Learn about the most popular RDBMSs

There are many types of RDBMS such as MySQL, Oracle, SQL Server, Mongo DB, Sybase,... To better understand RDBMS, in this article we will learn about some of the most popular RDBMS, compare the basic features of RDBMS. they. We invite you to follow along.

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What are Database and Database Management System?

A database is a collection of information organized so that it can be easily accessed, managed, and updated. Data is organized into rows, columns, tables, and indexed to easily find relevant information. Data is updated, expanded, and deleted as new information is added. Database processing is the set of tasks involved in creating and updating databases, querying data, and running applications.

Database Management System (DBMS) is a database management system that supports the development, administration and use of databases. DBMS, like RDBMS, is also used to store and manage databases, but in essence, these two systems have many differences.

According to JavaPoint, DBMS and RDBMS have the following main differences:

No	DBMS	RDBMS
first	DBMS stores data as files	RDBMS stores data as tables
2	Data is stored in a hierarchical or navigable form	Tables have an identifier called the primary key and data values ??are stored as tables
3	There is no data normalization	There is data standardization
4	There is no data protection when performing operations	Integrity constraints ensure data integrity when performing data operations such as adding, editing, deleting, etc.
5	There are no relationships between tables (because they are saved as files).	There are relationships between tables
6	Provides unified methods for accessing stored information	Supports a tabular structure and relationships between them to access stored information
7	Distributed databases are not supported	Supports distributed databases

8	Often used in small organizations, handling small volumes of data	Designed to handle large amounts of data, supporting multiple users
9	Examples of DBMS are file system, xml,.	Examples of RDBMS are MySQL, Oracle or SQL Server,.

Learn about MySQL

MySQL is an open source SQL database, developed by MySQL AB, a Swedish company. It's a bit interesting here, MySQL is read as "mai ét da qua eo" while SQL is read as "si queo". I'll just transcribe it roughly for you to understand. Specifically, in English MySQL is pronounced "my ess-que-ell", and SQL is "sequel".

MySQL supports many different platforms, including of course popular platforms such as Windows, macOS, UNIX and Linux distributions.

This relational database management system is available in both free and paid versions, depending on the intended use (commercial/non-commercial) and features. MySQL comes with a very fast, multi-threaded, multi-user and extremely powerful SQL database server.

I'll skip the history part. You just need to know that the latest MySQL version as of the time I wrote this article is 5.7.20 released on October 16, 2017, version 5.7.21 is about to be released soon :D.

MySQL main features:

1. High performance
2. High availability
3. Scalability and flexibility
4. Strong support for transactions (a processing unit in SQL, consisting of a group of statements to sequentially process database operations)
5. Strong data warehouse and web
6. Strong data protection
7. Comprehensive application development
8. Easy management
9. Free open source code, 24/7 support
10. Reasonable total cost

Learn about MS SQL Server

MS SQL Server is an RDBMS developed by Microsoft. The main query languages ??of MS SQL Server are T-SQL and ANSI SQL.

The latest version of MS SQL Server is currently 2019, you can try it for 180 days. If you are interested, download it here: https://www.microsoft.com/en-us/sql-server/sql-server-downloads

Main features of MS SQL Server (2019 version)

1. Reasonable price and performance, better when used on a large scale
2. High performance data warehouse
3. Safe and well compatible
4. High availability and resilience
5. Intelligent collaboration at the enterprise level
6. Perfect integration on many devices
7. Simplify small and medium data
8. Advanced data analysis tools
9. Advanced real-time analysis and processing process
10. Available on Windows, Linux and Docker
11. Unified data platform across platforms
12. Easy-to-use tools and connectors

Learn about Oracle

This is a very large multi-user database management system developed by Oracle Corporation. Oracle works effectively when managing resources, a database of information between requests from many customers and data sent across the network.

This is a great choice for database servers. Oracle supports all major operating systems, on both client and server, including MS DOS, NetWare, UnixWare, OS/2 and most UNIX versions.

The latest version of Oracle is 12c, released on March 1, 2017. Oracle is written in assembly language, C and C++.

Key features of Oracle:

1. Simultaneous access: Strong support for multiple users accessing the same data unit at the same time
2. Consistency
3. Portability
4. Self-managed database
5. Data warehouse
6. Resource management
7. Execute in parallel
8. Data Mining
9. Partition
10. Bitmap index
11. Supports data management with large volumes
12. Ability to work 24/24
13. Good safety and security mechanism
14. Ensuring data integrity constraints from simple to complex on the database

Learn about MS Access

Microsoft Access is an extremely familiar application to Windows users, built into the Microsoft Office office suite, is a low-cost, basic-level database management software, suitable for projects. small sentence.

MS Access uses the Jet database engine, also known as Jet SQL, with a fairly easy-to-use graphical interface. If you are new to databases, MS Access is also an option you should consider.

Main features of MS Access:

You can create tables, execute queries, create forms and reports, and connect them with macros.

Can import/export data from/to many different formats such as Excel, Outlook, ASCII, dBase, Paradox, FoxPro, SQL Server, Oracle, ODBC,.

Jet Database format is available, a file containing the application and data, which helps distribute the entire application to other users to run in a disconnected environment.

Microsoft Access provides parameterized queries. These queries and Access tables can be referenced from other programs such as VB6, .NET via DAO or ADO.

The desktop version of Microsoft SQL Server can be used with Access as an alternative to the Jet Database Engine

MS Access is a file server-based database. Unlike other RDBMSs, Access does not execute Database triggers, Stored Procedures or Transaction Logs.

Congratulations on overcoming the most boring theory lessons in the world. In the following part, we will learn about basic syntax in SQL, data types, operators, expressions,. Although there is still a bit of theory, we guarantee there will not be as many words as this ^^ !