```java
package jdbc;

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/**
 *
 * @author 4093
 */

import javax.swing.*;
import java.sql.*;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;

public class JDBC extends javax.swing.JFrame {

    /**
     * Creates new form JDBC
     */
    Connection con;
    Statement st;
    PreparedStatement ps;
    ResultSet rs;
    public JDBC() {
        initComponents();
        try{
            Class.forName("oracle.jdbc.OracleDriver");
            JOptionPane.showMessageDialog(this,"Driver Loaded!");

            try {
                con =
DriverManager.getConnection("jdbc:oracle:thin:@10.6.4.33:1521:orcl","4093","nhk2000
");
                JOptionPane.showMessageDialog(this,"Connected to Oracle
database!");
            }
            catch (SQLException ex) {
                Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
                JOptionPane.showMessageDialog(this,ex.getMessage());
            }
        }
        catch(ClassNotFoundException ex){
            Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
            JOptionPane.showMessageDialog(this,ex.getMessage());
        }
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {
```

```java
name = new javax.swing.JTextField();
designation = new javax.swing.JTextField();
salary = new javax.swing.JTextField();
id = new javax.swing.JTextField();
Name = new javax.swing.JLabel();
Designation = new javax.swing.JLabel();
Salary = new javax.swing.JLabel();
EmployeeID = new javax.swing.JLabel();
insert = new javax.swing.JButton();
update = new javax.swing.JButton();
delete = new javax.swing.JButton();
search = new javax.swing.JButton();
jLabel1 = new javax.swing.JLabel();
Bonus = new javax.swing.JLabel();
bonus = new javax.swing.JTextField();
clear = new javax.swing.JButton();
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

name.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        nameActionPerformed(evt);
    }
});
designation.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        designationActionPerformed(evt);
    }
});
salary.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        salaryActionPerformed(evt);
    }
});
id.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        idActionPerformed(evt);
    }
});
Name.setText("Name");
Designation.setText("Designation");
Salary.setText("Salary");
EmployeeID.setText("Employee ID");
insert.setText("Insert");
insert.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        insertActionPerformed(evt);
    }
});
update.setText("Update");
update.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        updateActionPerformed(evt);
    }
});
delete.setText("Delete");
delete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        deleteActionPerformed(evt);
    }
});
```

```java
        search.setText("Search");
        search.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                searchActionPerformed(evt);
            }
        });
        jLabel1.setText("EMPLOYEE DATABASE");
        Bonus.setText("Bonus");
        bonus.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                bonusActionPerformed(evt);
            }
        });
        clear.setText("Clear");
        clear.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                clearActionPerformed(evt);
            }
        });
        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGap(143, 143, 143)
                        .addComponent(jLabel1))
                    .addGroup(layout.createSequentialGroup()
                        .addGap(44, 44, 44)
                        .addComponent(insert,
javax.swing.GroupLayout.PREFERRED_SIZE, 73, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement
.RELATED)
                        .addComponent(update,
javax.swing.GroupLayout.PREFERRED_SIZE, 75, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement
.RELATED)
                        .addComponent(delete,
javax.swing.GroupLayout.PREFERRED_SIZE, 75, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement
.RELATED)
                        .addComponent(search,
javax.swing.GroupLayout.PREFERRED_SIZE, 74,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(layout.createSequentialGroup()
                        .addGap(61, 61, 61)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)
                            .addComponent(Name)
                            .addComponent(EmployeeID)
                            .addComponent(Designation)
                            .addComponent(Salary)
                            .addComponent(Bonus))
                        .addGap(43, 43, 43)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)
                            .addComponent(id)
```

```java
                                    .addComponent(name)
                                    .addComponent(bonus)
                                    .addComponent(salary)
                                    .addComponent(designation))))
                        .addGap(38, 38, 38))
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                        .addGap(0, 0, Short.MAX_VALUE)
                        .addComponent(clear)
                        .addGap(168, 168, 168))
                );
                layout.setVerticalGroup(
                    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGap(18, 18, 18)
                        .addComponent(jLabel1)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELAT
ED)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(EmployeeID)
                            .addComponent(id, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED
)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(name, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(Name))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED
)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(designation,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(Designation))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED
)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(salary, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(Salary))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED
