Java JDBC Interview Questions

1)What is JDBC? JDBC (Java Database Connectivity) is an API that enables Java applications to interact with relational databases using SQL.

2)What is PreparedStatement? PreparedStatement is a JDBC interface used to execute parameterized SQL queries efficiently and securely.

3)Difference between Statement and PreparedStatement? Statement executes static SQL queries, while PreparedStatement allows dynamic parameters and helps prevent SQL injection.

4)How do you handle SQL exceptions? SQL exceptions are handled using try-catch blocks and the SQLException class to log or manage errors.

5)How to prevent SQL Injection? Use PreparedStatement with parameterized queries instead of string concatenation to avoid injection vulnerabilities.

6)What is JDBC DriverManager? DriverManager is a class that manages JDBC drivers and establishes database connections using getConnection().

7)How to close connections? Use close() on Connection, Statement, and ResultSet objects in a finally block or try-with-resources.

8)What is a ResultSet? ResultSet is a JDBC object that holds data retrieved from a database query and allows row-by-row access.

9)What is auto-commit in JDBC? Auto-commit is a mode where each SQL statement is committed automatically; it can be disabled for transaction control.

10)How to connect Java to MySQL? Load the MySQL JDBC driver and use DriverManager.getConnection(url, user, password) with the correct database URL.