NoSQL

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What is NoSQL? NoSQL stands for non SQL or not only SQL. The No in NoSQL represents the idea of a non-relational database or a database that is focused on storage space rather than organization of data. NoSQL emphasizes the concept of horizontal scaling. Horizontal scaling or sharding is essentially when database storage increases by adding more servers. Horizontal scaling is what makes NoSQL so dense and powerful. The idea behind NoSQL is to store any data with no storage restrictions. NoSQL uses JSON to format data and additionally make it easy to understand. JSON stands for JavaScript Object Notation. JSON is used to represent data. Any data that goes into NoSQL is converted into JSON. Think of it as the middle of a range to better understand NoSQL. NoSQL sits in between two forms of databases, structured and unstructured. While NoSQL does not require a form of structure to its data upfront, you can later organize your data with semi-structured tags.

 In MIS 2502, we talk about NoSQL in relation to MongoDB and transactional databases. MongoDB is a NoSQL database program. Transactional databases are utilized to store transactional data in a relational or NoSQL database. Earlier in the year, I learned how to use MongoDB by querying several forms of data. I would do this practice several times by creating different inputs to output specific data instructed in the directions.

 One notable NoSQL database in today's society is the Apache Cassandra. Apache Cassandra is an open-source database. An open-source database is a free-to-view, downloadable, and reusable codebase that developers can alter to their specifications. An open-source database is a very reliable database that allows companies to incorporate large amounts of data without compromising the performance of the database. Today, Apache Cassandra powers GoDaddy, Netflix, Instagram. Out of all the big-time companies globally, the most significant Apache Cassandra resides with Apple. Westoby (2019) noted, in 2014, Apple announced that their Cassandra database had over 75,000 nodes and stored over 10 petabytes of data. Apple also noted that one cluster had over 1,000 nodes. At the time, Apple specified that it had to process over millions of read and write operations (Westoby 2019). As of today, that number is drastically increasing. Since 2014, Apple has significantly grown to be a top predator in today's tech market. Today, the company's size implies that Apple's Cassandra database has significantly grown in size since its once astonishing 2014 size.

Works Cited

Louise Westoby on March 27, 2019, & Westoby, L. (n.d.). *Apache Cassandra™: Four interesting facts*. Datastax. Retrieved December 7, 2021, from <https://www.datastax.com/blog/apache-cassandratm-four-interesting-facts#:~:text=In%202014%2C%20Apple%20announced%20its,second%20on%20a%20regular%20basis>. Apple has the biggest Cassandra instance