Java Institute for Advanced Technology

UNIT NAME: SOFTWARE APPLICATION DEVELOPMENT

UNIT ID: H7E1 04

ASSIGNMENT ID: H7E1 04/AS/02

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PROJECT FILE: https://drive.google.com/drive/folders/1h9K-ZHMo66cALv7EaSki3MaTWuYdQXP0?usp=sharing

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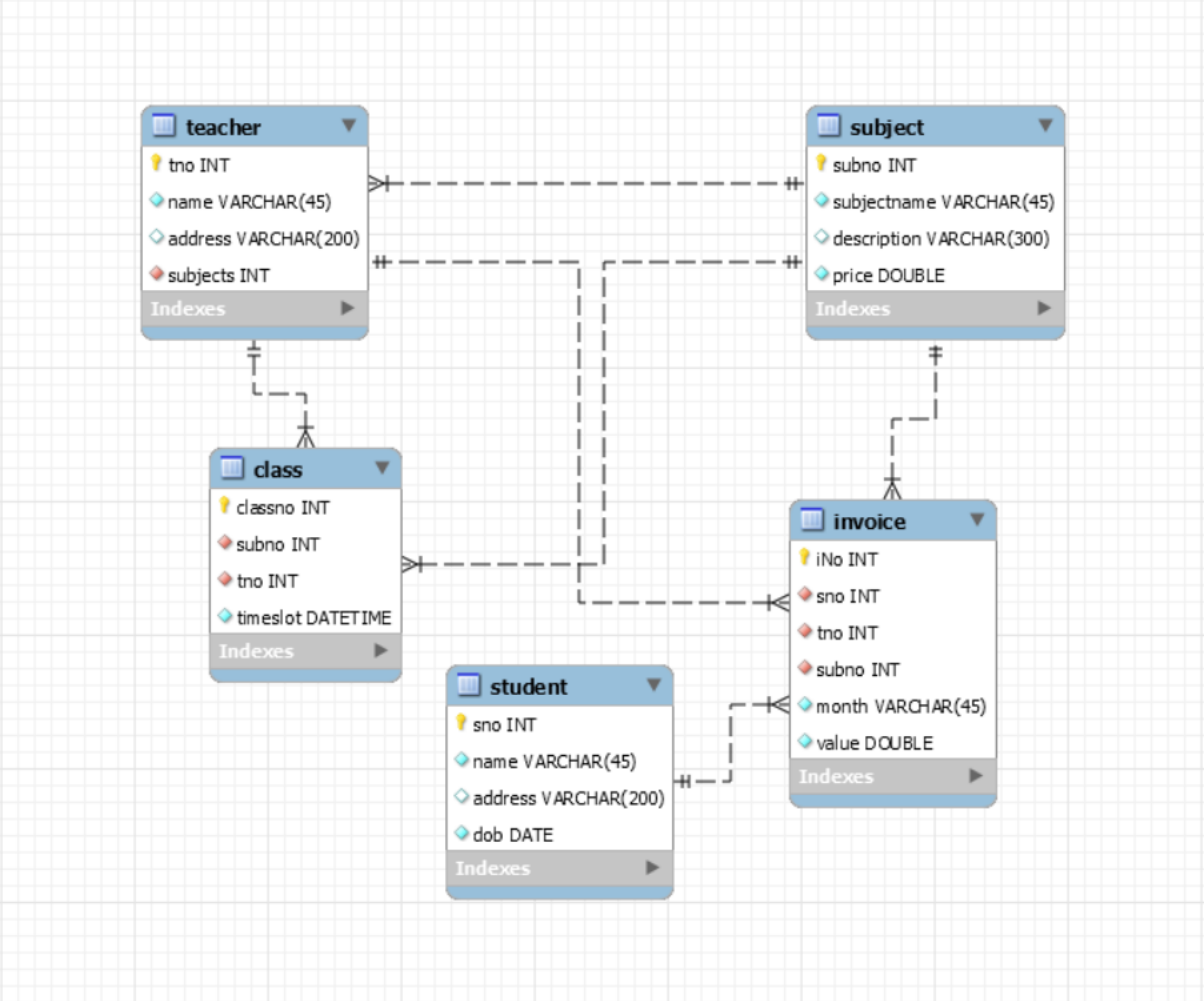
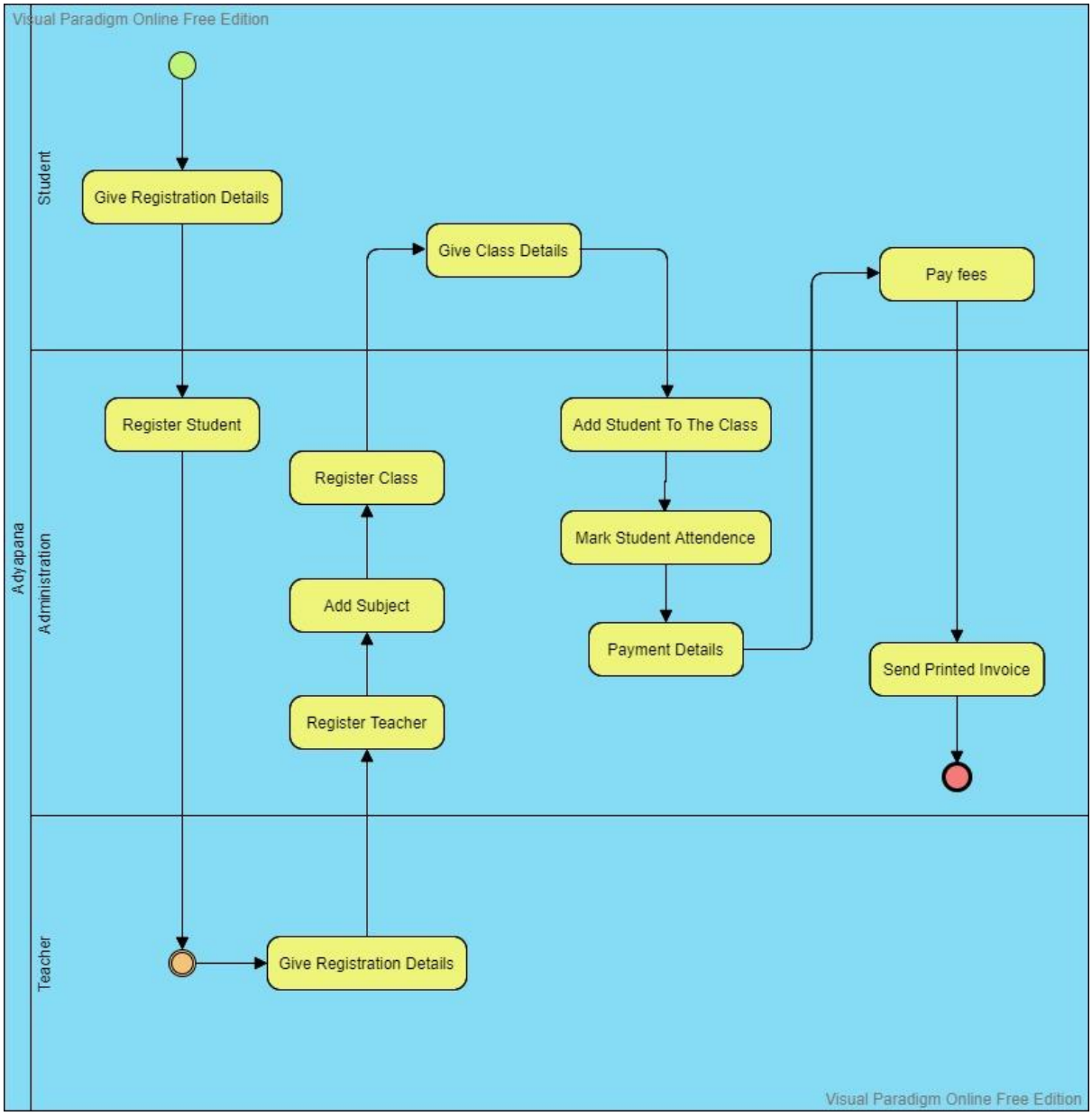
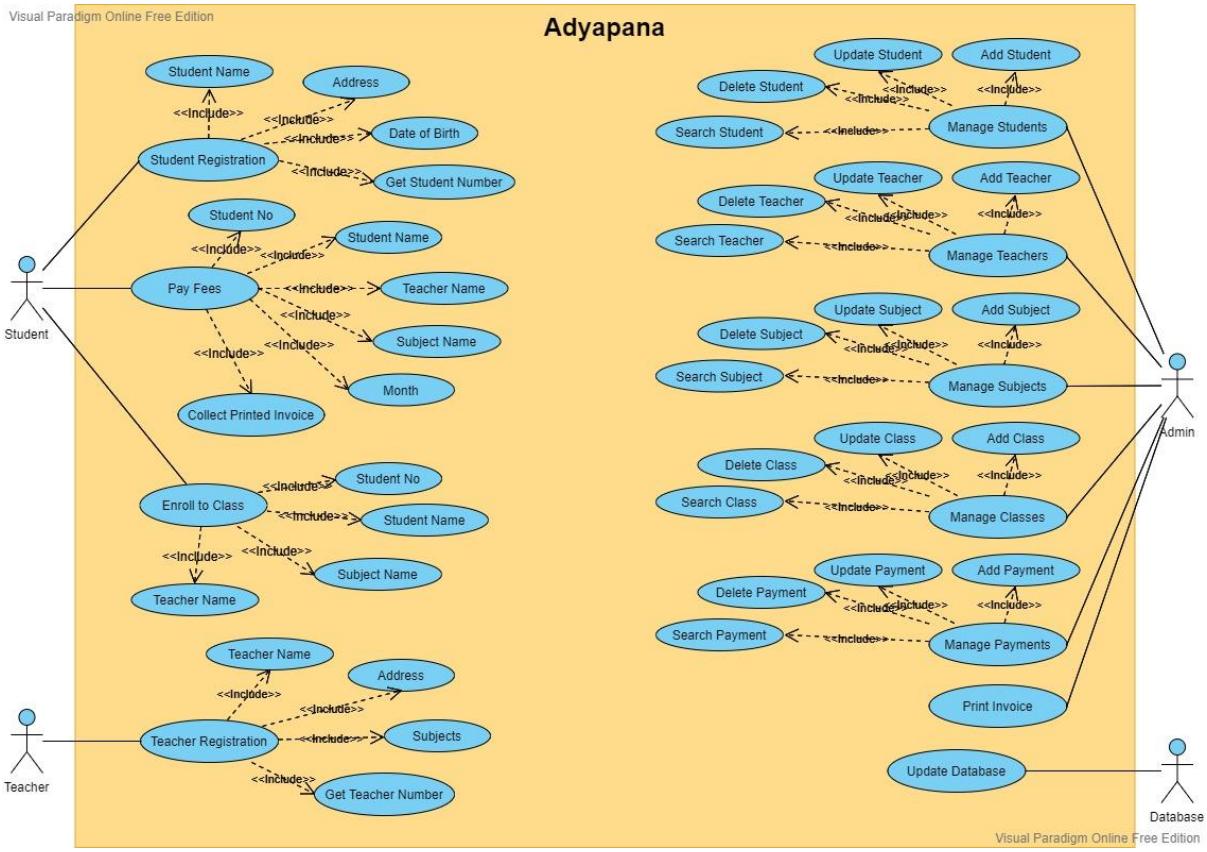
ER Diagram


teacher
tno INT
name VARCHAR(45)
address VARCHAR(200)
subjects INT
Indexes
subject
subno INT
subjectname VARCHAR(45)
description VARCHAR(300)
price DOUBLE
Indexes
class
classno INT
subno INT
tno INT
timeslot DATETIME
Indexes
invoice
iNo INT
sno INT
tno INT
subno INT
month VARCHAR(45)
value DOUBLE
Indexes
student
sno INT
name VARCHAR(45)
address VARCHAR(200)
dob DATE
Indexes

