Comparison Between the Rules Of Data Storage Tools

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Abstract

It is proposed that this paper shows the types of pros and cons of storage and data retrieval tools. Also it shows the pros and cons of each type with a detailed explanation. The explanation shows how and when they can use any of them also determine the means and security applications in these tools and give the pros and cons of each one. In addition to provide tips and benefits of each one of them in terms of storage size and the number of tables. Also the number of users and analysis tools databases and support tools for each one of them, and how to repair, back up, and recover evidence rules for each one of them. Identifying the powers of users and the cons in each one and determine when Microsoft SQL server or Microsoft access can be used if needed. There are several versions of SQL server in the market. Each copy gives a certain capability. The user will find a copy for Project Enterprise. Which is the largest, the powerful, and most frequently used version. Also there is a developer's copy. Where a developer will have an enterprise version with full specification. This version deigned only for developers who develop programs that run on SQL server. Moreover developer's copy there is a miniature version of windows CE edition. Which works on windows CE systems for handheld devices.

Keywords: Database, Microsoft Access and Microsoft SQL Server

1. Introduction

In order to understand the way of speeding up the access into a database system and to provide an examples that support the understood of the operations that performed on databases, we have to concentrate on the big database rules such as the ones that run in universities and huge international institutes or companies. These rules has enhanced the development process in the field of telecommunications. Also it increased the efficiency of computers, and their ability to store and process massive amounts of information. The speed of data retrieval has been enhanced as well. Once the efficiency of ready-made systems and maturity of different programming languages has been increased, the desire among researchers started to grow in a various segments to reach to information easily and quickly and to explore large amounts of data too, regardless of their sources. All of this has led to the development and growth of automated search services in databases and increase the turnout of beneficiaries in various parts of the world.

The relative disparity between the amount of data in any system and the appropriate retrieval time for research purposes or difficult pre-acknowledgment response the adequacy of the actual results obtained by the beneficiary and substantive research to its needs as a result of use of retrieval systems. Besides the weak recovery efficiency in itself will lead to a waste of time and effort beneficiary expended in the poll and scan large amounts of information, and a continuous research process. Which negatively affects the beneficiary and forums responsible for providing these services in multiple aspects.

In case of saving the data for the first time, we have to choose a certain storage type to save the date where the lack of storage types to make it easier to handle the data. Separating the data read/write at one store on the same machine, its time for the device to

determine the read/write position. Copies has to be stored on other tablets safe away from the disk that the user and we have to create new formation of other paths to store databases in sake to have a steady course reserves, this will facilitates export and import operations on retrieving the data from the storage of databases. This will help to determine the real factors that affect the retrieval efficiency. Also it will help in testing each of these factors in a way that helps to increase the retrieval efficiency and reach the highest accuracy in the retrieved results, and I intent to improve the performance of research operations using experimental methods. in order to obtain compatible search results with the user trends, we will perform a direct research operations on the right direction of databases to achieve that balance between high costs for these services and user satisfaction. Then we will work to standardize the research procedures to provide the service in all of the information institutions and simplify the procedures and reduce the mediator effort to retrieve the data. Then we will work to develop a common understanding of the mediator's services data and functions of information retrieval used in the operation of the rules of scientific data in information systems organizations. Then enabling them to raise the efficiency of research operations performed, increase the chances of the user to receive the results of the research suited to his demand time and effort suitable.

2. Related Work

Normalization is more complicated specifically if the number of relations and number of attributes in each relation is high [2]. When normalization performed manually, it could be time consuming, prone to errors and costly, since it needs a high skilled personnel [9]. Thus, automating the process of normalization is the only way to eliminate the drawbacks of manual normalization.

Automatic marking of student conceptual database diagrams is a difficult problem like free text marking [3]. However, the assessment process can be altered to make it suitable for automation as long as that alteration is justified educationally. This research investigates the requirements of the assessment environment, which can help the examiner during the marking by analyzing the existing manual assessment in order to computerize it as much as possible. This approach will give the institution the form of a fully automated assessment. In addition, the research results have some immediate practical uses.

The use of new graphical interface in the ERD facilitates the designer to change the layout of ER-diagram and validity verification [4]. ER-draw supports the verification of the validity of an ER-diagram and ensures that only well-formed ER-diagrams can be exported in ERML files or translated to relational database schemas and Automatic translation to relational models. After an ER-diagram is created with ER draw, one can simply translate the ER-diagram to a relational database schema (*e.g.*, a set of CREATE TABLE statements) automatically. In particular, integrity constraints such as total participation constraints and key constraints will be implemented in the resulting schema automatically and Platform independence. ER draw is implemented in Java, therefore it can be executed in all environments where a Java virtual machine is available.

