Introduction to MongoDB
Pre-read

Relevel
by Unacademy

Things I need to know before this session

What is a Database?

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS). Together, the data and the DBMS, along with the applications that are associated with them, are referred to as a database system, often shortened to just database.

Types of Database: Relational Databases and NoSql DataBase

NOSQL Databases:

NoSQL is a broad category that includes any database that doesn't use SQL as its primary data access language. These types of databases are also sometimes referred to as non-relational databases. Unlike in relational databases, data in a NoSQL database doesn't have to conform to a pre-defined schema, so these types of databases are great for organizations seeking to store unstructured or semi-structured data.

Examples: Apache Cassandra, MongoDB, CouchDB, and CouchBase

What will be taught in this session?

In this session, we are going to focus on below points –

- Introduction to Mongo DB
- MongoDB Architecture's Key Components
- JSON and BSON
- Practical Use cases
- Installation of Mongo DB on Windows
- Database Operations
- Collection Operations
- CRUD Document operations on single and multiple docs
- _id/ObjectId
- Query and Projection Operators
- Examples

Mongo DB

MongoDB is a free and open-source database that employs a document-oriented data model and a non-structured query language. It is currently among the most powerful NoSQL systems and databases available.

MongoDB is indeed a document-oriented database. This means that it stores its data in collections of JSON-like documents rather than tables and rows. These documents support embedded fields, allowing related data to be stored within them.

MongoDB Architecture's Key Components

The Key components of Mongo DB are

- Database
- Collection
- Documents

How are these concepts being used in the industry for building applications?

Various web applications use MongoDB as their primary data store. This is because MongoDB offers high-value storage capabilities. For instance, MEAN is one of the most popular Web Development Stacks that uses MongoDB as the data store. Here are a few essential MongoDB use cases

- Product Management
- Operational Intelligence
- Real-Time Data Integration

Real-life Examples Of MongoDB Use Cases

- Aadhar
- MetLife
- Ebay etc