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|  | **LARAIB AYOUB 21SW120**  **LAB TASK**  **LAB NO:13**  **SUBMITTED BY :SIR ASMATULLAH** |

Lab 13 task

GITHUB link (<https://github.com/hassan-ahmed90/DataBaseLaB>);

**STUDENT REGISTRATION FORM**

import org.json.simple.JSONObject;  
import org.json.simple.parser.JSONParser;  
import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
import java.io.FileReader;  
import java.io.FileWriter;  
import java.sql.\*;  
  
public class Main{  
 static Connection *connection*=null;  
 JFrame frame;  
 JPanel panel;  
 JLabel name,roll,batch,section,gender,qualification,address,country;  
 JTextField t1,t2,t3,t4;  
 JTextArea textArea;  
 JCheckBox c1,c2,c3,c4;  
 String[] countryList={"Pakistan","India","Australia","England","Sri Lanka","Bangladesh","New Zealand"};  
 JComboBox<String> comboBox=new JComboBox<>(countryList);  
 JRadioButton r1,r2;  
 JButton b1,b2,b3,b4;  
 ButtonGroup buttonGroup1,buttonGroup2;  
 JSONObject jsonObject=new JSONObject();  
  
 Main()  
 {  
 frame=new JFrame("Student Registration");  
 panel=new JPanel();  
 name=new JLabel("Name: ");  
 roll=new JLabel("Roll Number: ");  
 batch=new JLabel("Batch: ");  
 section=new JLabel("Section: ");  
 gender=new JLabel("Gender: ");  
 qualification=new JLabel("Qualification");  
 address=new JLabel("Address");  
 country=new JLabel("Country");  
 c1=new JCheckBox("Matric");  
 c2=new JCheckBox("Intermediate");  
 c3=new JCheckBox("Graduate");  
 c4=new JCheckBox("Post Graduate");  
 buttonGroup1=new ButtonGroup();  
 buttonGroup2=new ButtonGroup();  
 t1=new JTextField();  
 t2=new JTextField();  
 t3=new JTextField();  
 t4=new JTextField();  
 textArea=new JTextArea();  
 r1=new JRadioButton("Male");  
 r2=new JRadioButton("Female");  
 b1=new JButton("Save");  
 b2=new JButton("Print");  
 b3=new JButton("Database");  
 b4=new JButton("Show Database");  
 panel.setLayout(null);  
 frame.setSize(700,700);  
 panel.setSize(700,700);  
 panel.setBackground(Color.*yellow*);  
 name.setBounds(50,50,100,50);  
 roll.setBounds(50,100,100,50);  
 batch.setBounds(50,150,100,50);  
 section.setBounds(50,200,100,50);  
 gender.setBounds(50,250,100,50);  
 qualification.setBounds(50,300,100,50);  
 address.setBounds(50,400,100,50);  
 country.setBounds(50,490,100,50);  
 c1.setBounds(180,310,100,30);  
 c2.setBounds(330,310,100,30);  
 c3.setBounds(180,360,100,30);  
 c4.setBounds(330,360,120,30);  
 t1.setBounds(180,60,150,30);  
 t2.setBounds(180,110,150,30);  
 t3.setBounds(180,160,150,30);  
 t4.setBounds(180,210,150,30);  
 textArea.setBounds(180,400,220,75);  
 comboBox.setBounds(180,500,200,30);  
 comboBox.setEditable(false);  
 r1.setBounds(180,260,70,30);  
 r2.setBounds(280,260,70,30);  
 b1.setBounds(50,600,70,30);  
 b2.setBounds(140,600,70,30);  
 b3.setBounds(230,600,70,30);  
 b4.setBounds(320,600,130,30);  
 buttonGroup1.add(r1);  
 buttonGroup1.add(r2);  
 buttonGroup2.add(c1);  
 buttonGroup2.add(c2);  
 buttonGroup2.add(c3);  
 buttonGroup2.add(c4);  
 panel.add(name);  
 panel.add(roll);  
 panel.add(batch);  
 panel.add(section);  
 panel.add(gender);  
 panel.add(qualification);  
 panel.add(address);  
 panel.add(country);  
 panel.add(c1);  
 panel.add(c2);  
 panel.add(c3);  
 panel.add(c4);  
 panel.add(t1);  
 panel.add(t2);  
 panel.add(t3);  
 panel.add(t4);  
 panel.add(textArea);  
 panel.add(comboBox);  
 panel.add(r1);  
 panel.add(r2);  
 panel.add(b1);  
 panel.add(b2);  
 panel.add(b3);  
 panel.add(b4);  
 frame.add(panel);  
 frame.setVisible(true);  
 frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
  
