

Appendix
Java Code
BooksAvalibilityForm.Java

```
package My_Forms;

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

public class BooksAvalibilityForm extends javax.swing.JFrame {

    /**
     * Creates new form BooksAvalibilityForm
     */
    public ConnectDb dbconnect = new ConnectDb();

    public BooksAvalibilityForm() {
        initComponents();
        this.setLocationRelativeTo(null);
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {
```

```

jMenuItem1 = new javax.swing.JMenuItem();
jTextField1 = new javax.swing.JTextField();
Avalibility_chosen_dropdown = new javax.swing.JComboBox<>();
Avalibility_panel_0 = new javax.swing.JPanel();
title = new javax.swing.JLabel();
goback = new javax.swing.JButton();
Avalibility_panel_1 = new javax.swing.JPanel();
Avalibility_criteria_fieldname = new javax.swing.JLabel();
jComboBox1 = new javax.swing.JComboBox<>();
Okay_button = new javax.swing.JButton();
Avalibility_panel_3 = new javax.swing.JPanel();
jScrollPane1 = new javax.swing.JScrollPane();
Avalibility_outputtable = new javax.swing.JTable();
Avalibility_panel_2 = new javax.swing.JPanel();
Avalibility_chosen_fieldname = new javax.swing.JLabel();
Search_button = new javax.swing.JButton();
CriteriaTextField = new javax.swing.JTextField();

jMenuItem1.setText("jMenuItem1");

jTextField1.setText("jTextField1");

Avalibility_chosen_dropdown.addActionListener(new java.awt.event.ActionListener()
{
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Avalibility_chosen_dropdownActionPerformed(evt);
    }
});

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

```

```
Avalibility_panel_0.setBackground(java.awt.Color.white);
```

```
title.setFont(new java.awt.Font("Arial", 0, 30)); // NOI18N
```

```
title.setText("    Books Availability");
```

```
goback.setBackground(java.awt.Color.black);
```

```
goback.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
```

```
goback.setForeground(java.awt.Color.white);
```

```
goback.setText("Go Back");
```

```
goback.addActionListener(new java.awt.event.ActionListener() {
```

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

```
        gobackActionPerformed(evt);
```

```
    }
```

```
});
```

```
Avalibility_panel_1.setBackground(java.awt.Color.white);
```

```
Avalibility_panel_1.setBorder(javax.swing.BorderFactory.createLineBorder(new  
java.awt.Color(0, 0, 0)));
```

```
Avalibility_panel_1.setForeground(java.awt.Color.white);
```

```
Avalibility_criteria_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
```

```
Avalibility_criteria_fieldname.setText("Choose a criteria");
```

```
jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {  
"null", "genre", "level", "publisher", "author" }));
```

```
Okay_button.setBackground(java.awt.Color.black);
```

```
Okay_button.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
```

```
Okay_button.setForeground(java.awt.Color.white);
```

```
Okay_button.setText("Okay");
```

```
Okay_button.addActionListener(new java.awt.event.ActionListener() {
```

```

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

    javax.swing.GroupLayout Avalibility_panel_1Layout = new
    javax.swing.GroupLayout(Avalibility_panel_1);

    Avalibility_panel_1.setLayout(Avalibility_panel_1Layout);
    Avalibility_panel_1Layout.setHorizontalGroup(

    Avalibility_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Avalibility_panel_1Layout.createSequentialGroup()

            .addContainerGap(65, Short.MAX_VALUE)

            .addGroup(Avalibility_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
                    Avalibility_panel_1Layout.createSequentialGroup()

                        .addComponent(Avalibility_criteria_fieldname,
                            javax.swing.GroupLayout.PREFERRED_SIZE, 168,
                            javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addGap(77, 77, 77))

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
                    Avalibility_panel_1Layout.createSequentialGroup()

                        .addComponent(jComboBox1,
                            javax.swing.GroupLayout.PREFERRED_SIZE, 252,
                            javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addGap(34, 34, 34))

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
                    Avalibility_panel_1Layout.createSequentialGroup()

                        .addComponent(Okay_button)

                        .addGap(129, 129, 129))))

    );

    Avalibility_panel_1Layout.setVerticalGroup(

```

```
Avalibility_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
    .addGroup(Avalibility_panel_1Layout.createSequentialGroup()  
        .addGap(61, 61, 61)  
        .addComponent(Avalibility_criteria_fieldname,  
            javax.swing.GroupLayout.PREFERRED_SIZE, 58,  
            javax.swing.GroupLayout.PREFERRED_SIZE)  
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)  
        .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE, 40,  
            javax.swing.GroupLayout.PREFERRED_SIZE)  
        .addGap(31, 31, 31)  
        .addComponent(Okay_button, javax.swing.GroupLayout.PREFERRED_SIZE, 37,  
            javax.swing.GroupLayout.PREFERRED_SIZE)  
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,  
            Short.MAX_VALUE))  
    );
```

```
Avalibility_panel_3.setBackground(java.awt.Color.white);
```

```
Avalibility_panel_3.setBorder(javax.swing.BorderFactory.createLineBorder(new  
    java.awt.Color(0, 0, 0)));
```

```
Avalibility_outputtable.setModel(new javax.swing.table.DefaultTableModel(  
    new Object [][] {  
  
        },  
    new String [] {  
        "Book ID", "Book title", "Book Level", "Book Genre ", "Book publisher", " Book  
Author"  
    }  
));  
jScrollPane1.setViewportViewView(Avalibility_outputtable);  
if (Avalibility_outputtable.getColumnModel().getColumnCount() > 0) {
```

```
Avalibility_outputtable.getColumnModel().getColumn(0).setHeaderValue("Book ID");
```

```
Avalibility_outputtable.getColumnModel().getColumn(1).setHeaderValue("Book title");
```

```
Avalibility_outputtable.getColumnModel().getColumn(2).setHeaderValue("Book Level");
```

```
Avalibility_outputtable.getColumnModel().getColumn(3).setHeaderValue("Book Genre ");
```

```
Avalibility_outputtable.getColumnModel().getColumn(4).setHeaderValue("Book publisher");
```

```
Avalibility_outputtable.getColumnModel().getColumn(5).setHeaderValue(" Book Author");
```

```
}
```

```
javax.swing.GroupLayout Avalibility_panel_3Layout = new  
javax.swing.GroupLayout(Avalibility_panel_3);
```

```
Avalibility_panel_3.setLayout(Avalibility_panel_3Layout);
```

```
Avalibility_panel_3Layout.setHorizontalGroup(
```

```
Avalibility_panel_3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,  
Avalibility_panel_3Layout.createSequentialGroup()
```

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

```
.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 713,  
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addContainerGap())
```

```
);
```

```
Avalibility_panel_3Layout.setVerticalGroup(
```

```
Avalibility_panel_3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,  
Avalibility_panel_3Layout.createSequentialGroup()
```

```

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

        .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 258,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(39, 39, 39))

);

```

```

Avalibility_panel_2.setBackground(java.awt.Color.white);

Avalibility_panel_2.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

```

```

Avalibility_chosen_fieldname.setBackground(java.awt.Color.black);

Avalibility_chosen_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N

