On the Application of Computer Database System in Information Management

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Abstract: In recent years, with the rapid development of global economy and constant progress of science and technology, the society has gone through earth-shaking changes. The development and application of information technology have brought convenience to people and gradually led the world into the information age. Under the background of information age, a large number of information resources of various types emerge, which makes it difficult to manage them in an effective way. Thus, in the process of information management, the application of a computer database system can effectively integrate data and information resources, offer convenience to management personnel of the system and raise the efficiency and level of information management.

Introduction

Computer database technology originated from the west. Due to its powerful technology and good application effect, in recent years, it has been introduced to China and popularized deeply, thereby achieving a rapid growth in China. With the development of science and technology, the requirements for computer software itself have gradually been improved, especially in terms of hardware performance and task processing speed. In order to satisfy these requirements, the computer database system is applied to information management. However, when the computer database system is applied to information management, there exist some problems that affect the effect of application, which need to be discovered in time and solved with effective strategies.

Computer Database System

Computer database system is a kind of computer system which takes data as the unit. It can not only realize the information exchange and resource sharing among computer users, but also enable a degree of independence inside the computer. In information management, by taking advantage of its own characteristics, the computer database system organizes data effectively, provides shared services for multiple users, and realizes automatic and intelligent management. At present, the database system has five technical characteristics, that is, database sharing, redundancy control, organization, independence and overall flexibility. Below, the author will introduce them in detail.

Sharing. Among four characteristics of computer database system, sharing is the most prominent one, and an inherent attribute of computer. A database system is built in the computer, and only by realizing data sharing can the true significance of database system construction and application be incarnated. The sharing of database system allows computer users to exchange information and share data without distance.

Redundancy control. In a computer database system, when data are stored repeatedly, data redundancy will occur, which will occupy a lot of computer internal storage space and seriously waste the space resources. Also, repeated data can lead to the confusion of database system, bring trouble to users' information query, and, to a certain extent, affect the normal operation of database system. However, since the database system is shareable, the repeated data can be filtered out and deleted, and data redundancy can be effectively minimized and the storage space can be saved. In this way, the database system can store data information of different users, according to their respective needs.

Organization. A computer database system is applied to manage massive information. A great deal of data information is stored in the database. To make it easy for people to obtain the correlation between data, and analyze the law of data in depth, we can resort to the organization feature of database. With this feature, identical or similar information resources can be connected automatically, the relevance between resources can be enhanced and the management load of database can be eased.

Independence. Relying on the organization feature of database, relevant resources in the database are interrelated and the connection between data is increased. The independence of database allows users to modify information resources in the database in an effective way, such as data item and data type, etc., without changing the internal operating program of the database. After the modification, the logical structure of the database remains unchanged. Apart from the independence of logical structure, the database also has physical independence. Even though a series of problems have been changed, such as system hardware, storage position and method, the normal operation of the system won't be affected.

Flexibility. The application of computer database is quite flexible. When a database system is applied to information management, its flexibility can be better related, making the computer more practical. In information management, the computer database system is mainly used as an automated electronic warehouse, to which relevant management features are added. Using a computer database system, users can query, modify, delete and store data, and so on. Computer users can use these features in a flexible manner, depending on their own needs.

Status Quo of the Application of Computer Database System in Information Management

Thanks to many good characteristics of computer database system, it has been applied to information management in an effective way. In a database system, the most essential and fundamental part is data model. Therefore, people classify traditional database systems according to the characteristics of data model. Such systems are divided into reticular database, hierarchical database and relational database. In recent years, the database system technology continues to develop and evolve and is combined with computer information technology in an effective way, which further expands the application field and scope of computer database. Currently, the application of computer database system in information management is mainly embodied in the following three aspects:

First of all, computer database technology continues to develop and evolve. The level of computer database technology has a direct bearing on its application effect in information management. In recent years, rapid development has been achieved by computer database technology, from reticular, hierarchical to relational, and finally to object-oriented. After going through these four stages, the operability and applicability of computer database technology become stronger and assure the application of computer database.

Secondly, the security of computer database system has been reinforced ceaselessly. Security is one of the guarantees for the effective application of computer database system, and also protects the safety of the system itself. Plenty of information resources are stored in database, which are very crucial for all kinds of enterprises, institutions and users. Therefore, to apply computer database system to information management, the first thing to do is to protect the safety of the system itself. Only in this way can it guarantee the safety of the information stored in various database systems.

Finally, the computer database system expands its application scope and receives increasing attention. As an effective combination of database technology and computer technology, the computer database system technology has good technical characteristics and a broad market prospect. At the current stage, the application scope of computer database system is constantly expanded. Whether in industry, agriculture or other industries, greater and greater importance has been attached to the development of computer database system, which is very conducive to the application of computer database system.

