Introduction

This article explains how to set up a database connection with a Swing GUI in Java. The NetBeans IDE is used to create the sample examples.

Fetching Records from Database using Swing GUI

For creating this app we need the following files:

1. Java file (SwingDatabaseApp.java)
2. SQL table (emp.sql)

1. SwingDatabaseApp.java

This Java consists of the entire logic. First of all we initialize JFrame components using a constructor then create a database connection and finally set the database value to the textfield and display it using a constructor.

2. emp.sql

For fetching records we need a database table; for that we create an "emp" table in our database.

Syntax

emp.sql

```
create table emp
 (
   uname varchar2(20), umail varchar2(30),
   upass varchar2(20), ucountry varchar2(20)
 );
```

Insert some rows

The following SQL will insert some rows in it:

```
1. insert into emp values ('sandeep', 'sandy05.1991@gmail.com', 'welcome', 'India');
2. insert into emp values ('rahul', 'rahul@gmail.com' , '123', 'India');
```

Now let's start creating this app. Use the following procedure to do that in the NetBeans IDE.

Step 1

Open the NetBeans IDE.

Step 2
Choose "Java" -> "Java application" as shown below.

Step 3
Type your project name as "SwingDatabaseApp" as in the following.

Step 4

Now provide the following code in the "SwingDatabaseApp.java" file.

SwingDatabaseApp.java

```
import javax.swing.*;
import java.awt.event.*;
import java.awt.*;
import java.sql.*;

public class SwingDatabaseApp extends JFrame {

//Initializing Components
   JLabel lb, lb1, lb2, lb3, lb4;
   JTextField tf1, tf2, tf3, tf4;

   //Creating Constructor for initializing JFrame components
   SwingDatabaseApp() {
      //Providing Title
      super("Fetching Student Information");

      lb = new JLabel("Fetching Student Information From Database");
      lb.setBounds(20, 50, 450, 20);
      lb.setForeground(Color.red);
      lb.setFont(new Font("Serif", Font.BOLD, 20));
      setVisible(true);
      setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      setSize(500, 500);
      lb1 = new JLabel("U_Name:");
      lb1.setBounds(50, 105, 100, 20);
      tf1 = new JTextField(50);
      tf1.setBounds(160, 105, 100, 20);
      lb2 = new JLabel("U_Mail:");
      lb2.setBounds(50, 135, 100, 20);
      tf2 = new JTextField(100);
      tf2.setBounds(160, 135, 200, 20);
      lb3 = new JLabel("U_Pass:");
      lb3.setBounds(50, 165, 100, 20);
      tf3 = new JTextField(50);
      tf3.setBounds(160, 165, 100, 20);
      lb4 = new JLabel("U_Country:");
      lb4.setBounds(50, 200, 100, 20);
      tf4 = new JTextField(50);
      tf4.setBounds(160, 200, 100, 20);
      setLayout(null);

      //Add components to the JFrame
      add(lb);
      add(lb1);
      add(tf1);
      add(lb2);
      add(tf2);
      add(lb3);
      add(tf3);
      add(lb4);
```

```
        add(tf4);

        //Set TextField Editable False
        tf1.setEditable(false);
        tf2.setEditable(false);
        tf3.setEditable(false);
        tf4.setEditable(false);

        //Create DataBase Coonection and Fetching Records for uname='sandeep'
        try {
            String str = "sandeep";
            Class.forName("oracle.jdbc.driver.OracleDriver");
            Connection con = DriverManager.getConnection("jdbc:oracle:thin:@mcndesktop07:1521",
"sandeep", "welcome");
            PreparedStatement st = con.prepareStatement("select * from emp where uname=?");
            st.setString(1, str);

            //Excuting Query
            ResultSet rs = st.executeQuery();
            while (rs.next()) {
                String s = rs.getString(1);
                String s1 = rs.getString(2);
                String s2 = rs.getString(3);
                String s3 = rs.getString(4);

                //Sets Records in TextFields.
                tf1.setText(s);
                tf2.setText(s1);
                tf3.setText(s2);
                tf4.setText(s3);
            }
        } //Create Exception Handler
        catch (Exception ex) {
            System.out.println(ex);
        }
    }
//Running Constructor

    public static void main(String args[]) {
        new SwingDatabaseApp();
    }
}
```

Step 5

Now our project is ready to run. Right-click on the project menu, then choose "Run". The following output will be generated.

Step 6
Now change the uname and this time we are fetching records for "rahul".
String str = "rahul";

- fetching records in