

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 txtField_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.cyan);
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.setFillViewportHeight(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");
        sci1= 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 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:

STUDENT GRADE CALCULATOR

Roll Number: Standard:

Student Name: Section:

Tamil: English:

Maths: Science:

Social Science: Total Marks:

Percentage: Grade:

Grade Description

- A - Fabulous
- B - Excellent
- C - Very Good
- D - Good
- E - Average
- F - Poor

Calculate Reset Exit Show data

Window Snap

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number:

07

Standard:

Student Name:

dharsana

Section:

B

Tamil:

99

English:

66

Maths:

65

Science:

66

Social Science:

55

Total Marks:

Grade:

Grade Description

A - Fabulous

B - Excellent

C - Very Good

D - Good

E - Average

F - Poor

Message

Make sure that, you entered Standard

OK

Exit

Show data

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number: Standard:

Student Name: Section:

Tamil: English:

Maths: Science:

Social Science: Total Marks:

Grade:

Grade Description

- A - Fabulous
- B - Excellent
- C - Very Good
- D - Good
- E - Average
- F - Poor

Message

Welcome, Your grade is calculated successfully

Exit **Show data**

Hello,dharsana of class V B. Good,Congratulations

Your Total Marks is: 351.0

Your Percentage is70.200005

Your Grade is C

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number:

07

Standard:

V

Student Name:

dharsana

Section:

B

Tamil:

99

English:

66

Maths:

65

Science:

66

Social Science:

55

Total Marks:

351.0

Percentage:

70.200005

Grade:

C

Calculate

Reset

Exit

Show data

Grade Description

A - Fabulous

B - Excellent

C - Very Good

D - Good

E - Average

F - Poor

Hello,dharsana of class V B. Good,Congratulations

Your Total Marks is: 351.0

Your Percentage is70.200005

Your Grade is C

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number:

Standard:

Student Name:

Section:

Tamil:

English:

Maths:

Science:

Social Science:

Total Marks:

Percentage:

Grade Description

A - Fabulous

B - Excellent

C - Very Good

D - Good

E - Average

F - Poor

Calculate

Exit

Show data

Message

Successfully cleared

OK

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number:

Standard:

V

Student Name:

Section:

B

Tamil:

English:

Maths:

Science:

Social Science:

Total Marks:

Percentage:

Grade Description

A - Fabulous

B - Excellent

C - Very Good

D - Good

E - Average

F - Poor

Calculate

Reset

Show data

?

Do you wish to exit?

Yes

No

Cancel

Hello,dharsana of class V B. Good,Congratulations

Your Total Marks is: 351.0

Your Percentage is70.200005

Your Grade is C

Student's Grade Calculator

STUDENT GRADE CALCULATOR

Roll Number:

Standard:

V

Student Name:

Section:

B

Tamil:

English:

Maths:

Science:

Social Science:

Total Marks:

Percentage:

Grade:

Calculate

Reset

Exit

Grade Description

A - Fabulous

B - Excellent

C - Very Good

D - Good

E - Average

F - Poor

Message

It will show the database details

OK

Hello,dharsana of class V B. Good,Congratulations

Your Total Marks is: 351.0

Your Percentage is70.200005

Your Grade is C

| Database Result | | | | | | | | | | | |
|-----------------|--------------|----------|---------|-------|---------|-------|---------|--------|-------------|------------|-------|
| Roll_No | Student_N... | Standard | Section | Tamil | English | Maths | Science | Social | Total_Marks | Percentage | Grade |
| 01 | Yoga | X | A | 96 | 93 | 100 | 99 | 94 | 482.0 | 96.4 | A |
| 02 | Kavi | IV | E | 88 | 65 | 54 | 66 | 98 | 371.0 | 74.2 | C |
| 03 | Poo | V | B | 88 | 66 | 99 | 66 | 88 | 407.0 | 81.4 | B |
| 04 | Yogesh K | II | C | 89 | 76 | 99 | 89 | 66 | 419.0 | 83.8 | B |
| 05 | Alex | IV | B | 99 | 67 | 45 | 23 | 66 | 300.0 | 60.000004 | D |
| 06 | Nesiga | III | B | 99 | 98 | 100 | 97 | 100 | 494.0 | 98.799995 | A |
| 07 | dharsana | V | B | 99 | 66 | 65 | 66 | 55 | 351.0 | 70.200005 | C |

```
25 • use data;
26 • create table project
27 • (Roll_No varchar(20),Student_Name varchar(50),Standard varchar(30),Section varchar(30),
28 • Tamil varchar(30),English varchar(30),Maths varchar(30),Science varchar(30),
29 • Social varchar(30),Total_Mark varchar(50),Percentage varchar(30),Grade varchar(40));
30 • select * from project;
```

Result Grid

| | Roll_No | Student_Name | Standard | Section | Tamil | English | Maths | Science | Social | Total_Mark | Percentage | Grade |
|---|---------|--------------|----------|---------|-------|---------|-------|---------|--------|------------|------------|-------|
| ▶ | 01 | Yoga | X | A | 96 | 93 | 100 | 99 | 94 | 482.0 | 96.4 | A |
| | 02 | Kavi | IV | E | 88 | 65 | 54 | 66 | 98 | 371.0 | 74.2 | C |
| | 03 | Poo | V | B | 88 | 66 | 99 | 66 | 88 | 407.0 | 81.4 | B |
| | 04 | Yogesh K | II | C | 89 | 76 | 99 | 89 | 66 | 419.0 | 83.8 | B |
| | 05 | Alex | IV | B | 99 | 67 | 45 | 23 | 66 | 300.0 | 60.000004 | D |
| | 06 | Nesiga | III | B | 99 | 98 | 100 | 97 | 100 | 494.0 | 98.799995 | A |
| | 07 | dharsana | V | B | 99 | 66 | 65 | 66 | 55 | 351.0 | 70.200005 | C |
| | 08 | fjj | III | B | 8 | 44 | 44 | 33 | 66 | 195.0 | 39.0 | F |

project 1 x

Output

Action Output

| # | Time | Action | Message |
|-----|----------|-------------------------------------|-------------------|
| ✓ 1 | 16:42:51 | select * from project LIMIT 0, 1000 | 8 row(s) returned |

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