```

```

Search_button.setBackground(java.awt.Color.black);

Search_button.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N

Search_button.setForeground(java.awt.Color.white);

Search_button.setText("Search");

Search_button.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        Search_buttonActionPerformed(evt);

    }

});

```

```

CriteriaTextField.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        CriteriaTextFieldActionPerformed(evt);

    }

});

```

```

javax.swing.GroupLayout Avalibility_panel_2Layout = new
javax.swing.GroupLayout(Avalibility_panel_2);

```

```

Avalibility_panel_2.setLayout(Avalibility_panel_2Layout);
Avalibility_panel_2Layout.setHorizontalGroup(

Avalibility_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Avalibility_panel_2Layout.createSequentialGroup()

        .addGap(78, 78, 78)

        .addComponent(Avalibility_chosen_fieldname,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
Avalibility_panel_2Layout.createSequentialGroup()

            .addGap(0, 0, Short.MAX_VALUE)

            .addComponent(Search_button, javax.swing.GroupLayout.PREFERRED_SIZE,
129, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(76, 76, 76))

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
Avalibility_panel_2Layout.createSequentialGroup()

            .addContainerGap(32, Short.MAX_VALUE)

            .addComponent(CriteriaTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
237, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addContainerGap())

    );
Avalibility_panel_2Layout.setVerticalGroup(

Avalibility_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
Avalibility_panel_2Layout.createSequentialGroup()

        .addContainerGap(62, Short.MAX_VALUE)

        .addComponent(Avalibility_chosen_fieldname,
javax.swing.GroupLayout.PREFERRED_SIZE, 36,
javax.swing.GroupLayout.PREFERRED_SIZE)

```



```

        .addGap(31, 31, 31)

        .addComponent(CriteriaTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
38, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(26, 26, 26)

        .addComponent(Search_button, javax.swing.GroupLayout.PREFERRED_SIZE,
37, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(97, 97, 97))
    );

```

```

    javax.swing.GroupLayout Avalibility_panel_0Layout = new
    javax.swing.GroupLayout(Avalibility_panel_0);

```

```

    Avalibility_panel_0.setLayout(Avalibility_panel_0Layout);

```

```

    Avalibility_panel_0Layout.setHorizontalGroup(

```

```

Avalibility_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```

```

        .addGroup(Avalibility_panel_0Layout.createSequentialGroup())

```

```

            .addGap(30, 30, 30)

```

```

            .addComponent(goback)

```

```

            .addGap(83, 83, 83)

```

```

            .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 335,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

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

```

```

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
Avalibility_panel_0Layout.createSequentialGroup())

```

```

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

```

```

        .addGroup(Avalibility_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```

```

            .addComponent(Avalibility_panel_3,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

            .addGroup(Avalibility_panel_0Layout.createSequentialGroup())

```

```

        .addComponent(Avalibility_panel_1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(46, 46, 46)

        .addComponent(Avalibility_panel_2,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))

        .addContainerGap(48, Short.MAX_VALUE))

);

Avalibility_panel_0Layout.setVerticalGroup(

Avalibility_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Avalibility_panel_0Layout.createSequentialGroup())

        .addContainerGap()

        .addGroup(Avalibility_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 54,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(goback, javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGroup(Avalibility_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

                .addGroup(Avalibility_panel_0Layout.createSequentialGroup())

                .addGap(18, 18, 18)

                .addComponent(Avalibility_panel_2,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGroup(Avalibility_panel_0Layout.createSequentialGroup())

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

        .addComponent(Avalibility_panel_1,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)))

```

```

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

        .addComponent(Avalibility_panel_3,
javax.swing.GroupLayout.PREFERRED_SIZE, 299,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addContainerGap())

);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

        .addComponent(Avalibility_panel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

);

layout.setVerticalGroup(

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

        .addComponent(Avalibility_panel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

);

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

```

```

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

    Dashboardform Dashform = new Dashboardform();

    Dashform.setVisible(true);

    this.setVisible(false);
}

private void Search_buttonActionPerformed(java.awt.event.ActionEvent evt) {

```

```

// TODO add your handling code here:

if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("genre")){

    DefaultTableModel model = (DefaultTableModel)
Avalibility_outputtable.getModel();

    model.setRowCount(0);

    try {
        Statement st = dbconnect.librarycon.createStatement();

        String firstSql = "Select * from book where issued = 'N' and genre ="
+CriteriaTextField.getText()+"";

        System.out.println(firstSql);

        ResultSet rs = st.executeQuery(firstSql);

        while (rs.next()) {

            String id = String.valueOf(rs.getInt("id"));

            String name = rs.getString("name");

            String level = String.valueOf(rs.getInt("level"));

            String genre = rs.getString("genre");

            String publisher = rs.getString("publisher");

            String author = rs.getString("author");

            String tbData[] = {id,name,level,genre,publisher,author};

            DefaultTableModel tblmodle =
(DefaultTableModel)Avalibility_outputtable.getModel();

            tblmodle.addRow(tbData);

        }
        } catch (Exception e) {

        }

    }else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("level")){

        DefaultTableModel model = (DefaultTableModel)
Avalibility_outputtable.getModel();

```

```

model.setRowCount(0);

try {
    Statement st = dbconnect.librarycon.createStatement();

    String firstSql = "Select * from book where issued = 'N' and level ="
+Integer.parseInt(CriteriaTextField.getText())+"";

    System.out.println(firstSql);

    ResultSet rs = st.executeQuery(firstSql);

    while (rs.next()) {

        String id = String.valueOf(rs.getInt("id"));

        String name = rs.getString("name");

        String level = String.valueOf(rs.getInt("level"));

        String genre = rs.getString("genre");

        String publisher = rs.getString("publisher");

        String author = rs.getString("author");


        String tbData[] = {id,name,level,genre,publisher,author};

        DefaultTableModel tblmodle =
(DefaultTableModel)Avalibility_outputtable.getModel();

        tblmodle.addRow(tbData);

    }
    } catch (Exception e) {

    }

}

}else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("publisher")){

    DefaultTableModel model = (DefaultTableModel)
Avalibility_outputtable.getModel();

    model.setRowCount(0);

    try {

        Statement st = dbconnect.librarycon.createStatement();

        String firstSql = "Select * from book where issued = 'N' and publisher ="
+CriteriaTextField.getText()+"";

```

```

ResultSet rs = st.executeQuery(firstSql);
while (rs.next()) {
    String id = String.valueOf(rs.getInt("id"));
    String name = rs.getString("name");
    String level = String.valueOf(rs.getInt("level"));
    String genre = rs.getString("genre");
    String publisher = rs.getString("publisher");
    String author = rs.getString("author");

    String tbData[] = {id,name,level,genre,publisher,author};
    DefaultTableModel tblmodle =
(DefaultTableModel)Avalibility_outputtable.getModel();

    tblmodle.addRow(tbData);
    }
    } catch (Exception e) {
    }
}
}else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("author")){
    DefaultTableModel model = (DefaultTableModel)
Avalibility_outputtable.getModel();
    model.setRowCount(0);
    try {
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select * from book where issued = 'N' and  author ="
+CriteriaTextField.getText()+"";
        ResultSet rs = st.executeQuery(firstSql);
        while (rs.next()) {
            String id = String.valueOf(rs.getInt("id"));
            String name = rs.getString("name");
            String level = String.valueOf(rs.getInt("level"));
            String genre = rs.getString("genre");

