NoSQL

Not only SQL

Non-SQL

What is NOSQL?

- NOSQL means Not Only SQL.

- A NOSQL or Not Only SQL database provides a mechanism for storage and retrieval of data that is modelled in means other than the tabular relations used in relational databases.

- The data structure differs from the RDBMS and therefore some operations are faster in NOSQL and some in RDBMS.

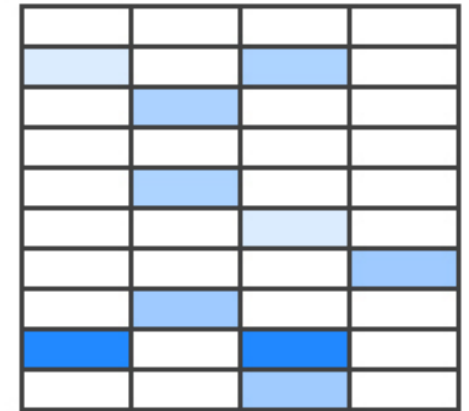- NOSQL databases are increasingly used in big-data and real-time web applications.[1]

Types of NoSQL databases

Document databases These databases store data as semi-structured documents, such as JSON or XML, and can be queried using document-oriented query languages.

Key-value databases are a simpler type of database where each item contains keys and values.

Column-family These databases store data as column families, which are sets of columns that are treated as a single entity. They are optimized for fast and efficient querying of large amounts of data.

Graph databases store data in nodes and edges. Nodes typically store information about people, places, and things, while edges store information about the relationships between the nodes.

Document   **Graph**   **Key-Value**   **Wide-column**

1. **Graph Databases**: Examples – Amazon Neptune, Neo4j
2. **Key value store:** Examples – Memcached, Redis, Coherence
3. **Column:** Examples – Hbase, Big Table, Accumulo
4. **Document-based:** Examples – MongoDB, CouchDB, Cloudant

Disadvantages of NoSQL:

Open-source
GUI is not available
Backup is a great weak point for some NoSQL databases like MongoDB