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TYPES OF DATABASES

- RELATIONAL DATABASE

- Relational Database is the data stored through collection of tables; these tables are related to one another; each table consists of columns and rows; each columns have a name and a data type. Data type can be said as a data rule which is associated to every column, only those data that satisfy this data rule can be inserted in the specific column. A row can be treated as a record which is formed by a single or multiple columns.

- ANALYTICAL (OLAP)

- Analytical Database stores and oversees enormous amounts of information, including business, market, and client information for business analysis. Analytical database is extremely streamlined to allow for faster inquiries and adaptability.

- KEY-VALUE DATABASE

- It is the simplest non-relational database and as the name suggests, every data stored in this database will be assigned to a key to store data. You provide a key and a blob of data, such as an image, text, file, and so on. Key-value database are particularly useful to store certain types of data, such as configuration data, state information or any data that might be represented by a dictionary or a hash in a programming language. Examples can be Redis Database, Memcached Database, etc.

- COLUMN-FAMILY DATABASE

- Column-Family Database store data using rows and columns but they do not use tables, instead of stables, they use structure called as column families. Column families contain rows of data where each row has its own structure or schema, each row comprises of unique row identifier and sets of column names and values, each row can have different number of columns with several types of data. Examples can be Cassandra, HBase, etc.

- GRAPH DATABASE

- Graph Database falls under the bracket of non-relational database and follows a different approach forming relationships between data rather than using tables and foreign keys to form relation. Graph Database forms relation by using nodes edges and properties. Data is represented through individual nodes and each node can have multiple properties between these nodes edges or relationships are established to represent different types of connection. Graph database is useful when searching for specific pattern like fraud detection through money laundering transactions etc. Example can be Neo4j database.

- DOCUMENT DATABASE

- Document Database also called as Document Store are also a unique key to identify data stored database, however, unlike key-value store, document database store data in structural format called documents. Though, each document in this database has structured data, there is no specific format to be followed for all documents, each document can have its own structure which the database understands. So, unlike key-value, the data stored in document can be queried and analyzed. Examples can be MongoDB, CouchDB, etc.