Database vs Data Warehouse vs DataLake

Database

- Designed to capture and record data (OLTP)
- Live, real time data
- Data stored in tables with rows and columns
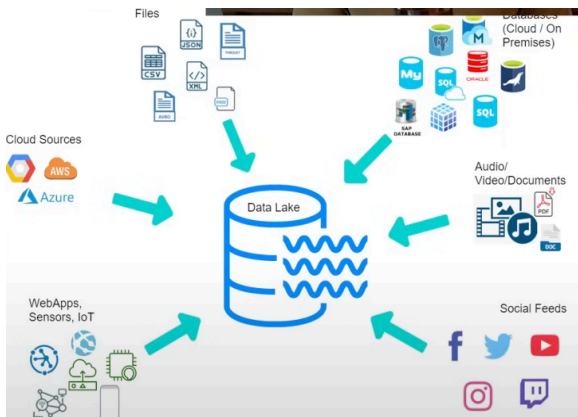- Flexible schemas (how the data is organized)

Data warehouse:

- Designed for analytical processing (OLAP)
- Data is refreshed from source systems - stores current and historical
- Data is summarized
- Rigid schema (how the data is organized)

Data Lake:

- Designed to capture raw data (structured, semi-structured, unstructured)
- Made for large amount of data
- Used for ML and AI in its current state or Analytics with processing

A data warehouse is a database and a data lake is file storage. By the way the difference between a database and a data warehouse is only in what they are used for. All data warehouses are databases but not all databases are categorized as data warehouses