SQL	NoSQL
SQL is Relational Database Management System (RDBMS).	NoSQL databases are Non-relational or distributed database system.
It supports table with row n columns.	No Sql database supports documents and collection.
It supports joins and complex queries.	Not supports joins and complex queries.
It supports Acid Properties	Not supports Acid Properties. (CAP Consistency, Availability, Partition Tolerance)
It supports vertical scaling	It supports Horizontal scaling
Examples: MySQL, PostgreSQL, Oracle, MS-SQL Server, etc	Examples: MongoDB, HBase, Neo4j, Cassandra, etc

NoSQL is a type of database management system (DBMS) that is designed to handle and store large volumes of unstructured and semi-structured data.

NoSQL databases are generally classified into four main categories:

Document databases: A document database stores data in JSON, BSON, or XML documents. Documents in the database can be nested.

Document Databases are: MongoDb, Apache CouchDb

Key-value stores: This is the simplest type of NoSQL database. Every element is stored as a key-value pair consisting of an attribute name ("key") and a value.

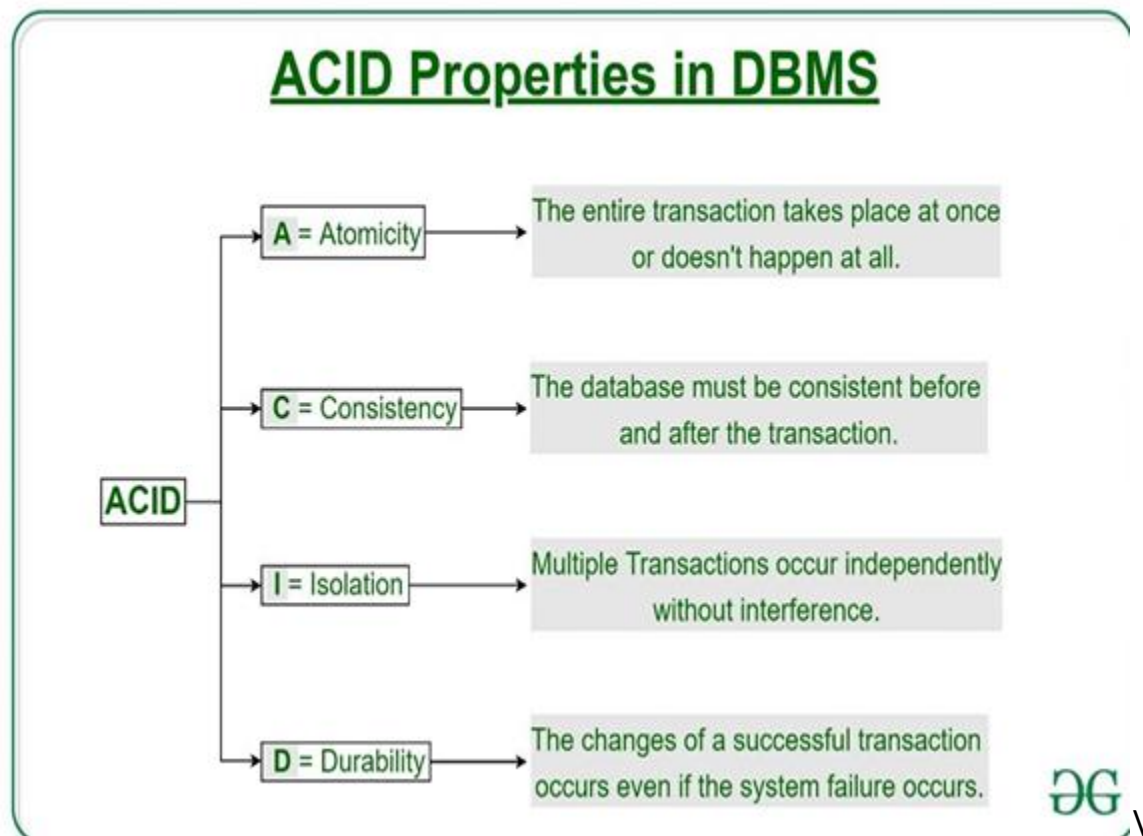Key-value Databases are: Amazon, redis, memecached, dinamodb

Column-family stores/ Wide-column stores: While an RDBMS stores data in rows and reads it row by row, column-oriented databases are organized as a set of columns.

Wide-column Databases are: Cassandra , H-base

Graph databases: A graph database focuses on the relationship between data elements. Each element is contained as a node. The connections between

elements in the database are called links or relationships.

Graph databases are: Neo4j.

ACID Properties in DBMS

What is JSON

o JSON stands for JavaScript Object Notation.

o JSON is an open standard data-interchange format.

o JSON is lightweight and self-describing.

o JSON originated from JavaScript.

o JSON is easy to read and write.

o JSON is language independent.

o JSON supports data structures such as arrays and objects.

MONGODB: It is a cross Platform, document based, Open-source, Distributed database.

It was written in C++.

It stores data in the form of JSON like documents.

It supports horizontal scaling, flexible, indexing, sharding, replica sets.

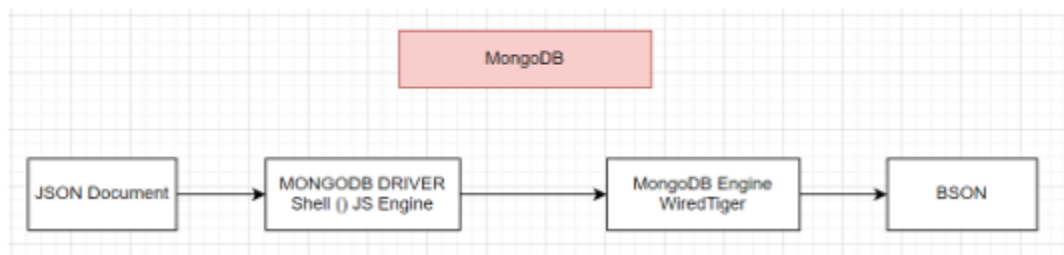If we want to store huge data mongodb is best choice.

HISTORY OF MONGODB:

MongoDB was founded in 2007 by Dwight Merriman, Eliot Horowitz and Kevin Ryan – the team behind DoubleClick.

First version released in 2009 i.e., mongodb 1.0

HOW MONGODB INTERNALLY WORKS:

Architecture of MongoDB

MongoDB

JSON Document → MONGODB DRIVER Shell () JS Engine → MongoDB Engine WiredTiger → BSON

WiredTiger is the default storage engine in MongoDB.

BSON: Binary JSON

It is almost similar to JSON.

It has limited datatypes

Data stored in the form of binary.

It is more faster than json

Binary can be understood by only machines. Json can be understood b by human

and machines.

RDBMS
DATABASE
TABLES
ROWS & COLUMNS

MONGODB (Document Based)
DATABASSE
Collections
Documents
Fields