

20/06/2018

Submission Date:

07/7/2017 JDBC 1,4,5

14/7/2017 - JDBC 6,9,10

Exercise 4

Write a JDBC program for marksheet entry in Student Marksheet table in Student database. (Using PreparedStatement)

FieldName	Datatype
Stud_Id	Number (Foreign key)
Mark1	Number
Mark2	Number
Mark3	Number
Total	Number
Percentage	Decimal (Scale =2)
Grade	Char

Solution:

1. Exercise 4 (Only Source Code)

Create a java file with Name: Exe_4 in Netbeans Java Project: Tutorial2 with java package as tutorial 2.

```
package tutorial2;

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.plaf.basic.*;
import java.sql.*;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */

public class Exe_4 implements ActionListener{
    JButton btn_delete,btn_insert,btn_update,btn_view;
    JLabel lbl_mark1,lbl_mark2,lbl_mark3,lbl_roll_no,lbl_s_name;
    JTextArea txt_area_view;
    JTextField txt_mark1,txt_mark2,txt_mark3,txt_roll_no,txt_s_name;

    int count=0,stud_no,m1,m2,m3,sum;
    double per;
```

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```
String s = "",grd;
Connection con = null ;
ResultSet rs = null;

public static void main(String args[]){
    Exe_4 obj = new Exe_4();
    obj.createGUI();
}
public void createGUI(){
    JFrame frame = new JFrame("Student Result Form");

    //Layout Of Main Window
    Container c = frame.getContentPane();
    c.setLayout(new DefaultMenuLayout(c, DefaultMenuLayout.Y_AXIS));

    lbl_roll_no = new JLabel("Roll No : ");
    lbl_s_name = new JLabel("Student Name : ");
    lbl_mark1 = new JLabel("Mark 1 : ");
    lbl_mark2 = new JLabel("Mark 2 : ");
    lbl_mark3 = new JLabel("Mark 3 : ");

    txt_roll_no = new JTextField("", 15);
    txt_roll_no.setEditable(false);
    txt_s_name = new JTextField("", 30);
    txt_s_name.setEditable(false);
    txt_mark1 = new JTextField("", 30);
    txt_mark2 = new JTextField("", 30);
    txt_mark3 = new JTextField("", 30);

    JPanel pnlInput = new JPanel(new GridLayout(5, 2));

    pnlInput.add(lbl_roll_no);
    pnlInput.add(txt_roll_no);

    pnlInput.add(lbl_s_name);
    pnlInput.add(txt_s_name);

    pnlInput.add(lbl_mark1);
    pnlInput.add(txt_mark1);
```

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```
pnlInput.add(lbl_mark2);
pnlInput.add(txt_mark2);

pnlInput.add(lbl_mark3);
pnlInput.add(txt_mark3);

btn_insert = new JButton("Insert");
btn_insert.addActionListener(this);
btn_update = new JButton("Update");
btn_update.addActionListener(this);
btn_delete = new JButton("Delete");
btn_delete.addActionListener(this);
btn_view = new JButton("View");
btn_view.addActionListener(this);

JPanel pnlBut = new JPanel(new GridLayout(1, 4));
pnlBut.add(btn_insert);
pnlBut.add(btn_update);
pnlBut.add(btn_delete);
pnlBut.add(btn_view);

txt_area_view = new JTextArea(10, 30);
txt_area_view.setEditable(false);

JPanel pnlView = new JPanel(new GridLayout(1, 2));
pnlView.add(txt_area_view);

frame.add(pnlInput);
frame.add(pnlBut);
frame.add(pnlView);

frame.pack();
frame.setVisible(true);
}

public void actionPerformed(ActionEvent e) {
    String cmd = e.getActionCommand();

    if(cmd.equals("Insert")){
        insertData();
    }
}
```