Some theoretical analytical work has been performed on software engineering notations and visual programming languages [5]. But no empirical studies on human comprehension of these notations have been found. While software engineering notations have been analyses and compared using the Cognitive Dimensions framework this framework is theoretical and these analyses, while providing interesting structured perspectives on the notational features, are not based on experimental data. The methodology and experiment reported here complements such analytical work. The aim of this research was to present an experimental methodology for comparing complete notational representational methods with respect to their comprehension by humans, and

to demonstrate its use by applying it to the comparison between two entity relationship notations.

Many companies are facing a problem of their legacy systems [6], often with an inadequate or non-existent documentation .that are inhibiting their business growth and capacity to change. Rather than throwing old systems away, or simply patching them until they collapse, many companies are investing money to refurbish the old systems. These schemas supplement low low-level database schemas such as relational schemas to help recon- strict entity-relationship schemas.

Relational databases play a key role in most organizations storing the data they need for their business operations [7]. To make sure the data is consistent; a set of integrity constraints is defined as part of the database schema. These constraints must be obviously aligned with the organizational policies and rules. Therefore, it is very important these constraints evolve together with the own organization as it adapts to the changing needs of the market. Unfortunately, discovering and understanding the set of business rules enforced by a given database system is a time consuming and error-prone activity since it implies querying/browsing the database dictionary to extract and analyze the retrieved data solution is based on the principles of Model Driven Engineering (MDE) which facilitates reusing the plethora of available model-based tools for manipulating and processing the obtained models.

Software reengineering is the modification of the functionalities or structures of a software system in order to improve the quality of the software [8]. Software reengineering includes two parts: reverse engineering and forward engineering (*e.g.*, traditional software engineering). Reverse engineering analyzes the implementation of a legacy system. Also then abstracts such information into high-level design representations in order to obtain the design specification of the original system the semantics of a recovered conceptual model must incorporate more domain semantics than some structural meaning, namely how data entities relate to each other. Therefore, sources of FIBRE should not be limited to the database schema. Another way to obtain semantics is through analysis of data instances in a database and the query and view.

From the perspective of teaching reform [1]. Some literatures state the quality of graduation subject choosing, while qualitative analysis is too much with few quantitative studies. Especially it is very difficult to reflect the importance degree and deeply interdependent relationships of those factors that affect hundreds of students to choose their graduation projects at the same time. Leading to little effect during improving graduate design management with some problems recurring year by year. Therefore, a quantitative method by data mining of graduation project selection database is proposed to improve the quality for facing a lot of graduation choices, before data mining. Also will describe data preparation work through constructing a database system from graduation project selection results within five years. The data mining method for graduation project selection results database is followed.

3. Comparison Tools

Table 1 presents a comparison between Microsoft access and SQL. We compare between Microsoft access and SQL according to the following criteria: size of the database, the number of tables, number of users, safety, data analysis tools, Symmetric Multiprocessor (SMP) support systems, repair database problems, backup for databases and users authorization (cf. Table 1).

Table 1. Compare of Tools

Feature is	Microsoft Access	Microsoft SQL Server
Size of the database	2 GB	Greater than 1 terabyte (1024 GB)
The number of tables	32,768	2,147,483,647
Number of users	255 maximum	Unlimited
Safety	Depends on the team or programmer	Merged with windows 2000 security
Data analysis tools	Unsupported	Supported
SMP support systems	Unsupported	Supported
Repair database problems	Depends on backup	Restore the database to any point
Backup for databases	Unsupported	Supported
Users authorization	Depends on the programmer	Supported from SQL itself

3.1. Introduction of Comparison

We used a small or medium databases systems such as Microsoft Access. The most important features of the former type is cheap price and ease of use and availability of technical support. Due to the large number of books that specialize in it .The proliferation of forums that talk about Microsoft access has increased the popularity of this system to cover the popular singers.

Those were the advantages and a disadvantage either is endless! Since the problems of this kind from many databases. Including the lack of safety, because the databases are designed to penetrate this system very easy process even, If they are protected tens of passwords .the use of the database by more than one user leads to a lot of pressure on the system drives (known as the Microsoft Jet) causing damage to data or the inability of the engine to respond to all customer requests on the network.

3.2. Disadvantages and Advantages

What Microsoft SQL server has been covered on these defects? But added other features McCann any programmer that dream. Safety system is very high, predefined functions, Triggers, specific rules, defined data types user defined types. Processes transactions and many other additions that have increased the strength and stability of this system. Have a huge big companies and government institutions using MS SQL Server or system conversion him -as did the company NASA space science.

As the SQL server system has the ability to store a huge amount of information up to thousands MB. It is one of the most efficient systems to be a real competitor to the famous system databases oracle, as oracle databases monopolize the market without a competitor for a long time in spite of its flaws is very difficult to use.

