

Assignment 3

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Technology Track : Modern Application Development (Java Spring Boot)

Question : Implement JAVA assignment for JAVA JDBC using JAVA.

```
import java.sql.*;

public class JDBCdemo {

    // JDBC driver and database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/mydatabase";

    // Database credentials
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try {
            // Register JDBC driver
            Class.forName(JDBC_DRIVER);

            // Open a connection
            System.out.println("Connecting to database...");
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conn = DriverManager.getConnection(DB_URL, USER, PASS);

// Execute a query to create a table
System.out.println("Creating table...");
stmt = conn.createStatement();
String sql = "CREATE TABLE Employees " +
    "(id INTEGER not NULL, " +
    " first_name VARCHAR(255), " +
    " last_name VARCHAR(255), " +
    " age INTEGER, " +
    " PRIMARY KEY ( id ))";
stmt.executeUpdate(sql);
System.out.println("Table created successfully!");

// Execute a query to insert data
System.out.println("Inserting data...");
sql = "INSERT INTO Employees (id, first_name, last_name, age) VALUES " +
    "(1, 'John', 'Doe', 30), " +
    "(2, 'Jane', 'Smith', 25), " +
    "(3, 'David', 'Johnson', 40)";
stmt.executeUpdate(sql);
System.out.println("Data inserted successfully!");

// Execute a query to retrieve data
System.out.println("Retrieving data...");
sql = "SELECT id, first_name, last_name, age FROM Employees";
ResultSet rs = stmt.executeQuery(sql);
while (rs.next()) {
    int id = rs.getInt("id");
    String firstName = rs.getString("first_name");
    String lastName = rs.getString("last_name");

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        int age = rs.getInt("age");

        System.out.println("ID: " + id + ", First Name: " + firstName + ", Last Name: " + lastName + ",
Age: " + age);
    }

    rs.close();

    System.out.println("Data retrieved successfully!");

    // Clean up
    stmt.close();
    conn.close();
} catch (SQLException se) {
    se.printStackTrace();
} catch (Exception e) {
    e.printStackTrace();
} finally {
    try {
        if (stmt != null)
            stmt.close();
    } catch (SQLException se2) {
    }
    try {
        if (conn != null)
            conn.close();
    } catch (SQLException se) {
        se.printStackTrace();
    }
}

    System.out.println("Goodbye!");
}
}

```