

Assignment 6

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Class: CS-D

Division: D

Batch: B3

Problem Statement

Implement various operations like add, update and delete the data using JDBC Connectivity.

home.java

```
package assignment6;

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;

import java.awt.Font;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.Statement;
import java.awt.event.ActionEvent;

public class home {

    private JFrame frame;
    private JTextField textField_roll;
    private JTextField textField_name;
    private JTextField textField_class;
    //String driverName = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost:3306/assignment6";
    static final String USER = "root";
    static final String PASS = "";

    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
```

```

        public void run() {
            try {
                home window = new home();
                window.frame.setVisible(true);
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    });
}

/**
 * Create the application.
 */
public home() {
    initialize();
}

/**
 * Initialize the contents of the frame.
 */
private void initialize() {
    frame = new JFrame();
    frame.setBounds(100, 100, 450, 300);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.getContentPane().setLayout(null);

    JLabel lblNewLabel_roll = new JLabel("Roll No");
    lblNewLabel_roll.setFont(new Font("Tahoma", Font.BOLD, 12));
    lblNewLabel_roll.setBounds(90, 56, 43, 14);
    frame.getContentPane().add(lblNewLabel_roll);

    JLabel lblNewLabel = new JLabel("Student Login");
    lblNewLabel.setFont(new Font("Tahoma", Font.BOLD, 14));
    lblNewLabel.setBounds(165, 11, 111, 35);
    frame.getContentPane().add(lblNewLabel);

    textField_roll = new JTextField();
    textField_roll.setFont(new Font("Tahoma", Font.PLAIN, 12));
    textField_roll.setBounds(165, 53, 166, 20);
    frame.getContentPane().add(textField_roll);
    textField_roll.setColumns(10);

    JLabel lblNewLabel_name = new JLabel("Name: ");
    lblNewLabel_name.setFont(new Font("Tahoma", Font.BOLD, 12));
    lblNewLabel_name.setBounds(90, 93, 46, 14);
    frame.getContentPane().add(lblNewLabel_name);

    textField_name = new JTextField();
    textField_name.setFont(new Font("Tahoma", Font.PLAIN, 12));
    textField_name.setBounds(165, 90, 166, 20);
    frame.getContentPane().add(textField_name);
    textField_name.setColumns(10);

    JLabel lblNewLabel_class = new JLabel("Marks");

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lblNewLabel_class.setFont(new Font("Tahoma", Font.BOLD, 12));
lblNewLabel_class.setBounds(90, 137, 46, 14);
frame.getContentPane().add(lblNewLabel_class);

textField_class = new JTextField();
textField_class.setBounds(165, 135, 166, 20);
frame.getContentPane().add(textField_class);
textField_class.setColumns(10);

JButton btnNewButton = new JButton("ADD");
btnNewButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        String roll = textField_roll.getText();
        String sName = textField_name.getText();
        String class1 = textField_class.getText();

try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection connection =
DriverManager.getConnection(DB_URL,USER,PASS);
            String query = "INSERT INTO student values('" + roll + "','" + sName + "','" +
class1 + "')";

            Statement sta = connection.createStatement();
            int x = sta.executeUpdate(query);

            JOptionPane.showMessageDialog(btnNewButton,"data for "+ sName + "
added sucessfully ");

            connection.close();
        } catch (Exception exception) {
            exception.printStackTrace();
        }
    }

});

btnNewButton.setFont(new Font("Tahoma", Font.BOLD, 13));
btnNewButton.setBounds(28, 201, 89, 23);
frame.getContentPane().add(btnNewButton);

JButton btnDisplay = new JButton("DISPLAY");
btnDisplay.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        new display().showTableData();
    }
});
btnDisplay.setFont(new Font("Tahoma", Font.BOLD, 13));
btnDisplay.setBounds(127, 201, 109, 23);
frame.getContentPane().add(btnDisplay);

JButton btnUpdate = new JButton("UPDATE");
btnUpdate.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        new update().updateTableData();
    }
}

```

```

    });
    btnUpdate.setFont(new Font("Tahoma", Font.BOLD, 13));
    btnUpdate.setBounds(246, 201, 89, 23);
    frame.getContentPane().add(btnUpdate);

    JButton btnDelete = new JButton("DELETE");
    btnDelete.addActionListener(new ActionListener() {
        public void actionPerformed(ActionEvent e) {
            new delete().deleteTableData();
        }
    });
    btnDelete.setFont(new Font("Tahoma", Font.BOLD, 13));
    btnDelete.setBounds(345, 201, 89, 23);
    frame.getContentPane().add(btnDelete);
}
}

