Assignment 3

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

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            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!");
   }
}
```