```

```

String publisher = rs.getString("publisher");
String author = rs.getString("author");

String tbData[] = {id,name,level,genre,publisher,author};

DefaultTableModel tblmodle =
(DefaultTableModel)Avalibility_outputtable.getModel();

tblmodle.addRow(tbData);
    }
    } catch (Exception e) {
    }
}

}

private void Okay_buttonActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("genre")){
    Avalibility_choosen_fieldname.setText("genre");

}
else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("level")){
    Avalibility_choosen_fieldname.setText("Level");

}
else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("publisher")){
    Avalibility_choosen_fieldname.setText("Publisher");

}
else if(jComboBox1.getSelectedItem().toString().equalsIgnoreCase("author")){
    Avalibility_choosen_fieldname.setText("author");

}
}

```

```

    }

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

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

    /**
     * @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 ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

```



```
java.util.logging.Logger.getLogger(BooksAvalibilityForm.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (InstantiationException ex) {
```

```
java.util.logging.Logger.getLogger(BooksAvalibilityForm.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (IllegalAccessException ex) {
```

```
java.util.logging.Logger.getLogger(BooksAvalibilityForm.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

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

```
java.util.logging.Logger.getLogger(BooksAvalibilityForm.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 BooksAvalibilityForm().setVisible(true);
```

```
    }
```

```
});
```

```
}
```

```
// Variables declaration - do not modify
```

```
private javax.swing.JComboBox<String> Avalibility_choosen_dropdown;
```

```
private javax.swing.JLabel Avalibility_choosen_fieldname;
```

```
private javax.swing.JLabel Avalibility_criteria_fieldname;
```

```
private javax.swing.JTable Avalibility_outputtable;
```

```
private javax.swing.JPanel Avalibility_panel_0;
```

```
private javax.swing.JPanel Avalibility_panel_1;
```

```

private javax.swing.JPanel Avalibility_panel_2;
private javax.swing.JPanel Avalibility_panel_3;
private javax.swing.JTextField CriteriaTextField;
private javax.swing.JButton Okay_button;
private javax.swing.JButton Search_button;
private javax.swing.JButton goback;
private javax.swing.JComboBox<String> jComboBox1;
private javax.swing.JMenuItem jMenuItem1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTextField jTextField1;
private javax.swing.JLabel title;
// End of variables declaration
}

```

Bookform.Java

```

package My_Forms;

import javax.swing.JOptionPane;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing.JFrame;
import javax.swing.table.DefaultTableModel;

public class Booksform extends javax.swing.JFrame {

    /**
     * Creates new form Booksform

```

```

*/

public ConnectDb dbconnect = new ConnectDb();

public Booksform() {
    initComponents();
    this.setLocationRelativeTo(null);
    try {
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select * from book order by id";
        ResultSet rs = st.executeQuery(firstSql);
        while (rs.next()) {
            String id = String.valueOf(rs.getInt("id"));
            String name = rs.getString("name");
            String genre = rs.getString("genre");
            String publisher = rs.getString("publisher");
            String author = rs.getString("author");
            String level = String.valueOf(rs.getInt("level"));
            String tbData[] = {id,name,genre,publisher,author,level};
            DefaultTableModel tblmodle = (DefaultTableModel)Book_outputtable.getModel();

            tblmodle.addRow(tbData);
        }
        rs.close();
    } catch (Exception e) {
    }
}

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">

```

```

private void initComponents() {

    Book_jpanel_0 = new javax.swing.JPanel();
    goback = new javax.swing.JButton();
    title = new javax.swing.JLabel();
    Book_jpanel_1 = new javax.swing.JPanel();
    Book_id_fieldname = new javax.swing.JLabel();
    Book_id_fieldtext = new javax.swing.JTextField();
    Book_name_fieldname = new javax.swing.JLabel();
    Book_name_fieldtext = new javax.swing.JTextField();
    Book_level_fieldname = new javax.swing.JLabel();
    Book_level_fieldtext = new javax.swing.JTextField();
    Book_add = new javax.swing.JButton();
    Book_genre_fieldname = new javax.swing.JLabel();
    Book_genre_fieldtext = new javax.swing.JTextField();
    Book_publisher_fieldname = new javax.swing.JLabel();
    Book_publisher_fieldtext = new javax.swing.JTextField();
    Book_author_fieldname = new javax.swing.JLabel();
    Book_author_fieldtext = new javax.swing.JTextField();
    Book_update = new javax.swing.JButton();
    Book_remove = new javax.swing.JButton();
    Book_jpanel_2 = new javax.swing.JPanel();
    jScrollPane1 = new javax.swing.JScrollPane();
    Book_outputtable = new javax.swing.JTable();
    Refresh = new javax.swing.JButton();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    Book_jpanel_0.setBackground(java.awt.Color.white);

```

```

goback.setBackground(java.awt.Color.black);
goback.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
goback.setForeground(java.awt.Color.white);
goback.setText("Go Back");
goback.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        gobackActionPerformed(evt);
    }
});

title.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
title.setText("      Books ");

Book_jpanel_1.setBackground(java.awt.Color.white);
Book_jpanel_1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

Book_id_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_id_fieldname.setText("Book ID");

Book_name_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_name_fieldname.setText("Book title ");

Book_level_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_level_fieldname.setText("Book level");

Book_add.setBackground(java.awt.Color.black);
Book_add.setForeground(java.awt.Color.white);
Book_add.setText("Add");
Book_add.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {

```

```

        Book_addActionPerformed(evt);
    }
});

Book_genre_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_genre_fieldname.setText("Book Genre");

Book_publisher_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_publisher_fieldname.setText("Book Publisher");

Book_author_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Book_author_fieldname.setText("Book Author");

Book_update.setBackground(java.awt.Color.black);
Book_update.setForeground(java.awt.Color.white);
Book_update.setText("Update");
Book_update.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Book_updateActionPerformed(evt);
    }
});

Book_remove.setBackground(java.awt.Color.black);
Book_remove.setForeground(java.awt.Color.white);
Book_remove.setText("Remove");
Book_remove.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Book_removeActionPerformed(evt);
    }
});

```

```

        javax.swing.GroupLayout Book_jpanel_1Layout = new
javax.swing.GroupLayout(Book_jpanel_1);

        Book_jpanel_1.setLayout(Book_jpanel_1Layout);

        Book_jpanel_1Layout.setHorizontalGroup(

Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
Book_jpanel_1Layout.createSequentialGroup()

            .addGap(73, 73, 73)

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING, false)

            .addComponent(Book_id_fieldname)

            .addComponent(Book_name_fieldname)

            .addComponent(Book_level_fieldname)

            .addComponent(Book_id_fieldtext, javax.swing.GroupLayout.DEFAULT_SIZE,
246, Short.MAX_VALUE)

            .addComponent(Book_name_fieldtext)

            .addComponent(Book_level_fieldtext))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 166,
Short.MAX_VALUE)

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING, false)

            .addComponent(Book_author_fieldtext)

            .addGroup(Book_jpanel_1Layout.createSequentialGroup()

                .addGap(3, 3, 3)

