

## 1. What is SQL?

ANS:

**SQL (Structured Query Language):** This is a standardized language used to interact with relational databases. SQL provides commands for querying and manipulating data, such as `SELECT`, `INSERT`, `UPDATE`, and `DELETE`. It also includes commands for defining and managing database schema and security. SQL is used across various relational database systems, including MySQL, PostgreSQL, SQL Server, Oracle, and others.

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## 2. what is difference between Data and Information?

**ANS :**

- **DATA**

- Data is a collection of raw, unorganised facts and details like text, observations, figures, symbols and descriptions of things etc. In other words, data does not carry any specific purpose and has no significance by itself. Moreover, data is measured in terms of bits and bytes – which are basic units of information in the context of computer storage and processing.

- **Information**

- Information is processed, organised and structured data. It provides context for data and enables decision making. For example, a single customer's sale at a restaurant is data – this becomes information when the business is able to identify the most popular or least popular dish

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### 3. What is Database and DBMS?

**ANS :**

- **Database**

A structured collection of data stored electronically. It is designed to efficiently store, retrieve, and manage large volumes of data, often organized in tables with rows and columns. Databases can store various types of information, such as customer records, inventory data, and transaction details.

- **DBMS (Database Management System)**

Software that provides an interface for users and applications to interact with a database. It manages the database, handling tasks such as data storage, retrieval, updating, and security. DBMSs support operations like querying, transaction processing, and data management. Examples include MySQL, PostgreSQL, Oracle Database, and Microsoft SQL Server.

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### 4. What is Relational Database Management System?

**ANS :** **Relational Database Management System (RDBMS)** is a type of DBMS that organizes data into tables (or "relations") which are linked based on relationships between the data

- **Tables:** Data is stored in tables, which consist of rows and columns. Each table represents an entity (e.g., customers, orders), and each row represents a record within that entity.
  - **Relationships:** Tables can be related to each other through keys. Primary keys uniquely identify records within a table, while foreign keys create links between tables by referencing primary keys in other tables.
  - **SQL:** RDBMSs use Structured Query Language (SQL) to perform operations like querying, updating, and managing the data.
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### 5. State at least 5 names of Database Management System or Software.

**ANS:** RDBMSs include MySQL, PostgreSQL, Oracle Database, SQL lite and Microsoft SQL Server.

