

ASSIGNMENT 8

Java util Collection Frameworks and Java Swing

a) Write a program to set up jdbc connection to mysql database and perform various DLL operations by creating a Table EMPLOYEE.

CODE:-

```
import java.sql.*;  
  
public class EmployeeDDL {  
  
    public static void main(String[] args) {  
  
        String url = "jdbc:mysql://localhost:3306/test";  
  
        String user = "root";  
  
        String password = "Sujal@6219";  
  
        try {  
  
            Class.forName("com.mysql.cj.jdbc.Driver");  
  
            Connection con = DriverManager.getConnection(url, user, password);  
  
            System.out.println("Connected to MySQL database successfully!");  
  
            Statement stmt = con.createStatement();  
  
            String createTable = "CREATE TABLE IF NOT EXISTS EMPLOYEE (" +  
  
                "id INT PRIMARY KEY AUTO_INCREMENT, " +  
  
                "name VARCHAR(50), " +  
  
                "designation VARCHAR(50), " +  
  
                "salary DOUBLE);";  
  
            stmt.executeUpdate(createTable);  
  
            System.out.println("EMPLOYEE table created successfully!");  
  
            String alterTableAdd = "ALTER TABLE EMPLOYEE ADD COLUMN department  
VARCHAR(50);";  
  
            stmt.executeUpdate(alterTableAdd);  
        }  
    }  
}
```

```

        System.out.println("Column 'department' added successfully!");

        String renameColumn = "ALTER TABLE EMPLOYEE RENAME COLUMN department TO
dept";
        stmt.executeUpdate(renameColumn);

        System.out.println("Column renamed successfully!");

        String dropColumn = "ALTER TABLE EMPLOYEE DROP COLUMN dept";
        stmt.executeUpdate(dropColumn);

        System.out.println("Column dropped successfully!");

        con.close();

    } catch (Exception e) {
        e.printStackTrace();
    }
}

}

```

b)With reference to previous question, write a java program to connect to database and perform various DML commands on the created table.

CODE:-

```

import java.sql.*;

public class EmployeeDML {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/test";
        String user = "root";
        String password = "Sujal@6219";

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, password);
            System.out.println("Connected to MySQL database successfully!");
        }
    }
}

```

```

Statement stmt = con.createStatement();

String insert = "INSERT INTO EMPLOYEE (name, designation, salary) VALUES " +
    "('Sujal', 'Software Engineer', 820000), " +
    "('Rahul', 'Data Analyst', 620000), " +
    "('Arjun', 'Project Manager', 950000);"

stmt.executeUpdate(insert);

System.out.println("Records inserted successfully!");

String update = "UPDATE EMPLOYEE SET salary = 700000 WHERE name = 'Priya'";
stmt.executeUpdate(update);

System.out.println("Record updated successfully!");

String delete = "DELETE FROM EMPLOYEE WHERE name = 'Arjun'";
stmt.executeUpdate(delete);

System.out.println("Record deleted successfully!");

con.close();

} catch (Exception e) {
    e.printStackTrace();
}

}

}

```

c) Use select command to extract request based information from the database using JDBC.

CODE:-

```

import java.sql.*;

public class EmployeeSelect {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/test";
        String user = "root";

```

```
String password = "Sujal@6219";  
try {  
    Class.forName("com.mysql.cj.jdbc.Driver");  
    Connection con = DriverManager.getConnection(url, user, password);  
    System.out.println("Connected to MySQL database successfully!");  
    Statement stmt = con.createStatement();  
    String query = "SELECT * FROM EMPLOYEE";  
    ResultSet rs = stmt.executeQuery(query);  
    System.out.println("\nEMPLOYEE TABLE DATA:");  
    System.out.printf("%-5s %-15s %-15s %-10s%n", "ID", "NAME", "DESIGNATION",  
    "SALARY");  
    while (rs.next()) {  
        int id = rs.getInt("id");  
        String name = rs.getString("name");  
        String designation = rs.getString("designation");  
        double salary = rs.getDouble("salary");  
        System.out.printf("%-5d %-15s %-15s %-10.2f%n", id, name, designation, salary);  
    }  
    con.close();  
} catch (Exception e) {  
    e.printStackTrace();  
}  
}
```
