## STUDENT GRADE CALCULATOR-Mini Project

```
package Project;
import java.awt.*;
import java.awt.event.*;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing .*;
import javax.swing.table.DefaultTableModel;
public class Grade Calculator implements ActionListener
  JLabel label_1,label_2,label_3,label_4,label_5,label_6,label_7,label_8,label_9,label_10,label_11,
label_12,label_13,label_14,label_15,label_16,label_17,label_18, label_19,label_20,label_21,label_22,
label_23;
  JTextField_1,txtField_2,txtField_3,txtField_4,txtField_5,txtField_6,txtField_7,txtField_8,
txtField 9,txtField 10;
  JButton button 1,button 2,button 3,button 4;
  JComboBox cbox_1,cbox_2;
  JFrame frame, frame1;
  static JTable table;
  String tf;
  String driverName = "com.mysql.cj.jdbc.Driver";
  String url = "jdbc:mysql://localhost:3306/data";
  String userName = "root";
  String password = "Yoga@12345";
  String[] columnNames = {"Roll_No", "Student_Name", "Standard", "Section", "Tamil", "English",
"Maths", "Science", "Social", "Total_Marks", "Percentage", "Grade" };
//Construtor
  public Grade_Calculator()
  JFrame.setDefaultLookAndFeelDecorated(true);
  frame =new JFrame("Student's Grade Calculator");
  label 1=new JLabel("STUDENT GRADE CALCULATOR");
  label 1.setBounds(220,30,350,40);
  label_1.setFont(new Font("Arial",Font.BOLD,20));
  label_1.setForeground(Color.black);
  frame.add(label 1);
  label 2=new JLabel("Roll Number:");
  label 2.setBounds(50,90,80,40);
  frame.add(label 2);
  txtField_1=new JTextField(20);
```

```
txtField_1.setBounds(170,102,130,20);
 frame.add(txtField_1);
 label_2=new JLabel("Standard:");
 label 2.setBounds(330,90,80,40);
 frame.add(label_2);
String std[]= {"","I","II","III","IV","V","VI","VII","VIII","IX","X"};
 cbox_1=new JComboBox(std);
 cbox_1.setBounds(420,100,80,20);
 frame.add(cbox_1);
 label 3=new JLabel("Student Name:");
 label 3.setBounds(50,140,100,40);
 frame.add(label 3);
 txtField_2=new JTextField(20);
 txtField_2.setBounds(170,152,130,20);
 frame.add(txtField_2);
 label 4=new JLabel("Section:");
 label 4.setBounds(330,140,80,40);
 frame.add(label_4);
 String sec[]= {"","A","B","C","D","E"};
 cbox_2=new JComboBox(sec);
 cbox_2.setBounds(420,150,80,20);
 frame.add(cbox 2);
 label_5=new JLabel("Tamil:");
 label_5.setBounds(50,190,100,40);
 frame.add(label_5);
 txtField_3=new JTextField(20);
 txtField_3.setBounds(170,202,130,20);
 frame.add(txtField_3);
