

Difference between SQL and NoSQL :

From last 5 years the total data in the world is tripled and data is growing so rapidly. In this world of data there is need to change in database technology also. Traditionally we are using [SQL](#) as database language which is working with the structured data only. Now a days we need to work on non structured data also so to handle this kind of Structured as well as non structured data NoSQL database comes to the picture. It is nothing but so called Big Data Technology which is growing widely day by day. Now a days NoSQL databases widely used in different businesses. In this article i will try to explain difference Between SQL and NoSQL.

SQL Databases :

SQL stands for "Structured Query Language"; in the name itself you will get idea that SQL database contains Structured data. SQL is traditional language used to manage data in different database management systems like Oracle, Mysql, MSSQL e.t.c. SQL Databases are also known as Relational Database Management System (RDBMS) in which tables are connected with each other with specific relation you can say it with constraints and joins. SQL Databases are integral part of any project because data which is relational data needs to be used in every project.

"SQL Databases are Heart of Any Application or Software or System..."

Examples Of SQL Databases :

[1. MS SQL :](#)

MS SQL is also known as Microsoft SQL which is well known SQL database which is used by so many mid and large scale applications. Microsoft SQL is very widely used database management system throughout the world to create not only stand-alone software but also distributed web applications.

Following are Advantages of MSSQL:

1. High Speed
2. Large data volume
3. Low code approach
4. Concurrency control mechanism
5. Easy Tuning
6. Easy Reporting and Analytics facility

There are other SQL databases also. If you want to check the information about different SQL databases Click on Database names below:

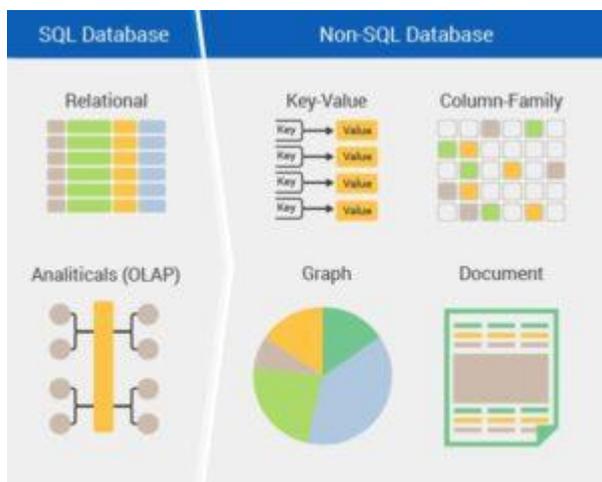
[1.Oracle :One of the most popular SQL database](#)

[2.MySQL:Popular and Open Source Database](#)

[3.MSSQL:Microsoft Supported Database](#)

NoSQL Databases :

NoSQL is unstructured database which is referring as "Non Relational" or "Non SQL" database.It means the database.The storage and retrieval of a data in NoSQL is modeled not in tabular format.NoSQL does not involve a structured Query Language or SQL.NoSQL Databases are used in many large scale distributed databases.The websites like google,twitter,facebook uses big data technology rather than using the traditional technology.



NoSQL database is nothing but Non Relational and Non SQL database

Following are some advantages of NoSQL database:

1. More Scalable than traditional database
2. High Performance
3. Faster than traditional database
4. Worked with rapidly changing datatypes-Structured,Non-Structured,unstructured,Polymorphic data.
5. Less ETL need

These are some advantages of NoSQL database.Lets discuss one example of NoSQL database.

Example:

There are following NoSQL databases:

MongoDB, CouchDB, Redis, ccumulo, Cassandra, Druid, HBase, Vertica, SAP HANA. Document: Apache CouchDB, ArangoDB, Clusterpoint, Cosmos DB, HyperDex, IBM Domino, MarkLogic, OrientDB, Qizx, RethinkDB.

MongoDB :

MongoDB is one of the popular NoSQL Databases. It stores data in JSON documents. It is non-relational database which has dynamic schema.

Following are some Advantages of MongoDB:

1.Speed:

MongoDB is good database for performance tuning as it eliminates lot of complex queries and complex join structure.

2.Scalable :

It is horizontally scalable i.e. you can reduce the workload by increasing the number of servers in your resource pool instead of relying on a stand alone resource.

3.Manageable:

It is easy to use for both developers and administrators. This also gives the ability to shard database.

4.Dynamic Schema:

Its gives you the flexibility to evolve your data schema without modifying the existing data.

This is one of the best NoSQL databases.

Difference between SQL and NoSQL :

Following is Difference between SQL and NoSQL databases in Tabular format:

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SQL DB

Examples: DB2, MySQL, Oracle, Postgress, SQL server

These are called RDBMS.

Based on ACID properties i.e. Atomicity, Consistency, Isolation and Durability

NoSQL DB

Examples: CouchDb MongoDB, RavenDb, Redis, Cassandra, Hbase, Neo4j, BigTable

These are called not only SQL database.

Based on CAP properties i.e. (Consistency, Availability and Partition tolerance)

These are table based database i.e. the data are stored in a table with rows and columns. These are standard schema based (predefined schema)

These databases are document based, key-value pairs or graph based etc.

These are not standard schema based(dynamic schema)

These are scaled vertically. Load can be managed by increasing CPU, RAM etc in the same server.

These are scaled horizontally. A few servers can be added to manage large traffic.

Not preferred for large/big data sets.

Preferred for large/big data sets.

Preferred for complex query execution

Not preferred for complex query execution

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