Development and Management of Software-based Information Systems

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Content Management

This document is referring to the Project: Events databases.

Every app nowadays uses databases so that it can handle a large amount of data which contains user names, addresses, phone numbers, customer orders if the app needs it and many more examples.

Our project will be using databases to save all user's information, the users will be able to login through google and facebook and that's exactly why we're going to need a database to save all these data.

When it comes to organizing data, we often start by compiling everything into a single spreadsheet. But that approach isn't scalable. As more data floods the system, a single table will result in misleading information, duplicate data, and errors.

In order to avoid errors we are going to use databases like the ones that will be mentioned below and we're going to pick the best based on our requirements.

Databases:

MySQL: An open source, multi-threaded, and easy to use SQL database.

PostgreSQL: A powerful, open source object-based, relational-database that is highly customizable.

Redis: An open source, low maintenance, key/value store that is used for data caching in mobile applications.

MongoDB: A schemaless, JSON document database which is known for its flexibility and scalability.

Memcached: A distributed cache system which is multi-threaded, and used primarily for caching objects to speed up applications by alleviating database load.

MariaDB: A popular open source relational database which was created by the original developers of MySQL.

Cassandra: A free and open source, NoSQL database which is designed to handle a large amount of unstructured data at any scale.

SQLite: Embedded database, common usage is to provide local data storage capabilities on mobile phones.

InfluxDB: An open source, fast and time series database which is written in Go.

RethinkDB: An open source, and document-oriented database which stores data in JSON format and sync in real time with the application.

Riak DB: A distributed NoSQL database, which offers high availability, fault tolerance and data resiliency as its core feature.
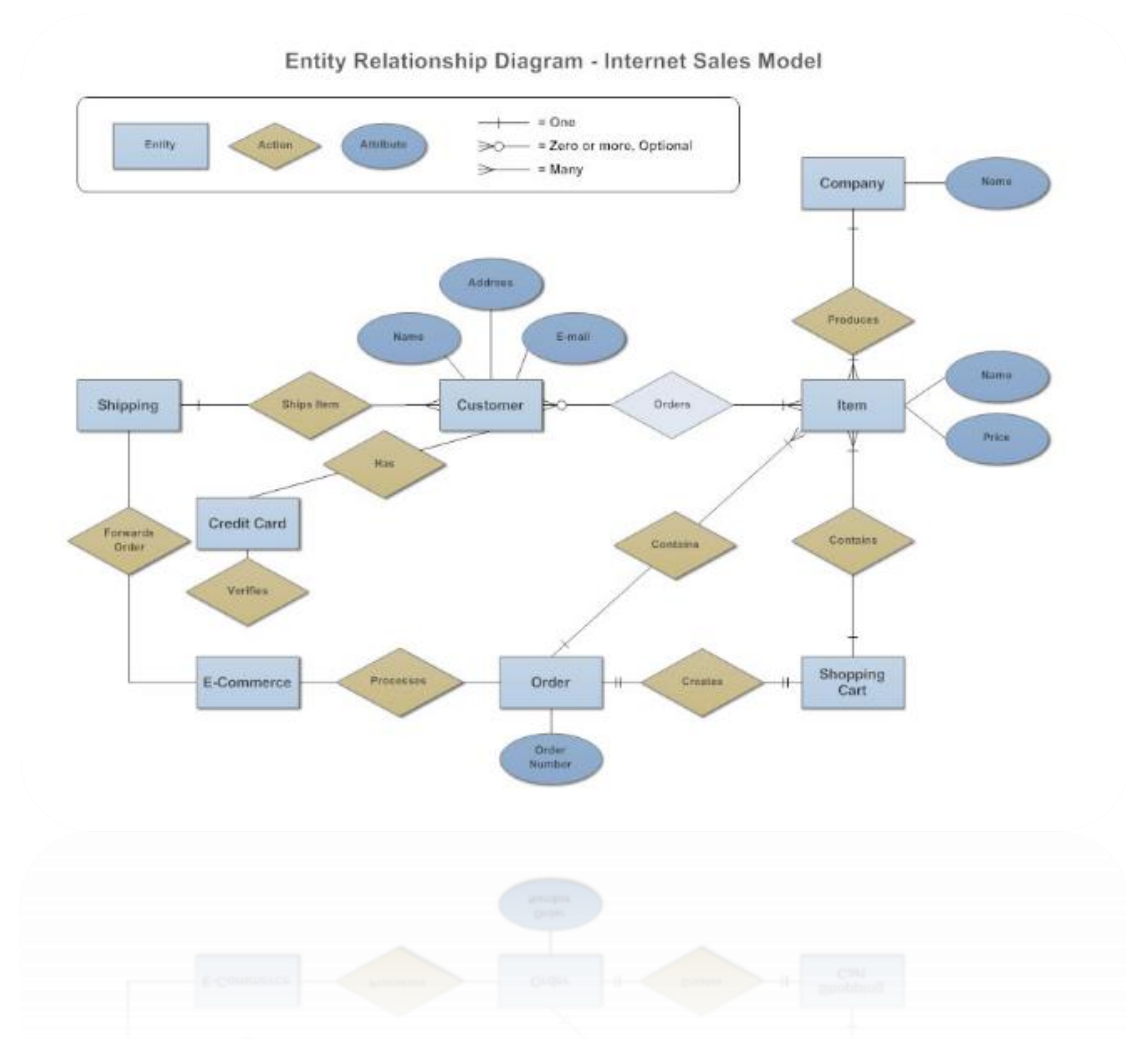
CouchDB: A document-oriented NoSQL database which uses JSON to store data and javascript as its main query language.

Couchbase: A full Stack NoSQL database that supports offline sync, full CRUD, and query capabilities and runs locally on the device.

ArangoDB: An open source NoSQL database which is known for its multi-model, graph and geo algorithm features.

Another helpful tool to understand databases better would be Entity Relationship Diagrams. It's a visual way of looking at the database structure and it has an export/import tool that makes coding into diagrams and the opposite.

Entity Relationship Diagram - Internet Sales Model

Sources:

https://www.smartdraw.com/entity-relationship-diagram/

https://www.simform.com/mobile-app-developers-database-selection/