DataBases

What is NO SQL?

NoSQL is a non-relational database created in the latter part of the 2000s. It was designed to prioritize scalability and facilitate the swift adaptation of applications, influenced by agile methodologies and DevOps practices. NoSQL comes in many forms, with the main types being Documents, Key-Values, Wide Columns, and Graphs. Each type uses models according to its specific requirements.
The data storage models for Documents involve JSON documents, Key-Value databases use key-value pairs, Wide-Column databases utilize tables with rows and dynamic columns, and Graph databases use nodes and edges. Examples of NoSQL databases include MongoDB, CouchDB, Redis, DynamoDB, Cassandra, HBase, and Amazon Neptune.
NoSQL databases typically feature flexible structures, making it easy to adjust the database when it needs change. Many NoSQL databases enable horizontal scaling, allowing for easy expansion by adding more affordable servers whenever necessary.
In NoSQL databases, queries can be quicker compared to SQL databases. The reason is that in SQL databases, data is often organized in a normalized manner. This means retrieving information about a single object or entity may involve combining data from various tables. As these tables get larger, the process of joining them can become costly. On the other hand, NoSQL databases store data in a way that's optimized for queries, making the retrieval process more efficient.

What is SQL?

An SQL database or relational database consists of structured tables where each row represents a data entity and columns define specific information fields. It uses Structured Query Language for creating, storing, updating and retrieving data. In an SQL database, information is stored in tables. Tables are like organized boxes where each row is a piece of info like a customer and columns are the details about that info such as names and addresses. It's a neat way to keep things in order. It lets people using the database add new tables and columns, rename things, and make different changes without stopping the database from working. An RDBMS cuts down on repeated data by using a process called normalization. This means arranging data to get rid of issues that can pop up when adding, updating, or deleting information. There are databases which use SQL such as MySQL, PostgreSQL, Oracle, MS SQL Server.