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

                .addComponent(Book_publisher_fieldname)

                .addComponent(Book_genre_fieldname)

```

```

        .addComponent(Book_genre_fieldtext,
javax.swing.GroupLayout.PREFERRED_SIZE, 249,
javax.swing.GroupLayout.PREFERRED_SIZE)))

        .addComponent(Book_author_fieldname)

        .addComponent(Book_publisher_fieldtext))

        .addGap(71, 71, 71))

    .addGroup(Book_jpanel_1Layout.createSequentialGroup())

        .addGap(178, 178, 178)

        .addComponent(Book_add, javax.swing.GroupLayout.PREFERRED_SIZE, 101,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(85, 85, 85)

        .addComponent(Book_update, javax.swing.GroupLayout.PREFERRED_SIZE,
101, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(64, 64, 64)

        .addComponent(Book_remove, javax.swing.GroupLayout.PREFERRED_SIZE,
101, javax.swing.GroupLayout.PREFERRED_SIZE)

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

    );

    Book_jpanel_1Layout.setVerticalGroup(

Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Book_jpanel_1Layout.createSequentialGroup())

            .addGap(37, 37, 37)

        .addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

            .addComponent(Book_id_fieldname)

            .addComponent(Book_genre_fieldname))

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

        .addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

```



```

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

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

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

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

        .addComponent(Book_name_fieldname)

        .addComponent(Book_publisher_fieldname))

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

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

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

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

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

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

        .addComponent(Book_level_fieldname)

        .addComponent(Book_author_fieldname))

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

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

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

```

```

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

        .addGap(31, 31, 31)

.addGroup(Book_jpanel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

        .addComponent(Book_update)

        .addComponent(Book_add)

        .addComponent(Book_remove))

.addContainerGap()

);

Book_jpanel_2.setBackground(java.awt.Color.white);

Book_jpanel_2.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

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

        },
    new String [] {
        "ID", "Name", "Genre", "Publisher", "Author", "Level"
    }
));

Book_outputtable.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        Book_outputtableMouseClicked(evt);
    }
});

jScrollPane1.setViewportView(Book_outputtable);

```

```

Refresh.setBackground(java.awt.Color.black);
Refresh.setForeground(java.awt.Color.white);
Refresh.setText("Refresh");
Refresh.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        RefreshActionPerformed(evt);
    }
});

javax.swing.GroupLayout Book_jpanel_2Layout = new
javax.swing.GroupLayout(Book_jpanel_2);
Book_jpanel_2.setLayout(Book_jpanel_2Layout);
Book_jpanel_2Layout.setHorizontalGroup(
Book_jpanel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(Book_jpanel_2Layout.createSequentialGroup()
        .addGap(60, 60, 60)
        .addGroup(Book_jpanel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
            .addComponent(Refresh, javax.swing.GroupLayout.PREFERRED_SIZE, 101,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE,
683, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(65, Short.MAX_VALUE))
    );
Book_jpanel_2Layout.setVerticalGroup(
Book_jpanel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(Book_jpanel_2Layout.createSequentialGroup()
        .addGap(60, 60, 60)
        .addComponent(Refresh)
        .addGap(65, Short.MAX_VALUE))
    );

```

```

        .addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE, 187,
Short.MAX_VALUE)

        .addGap(18, 18, 18))

    );

    javax.swing.GroupLayout Book_jpanel_0Layout = new
javax.swing.GroupLayout(Book_jpanel_0);

    Book_jpanel_0.setLayout(Book_jpanel_0Layout);

    Book_jpanel_0Layout.setHorizontalGroup(

Book_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Book_jpanel_0Layout.createSequentialGroup()

            .addGap(49, 49, 49)

            .addGroup(Book_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

                .addGroup(Book_jpanel_0Layout.createSequentialGroup()

                    .addGroup(Book_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

                        .addComponent(Book_jpanel_1,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

                        .addComponent(Book_jpanel_2,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

                    .addGap(75, 75, 75))

                .addGroup(Book_jpanel_0Layout.createSequentialGroup()

                    .addComponent(goback, javax.swing.GroupLayout.PREFERRED_SIZE, 125,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addGap(191, 191, 191)

                    .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 210,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

```

```

);

Book_jpanel_0Layout.setVerticalGroup(

Book_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Book_jpanel_0Layout.createSequentialGroup()

        .addContainerGap()

.addGroup(Book_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

    .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(goback, javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

    .addComponent(Book_jpanel_1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

    .addComponent(Book_jpanel_2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

        .addComponent(Book_jpanel_0, 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(Book_jpanel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

    );

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

```

```

private void gobackActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Dashboardform Dashform = new Dashboardform();
    Dashform.setVisible(true);
    this.setVisible(false);
}

```

```

private void RefreshActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        DefaultTableModel model = (DefaultTableModel) Book_outputtable.getModel();
        model.setRowCount(0);
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select * from book order by id";
        ResultSet rs = st.executeQuery(firstSql);
        while (rs.next()) {
            String id = String.valueOf(rs.getInt("id"));
            String name = rs.getString("name");
            String genre = rs.getString("genre");
            String publisher = rs.getString("publisher");
            String author = rs.getString("author");

```

```

String level = String.valueOf(rs.getInt("level"));
String tbData[] = {id,name,genre,publisher,author,level};
DefaultTableModel tblmodel = (DefaultTableModel)Book_outputtable.getModel();

tblmodel.addRow(tbData);
    }
    rs.close();
    } catch (Exception e) {
    }
}

```

```

private void Book_outputtableMouseClicked(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    DefaultTableModel tb = (DefaultTableModel)Book_outputtable.getModel();

    String tbid = tb.getValueAt(Book_outputtable.getSelectedRow(), 0).toString();
    String tbname = tb.getValueAt(Book_outputtable.getSelectedRow(), 1).toString();
    String tbgenre = tb.getValueAt(Book_outputtable.getSelectedRow(), 2).toString();
    String tbpublisher = tb.getValueAt(Book_outputtable.getSelectedRow(), 3).toString();
    String tbauthor = tb.getValueAt(Book_outputtable.getSelectedRow(), 4).toString();
    String tblevel = tb.getValueAt(Book_outputtable.getSelectedRow(), 5).toString();

    Book_id_fieldtext.setText(tbid);
    Book_name_fieldtext.setText(tbname);
    Book_genre_fieldtext.setText(tbggenre);
    Book_publisher_fieldtext.setText(tbpublisher);
    Book_author_fieldtext.setText(tbauthor);
    Book_level_fieldtext.setText(tblevel);
}

```

```

private void Book_removeActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    if ( Book_id_fieldtext.getText().isEmpty() || Book_name_fieldtext.getText().isEmpty() ||
Book_level_fieldtext.getText().isEmpty()|| Book_genre_fieldtext.getText().isEmpty() ||
Book_publisher_fieldtext.getText().isEmpty()|| Book_author_fieldtext.getText().isEmpty() ){

        JOptionPane.showMessageDialog(new JFrame(), "Choose a value from the table to
be deleted.", "Message" , JOptionPane.INFORMATION_MESSAGE);

    }else{

        int result = JOptionPane.showConfirmDialog(Book_jpanel_0,"Are you Sure? You
want to Delete?", "Books form",