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```
}
else if(cmd.equals("Update")){
    updateData();
}else if(cmd.equals("Delete")){
    deleteData();
}else if(cmd.equals("View")){
    viewData();
}
}
}
public void databaseConnection(){
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/student_management", "root",
""");
    } catch (Exception e){
        txt_area_view.setText("Database Not Connected!!!!");
    }
}

public void markPerGrd(){
    m1 = Integer.valueOf(txt_mark1.getText()).intValue();
    m2 = Integer.valueOf(txt_mark2.getText()).intValue();
    m3 = Integer.valueOf(txt_mark3.getText()).intValue();
    sum = m1 + m2 +m3;
    per = sum/3;
    if(m1 >= 35 && m2 >= 35 && m3 >= 35){
        if (per >= 90) {
            grd = "A+";
        }
        else if(per >=80 && per<=90){
            grd = "A";
        }
        else if(per >=70 && per<=80){
            grd = "B";
        }
        else if(per >=60 && per<=70){
            grd = "C";
        }
        else if(per >=50 && per<=60){
```

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```
        grd = "D";
    }
    else{
        grd = "E";
    }
}
else
{
    per = 0;
    grd = "Fail";
}
}

public void printDetails(int param){
    if (param == 1) {
        s += "\nStudent Roll No : " + txt_roll_no.getText();
        s += "\nStudent Name : " + txt_s_name.getText();
        s += "\nMark 1 : " + txt_mark1.getText();
        s += "\nMark 2 : " + txt_mark2.getText();
        s += "\nMark 3 : " + txt_mark3.getText();
        s += "\nTotal : " + sum;
        s += "\nPercentage : " + per + "%";
        s += "\nGrade : " + grd;
    }
    if (param == 2) {
        try{
            s += "\nStudent Roll No : " + rs.getString(1);
            s += "\nStudent Name : " + rs.getString(2);
            s += "\nMark 1 : " + rs.getString(3);
            s += "\nMark 2 : " + rs.getString(4);
            s += "\nMark 3 : " + rs.getString(5);
            s += "\nTotal : " + rs.getString(6);
            s += "\nPercentage : " + rs.getString(7) + "%";
            s += "\nGrade : " + rs.getString(8);
        }catch(SQLException e){
            e.printStackTrace();
        }
    }
    txt_area_view.setText(s);
}

public void emptyControls(){
```

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```
txt_roll_no.setText("");
txt_s_name.setText("");
txt_mark1.setText("");
txt_mark2.setText("");
txt_mark3.setText("");
}
public void insertData(){
txt_area_view.setText("");
databaseConnection();
if(count == 0){
    try {
        String sql = "select * from student_details where stud_id = ?";
        PreparedStatement prest = con.prepareStatement(sql);
        stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
        prest.setInt(1, stud_no);
        rs = prest.executeQuery();

        while(rs.next()){
            txt_roll_no.setText(rs.getString(1));
            txt_s_name.setText(rs.getString(2));
        }
        prest.close();
        con.close();
    } catch (SQLException e) {
        e.printStackTrace();
        txt_area_view.setText("Roll Number Not Found!!!!");
    }
}
else if(count ==1)
{
    try {
        String sql = "insert into student_marksheet values(?,?,?,?,?,?)";
        PreparedStatement prest = con.prepareStatement(sql);
        prest.setInt(1, stud_no);
        prest.setInt(2,Integer.parseInt(txt_mark1.getText()));
        prest.setInt(3,Integer.parseInt(txt_mark2.getText()));
        prest.setInt(4,Integer.parseInt(txt_mark3.getText()));

        markPerGrd();
    }
}
```

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```
    prest.setInt(5,sum);
    prest.setDouble(6,per);
    prest.setString(7, grd);

    int in_count = prest.executeUpdate();
    if(in_count == 1)
    {
        s = "Inserted Record Is : ";
        printDetails(1);
    }
    prest.close();
    con.close();
} catch (SQLException ie) {
    ie.printStackTrace();
    txt_area_view.setText("Student Roll No is Already Excites !");
} catch (NumberFormatException ine){
    ine.printStackTrace();
    txt_area_view.setText("Please Insert Values !!!! ");
}
count = 2;
}
if(count == 0){
    count = 1;
}
if(count == 2){
    count = 0;
    emptyControls();
}
}
public void updateData(){
    txt_area_view.setText("");
    databaseConnection();
    if(count == 0){
        try {
            String sql = "SELECT sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3
FROM `student_marksheet` as sm left join `student_details` as sd on sm.stud_id = sd.stud_id
where sm.stud_id = ?";
            PreparedStatement prest = con.prepareStatement(sql);
```

