

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**