For this weeks technical blog I chose to write about the difference between SQL and NoSQL DBMSs. SQL servers have been around since the 1970s when programs started requiring ways to store and access data. With SQL servers, their records are stored in tables, with rows and columns storing a specific piece about that record. This system structure does have its drawbacks though. When trying to process a wide array of requests or when you want to make your servers work faster, you have to upgrade the server hardware instead of just adding additional servers. This new hardware is frequently expensive and can lead to lengthy server downtime.

NoSQL was developed in the early 2000s to deal with these limits by structuring the data in an entirely different way. Instead of putting the data in tables with rows in columns, NoSQL records the data with key-value pairs that only have two columns because of this. It is a much more flexible system that can be upgraded by adding more servers to distribute the load, rather than upgrading the current hardware. This means that server changes and upgrades can be made without any downtime for the website or application. This allows for faster code integration in addition to no service interruptions with more of a free flowing operation. NoSQL is faster performance wise too because of this structure.

NoSQL does have its drawbacks though. Because SQL has been around for so much longer, it is considered to be more reliable than NoSQL. It also has much better support and most SQL DBMS are based off the standardized SQL language. With NoSQL databases they each have a unique way to work with the data they manage. Complex querying can be easier to do with the relational database (SQL) because of the nature of the structure of SQL and how you go about querying that complex data as compared to the free flowing structure of NoSQL.