

# DIFFERENCE BETWEEN SQL & NoSQL





# Relational Database Management System (RDBMS)

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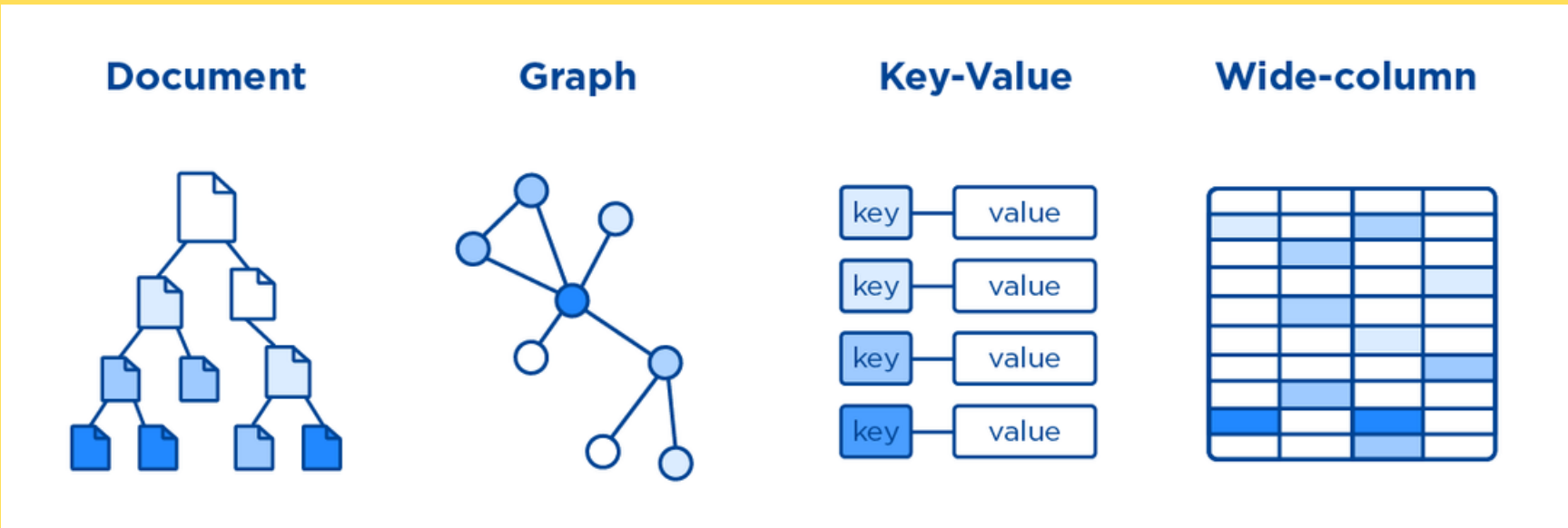
# Non-Relational or Distributed Databases



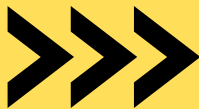
Table: customers

| customer_id | first_name | last_name | phone        | country |
|-------------|------------|-----------|--------------|---------|
| 1           | John       | Doe       | 817-646-8833 | USA     |
| 2           | Robert     | Luna      | 412-862-0502 | USA     |
| 3           | David      | Robinson  | 208-340-7906 | UK      |
| 4           | John       | Reinhardt | 307-242-6285 | UK      |
| 5           | Betty      | Taylor    | 806-749-2958 | UAE     |