 label 6=new JLabel("English:");
label_6.setBounds(330,190,80,40);
frame.add(label_6);
txtField 4=new JTextField(20);
txtField_4.setBounds(420,200,130,20);
frame.add(txtField_4);
label_7=new JLabel("Maths:");
label_7.setBounds(50,240,100,40);
frame.add(label_7);
txtField 5=new JTextField(20);
txtField_5.setBounds(170,252,130,20);
```

```
frame.add(txtField_5);
label_8=new JLabel("Science:");
label_8.setBounds(330,240,80,40);
frame.add(label_8);
txtField 6=new JTextField(20);
txtField 6.setBounds(420,250,130,20);
frame.add(txtField_6);
label_9=new JLabel("Social Science:");
label_9.setBounds(50,290,100,40);
frame.add(label_9);
txtField 7=new JTextField(20);
txtField_7.setBounds(170,302,130,20);
frame.add(txtField_7);
label_10=new JLabel("Total Marks:");
label_10.setBounds(330,290,80,40);
frame.add(label 10);
txtField_8=new JTextField(20);
txtField_8.setBounds(420,300,130,20);
frame.add(txtField_8);
label 11=new JLabel("Percentage:");
label 11.setBounds(50,340,100,40);
frame.add(label 11);
txtField_9=new JTextField(20);
txtField_9.setBounds(170,352,130,20);
frame.add(txtField_9);
label 12=new JLabel("Grade:");
label_12.setBounds(330,340,80,40);
frame.add(label 12);
txtField_10=new JTextField(20);
txtField_10.setBounds(420,350,130,20);
frame.add(txtField_10);
button_1=new JButton("Calculate");
button 1.setBounds(50,390,100,40);
frame.add(button 1);
button_1.setBackground(Color.green);
button_1.addActionListener(this);
button_2=new JButton("Reset");
button_2.setBounds(220,390,100,40);
frame.add(button 2);
```

```
button 2.setBackground(Color.magenta);
button_2.addActionListener(this);
button_3=new JButton("Exit");
button_3.setBounds(370,390,100,40);
frame.add(button 3);
button 3.setBackground(Color.cvan);
button 3.addActionListener(this);
label_13=new JLabel();
label 13.setBounds(50,440,300,100);
frame.add(label_13);
label_13.setForeground(Color.red);
label 14=new JLabel();
label_14.setBounds(50,490,300,100);
frame.add(label_14);
label_14.setForeground(Color.blue);
label_15=new JLabel();
label 15.setBounds(50,540,300,100);
frame.add(label_15);
label_15.setForeground(Color.magenta);
label_16=new JLabel("Grade Description");
label_16.setBounds(640,80,150,30);
frame.add(label 16);
label 16.setForeground(Color.BLACK);
label 17=new JLabel("A - Fabulous");
label_17.setBounds(640,110,150,30);
frame.add(label_17);
label_17.setForeground(Color.magenta);
label 18=new JLabel("B - Excellent");