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```
stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
prest.setInt(1, stud_no);
rs = prest.executeQuery();

while(rs.next())
{
    txt_roll_no.setText(rs.getString(1));
    txt_s_name.setText(rs.getString(2));
    txt_mark1.setText(rs.getString(3));
    txt_mark2.setText(rs.getString(4));
    txt_mark3.setText(rs.getString(5));
}

prest.close();
con.close();
} catch (Exception ue) {
    ue.printStackTrace();
    txt_area_view.setText("Roll Number Not Found!!!!");
}
}
else if(count ==1)
{
    try {
        String sql = "UPDATE `student_marksheet` SET
`mark1`=?,`mark2`=?,`mark3`=?,"
        + "`total`=?,`percentage`=?,`grad`=? WHERE `stud_id` = ? ";
        PreparedStatement prest = con.prepareStatement(sql);

        prest.setInt(1,Integer.parseInt(txt_mark1.getText()));
        prest.setInt(2,Integer.parseInt(txt_mark2.getText()));
        prest.setInt(3,Integer.parseInt(txt_mark3.getText()));

        markPerGrd();

        prest.setInt(4,sum);
        prest.setDouble(5,per);
        prest.setString(6, grd);
        prest.setInt(7, stud_no);
        int in_count = prest.executeUpdate();
```


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```
        if(in_count == 1)
        {
            s = "Updated Record Is : ";
            printDetails(1);
        }
        prest.close();
        con.close();
    } catch (SQLException upe) {
        upe.printStackTrace();
        txt_area_view.setText("Student Roll No is Already Excites !");
    } catch (NumberFormatException upde){
        upde.printStackTrace();
        txt_area_view.setText("Please Insert Values !!!! ");
    }
    count = 2;
}
if(count == 0){
    count = 1;
}
if(count == 2){
    count = 0;
    emptyControls();
}
}
public void deleteData(){
    txt_area_view.setText("");
    databaseConnection();
    try {
        String sql = "SELECT
sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3,sm.total,sm.percentage,sm.grad
FROM `student_marksheet` as sm left join `student_details` as sd on sm.stud_id = sd.stud_id
where sm.stud_id = ?";
        PreparedStatement prest = con.prepareStatement(sql);
        stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
        prest.setInt(1, stud_no);
        rs = prest.executeQuery();
        while (rs.next()) {
            s = "Deleted Record Is : ";
            printDetails(2);
```

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```
    }
    String del_sql = "DELETE FROM `student_marksheet` WHERE stud_id = ?";
    prest = con.prepareStatement(del_sql);
    prest.setInt(1, stud_no);
    prest.executeUpdate();
    prest.close();
    con.close();
} catch (SQLException e) {
    e.printStackTrace();
    txt_area_view.setText("Student Roll Number Not Excites !!!!");
}
}
public void viewData(){
    txt_area_view.setText("");
    databaseConnection();
    try {
        String sql = "SELECT
sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3,sm.total,sm.percentage,sm.grad "
        + "FROM `student_marksheet` as sm left join `student_details` as sd on
sm.stud_id = sd.stud_id "
        + "where sm.stud_id = ?";
        PreparedStatement prest = con.prepareStatement(sql);
        stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
        prest.setInt(1, stud_no);
        rs = prest.executeQuery();

        while (rs.next()) {
            s = "Selected Record Is : ";
            printDetails(2);
        }
        prest.close();
        con.close();
    } catch (SQLException e) {
        e.printStackTrace();
        txt_area_view.setText("Student Roll Number Not Excites !!!!");
    }
}
}
```

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Exercise 4 (Design View and Source)

```
package tutorial2;

import java.sql.*;
import javax.swing.JOptionPane;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
public class Exe_4_1 extends javax.swing.JFrame {