)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(bonus, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(Bonus))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELAT
ED)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)
                            .addComponent(update)
                            .addComponent(insert)
                            .addComponent(delete)
                            .addComponent(search))
```

```java
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED
)
                .addComponent(clear)
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
        );
        pack();
    }// </editor-fold>
    private void idActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
    private void nameActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
    private void designationActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
    private void salaryActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
    private void cleartext(){
        id.setText("");
        name.setText("");
        designation.setText("");
        salary.setText("");
        bonus.setText("");
    }
    private void insertActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
         try {
            String sql = "insert into employees values(?,?,?,?,?)";
            ps = con.prepareStatement(sql);
            ps.setString(1, id.getText());
            ps.setString(2, name.getText());
            ps.setString(3, designation.getText());
            ps.setString(4, salary.getText());
            ps.setString(5, bonus.getText());
            ps.execute();
            JOptionPane.showMessageDialog(this,"Inserted!");
            cleartext();
        }
        catch (SQLException ex) {
            Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
            JOptionPane.showMessageDialog(this,ex.getMessage());
        }
    }
    private void updateActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        try{
            String sql = "update employees set
name=?,designation=?,salary=?,bonus=? where id=?";
            ps = con.prepareStatement(sql);
            ps.setString(5, id.getText());
            ps.setString(1, name.getText());
            ps.setString(2, designation.getText());
            ps.setString(3, salary.getText());
            ps.setString(4, bonus.getText());
            ps.execute();
            JOptionPane.showMessageDialog(this, "Updated!");
            cleartext();
```

```java
        }
        catch (SQLException ex) {
            Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
            JOptionPane.showMessageDialog(this,ex.getMessage());
        }
    }
    private void deleteActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        try{
            String sql = "delete from employees where id=?";
            ps = con.prepareStatement(sql);
            ps.setString(1, id.getText());
            ps.execute();
            JOptionPane.showMessageDialog(this, "Deleted!");
            cleartext();
        }
        catch (SQLException ex) {
            Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
            JOptionPane.showMessageDialog(this,ex.getMessage());
        }
    }
    private void searchActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        try {
            // TODO add your handling code here:
            String sql = "select * from employees where id = '"+id.getText()+"'";
            st =
con.createStatement(ResultSet.TYPE_SCROLL_SENSITIVE,ResultSet.CONCUR_UPDATABLE);
            rs = st.executeQuery(sql);
            if(rs.next()){
                id.setText(rs.getString(1));
                name.setText(rs.getString(2));
                designation.setText(rs.getString(3));
                salary.setText(rs.getString(4));
                bonus.setText(rs.getString(5));
                JOptionPane.showMessageDialog(this, "Record Found!");
            }
            else
                JOptionPane.showMessageDialog(this, "Record Not Found!");
        }
        catch (SQLException ex) {
            Logger.getLogger(JDBC.class.getName()).log(Level.SEVERE, null, ex);
            JOptionPane.showMessageDialog(this, ex.getMessage());
        }
    }
    private void bonusActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
    private void clearActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        cleartext();
    }
    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code
(optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay with the
```

```java
default look and feel.
         * For details see http://download.oracle.com/javase/tutorial/uiswing/
lookandfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(JDBC.class.getName()).log(java.util.logging.Leve
l.SEVERE, null, ex);
        } catch (InstantiationException ex)
{ java.util.logging.Logger.getLogger(JDBC.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
        } catch (IllegalAccessException ex)
{ java.util.logging.Logger.getLogger(JDBC.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex)
{  java.util.logging.Logger.getLogger(JDBC.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        }
        //</editor-fold>
        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new JDBC().setVisible(true);
            }
        });
    }
    // Variables declaration - do not modify
    private javax.swing.JLabel Bonus;
    private javax.swing.JLabel Designation;
    private javax.swing.JLabel EmployeeID;
    private javax.swing.JLabel Name;
    private javax.swing.JLabel Salary;
    private javax.swing.JTextField bonus;
    private javax.swing.JButton clear;
    private javax.swing.JButton delete;
    private javax.swing.JTextField designation;
    private javax.swing.JTextField id;
    private javax.swing.JButton insert;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JTextField name;
    private javax.swing.JTextField salary;
    private javax.swing.JButton search;
    private javax.swing.JButton update;
    // End of variables declaration
}
```

EMPLOYEE DATABASE

Employee ID   E023

Name

Designation

Salary

Bonus

[Insert] [Update] [Delete] [Search]

[Clear]

Message

Deleted!

[OK]

EMPLOYEE DATABASE

Employee ID   E020

Name   KANDA

Designation   MANAGER

Salary   100000

Bonus   50000

[Insert] [Update] [Delete] [Search]

[Clear]

Message

Inserted!

[OK]