The Computer Database System Plays a Vital Role in Information Management

To diagnose information. We used to find some useless information on our computer, which not only affected our mood, but also lowered the efficiency of information management. This phenomenon can hardly be eradicated by computer technology alone. But the computer database technology, which integrates database technology and computer technology, can diagnose information, filter out useless information and effectively solve the problem of useless information. In addition, the computer database can effectively integrate information according to the information type, or recommend relevant information to users, according to information commonly used by users. In this way, the efficiency of information management is improved.

To store a great deal of information. In the era of Internet big data, a great deal of data information is generated. The computer database system can obtain data information generated at the user side, upload information to the Internet and realize the sharing of information. The application of computer database system in information management not only enables the storage of massive information resources and facilitates the sharing of data information, but also satisfies the information needs of other users quickly.

To guarantee information independence. The computer database system has the function of information recommendation. It can recommend relevant information to users when they query information. As a matter of fact, there is a certain connection between the recommended information and the information inquired by users. However, they are mutually independent, without affecting each other. If information recommended by the database system cannot satisfy the needs of users, users can choose to block or delete such information. In doing so, the database system won't recommend such type of information to the users again, and the query of other information won't be affected.

The Application Strategies of Computer Database System in Information Management

To enhance the security of database technology. With the advent of the big data era, a tremendous amount of data information has been produced by all walks of life. A basic premise for maintaining information security is to integrate and protect information in an effective way. If any information is leaked, stolen or destroyed, users will suffer serious losses, especially the data information of key national authorities. Therefore, to effectively protect the security of computer database system, it is necessary to improve the security of database technology. While how to improve the security of database technology is always a problem highly concerned about by technicians. We can take some system protection measures or adopt certain systematic methods to protect the data information in the database. With this kind of security, malicious theft and illegal access to information, etc. can be prevented. This is an important guarantee for the normal operation of database system, and also a measurement indicator of database system. While using database technology to manage information, we should perfect the information encryption technique in the technology, thereby enhancing the security of information. Also, we can set user access permissions and improve the security of database, using a variety of authentication modes, like password.

To strengthen the security of computer database system. Computer database technology is an effective combination of database technology and computer technology, and the security of computer database system is protected by computer database system security technology. This technology has the characteristics and advantages of computer security technology and database security technology, and is constantly updated, with the development of these two technologies. In a computer database system, there is a great deal of data information. Therefore, the security of database system is very crucial. However, some users have a weak awareness of network security. They neither pay attention to the management of online information security, nor take concrete management measures. As a consequence, the user's database is prone to security problems, and brings safety hazards to the database system. For this reason, technicians should lay emphasis on the security of computer database system, set up a monitoring mechanism to monitor the security problems in real time, and take active measures, to enhance the security of computer database system.

To reinforce research on database technology. In addition to attaching importance to the security of database technology, in order to protect the security of computer database system, it is also necessary to reinforce research on other technologies in database. A technology will inevitably have many defects and shortcomings during its development. These problems not only affect the security of database technology and the security of computer database system, but also influence the stable operation of database system, thereby decreasing the efficiency of information management. For this reason, it is imperative to reinforce research on database technology and increase the stability of system, thereby realizing the efficient management of information.

To combine theory with practice in an organic way. The computer database theories can effectively guide the development of computer database technology. With the reform and innovation of technology, theoretical knowledge has constantly been updated. In order to verify technical theories related to computer database system, we can combine theory with practice in an organic way. In this way, the scientificity and rationality of practice can be improved. Meanwhile, the theoretical research of computer database system will also be promoted.

To strengthen the management of computer database system. The effective application of computer database system in information management can give free rein to the technical characteristics of computer database and achieve the effective integration of information resources of database system. The premise of improving the efficiency and management level of information management is to manage the computer database system properly. Generally speaking, the management of computer database system can be divided into data storage, data modification, and later-stage management of data, etc. So the management personnel need to strengthen effective management of computer database system, so as to assure the security and efficiency of information management.

To enhance the awareness of information security. Although the application of computer database system in information management can increase the efficiency of user information management and protect the security of user information, it will also inflict a serious impact on information management, because of network security problems. During information management, with a weak awareness of network security, the management personnel or users readily place trust in other information on the Internet and click on links from other people, etc. at will, which is apt to cause network security problems and bring hidden danger to the database system. Therefore, to apply computer database system to information management, the first thing to do is to increase the management personnel's awareness of information security, avoid security problems resulting from improper operations, and enhance the security of database system application.

Summary

To sum up, the computer database system can store a great deal of data information, which brings convenience to information management. With the constant development, perfection and integration of database technology and computer technology, a computer database technology integrating the advantages of technologies is obtained. The computer database system has a variety of characteristics, such as shareable, flexible and independent. While being applied to information management, it can give full play to the advantages of computer database system. Apart from storing a great deal of information, it can also diagnose information and maintain information independence. The application of computer database system in information management closes the distance between computer database system and information management, and also promotes the development of the two.

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