Bitesize

GCSE Bitesize Computer Science
Facebook's Jackson Gabbard on databases

I'm Jackson Gabbard. I'm an engineer at the Facebook London office.

Databases are the, sort of, lifeblood of Facebook. Each user has its own database that the user lives on, so to speak. That's a relational database that gives us the ability to store all of the data associated with the user - the stuff that person has liked, the stuff that person has commented on, and so forth. MySQL on its own, though, could not handle the massive number of requests that we receive regularly. So we have a system in front of MySQL called Memcache.

You can think of Memcache as a key value store, where there's a key and there's some blob of data associated with it, and it's extremely fast.

So most interactions with a database, for parts of Facebook that users experience, come from a relational database, at some low level, through a key-value store, so that the next time that request is made you don't have to do the complex relational database work. It's merely a key that we already know is associated with the data that you want.

So let's say you're fetching your list of friends. The first time, we have to go to your database and say, 'Ah, who are this person's friends?' The second time, we can say, 'Ah, this user has already requested their friends'. We have this in this very fast key value store, we can go and fetch that and return it without going to the relational data store.