“**[Relational Database Management Systems](https://devathon.com/blog/mysql-vs-postgresql-vs-sqlite/)**” (RDBMSs) emerged in the 1970s. Edgar Frank Codd, a British computer scientist working for IBM had invented the concept of RDBMS. RDBMSs are often called “SQL databases” since they use SQL (“Structured Query Language).

In comparison, NoSQL databases emerged in the late 2000s. The term “NoSQL” means “non-SQL” or not only SQL”, which we will discuss shortly.

**The differences between SQL and NoSQL databases are as follows:**

* **Data storage model:** SQL databases store data in tables with fixed rows and columns. NoSQL databases store data like documents, key-value pairs, wide-columns, and graphs. Note that “Wide-column” data refers to tables with rows and dynamic columns.
* **The kind of data to be stored:** SQL databases allow you to store structured data only. NoSQL databases enable you to store unstructured data too.
* **Objective:** SQL databases are general-purpose databases. NoSQL databases can be for general purposes, however, they can be used for storing documents, key-value pairs, wide-column data, etc.
* **Schema:** SQL databases use a rigid schema, however, NoSQL databases are flexible.
* **Scaling:** SQL databases scale up with larger servers, which is vertical scaling. NoSQL servers scale horizontally, i.e., with more servers.
* **“Joins”:** SQL databases support “Joins”, however, NoSQL databases don’t support them.
* **Multi-record ACID compliance:** SQL databases support multi-record ACID (“Atomicity”, “Consistency”, “Isolation”, and “Durability”) properties, however, NoSQL databases often don’t support them.

MySQL, PostgreSQL, SQLite, Oracle, and Microsoft SQL Server are popular examples of SQL databases. MongoDB, Cassandra, Redis, Memcached, and Amazon DynamoDB are popular examples of NoSQL databases.