```

InputDialogFrame.java

```

package assignment6;

import java.awt.Color;
import javax.swing.JFrame;
import javax.swing.JOptionPane;

public class InputDialogFrame extends JFrame{

    /**
     *
     */
    //private static final long serialVersionUID = 1L;

    public InputDialogFrame() {

        getContentPane().setBackground(Color.DARK_GRAY);
        setTitle("Input Dialog in Frame");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setVisible(true);
        setResizable(false);
        setSize(400, 300);
        getContentPane().setLayout(null);

    }
    void closeIt(){

        this.getContentPane().setVisible(false);
        this.dispose();

    }
}

```

update.java

```
package assignment6;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.awt.*;
import javax.swing.JOptionPane;

public class update {
    //String driverName = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost:3306/assignment6";
    static final String USER = "root";
    static final String PASS = "";
    public void updateTableData() {

        try {
            Connection conn = DriverManager.getConnection(DB_URL,USER,PASS);
            InputDialogFrame frame = new InputDialogFrame();
            String m1 = JOptionPane.showInputDialog(frame, "Enter rollNo to update a record");
            if(m1.isEmpty()){
                frame.closeIt();
            }
            String m = JOptionPane.showInputDialog(frame, "New value for Student name");
            if(m.isEmpty()){
                frame.closeIt();
            }
            String usql = "update student set Name=? WHERE RollNo =?";
            java.sql.PreparedStatement pst = conn.prepareStatement(usql);
            pst.setString(1,m);
            pst.setString(2,m1);
            pst.executeUpdate();
            JOptionPane.showMessageDialog(null, "record updated");
        } catch (SQLException e ) {
            JOptionPane.showMessageDialog(null, e);
        }
    }
}
```

delete.java

```
package assignment6;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

import javax.swing.JOptionPane;

public class delete {

    String driverName = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost:3306/assignment6";
    static final String USER = "root";
    static final String PASS = "";

    public void deleteTableData() {

        try {
            Connection conn = DriverManager.getConnection(DB_URL, USER, PASS);
            InputDialogFrame frame = new InputDialogFrame();
            String m = JOptionPane.showInputDialog(frame, "Enter RollNo to delete a record");
            if (m.isEmpty()) {
                frame.closeIt();
            }

            String usql = "delete from student WHERE RollNo =?";
            java.sql.PreparedStatement pst = conn.prepareStatement(usql);
            pst.setString(1, m);
            pst.executeUpdate();
            JOptionPane.showMessageDialog(null, "Record Deleted!");
        } catch (SQLException e) {
            JOptionPane.showMessageDialog(null, e);
        }

    }
}
```

