**What is MongoDB?**

MongoDB is an open-source document database that provides high performance, high availability, and automatic scaling.

* Mongo DB is a document-oriented database.
* It is an open source product, developed and supported by a company named 10gen.
* It provides high performance, high availability and automatic scaling.

**What was the need of MongoDB although there were many databases in action?**

* All the modern applications require big data, fast features development, flexible deployment, and the older database systems are not competent enough, that’s why MongoDB is required.

**The primary purpose of building MongoDB is:**

* Scalability
* Performance
* High Availability

**Key points of MongoDB:**

* Develop Faster
* Deploy Easier
* Scale Bigger

**Features of MongoDB:-**

* Support ad hoc queries
* Indexing
* Replication
* Duplication of data
* Load Balancing
* Support map reduce and aggregation tools
* Uses JavaScript instead of procedures.
* It is a schema-less database written in C++.
* Provides high performance.
* Stores files of any size easily without complicating your stack.
* Easy to administer in the case of failures.
* JSON data model with dynamic schemas
* Auto-sharding for horizontal scalability
* Built in replication for high availability

**Databases can be divided in 3 Types:-**

* RDMS (Relational Database Management System)
* OLAP ( Online Analytical Processing)
* NoSQL

**NoSQL Database:-**

* NoSQL Database is used to refer a non-SQL or non-relational database.
* NoSQL database doesn't use tables for storing and retrieving data.
* It is generally used to store big data and real-time web applications.

**MongoDB advantages over RDBMS**

* In recent days, MongoDB is a new and popularly used database. It is a document based, non-relational database provider.
* Although it is 100 times faster than the traditional database but it is early to say that it will broadly replace the traditional RDBMS. But it may be very useful in term to gain performance and scalability.
* A Relational database has a typical schema design that shows number of tables and the relationship between these tables, while in MongoDB there is no concept of relationship.

**MongoDB Advantages**

* MongoDB is schema less. It is a document database in which one collection holds different documents.
* There may be difference between number of fields, content and size of the document from one to other.
* Structure of a single object is clear in MongoDB.
* There are no complex joins in MongoDB.
* MongoDB provides the facility of deep query because it supports a powerful dynamic query on documents.
* It is very easy to scale.
* It uses internal memory for storing working sets and this is the reason of its fast access.

**Where MongoDB should be used**

* Big and complex data
* Mobile and social infrastructure
* Content management and delivery
* User data management
* Data hub

**Performance analysis of MongoDB and RDBMS**

* In relational database (RDBMS) tables are used as storing elements, while in MongoDB collection is used.
* In the RDBMS, we have multiple schema and in each schema we create tables to store data while, MongoDB is a document oriented database in which data is written in BSON format which is a JSON like format.
* MongoDB is almost 100 times faster than traditional database systems.