RDBMS Structure



NoSQL Structure





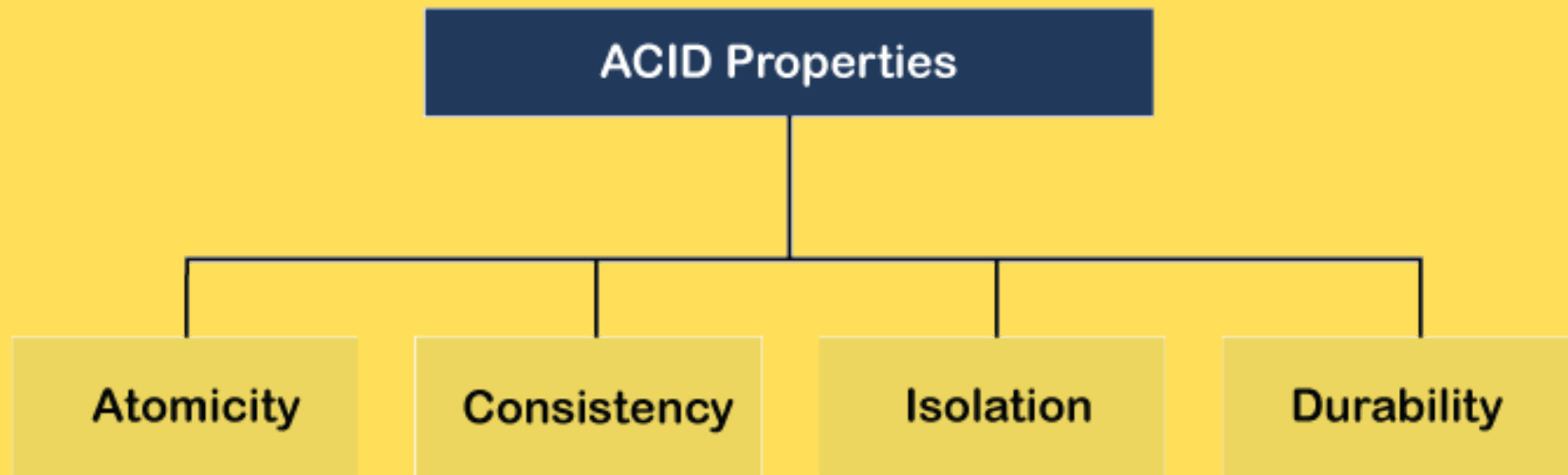
**SQL follows ACID properties**

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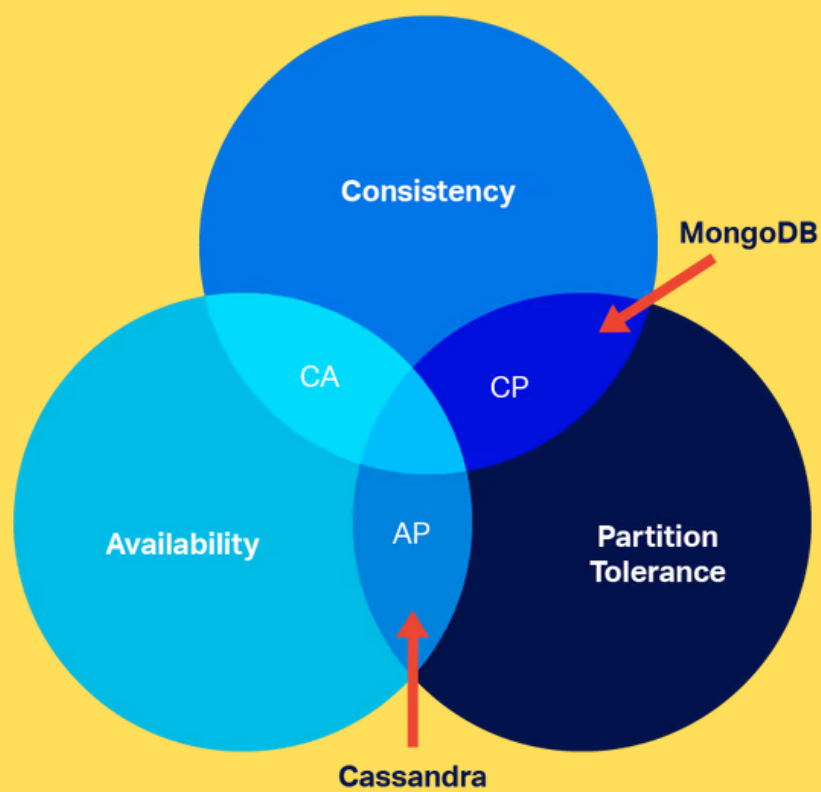


**NoSQL follows Brewers CAP  
Theorem**





## ACID Properties



## CAP Theorem





**SQL uses Structured Query  
Language.**

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**No Declarative Query Language**





## Fixed or Static Schema

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## Dynamic Schema





**Supports Complex Queries with joins.**

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**Does not support Complex Queries.**







## Vertically Scalable



NoSQL databases can scale horizontally.  
i.e. you can add new servers along with  
the existing ones.

## Horizontally Scalable





**Popular SQL databases are Oracle, MySQL, Sybase, MSSQL, PostgreSQL etc.**

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**Popular NoSQL databases are MongoDB, CouchDB, Redis, HBase, CassandraDB etc.**



teradata.



Amazon RDS



Microsoft®  
SQL Server®



ORACLE®

DATABASE



PostgreSQL

SAP S/4 HANA

## SQL Databases



mongoDB



Apache  
CASSANDRA™

APACHE  
HBASE



amazon  
DynamoDB



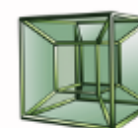
RAVENDB



CouchDB  
relax



redis



HYPERTABLE INC



## NoSQL Databases

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