Business Process Diagram

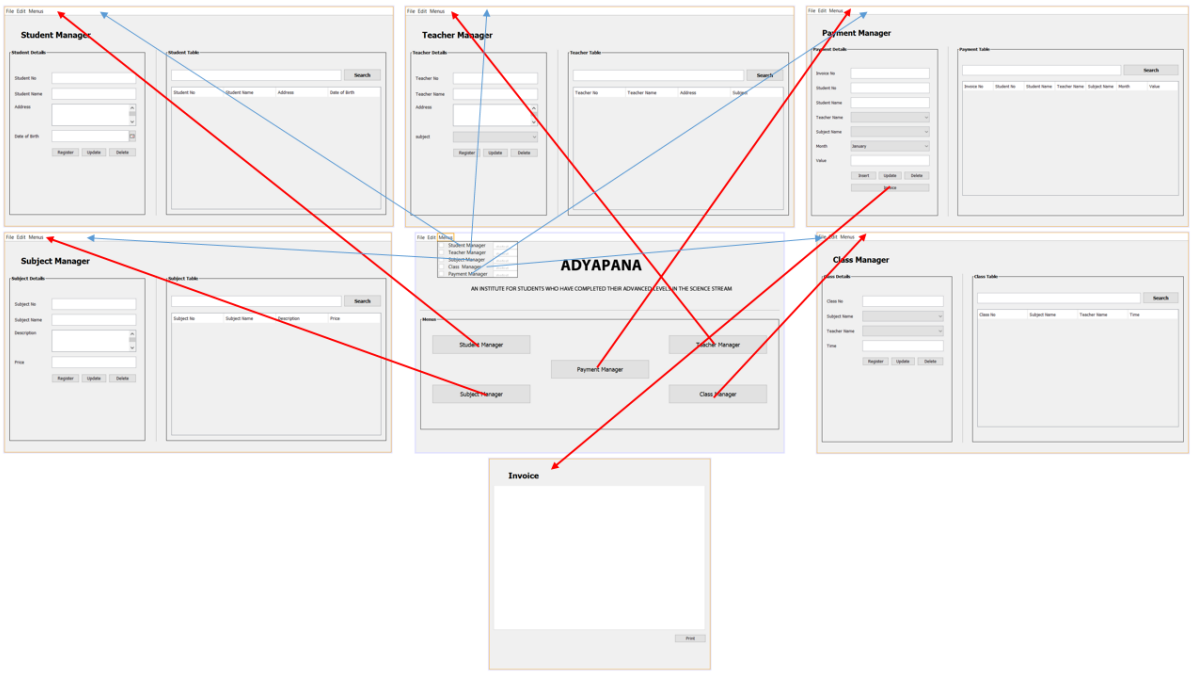


Use Case Diagram

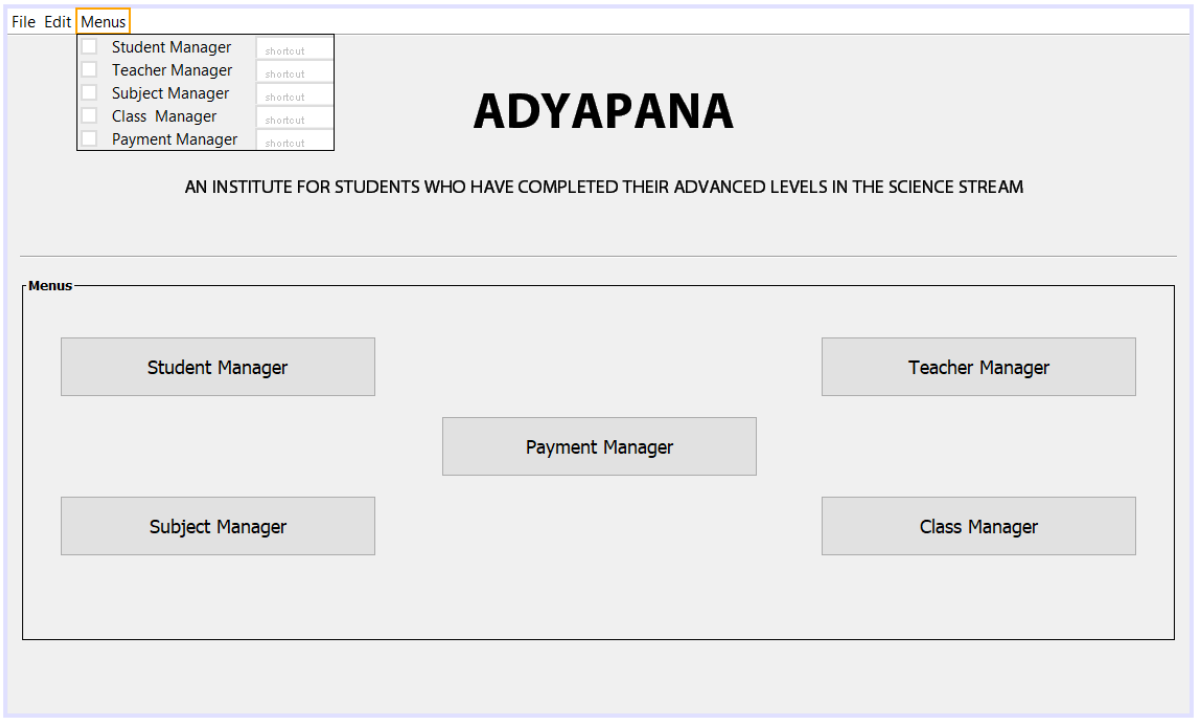


Wireframes and Reports

Wireframe Diagram

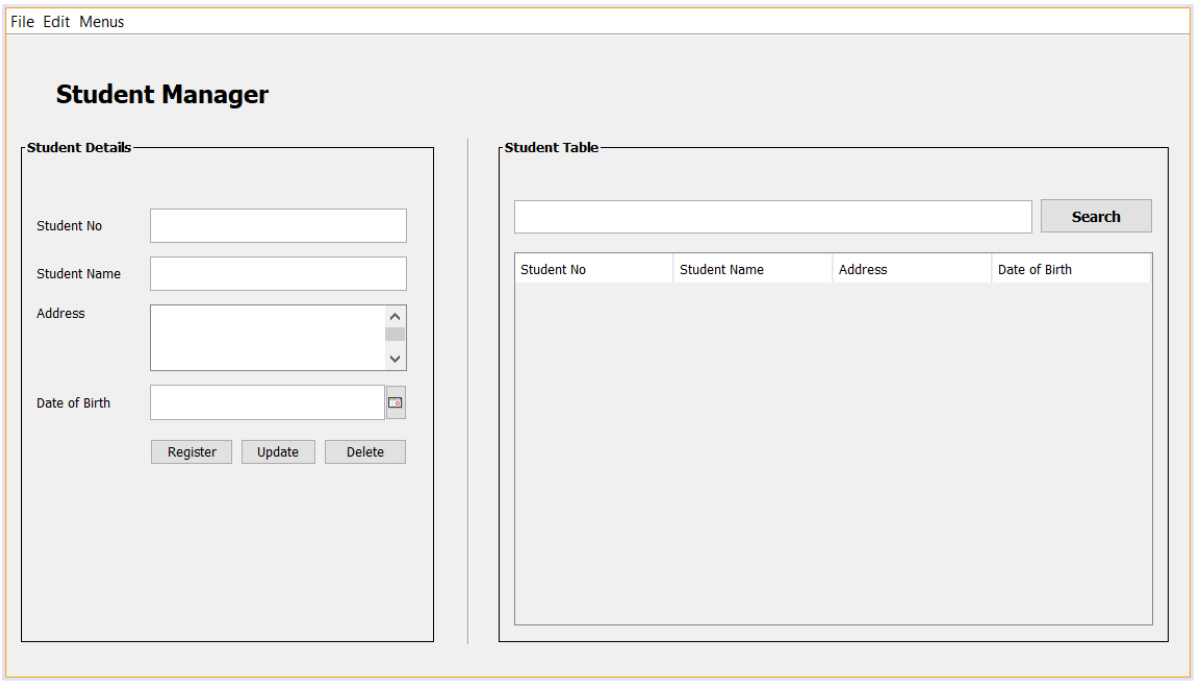


Home Page Frame



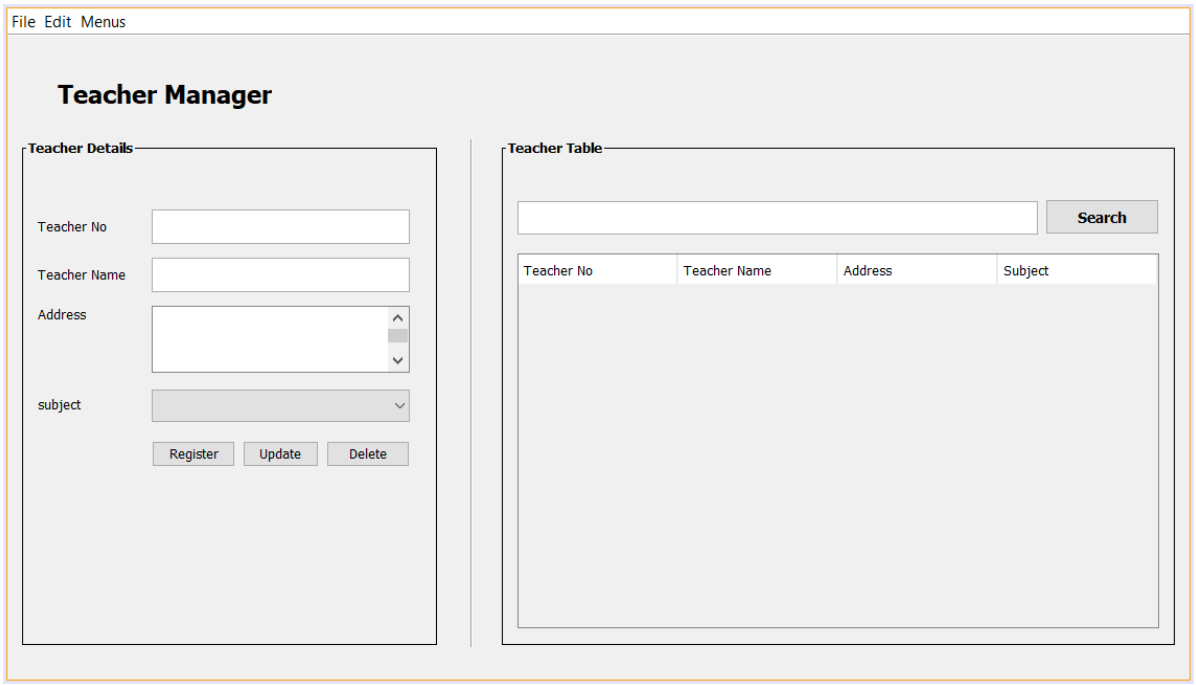
Frame	Home
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Menus
Labels	ADYAPANA, AN INSTITUTE FOR STUDENTS WHO HAVE COMPLETED THEIR ADVANCED LEVELS IN THE SCIENCE STREAM
Buttons	Student Manager(Link To Student Manager Frame), Teacher Manager(Link To Teacher Manager Frame), Subject Manager(Link To Subject Manager Frame), Class Manager(Link To Class Manager Frame), Payment Manager(Link To Payment Manager Frame)

Student Manager Frame



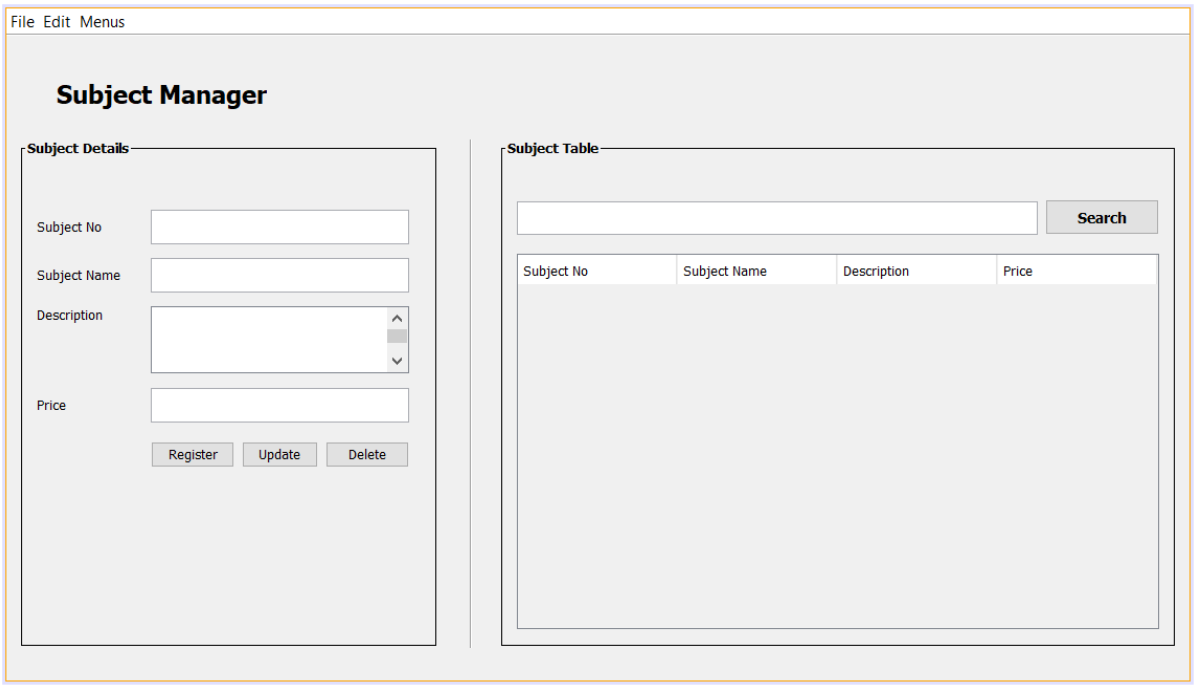
Frame	Student Manager
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Student Details, Student Table
Table	Student Table (Show all the Students and their Details in the Institute)
Labels	Student Manager, Student No, Student Name, Address, Date of Birth
Text Fields	Student No(To Give Student Number) , Student Name(To Give Student Name), Search Bar(To Search Student Details on The Student Name)
Text Area	Address(To Give Student Address)
Date Chooser	Date of Birth(To Give Student Date of Birth)
Buttons	Register(To Insert Student Details into the Database), Update(To Update Student Details in the Database), Delete(To Delete Student Details in the Database), Search(To Search Students and their Details on the Student Table)

Teacher Manager Frame



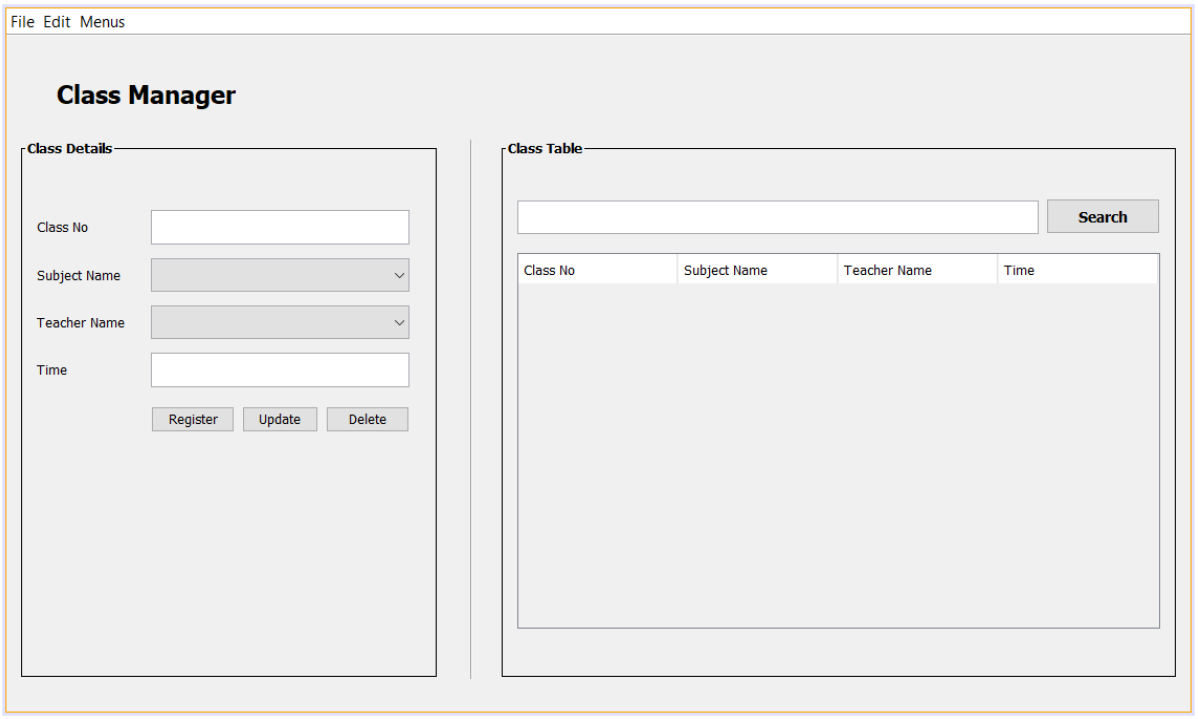
Frame	Teacher Manager
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Teacher Details, Teacher Table
Table	Teacher Table (Show all the Teachers and their Details in the Institute)
Labels	Teacher Manager, Teacher No, Teacher Name, Address, Subject
Text Fields	Teacher No(To Give Teacher Number) , Teacher Name(To Give Teacher Name), Search Bar(To Search Teacher Details on The Teacher Name or The Subject Name)
Text Area	Address(To Give Teacher Address)
Combo Box	Subject(To Select the Subject that the Teacher teaches)
Buttons	Register(To Insert Teacher Details into the Database), Update(To Update Teacher Details in the Database), Delete(To Delete Teacher Details in the Database), Search(To Search Teachers and their Details on the Teacher Table)

Subject Manager Frame



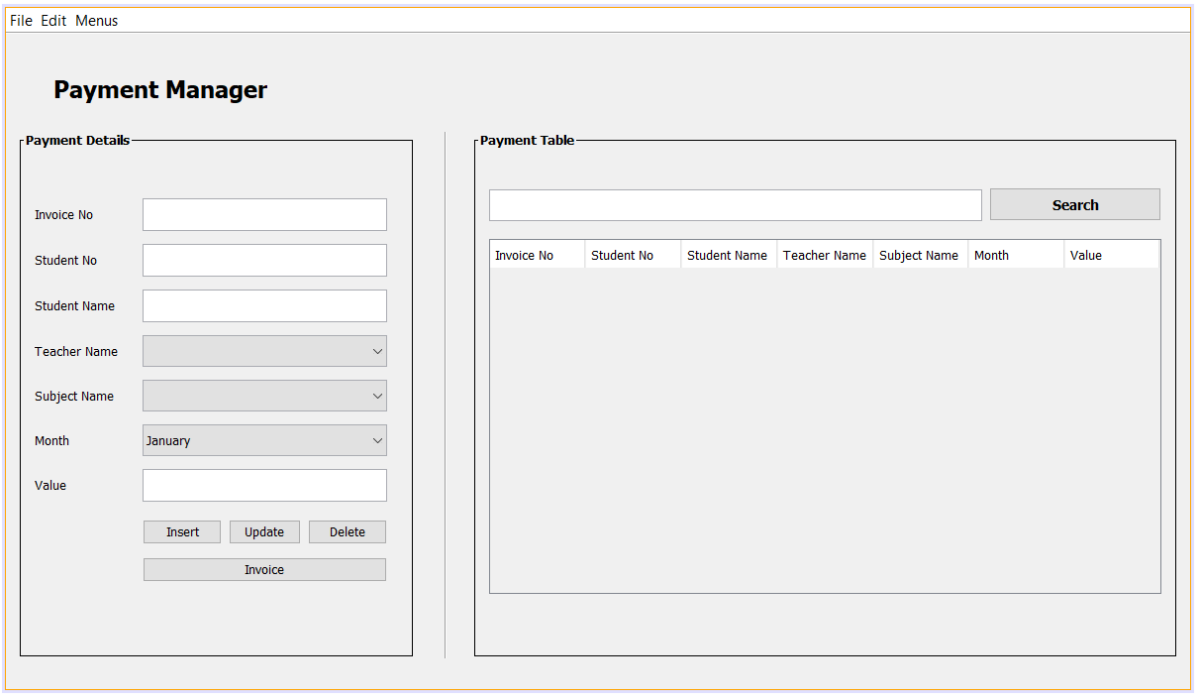
Frame	Subject Manager
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Subject Details, Subject Table
Table	Subject Table (Show all the Subjects and their Details in the Institute)
Labels	Subject Manager, Subject No, Subject Name, Description, Price
Text Fields	Subject No(To Give Subject Number) , Subject Name(To Give Subject Name), Price (To Give Subject Price),Search Bar(To Search Subject Details on The Subject Name)
Text Area	Description (To Give Subject Description)
Buttons	Register(To Insert Subject Details into the Database), Update(To Update Subject Details in the Database), Delete(To Delete Subject Details in the Database), Search(To Search Subjects and their Details on the Subject Table)

Class Manager Frame



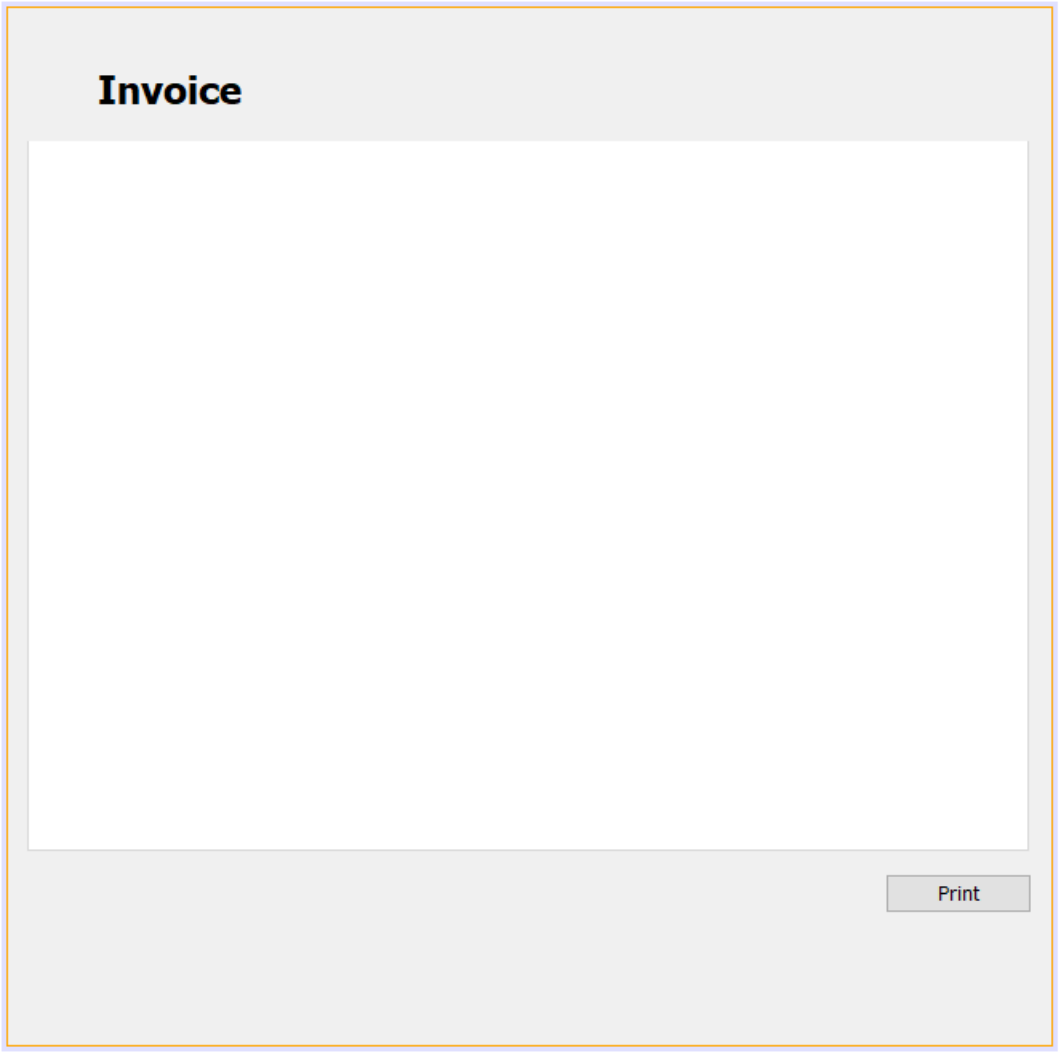
Frame	Class Manager
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Class Details, Class Table
Table	Class Table (Show all the Classes and their Details in the Institute)
Labels	Class Manager, Class No, Subject Name, Teacher Name, Time
Text Fields	Class No(To Give Class Number) , Time(To Give Class Time), Search Bar(To Search Class Details on The Subject Name or The Teacher Name)
Combo Box	Subject Name(To Select the Subject Name that the Teacher teaches), Teacher Name(To Select the Teacher Name)
Buttons	Register(To Insert Class Details into the Database), Update(To Update Class Details in the Database), Delete(To Delete Class Details in the Database), Search(To Search Classes and their Details on the Class Table)

Payment Manager Frame



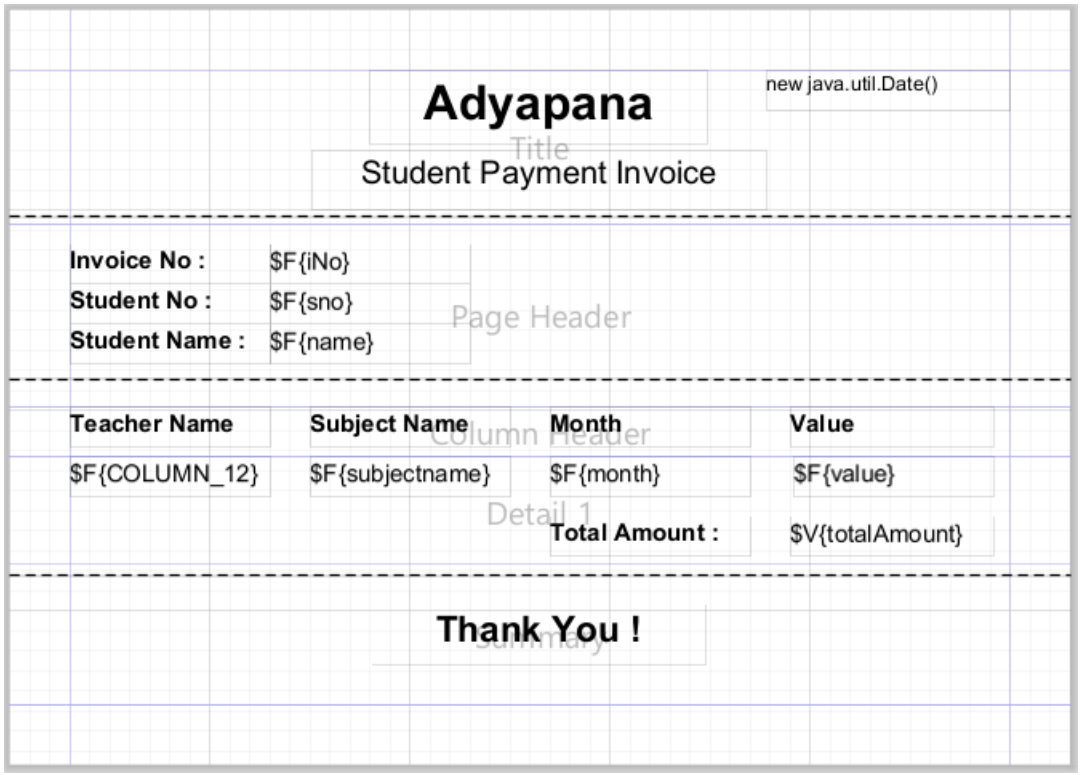
Frame	Payment Manager
Menu Bar Menus	File, Edit, Menus(Link to Other Frames)
Menu Items	Student Manager, Teacher Manager, Subject Manager, Class Manager, Payment Manager
Panels	Payment Details, Payment Table
Table	Payment Table (Show all the Payments and their Details in the Institute)
Labels	Payment Manager, Invoice No, Student No, Student Name, Teacher Name, Subject Name, Month, Value
Text Fields	Invoice No(To Give Invoice Number) , Student No(To Give Student Number), Student Name (To Give Student Name), Value(To Give Payment Value), Search Bar(To Search Payment Details on The Invoice Number or The Student Name or The Teacher Name or The Subject Name)
Combo Box	Teacher Name(To Select the Teacher Name), Subject Name(To Select the Subject Name that the Teacher teaches), Month(To Select the Payment Month)
Buttons	Register(To Insert Payment Details into the Database), Update(To Update Payment Details in the Database), Delete(To Delete Payment Details in the Database), Search(To Search Payments and their Details on the Payment Table), Invoice (To Generate The Invoice on Invoice Manager Dialog)

