

# ASSIGNMENT 8

## Java util Collection Frameworks and Java Swing

a) Write a program to set up jdbc connection to mysql database and perform various DDL 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();

    }

}

}

```

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**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();
}

}

}

```

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**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();
}
}
```

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