Introduction to
Databases Checkpoint

NoSQL to SQL

Incarner ce que nous sommes et ce que nous faisons

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Introduction

Understanding Database Types

What is SQL?

SQL is a domain-specific language used to query and manage data. It works by allowing users to query, insert, delete, and update records in relational databases. SQL also allows for complex logic to be applied through the use of transactions and embedded procedures such as stored functions or views.

What is NoSQL?

NoSQL stands for Not only SQL. It is a type of database that uses non-relational data structures, such as documents, graph databases, and key-value stores to store and retrieve data. NoSQL systems are designed to be more flexible than traditional relational databases and can scale up or down easily to accommodate changes in usage or load. This makes them ideal for use in applications

Why NoSQL is Used Over SQL

NoSQL is preferred over SQL in many cases because it offers more flexibility and scalability. The primary benefit of using a NoSQL system is that it provides developers with the ability to store and access data quickly and easily, without the overhead of a traditional relational database. As a result, development teams can focus on delivering features and core business logic faster, without worrying about the underlying data storage implementation.

MongoDB

Established in 2007, MongoDB Inc. introduced an innovative approach to database creation. The term “MongoDB,” derived from “humongous,” was coined to address the challenge of storing vast amounts of data required for scalable use cases.

The exponential growth of digital services and websites necessitated a more adaptable database management system with enhanced functionality.

The quest for swift and information-rich database performance served as the driving force behind the development of MongoDB, with a key design principle centered around the utilization of MongoDB documents for data storage.

Notably, e-commerce and content-serving websites opt for MongoDB due to its scalability and flexibility. As a high-performance database, MongoDB enables businesses to expedite data updates in terms of both structure and content.

MongoDB

MongoDB is a document-based, non-relational database management system. Another name for it is an object-based systemMongoDB is a document-based, non-relational database management system. Another name for it is an object-based system

Every record in MongoDB is kept as a separate document. Documents from a specific class or group are kept in a “collection”.
MongoDB supports out-of-the-box replication and sharding and was built with high availability and scalability in mind.
It was created by MongoDB Inc. and was made available on February 11, 2009.

SQL

A table-based system is MySQL (or open-source relational database). The table-based architecture, which is regarded as a SQL database, is the data query
structure for search.
Each individual entry is saved as a “row” in a database in MySQL.
Rows (also known as records) of a similar sort are kept in a “table”.
Although the MySQL architecture does not support effective replication and sharding, one can access related data via joins in MySQL, which reduces duplication.
On April 24, 1989, Microsoft Corporation first made this technology available.