Janis Gonzalez

WEB 335 Introduction to NoSQL

Discussion 4.1 What is MongoDB

April 06,2023

Bellevue University

MongoDB is a free to use document-oriented NoSQL database. MongoDB provides support for JSON like storage that has a flexible data model that enables a person to store unstructured data (Taylor, 2023). It supports field, range, and regular-expression queries which can then return an entire document, specific parts of the document, or just random samples of results (Taylor, 2023). MongoDB can have documents be indexed with primary and secondary indices which includes single field, multiple fields, text, and hashed (Taylor, 2023). It also provides high availability with replica sets. Documents consist of key-value pairs which are the basic units that are used in MongoDB. Documents consist of field names and values. Collections contain sets of documents and exist within a single database. So, a database contains collections which then contain documents. Documents can each have varying sizes and content from other documents. MongoDB allows the user to represent hierarchical relationships, to store arrays, and other complex structures easily (Comparing the differences - mongodb vs mysql). MongoDB is also highly scalable. MongoDB uses a 12-byte ObjectId for the \_id field which is the primary key to uniquely identify the documents (Comparing the differences - mongodb vs mysql). While MongoDB is non-relational, or NoSQL, system, MySQL is an open-source relational database management system. MySQL stores data using tables and rows, enforces referential integrity, and uses structured query language, SQL, for data access (Comparing the differences - mongodb vs mysql). In MySQL databases schemas and data models need to be defined first and the data must match the schema that is to be stored in the database. So, it isn’t as flexible as MongoDB. Schema migration needs to occur when a new type or format of data needs to be stored in the database. This can be expensive and complicated as the size of the database increases. Since documents are self-describing, there is a more flexible approach to MongoDB.

References

*Comparing the differences - mongodb vs mysql*. MongoDB. (n.d.). Retrieved from <https://www.mongodb.com/compare/mongodb-mysql>

Taylor, D. (2023, March 11). *What is mongodb? introduction, architecture, features & example*. Guru99. Retrieved from <https://www.guru99.com/what-is-mongodb.html>