

## # Database SQL NoSQL #

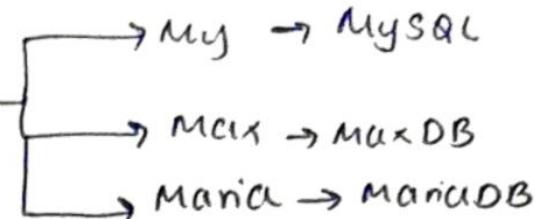
## ⇒ Database

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

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## # RDBMS (MySQL, PostgreSQL)

EF Codd — Codd's 12 Rules, [0-1L]

RDB → Relational database

### • PostgreSQL

↳ Michael Stonebreaker

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

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RDBMS (MySQL)	NOSQL (MongoDB)
- Table, Rows, columns	- collection, document , fields
- Structured data	- unstructured data
- Fixed schema	- flexible schema
- SQL	- Mongo (SQL), Neo4J C
- 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.