            JOptionPane.YES_NO_OPTION,

            JOptionPane.QUESTION_MESSAGE);

        if(result == JOptionPane.YES_OPTION){

            try{

                String sql = "Delete from book where id =?";

                PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);

                ps.setInt(1, Integer.parseInt(Book_id_fieldtext.getText()));

                ps.execute();

                JOptionPane.showMessageDialog(null, "Deleted successfully!! Click refresh to
see changes");

                Book_id_fieldtext.setText("");

                Book_name_fieldtext.setText("");

                Book_level_fieldtext.setText("");

                Book_genre_fieldtext.setText("");

                Book_publisher_fieldtext.setText("");

                Book_author_fieldtext.setText("");

            }

            catch(Exception e) {

                e.printStackTrace();

                JOptionPane.showMessageDialog(null, e);

            }

        }

    }
}

```



```

    }
}

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

    if ( Book_id_fieldtext.getText().isEmpty() || Book_name_fieldtext.getText().isEmpty() ||
        Book_level_fieldtext.getText().isEmpty() || Book_genre_fieldtext.getText().isEmpty() ||
        Book_publisher_fieldtext.getText().isEmpty() || Book_author_fieldtext.getText().isEmpty() ){

        JOptionPane.showMessageDialog(new JFrame(), "Choose a value from the table to
        be updated.", "Message" , JOptionPane.INFORMATION_MESSAGE);

    }else{
        try{
            String sql = "Update book set name = ?,genre = ?, publisher = ?, author = ?, level =
            ? where id=?";

            PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);

            ps.setString(1, Book_name_fieldtext.getText());

            ps.setString(2, Book_genre_fieldtext.getText());

            ps.setString(3, Book_publisher_fieldtext.getText());

            ps.setString(4, Book_author_fieldtext.getText());

            ps.setInt(5, Integer.parseInt(Book_level_fieldtext.getText()));

            ps.setInt(6, Integer.parseInt(Book_id_fieldtext.getText()));

            ps.execute();

            JOptionPane.showMessageDialog(null, "Updated successfully!! Click refresh to
            see changes");

            Book_id_fieldtext.setText("");

            Book_name_fieldtext.setText("");

            Book_level_fieldtext.setText("");

            Book_genre_fieldtext.setText("");

            Book_publisher_fieldtext.setText("");

            Book_author_fieldtext.setText("");

```

```

    }

    catch(Exception e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }
}
}

```

```

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

    if ( Book_id_fieldtext.getText().isEmpty() || Book_name_fieldtext.getText().isEmpty() ||
        Book_level_fieldtext.getText().isEmpty() || Book_genre_fieldtext.getText().isEmpty() ||
        Book_publisher_fieldtext.getText().isEmpty() || Book_author_fieldtext.getText().isEmpty() ){

        JOptionPane.showMessageDialog(new JFrame(), "The fields cannot be left blank.",
        "Message" , JOptionPane.INFORMATION_MESSAGE);

    }else{

        try{

            String sql = "Insert into book" + "(id,name,genre,publisher,author,level,issued)" +
            "values(?,?,?,?,?,?,?)";

            PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);

            ps.setInt(1, Integer.parseInt(Book_id_fieldtext.getText()));

            ps.setString(2, Book_name_fieldtext.getText());

            ps.setString(3, Book_genre_fieldtext.getText());

            ps.setString(4, Book_publisher_fieldtext.getText());

            ps.setString(5, Book_author_fieldtext.getText());

            ps.setInt(6, Integer.parseInt(Book_level_fieldtext.getText()));

            ps.setString(7, "N");

            ps.execute();

            JOptionPane.showMessageDialog(null, "Book added successfully!! Click refresh to
            see changes");

            Book_id_fieldtext.setText("");

```

```

        Book_name_fieldtext.setText("");
        Book_level_fieldtext.setText("");
        Book_genre_fieldtext.setText("");
        Book_publisher_fieldtext.setText("");
        Book_author_fieldtext.setText("");
    }
    catch(Exception e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }
}

/**
 * @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 ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    }
}

```

```

    }

    } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(Booksform.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);

        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Booksform.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);

        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Booksform.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);

        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Booksform.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 Booksform().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JButton Book_add;
private javax.swing.JLabel Book_author_fieldname;
private javax.swing.JTextField Book_author_fieldtext;
private javax.swing.JLabel Book_genre_fieldname;

```

```

private javax.swing.JTextField Book_genre_fieldtext;
private javax.swing.JLabel Book_id_fieldname;
private javax.swing.JTextField Book_id_fieldtext;
private javax.swing.JPanel Book_jpanel_0;
private javax.swing.JPanel Book_jpanel_1;
private javax.swing.JPanel Book_jpanel_2;
private javax.swing.JLabel Book_level_fieldname;
private javax.swing.JTextField Book_level_fieldtext;
private javax.swing.JLabel Book_name_fieldname;
private javax.swing.JTextField Book_name_fieldtext;
private javax.swing.JTable Book_outputtable;
private javax.swing.JLabel Book_publisher_fieldname;
private javax.swing.JTextField Book_publisher_fieldtext;
private javax.swing.JButton Book_remove;
private javax.swing.JButton Book_update;
private javax.swing.JButton Refresh;
private javax.swing.JButton goback;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel title;
// End of variables declaration
}

```

Bookinventory.Java

```

package My_Forms;

import java.sql.PreparedStatement;
import java.sql.*;
import java.util.Arrays;
import javax.swing.JOptionPane;

```

```

import javax.swing.JTextField;
import java.lang.Math;
import javax.swing.table.DefaultTableModel;
import java.time.LocalDate;

public class Booksinventory extends javax.swing.JFrame {

    /**
     * Creates new form Booksinventory
     */
    public ConnectDb dbconnect = new ConnectDb();

    public Booksinventory() {
        initComponents();
        this.setLocationRelativeTo(null);
        try {
            Statement st = dbconnect.librarycon.createStatement();
            String firstSql = "Select id from student";
            ResultSet rs = st.executeQuery(firstSql);
            while (rs.next()) {
                inventory_student_id_dropdown.addItem(rs.getString(1));
            }
            rs.close();
        } catch (Exception e) {
        }
        try {
            Statement st = dbconnect.librarycon.createStatement();
            String firstSql = "Select id from book";
            ResultSet rs = st.executeQuery(firstSql);
            while (rs.next()) {

```

```

        inventory_book_id_dropdown.addItem(rs.getString(1));
    }
    rs.close();
} catch (Exception e) {
}
}

try {
    Statement st = dbconnect.librarycon.createStatement();
    String firstSql = "Select * from inventory where issued = 'Y' ";
    ResultSet rs = st.executeQuery(firstSql);
    while (rs.next()) {
        String ids = String.valueOf(rs.getInt("ids"));
        String idb = String.valueOf(rs.getInt("idb"));
        String title = rs.getString("title");
        String name = rs.getString("name");
        String datei = rs.getString("datei");
        String dater = rs.getString("dater");

        String tbData[] = {ids,idb,title,name,datei,dater};

