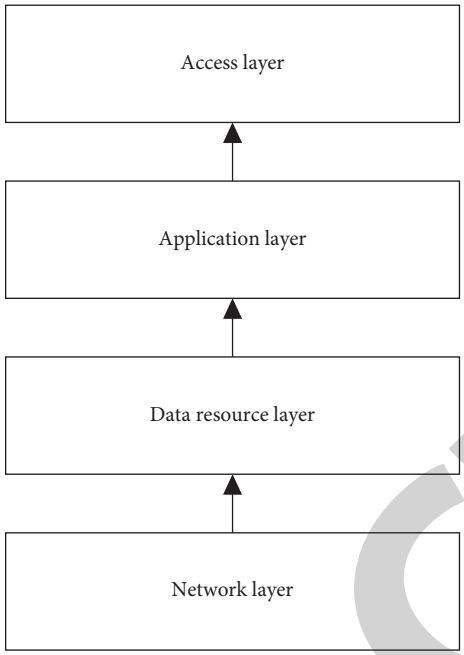

Figure 2: Platform architecture diagram.

Table 1: Analysis of the experimental results of the maximum concurrent number detection.

	90% line	95% line	99% line
HTTP request	907	931	989
Transaction controller	907	931	989
Total	907	931	989

Table 2: Test case table.

Number of users	Response time	CPU (%)	Throughput rate (b/s)	Click-through rate (h/s)
200	< 1	< 45	> 844, 595, 200	> 290
400	< 2	< 45	> 1,689, 190, 400	> 290.150
600	< 2.5	< 45	> 2,533, 785, 600	> 302.115
800	< 3	< 45	> 3,378, 380, 800	> 317.266

Table 3: Response time performance test.

	Experiment 1	Experiment 2	Experiment 3
200	0.2	0.4	0.3
400	0.4	0.3	0.2
600	0.3	0.3	0.5
800	0.5	0.5	0.2

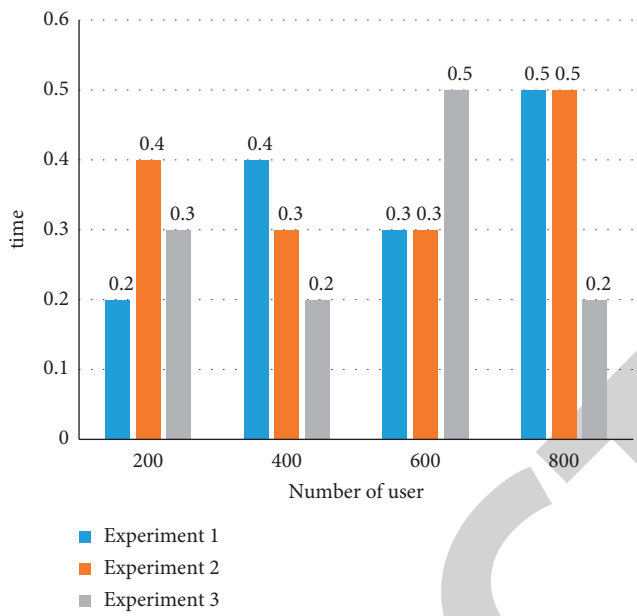

Figure 3: Response time performance test.

Table 4: CPU usage.

	Experiment 1 (%)	Experiment 2 (%)	Experiment 3 (%)
200	23	25	26
400	24	26	25
600	34	28	27
800	35	29	28

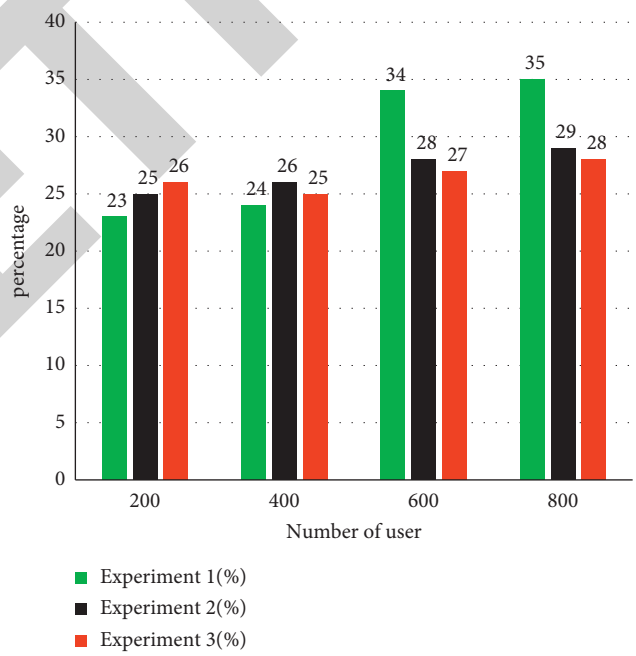

Figure 4: CPU usage.

5. Conclusions

This paper studies the SEC management information platform based on the B/S architecture, analyzes the system requirements and the B/S architecture based on the literature, then designs the SEC management information platform based on the analysis of the system function requirements, and develops the B/S architecture platform, and experimental tests were conducted on the design platform. The test results show that the platform's response time and CPU usage are within the range of system management requirements.

Data Availability

The data underlying the results presented in this study are available within the manuscript.

Disclosure

The author confirms that the content of the manuscript has not been published or submitted for publication elsewhere.

Conflicts of Interest

The author declares no conflicts of interest.

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