    /** Creates new form NewJFrame */
    String s = "",grd;
    int m1,m2,m3,sum,count=0,stud_no;
    double per;
    public Exe_4_1() {
        initComponents();
    }

    /** This method is called from within the constructor to
     * initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is
     * always regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    BEGIN: initComponents
    private void initComponents() {

        jSlider1 = new javax.swing.JSlider();
        lbl_roll_no = new javax.swing.JLabel();
        lbl_s_name = new javax.swing.JLabel();
        lbl_mark1 = new javax.swing.JLabel();
        lbl_mark2 = new javax.swing.JLabel();
        lbl_mark3 = new javax.swing.JLabel();
        txt_roll_no = new javax.swing.JTextField();
    }
}
```

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```
txt_s_name = new javax.swing.JTextField();
txt_mark1 = new javax.swing.JTextField();
txt_mark2 = new javax.swing.JTextField();
txt_mark3 = new javax.swing.JTextField();
btn_view = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
txt_area_view = new javax.swing.JTextArea();
btn_delete = new javax.swing.JButton();
btn_update = new javax.swing.JButton();
btn_insert = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

lbl_roll_no.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N
lbl_roll_no.setText("Roll No : ");

lbl_s_name.setFont(new java.awt.Font("Tahoma", 0, 14));
lbl_s_name.setText("Student Name : ");

lbl_mark1.setFont(new java.awt.Font("Tahoma", 0, 14));
lbl_mark1.setText("Mark 1 : ");

lbl_mark2.setFont(new java.awt.Font("Tahoma", 0, 14));
lbl_mark2.setText("Mark 2 :");

lbl_mark3.setFont(new java.awt.Font("Tahoma", 0, 14));
lbl_mark3.setText("Mark 3 :");

txt_roll_no.setEditable(false);
txt_roll_no.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyTyped(java.awt.event.KeyEvent evt) {
        txt_roll_noKeyTyped(evt);
    }
});

txt_s_name.setEditable(false);

btn_view.setFont(new java.awt.Font("Tahoma", 0, 14));
btn_view.setText("View");
btn_view.addActionListener(new java.awt.event.ActionListener() {
```

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```
public void actionPerformed(java.awt.event.ActionEvent evt) {
    btn_viewActionPerformed(evt);
}
});

txt_area_view.setColumns(20);
txt_area_view.setEditable(false);
txt_area_view.setRows(5);
jScrollPane1.setViewportView(txt_area_view);

btn_delete.setFont(new java.awt.Font("Tahoma", 0, 14));
btn_delete.setText("Delete");
btn_delete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btn_deleteActionPerformed(evt);
    }
});

btn_update.setFont(new java.awt.Font("Tahoma", 0, 14));
btn_update.setText("Update");
btn_update.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btn_updateActionPerformed(evt);
    }
});

btn_insert.setFont(new java.awt.Font("Tahoma", 0, 14));
btn_insert.setText("Insert");
btn_insert.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btn_insertActionPerformed(evt);
    }
});

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addContainerGap()
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(btn_view)
                .addComponent(btn_delete)
                .addComponent(btn_update)
                .addComponent(btn_insert)
            )
            .addContainerGap(150, true)
        )
        .addGroup(layout.createSequentialGroup()
            .addComponent(txt_area_view, javax.swing.GroupLayout.DEFAULT_SIZE, 300, true)
            .addContainerGap()
        )
        .addGroup(layout.createSequentialGroup()
            .addComponent(btn_delete)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(btn_update)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(btn_insert)
            .addContainerGap(150, true)
        )
    );
```

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```
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE,
380, Short.MAX_VALUE)
        .addGap(10, 10, 10)
        .addGroup(layout.createSequentialGroup()
            .addComponent(lbl_s_name)
            .addComponent(lbl_mark1)
            .addComponent(lbl_roll_no)
            .addComponent(lbl_mark2)
            .addComponent(lbl_mark3)
            .addGap(10, 10, 10)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
false)
                .addComponent(txt_roll_no, javax.swing.GroupLayout.DEFAULT_SIZE,
190, Short.MAX_VALUE)
                .addComponent(txt_s_name)
                .addComponent(txt_mark3)
                .addComponent(txt_mark2)
                .addComponent(txt_mark1, javax.swing.GroupLayout.DEFAULT_SIZE,
75, Short.MAX_VALUE)
                .addGap(10, 10, 10)
                .addComponent(btn_insert)
            )
        )
    )
    .addGap(10, 10, 10)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
    .addComponent(btn_update)
    .addGap(10, 10, 10)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
    .addComponent(btn_delete)
    .addGap(10, 10, 10)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
    .addComponent(btn_view)
    .addGap(10, 10, 10)
    .addGap(47, 47, 47)))
);
```