label_18.setBounds(640,140,150,30);
frame.add(label 18);
label 18.setForeground(Color.red);
label_19=new JLabel("C - Very Good");
label_19.setBounds(640,170,150,30);
frame.add(label_19);
label_19.setForeground(Color.magenta);
label 20=new JLabel("D - Good");
label_20.setBounds(640,200,150,30);
frame.add(label_20);
label_20.setForeground(Color.blue);
label_21=new JLabel("E - Average");
label 21.setBounds(640,230,150,30);
```

```
frame.add(label 21);
label_21.setForeground(Color.red);
label_22=new JLabel("F - Poor");
label 22.setBounds(640,260,150,30);
frame.add(label 22);
label 22.setForeground(Color.blue);
button_4=new JButton("Show data");
button_4.setBounds(540,390,100,40);
frame.add(button 4);
button_4.setBackground(Color.green);
button_4.addActionListener(new ActionListener()
 {
   @Override
   public void actionPerformed(ActionEvent e) {
   // TODO Auto-generated method stub
   JOptionPane.showMessageDialog(button_4,"It will show the database details");
   frame1 = new JFrame("Database Result");
   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(url, userName,password);
     String sql = "select * from Project";
     PreparedStatement ps = con.prepareStatement(sql);
     ResultSet rs = ps.executeQuery();
     String rollno1 = "";
     String sname1 = "";
     String std1 = "";
     String sec1="";
     String tam1="";
     String eng1= "";
     String mat1= "";
```

```
String sci1= "";
       String soc1="";
       String tm1="";
       String per1="";
       String grade1="";
         int i = 0;
       while(rs.next())
        rollno1= rs.getString("Roll_No");
        sname1 = rs.getString("Student_Name");
        std1 = rs.getString("Standard");
        sec1= rs.getString("Section");
        tam1= rs.getString("Tamil");
        eng1= rs.getString("English");
        mat1= rs.getString("Maths");
        scil= rs.getString("Science");
        soc1= rs.getString("Social");
        tm1= rs.getString("Total_Mark");
        per1= rs.getString("Percentage");
        grade1= rs.getString("Grade");
        model.addRow(new Object[]{rollno1, sname1, std1, sec1, tam1, eng1,mat1, sci1, soc1, tm1,
per1, grade1});
        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(850,400);
     frame1.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }});
  label_23=new JLabel("");
```

```
label 23.setBounds(50,590,300,100);
   frame.add(label_23);
