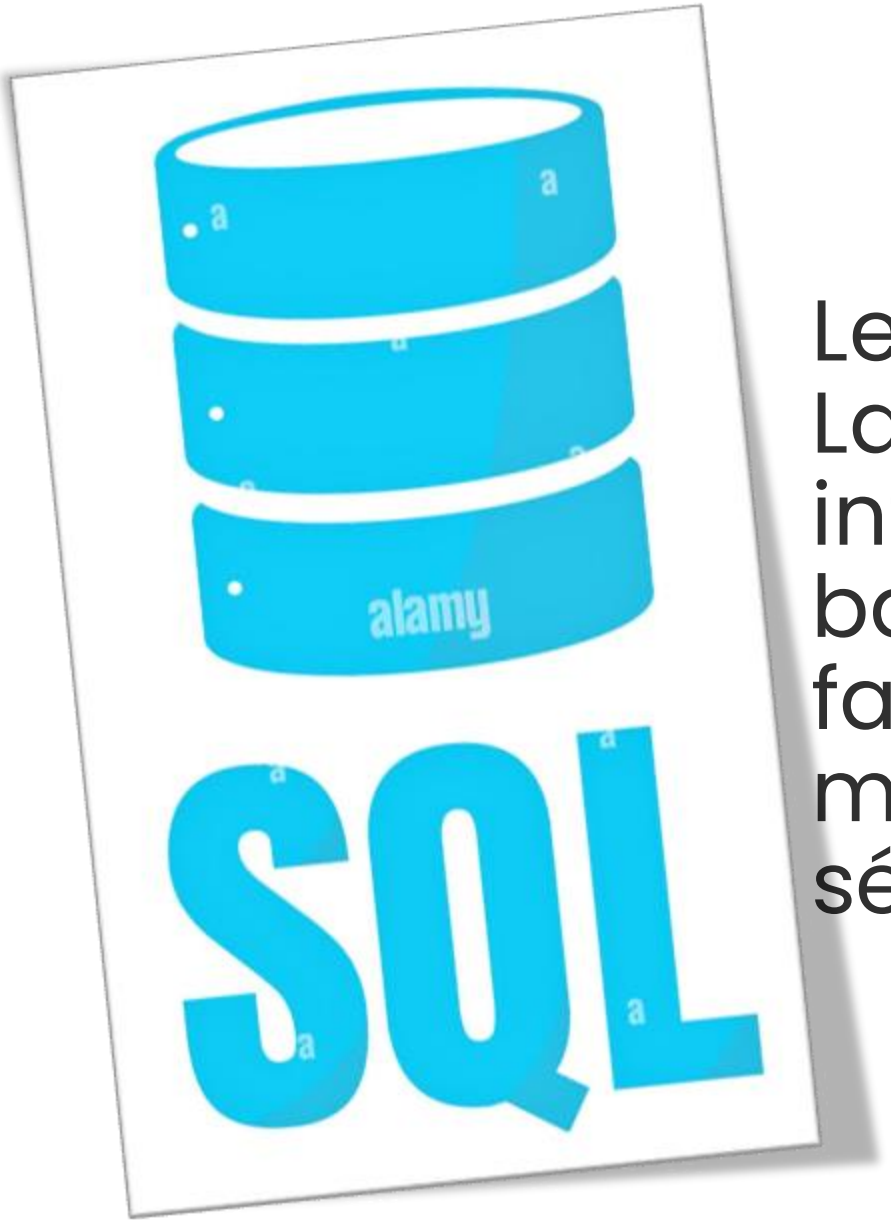
DATABASE

- *SQL*
- *NoSQL*



Definition SQL :

