

12/12/25

Database SQL NOSQL

⇒ Database

is an organised collection of data, or a type of data store based on the use of a database management system (DBMS).

⇒ Types of database :

1. Relational DB → MySQL, PostgreSQL
2. NOSQL DB → MongoDB
3. In memory DB → Redis
4. Distributed SQL DB → Cockroach DB
5. Time series DB → Influx DB
6. OO DB → db4o
7. Graph DB → Neo4j
8. Hierarchical DB → IBM IMS
9. Network DB → IDMS
10. Cloud DB → Amazon RDS

Michael Widemium

→ My → MySQL
→ Max → MaxDB
→ Maria → MariaDB



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RDBMS (MySQL, PostgreSQL)

EF Codd — Codd's 12 Rules [0-12]

RDB → Relational database

• PostgreSQL

↳ Michael Stonebraker

Ingres

PostIngres

PostgreSQL

(Not-only SQL)

#

NoSQL (MongoDB)

1. Document DB

2. Key value DB

3. Graph DB

4. wide column DB

5. Multi model

~~RDBMS~~ RDBMS (MySQL)

NoSQL (MongoDB)

- Table, Rows, columns

- collection, document, fields

- Structured data

- Unstructured data

- Fixed schema

- flexible scheme

- SQL

- Mongo (MQL), ME4JC

- Tough horizontal scaling

- easy to scale horizontally
vertically

- Relationships - foreign
keys + joins

- Nested [Relationship]

- Read-heavy apps

- Real Time, Big data,
distributed computing

- Ex. Banking apps

- Ex, Real time analysis,
social media.