  
  
 b1.addActionListener(new ActionListener() {  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 saveData();  
 }  
 });  
  
 b2.addActionListener(new ActionListener() {  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 showData();  
 }  
 });  
 b3.addActionListener(new ActionListener(){  
 @Override  
 public void actionPerformed(ActionEvent e){  
 database();  
 }  
 });  
 b4.addActionListener(new ActionListener() {  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 showDatabase();  
 frame.dispose();  
 }  
 });  
  
 }  
 public void saveData()  
 {  
  
 String gender;  
 String qualification;  
 if(c1.isSelected())qualification="Matric";  
 else if(c2.isSelected())qualification="Intermediate";  
 else if(c3.isSelected())qualification="Graduate";  
 else qualification="Post Graduate";  
 if(r1.isSelected())gender="Male";  
 else gender="Female";  
 String name=t1.getText();  
 String rollNumber=t2.getText();  
 String batch=t3.getText();  
 String section=t4.getText();  
 String country=(String)comboBox.getSelectedItem();  
 String address=textArea.getText();  
 jsonObject.put("Name",name);  
 jsonObject.put("RollNumber",rollNumber);  
 jsonObject.put("Batch",batch);  
 jsonObject.put("Section",section);  
 jsonObject.put("Gender",gender);  
 jsonObject.put("Qualification",qualification);  
 jsonObject.put("Country",country);  
 jsonObject.put("Address",address);  
 try {  
 FileWriter file=new FileWriter("MyFile.json");  
 file.write(jsonObject.toJSONString());  
 file.close();  
 JOptionPane.*showMessageDialog*(null,"Data stored successfully.");  
 }catch(Exception e)  
 {  
 JOptionPane.*showMessageDialog*(null,e.getMessage());  
 }  
 }  
 public void showData()  
 {  
 try {  
 JSONParser parser = new JSONParser();  
 Object obj = parser.parse(new FileReader("MyFile.json"));  
 JSONObject object = (JSONObject) obj;  
 String name = (String) object.get("Name");  
 String rollNumber = (String) object.get("RollNumber");  
 String batch = (String) object.get("Batch");  
 String section = (String) object.get("Section");  
 String gender = (String) object.get("Gender");  
 String qualification = (String) object.get("Qualification");  
 String country = (String) object.get("Country");  
 String address = (String) object.get("Address");  
 frame.remove(panel);  
 Panel panel1 = new Panel();  
 panel1.setLayout(null);  
 panel1.setBackground(Color.*orange*);  
 panel1.setSize(700, 700);  
 JLabel l1, l2, l3, l4, l5, l6, l7, l8;  
 l1 = new JLabel("Name : " + name);  
 l2 = new JLabel("Roll #: " + rollNumber);  
 l3 = new JLabel("Batch: " + batch);  
 l4 = new JLabel("Section: " + section);  
 l5 = new JLabel("Gender: " + gender);  
 l6 = new JLabel("Qualification: " + qualification);  
 l7 = new JLabel("Country: " + country);  
 l8 = new JLabel("Address: " + address);  
 l1.setBounds(10, 20, 200, 50);  
 l2.setBounds(10, 70, 200, 50);  
 l3.setBounds(10, 120, 200, 50);  
 l4.setBounds(10, 170, 200, 50);  
 l5.setBounds(10, 220, 200, 50);  
 l6.setBounds(10, 270, 200, 50);  
 l7.setBounds(10, 320, 200, 50);  
 l8.setBounds(10, 370, 200, 50);  
 panel1.add(l1);  
 panel1.add(l2);  
 panel1.add(l3);  
 panel1.add(l4);  
 panel1.add(l5);  
 panel1.add(l6);  
 panel1.add(l7);  
 panel1.add(l8);  
 frame.add(panel1);  
 frame.setVisible(true);  
 frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 }catch(Exception e)  
 {  
 JOptionPane.*showMessageDialog*(null,e.getMessage());  
 }  
  