   label_23.setForeground(Color.blue);
   frame.setDefaultCloseOperation(JFrame.EXIT ON CLOSE);
   frame.setSize(890,710);
   frame.setLayout(null);
   frame.setVisible(true);
   frame.getContentPane().setBackground(Color.yellow);
}
public void actionPerformed(ActionEvent e)
     if(e.getSource()==button 1)
          String rollno = txtField_1.getText();
          String sname = txtField_2.getText();
          String std = (String) cbox_1.getSelectedItem();
          String sec = (String)cbox_2.getSelectedItem();
          String tam=txtField_3.getText();
          String eng= txtField 4.getText();
          String mat= txtField_5.getText();
          String sci= txtField_6.getText();
          String soc= txtField_7.getText();
         if(rollno.equals("") || sname.equals("") || std.equals("") || std.equals("") || sec.equals("") || tam
.equals("") || eng.equals("") || mat.equals("") || sci.equals("") ||soc.equals(""))
                 if(rollno.equals(""))
                    JOptionPane.showMessageDialog(button_1, "Make sure that, you entered rollno");
                 if(sname.equals(""))
              JOptionPane.showMessageDialog(button_1, "Make sure that, you entered name");
           if(std.equals(""))
              JOptionPane.showMessageDialog(button 1, "Make sure that, you entered Standard");
           if(sec.equals(""))
              JOptionPane.showMessageDialog(button_1, "Make sure that, you entered Section");
           if(tam.equals(""))
              JOptionPane.showMessageDialog(button_1, "Make sure that, you entered Tamil Mark");
           if(eng.equals(""))
              JOptionPane.showMessageDialog(button_1, "Make sure that, you entered English Mark");
```

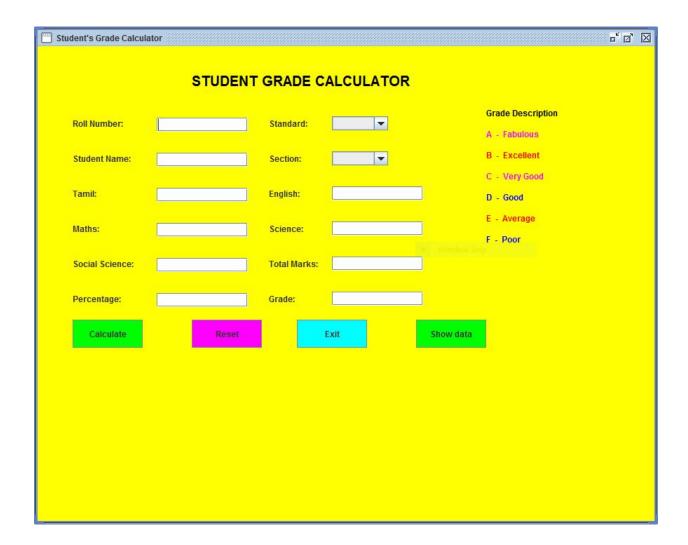
```
if(mat.equals(""))
               JOptionPane.showMessageDialog(button_1, "Make sure that, you entered Maths Mark");
            if(sci.equals(""))
               JOptionPane.showMessageDialog(button 1, "Make sure that, you entered Science Mark"
);
            if(soc.equals(""))
               JOptionPane.showMessageDialog(button_1, "Make sure that, you entered Social Mark");
           }
           else
           {
                 float tamil = Float.parseFloat(txtField_3.getText());
                 float english = Float.parseFloat(txtField_4.getText());
                 float maths = Float.parseFloat(txtField_5.getText());
                 float science = Float.parseFloat(txtField_6.getText());