Invoices Manager Dialog

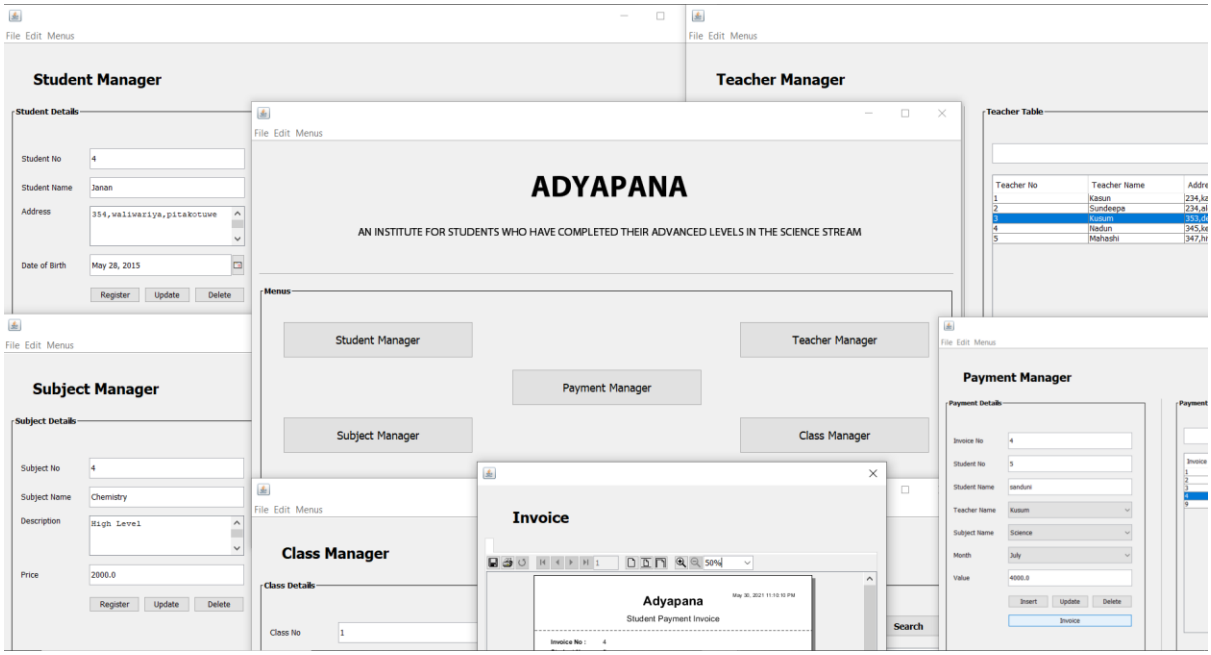


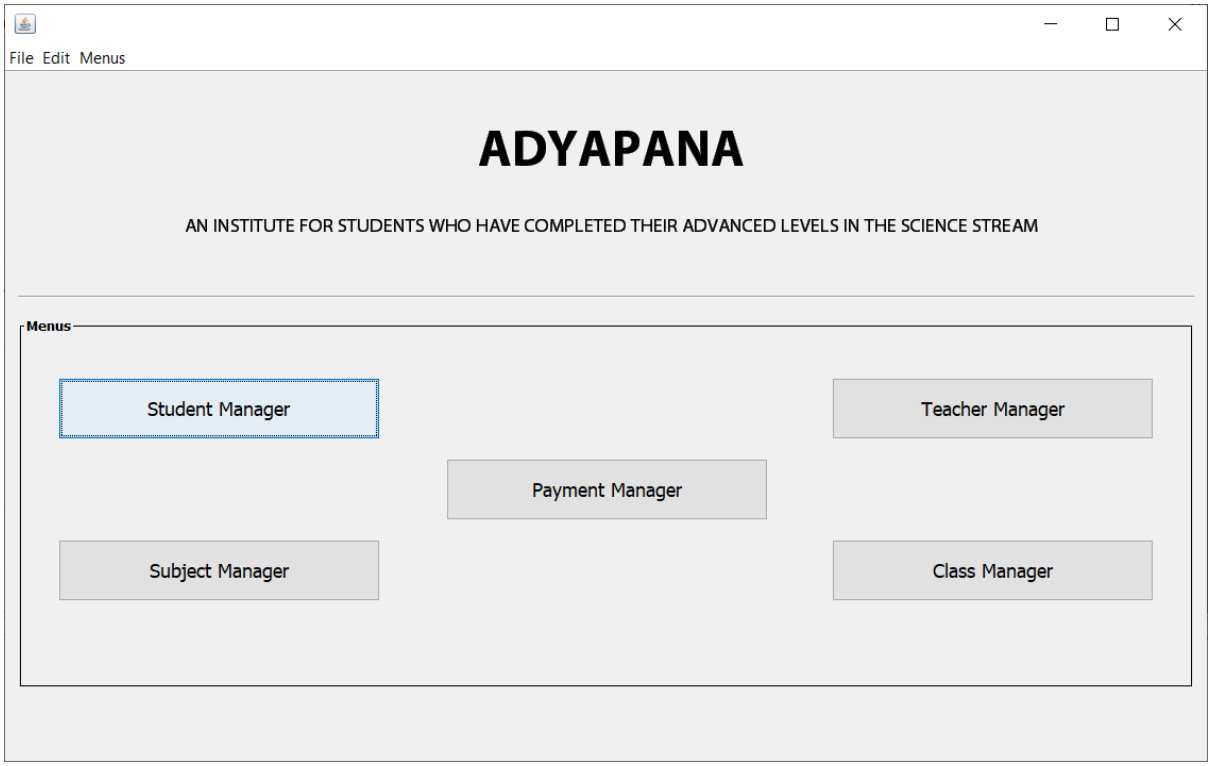
Dialog	Invoice Manager Dialog
Tabbed Pane	Invoice Tabbed Pane(To View Invoice Preview)
Labels	Invoice
Buttons	Print(To Print the Generated Invoice)

