MongoDB

MongoDB is an open-source document-oriented database that is designed to store a large scale of data and also allows you to work with that data very efficiently. It is categorized under the NoSQL (Not only SQL) database because the storage and retrieval of data in the MongoDB are not in the form of tables.

What is Data?

DATA is statically raw and unprocessed information.

For example – name, class, marks, etc. In computer language, a piece of information that can be translated into a form for efficient movement and processing is called data. Data is interchangeable information.

What is a Database?

DATABASE is a collection of data that is organized, which is also called structured data.

It can be accessed or stored in a computer system.

- Database is a container for collections.
- Each database gets its own set of files.
- A single MongoDB server has multiple databases.

DATA TYPE:

Databases can hold various kinds of information, including text, numbers, images, videos and more.

SQL and NO-SQL:

SQL: SQL stands for **S**tructured **Q**uery **L**anguages. To access a database, we use SQL statements.

NO-SQL: NO-SQL databases (also known as “not only SQL”) are non-tabular databases that store data differently than traditional relational databases.

SQL	NoSQL
RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)	Non-relational or distributed database system.
These databases have fixed or static or predefined schema	They have a dynamic schema
These databases are not suited for hierarchical data storage.	These databases are best suited for hierarchical data storage.
These databases are best suited for complex queries	These databases are not so good for complex queries
Examples: MySQL, PostgreSQL, Oracle, MS-SQL Server, etc	**Examples:** MongoDB, HBase, Neo4j, Cassandra, etc

Features of MongoDB

- Document-Oriented Model
- Sharding
- Flexible Schemas
- Widely Supported Languages
- Scalability and Horizontal Scaling

How to install MongoDB

- Visit the MongoDB download page on the official website.
- Click the “On-Premises” tab (for MongoDB on your own infrastructure).
- Select “MongoDB Community Server.”
- Choose your desired version and platform (Windows).
- Click the download button to get the installation file.
- Once downloaded, extract the ZIP archive to a location with write permissions.
- Navigate to the “bin” folder within the extracted files.
- Run the MongoDB server using the command:
- `mongod.exe --dbpath=pathtodatadirectory`

  Replace `pathtodatadirectory` with the actual path where you want to store MongoDB data[1].