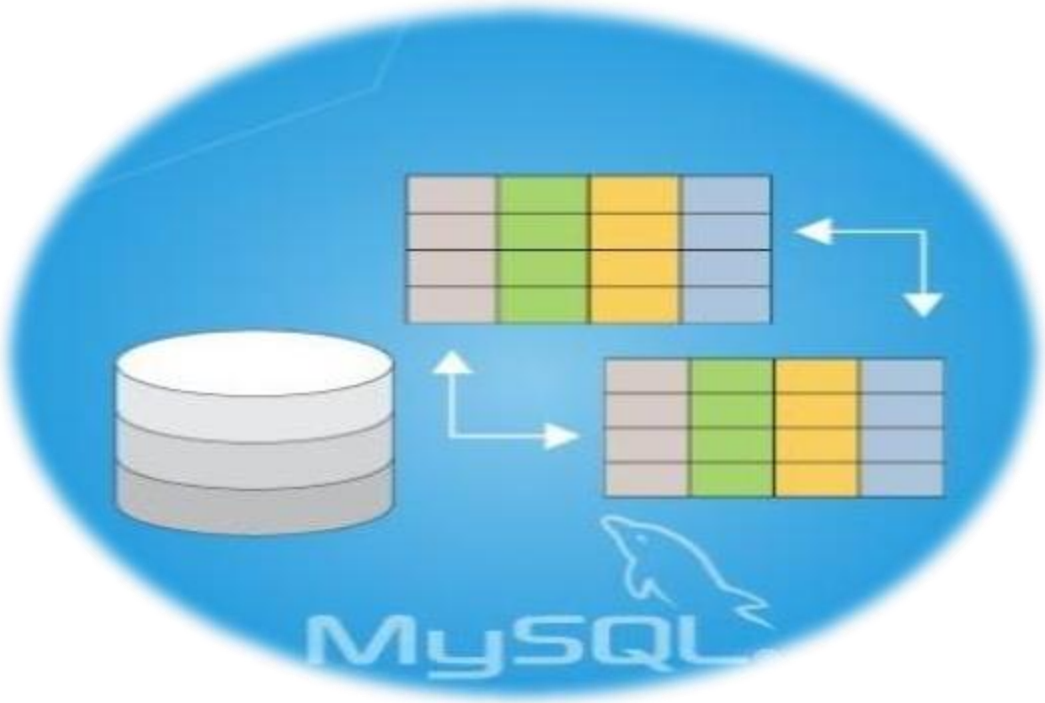
Le langage **SQL** (Structured Query Language) est un langage informatique utilisé pour exploiter des bases de données. Il permet de façon générale la définition, la manipulation et le contrôle de sécurité de données.

Definition NOSQL :

NoSQL is an approach to database management that can accommodate a wide variety of data models, including key-value, document, columnar and graph formats. A NoSQL database generally means that it is non-relational, distributed, flexible and scalable.

SQL functions

SQL functions allow you to perform more elaborate queries, for example adapting the results so that a string is displayed in uppercase or to save a string with the current date.



Function of NOSQL

NOSQL solutions usually destribute data accros multiple servers.if the amount of data increases new server are simply added.this allows NOSQL database to easily store and process large amount of data .making them ideal for big data applications.

Différences between SQL and NOSQL

SQL databases are vertically scalable, while NoSQL databases are horizontally scalable. SQL databases are table-based, while NoSQL databases are document, key-value, graph, or wide-column stores. SQL databases are better for multi-row transactions, while NoSQL is better for unstructured data like documents or JSON.

NoSQL Vs. SQL-Key Differences	
NoSQL database use various data models optimizef for different use cased	SQL databases use a relational model based on tables with predefined columns and rows
Uses query languages or APIs optimized for spécifie datamodels.	Uses a standardized language called Structured Query Language (SQL) to manipulate data.
NoSQL databases are horizontally scalable and can distribute data acrooss multiple server and nodes.	SQL database are vertically scalable.
May not be fully ACID compliant	SQL databases are designed to be ACID compliant.
Can provide faster perfermance for unstructured and non-relational data access	Can provide high performance for structured queries and data manipulation
No SQL databases can be more cost-effective for specific use cases	SQL databases can be more expensive than NO SQL-databases.