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Types of Databases

1.Relational

In this model, data is organized in two-dimensional tables and the relationship is maintained by storing a common field.

The basic structure of data in the relational model is tables. All the information related to a particular type is stored in rows of that table.

Therefore, tables are also known as relations in relational model.

2.Analytical

An analytical database system (also called OLAP, for Online Analytical Processing) is typically optimized for fast processing of large amounts of data with no or very broad filters.

3.Key-Value

A key-value database is a type of nonrelational database that uses a simple key-value method to store data. A key-value database stores data as a collection of key-value pairs in which a key serves as a unique identifier. Both keys and values can be anything, ranging from simple objects to complex compound objects

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4.Column-Family

A column family containing 3 rows. Each row contains its own set of columns.

A column family consists of multiple rows.

Each row can contain a different number of columns to the other rows. And the columns don't have to match the columns in the other rows (i.e. they can have different column names, data types, etc.).

Each column is contained to its row. It doesn't span all rows like in a relational database. Each column contains a name/value pair, along with a timestamp. Note that this example uses Unix/Epoch time for the timestamp.

5.Graph

A graph database, also called a graph-oriented database, is a type of NoSQL database that uses graph theory to store, map and query relationships.

A graph database is essentially a collection of nodes and edges.

6.Document

A document database is a NoSQL data stores that is designed to store and query data as JSON-like documents. The data in document databases is stored as documents with their metadata. The document stored is in key/value pair where the key is the unique identifier of the document. Unlike relational databases, document databases are faster to load, access, and parse.

Document database are also referred as document database management systems, document-oriented databases, or document store database.