Database Systems Quiz 7

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1. As per my research on different databases. I believe NoSQL is the ideal type of databases to use for storing, processing and analyzing such big data (Billions of blog post articles). I prefer NOSQL because it is best for routine data analysis.

   Not only the data base analysis but also many reasons like NoSQL has the capability to handle big data, NoSQL need not have to have a predefined schema like relational. And NoSQL handles unstructured data too unlike relational. When john is dealing with analyzing and processing such big number of blog posts the data will be dynamic and unstructured, So NoSQL will be the best choice in such situations.

   Moreover it uses Horizontal scaling which makes the storage of data very easy compared to relational, because in relational we use vertical scaling which makes the data storing complex but by using NoSQL, storing the data will be flexible.

   And I don't prefer data warehouse because we use warehouses for such applications like CRM applications. But for the given situation NoSQL is better.

2. Reference Link for the paper : https://www.ijert.org/research/a-study-of-nosql-database-IJERTV3IS041265.pdf

   Paper Name: A Study of NoSQL Database.

   Review: The paper explains briefly about NoSQL, different data models of NoSQL database and Transaction in NoSQL Databases and about the ACID Properties and CAP Theorem.

   In first chapter he gave introduction about NoSQL and mentioned different types of non-relational databases like Mango DB, HBase, Neo4j etc. In second chapter the author mentioned the importance of NoSQL and its features like horizontal scaling, dealing with unstructured and dynamic data and data replication etc. because of all these features NoSQL is preferred over relational database and also NoSQL can handle big data.

   In third chapter we can learn about different NoSQL Data Models like

   Key-Value Data Stores: Where a key gets generated to save data and this key-value pair gets permitted to the data store. The data values stored in key value stores can have dynamic sets of attributes.

Document oriented Data Stores: It is similar to key-value but it holds value, which an application can read or fetch by using a key

Column Family Data Stores: This data model reads or fetche the subset of fields and enable storing data in column centric approach. Each row in a columnfamily database is identified by a unique row key, defined by the application

Graph Database: This database are considered as the specialists of highly linked data. Therefore it handles huge number of relationships. The key difference between a graph and relational database is data querying
And all these models are briefly explained with examples and pictorial representations.

In chapter 4 transactions are explained and the ACID property, CAP theorem are explained briefly. These concepts are new for me and these properties I leaned newly from this paper. The author mentioned about PACELC and BASE theorems with abbrevations.

Chapter 5 is last where he made comparison between different NOSQL databases and mentioned the reasons why these databases are best.

In conclusion, If a person needs to know about what is NoSQL and learn about its properties and models and some basics of NoSQL this paper helps a lot. One of the best papers to get knowledge on NoSQL if you are starting new. The author clearly explained about which database model needs to be use in which cases.