                 float social =Float.parseFloat(txtField 7.getText());
             // Calculates total marks
              float total = tamil + english + maths + science + social;
              txtField_8.setText("" + total);
             // Calculates percentage
              float per = (total / 500) * 100;
              txtField_9.setText("" + per);
              String grade = null;
             // Grade calculation
              if (per > 90)
                 grade = "A";
              else if ((per > 80) \&\& (per < 90))
                 grade = "B";
              else if ((per > 70) \&\& (per < 80))
                 grade = "C";
              else if ((per > 60) \&\& (per < 70))
                 grade = "D";
              else if ((per > 50) && (per < 60))
```

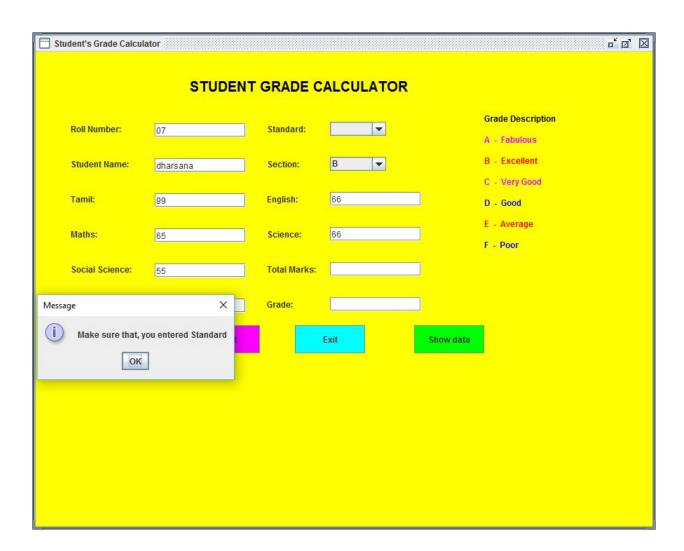
grade = "E";

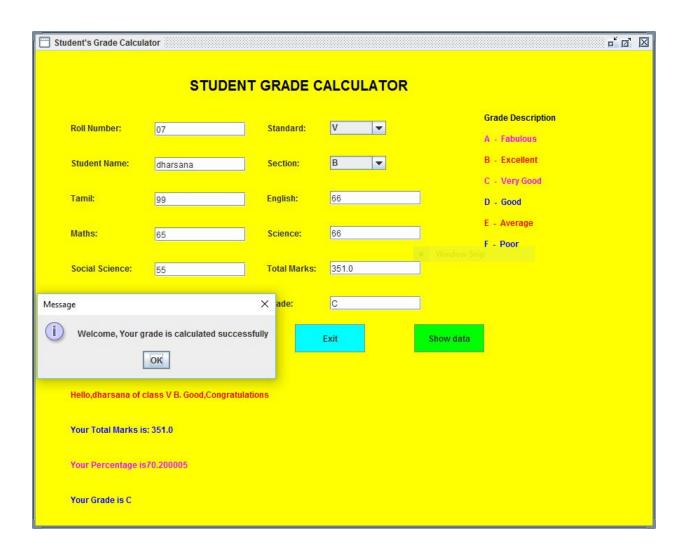
```
}
             else
                 grade = "F";
                          txtField_10.setText("" + grade);
             if(grade=="A")
               label_13.setText("Hello,"+ sname +"\n of class" + "\n " +cbox_1.getSelectedItem() + "\n
"+cbox_2.getSelectedItem() + ".\n "+"Fabulous,Congratulations");
             if(grade=="B")
               label_13.setText("Hello,"+ sname +"\n of class" + "\n " +cbox_1.getSelectedItem() + "\n
"+cbox_2.getSelectedItem() + ".\n"+"Very Good, Congratulations");
             if(grade=="C")
               label 13.setText("Hello,"+ sname +"\n of class" + "\n " + cbox 1.getSelectedItem() + "\n
"+cbox_2.getSelectedItem() + ".\n"+"Good,Congratulations" );
             if(grade=="D")
               label_13.setText("Hello,"+ sname +"\n of class" + "\n " + cbox_1.getSelectedItem() + "\n
"+cbox_2.getSelectedItem() + ".\n"+"Average,WorkHard" );
             if(grade=="E")
                 label_13.setText("Hello,"+ sname +"\n of class" + "\n " + cbox_1.getSelectedItem() +
"\n"+cbox_2.getSelectedItem() + ".\n"+"Very Poor, WordHard" );
            label_14.setText("Your Total Marks is: \n" + txtField_8.getText());
           label 15.setText("Your Percentage is\n"+ txtField 9.getText());
          label_23.setText("Your Grade is \n"+ grade ); JOptionPane.showMessageDialog(button_1,
"Welcome, Your grade is calculated successfully");
        String tm= txtField_8.getText();
             String perc= txtField_9.getText();
             String grades =txtField_10.getText();
