**Assignment 6**

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**Problem Statement**

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

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| **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");  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:** |