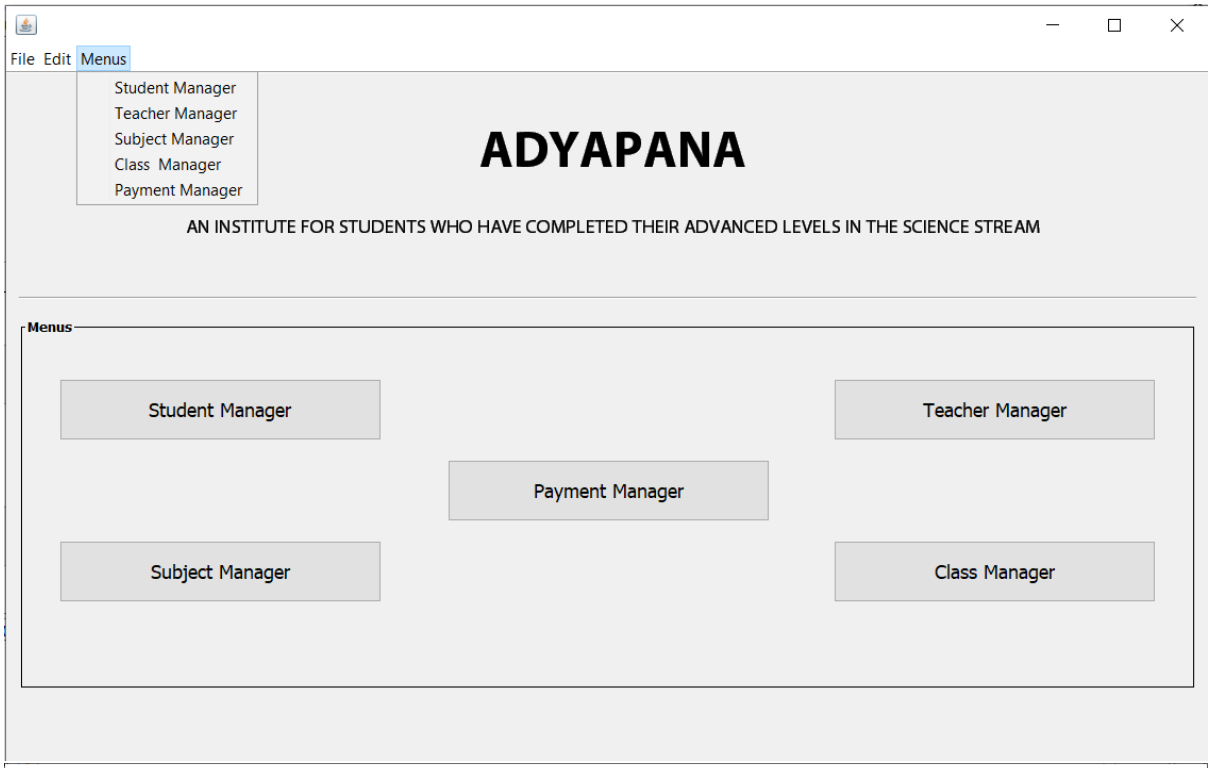
Invoice Report

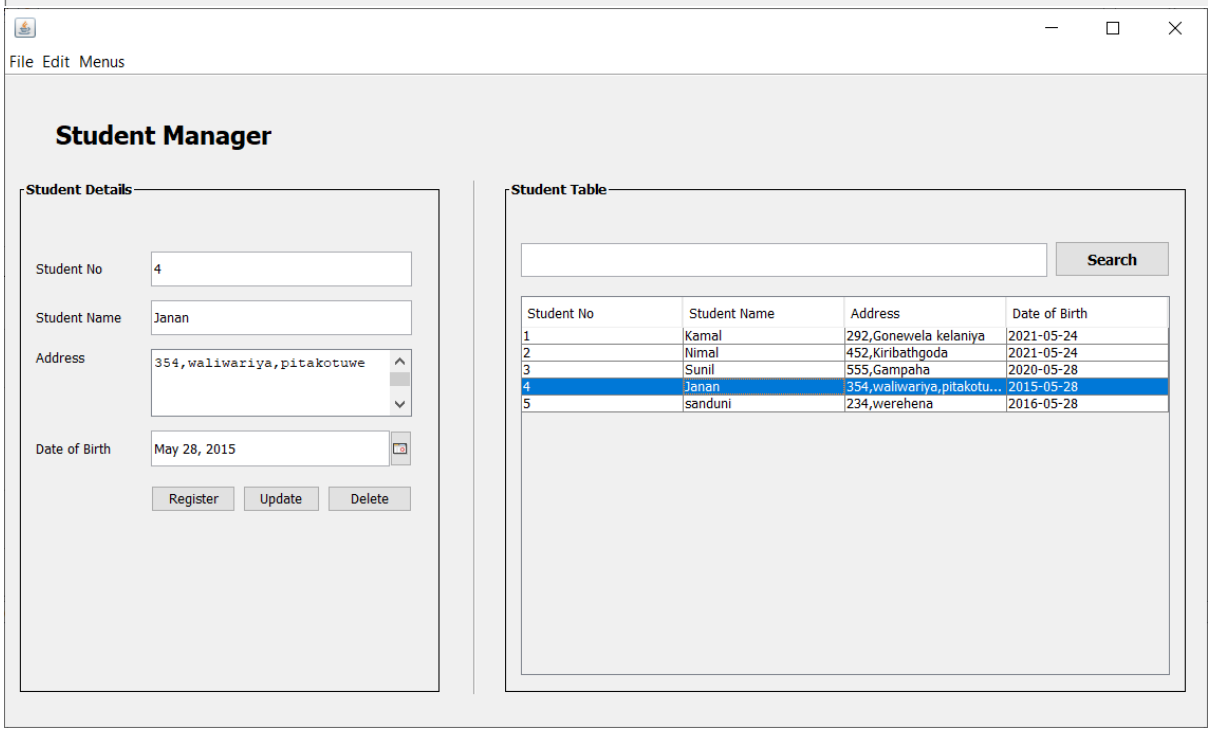


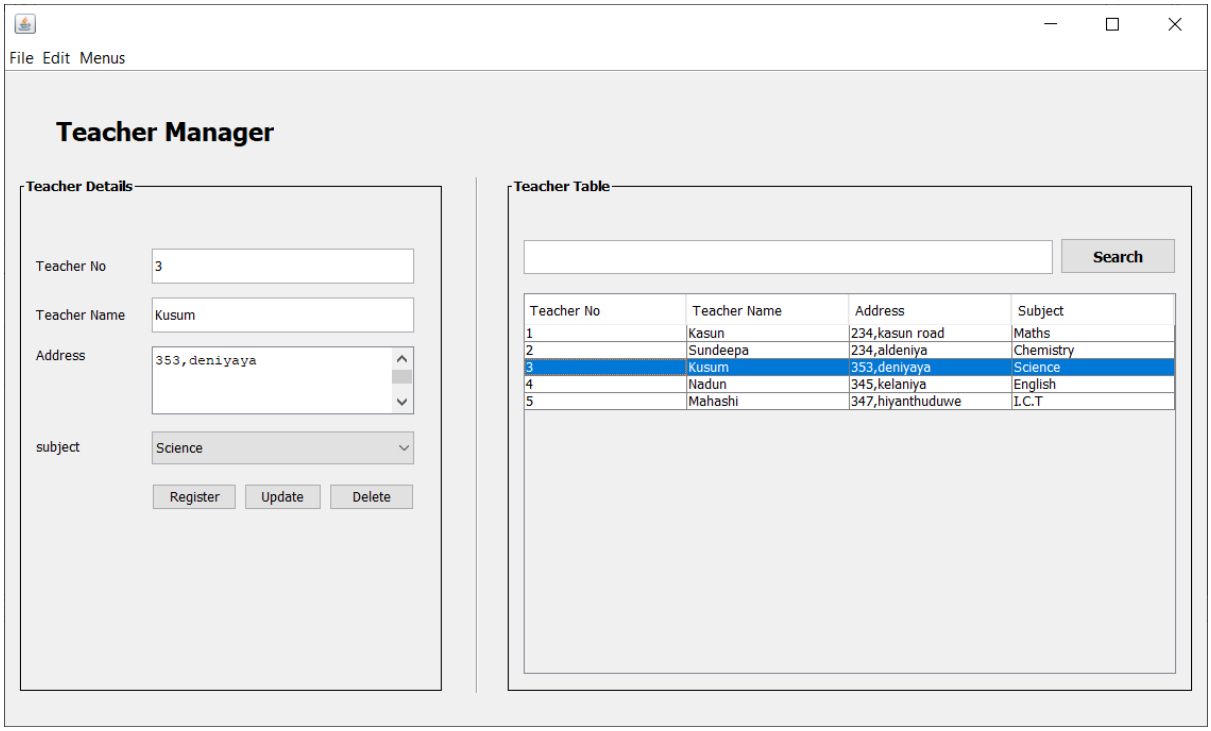
Screenshots

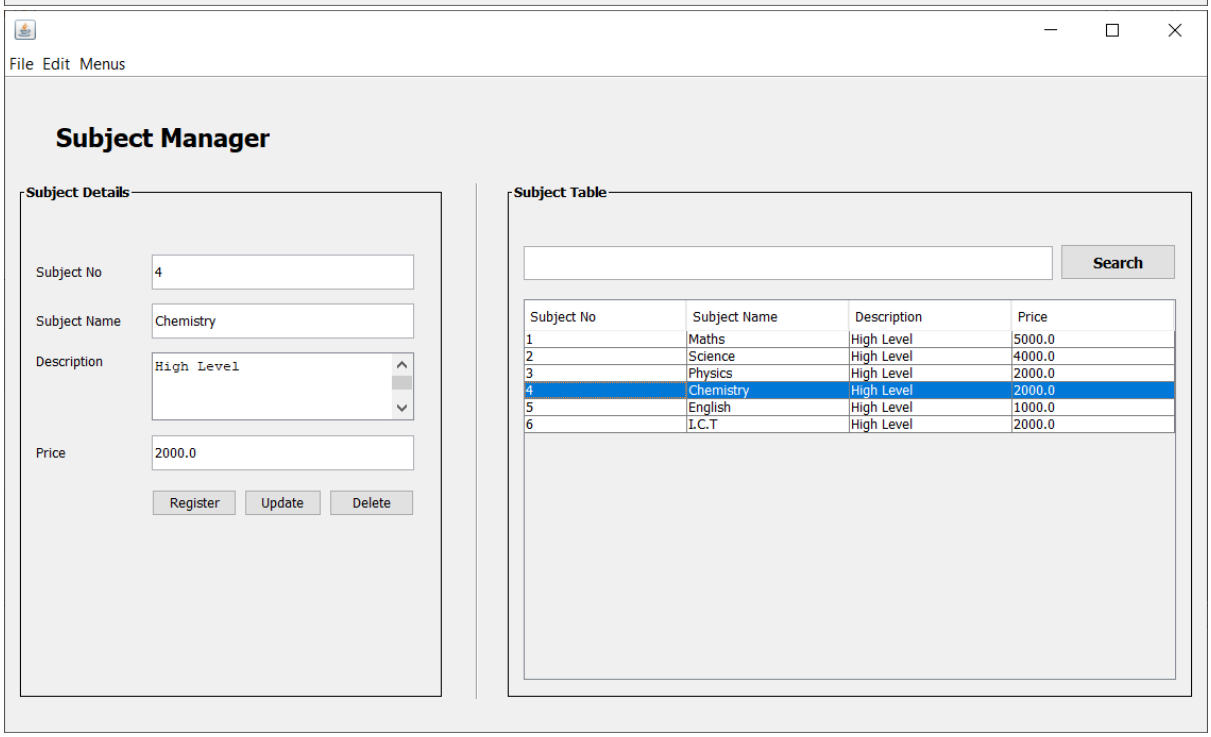


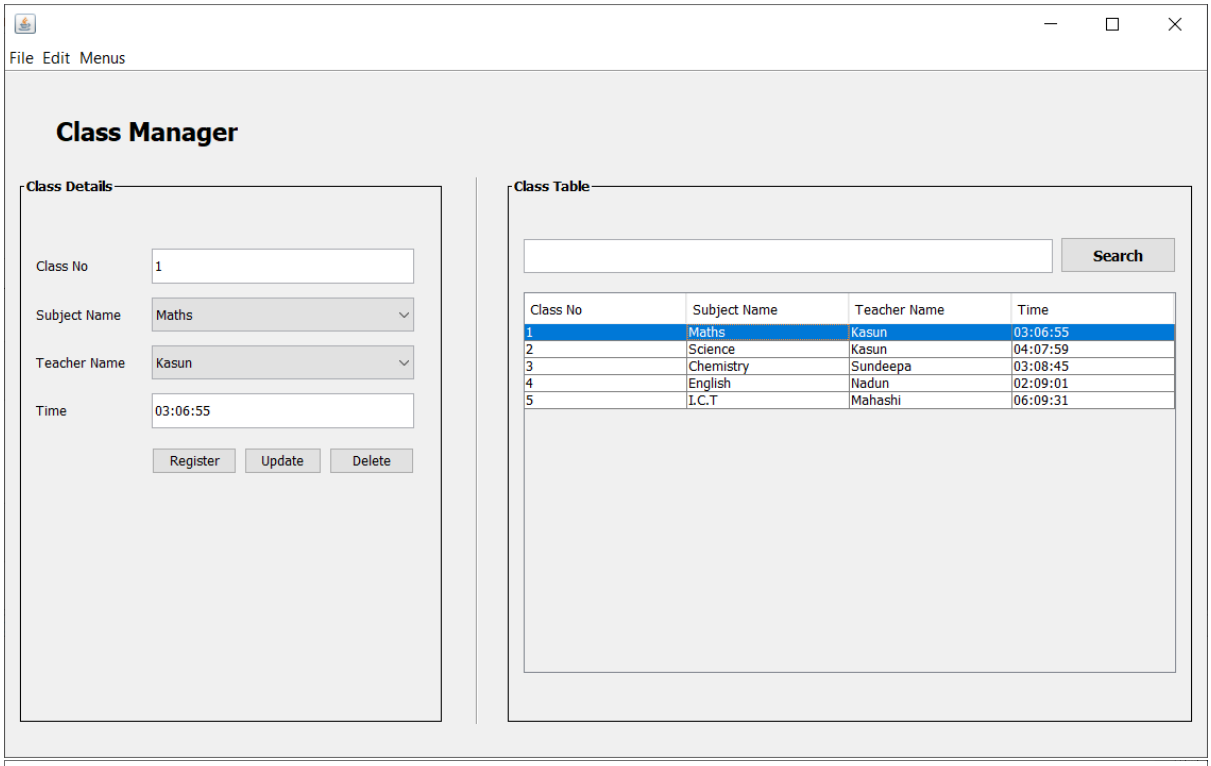


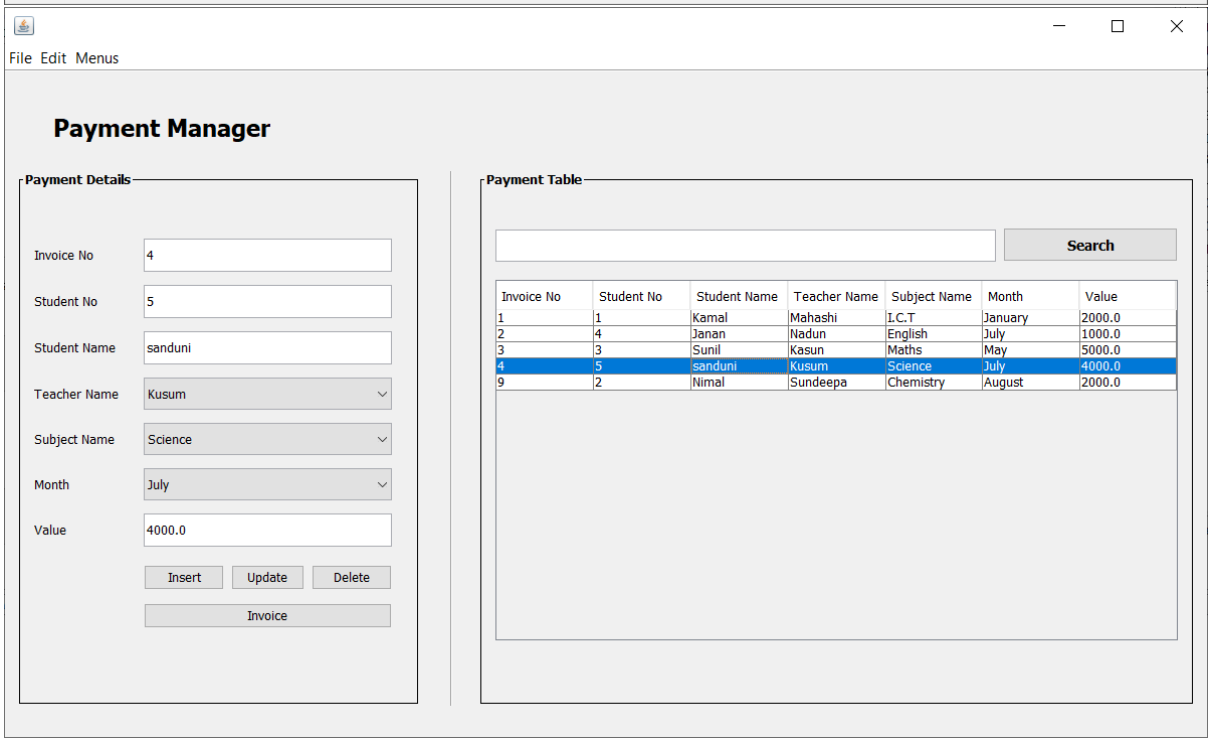

File Edit Menus
Student Manager
Teacher Manager
Subject Manager
Class Manager
Payment Manager
ADYAPANA
AN INSTITUTE FOR STUDENTS WHO HAVE COMPLETED THEIR ADVANCED LEVELS IN THE SCIENCE STREAM
Menus
Student Manager
Teacher Manager
Payment Manager
Subject Manager
Class Manager

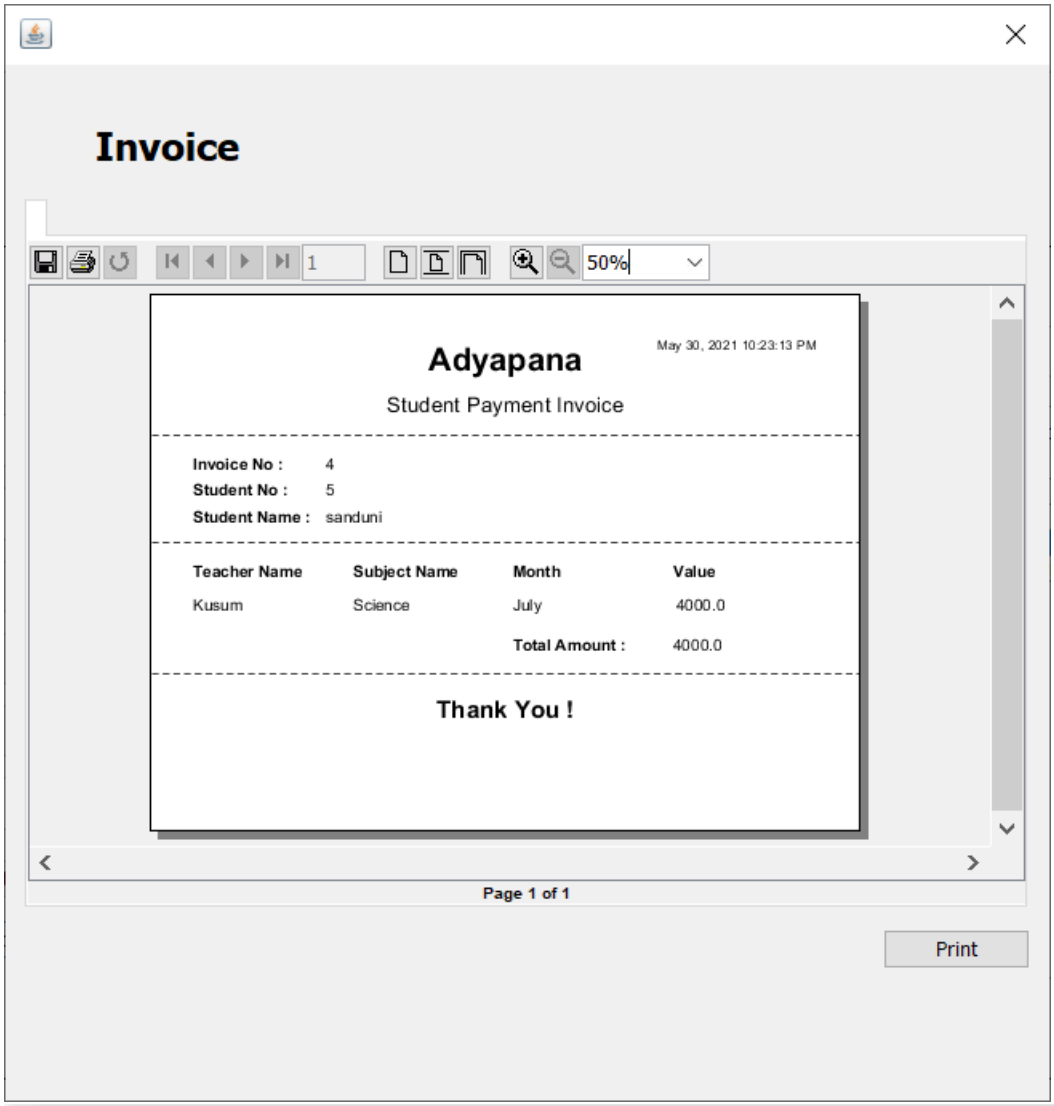

File Edit Menus
Student Manager
Student Details
Student No
4
Student Name
Janan
Address
354,waliwariya,pitakotuwe
Date of Birth
May 28, 2015
Register
Update
Delete
Student Table
Search
Student No
Student Name
Address
Date of Birth
1
Kamal
292,Gonewela kelaniya
2021-05-24
2
Nimal
452,Kiribathgoda
2021-05-24
3
Sunil
555,Gampaha
2020-05-28
4
Janan
354,waliwariya,pitakotu...
2015-05-28
5
sanduni
234,werehena
2016-05-28

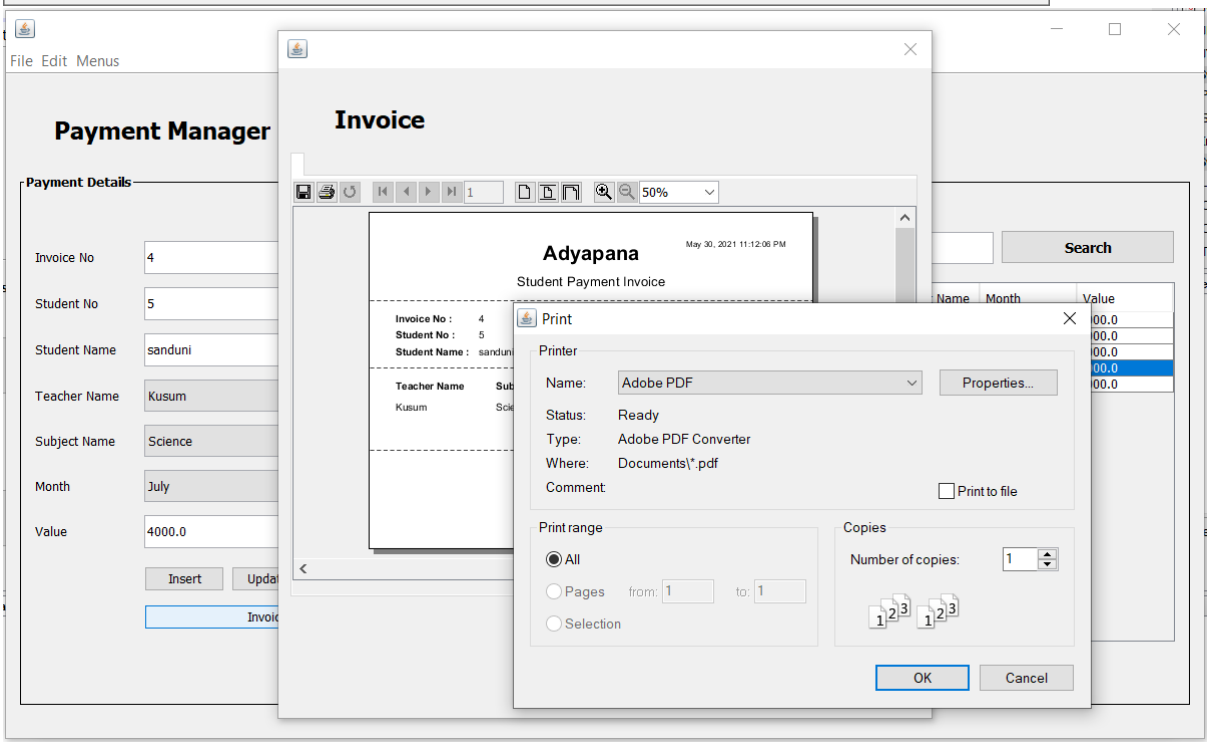

File Edit Menus
Teacher Manager
Teacher Details
Teacher No
3
Teacher Name
Kusum
Address
353,deniyaya
subject
Science
Register
Update
Delete
Teacher Table
Search
Teacher No
Teacher Name
Address
Subject
1
Kasun
234,kasun road
Maths
2
Sundeepa
234,aldeniya
Chemistry
3
Kusum
353,deniyaya
Science
4
Nadun
345,kelaniya
English
5
Mahashi
347,hiyanthuduwe
I.C.T

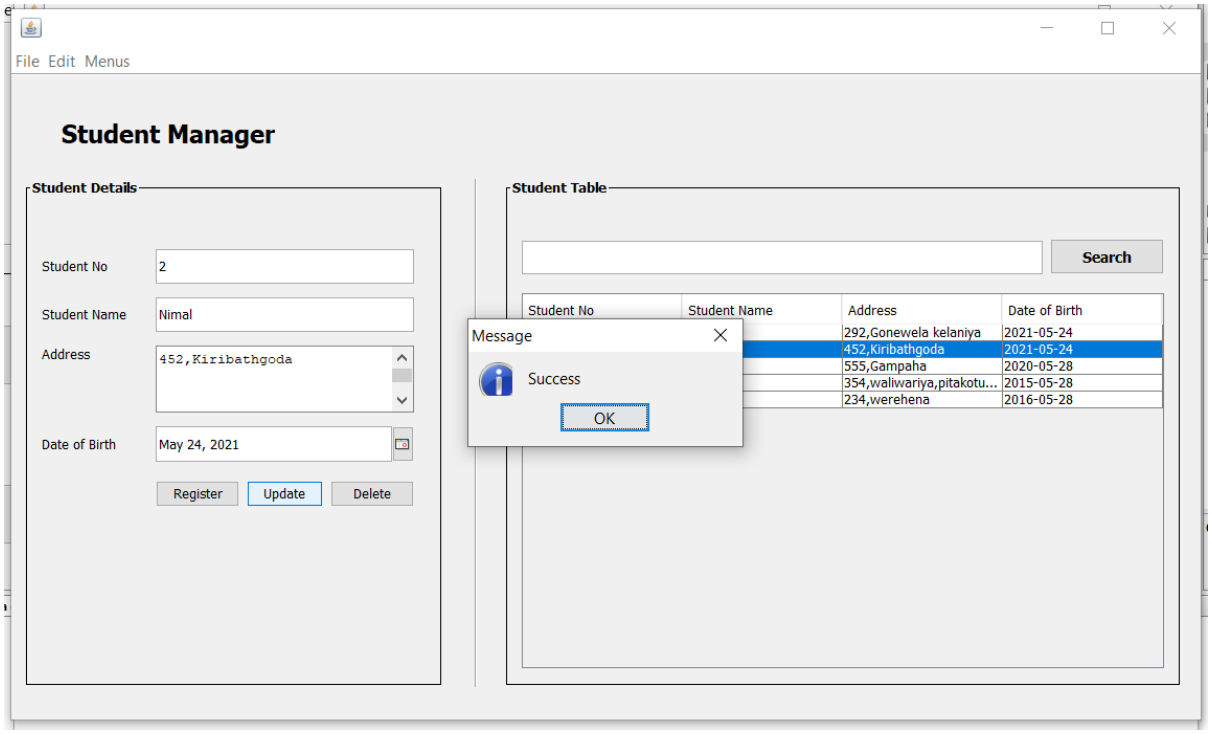

File Edit Menus
Subject Manager
Subject Details
Subject No
4
Subject Name
Chemistry
Description
High Level
Price
2000.0
Register
Update
Delete
Subject Table
Search
Subject No
Subject Name
Description
Price
1
Maths
High Level
5000.0
2
Science
High Level
4000.0
3
Physics
High Level
2000.0
4
Chemistry
High Level
2000.0
5
English
High Level
1000.0
6
I.C.T
High Level
2000.0


File Edit Menus
Class Manager
Class Details
Class No
1
Subject Name
Maths
Teacher Name
Kasun
Time
03:06:55
Register
Update
Delete
Class Table
Search
Class No
Subject Name
Teacher Name
Time
1
Maths
Kasun
03:06:55
2
Science
Kasun
04:07:59
3
Chemistry
Sundeepa
03:08:45
4
English
Nadun
02:09:01
5
I.C.T
Mahashi
06:09:31


File Edit Menus
Payment Manager
Payment Details
Invoice No
4
Student No
5
Student Name
sanduni
Teacher Name
Kusum
Subject Name
Science
Month
July
Value
4000.0
Insert
Update
Delete
Invoice
Payment Table
Search
Invoice No
Student No
Student Name
Teacher Name
Subject Name
Month
Value
1
1
Kamal
Mahashi
I.C.T
January
2000.0
2
4
Janan
Nadun
English
July
1000.0
3
3
Sunil
Kasun
Maths
May
5000.0
4
5
sanduni
Kusum
Science
July
4000.0
9
2
Nimal
Sundeepa
Chemistry
August
2000.0


Invoice
50%
Adyapana
May 30, 2021 10:23:13 PM
Student Payment Invoice
Invoice No : 4
Student No : 5
Student Name : sanduni
Teacher Name
Subject Name
Month
Value
Kusum
Science
July
4000.0
Total Amount : 4000.0
Thank You !
Page 1 of 1
Print


File Edit Menus
Payment Manager
Payment Details
Invoice No 4
Student No 5
Student Name sanduni
Teacher Name Kusum
Subject Name Science
Month July
Value 4000.0
Insert
Search
Invoice
Adyapana
Student Payment Invoice
Print
Printer
Name: Adobe PDF
Properties...
Status: Ready
Type: Adobe PDF Converter
Where: Documents*.pdf
Comment:
Print to file
Print range
All
Pages from: 1 to: 1
Selection
Copies
Number of copies: 1
OK
Cancel


File Edit Menus
Student Manager
Student Details
Student No
2
Student Name
Nimal
Address
452,Kiribathgoda
Date of Birth
May 24, 2021
Register
Update
Delete
Student Table
Search
Student No
Student Name
Address
Date of Birth
292,Gonewela kelaniya
2021-05-24
452,Kiribathgoda
2021-05-24
555,Gampaha
2020-05-28
354,waliwariya,pitakotu...
2015-05-28
234,werehena
2016-05-28
Message
Success
OK

