**4. Types of JDBC Statements**

**• Theory:**

1. **Overview of JDBC Statements:-**

* **Statement: Executes simple SQL queries without parameters:-** A JDBC object that allows you to execute SQL commands directly against a database.
* **Creating a Statement:-**

Statement stmt = connection.createStatement();

* **Executing a SQL Query:**
* **For a SELECT query:-**

ResultSet rs = stmt.executeQuery("SELECT \* FROM employees");

* **For an INSERT, UPDATE, or DELETE query:-**

int rowsAffected = stmt.executeUpdate("UPDATE employees SET salary = 50000 WHERE id = 1");

1. **PreparedStatement: Precompiled SQL statements for queries with parameters.:-**

* **PreparedStatement:** A subclass of the Statement interface that allows you to execute precompiled SQL queries with input parameters.
* **Querie:-**

// Create a PreparedStatement String sql = "SELECT \* FROM employees WHERE id = ?"; PreparedStatement pstmt = connection.prepareStatement(sql);

// Set the parameter value pstmt.setInt(1, 101);

// Sets the first parameter (id) to 101

// Execute the query ResultSet rs = pstmt.executeQuery();

1. **CallableStatement: Used to call stored procedures:-**

* The CallableStatement interface in JDBC is specifically designed for executing stored procedures in a database. Stored procedures are precompiled SQL code stored in the database, which can encapsulate complex operations.

1. **Differences between Statement, PreparedStatement, and CallableStatement:-**

