# **Introduction to MongoDB**

### What is MongoDB?

MongoDB is a popular open-source NoSQL database program. It uses a document-oriented

data model, making it especially useful for applications with evolving and complex data structures. MongoDB stores data in flexible, JSON-like documents, which can vary in structure, offering a more dynamic and scalable approach compared to traditional relational databases. It's widely used in modern web development for its scalability, flexibility, and ease of use.



### **Applications:**

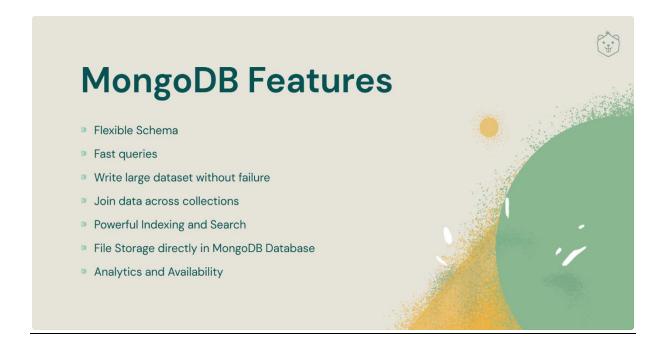
- Web and Mobile Applications:
- Content Management Systems (CMS.
- E-commerce Platforms
- Real-time Analytics and Logging
- Internet of Things (IoT)
- Social Networks and Web Collaboration Platforms
- Gaming.
- Big Data and Data Warehousing
- Content Management and Digital Asset Management
- Customer Relationship Management (CRM



## Why to study mongoDB?

- Market Demand
- Flexible Data Model
- Scalability

- Performance Optimization
- Real-time Analytics
- Big Data Trends
- Diversity in Database Systems.



#### Database:

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. It is designed to efficiently manage, retrieve, and manipulate data according to various criteria. Databases are commonly used in a wide range of applications, from simple ones like address books to complex ones like airline reservation systems or financial records.

In a database, data is organized into tables, which consist of rows and columns. Each row represents a single record, and each column represents a different attribute or piece of information about the records.

There are various types of databases, including relational databases, where data is structured in tables with predefined relationships between them; NoSQL databases, which are more flexible and can handle unstructured or semi-structured data; and others like object-oriented databases or graph databases, each suited to different types of data and applications.

Databases are essential components of modern computing, used in web applications, mobile apps, enterprise systems, and many other scenarios where structured data needs to be stored, managed, and accessed efficiently.