STUDENT GRADE CALCULATOR-Mini Project

```java
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);
```

```java
        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);
```

```java
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);
```

```java
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);
```

```java
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= "";
```

```java
        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("");
```

```java
        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");
          }
```

```java
            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";
```

```java
            }
            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(driverName);
            Connection connection = DriverManager.getConnection(url, userName,password);
            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();
```

```java
            } 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's Grade Calculator

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]

STUDENT GRADE CALCULATOR

Roll Number: 07

Standard: [▼]

Grade Description

A - Fabulous

Student Name: dharsana

Section: B [▼]

B - Excellent

C - Very Good

Tamil: 99

English: 66

D - Good

Maths: 65

Science: 66

E - Average

Social Science: 55

Total Marks:

F - Poor

Grade:

Message ✕

ⓘ   Make sure that, you entered Standard

[OK]

Exit

Show data

STUDENT GRADE CALCULATOR

Roll Number: 07

Standard: V

Grade Description

A - Fabulous

Student Name: dharsana

Section: B

B - Excellent

C - Very Good

Tamil: 99

English: 66

D - Good

Maths: 65

Science: 66

E - Average

F - Poor

Window Snip

Social Science: 55

Total Marks: 351.0

Grade: C

Message ×

ⓘ   Welcome, Your grade is calculated successfully

OK

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

Grade Description

A - Fabulous

Student Name: dharsana

Section: B

B - Excellent

C - Very Good

Tamil: 99

English: 66

D - Good

Maths: 65

Science: 66

E - Average

F - Poor

Social Science: 55

Total Marks: 351.0

Percentage: 70.200005

Grade: C

Calculate	Reset	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 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

Message	✕
(i) **Successfully cleared**	
OK	

[Calculate]   [Exit]   [Show data]

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

Select an Option ✕

?   **Do you wish to exit?**

[Yes] [No] [Cancel]

[Calculate]   [Reset]   [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 GRADE CALCULATOR

Roll Number: [ ]   **Standard:**   [V ▼]

Grade Description

Student Name: [ ]   **Section:**   [B ▼]

A - Fabulous

B - Excellent

Tamil: [ ]   **English:**   [ ]

C - Very Good

D - Good

Maths: [ ]   **Science:**   [ ]

E - Average

F - Poor

Social Science: [ ]   **Total Marks:**   [ ]

Percentage: [ ]   **Grade:**   [ ]

Message   ×

ⓘ   It will show the database details

[OK]

[**Calculate**]   [**Reset**]   [**Exit**]

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

Calculate   Reset   Exit   Show data

```
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;
```
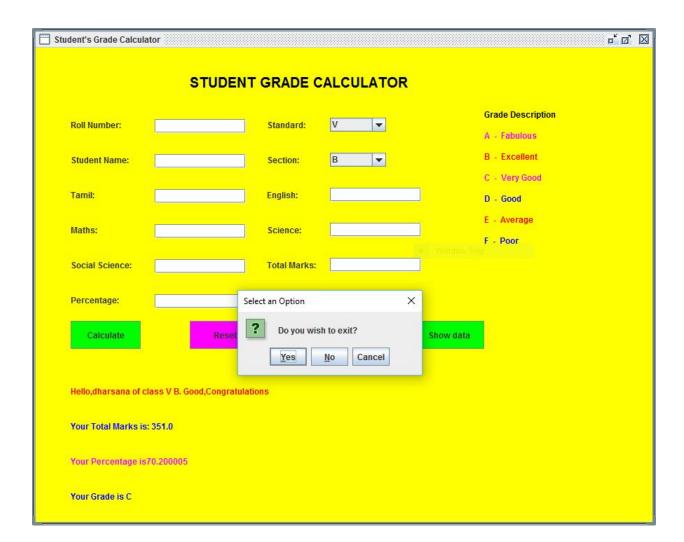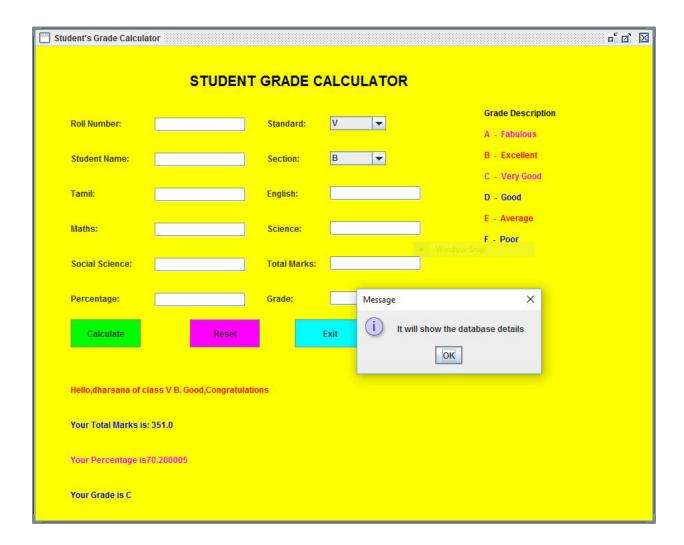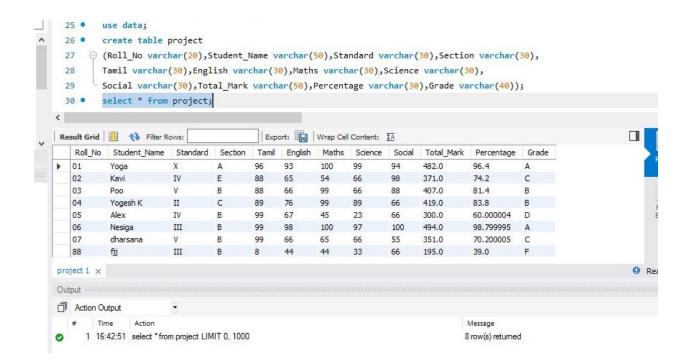
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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
88	fjj	III	B	8	44	44	33	66	195.0	39.0	F

project 1 ×

Output

Action Output

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

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