



MongoDB vs MySQL

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Differences between MongoDB and MySQL on various parameters are discussed below:

What are MongoDB and MySQL?

MongoDB	MySQL
MongoDB is an open-source database developed by MongoDB, Inc. MongoDB stores data in JSON-like documents that can vary in structure. It is a popular NoSQL database.	MySQL is a popular open-source relational database management system (RDBMS) that is developed, distributed and supported by Oracle Corporation.

How Data is Stored?

MongoDB	MySQL
In MongoDB, each individual records are stored as ' documents '.	In MySQL, each individual records are stored as 'rows' in a table.

HIERARCHICAL UPPER OF A RECORD



MongoDB	MySQL
Documents belonging to a particular class or group as stored in a ‘collection’ . Example: collection of users.	A ‘table’ is used to store rows (records) of similar type.

SQL or NoSQL

MongoDB	MySQL
MongoDB is what is called a NoSQL database . This means that pre-defined structure for the incoming data can be defined and adhered to but also, if required different documents in a collection can have different structures. It has a dynamic schema.	MySQL as the name suggests uses Structured Query Language (SQL) for database access. The schema can not be changed. The inputs following the given schema are only entered.

Example: In a table, if there are columns for **name**, **address** and there is need to enter ‘**age**’ in new column in one of the entries, it will not take it as the column is not defined in schema.

This can be achieved in MongoDB, any new field can be inserted irrespective of the schema and is thus known to have dynamic schema.

SALIENT FEATURES

MongoDB	MySQL
MongoDB was designed with high availability and scalability in mind, and includes out-of-the-box replication and sharding .	MySQL concept does not allow efficient replication and sharding but in MySQL one can access associated data using joins which minimizes duplication.

Features	MySQL	MongoDB
Rich Data Model	No	Yes
Dynamic Schema	No	Yes
Typed Data	Yes	Yes
Data Locality	No	Yes
Field Updates	Yes	Yes
Easy for Programmers	No	Yes
Complex Transactions	Yes	No
Auditing	Yes	Yes
Auto-Sharding	No	Yes

Mongodb MySQL feature comparison gfg

Differences in Terminology

There are differences based on terminology between MongoDB and MySQL.

MySQL	MongoDB
Table	Collection
Row	Document
Column	Field
Joins	Embedded documents, linking

Terminology Differences gfg

Data Representation

The difference between the way data is represented and stored in both the databases is quite different.

MongoDB stores data in form of JSON-like documents and MySQL stores data in form of rows of table as mentioned earlier.

Example: To show how data is stored and represented in MongoDB and MySQL.

A DOCUMENT IN MONGODB

```
{
  name:"Perry",
  age:20,
  contact: {
    mobile:"+91-9999999999",
    home-address:"perry street, GeeksForGeeks"
  }
}
```

A RECORD IN MYSQL

name	age	contact-mobile	home-address
Perry	20	9999999999	perry street, GeeksForGeeks

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