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Web 335

Discussion 4.1

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MongoDB is a non-relational database that uses documents as its basic unit of data, thus earning the name document-oriented database. It is known for its spread-out scalability versus upward, making it an overall more cost-effective way to go where databases are concerned. A feature of MongoDB is that there are no fix schemas. A document’s keys and values do not have to be the same throughout the database. This makes it easy to remove or add fields. Data models can be experimented on to decided which model is best to go on the project you have.   
With MongoDB scalability, it spreads its data across several servers instead of having you upgrade to a larger server, which over time, the larger the server the more the cost.

Some features of MongoDB are its indexing, aggregation, special collection and index types and file storage. As with most databases, indexing is a convenient tool to help searches go faster. MongoDB supports a variety of indexing, from generic secondary indexes with nested documents and arrays to full-text indexing.

There are 3 ways to perform aggregation in MongoDB, “the aggregation pipeline, the map-reduce function, and single purpose aggregation methods.” (MongoDB, n.d.). Aggregation is performed on grouped data from multiple documents. It processes records and returns computed results. (MongoDB, n.d.).

Data types in MongoDB are formatted in JSON and now, BSON. BSON allows more support for additional data types like date. Date is supported in the mongo shell, stored as a string or object in 64-bit integer, as milliseconds. (MongoDB, n.d., *Indexes*) It is much easier to work with dates in the database, although the time zone is not stored. (Bradshaw, Brazil & Chodorow, 2019)

To return Date as a string: var myDate = new Date();

The other data type is the Array. This allows us to store more information in a document as you can create nested arrays too. A key can have an array for its values. Arrays allows us to combine different data types as values to a key. Queries can be made inside arrays and an index can be formed to improve the searches. This array has a string and integers:

{“myArray” : [“birthday”, “31st”, “2021”]}

References

MongoDB. (n.d.). *Aggregation — MongoDB Manual*. MongoDB Documentation. Retrieved April 5, 2021, from https://docs.mongodb.com/manual/aggregation/

Bradshaw, S., Brazil, E., & Chodorow, K. (2019). *MongoDB: The Definitive Guide: Powerful and Scalable Data Storage* (3rd ed.). O’Reilly Media.

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