             try
                Class.forName("com.mysql.cj.jdbc.Driver");
                Connection = DriverManager.getConnection(
"jdbc:mysql://localhost:3306/data", "root", "Yoga@12345");
                String query = "INSERT INTO project values("" + rollno + "","" + sname +"","" + std +
"","" + sec + "","" + tam + "","" + eng + "","" + mat + "","" + sci + "","" + soc+ "","" + tm + "","" + perc + "","" +
grades + "")";
                Statement sta = connection.createStatement();
                int x = sta.executeUpdate(query);
```

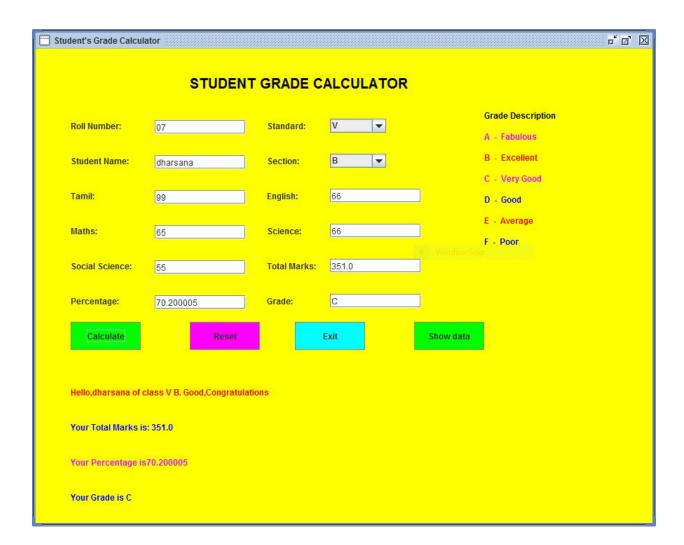
```
connection.close();
              } catch (Exception exception)
             exception.printStackTrace();
             System.out.println("Make sure that you entered all details");
        } if(e.getSource()==button_2)
       txtField_1.setText("");
       txtField_2.setText("");
       txtField_3.setText("");
       txtField_4.setText("");
       txtField_5.setText("");
       txtField_6.setText("");
       txtField_7.setText("");
       txtField_8.setText("");
       txtField_9.setText("");
       txtField_10.setText("");
       JOptionPane.showMessageDialog(button_2, "Successfully cleared");
       if(e.getSource()==button_3)
        int x=JOptionPane.showConfirmDialog(button_3, "Do you wish to exit?");
       if(x==0) {
        System.exit(0);
   }
public static void main(String[] args) {
// TODO Auto-generated method stub
     new Grade_Calculator();
  }
}
SQL QUERY:
create database data;
use data;
create table project
(Roll_No varchar(20),Student_Name varchar(50),Standard varchar(30),Section varchar(30),Tamil
varchar(30), English varchar(30), Maths varchar(30), Science varchar(30), Social varchar(30), Total Mark
varchar(50), Percentage varchar(30), Grade varchar(40));
select * from project;
```

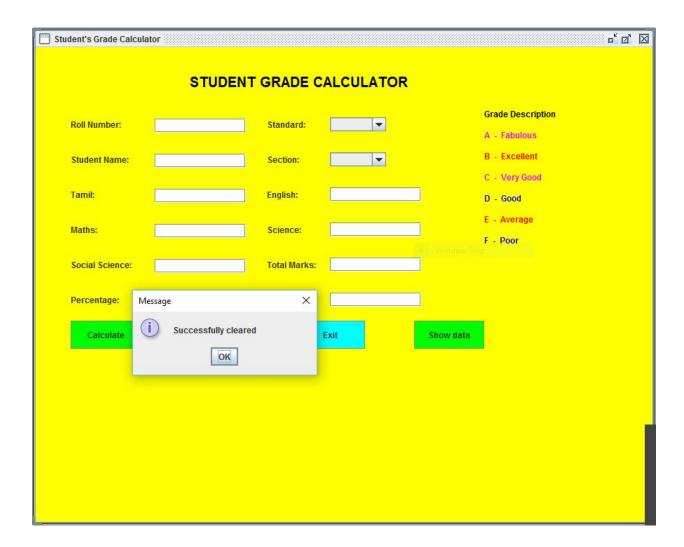
## **OUTPUT**:



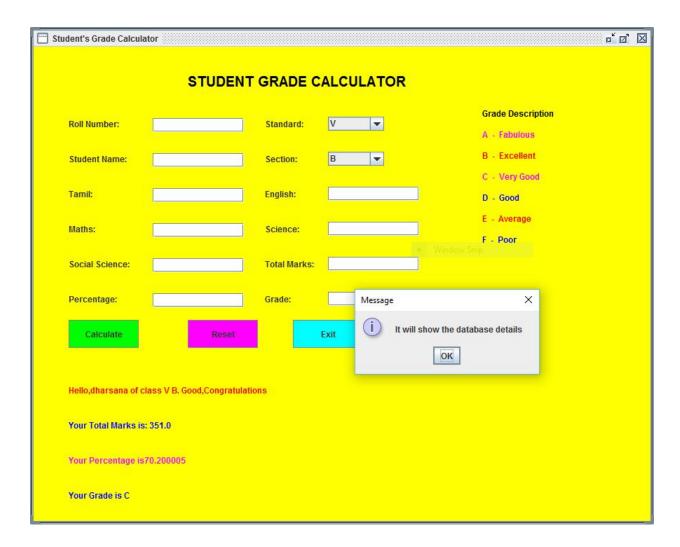




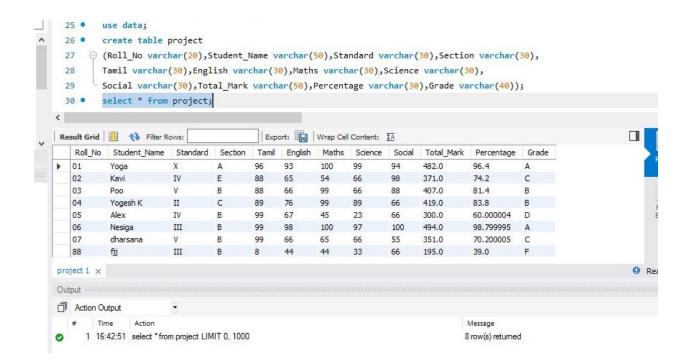








Roll_No	Student_N	Standard	Section	Tamil	English	Maths	Science	Social	Total_Marks	Percentage	Grad
1		X	A	96	93	100	99	94			A
2		IV	E	88	65	54	66	98	1 2000000000000000000000000000000000000	74.2	С
3	Poo	V	В	88	66	99	66	88	407.0	81.4	В
4	Yogesh K	II	С	89	76	99	89	66	419.0	83.8	В
5		IV	В	99	67	45	23	66	300.0	60.000004	D
6	Nesiga	Ш	В	99	98	100	97	100	494.0	98.799995	A
7	dharsana	V	В	99	66	65	66	55	351.0	70.200005	C



-----THE END-----