display.java

```
package assignment6;

import java.awt.BorderLayout;
import java.sql.*;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.JScrollPane;
import javax.swing.JTable;
import javax.swing.table.DefaultTableModel;

//import com.mysql.jdbc.PreparedStatement;

public class display {

    //String driverName = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost:3306/assignment6";
    static final String USER = "root";
    static final String PASS = "";
    public void showTableData() {

        JFrame frame1 = new JFrame("Database Result");
        JTable table;
        PreparedStatement pst;
        String[] columnNames = {"Roll No","Student Name" ,"Marks"};

        frame1.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        frame1.setLayout(new BorderLayout());
        DefaultTableModel model = new DefaultTableModel();

        model.setColumnIdentifiers(columnNames);

        table = new JTable();

        table.setModel(model);

        table.setAutoResizeMode(JTable.AUTO_RESIZE_ALL_COLUMNS);

        table.setFillsViewportHeight(true);

        JScrollPane scroll = new JScrollPane(table);

        scroll.setHorizontalScrollBarPolicy(

            JScrollPane.HORIZONTAL_SCROLLBAR_AS_NEEDED);
```

```

scroll.setVerticalScrollBarPolicy(

    JScrollPane.VERTICAL_SCROLLBAR_AS_NEEDED);

try {
    //Class.forName(driverName);
    Connection con = DriverManager.getConnection(DB_URL,USER,PASS);
    String sql = "select * from student";
    Statement ps = con.createStatement();
    ResultSet rs = ps.executeQuery(sql);

    int i = 0;
    while(rs.next())
    {
        int roll = rs.getInt(1);
        String sname =rs.getString(2);
        String class1 =rs.getString(3);

        model.addRow(new Object[]{roll,sname,class1 });
        i++;
    }
    if(i <1)
    {
        JOptionPane.showMessageDialog(null, "No Record Found","Error",
        JOptionPane.ERROR_MESSAGE);
    }
    if(i ==1)
    {
        System.out.println(i+" Record Found");
    }
    else
    {
        System.out.println(i+" Records Found");
    }

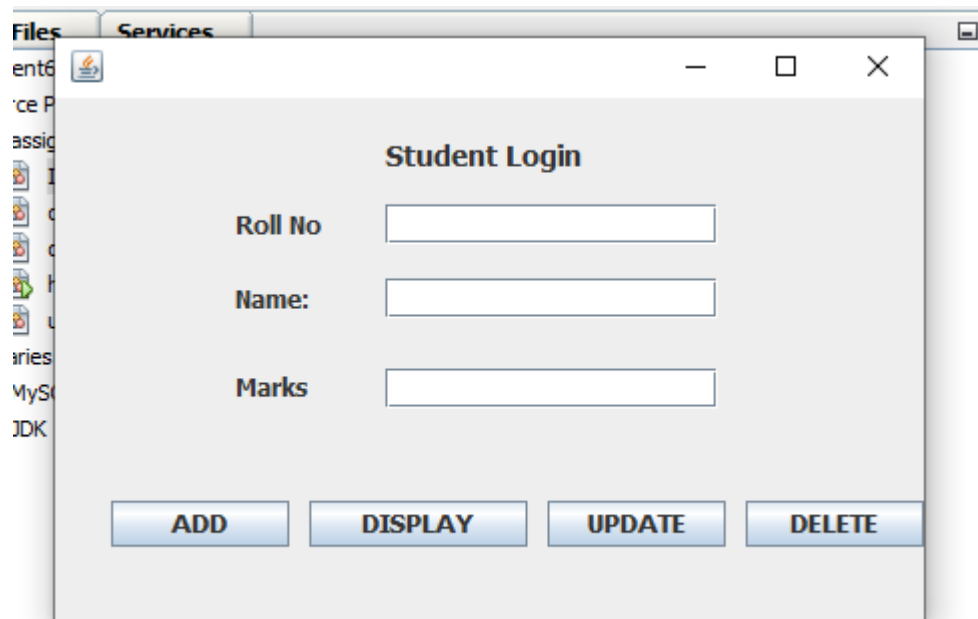
} catch (Exception ex) {
    JOptionPane.showMessageDialog(null, ex.getMessage(), "Error",
JOptionPane.ERROR_MESSAGE);
}
frame1.add(scroll);
frame1.setVisible(true);
frame1.setSize(400,300);

}

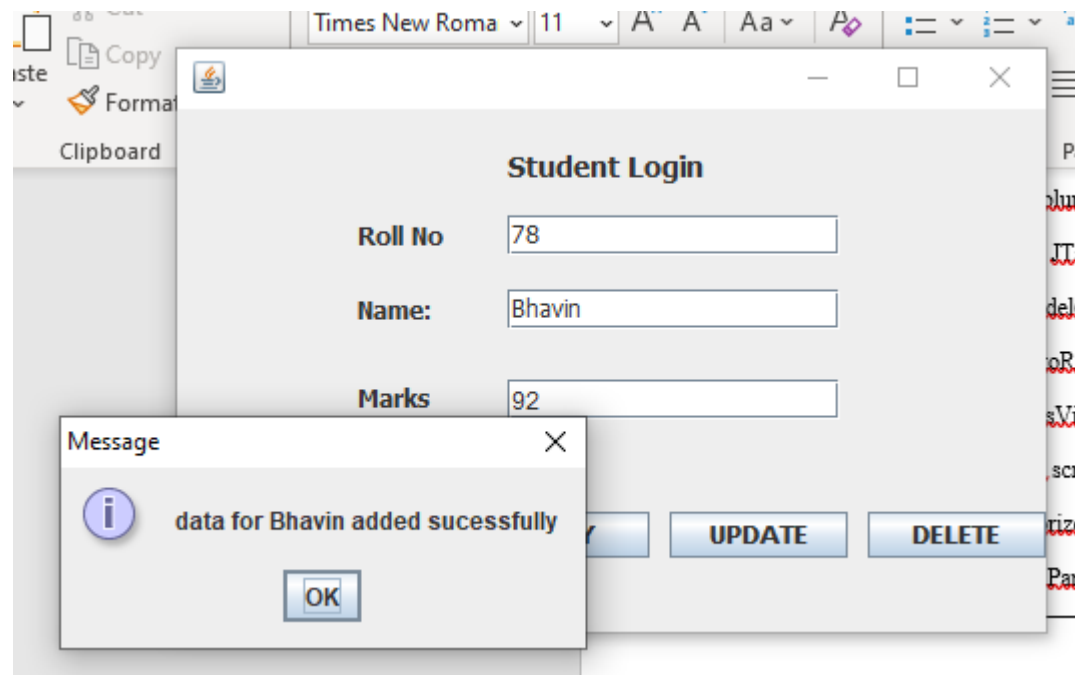
}

```


Expected Output:









The screenshot shows a window titled "Student Login" with a light gray background. It contains three input fields: "Roll No", "Name:", and "Marks". Below these fields are four buttons: "ADD", "DISPLAY", "UPDATE", and "DELETE". The window is overlaid on a background showing a file explorer and a text editor.






