SQL databases:

- Structure: SQL databases are relational databases that store data in tables with rows and columns. They enforce a predefined schema, meaning the structure of the data must be defined before storing it.
- Schema: SQL databases have a fixed schema, which means the structure of the data, including the types of data in each column, must be defined before inserting data into the database.
- Query Language: SQL databases use SQL (Structured Query Language) for querying and manipulating data. SQL is a standardized language for managing relational databases.
- Transactions: SQL databases typically support ACID (Atomicity, Consistency, Isolation, Durability) transactions, which ensure that database transactions are processed reliably.
- Scaling: SQL databases are usually vertically scalable, meaning they can handle increased load by upgrading the hardware (e.g., CPU, RAM) of a single server. However, scaling horizontally (across multiple servers) can be more challenging.

NoSQL databases:

- Structure: NoSQL databases are non-relational databases that store data in various formats, such as key-value pairs, documents, column-family, or graphs. They are schema-less, allowing for flexibility in the structure of the data.
- Schema: NoSQL databases do not require a fixed schema, allowing developers to store unstructured or semi-structured data without predefined schemas.
- Query Language: NoSQL databases do not use SQL for querying. Instead, they often provide their own query languages or APIs tailored to the specific data model they support.
- Transactions: NoSQL databases may sacrifice some ACID properties in favor of performance and scalability. Many NoSQL databases offer eventual consistency rather than strong consistency.
- Scaling: NoSQL databases are designed for horizontal scalability, meaning they can scale out across multiple servers or nodes. They are well-suited for handling large volumes of data and high throughput.