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```
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addContainerGap()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(lbl_roll_no)
    .addComponent(txt_roll_no, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(lbl_s_name)
    .addComponent(txt_s_name, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(lbl_mark1)
    .addComponent(txt_mark1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(lbl_mark2)
    .addComponent(txt_mark2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(lbl_mark3)
    .addComponent(txt_mark3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
```

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```
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(btn_view)
    .addComponent(btn_delete)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(btn_update)
    .addComponent(btn_insert)))
.addGap(23, 23, 23)
.addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE, 117,
Short.MAX_VALUE)
.addContainerGap()
);

pack();
} // </editor-fold> // GEN-END: initComponents

private void btn_viewActionPerformed(java.awt.event.ActionEvent evt) { // GEN-
FIRST:event_btn_viewActionPerformed
    txt_area_view.setText("");
    Connection con = null ;
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/student_management", "root",
    "");
        try {
            String sql = "SELECT
sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3,sm.total,sm.percentage,sm.grad
FROM `student_marksheet` as sm left join `student_details` as sd on sm.stud_id = sd.stud_id
where sm.stud_id = ?";
            PreparedStatement prest = con.prepareStatement(sql);
            stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
            prest.setInt(1, stud_no);
            ResultSet rs = prest.executeQuery();

            while (rs.next()) {
                s = "Student Roll No : " + rs.getString(1);
                s += "\nStudent Name : " + rs.getString(2);
```


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```
        txt_s_name.setText(rs.getString(2));
    }
} catch (Exception e) {
    e.printStackTrace();
    txt_area_view.setText("Roll Number Not Found!!!!");
}
}
else if(count ==1)
{
    try {
        String sql = "insert into student_marksheet values(?,?,?,?,?,?)";
        PreparedStatement prest = con.prepareStatement(sql);
        prest.setInt(1, stud_no);
        prest.setInt(2,Integer.parseInt(txt_mark1.getText()));
        prest.setInt(3,Integer.parseInt(txt_mark2.getText()));
        prest.setInt(4,Integer.parseInt(txt_mark3.getText()));

        m1 = Integer.valueOf(txt_mark1.getText()).intValue();
        m2 = Integer.valueOf(txt_mark2.getText()).intValue();
        m3 = Integer.valueOf(txt_mark3.getText()).intValue();
        sum = m1 + m2 +m3;
        per = sum/3;
        if(m1 >= 35 && m2 >= 35 && m3 >= 35){
            if (per >= 90) {
                grd = "A+";
            }
            else if(per >=80 && per<=90){
                grd = "A";
            }
            else if(per >=70 && per<=80){
                grd = "B";
            }
            else if(per >=60 && per<=70){
                grd = "C";
            }
            else if(per >=50 && per<=60){
                grd = "D";
            }
            else{
                grd = "E";
            }
        }
    }
}
```

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```
        }
    }
    else
    {
        per = 0;
        grd = "Fail";
    }
    prest.setInt(5,sum);
    prest.setDouble(6,per);
    prest.setString(7, grd);

    int in_count = prest.executeUpdate();
    if(in_count == 1)
    {
        s = "Inserted Record Is : ";
        s += "\nStudent Roll No : " + txt_roll_no.getText();
        s += "\nStudent Name : " + txt_s_name.getText();
        s += "\nMark 1 : " + txt_mark1.getText();
        s += "\nMark 2 : " + txt_mark2.getText();
        s += "\nMark 3 : " + txt_mark3.getText();
        s += "\nTotal : " + sum;
        s += "\nPercentage : " + per;
        s += "\nGrade : " + grd;
        txt_area_view.setText(s);
    }
    prest.close();
    con.close();
} catch (SQLException e) {
    e.printStackTrace();
    txt_area_view.setText("Student Roll No is Already Excites !");
} catch (NumberFormatException e){
    e.printStackTrace();
    txt_area_view.setText("Please Insert Values !!!! ");
}

count = 2;
}
if(count == 0){
    count = 1;
}
```