Code

package db

dbConnection.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package db;

import java.sql.Connection;
import java.sql.DriverManager;

/**
 *
 * @author EZIO AUDITORY
 */
public class dbConnection {

    private static Connection conn;

    public static Connection getConnection() {

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            conn =
DriverManager.getConnection("jdbc:mysql://localhost:3307/adyapana_db?useSSL=false",
"root", "ass34");
```

```
        } catch (Exception e) {
            conn = null;
        }

        return conn;

    }

//    public static void main(String[] args) {
//        try {
//            System.out.println(getConnection().getCatalog());
//        } catch (Exception e) {
//            e.printStackTrace();
//        }
//    }
}
```

package gui

home.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

/**
 *
 * @author EZIO AUDITORY
 */
public class home extends javax.swing.JFrame {

    /**
     * Creates new form home
     */
    public home() {
        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">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jSeparator1 = new javax.swing.JSeparator();
    jPanel2 = new javax.swing.JPanel();
    studentManagerButton = new javax.swing.JButton();
    teacherManagerButton = new javax.swing.JButton();
    subjectManagerButton = new javax.swing.JButton();
    classManagerButton = new javax.swing.JButton();
    paymentManagerButton = new javax.swing.JButton();
    jLabel2 = new javax.swing.JLabel();
    jMenuBar1 = new javax.swing.JMenuBar();
    FileMenu = new javax.swing.JMenu();
    EditMenu = new javax.swing.JMenu();
    MenusMenu = new javax.swing.JMenu();
    StudentManagerMenuItem = new javax.swing.JMenuItem();
    TeacherManagerMenuItem = new javax.swing.JMenuItem();
    SubjectManagerMenuItem = new javax.swing.JMenuItem();
    ClassManagerMenuItem = new javax.swing.JMenuItem();
    PaymentManagerMenuItem = new javax.swing.JMenuItem();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    jLabel1.setFont(new java.awt.Font("Myriad Pro", 1, 48)); // NOI18N
    jLabel1.setText("ADYAPANA");
    jLabel1.setAutoscrolls(true);
```

```
jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Menus",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

    studentManagerButton.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
    studentManagerButton.setText("Student Manager");
    studentManagerButton.setBorder(null);
    studentManagerButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            studentManagerButtonActionPerformed(evt);
        }
    });

    teacherManagerButton.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
    teacherManagerButton.setText("Teacher Manager");
    teacherManagerButton.setBorder(null);
    teacherManagerButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            teacherManagerButtonActionPerformed(evt);
        }
    });

    subjectManagerButton.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
    subjectManagerButton.setText("Subject Manager");
    subjectManagerButton.setBorder(null);
    subjectManagerButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            subjectManagerButtonActionPerformed(evt);
```

```
        }
    });

    classManagerButton.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
    classManagerButton.setText("Class Manager");
    classManagerButton.setBorder(null);
    classManagerButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            classManagerButtonActionPerformed(evt);
        }
    });

    paymentManagerButton.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
    paymentManagerButton.setText("Payment Manager");
    paymentManagerButton.setBorder(null);
    paymentManagerButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            paymentManagerButtonActionPerformed(evt);
        }
    });

    javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
    jPanel2.setLayout(jPanel2Layout);
    jPanel2Layout.setHorizontalGroup(
        jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel2Layout.createSequentialGroup()
            .addGap(33, 33, 33)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
```

```
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(paymentManagerButton,
javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE,
303, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                    .addComponent(studentManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 303, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(365, 365, 365)))
            .addComponent(subjectManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 303,
javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 60,
Short.MAX_VALUE)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
            .addComponent(teacherManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 303, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(classManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 303,
javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(33, 33, 33))
    );
    jPanel2Layout.setVerticalGroup(
      jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(jPanel2Layout.createSequentialGroup()
        .addGap(39, 39, 39)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
            .addComponent(studentManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 58, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                .addComponent(teacherManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 58, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addComponent(paymentManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 58, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(subjectManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 58, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(classManagerButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 58, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(77, Short.MAX_VALUE))
        );


        jLabel2.setFont(new java.awt.Font("Myriad Pro", 0, 18)); // NOI18N
        jLabel2.setText("AN INSTITUTE FOR STUDENTS WHO HAVE COMPLETED THEIR
ADVANCED LEVELS IN THE SCIENCE STREAM");


        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
```

```
                    .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jSeparator1))
                .addContainerGap())
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                .addGap(0, 0, Short.MAX_VALUE)
                .addComponent(jLabel1)
                .addGap(435, 435, 435))))
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addComponent(jLabel2)
            .addGap(159, 159, 159))
    );
    jPanel1Layout.setVerticalGroup(
        jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(51, 51, 51)
            .addComponent(jLabel1)
            .addGap(36, 36, 36)
            .addComponent(jLabel2)
            .addGap(55, 55, 55)
            .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 2,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18)
            .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap(68, Short.MAX_VALUE))
    );
```

```
FileMenu.setText("File");
jMenuBar1.add(FileMenu);

EditMenu.setText("Edit");
jMenuBar1.add(EditMenu);

MenusMenu.setText("Menus");

StudentManagerMenuItem.setText("Student Manager");
StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      StudentManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(StudentManagerMenuItem);

TeacherManagerMenuItem.setText("Teacher Manager");
TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      TeacherManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      SubjectManagerMenuItemActionPerformed(evt);
   }
```

```
        });
        MenusMenu.add(SubjectManagerMenuItem);

        ClassManagerMenuItem.setText("Class  Manager");
        ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                ClassManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(ClassManagerMenuItem);

        PaymentManagerMenuItem.setText("Payment Manager");
        PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                PaymentManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(PaymentManagerMenuItem);

        jMenuBar1.add(MenusMenu);

        setJMenuBar(jMenuBar1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
```

```
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
        setLocationRelativeTo(null);
    }// </editor-fold>

    private void studentManagerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new studentManager().setVisible(true);
    }

    private void teacherManagerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void paymentManagerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }

    private void subjectManagerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }
```

```
    private void classManagerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
    }

    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
```

```
        new paymentManager().setVisible(true);
    }


    /**
     * @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 {
            for (javax.swing.UIManager.LookAndFeelInfo info : javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Windows".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {
            java.util.logging.Logger.getLogger(home.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(home.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
```

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

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

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new home().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JMenuItem ClassManagerMenuItem;
    private javax.swing.JMenu EditMenu;
    private javax.swing.JMenu FileMenu;
    private javax.swing.JMenu MenusMenu;
    private javax.swing.JMenuItem PaymentManagerMenuItem;
    private javax.swing.JMenuItem StudentManagerMenuItem;
    private javax.swing.JMenuItem SubjectManagerMenuItem;
    private javax.swing.JMenuItem TeacherManagerMenuItem;
    private javax.swing.JButton classManagerButton;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JMenuBar jMenuBar1;
```

```
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JButton paymentManagerButton;
    private javax.swing.JButton studentManagerButton;
    private javax.swing.JButton subjectManagerButton;
    private javax.swing.JButton teacherManagerButton;
    // End of variables declaration
}
```

studentManager.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import java.util.Date;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import model.studentModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class studentManager extends javax.swing.JFrame {

    private studentModel studentModel;
    DefaultTableModel studentTableModel;
    /**
     * Creates new form studentManager
     */
    public studentManager() {
        initComponents();
        studentTableModel = (DefaultTableModel) studentTable.getModel();
        studentModel = new studentModel();
        studentModel.loadStudentTable("", studentTableModel);
```

```
}

/**
 * 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">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jPanel2 = new javax.swing.JPanel();
    studentNoField = new javax.swing.JTextField();
    studentNameField = new javax.swing.JTextField();
    dateOfBirthChooser = new com.toedter.calendar.JDateChooser();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    registerButton = new javax.swing.JButton();
    updateButton = new javax.swing.JButton();
    deleteButton = new javax.swing.JButton();
    jScrollPane1 = new javax.swing.JScrollPane();
    addressArea = new javax.swing.JTextArea();
    jPanel3 = new javax.swing.JPanel();
    jScrollPane2 = new javax.swing.JScrollPane();
    studentTable = new javax.swing.JTable();
```

```
        searchField = new javax.swing.JTextField();
        searchButton = new javax.swing.JButton();
        jSeparator1 = new javax.swing.JSeparator();
        jMenuBar1 = new javax.swing.JMenuBar();
        FileMenu = new javax.swing.JMenu();
        EditMenu = new javax.swing.JMenu();
        MenusMenu = new javax.swing.JMenu();
        StudentManagerMenuItem = new javax.swing.JMenuItem();
        TeacherManagerMenuItem = new javax.swing.JMenuItem();
        SubjectManagerMenuItem = new javax.swing.JMenuItem();
        ClassManagerMenuItem = new javax.swing.JMenuItem();
        PaymentManagerMenuItem = new javax.swing.JMenuItem();

        setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);

        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
        jLabel1.setText("Student Manager");

jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Student Details",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        studentNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        studentNameField.setPreferredSize(new java.awt.Dimension(10, 22));

        dateOfBirthChooser.setPreferredSize(new java.awt.Dimension(10, 22));
```

```
jLabel2.setText("Student No");

jLabel3.setText("Student Name");

jLabel4.setText("Address");

jLabel5.setText("Date of Birth");

registerButton.setText("Register");
registerButton.setPreferredSize(new java.awt.Dimension(80, 25));
registerButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      registerButtonActionPerformed(evt);
   }
});

updateButton.setText("Update");
updateButton.setPreferredSize(new java.awt.Dimension(80, 25));
updateButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      updateButtonActionPerformed(evt);
   }
});

deleteButton.setText("Delete");
deleteButton.setPreferredSize(new java.awt.Dimension(80, 25));
deleteButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      deleteButtonActionPerformed(evt);
```

```
        }
    });

    addressArea.setColumns(20);
    addressArea.setRows(5);
    jScrollPane1.setViewportView(addressArea);

    javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
    jPanel2.setLayout(jPanel2Layout);
    jPanel2Layout.setHorizontalGroup(
        jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
            .addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                .addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G, false)
                .addComponent(studentNameField,
javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addGroup(jPanel2Layout.createSequentialGroup()
```

```
                .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

            .addComponent(studentNoField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

            .addComponent(dateOfBirthChooser,
javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

            .addComponent(jScrollPane1))

        .addGap(23, 23, 23))

    );

    jPanel2Layout.setVerticalGroup(

      jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

      .addGroup(jPanel2Layout.createSequentialGroup()

        .addGap(49, 49, 49)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(studentNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jLabel2))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(studentNameField, javax.swing.GroupLayout.PREFERRED_SIZE,
33, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                .addComponent(jLabel3))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(jLabel4)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 64,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(dateOfBirthChooser, javax.swing.GroupLayout.PREFERRED_SIZE,
34, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(jPanel2Layout.createSequentialGroup()
                    .addGap(9, 9, 9)
                    .addComponent(jLabel5)))
            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );


jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Student Table",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
```

```
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        studentTable.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {

            },
            new String [] {
                "Student No", "Student Name", "Address", "Date of Birth"
            }
        ));
        studentTable.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                studentTableMouseClicked(evt);
            }
        });
        jScrollPane2.setViewportView(studentTable);

        searchButton.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        searchButton.setText("Search");
        searchButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                searchButtonActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
        jPanel3.setLayout(jPanel3Layout);
        jPanel3Layout.setHorizontalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addContainerGap()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(jScrollPane2)
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 498,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                    .addComponent(searchButton, javax.swing.GroupLayout.DEFAULT_SIZE, 109,
Short.MAX_VALUE)))
            .addContainerGap())
    );
    jPanel3Layout.setVerticalGroup(
        jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel3Layout.createSequentialGroup()
            .addContainerGap(39, Short.MAX_VALUE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G)
                .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(searchButton, javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 358,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap())
    );

    jSeparator1.setOrientation(javax.swing.SwingConstants.VERTICAL);
```

```
        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(30, 30, 30)
                        .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 10,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addComponent(jPanel3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(48, 48, 48)
                        .addComponent(jLabel1)))
                .addContainerGap(18, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(41, 41, 41)
                .addComponent(jLabel1)
                .addGap(29, 29, 29)
```

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
                .addComponent(jSeparator1, javax.swing.GroupLayout.DEFAULT_SIZE, 485,
Short.MAX_VALUE)
                .addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
            .addContainerGap(31, Short.MAX_VALUE))
        );

        FileMenu.setText("File");
        jMenuBar1.add(FileMenu);

        EditMenu.setText("Edit");
        jMenuBar1.add(EditMenu);

        MenusMenu.setText("Menus");

        StudentManagerMenuItem.setText("Student Manager");
        StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                StudentManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(StudentManagerMenuItem);

        TeacherManagerMenuItem.setText("Teacher Manager");
        TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        TeacherManagerMenuItemActionPerformed(evt);
    }
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        SubjectManagerMenuItemActionPerformed(evt);
    }
});
MenusMenu.add(SubjectManagerMenuItem);

ClassManagerMenuItem.setText("Class  Manager");
ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        ClassManagerMenuItemActionPerformed(evt);
    }
});
MenusMenu.add(ClassManagerMenuItem);

PaymentManagerMenuItem.setText("Payment Manager");
PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        PaymentManagerMenuItemActionPerformed(evt);
    }
});
MenusMenu.add(PaymentManagerMenuItem);
```

```
        jMenuBar1.add(MenusMenu);

        setJMenuBar(jMenuBar1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(0, 0, Short.MAX_VALUE))
        );

        pack();
        setLocationRelativeTo(null);
    }// </editor-fold>

    private void registerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        //String studentNo = studentNoField.getText();
        String studentName = studentNameField.getText();
        String address = addressArea.getText();
        Date dateOfBirth = dateOfBirthChooser.getDate();
```

```
        String result = studentModel.registerStudent(studentName,address,dateOfBirth);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        studentModel.loadStudentTable("", studentTableModel);

        studentNoField.setText("");
        studentNameField.setText("");
        addressArea.setText("");
        dateOfBirthChooser.setDate(null);
    }

    private void updateButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String studentNo = studentNoField.getText();
        String studentName = studentNameField.getText();
        String address = addressArea.getText();
        Date dateOfBirth = dateOfBirthChooser.getDate();

        String result =
studentModel.updateStudent(studentNo,studentName,address,dateOfBirth);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        studentModel.loadStudentTable("", studentTableModel);
    }

    private void deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String studentNo = studentNoField.getText();
        String result = studentModel.deleteStudent(studentNo);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        studentModel.loadStudentTable("", studentTableModel);
```

```
        studentNoField.setText("");
        studentNameField.setText("");
        addressArea.setText("");
        dateOfBirthChooser.setDate(null);
    }

    private void searchButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String keyword = searchField.getText();
        studentModel.loadStudentTable(keyword, studentTableModel);

    }

    private void studentTableMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        int row = studentTable.getSelectedRow();
        int studentNo = (int) studentTableModel.getValueAt(row, 0);
        Object[] studentData = studentModel.getSelectedStudentData(studentNo);

        studentNoField.setText(new String(studentData[0]+""));
        studentNameField.setText((String) studentData[1]);
        addressArea.setText((String) studentData[2]);
        dateOfBirthChooser.setDate((Date) studentData[3]);

    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
```

```
    }

    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }

    /**
     * @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 {
            for (javax.swing.UIManager.LookAndFeelInfo info : javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Windows".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {
            java.util.logging.Logger.getLogger(studentManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(studentManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(studentManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(studentManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>
```

```
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new studentManager().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JMenuItem ClassManagerMenuItem;
private javax.swing.JMenu EditMenu;
private javax.swing.JMenu FileMenu;
private javax.swing.JMenu MenusMenu;
private javax.swing.JMenuItem PaymentManagerMenuItem;
private javax.swing.JMenuItem StudentManagerMenuItem;
private javax.swing.JMenuItem SubjectManagerMenuItem;
private javax.swing.JMenuItem TeacherManagerMenuItem;
private javax.swing.JTextArea addressArea;
private com.toedter.calendar.JDateChooser dateOfBirthChooser;
private javax.swing.JButton deleteButton;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
```