The screenshot shows the "Student Login" window with the input fields filled: "Roll No" contains "78", "Name:" contains "Bhavin", and "Marks" contains "92". A "Message" dialog box is open in the foreground, displaying the message "data for Bhavin added sucessfully" with an "OK" button. The background shows a text editor with a menu bar and a list of files.










☐ Show all | Number of rows: 25 ▾ | Filter rows:


+ Options

				RollNo	Name	Marks
<input type="checkbox"/>		Edit		Copy		Delete
				2	Metavin	98
<input type="checkbox"/>		Edit		Copy		Delete
				91	Uma	98

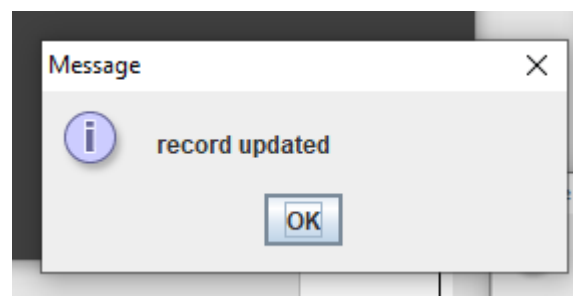
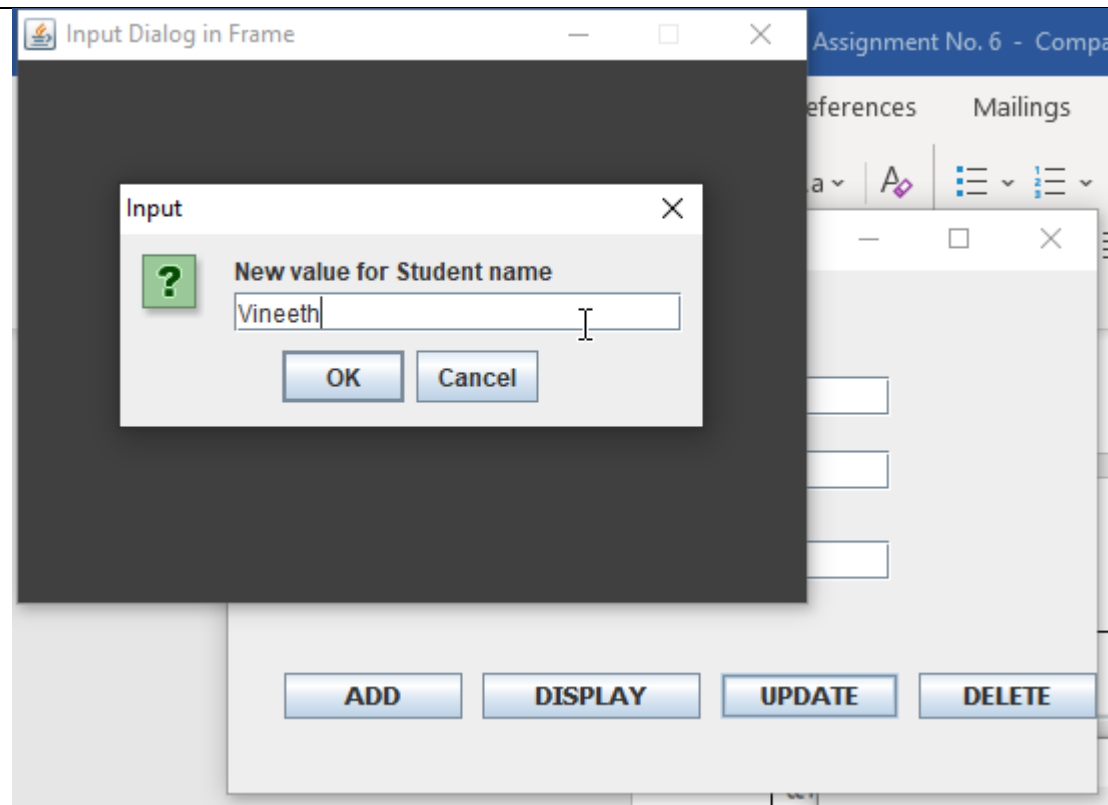
↑ ☐ Check all | With selected:  Edit  Copy  Delete

+ Options

				RollNo	Name	Marks
<input type="checkbox"/>		Edit		Copy		Delete
				2	Metavin	98
<input type="checkbox"/>		Edit		Copy		Delete
				78	Bhavin	92
<input type="checkbox"/>		Edit		Copy		Delete
				91	Uma	98

 Database Result

Roll No	Student Name	Marks
2	Metavin	98
78	Bhavin	92
91	Uma	98



Database Result

Roll No	Student Name	Marks
2	Vineeth	98
78	Bhavin	92
91	Uma	98