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```
        if(count == 2){
            count = 0;
            txt_roll_no.setText("");
            txt_s_name.setText("");
            txt_mark1.setText("");
            txt_mark2.setText("");
            txt_mark3.setText("");
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
} //GEN-LAST:event_btn_insertActionPerformed

private void txt_roll_noKeyTyped(java.awt.event.KeyEvent evt) { //GEN-FIRST:event_txt_roll_noKeyTyped
    txt_area_view.setText("Please Click On Button !");
} //GEN-LAST:event_txt_roll_noKeyTyped

private void btn_updateActionPerformed(java.awt.event.ActionEvent evt) { //GEN-FIRST:event_btn_updateActionPerformed
    txt_area_view.setText("");
    Connection con = null ;
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con =
        DriverManager.getConnection("jdbc:mysql://localhost:3306/student_management", "root",
        "");

        if(count == 0){
            try {
                String sql = "SELECT sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3
FROM `student_marksheet` as sm left join `student_details` as sd on sm.stud_id = sd.stud_id
where sm.stud_id = ?";
                PreparedStatement prest = con.prepareStatement(sql);
                stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
                prest.setInt(1, stud_no);
                ResultSet rs = prest.executeQuery();

                while (rs.next()) {
```

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```
txt_roll_no.setText(rs.getString(1));
txt_s_name.setText(rs.getString(2));
txt_mark1.setText(rs.getString(3));
txt_mark2.setText(rs.getString(4));
txt_mark3.setText(rs.getString(5));
}
} catch (Exception e) {
    e.printStackTrace();
    txt_area_view.setText("Roll Number Not Found!!!!");
}
}
else if(count ==1)
{
    try {
        String sql = "UPDATE `student_marksheet` SET
`mark1`=?,`mark2`=?,`mark3`=?,"
        + "`total`=?,`percentage`=?,`grad`=? WHERE `stud_id` = ? ";
        PreparedStatement prest = con.prepareStatement(sql);

        prest.setInt(1,Integer.parseInt(txt_mark1.getText()));
        prest.setInt(2,Integer.parseInt(txt_mark2.getText()));
        prest.setInt(3,Integer.parseInt(txt_mark3.getText()));

        m1 = Integer.valueOf(txt_mark1.getText()).intValue();
        m2 = Integer.valueOf(txt_mark2.getText()).intValue();
        m3 = Integer.valueOf(txt_mark3.getText()).intValue();
        sum = m1 + m2 +m3;
        per = sum/3;
        if(m1 >= 35 && m2 >= 35 && m3 >= 35){
            if (per >= 90) {
                grd = "A+";
            }
            else if(per >=80 && per<=90){
                grd = "A";
            }
            else if(per >=70 && per<=80){
                grd = "B";
            }
            else if(per >=60 && per<=70){
                grd = "C";
            }
        }
    }
}
```

