Megan Walker

Bellevue University

WEB 335 Introduction to NoSQL

Professor Krasso

April 4, 2023

Discussion 4.1 – What is MongoDB?

What is MongoDB?

MongoDB is a popular database management system that has gained a lot of popularity in recent years. It is a NoSQL database, which means that it does not use the traditional relational model that is used in SQL databases. MongoDB is a document-oriented database, which means that it stores data as JSON-like documents. These documents are stored in collections. Each document has a unique identifier, known as the ObjectID.

What are Collections?

Collections in MongoDB are used to group together related documents. Collections make it easier to query and retrieve data from the database. Collections are similar to tables in a traditional SQL database.

What are Documents?

In MongoDB, a document is a basic unit of data storage. It is similar to a row in a traditional SQL database, but with a key difference: while a row in a SQL database has a fixed set of columns and data types, a document in MongoDB can have any number of fields and any type of data within those fields.

What is MongoDB's version of an auto-generated primary key?

In MongoDB, the ObjectId is an auto-generated primary key. The ObjectId is a 12-byte value that consists of a timestamp, a machine identifier, a process identifier, and a random value. It is generated automatically by MongoDB when a new document is inserted into a collection and serves as a unique identifier for that document.

What are the key differences between MongoDB and MySQL?

One key difference between MongoDB and MySQL is that MongoDB is a schema-less database. That means that it does not enforce a rigid structure on the data. This makes it very flexible and easy to work with, especially when dealing with large amounts of unstructured data. MySQL, on the other hand, is a schema-based database, which means that it requires a predefined schema before data can be stored in the database.

Another difference between MongoDB and MySQL is their approach to scaling. MongoDB is designed to scale horizontally, which means it can easily handle large amounts of data by distributing it across multiple servers. MySQL, on the other hand, is designed to scale vertically, which means that it relies on increasing the power of a single server to handle more data.

References

What is MongoDB ? | IBM. (2023). Ibm.com. https://www.ibm.com/topics/mongodb

What Is MongoDB? (2018). MongoDB. https://www.mongodb.com/what-is-mongodb

What is MongoDB? Introduction, Architecture, Features & Example. (2020, January 5). Guru99. https://www.guru99.com/what-is-mongodb.html