```
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JButton registerButton;
    private javax.swing.JButton searchButton;
    private javax.swing.JTextField searchField;
    private javax.swing.JTextField studentNameField;
    private javax.swing.JTextField studentNoField;
    private javax.swing.JTable studentTable;
    private javax.swing.JButton updateButton;
    // End of variables declaration
}
```

teacherManager.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import java.util.Vector;
import javax.swing.DefaultComboBoxModel;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import model.teacherModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class teacherManager extends javax.swing.JFrame {

    private teacherModel teacherModel;
    DefaultTableModel teacherTableModel;
    DefaultComboBoxModel dcm;



    /**
     * Creates new form teacherManager
     */
    public teacherManager() {
```

```
    initComponents();
    teacherTableModel = (DefaultTableModel) teacherTable.getModel();
    teacherModel = new teacherModel();
    teacherModel.loadTeacherTable("", teacherTableModel);
    Vector v = teacherModel.comboBoxLoad();
    dcm = new DefaultComboBoxModel(v);
    subjectComboBox.setModel(dcm);

}

/**
 * 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">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jPanel2 = new javax.swing.JPanel();
    teacherNoField = new javax.swing.JTextField();
    teacherNameField = new javax.swing.JTextField();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    registerButton = new javax.swing.JButton();
```

```
updateButton = new javax.swing.JButton();
deleteButton = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
addressArea = new javax.swing.JTextArea();
subjectComboBox = new javax.swing.JComboBox<>();
jPanel3 = new javax.swing.JPanel();
jScrollPane2 = new javax.swing.JScrollPane();
teacherTable = new javax.swing.JTable();
searchField = new javax.swing.JTextField();
searchButton = new javax.swing.JButton();
jSeparator1 = new javax.swing.JSeparator();
jMenuBar1 = new javax.swing.JMenuBar();
FileMenu = new javax.swing.JMenu();
EditMenu = new javax.swing.JMenu();
MenusMenu = new javax.swing.JMenu();
StudentManagerMenuItem = new javax.swing.JMenuItem();
TeacherManagerMenuItem = new javax.swing.JMenuItem();
SubjectManagerMenuItem = new javax.swing.JMenuItem();
ClassManagerMenuItem = new javax.swing.JMenuItem();
PaymentManagerMenuItem = new javax.swing.JMenuItem();

setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jLabel1.setText("Teacher Manager");

jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Teacher Details",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
```

```
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        teacherNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        teacherNameField.setPreferredSize(new java.awt.Dimension(10, 22));

        jLabel2.setText("Teacher No");

        jLabel3.setText("Teacher Name");

        jLabel4.setText("Address");

        jLabel5.setText("subject");

        registerButton.setText("Register");
        registerButton.setPreferredSize(new java.awt.Dimension(80, 25));
        registerButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                registerButtonActionPerformed(evt);
            }
        });

        updateButton.setText("Update");
        updateButton.setPreferredSize(new java.awt.Dimension(80, 25));
        updateButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                updateButtonActionPerformed(evt);
            }
        });
```

```
        deleteButton.setText("Delete");
        deleteButton.setPreferredSize(new java.awt.Dimension(80, 25));
        deleteButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                deleteButtonActionPerformed(evt);
            }
        });

        addressArea.setColumns(20);
        addressArea.setRows(5);
        jScrollPane1.setViewportView(addressArea);

        javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(
            jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE))
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
```

```
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G, false)
            .addComponent(teacherNameField,
javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addGroup(jPanel2Layout.createSequentialGroup()
              .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
              .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
              .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)
              .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
              .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addComponent(teacherNoField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
            .addComponent(jScrollPane1)
            .addComponent(subjectComboBox, 0, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
          .addGap(23, 23, 23))
    );
    jPanel2Layout.setVerticalGroup(
      jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(jPanel2Layout.createSequentialGroup()
        .addGap(49, 49, 49)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
            .addComponent(teacherNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel2))
```

```
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(teacherNameField, javax.swing.GroupLayout.PREFERRED_SIZE,
33, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jLabel3))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)

            .addComponent(jLabel4)

            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 64,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)

            .addGroup(jPanel2Layout.createSequentialGroup()

              .addGap(22, 22, 22)

              .addComponent(jLabel5))

            .addGroup(jPanel2Layout.createSequentialGroup()

              .addGap(16, 16, 16)

              .addComponent(subjectComboBox,
javax.swing.GroupLayout.PREFERRED_SIZE, 31, javax.swing.GroupLayout.PREFERRED_SIZE)))

            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
            .addContainerGap(167, Short.MAX_VALUE))
        );


jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Teacher Table",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N


        teacherTable.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {


            },
            new String [] {
                "Teacher No", "Teacher Name", "Address", "Subject"
            }
        ));
        teacherTable.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                teacherTableMouseClicked(evt);
            }
        });
        jScrollPane2.setViewportView(teacherTable);


        searchButton.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        searchButton.setText("Search");
        searchButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                searchButtonActionPerformed(evt);
            }
```

```
        });

        javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
        jPanel3.setLayout(jPanel3Layout);
        jPanel3Layout.setHorizontalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jScrollPane2)
                    .addGroup(jPanel3Layout.createSequentialGroup()
                        .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 498,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                        .addComponent(searchButton, javax.swing.GroupLayout.DEFAULT_SIZE, 109,
Short.MAX_VALUE)))
                .addContainerGap())
        );
        jPanel3Layout.setVerticalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel3Layout.createSequentialGroup()
                .addContainerGap(39, Short.MAX_VALUE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G)
                    .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(searchButton, javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
            .addGap(18, 18, 18)
            .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 358, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap())
        );

        jSeparator1.setOrientation(javax.swing.SwingConstants.VERTICAL);

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(30, 30, 30)
                        .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 10, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addComponent(jPanel3, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(48, 48, 48)
                        .addComponent(jLabel1)))
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );
```

```
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(41, 41, 41)
                .addComponent(jLabel1)
                .addGap(29, 29, 29)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
                    .addComponent(jSeparator1, javax.swing.GroupLayout.DEFAULT_SIZE, 485,
Short.MAX_VALUE)
                    .addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                .addContainerGap(31, Short.MAX_VALUE))
        );

        FileMenu.setText("File");
        jMenuBar1.add(FileMenu);

        EditMenu.setText("Edit");
        jMenuBar1.add(EditMenu);

        MenusMenu.setText("Menus");

        StudentManagerMenuItem.setText("Student Manager");
        StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                StudentManagerMenuItemActionPerformed(evt);
            }
```

```
});
MenusMenu.add(StudentManagerMenuItem);

TeacherManagerMenuItem.setText("Teacher Manager");
TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      TeacherManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      SubjectManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(SubjectManagerMenuItem);

ClassManagerMenuItem.setText("Class  Manager");
ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      ClassManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(ClassManagerMenuItem);

PaymentManagerMenuItem.setText("Payment Manager");
PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
```

```
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            PaymentManagerMenuItemActionPerformed(evt);
        }
    });
    MenusMenu.add(PaymentManagerMenuItem);

    jMenuBar1.add(MenusMenu);

    setJMenuBar(jMenuBar1);

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    );
    layout.setVerticalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(0, 0, Short.MAX_VALUE))
    );

    pack();
    setLocationRelativeTo(null);
  }// </editor-fold>

  private void registerButtonActionPerformed(java.awt.event.ActionEvent evt) {
```

```
        // TODO add your handling code here:
        //String teacherNo = teacherNoField.getText();
        String teacherName = teacherNameField.getText();
        String address = addressArea.getText();
        int subject = subjectComboBox.getSelectedIndex() + 1;

        String result = teacherModel.registerTeacher(teacherName, address, subject);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        teacherModel.loadTeacherTable("", teacherTableModel);

        teacherNoField.setText("");
        teacherNameField.setText("");
        addressArea.setText("");

    }

    private void updateButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String teacherNo = teacherNoField.getText();
        String teacherName = teacherNameField.getText();
        String address = addressArea.getText();
        int subject = subjectComboBox.getSelectedIndex() + 1;

        String result = teacherModel.updateTeacher(teacherNo, teacherName, address,
subject);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        teacherModel.loadTeacherTable("", teacherTableModel);
    }

    private void deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
    String teacherNo = teacherNoField.getText();
    String result = teacherModel.deleteTeacher(teacherNo);
    JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
    teacherModel.loadTeacherTable("", teacherTableModel);

    teacherNoField.setText("");
    teacherNameField.setText("");
    addressArea.setText("");
}

private void teacherTableMouseClicked(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    int row = teacherTable.getSelectedRow();
    int teacherNo = (int) teacherTableModel.getValueAt(row, 0);
    Object[] teacherData = teacherModel.getSelectedTeacherData(teacherNo);

    teacherNoField.setText(new String(teacherData[0] + ""));
    teacherNameField.setText((String) teacherData[1]);
    addressArea.setText((String) teacherData[2]);
    subjectComboBox.setSelectedIndex((int) teacherData[3] - 1);

}

private void searchButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String keyword = searchField.getText();
    teacherModel.loadTeacherTable(keyword, teacherTableModel);
```

```
    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
    }

    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }
```

```
    /**
     * @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 {
            for (javax.swing.UIManager.LookAndFeelInfo info : javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Windows".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {
            java.util.logging.Logger.getLogger(teacherManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(teacherManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(teacherManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

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

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new teacherManager().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JMenuItem ClassManagerMenuItem;
    private javax.swing.JMenu EditMenu;
    private javax.swing.JMenu FileMenu;
    private javax.swing.JMenu MenusMenu;
    private javax.swing.JMenuItem PaymentManagerMenuItem;
    private javax.swing.JMenuItem StudentManagerMenuItem;
    private javax.swing.JMenuItem SubjectManagerMenuItem;
    private javax.swing.JMenuItem TeacherManagerMenuItem;
    private javax.swing.JTextArea addressArea;
    private javax.swing.JButton deleteButton;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
```

```
    private javax.swing.JLabel jLabel5;
    private javax.swing.JMenuBar jMenuBar1;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JPanel jPanel3;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JButton registerButton;
    private javax.swing.JButton searchButton;
    private javax.swing.JTextField searchField;
    private javax.swing.JComboBox<String> subjectComboBox;
    private javax.swing.JTextField teacherNameField;
    private javax.swing.JTextField teacherNoField;
    private javax.swing.JTable teacherTable;
    private javax.swing.JButton updateButton;
    // End of variables declaration
}
```

subjectManager.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import model.subjectModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class subjectManager extends javax.swing.JFrame {

    private subjectModel subjectModel;
    DefaultTableModel subjectTableModel;
    /**
     * Creates new form subjectManager
     */
    public subjectManager() {
        initComponents();
        subjectTableModel = (DefaultTableModel) subjectTable.getModel();
        subjectModel = new subjectModel();
        subjectModel.loadSubjectTable("", subjectTableModel);
    }
```

```
/**
 * 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">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jPanel2 = new javax.swing.JPanel();
    subjectNoField = new javax.swing.JTextField();
    subjectNameField = new javax.swing.JTextField();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    registerButton = new javax.swing.JButton();
    updateButton = new javax.swing.JButton();
    deleteButton = new javax.swing.JButton();
    jScrollPane1 = new javax.swing.JScrollPane();
    descriptionArea = new javax.swing.JTextArea();
    priceField = new javax.swing.JTextField();
    jPanel3 = new javax.swing.JPanel();
    jScrollPane2 = new javax.swing.JScrollPane();
    subjectTable = new javax.swing.JTable();
    searchField = new javax.swing.JTextField();
```

```
        searchButton = new javax.swing.JButton();
        jSeparator1 = new javax.swing.JSeparator();
        jMenuBar1 = new javax.swing.JMenuBar();
        FileMenu = new javax.swing.JMenu();
        EditMenu = new javax.swing.JMenu();
        MenusMenu = new javax.swing.JMenu();
        StudentManagerMenuItem = new javax.swing.JMenuItem();
        TeacherManagerMenuItem = new javax.swing.JMenuItem();
        SubjectManagerMenuItem = new javax.swing.JMenuItem();
        ClassManagerMenuItem = new javax.swing.JMenuItem();
        PaymentManagerMenuItem = new javax.swing.JMenuItem();

        setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);

        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
        jLabel1.setText("Subject Manager");

jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Subject Details",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        subjectNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        subjectNameField.setPreferredSize(new java.awt.Dimension(10, 22));

        jLabel2.setText("Subject No");

        jLabel3.setText("Subject Name");
```

```
jLabel4.setText("Description");

jLabel5.setText("Price");

registerButton.setText("Register");
registerButton.setPreferredSize(new java.awt.Dimension(80, 25));
registerButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      registerButtonActionPerformed(evt);
   }
});

updateButton.setText("Update");
updateButton.setPreferredSize(new java.awt.Dimension(80, 25));
updateButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      updateButtonActionPerformed(evt);
   }
});

deleteButton.setText("Delete");
deleteButton.setPreferredSize(new java.awt.Dimension(80, 25));
deleteButton.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      deleteButtonActionPerformed(evt);
   }
});
```

```
        descriptionArea.setColumns(20);
        descriptionArea.setRows(5);
        jScrollPane1.setViewportView(descriptionArea);

        priceField.setPreferredSize(new java.awt.Dimension(10, 22));

        javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(
            jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                .addContainerGap()
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE))
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G, false)
                    .addComponent(subjectNameField,
javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addGroup(jPanel2Layout.createSequentialGroup()
```

```
                .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

            .addComponent(subjectNoField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

            .addComponent(jScrollPane1)

            .addComponent(priceField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

        .addGap(23, 23, 23))

    );

    jPanel2Layout.setVerticalGroup(

      jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

      .addGroup(jPanel2Layout.createSequentialGroup()

        .addGap(49, 49, 49)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(subjectNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jLabel2))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(subjectNameField, javax.swing.GroupLayout.PREFERRED_SIZE,
33, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                .addComponent(jLabel3))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(jLabel4)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 64,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(14, 14, 14)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(jLabel5)
                .addComponent(priceField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(167, Short.MAX_VALUE))
        );



jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Subject Table",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N
```

```
subjectTable.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {

    },
    new String [] {
        "Subject No", "Subject Name", "Description", "Price"
    }
));
subjectTable.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        subjectTableMouseClicked(evt);
    }
});
jScrollPane2.setViewportView(subjectTable);

searchButton.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
searchButton.setText("Search");
searchButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        searchButtonActionPerformed(evt);
    }
});

javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
jPanel3.setLayout(jPanel3Layout);
jPanel3Layout.setHorizontalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel3Layout.createSequentialGroup()
        .addContainerGap()
```

```
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
            .addComponent(jScrollPane2)
            .addGroup(jPanel3Layout.createSequentialGroup()
              .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 498,
javax.swing.GroupLayout.PREFERRED_SIZE)
              .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
              .addComponent(searchButton, javax.swing.GroupLayout.DEFAULT_SIZE, 109,
Short.MAX_VALUE)))
          .addContainerGap())
    );
    jPanel3Layout.setVerticalGroup(
      jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel3Layout.createSequentialGroup()
          .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G)
            .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(searchButton, javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE))
          .addGap(18, 18, 18)
          .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 358,
javax.swing.GroupLayout.PREFERRED_SIZE)
          .addContainerGap())
    );

    jSeparator1.setOrientation(javax.swing.SwingConstants.VERTICAL);

    javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
```

```
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(30, 30, 30)
                        .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 10,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addComponent(jPanel3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(48, 48, 48)
                        .addComponent(jLabel1)))
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(41, 41, 41)
                .addComponent(jLabel1)
                .addGap(29, 29, 29)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
```

```
                .addComponent(jSeparator1, javax.swing.GroupLayout.DEFAULT_SIZE, 485,
Short.MAX_VALUE)
                .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jPanel3, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
            .addContainerGap(31, Short.MAX_VALUE))
        );

        FileMenu.setText("File");
        jMenuBar1.add(FileMenu);

        EditMenu.setText("Edit");
        jMenuBar1.add(EditMenu);

        MenusMenu.setText("Menus");

        StudentManagerMenuItem.setText("Student Manager");
        StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                StudentManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(StudentManagerMenuItem);

        TeacherManagerMenuItem.setText("Teacher Manager");
        TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                TeacherManagerMenuItemActionPerformed(evt);
            }
```

```
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      SubjectManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(SubjectManagerMenuItem);

ClassManagerMenuItem.setText("Class  Manager");
ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      ClassManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(ClassManagerMenuItem);

PaymentManagerMenuItem.setText("Payment Manager");
PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      PaymentManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(PaymentManagerMenuItem);

jMenuBar1.add(MenusMenu);
```

```
        setJMenuBar(jMenuBar1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(0, 0, Short.MAX_VALUE))
        );

        pack();
        setLocationRelativeTo(null);
    }// </editor-fold>

    private void registerButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        //String subjectNo = subjectNoField.getText();
        String subjectName = subjectNameField.getText();
        String description = descriptionArea.getText();
        String price = priceField.getText();

        String result = subjectModel.registersubject(subjectName, description, price);
```

```
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        subjectModel.loadSubjectTable("", subjectTableModel);

        subjectNoField.setText("");
        subjectNameField.setText("");
        descriptionArea.setText("");
        priceField.setText("");
    }

    private void updateButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String subjectNo = subjectNoField.getText();
        String subjectName = subjectNameField.getText();
        String description = descriptionArea.getText();
        String price = priceField.getText();


        String result = subjectModel.updatesubject(subjectNo, subjectName, description,
price);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        subjectModel.loadSubjectTable("", subjectTableModel);
    }

    private void deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String subjectNo = subjectNoField.getText();
        String result = subjectModel.deletesubject(subjectNo);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        subjectModel.loadSubjectTable("", subjectTableModel);
```

```
        subjectNoField.setText("");
        subjectNameField.setText("");
        descriptionArea.setText("");
         priceField.setText("");
    }

    private void subjectTableMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        int row = subjectTable.getSelectedRow();
        int subjectNo = (int) subjectTableModel.getValueAt(row, 0);
        Object[] subjectData = subjectModel.getSelectedsubjectData(subjectNo);

        subjectNoField.setText(new String(subjectData[0] + ""));
        subjectNameField.setText((String) subjectData[1]);
        descriptionArea.setText((String) subjectData[2]);
        priceField.setText(new String(subjectData[3] + ""));

    }

    private void searchButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String keyword = searchField.getText();
        subjectModel.loadSubjectTable(keyword, subjectTableModel);
    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
    }
```

```
    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }

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

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

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

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

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

        /* Create and display the form */
```

```
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new subjectManager().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JMenuItem ClassManagerMenuItem;
private javax.swing.JMenu EditMenu;
private javax.swing.JMenu FileMenu;
private javax.swing.JMenu MenusMenu;
private javax.swing.JMenuItem PaymentManagerMenuItem;
private javax.swing.JMenuItem StudentManagerMenuItem;
private javax.swing.JMenuItem SubjectManagerMenuItem;
private javax.swing.JMenuItem TeacherManagerMenuItem;
private javax.swing.JButton deleteButton;
private javax.swing.JTextArea descriptionArea;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;
```