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```
    }
    else if(per >=50 && per<=60){
        grd = "D";
    }
    else{
        grd = "E";
    }
}
else
{
    per = 0;
    grd = "Fail";
}
prest.setInt(4,sum);
prest.setDouble(5,per);
prest.setString(6, grd);
prest.setInt(7, stud_no);
int in_count = prest.executeUpdate();
if(in_count == 1)
{
    s = "Updated Record Is : ";
    s += "\nStudent Roll No : " + txt_roll_no.getText();
    s += "\nStudent Name : " + txt_s_name.getText();
    s += "\nMark 1 : " + txt_mark1.getText();
    s += "\nMark 2 : " + txt_mark2.getText();
    s += "\nMark 3 : " + txt_mark3.getText();
    s += "\nTotal : " + sum;
    s += "\nPersentage : " + per;
    s += "\nGrade : " + grd;
    txt_area_view.setText(s);
}
prest.close();
con.close();
} catch (SQLException e) {
    e.printStackTrace();
    txt_area_view.setText("Student Roll No is Already Excites !");
} catch (NumberFormatException e){
    e.printStackTrace();
    txt_area_view.setText("Please Insert Values !!!! ");
}
```

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```
        count = 2;
    }
    if(count == 0){
        count = 1;
    }
    if(count == 2){
        count = 0;
        txt_roll_no.setText("");
        txt_s_name.setText("");
        txt_mark1.setText("");
        txt_mark2.setText("");
        txt_mark3.setText("");
    }
} catch (Exception e) {
    e.printStackTrace();
}
} //GEN-LAST:event_btn_updateActionPerformed

private void btn_deleteActionPerformed(java.awt.event.ActionEvent evt) { //GEN-FIRST:event_btn_deleteActionPerformed
    txt_area_view.setText("");
    Connection con = null ;
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con =
        DriverManager.getConnection("jdbc:mysql://localhost:3306/student_management", "root",
        "");
        try {
            String sql = "SELECT
sm.stud_id,sd.stud_name,sm.mark1,sm.mark2,sm.mark3,sm.total,sm.percentage,sm.grad
FROM `student_marksheet` as sm left join `student_details` as sd on sm.stud_id = sd.stud_id
where sm.stud_id = ?";
            PreparedStatement prest = con.prepareStatement(sql);
            stud_no = Integer.parseInt(JOptionPane.showInputDialog(null,"Enter Student Roll
Number : "));
            prest.setInt(1, stud_no);
            ResultSet rs = prest.executeQuery();

            while (rs.next()) {
```

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```
s = "Deleted Record Is : ";
s += "\nStudent Roll No : " + rs.getString(1);
s += "\nStudent Name : " + rs.getString(2);
s += "\nMark 1 : " + rs.getString(3);
s += "\nMark 2 : " + rs.getString(4);
s += "\nMark 3 : " + rs.getString(5);
s += "\nTotal : " + rs.getString(6);
s += "\nPercentage : " + rs.getString(7);
s += "\nGrade : " + rs.getString(8);
txt_area_view.setText(s);
}

String del_sql = "DELETE FROM `student_marksheet` WHERE stud_id = ?";
prest = con.prepareStatement(del_sql);
prest.setInt(1, stud_no);
prest.executeUpdate();
prest.close();
con.close();
} catch (SQLException e) {
    e.printStackTrace();
    txt_area_view.setText("Student Roll Number Not Excites !!!!");
}
} catch (Exception e) {
    e.printStackTrace();
}
} //GEN-LAST:event_btn_deleteActionPerformed

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and
    feel.
    * For details see
    http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
    */
    try {
```


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```
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(Exe_4_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Exe_4_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Exe_4_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Exe_4_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {

    @Override
    public void run() {
        new Exe_4_1().setVisible(true);
    }
});
}
// Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JButton btn_delete;
private javax.swing.JButton btn_insert;
private javax.swing.JButton btn_update;
private javax.swing.JButton btn_view;
```

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```
private javax.swing.JScrollPane jScrollPane1;  
private javax.swing.JSlider jSlider1;  
private javax.swing.JLabel lbl_mark1;  
private javax.swing.JLabel lbl_mark2;  
private javax.swing.JLabel lbl_mark3;  
private javax.swing.JLabel lbl_roll_no;  
private javax.swing.JLabel lbl_s_name;  
private javax.swing.JTextArea txt_area_view;  
private javax.swing.JTextField txt_mark1;  
private javax.swing.JTextField txt_mark2;  
private javax.swing.JTextField txt_mark3;  
private javax.swing.JTextField txt_roll_no;  
private javax.swing.JTextField txt_s_name;  
// End of variables declaration//GEN-END:variables  
}
```