        DefaultTableModel tblmodle =
(DefaultTableModel)inventory_outputtable.getModel();

        tblmodle.addRow(tbData);
    }
    rs.close();
} catch (Exception e) {
}
}

```

```
}
```

```
@SuppressWarnings("unchecked")
```

```
// <editor-fold defaultstate="collapsed" desc="Generated Code">
```

```
private void initComponents() {
```

```
    jScrollPane1 = new javax.swing.JScrollPane();
```

```
    jTable1 = new javax.swing.JTable();
```

```
    jCalendar1 = new com.toedter.calendar.JCalendar();
```

```
    jDateChooser1 = new com.toedter.calendar.JDateChooser();
```

```
    jScrollPane2 = new javax.swing.JScrollPane();
```

```
    jTable2 = new javax.swing.JTable();
```

```
    jScrollPane3 = new javax.swing.JScrollPane();
```

```
    jTable3 = new javax.swing.JTable();
```

```
    jPopupMenu1 = new javax.swing.JPopupMenu();
```

```
    Inventory_panel_0 = new javax.swing.JPanel();
```

```
    jLabel1 = new javax.swing.JLabel();
```

```
    goback = new javax.swing.JButton();
```

```
    Inventory_panel_1 = new javax.swing.JPanel();
```

```
    inventory_book_id_fieldname = new javax.swing.JLabel();
```

```
    inventory_book_title_feildtext = new javax.swing.JTextField();
```

```
    inventory_book_title_fieldname = new javax.swing.JLabel();
```

```
    inventory_date_issue_fieldname = new javax.swing.JLabel();
```

```
    inventory_student_id_fieldname = new javax.swing.JLabel();
```

```
    inventory_student_title_fieldname = new javax.swing.JLabel();
```

```
    jTextField3 = new javax.swing.JTextField();
```

```
    inventory_date_return_fieldname = new javax.swing.JLabel();
```

```
    inventory_issue = new javax.swing.JButton();
```

```
    inventory_return = new javax.swing.JButton();
```

```
    inventory_date_issue_datechooser = new com.toedter.calendar.JDateChooser();
```



```

inventory_date_return_datechooser = new com.toedter.calendar.JDateChooser();
inventory_book_id_dropdown = new javax.swing.JComboBox<>();
inventory_student_id_dropdown = new javax.swing.JComboBox<>();
Inventory_panel_2 = new javax.swing.JPanel();
title_1 = new javax.swing.JLabel();
jScrollPane4 = new javax.swing.JScrollPane();
inventory_outputtable = new javax.swing.JTable();
booksissued_button = new javax.swing.JButton();
overduebook_button = new javax.swing.JButton();

```

```

jTable1.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane1.setViewportViewView(jTable1);

```

```

jTable2.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },

```

```

        new String [] {
            "Title 1", "Title 2", "Title 3", "Title 4"
        }
    ));
jScrollPane2.setViewportViewView(jTable2);

jTable3.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane3.setViewportViewView(jTable3);

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

Inventory_panel_0.setBackground(java.awt.Color.white);

jLabel1.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
jLabel1.setText("    Books Inventory");

goback.setBackground(java.awt.Color.black);
goback.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
goback.setForeground(java.awt.Color.white);
goback.setText("Go Back");

```

```

goback.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        gobackActionPerformed(evt);
    }
});

Inventory_panel_1.setBackground(java.awt.Color.white);

Inventory_panel_1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

inventory_book_id_fieldname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
inventory_book_id_fieldname.setText("Book ID");

inventory_book_title_fieldname.setText("Book Title");

inventory_date_issue_fieldname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
inventory_date_issue_fieldname.setText("Date of issue");

inventory_student_id_fieldname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
inventory_student_id_fieldname.setText("Student ID");

inventory_student_title_fieldname.setFont(new java.awt.Font("Arial", 0, 16)); //
NOI18N
inventory_student_title_fieldname.setText("Student Name");

inventory_date_return_fieldname.setText("Date of return");

inventory_issue.setBackground(java.awt.Color.black);
inventory_issue.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
inventory_issue.setForeground(java.awt.Color.white);
inventory_issue.setText("Issue");

```

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

```
inventory_return.setBackground(java.awt.Color.black);
inventory_return.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
inventory_return.setForeground(java.awt.Color.white);
inventory_return.setText("Return");
inventory_return.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        inventory_returnActionPerformed(evt);
    }
});
```

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

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

```
javax.swing.GroupLayout Inventory_panel_1Layout = new
javax.swing.GroupLayout(Inventory_panel_1);
```

```

Inventory_panel_1.setLayout(Inventory_panel_1Layout);
Inventory_panel_1Layout.setHorizontalGroup(

Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Inventory_panel_1Layout.createSequentialGroup()

        .addGap(114, 114, 114)

    .addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Inventory_panel_1Layout.createSequentialGroup()

            .addGap(65, 65, 65)

            .addComponent(inventory_issue)

            .addGap(178, 178, 178)

            .addComponent(inventory_return))

        .addGroup(Inventory_panel_1Layout.createSequentialGroup()

    .addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

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

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

        .addComponent(inventory_date_issue_fieldname)

        .addComponent(inventory_book_title_fieldname)

        .addComponent(inventory_book_id_fieldname)

        .addComponent(inventory_book_title_feildtext,
javax.swing.GroupLayout.PREFERRED_SIZE, 206,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(53, 53, 53)

    .addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

        .addComponent(inventory_student_id_fieldname)

```

```

        .addComponent(inventory_student_title_fieldname)

        .addComponent(jTextField3)

        .addComponent(inventory_date_return_fieldname)

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

        .addComponent(inventory_student_id_dropdown,
javax.swing.GroupLayout.PREFERRED_SIZE, 213,
javax.swing.GroupLayout.PREFERRED_SIZE))))

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

    );

    Inventory_panel_1Layout.setVerticalGroup(

Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Inventory_panel_1Layout.createSequentialGroup()

            .addContainerGap()

                .addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                    .addComponent(inventory_book_id_fieldname)

                    .addComponent(inventory_student_id_fieldname))

                .addGap(14, 14, 14)

                    .addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                        .addComponent(inventory_book_id_dropdown,
javax.swing.GroupLayout.PREFERRED_SIZE, 28,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

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

```

```
.addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
    .addComponent(inventory_book_title_fieldname)
```

```
    .addComponent(inventory_student_title_fieldname))
```

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

```
.addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

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

```
    .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE, 33,  
    javax.swing.GroupLayout.PREFERRED_SIZE))
```

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

```
.addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
    .addComponent(inventory_date_issue_fieldname)
```

```
    .addComponent(inventory_date_return_fieldname))
```

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

```
.addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

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

```
    .addGroup(Inventory_panel_1Layout.createSequentialGroup())
```

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

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

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

```
.addGroup(Inventory_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```

        .addComponent(inventory_issue)
        .addComponent(inventory_return))
        .addContainerGap()
    );

    Inventory_panel_2.setBackground(java.awt.Color.white);
    Inventory_panel_2.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));
    Inventory_panel_2.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            Inventory_panel_2MouseClicked(evt);
        }
    });

    title_1.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
    title_1.setText("List of books currently issued ");

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

        },
        new String [] {
            "Student ID", "Book ID", "Book Title", "Student Name", "Date of issue ", "Date of
Return"
        }
    ));
    inventory_outputtable.getTableHeader().setReorderingAllowed(false);
    inventory_outputtable.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            inventory_outputtableMouseClicked(evt);
        }
    }

```



