What is SQL?
A relational database is a type of database that stores and provides access to data points that are related to one another. It is based on the relational model, which organizes data into tables (also known as relations) consisting of rows and columns. Each row in a table represents a record with a unique identifier called a primary key, and each column represents an attribute of the data.

Key features and components of a relational database include:

1. **Tables:** The core structure where data is stored. Each table represents a different entity (e.g., customers, orders, products) and consists of rows and columns.

2. **Rows and Columns:** Rows (or records) represent individual entries in a table, while columns (or fields) represent the attributes of the data. For example, in a customer table, rows might represent individual customers, and columns might include attributes like customer ID, name, and address.

3. **Primary Keys:** A column (or set of columns) with unique values used to identify each row in a table uniquely. It ensures that each record can be uniquely identified.

4. **Foreign Keys:** A column (or set of columns) used to create a link between the data in two tables. A foreign key in one table points to a primary key in another table, establishing a relationship between the two tables.

5. **SQL (Structured Query Language):** The standard programming language used to manage and manipulate relational databases. SQL allows users to perform various operations like querying data, updating records, inserting new data, and deleting existing records.

6. **ACID Properties:** Relational databases typically adhere to ACID (Atomicity, Consistency, Isolation, Durability) properties to ensure reliable transaction processing:
- **Atomicity**:** Ensures that all operations within a transaction are completed successfully; otherwise, the transaction is aborted.

- **Consistency**: Ensures that a transaction brings the database from one valid state to another, maintaining data integrity.
- **Isolation**: Ensures that concurrent transactions do not interfere with each other.
- **Durability**: Ensures that once a transaction is committed, it remains so, even in the event of a system failure.

Examples of popular relational database management systems (RDBMS) include **MySQL, PostgreSQL, Oracle Database, Microsoft SQL Server**, and **SQLite**. These systems provide tools and interfaces to create, read, update, and delete data in a relational database.