3.3. Difference between MS access and MS SQL Server

This question has been asked by every person thinks the transition to MS SQL server. Also in my opinion, the comparison is one of the easiest ways to deliver information. Differences between SQL server and access too many, it is the most important, MS access database based on the file based database file. Any reservation all the base data in a

separate file, The SQL server is based on server based database. Any integrated system for the management of databases running in the background and the system depends on the server and the client. Does not depend on separate files to save the data, it contains its own combination. Some of the other differences are shown in this table.

Among other differences .MS access forms supports while SQL server to but you can use MS access as a front for the SQL server database so that SQL server is at the same time take advantage of the possibilities of other access such as forms and reports.

3.4. Support Tools

That supports the SQL server backup, where you can SQL server programming for doing backups every certain period. Mesh in MS SQL server support for a technique where the XML that you can export data to XML. But so far not fully support XML and way ahead of this work in the next versions of SQL server.

But after mentioning all these advantages, does not mean that your database turned into a SQL server immediately, as the MS access is still better and easier for small applications, whether commercial or government as long as the size of the data is currently only 2 GB .In any case, I will mention to you when you should be using access. Lotto should be used for.

A. When we use the MS access?

1. You have a small number of users.

2. The size of the data will not exceed 2 GB.

3. Want extreme ease in dealing with the database.

4. If you want compatibility with older versions of access, Such as access 9x.

5. Number of transactions few operations.

B. When SQL server is used?

1. If your program deals with a large number of users.

2. If you want a very high percentage of safety.

3. If the volume of data is too large.

4. Counting operations are very large.

5. If you want to use measures of knowledge stored procedure, which in turn provide a lot.

6. If you want professionalism!

3.5. There are Several Versions of SQL Server in the Market

In the following explanation of different versions:

1. *Enterprise Edition*: copy projects, a larger version of SQL server and contains all the features of SQL server available. Such as drags analysis tools data. Which includes data cubes .as well as XML, also a copy of the projects have the potential to deal with devices containing 32 processor .and also be able to deal with 2 GB of memory RAM .for the amount of data it is limited as they absorb greater than 1024 GB (1 TB) .this version is not working only on the windows 2000 server or windows NT systems 4.0.

2. *Standard Edition*: the standard version which is the best solution for small and medium enterprises. As they contain more possibilities for the previous version,

except for professional possibilities .this version can deal with only 4 processors! And also 2 GB of memory RAM .this version is not working only on the windows 2000 server or Windows NT systems 4.0.

3. *Personal Edition*: Personal edition, which is the best solution for personal use or for applications that do not require the server to be connected all the time. This version contains more possibilities for the standard version, but with less power. The advantage of this version it is working on all the different windows operating systems. Whether NT, 2000, or ME or XP.

4. *Developer Edition*: a customized version for developers or for software companies to develop. Where it's at full specifications copy projects but to experience the programs that deal with SQL server, this version cheaper than previous versions as well as it works on most windows systems.

5. *Evaluation Edition*: evaluation copy, a copy of the full specifications copy projects without any decrease but it works for a period of 120 days only. It is free and talk is shipping value .and some of the books attached to this version with it. For the information, copies of this work to more windows systems.

3.6. Security in the MS SQL Server

MS SQL server provides the two types of the authentication inside in order to applications that run on systems associated with the first type we begin working with Microsoft NT family systems such as windows NT, 2K, XP .also Later and is called windows. the second type works with systems such as windows 9X 98, windows ME and is called SQL server authentication or mixed mode authentication.

4. Examples

Microsoft access is used in the creation of small companies' databases such as car shows, private companies to store customers, employees, stuff related to customers, employees, and the names of the stuff sold. Microsoft SQL server session state provides the use of a longer and scalable for the session in the case of Microsoft ASP.NET. However, SQL server session state uses the same SQL server database for all applications in the same process ASPNET.

5. Determinants of Tools

Microsoft SQL server cons are severe difficulty in using and teaching. But Microsoft X problems are in large defects such as this kind of problems many databases, including the lack of safety, because the databases are designed to penetrate. This system very easy process even if they are protected by dozens of passwords. The use of the database by more than one user leads to a lot of pressure on the system drives (i.e., known as the Microsoft Jet) causing damage to data or the inability of the engine to respond to all customer requests on the network.

6. Conclusion

Mentioning of all these advantages, does not mean that the database turned into a SQL server immediately. As the MS access is still better and easier for small applications, whether commercial or government as long as the size of the data is currently only 2 GB. The negative aspects of SQL server is that it select to deal with the MS SQL server is not as dealing with MS access where you are in the access lists based applications to attach your database to the client and the need for the presence of JET engine has to work your application that is. Some types of safety Microsoft SQL server and explanation by the

simplified application said this depends on the nature of the work done by example in the internal enterprise applications and solutions faced by developers in security matters.

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