

1. What is SQL?
2. what is difference between Data and Information?
3. What is Database and DBMS?
4. What is Relational Database Management System?
5. State at least 5 names of Database Management System or Software.

SQL (Structured Query Language) is a standard programming language used to interact with relational databases. It enables users to perform operations such as creating, reading, updating, and deleting data (CRUD operations).

| <b>Data</b>                           | <b>Information</b>                              |
|---------------------------------------|---|
| Raw facts or figures without context. | Processed, organized, and meaningful.           |
| Unprocessed and unorganized.          | Processed and structured for interpretation.    |
| Serves as input for analysis.         | Provides insights and supports decision-making. |

### 3. What is a Database and DBMS?

- **Database:** A database is an organized collection of data that is stored electronically and managed to ensure efficient access, retrieval, and storage. It can contain tables, views, and other structures to represent real-world entities.
- **DBMS (Database Management System):** A DBMS is software that provides tools and functionalities for managing, storing, retrieving, and manipulating data in a database. It acts as an interface between the database and users or applications.

#### Key Features of DBMS:

- Data storage and retrieval.
- Data security and integrity.

- Concurrency control.
  - Backup and recovery.
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#### **4. What is a Relational Database Management System (RDBMS)?**

An RDBMS is a type of DBMS that organizes data into tables (also called relations). These tables consist of rows (records) and columns (fields), and the data can be linked to other tables using keys (primary and foreign keys).

##### **Key Features of RDBMS:**

- Supports SQL for querying.
  - Maintains data integrity and consistency.
  - Ensures relationships between tables.
  - Examples of relationships: One-to-One, One-to-Many, Many-to-Many.
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#### **5. At Least 5 Names of Database Management Systems or Software:**

1. MySQL
2. PostgreSQL
3. Microsoft SQL Server
4. Oracle Database
5. MongoDB (NoSQL)