 }  
 public void database(){  
 try{  
 String query="insert into students(Name,RollNumber,Batch,Section,Gender,Qualification,Country,Address) values(?,?,?,?,?,?,?,?)";  
 PreparedStatement ps=*connection*.prepareStatement(query);  
 String gender;  
 if(r1.isSelected())gender="Male";  
 else gender="Female";  
 String qualify;  
 if(c1.isSelected())qualify="Matric";  
 else if(c2.isSelected())qualify="Intermediate";  
 else if(c3.isSelected())qualify="Graduation";  
 else qualify="Post Graduate";  
  
 ps.setString(1,t1.getText());  
 ps.setString(2,t2.getText());  
 ps.setString(3,t3.getText());  
 ps.setString(4,t4.getText());  
 ps.setString(5,gender);  
 ps.setString(6,qualify);  
 ps.setString(8,textArea.getText());  
 ps.setString(7,comboBox.getSelectedItem().toString());  
 ps.executeUpdate();  
 JOptionPane.*showMessageDialog*(null,"Data stored successfully");  
// frame.dispose();  
  
 }catch(Exception e){  
 JOptionPane.*showMessageDialog*(null,e.getMessage());  
 System.*exit*(0);  
 }  
 }  
 public void showDatabase(){  
 String Name=JOptionPane.*showInputDialog*(null,"Enter name");  
 try{  
 Statement st=*connection*.createStatement();  
 String query="select \* from students where Name = '"+Name+"'";  
 ResultSet rs=st.executeQuery(query);  
 while(rs.next()){  
 String name=rs.getString("Name");  
 String rollNumber=rs.getString("RollNumber");  
 String batch=rs.getString("Batch");  
 String section=rs.getString("Section");  
 String gender=rs.getString("Gender");  
 String qualification=rs.getString("Qualification");  
 String address=rs.getString("Address");  
 String country=rs.getString("Country");  
 JFrame frame1=new JFrame("Student Registration");  
 JPanel panel1 = new JPanel(null);  
// panel1.setLayout(null);  
 frame1.setSize(700,700);  
 panel1.setBackground(Color.*orange*);  
 panel1.setSize(700, 700);  
 JLabel l1, l2, l3, l4, l5, l6, l7, l8;  
 l1 = new JLabel("Name : " + name);  
 l2 = new JLabel("Roll #: " + rollNumber);  
 l3 = new JLabel("Batch: " + batch);  
 l4 = new JLabel("Section: " + section);  
 l5 = new JLabel("Gender: " + gender);  
 l6 = new JLabel("Qualification: " + qualification);  
 l7 = new JLabel("Country: " + country);  
 l8 = new JLabel("Address: " + address);  
 l1.setBounds(10, 20, 200, 50);  
 l2.setBounds(10, 70, 200, 50);  
 l3.setBounds(10, 120, 200, 50);  
 l4.setBounds(10, 170, 200, 50);  
 l5.setBounds(10, 220, 200, 50);  
 l6.setBounds(10, 270, 200, 50);  
 l7.setBounds(10, 320, 200, 50);  
 l8.setBounds(10, 370, 200, 50);  
 panel1.add(l1);  
 panel1.add(l2);  
 panel1.add(l3);  
 panel1.add(l4);  
 panel1.add(l5);  
 panel1.add(l6);  
 panel1.add(l7);  
 panel1.add(l8);  
 frame1.add(panel1);  
 frame1.setVisible(true);  
 frame1.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 }  
 }catch(Exception e){  
 JOptionPane.*showMessageDialog*(null,e.getMessage());  
 System.*exit*(0);  
 }  
 }  
 public static void main(String[] args) {  
 try {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 *connection* = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/saddardb", "root", "saddarudin338@");  
 }catch(Exception ex) {  
 JOptionPane.*showMessageDialog*(null,ex.getMessage());  
 System.*exit*(0);  
 }  
  
 Main gui=new Main();  
 }  
}

