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TYPES OF DATABASES

Relational database is a type of database that stores and provides access to data points that are related to one another. The columns of the table hold attributes of the data, and each record usually has a value for each attribute, making it easy to establish the relationships among data points.

Example: Microsoft SQL Server, Oracle Database, MySQL and IBM DB2

Online analytical processing, or OLAP, is an approach to answer multi-dimensional analytical queries swiftly in computing. OLAP is part of the broader category of business intelligence, which also encompasses relational databases, report writing and data mining.

Data Warehouse is the example of OLAP system.

Key–value database, or key–value store, is a data storage paradigm designed for storing, retrieving, and managing associative arrays, and a data structure more commonly known today as a dictionary or hash table.

Example: Redis, Riak, and Oracle NoSQL database are examples of key-value databases.

Column family is a database object that contains columns of related data. It is a tuple that consists of a key–value pair, where the key is mapped to a value that is a set of columns. In analogy with relational databases, a column family is as a "table", each key-value pair being a "row".

Example: Cassandra is one of the popular column-family databases; there are others, such as HBase, Hypertable, and Amazon DynamoDB [Amazon DynamoDB].

Graph database is a database that uses graph structures for semantic queries with nodes, edges, and properties to represent and store data. A key concept of the system is the graph.

Some of example of graph databases are Instagram, Twitter, Facebook, Amazon, and, practically, all applications, which must rapidly query information scattered across an exponentially-growing and highly-dynamic network of data, are already taking advantage of Graph Databases.

Document-oriented database, or document store, is a computer program and data storage system designed for storing, retrieving and managing document-oriented information, also known as semi-structured data.

Common examples of document DBMS include JSON, XML docs, Catalogs, serialized PDFs and Excel docs, Profile data, and serialized objects.