```
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JTextField priceField;
    private javax.swing.JButton registerButton;
    private javax.swing.JButton searchButton;
    private javax.swing.JTextField searchField;
    private javax.swing.JTextField subjectNameField;
    private javax.swing.JTextField subjectNoField;
    private javax.swing.JTable subjectTable;
    private javax.swing.JButton updateButton;
    // End of variables declaration
}
```

classManager.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import java.util.Vector;
import javax.swing.DefaultComboBoxModel;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import model.classModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class classManager extends javax.swing.JFrame {

    private classModel classModel;
    DefaultTableModel classTableModel;
    DefaultComboBoxModel subjectNameComboBoxModel;
    DefaultComboBoxModel teacherNameComboBoxModel;

    /**
     * Creates new form classManager
     */
    public classManager() {
```

```
    initComponents();
    classTableModel = (DefaultTableModel) classTable.getModel();
    classModel = new classModel();
    classModel.loadClassTable("", classTableModel);

    Vector vSubject = classModel.subjectNamecomboBoxLoad();
    subjectNameComboBoxModel = new DefaultComboBoxModel(vSubject);
    subjectNameComboBox.setModel(subjectNameComboBoxModel);

    Vector vTeacher = classModel.teacherNamecomboBoxLoad();
    teacherNameComboBoxModel = new DefaultComboBoxModel(vTeacher);
    teacherNameComboBox.setModel(teacherNameComboBoxModel);
}

/**
 * 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">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jPanel2 = new javax.swing.JPanel();
    classNoField = new javax.swing.JTextField();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
```

```
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
registerButton = new javax.swing.JButton();
updateButton = new javax.swing.JButton();
deleteButton = new javax.swing.JButton();
timeField = new javax.swing.JTextField();
subjectNameComboBox = new javax.swing.JComboBox<>();
teacherNameComboBox = new javax.swing.JComboBox<>();
jPanel3 = new javax.swing.JPanel();
jScrollPane2 = new javax.swing.JScrollPane();
classTable = new javax.swing.JTable();
searchField = new javax.swing.JTextField();
searchButton = new javax.swing.JButton();
jSeparator1 = new javax.swing.JSeparator();
jMenuBar1 = new javax.swing.JMenuBar();
FileMenu = new javax.swing.JMenu();
EditMenu = new javax.swing.JMenu();
MenusMenu = new javax.swing.JMenu();
StudentManagerMenuItem = new javax.swing.JMenuItem();
TeacherManagerMenuItem = new javax.swing.JMenuItem();
SubjectManagerMenuItem = new javax.swing.JMenuItem();
ClassManagerMenuItem = new javax.swing.JMenuItem();
PaymentManagerMenuItem = new javax.swing.JMenuItem();

setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jLabel1.setText("Class Manager");
```

```
jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Class Details",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        classNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        jLabel2.setText("Class No");

        jLabel3.setText("Subject Name");

        jLabel4.setText("Teacher Name");

        jLabel5.setText("Time");

        registerButton.setText("Register");
        registerButton.setPreferredSize(new java.awt.Dimension(80, 25));
        registerButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                registerButtonActionPerformed(evt);
            }
        });

        updateButton.setText("Update");
        updateButton.setPreferredSize(new java.awt.Dimension(80, 25));
        updateButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                updateButtonActionPerformed(evt);
            }
```

```
        });

        deleteButton.setText("Delete");
        deleteButton.setPreferredSize(new java.awt.Dimension(80, 25));
        deleteButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                deleteButtonActionPerformed(evt);
            }
        });

        timeField.setToolTipText("");
        timeField.setCursor(new java.awt.Cursor(java.awt.Cursor.TEXT_CURSOR));
        timeField.setPreferredSize(new java.awt.Dimension(10, 22));

        javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(
            jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)
                    .addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE))
```

```
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G, false)

                .addGroup(jPanel2Layout.createSequentialGroup()

                  .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                  .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                  .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)

                  .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                  .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

                .addComponent(classNoField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

                .addComponent(timeField, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

                .addComponent(subjectNameComboBox, 0,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(teacherNameComboBox, 0,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

            .addGap(23, 23, 23))

        );

        jPanel2Layout.setVerticalGroup(

          jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

          .addGroup(jPanel2Layout.createSequentialGroup()

            .addGap(49, 49, 49)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
```

```
                .addComponent(classNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(jLabel2))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

                .addComponent(jLabel3)

                .addComponent(subjectNameComboBox,
javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

                .addComponent(jLabel4)

                .addComponent(teacherNameComboBox,
javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

                .addComponent(jLabel5)

                .addComponent(timeField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

                .addComponent(registerButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );


jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Class Table",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        classTable.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {

            },
            new String [] {
                "Class No", "Subject Name", "Teacher Name", "Time"
            }
        ));
        classTable.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                classTableMouseClicked(evt);
            }
        });
        jScrollPane2.setViewportView(classTable);

        searchButton.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        searchButton.setText("Search");
        searchButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                searchButtonActionPerformed(evt);
            }
```

```
        });

        javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
        jPanel3.setLayout(jPanel3Layout);
        jPanel3Layout.setHorizontalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jScrollPane2)
                    .addGroup(jPanel3Layout.createSequentialGroup()
                        .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 498,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                        .addComponent(searchButton, javax.swing.GroupLayout.DEFAULT_SIZE, 109,
Short.MAX_VALUE)))
                .addContainerGap())
        );
        jPanel3Layout.setVerticalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addGap(38, 38, 38)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G)
                    .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(searchButton, javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
```

```
            .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 358,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );

        jSeparator1.setOrientation(javax.swing.SwingConstants.VERTICAL);

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
           jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
           .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                 .addGroup(jPanel1Layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(30, 30, 30)
                    .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 10,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(jPanel3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                 .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(48, 48, 48)
                    .addComponent(jLabel1)))
              .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(
```

```
        jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(41, 41, 41)
            .addComponent(jLabel1)
            .addGap(29, 29, 29)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
                .addComponent(jSeparator1, javax.swing.GroupLayout.DEFAULT_SIZE, 514,
Short.MAX_VALUE)
                .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jPanel3, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
            .addContainerGap(31, Short.MAX_VALUE))
    );

    FileMenu.setText("File");
    jMenuBar1.add(FileMenu);

    EditMenu.setText("Edit");
    jMenuBar1.add(EditMenu);

    MenusMenu.setText("Menus");

    StudentManagerMenuItem.setText("Student Manager");
    StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            StudentManagerMenuItemActionPerformed(evt);
        }
```

```
});
MenusMenu.add(StudentManagerMenuItem);

TeacherManagerMenuItem.setText("Teacher Manager");
TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      TeacherManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      SubjectManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(SubjectManagerMenuItem);

ClassManagerMenuItem.setText("Class  Manager");
ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      ClassManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(ClassManagerMenuItem);

PaymentManagerMenuItem.setText("Payment Manager");
PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
```

```
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            PaymentManagerMenuItemActionPerformed(evt);
        }
    });
    MenusMenu.add(PaymentManagerMenuItem);

    jMenuBar1.add(MenusMenu);

    setJMenuBar(jMenuBar1);

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    );
    layout.setVerticalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(0, 0, Short.MAX_VALUE))
    );

    pack();
    setLocationRelativeTo(null);
  }// </editor-fold>

  private void registerButtonActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
    //String classNo = classNoField.getText();
    int subject = subjectNameComboBox.getSelectedIndex() + 1;
    int teacher = teacherNameComboBox.getSelectedIndex() + 1;
    String time = timeField.getText();

    String result = classModel.registerclass(subject, teacher, time);
    JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
    classModel.loadClassTable("", classTableModel);

    classNoField.setText("");
    timeField.setText("");
}

private void updateButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String classNo = classNoField.getText();
    int subject = subjectNameComboBox.getSelectedIndex() + 1;
    int teacher = teacherNameComboBox.getSelectedIndex() + 1;
    String time = timeField.getText();

    String result = classModel.updateclass(classNo, subject, teacher, time);
    JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
    classModel.loadClassTable("", classTableModel);
}

private void deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String classNo = classNoField.getText();
```

```
        String result = classModel.deleteclass(classNo);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        classModel.loadClassTable("", classTableModel);

        classNoField.setText("");
        timeField.setText("");
    }

    private void classTableMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        int row = classTable.getSelectedRow();
        int classNo = (int) classTableModel.getValueAt(row, 0);
        Object[] classData = classModel.getSelectedclassData(classNo);

        classNoField.setText(new String(classData[0] + ""));
        subjectNameComboBox.setSelectedIndex((int) classData[1] - 1);
        teacherNameComboBox.setSelectedIndex((int) classData[2] - 1);
        timeField.setText(new String(classData[3] + ""));
    }

    private void searchButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String keyword = searchField.getText();
        classModel.loadClassTable(keyword, classTableModel);
    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
```

```
    }

    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }

    /**
     * @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 {
            for (javax.swing.UIManager.LookAndFeelInfo info : javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Windows".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {
            java.util.logging.Logger.getLogger(classManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(classManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(classManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(classManager.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>
```

```
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new classManager().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JMenuItem ClassManagerMenuItem;
private javax.swing.JMenu EditMenu;
private javax.swing.JMenu FileMenu;
private javax.swing.JMenu MenusMenu;
private javax.swing.JMenuItem PaymentManagerMenuItem;
private javax.swing.JMenuItem StudentManagerMenuItem;
private javax.swing.JMenuItem SubjectManagerMenuItem;
private javax.swing.JMenuItem TeacherManagerMenuItem;
private javax.swing.JTextField classNoField;
private javax.swing.JTable classTable;
private javax.swing.JButton deleteButton;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
```

```
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JButton registerButton;
    private javax.swing.JButton searchButton;
    private javax.swing.JTextField searchField;
    private javax.swing.JComboBox<String> subjectNameComboBox;
    private javax.swing.JComboBox<String> teacherNameComboBox;
    private javax.swing.JTextField timeField;
    private javax.swing.JButton updateButton;
    // End of variables declaration
}
```

paymentManager.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import java.util.Vector;
import javax.swing.DefaultComboBoxModel;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import model.paymentModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class paymentManager extends javax.swing.JFrame {

    private paymentModel paymentModel;
    DefaultTableModel paymentTableModel;
    DefaultComboBoxModel studentNameComboBoxModel;
    DefaultComboBoxModel teacherNameComboBoxModel;
    DefaultComboBoxModel subjectNameComboBoxModel;

    /**
     * Creates new form paymentManager
     */
```

```
    public paymentManager() {
        initComponents();
        paymentTableModel = (DefaultTableModel) paymentTable.getModel();
        paymentModel = new paymentModel();
        paymentModel.loadpaymentTable("", paymentTableModel);

//        Vector vStudent = paymentModel.studentNamecomboBoxLoad();
//        studentNameComboBoxModel = new DefaultComboBoxModel(vStudent);
//        studentNameComboBox.setModel(studentNameComboBoxModel);

        Vector vTeacher = paymentModel.teacherNamecomboBoxLoad();
        teacherNameComboBoxModel = new DefaultComboBoxModel(vTeacher);
        teacherNameComboBox.setModel(teacherNameComboBoxModel);

        Vector vSubject = paymentModel.subjectNamecomboBoxLoad();
        subjectNameComboBoxModel = new DefaultComboBoxModel(vSubject);
        subjectNameComboBox.setModel(subjectNameComboBoxModel);
    }

    /**
     * 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">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
```

```
jLabel1 = new javax.swing.JLabel();
jPanel2 = new javax.swing.JPanel();
invoiceNoField = new javax.swing.JTextField();
jLabel2 = new javax.swing.JLabel();
jLabel3 = new javax.swing.JLabel();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
insertButton = new javax.swing.JButton();
updateButton = new javax.swing.JButton();
deleteButton = new javax.swing.JButton();
valueField = new javax.swing.JTextField();
teacherNameComboBox = new javax.swing.JComboBox<>();
jLabel6 = new javax.swing.JLabel();
subjectNameComboBox = new javax.swing.JComboBox<>();
jLabel7 = new javax.swing.JLabel();
monthComboBox = new javax.swing.JComboBox<>();
invoiceButton = new javax.swing.JButton();
studentNoField = new javax.swing.JTextField();
studentNameField = new javax.swing.JTextField();
jLabel8 = new javax.swing.JLabel();
jPanel3 = new javax.swing.JPanel();
jScrollPane2 = new javax.swing.JScrollPane();
paymentTable = new javax.swing.JTable();
searchField = new javax.swing.JTextField();
searchButton = new javax.swing.JButton();
jSeparator1 = new javax.swing.JSeparator();
jMenuBar1 = new javax.swing.JMenuBar();
FileMenu = new javax.swing.JMenu();
EditMenu = new javax.swing.JMenu();
```

```
        MenusMenu = new javax.swing.JMenu();
        StudentManagerMenuItem = new javax.swing.JMenuItem();
        TeacherManagerMenuItem = new javax.swing.JMenuItem();
        SubjectManagerMenuItem = new javax.swing.JMenuItem();
        ClassManagerMenuItem = new javax.swing.JMenuItem();
        PaymentManagerMenuItem = new javax.swing.JMenuItem();

        setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);

        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
        jLabel1.setText("Payment Manager");

jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Payment Details",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N

        invoiceNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        jLabel2.setText("Invoice No");

        jLabel3.setText("Student No");

        jLabel4.setText("Teacher Name");

        jLabel5.setText("Value");

        insertButton.setText("Insert");
        insertButton.setPreferredSize(new java.awt.Dimension(80, 25));
```

```
insertButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        insertButtonActionPerformed(evt);
    }
});

updateButton.setText("Update");
updateButton.setPreferredSize(new java.awt.Dimension(80, 25));
updateButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        updateButtonActionPerformed(evt);
    }
});

deleteButton.setText("Delete");
deleteButton.setPreferredSize(new java.awt.Dimension(80, 25));
deleteButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        deleteButtonActionPerformed(evt);
    }
});

valueField.setToolTipText("");
valueField.setCursor(new java.awt.Cursor(java.awt.Cursor.TEXT_CURSOR));
valueField.setPreferredSize(new java.awt.Dimension(10, 22));

jLabel6.setText("Subject Name");

jLabel7.setText("Month ");
```

```
        monthComboBox.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {
"January", "February", "March", "April", "May", "June", "July", "August", "September",
"October", "November", "December", " " }));
        monthComboBox.setToolTipText("");

        invoiceButton.setText("Invoice");
        invoiceButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                invoiceButtonActionPerformed(evt);
            }
        });

        studentNoField.setPreferredSize(new java.awt.Dimension(10, 22));

        studentNameField.setPreferredSize(new java.awt.Dimension(10, 22));

        jLabel8.setText("Student Name");

        javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(
            jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jLabel7, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
```

```
                .addComponent(jLabel6, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)

                .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)

                .addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT_SIZE, 104,
Short.MAX_VALUE)

                .addComponent(jLabel8, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE, 104, Short.MAX_VALUE))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)

                .addComponent(invoiceButton, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()

                    .addComponent(insertButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                    .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                    .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

                .addComponent(invoiceNoField, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(valueField, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
```

```
            .addComponent(teacherNameComboBox,
javax.swing.GroupLayout.Alignment.TRAILING, 0, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

            .addComponent(subjectNameComboBox,
javax.swing.GroupLayout.Alignment.TRAILING, 0, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

            .addComponent(monthComboBox,
javax.swing.GroupLayout.Alignment.TRAILING, 0, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

            .addComponent(studentNoField, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

            .addComponent(studentNameField, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

        .addGap(23, 23, 23))

    );

    jPanel2Layout.setVerticalGroup(

      jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

      .addGroup(jPanel2Layout.createSequentialGroup()

        .addGap(49, 49, 49)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(invoiceNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jLabel2))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

            .addComponent(jLabel3)

            .addComponent(studentNoField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
```

```
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(studentNameField, javax.swing.GroupLayout.PREFERRED_SIZE,
33, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel8))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(jLabel4)
                .addComponent(teacherNameComboBox,
javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(jLabel6)
                .addComponent(subjectNameComboBox,
javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(jLabel7)
                .addComponent(monthComboBox, javax.swing.GroupLayout.PREFERRED_SIZE,
32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)
                .addComponent(jLabel5)
                .addComponent(valueField, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELIN
E)

                .addComponent(insertButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(updateButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(deleteButton, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

            .addComponent(invoiceButton)

            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

        );



jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.
createLineBorder(new java.awt.Color(0, 0, 0)), "Payment Table",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 13)));
// NOI18N


        paymentTable.setModel(new javax.swing.table.DefaultTableModel(

            new Object [][] {


            },

            new String [] {

                "Invoice No", "Student No", "Student Name", "Teacher Name", "Subject Name",
"Month", "Value"

            }

        ));

        paymentTable.addMouseListener(new java.awt.event.MouseAdapter() {

            public void mouseClicked(java.awt.event.MouseEvent evt) {
```

```
            paymentTableMouseClicked(evt);
        }
    });
    jScrollPane2.setViewportView(paymentTable);

    searchButton.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
    searchButton.setText("Search");
    searchButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            searchButtonActionPerformed(evt);
        }
    });

    javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
    jPanel3.setLayout(jPanel3Layout);
    jPanel3Layout.setHorizontalGroup(
        jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addContainerGap()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(jScrollPane2)
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 498,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                    .addComponent(searchButton, javax.swing.GroupLayout.DEFAULT_SIZE, 174,
Short.MAX_VALUE)))
            .addContainerGap())
    );
```

```
        jPanel3Layout.setVerticalGroup(
            jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addGap(38, 38, 38)
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .addComponent(searchField, javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(searchButton, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 358, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        );

        jSeparator1.setOrientation(javax.swing.SwingConstants.VERTICAL);

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(30, 30, 30)
```

```
                .addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED_SIZE, 10,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGap(18, 18, 18)

                .addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

            .addGroup(jPanel1Layout.createSequentialGroup()

                .addGap(48, 48, 48)

                .addComponent(jLabel1)

                .addGap(0, 0, Short.MAX_VALUE)))

        .addContainerGap())

    );

    jPanel1Layout.setVerticalGroup(

       jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

       .addGroup(jPanel1Layout.createSequentialGroup()

          .addGap(41, 41, 41)

          .addComponent(jLabel1)

          .addGap(29, 29, 29)


.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)

                .addComponent(jSeparator1, javax.swing.GroupLayout.DEFAULT_SIZE, 531,
Short.MAX_VALUE)

                .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                .addComponent(jPanel3, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

          .addContainerGap(31, Short.MAX_VALUE))

    );


    FileMenu.setText("File");

    jMenuBar1.add(FileMenu);
```

```
EditMenu.setText("Edit");
jMenuBar1.add(EditMenu);

MenusMenu.setText("Menus");

StudentManagerMenuItem.setText("Student Manager");
StudentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      StudentManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(StudentManagerMenuItem);

TeacherManagerMenuItem.setText("Teacher Manager");
TeacherManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      TeacherManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(TeacherManagerMenuItem);

SubjectManagerMenuItem.setText("Subject Manager");
SubjectManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      SubjectManagerMenuItemActionPerformed(evt);
   }
});
MenusMenu.add(SubjectManagerMenuItem);
```

```
        ClassManagerMenuItem.setText("Class  Manager");
        ClassManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                ClassManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(ClassManagerMenuItem);

        PaymentManagerMenuItem.setText("Payment Manager");
        PaymentManagerMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                PaymentManagerMenuItemActionPerformed(evt);
            }
        });
        MenusMenu.add(PaymentManagerMenuItem);

        jMenuBar1.add(MenusMenu);

        setJMenuBar(jMenuBar1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(0, 0, Short.MAX_VALUE))
        );

        pack();
        setLocationRelativeTo(null);
    }// </editor-fold>

    private void insertButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        //String paymentNo = paymentNoField.getText();
        int studentNo = Integer.parseInt(studentNoField.getText());
        int teacher = teacherNameComboBox.getSelectedIndex() + 1;
        int subject = subjectNameComboBox.getSelectedIndex() + 1;
        String month = String.valueOf(monthComboBox.getSelectedItem());

        String value = valueField.getText();

        String result = paymentModel.insertpayment(studentNo, teacher, subject, month,
value);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        paymentModel.loadpaymentTable("", paymentTableModel);

        invoiceNoField.setText("");
        valueField.setText("");
    }

    private void updateButtonActionPerformed(java.awt.event.ActionEvent evt) {
```

```
        // TODO add your handling code here:
        String invoiceNo = invoiceNoField.getText();
        int studentNo = Integer.parseInt(studentNoField.getText());
        int teacher = teacherNameComboBox.getSelectedIndex() + 1;
        int subject = subjectNameComboBox.getSelectedIndex() + 1;
        String month = String.valueOf(monthComboBox.getSelectedItem());
        String value = valueField.getText();

        String result = paymentModel.updatepayment(invoiceNo, studentNo, teacher, subject,
month, value);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        paymentModel.loadpaymentTable("", paymentTableModel);
    }

    private void deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String invoiceNo = invoiceNoField.getText();
        String result = paymentModel.deletepayment(invoiceNo);
        JOptionPane.showConfirmDialog(rootPane, result, "Message", -1, 1);
        paymentModel.loadpaymentTable("", paymentTableModel);

        invoiceNoField.setText("");
        valueField.setText("");
    }

    private void paymentTableMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        int row = paymentTable.getSelectedRow();
        int invoiceNo = (int) paymentTableModel.getValueAt(row, 0);
        Object[] paymentData = paymentModel.getSelectedpaymentData(invoiceNo);
```

```
        invoiceNoField.setText(new String(paymentData[0] + ""));
        studentNoField.setText(new String(paymentData[1] + ""));
        studentNameField.setText((String) paymentData[2]);
        teacherNameComboBox.setSelectedIndex((int) paymentData[3] - 1);
        subjectNameComboBox.setSelectedIndex((int) paymentData[4] - 1);
        monthComboBox.setSelectedItem((Object) paymentData[5]);
        valueField.setText(new String(paymentData[6] + ""));
    }

    private void searchButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String keyword = searchField.getText();
        paymentModel.loadpaymentTable(keyword, paymentTableModel);
    }

    private void invoiceButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        int invoiceNo = Integer.parseInt(invoiceNoField.getText());
        new invoiceManagerDialog(this, true, invoiceNo).setVisible(true);
//          new invoiceManager(invoiceNo).setVisible(true);

    }

    private void StudentManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new studentManager().setVisible(true);
    }
```

```
    private void TeacherManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new teacherManager().setVisible(true);
    }

    private void SubjectManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        new subjectManager().setVisible(true);
    }

    private void ClassManagerMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        new classManager().setVisible(true);
    }

    private void PaymentManagerMenuItemActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
        new paymentManager().setVisible(true);
    }

