Vampire Unicorns - Week 4

Theoretical

A scenario where using NoSQL databases makes more sense

[Youssef Ashraf Sabry]

Big Data Scenario

There are vital challenges to developing Big Data systems. Big Data is getting massive and chaotic every day. The Internet, social media, mobile devices, and other technologies are causing vast volumes of varied and unstructured data storage at exceptional speeds.

Requirements of Big Data Systems

1. Rapid Processing and Analyzing of Unstructured Data

   Big Data systems receive a massive load of real-time unstructured data, which it needs to store, manage and analyze rapidly. SQL can't process unpredictable and unstructured data and is not very good at handling a large amount of data. On the other hand, NoSQL databases can process unstructured data and manage large amounts of data, making them the more suitable option.

2. Continuous and High-speed Scalability

   NoSQL databases rely on efficient horizontal scaling. That means increasing storage and compute capacity is merely adding more commodity servers or cloud instances. On the other hand, SQL databases rely on a monolithic architecture that requires making a single server more powerful, which has limitations. In this case, NoSQL is the more cost-effective solution.

3. Fast Development

   Since NoSQL databases are schema-less, it is more suitable in agile environments. It has the flexibility to change the data type on the go. Instead of applying schema on write, NoSQL databases use schema on reading.

Practical

Create a migration file with the required SQL statements for creating the tables

[Youssef Ashraf Sabry]