Week 11 : Programming Assignment 5

Due on 2025-04-10, 23:59 IS

Count the Number of Records in a Table Using JDBC

📝 Problem Statement

You are given a table named `players` that stores multiple player records.
Your task is to **count how many records** are present in this table using a SQL `COUNT(*)` query via JDBC.

You need to **write only one line of code** that executes the SQL count query and stores the result in a `ResultSet`.

This introduces the common and useful task of querying for aggregate values from a database (like totals, averages, etc.).

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1		Number of records: 2	Number of records: 2\n	Passed

The due date for submitting this assignment has passed.
1 out of 1 tests passed.
You scored 100.0/100.

Assignment submitted on 2025-04-08, 22:23 IST
Your last recorded submission was :

```java
import java.sql.*;

public class W11_P5 {
    public static void main(String args[]) {
        try {
            // Set SQLite temp directory for NPTEL-compatible runtime
            System.setProperty("org.sqlite.tmpdir", "/tempfs");

            // Connect to database
            Connection conn = DriverManager.getConnection("jdbc:sqlite:/tempfs/db");

            // Create 'players' table and insert sample data
            Statement stmt = conn.createStatement();
            String CREATE_TABLE_SQL = "CREATE TABLE IF NOT EXISTS players (UID INT, First_Name VARCHAR(45), Last_Name V
            stmt.executeUpdate(CREATE_TABLE_SQL);

            // Clear old records and insert fresh test data
            stmt.executeUpdate("DELETE FROM players");
            stmt.executeUpdate("INSERT INTO players VALUES(6, 'Kiran', 'Devi', 20)");
            stmt.executeUpdate("INSERT INTO players VALUES(7, 'Suresh', 'Nair', 23)");

            // SQL query to count total records in table
            String sql = "SELECT COUNT(*) FROM players";
ResultSet rs = stmt.executeQuery(sql);
// Move to first row of the result and print the count
            if (rs.next()) {
                int count = rs.getInt(1); // Get count from first column
                System.out.println("Number of records: " + count);
            }

            // Close resources
            conn.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

Sample solutions (Provided by instructor)

```java
import java.sql.*;

public class W11_P5 {
    public static void main(String args[]) {
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            stmt.executeUpdate("INSERT INTO players VALUES(7, 'Suresh', 'Nair', 23)");

            // SQL query to count total records in table
            String sql = "SELECT COUNT(*) FROM players";
ResultSet rs = stmt.executeQuery(sql); // Run count query and store result in ResultSet

/*
Explanation:
- The query returns one row with one column: COUNT(*)
- rs.next() moves to that row.
- rs.getInt(1) reads the value of the count from column index 1.
- This is a standard way to perform aggregate queries using JDBC.
*/
// Move to first row of the result and print the count
            if (rs.next()) {
                int count = rs.getInt(1); // Get count from first column
                System.out.println("Number of records: " + count);
            }

            // Close resources
            conn.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```