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

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

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

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

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

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

```
            new paymentManager().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JMenuItem ClassManagerMenuItem;
private javax.swing.JMenu EditMenu;
private javax.swing.JMenu FileMenu;
private javax.swing.JMenu MenusMenu;
private javax.swing.JMenuItem PaymentManagerMenuItem;
private javax.swing.JMenuItem StudentManagerMenuItem;
private javax.swing.JMenuItem SubjectManagerMenuItem;
private javax.swing.JMenuItem TeacherManagerMenuItem;
private javax.swing.JButton deleteButton;
private javax.swing.JButton insertButton;
private javax.swing.JButton invoiceButton;
private javax.swing.JTextField invoiceNoField;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JLabel jLabel8;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
```

```
    private javax.swing.JPanel jPanel3;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JComboBox<String> monthComboBox;
    private javax.swing.JTable paymentTable;
    private javax.swing.JButton searchButton;
    private javax.swing.JTextField searchField;
    private javax.swing.JTextField studentNameField;
    private javax.swing.JTextField studentNoField;
    private javax.swing.JComboBox<String> subjectNameComboBox;
    private javax.swing.JComboBox<String> teacherNameComboBox;
    private javax.swing.JButton updateButton;
    private javax.swing.JTextField valueField;
    // End of variables declaration
}
```

invoiceManagerDialog.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package gui;

import java.util.HashMap;
import java.util.Map;
import net.sf.jasperreports.engine.JasperFillManager;
import net.sf.jasperreports.engine.JasperPrint;
import net.sf.jasperreports.engine.JasperPrintManager;
import net.sf.jasperreports.swing.JRViewer;
import java.util.Date;

/**
 *
 * @author EZIO AUDITORY
 */
public class invoiceManagerDialog extends javax.swing.JDialog {

   String reportPath = "C:\\Users\\EZIO
AUDITORY\\JaspersoftWorkspace\\MyReports\\adyapanaInvoice.jasper";
   Map m = new HashMap();
   int invoiceNumber;
   /**
    * Creates new form invoiceManagerDialog
    */
```

```
    public invoiceManagerDialog(java.awt.Frame parent, boolean modal, int invoiceNo) {
        super(parent, modal);
        initComponents();
        invoiceNumber = invoiceNo;
        m.put("invoiceNo", invoiceNumber);
        try {
            JasperPrint jp = JasperFillManager.fillReport(reportPath,
m,db.dbConnection.getConnection());
            JRViewer jv = new JRViewer(jp);
            jTabbedPane1.add(jv);
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    /**
     * 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">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        printButton = new javax.swing.JButton();
        jTabbedPane1 = new javax.swing.JTabbedPane();

        setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);
```

```
        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
        jLabel1.setText("Invoice");

        printButton.setText("Print");
        printButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                printButtonActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                    .addComponent(jTabbedPane1)
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                        .addGap(0, 0, Short.MAX_VALUE)
                        .addComponent(printButton, javax.swing.GroupLayout.PREFERRED_SIZE, 92,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addContainerGap())
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(56, 56, 56)
                .addComponent(jLabel1)
                .addContainerGap(506, Short.MAX_VALUE))
```

```
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()
                .addContainerGap(36, Short.MAX_VALUE)
                .addComponent(jLabel1)
                .addGap(18, 18, 18)
                .addComponent(jTabbedPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 444, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(printButton)
                .addGap(82, 82, 82))
        );

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
        setLocationRelativeTo(null);
    }// </editor-fold>
```

```
    private void printButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        m.put("invoiceNo", invoiceNumber);
        try {
            JasperPrint jp = JasperFillManager.fillReport(reportPath,
m,db.dbConnection.getConnection());
            JasperPrintManager.printReport(jp, true);
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    /**
     * @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 {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Windows".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
```

```
            }
        } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(invoiceManagerDialog.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(invoiceManagerDialog.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(invoiceManagerDialog.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(invoiceManagerDialog.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the dialog */
//      java.awt.EventQueue.invokeLater(new Runnable() {
//          public void run() {
//              invoiceManagerDialog dialog = new invoiceManagerDialog(new
javax.swing.JFrame(), true, invoiceNo);
//              dialog.addWindowListener(new java.awt.event.WindowAdapter() {
//                  @Override
//                  public void windowClosing(java.awt.event.WindowEvent e) {
//                      System.exit(0);
//                  }
//              });
//              dialog.setVisible(true);
```

```
//          }
//      });
    }

    // Variables declaration - do not modify
    private javax.swing.JLabel jLabel1;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JTabbedPane jTabbedPane1;
    private javax.swing.JButton printButton;
    // End of variables declaration
}
```

package model

studentModel.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package model;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Date;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class studentModel {

    private Connection conn;

    public studentModel() {
        conn = db.dbConnection.getConnection();
    }

    public String registerStudent(String studentName, String address, Date dateOfBirth) {
```

```
    String message = null;
    String query = "INSERT INTO student(name,address,dob)VALUE(?,?,?)";

    try {
      PreparedStatement psm = conn.prepareStatement(query);
      psm.setString(1, studentName);
      psm.setString(2, address);
      psm.setDate(3, new java.sql.Date(dateOfBirth.getTime()));
      psm.execute();
      return "Success";
    } catch (Exception e) {
      e.printStackTrace();
      return "Error" + e.getMessage();
    }
  }

  public String updateStudent(String studentNo, String studentName, String address, Date
dateOfBirth) {
    String message = null;
    String query = "UPDATE student SET name = ?,address = ?,dob = ? WHERE sno = ?";

    try {
      PreparedStatement psm = conn.prepareStatement(query);
      psm.setString(1, studentName);
      psm.setString(2, address);
      psm.setDate(3, new java.sql.Date(dateOfBirth.getTime()));
      psm.setString(4, studentNo);
      psm.execute();
      return "Success";
    } catch (Exception e) {
```

```
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
    }

    public String deleteStudent(String studentNo) {
        String message = null;
        String query = "DELETE FROM student WHERE sno = ?";

        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setString(1, studentNo);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
    }

    public Object[] getSelectedStudentData(int studentNo) {
        String query = "SELECT * FROM student WHERE sno = ?";
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setInt(1, studentNo);
            ResultSet rs = psm.executeQuery();
            Object[] rowData = null;

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

```
            int studentNum = rs.getInt("sno");
            String studentName = rs.getString("name");
            String address = rs.getString("address");
            Date dateOfBirth = rs.getDate("dob");
            rowData = new Object[]{studentNum, studentName, address, dateOfBirth};
        }

        return rowData;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
}

public void loadStudentTable(String keyword, DefaultTableModel studentTableModel) {
    String query = "SELECT * FROM student WHERE name LIKE ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, "%" + keyword + "%");
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;
        studentTableModel.setRowCount(0);
        while (rs.next()) {
            int studentNum = rs.getInt("sno");
            String studentName = rs.getString("name");
            String address = rs.getString("address");
            Date dateOfBirth = rs.getDate("dob");
            rowData = new Object[]{studentNum, studentName, address, dateOfBirth};
```

```
                studentTableModel.addRow(rowData);
            }
        } catch (Exception e) {
            e.printStackTrace();

        }
    }

}
```

teacherModel.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package model;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Vector;
import javax.swing.DefaultComboBoxModel;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class teacherModel {

    private Connection conn;

    public teacherModel() {
        conn = db.dbConnection.getConnection();
    }

    public String registerTeacher(String teacherName, String address, int subject) {
        String message = null;
```

```
    String query = "INSERT INTO teacher(name,address,subjects)VALUE(?,?,?)";

    try {
      PreparedStatement psm = conn.prepareStatement(query);
      psm.setString(1, teacherName);
      psm.setString(2, address);
      psm.setInt(3, subject);
      psm.execute();
      return "Success";
    } catch (Exception e) {
      e.printStackTrace();
      return "Error" + e.getMessage();
    }
  }

  public String updateTeacher(String teacherNo, String teacherName, String address, int
subject) {
    String message = null;
    String query = "UPDATE teacher SET name = ?,address = ?,subjects = ? WHERE tno = ?";

    try {
      PreparedStatement psm = conn.prepareStatement(query);
      psm.setString(1, teacherName);
      psm.setString(2, address);
      psm.setInt(3, subject);
      psm.setString(4, teacherNo);
      psm.execute();
      return "Success";
    } catch (Exception e) {
      e.printStackTrace();
```

```
        return "Error" + e.getMessage();
    }
}

public String deleteTeacher(String teacherNo) {
    String message = null;
    String query = "DELETE FROM teacher WHERE tno = ?";

    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, teacherNo);
        psm.execute();
        return "Success";
    } catch (Exception e) {
        e.printStackTrace();
        return "Error" + e.getMessage();
    }
}

public Object[] getSelectedTeacherData(int teacherNo) {
    String query = "SELECT * FROM teacher WHERE tno = ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setInt(1, teacherNo);
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;

        while (rs.next()) {
            int teacherNum = rs.getInt("tno");
```

```
            String teacherName = rs.getString("name");
            String address = rs.getString("address");
            int subject = rs.getInt("subjects");
            rowData = new Object[]{teacherNum, teacherName, address, subject};
        }

        return rowData;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
  }

  public void loadTeacherTable(String keyword, DefaultTableModel teacherTableModel) {
    String query = "SELECT * FROM teacher INNER JOIN subject ON  teacher.subjects =
subject.subno WHERE teacher.name LIKE ? or subject.subjectname LIKE ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, "%" + keyword + "%");
        psm.setString(2, "%" + keyword + "%");
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;
        teacherTableModel.setRowCount(0);
        while (rs.next()) {
            int teacherNum = rs.getInt("tno");
            String teacherName = rs.getString("name");
            String address = rs.getString("address");
            String subject = rs.getString("subjectname");
            rowData = new Object[]{teacherNum, teacherName, address, subject};
```

```
            teacherTableModel.addRow(rowData);
        }
    } catch (Exception e) {
        e.printStackTrace();

    }
  }

  public Vector comboBoxLoad() {
    String query = "SELECT * FROM subject";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        ResultSet rs = psm.executeQuery();

        Vector v = new Vector();
        while (rs.next()) {
            v.add(rs.getString("subjectname"));
        }
        return v;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
  }

}
```

subjectModel.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package model;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class subjectModel {

    private Connection conn;

    public subjectModel(){
        conn = db.dbConnection.getConnection();
    }

    public String registersubject(String subjectName, String description, String price) {
        String message = null;
        String query = "INSERT INTO subject(subjectname,description,price)VALUE(?,?,?)";
```

```
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setString(1, subjectName);
            psm.setString(2, description);
            psm.setString(3, price);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
    }

    public String updatesubject(String subjectNo, String subjectName, String description,
String price) {
        String message = null;
        String query = "UPDATE subject SET subjectname = ?,description = ?,price = ? WHERE
subno = ?";

        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setString(1, subjectName);
            psm.setString(2, description);
            psm.setString(3, price);
            psm.setString(4, subjectNo);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
```

```
    }
}

public String deletesubject(String subjectNo) {
    String message = null;
    String query = "DELETE FROM subject WHERE subno = ?";

    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, subjectNo);
        psm.execute();
        return "Success";
    } catch (Exception e) {
        e.printStackTrace();
        return "Error" + e.getMessage();
    }
}

public Object[] getSelectedsubjectData(int subjectNo) {
    String query = "SELECT * FROM subject WHERE subno = ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setInt(1, subjectNo);
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;

        while (rs.next()) {
            int subjectNum = rs.getInt("subno");
            String subjectName = rs.getString("subjectname");
```

```
            String description = rs.getString("description");
            double price  = rs.getDouble("price");
            rowData = new Object[]{subjectNum, subjectName, description, price};
        }

        return rowData;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
}

public void loadSubjectTable(String keyword, DefaultTableModel subjectTableModel) {
    String query = "SELECT * FROM subject WHERE subjectname LIKE ? ";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, "%" + keyword + "%");
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;
        subjectTableModel.setRowCount(0);
        while (rs.next()) {
            int subjectNum = rs.getInt("subno");
            String subjectName = rs.getString("subjectname");
            String description = rs.getString("description");
            double price  = rs.getDouble("price");
            rowData = new Object[]{subjectNum, subjectName, description, price};
            subjectTableModel.addRow(rowData);
        }
```

```
        } catch (Exception e) {
            e.printStackTrace();

        }
    }

}
```

classModel.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package model;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Vector;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class classModel {

    private Connection conn;

    public classModel() {
        conn = db.dbConnection.getConnection();
    }

    public String registerclass(int subject, int teacher, String time) {
        String message = null;
        String query = "INSERT INTO class(subno,tno,timeslot)VALUE(?,?,?)";
```

```
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setInt(1, subject);
            psm.setInt(2, teacher);
            psm.setString(3, time);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
// throw new UnsupportedOperationException("Not supported yet."); //To change body of generated methods, choose Tools | Templates.
    }

    public String updateclass(String classNo, int subject, int teacher, String time) {
        String message = null;
        String query = "UPDATE class SET subno = ?,tno = ?,timeslot = ? WHERE classno = ?";

        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setInt(1, subject);
            psm.setInt(2, teacher);
            psm.setString(3, time);
            psm.setString(4, classNo);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
```

```
        return "Error" + e.getMessage();
    }
}

public String deleteclass(String classNo) {
    String message = null;
    String query = "DELETE FROM class WHERE classno = ?";

    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, classNo);
        psm.execute();
        return "Success";
    } catch (Exception e) {
        e.printStackTrace();
        return "Error" + e.getMessage();
    }
}

public Object[] getSelectedclassData(int classNo) {
    String query = "SELECT * FROM class WHERE classno = ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setInt(1, classNo);
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;

        while (rs.next()) {
            int classNum = rs.getInt("classno");
```

```
            int subject = rs.getInt("subno");
            int teacher = rs.getInt("tno");
            String time = rs.getString("timeslot");
            rowData = new Object[]{classNum, subject, teacher, time};
        }

        return rowData;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
}

public void loadClassTable(String keyword, DefaultTableModel classTableModel) {
    String query = "SELECT * FROM class INNER JOIN subject INNER JOIN  teacher ON
class.subno = subject.subno AND class.tno = teacher.tno WHERE teacher.name LIKE ? or
subject.subjectname LIKE ?";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, "%" + keyword + "%");
        psm.setString(2, "%" + keyword + "%");
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;
        classTableModel.setRowCount(0);
        while (rs.next()) {
            int classNum = rs.getInt("classno");
            String subject = rs.getString("subjectname");
            String teacher = rs.getString("name");
            String time = rs.getString("timeslot");
```

```
            rowData = new Object[]{classNum, subject, teacher, time};
            classTableModel.addRow(rowData);
        }
    } catch (Exception e) {
        e.printStackTrace();

    }
}

public Vector subjectNamecomboBoxLoad() {
    String query = "SELECT * FROM subject";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        ResultSet rs = psm.executeQuery();

        Vector v = new Vector();
        while (rs.next()) {
            v.add(rs.getString("subjectname"));
        }
        return v;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
}

public Vector teacherNamecomboBoxLoad() {
    String query = "SELECT * FROM teacher";
```

```
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            ResultSet rs = psm.executeQuery();

            Vector v = new Vector();
            while (rs.next()) {
                v.add(rs.getString("name"));
            }
            return v;
        } catch (Exception e) {
            e.printStackTrace();

        }
        return null;
    }

}
```

paymentModel.java

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package model;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Vector;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author EZIO AUDITORY
 */
public class paymentModel {

    private Connection conn;

    public paymentModel() {
        conn = db.dbConnection.getConnection();
    }

    public String insertpayment(int studentNo, int teacher, int subject, String month, String
value) {
        String message = null;
```

```
    String query = "INSERT INTO invoice(sno,tno,subno,month,value)VALUE(?,?,?,?,?)";

    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setInt(1, studentNo);
        psm.setInt(2, teacher);
        psm.setInt(3, subject);
        psm.setString(4, month);
        psm.setString(5, value);
        psm.execute();
        return "Success";
    } catch (Exception e) {
        e.printStackTrace();
        return "Error" + e.getMessage();
    }
  }

  public String updatepayment(String invoiceNo, int studentNo, int teacher, int subject,
String month, String value) {
    String message = null;
    String query = "UPDATE invoice SET sno = ?,tno = ?,subno = ?,month = ?,value = ?
WHERE iNo = ?";

    try {
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setInt(1, studentNo);
        psm.setInt(2, teacher);
        psm.setInt(3, subject);
        psm.setString(4, month);
        psm.setString(5, value);
```

```
            psm.setString(6, invoiceNo);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
    }

    public String deletepayment(String invoiceNo) {
        String message = null;
        String query = "DELETE FROM invoice WHERE iNo = ?";

        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setString(1, invoiceNo);
            psm.execute();
            return "Success";
        } catch (Exception e) {
            e.printStackTrace();
            return "Error" + e.getMessage();
        }
    }

    public Object[] getSelectedpaymentData(int invoiceNo) {
        String query = "SELECT * FROM invoice INNER JOIN student ON invoice.sno =
student.sno WHERE invoice.iNo = ?";
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            psm.setInt(1, invoiceNo);
```

```
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;

        while (rs.next()) {
           int invoiceNum = rs.getInt("iNo");
           int studentNo = rs.getInt("sno");
           String studentName = rs.getString("student.name");
           int teacher = rs.getInt("tno");
           int subject = rs.getInt("subno");
           String month = rs.getString("month");
           double value = rs.getDouble("value");
           rowData = new Object[]{invoiceNum, studentNo,studentName, teacher, subject,
month, value};
        }

        return rowData;
      } catch (Exception e) {
        e.printStackTrace();

      }
      return null;
   }

   public void loadpaymentTable(String keyword, DefaultTableModel paymentTableModel) {
      String query = "SELECT * FROM invoice INNER JOIN student INNER JOIN  teacher INNER
JOIN subject "
            + "ON invoice.sno = student.sno AND invoice.tno = teacher.tno AND invoice.subno
= subject.subno "
            + "WHERE student.name LIKE ? or teacher.name LIKE ? or subject.subjectname LIKE
? or invoice.month LIKE ?";
      try {
```

```
        PreparedStatement psm = conn.prepareStatement(query);
        psm.setString(1, "%" + keyword + "%");
        psm.setString(2, "%" + keyword + "%");
        psm.setString(3, "%" + keyword + "%");
        psm.setString(4, "%" + keyword + "%");
        ResultSet rs = psm.executeQuery();
        Object[] rowData = null;
        paymentTableModel.setRowCount(0);
        while (rs.next()) {
           int invoiceNum = rs.getInt("iNo");
           int studentNo = rs.getInt("sno");
           String studentName = rs.getString("student.name");
           String teacher = rs.getString("teacher.name");
           String subject = rs.getString("subjectname");
           String month = rs.getString("month");
           double value = rs.getDouble("value");
           rowData = new Object[]{invoiceNum, studentNo ,studentName, teacher, subject,
month, value};
           paymentTableModel.addRow(rowData);
        }
      } catch (Exception e) {
        e.printStackTrace();

      }
   }

   public Vector studentNamecomboBoxLoad() {
      String query = "SELECT * FROM student";
      try {
        PreparedStatement psm = conn.prepareStatement(query);
```

```
        ResultSet rs = psm.executeQuery();

        Vector v = new Vector();
        while (rs.next()) {
            v.add(rs.getString("name"));
        }
        return v;
    } catch (Exception e) {
        e.printStackTrace();

    }
    return null;
}

public Vector teacherNamecomboBoxLoad() {
    String query = "SELECT * FROM teacher";
    try {
        PreparedStatement psm = conn.prepareStatement(query);
        ResultSet rs = psm.executeQuery();

        Vector v = new Vector();
        while (rs.next()) {
            v.add(rs.getString("name"));
        }
        return v;
    } catch (Exception e) {
        e.printStackTrace();

    }
```

```
        return null;
    }

    public Vector subjectNamecomboBoxLoad() {
        String query = "SELECT * FROM subject";
        try {
            PreparedStatement psm = conn.prepareStatement(query);
            ResultSet rs = psm.executeQuery();

            Vector v = new Vector();
            while (rs.next()) {
                v.add(rs.getString("subjectname"));
            }
            return v;
        } catch (Exception e) {
            e.printStackTrace();

        }
        return null;
    }

}
```