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Computer Science 2nd Year

Subject - 'DBMS'

The Advantages of NoSQL

There are several advantages of working with NoSQL databases such as MongoDB and Cassandra. The main advantages are High Scalability and High availability.

High Scalability :- No SQL database such as MongoDB uses sharding for Horizontal scaling. Sharding is partitioning of data and placing machines in such a way that the order of the data is preserved. Vertical Scaling means adding more resources to the existing machine while horizontal scaling means adding more machines to handle the data. Vertical scaling is not that easy to implement, on the other hand Horizontal scaling is easy to implement. Horizontal scaling is

Horizontal scaling database examples :- MongoDB, Cassandra etc. Because of this feature NoSQL can handle huge amount of data, as the data grow NoSQL scale itself to handle that data in efficient manner.

High availability :- Auto replication ~~feature~~ feature MongoDB makes it highly available.

because in case of any failure data replicates itself to the previous consistent state.

Types of NoSQL databases

~~Here~~ Here are some types of NoSQL databases and the name of the database system that falls in the category. MongoDB falls in the category of NoSQL document based database.

Key Value store :- Memcached, Redis, Coherence

Tabular :- Hbase, Big table, Accumulo.

Document based :- MongoDB, CouchDB, Cloudant.

Application of NoSQL

- 1) when you want to store and Retrieve huge amount of data.
- 2) The relationship between the data you store is not that important.
- 3) The data is not structured and changing over time.
- 4) Constraints and Joins support is not required at database level.
- 5) The data is growing continuously and you need to scale the database regularly to handle the data.

Shreya
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Shardha Vaish