

# 100 Important SQL and DBMS Interview Questions with Answers

## 1. What is DBMS?

A Database Management System (DBMS) is software that allows users to define, create, maintain, and control access to the database. It manages data, the database engine, and the schema.

## 2. What is SQL?

SQL (Structured Query Language) is a standard language used to communicate with relational databases. It is used for querying and manipulating data. It includes DDL, DML, DCL, and TCL statements.

## 3. What is the difference between DBMS and RDBMS?

DBMS stores data as files and doesn't enforce relationships. RDBMS stores data in tables and enforces relationships using foreign keys. RDBMS also follows ACID properties.

## 4. What is a Primary Key?

A Primary Key uniquely identifies each record in a table. It cannot be null or duplicate, ensuring entity integrity. It can consist of one or more columns.

## 5. What is a Foreign Key?

A Foreign Key is a field in one table that uniquely identifies a row in another table, establishing a relationship between tables and ensuring referential integrity.

## 6. What is Normalization?

Normalization is the process of organizing data to reduce redundancy and improve integrity. It involves decomposing tables into smaller ones and defining relationships.

## 7. What is Denormalization?

Denormalization is the process of combining tables to improve read performance. It is commonly used in OLAP systems and trades off storage for speed.

## 8. What are Joins in SQL?

Joins combine rows from two or more tables based on a related column. Types: INNER, LEFT, RIGHT, FULL, and SELF JOINS.

### **9. What is an Index in SQL?**

An Index is a database object that speeds up data retrieval. It requires additional storage and can slow down data modification operations.

### **10. What is a View in SQL?**

A View is a virtual table based on a SQL query result. It simplifies complex queries and enhances security. It doesn't store data itself.