

1. What is SQL?

SQL stands for **Structured Query Language**.

It is a standard language used to **store, retrieve, manage, and manipulate data in a relational database**.

What SQL is used for

- Creating databases and tables
- Inserting new data
- Fetching data using queries
- Updating existing records
- Deleting data
- Controlling access to data

2. What is difference between Data and Information?

Difference between Data and Information

| Basis | Data | Information |
|---------------|----------------------------------|------------------------------|
| Meaning | Raw facts and figures | Processed and organized data |
| Nature | Unprocessed, unorganized | Meaningful and useful |
| Context | Has no context | Has context and purpose |
| Understanding | Difficult to understand directly | Easy to understand |
| Usage | Input for processing | Output after processing |
| Example | 75, 80, 90 | Average marks = 81.6% |

Simple definition

- **Data:** Raw input (numbers, text, symbols)
- **Information:** Meaningful output after processing data

Real-life example

- **Data:** Daily temperature readings

- **Information:** Weekly weather report

In short: **Data + Processing = Information**

3. What is Database and DBMS?

Database

A **database** is an **organized collection of related data** stored electronically so that it can be easily accessed, managed, and updated.

Example:

A student database storing roll number, name, class, and marks.

DBMS (Database Management System)

A **DBMS** is **software** that allows users to **create, store, retrieve, update, and manage** data in a database safely and efficiently.

Example DBMS software:

MySQL, Oracle, SQL Server, MS Access

4. What is Relational Database Management System?

Relational Database Management System (RDBMS)

A **Relational Database Management System (RDBMS)** is a type of **DBMS** that stores data in the form of **tables (relations)** consisting of **rows and columns**, and maintains relationships between tables using **keys**.

Key Features of RDBMS

- Data stored in **tables**
- Uses **rows (records)** and **columns (fields)**
- Relationships maintained using **Primary Key** and **Foreign Key**
- Supports **SQL (Structured Query Language)**
- Ensures **data accuracy, consistency, and integrity**

5. State at least 5 names of Database Management System or Software.

Here are **5 Database Management System (DBMS) software names:**

1. **MySQL**
2. **Oracle Database**
3. **Microsoft SQL Server**

- 4. PostgreSQL**
- 5. Microsoft Access**