```

});

jScrollPane4.setViewportViewView(inventory_outputtable);

booksissued_button.setBackground(java.awt.Color.black);
booksissued_button.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
booksissued_button.setForeground(java.awt.Color.white);
booksissued_button.setText("Books issued");
booksissued_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        booksissued_buttonActionPerformed(evt);
    }
});

overduebook_button.setBackground(java.awt.Color.black);
overduebook_button.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
overduebook_button.setForeground(java.awt.Color.white);
overduebook_button.setText("Overdue books");
overduebook_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        overduebook_buttonActionPerformed(evt);
    }
});

javax.swing.GroupLayout Inventory_panel_2Layout = new
javax.swing.GroupLayout(Inventory_panel_2);

Inventory_panel_2.setLayout(Inventory_panel_2Layout);
Inventory_panel_2Layout.setHorizontalGroup(

Inventory_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Inventory_panel_2Layout.createSequentialGroup()

```

```

        .addContainerGap()

        .addComponent(title_1)

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

        .addComponent(overduebook_button)

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

        .addComponent(booksissued_button)

        .addGap(11, 11, 11))

    .addGroup(Inventory_panel_2Layout.createSequentialGroup()

        .addComponent(jScrollPane4, javax.swing.GroupLayout.PREFERRED_SIZE, 725,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

    );

    Inventory_panel_2Layout.setVerticalGroup(

Inventory_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(Inventory_panel_2Layout.createSequentialGroup()

            .addContainerGap()

            .addGroup(Inventory_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                .addComponent(title_1)

                .addComponent(booksissued_button)

                .addComponent(overduebook_button))

            .addGap(18, 18, 18)

            .addComponent(jScrollPane4, javax.swing.GroupLayout.PREFERRED_SIZE, 223,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addContainerGap(26, Short.MAX_VALUE))

        );

    javax.swing.GroupLayout Inventory_panel_0Layout = new
javax.swing.GroupLayout(Inventory_panel_0);

```

```

Inventory_panel_0.setLayout(Inventory_panel_0Layout);
Inventory_panel_0Layout.setHorizontalGroup(

Inventory_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Inventory_panel_0Layout.createSequentialGroup()

        .addGap(31, 31, 31)

        .addComponent(goback)

        .addGap(107, 107, 107)

        .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 312,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

        .addGroup(Inventory_panel_0Layout.createSequentialGroup()

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

            .addGroup(Inventory_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.LEADING, false)

                .addComponent(Inventory_panel_2,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

                .addComponent(Inventory_panel_1,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

            .addContainerGap(22, Short.MAX_VALUE))

    );
Inventory_panel_0Layout.setVerticalGroup(

Inventory_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(Inventory_panel_0Layout.createSequentialGroup()

        .addContainerGap()

        .addGroup(Inventory_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.BASELINE)

```

```

        .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 44,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(goback))

    .addGap(30, 30, 30)

    .addComponent(Inventory_panel_1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

    .addComponent(Inventory_panel_2,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

        .addComponent(Inventory_panel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

);

layout.setVerticalGroup(

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

        .addComponent(Inventory_panel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

);

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

```

```

private void gobackActionPerformed(java.awt.event.ActionEvent evt) {

```

```

// TODO add your handling code here:

Dashboardform Dashform = new Dashboardform();

    Dashform.setVisible(true);

    this.setVisible(false);

}

private void inventory_issueActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

        try{

            Statement st = dbconnect.librarycon.createStatement();

            String spl = "Delete from overdue";

            PreparedStatement ps = dbconnect.librarycon.prepareStatement(spl);

            ps.execute();

        } catch(Exception e){

        }

        int row_count = 0;

        try{

            Statement st = dbconnect.librarycon.createStatement();

            String firstSql = "Select ids from inventory where dater < " + LocalDate.now() + " "
and issued = 'Y'";

            ResultSet rs = st.executeQuery(firstSql);

            while(rs.next()){

                row_count++;

            }

        }

```

```

catch (Exception e) { }

try {

    Statement st = dbconnect.librarycon.createStatement();

    String firstSql = "Select ids from inventory where dater < '" + LocalDate.now() + '"
and issued = 'Y'";

    ResultSet rs = st.executeQuery(firstSql);

    int[] OverdueArr = new int[row_count];
    int i=0;
    while (rs.next()) {
        OverdueArr[i] = rs.getInt("ids");
        i++;
    }

    for (int m = 0; m < OverdueArr.length; m++){
        for (int j = m + 1; j < OverdueArr.length; j++)
        {
            int tmp = 0;
            if (OverdueArr[m] > OverdueArr[j])
            {
                tmp = OverdueArr[m];
                OverdueArr[m] = OverdueArr[j];
                OverdueArr[j] = tmp;
            }
        }
    }
}

```

```

    }

    System.out.println(Arrays.toString(OverdueArr));

    System.out.println(i);

    int student_id_compare =
Integer.parseInt(inventory_student_id_dropdown.getSelectedItem().toString());

    int first = 0;

    int last=OverdueArr.length-1;

    int found = -1;

    int mid;

    while( last> first && found == -1 ){

        mid = (first + last)/2;

        if ( OverdueArr[mid] < student_id_compare ){

            first = mid + 1;

        }else {

            if ( student_id_compare < OverdueArr[mid]){

                last = mid - 1;

            }else{

                found = 2 ;

            }

        }

    }

    System.out.println(found);

    if( found != -1){

        java.sql.Date sqldate = new
java.sql.Date(inventory_date_issue_datechooser.getDate().getTime());

        java.sql.Date sqldate1 = new
java.sql.Date(inventory_date_return_datechooser.getDate().getTime());

        try{

            String sql = "Insert into inventory" +"(name,title,issued,datei,dater,ids,idb)" +
"values(?,?,?,?,?,?)";

```

```
// String sql = "Insert into inventory" + "(title,name,datei,dater,issued,ids,idb)" +
"values(?,?,?,?,?,?,?)";
```

```
PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
```

```
ps.setString(1, jTextField3.getText());
```

```
ps.setString(2, inventory_book_title_feildtext.getText());
```

```
ps.setString(3, "Y");
```

```
ps.setDate(4, sqldate);
```

```
ps.setDate(5, sqldate1);
```

```
ps.setString(6, inventory_student_id_dropdown.getSelectedItem().toString());
```

```
ps.setString(7, inventory_book_id_dropdown.getSelectedItem().toString());
```

```
ps.execute();
```

```
JOptionPane.showMessageDialog(null, "Issued successfully!!");
```

```
inventory_book_title_feildtext.setText("");
```

```
jTextField3.setText("");
```

```
((JTextField)inventory_date_issue_datechooser.getDateEditor().getUiComponent()).setText(
"");
```

```
((JTextField)inventory_date_return_datechooser.getDateEditor().getUiComponent()).setText(
"");
```

```
try {
```

```
String sql1 = "Update book set issued = ? where id =?";
```

```
ps = dbconnect.librarycon.prepareStatement(sql1);
```

```
ps.setString(1, "Y");
```

```
ps.setInt(2,
```

```
Integer.valueOf(inventory_book_id_dropdown.getSelectedItem().toString()));
```

```
ps.execute();
```

```
}
```

```
catch(Exception e){
```

```
e.printStackTrace();
```

```
JOptionPane.showMessageDialog(null, e);
```



```

        }
    }
    catch(Exception e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }

    }else{
        JOptionPane.showMessageDialog(null, "The student ID -
"+student_id_compare+"has an overdue book so the issue is unsuccessful.");
    }

        rs.close();

        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }
    }

private void inventory_returnActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try{
        String sql = "Update inventory set issued = ? where idb =?";
        PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
        ps.setString(1, "N");
        ps.setString(2, inventory_book_id_dropdown.getSelectedItem().toString());
        ps.execute();
        JOptionPane.showMessageDialog(null, "Return successfully!!");
        try {
            String sql1 = "Update book set issued = ? where id =?";

```

```

        ps = dbconnect.librarycon.prepareStatement(sql1);
        ps.setString(1, "N");
        ps.setInt(2,
Integer.valueOf(inventory_book_id_dropdown.getSelectedItem().toString()));
        ps.execute();
    }
    catch(Exception e){
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }
}

catch(Exception e) {
    e.printStackTrace();
    JOptionPane.showMessageDialog(null, e);
}

}

private void inventory_book_id_dropdownActionPerformed(java.awt.event.ActionEvent
evt) {
    // TODO add your handling code here:
    try{
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select name from book where id =
"+inventory_book_id_dropdown.getSelectedItem().toString()+"";
        ResultSet rs = st.executeQuery(firstSql);
        while(rs.next()){
            inventory_book_title_feildtext.setText(rs.getString("name"));

        }
    }
}

```

```

catch(Exception e){
    e.printStackTrace();
    JOptionPane.showMessageDialog(null, e);
}

}

private void booksissued_buttonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    title_1.setText("List of books currently issued");
    DefaultTableModel model = (DefaultTableModel) inventory_outputtable.getModel();
    model.setRowCount(0);
    try {
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select * from inventory where issued = 'Y' ";
        ResultSet rs = st.executeQuery(firstSql);
        while (rs.next()) {
            String ids = String.valueOf(rs.getInt("ids"));
            String idb = String.valueOf(rs.getInt("idb"));
            String title = rs.getString("title");
            String name = rs.getString("name");
            String datei = rs.getString("datei");
            String dater = rs.getString("dater");

            String tbData[] = {ids,idb,title,name,datei,dater};

```

```
DefaultTableModel tblmodle =  
(DefaultTableModel)inventory_outputtable.getModel();
```

```
tblmodle.addRow(tbData);  
    }  
    rs.close();  
    } catch (Exception e) {  
    }  
}
```

```
private void Inventory_panel_2MouseClicked(java.awt.event.MouseEvent evt) {  
    // TODO add your handling code here:  
}
```

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

```
DefaultTableModel tb = (DefaultTableModel)inventory_outputtable.getModel();
```

```
String tbids = tb.getValueAt(inventory_outputtable.getSelectedRow(), 0).toString();  
String tbidb = tb.getValueAt(inventory_outputtable.getSelectedRow(), 1).toString();  
String tbtitle = tb.getValueAt(inventory_outputtable.getSelectedRow(), 2).toString();  
String tbname = tb.getValueAt(inventory_outputtable.getSelectedRow(), 3).toString();  
String tbdatei = tb.getValueAt(inventory_outputtable.getSelectedRow(), 4).toString();  
String tbdater = tb.getValueAt(inventory_outputtable.getSelectedRow(), 5).toString();  
inventory_book_id_dropdown.setSelectedItem(tbidb);  
inventory_student_id_dropdown.setSelectedItem(tbids);  
inventory_book_title_feildtext.setText(tbtitle);  
jTextField3.setText(tbname);
```

```

    }

    private void inventory_student_id_dropdownActionPerformed(java.awt.event.ActionEvent
    evt) {
        // TODO add your handling code here:
        try{
            Statement st = dbconnect.librarycon.createStatement();
            String firstSql = "Select name from student where id =
            '"+inventory_student_id_dropdown.getSelectedItem().toString()+"'";
            ResultSet rs = st.executeQuery(firstSql);
            while(rs.next()){
                jTextField3.setText(rs.getString("name"));
            }
        }
        catch(Exception e){
            e.printStackTrace();
            JOptionPane.showMessageDialog(null, e);
        }
    }

    private void overduebook_buttonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        title_1.setText("List of books currently overdue");
        try {
            DefaultTableModel model = (DefaultTableModel)
            inventory_outputtable.getModel();
            model.setRowCount(0);
            Statement st = dbconnect.librarycon.createStatement();

```

```

        String firstSql = "Select * from inventory where dater < " + LocalDate.now() + " and
issued = 'Y'";

        System.out.println(firstSql);

        ResultSet rs = st.executeQuery(firstSql);

        while (rs.next()) {

            String ids = String.valueOf(rs.getInt("ids"));

            String idb = String.valueOf(rs.getInt("idb"));

            String title = rs.getString("title");

            String name = rs.getString("name");

            String datei = rs.getString("datei");

            String dater = rs.getString("dater");


            String tbData[] = {ids,idb,title,name, datei,dater};

            DefaultTableModel tblmodle = (DefaultTableModel)
inventory_outputtable.getModel();

            tblmodle.addRow(tbData);

        }

        rs.close();

    } catch (Exception e) {

    }

}

/**
 * @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 ("Nimbus".equals(info.getName())) {

                    javax.swing.UIManager.setLookAndFeel(info.getClassName());

                    break;

                }

            }

        } catch (ClassNotFoundException ex) {

            java.util.logging.Logger.getLogger(Booksinventory.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (InstantiationException ex) {

            java.util.logging.Logger.getLogger(Booksinventory.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (IllegalAccessException ex) {

            java.util.logging.Logger.getLogger(Booksinventory.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

            java.util.logging.Logger.getLogger(Booksinventory.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 Booksinventory().setVisible(true);

```

```

    }
    });
}

// Variables declaration - do not modify
private javax.swing.JPanel Inventory_panel_0;
private javax.swing.JPanel Inventory_panel_1;
private javax.swing.JPanel Inventory_panel_2;
private javax.swing.JButton booksissued_button;
private javax.swing.JButton goback;
private javax.swing.JComboBox<String> inventory_book_id_dropdown;
private javax.swing.JLabel inventory_book_id_fieldname;
private javax.swing.JTextField inventory_book_title_feildtext;
private javax.swing.JLabel inventory_book_title_fieldname;
private com.toedter.calendar.JDateChooser inventory_date_issue_datechooser;
private javax.swing.JLabel inventory_date_issue_fieldname;
private com.toedter.calendar.JDateChooser inventory_date_return_datechooser;
private javax.swing.JLabel inventory_date_return_fieldname;
private javax.swing.JButton inventory_issue;
private javax.swing.JTable inventory_outputtable;
private javax.swing.JButton inventory_return;
private javax.swing.JComboBox<String> inventory_student_id_dropdown;
private javax.swing.JLabel inventory_student_id_fieldname;
private javax.swing.JLabel inventory_student_title_fieldname;
private com.toedter.calendar.JCalendar jCalendar1;
private com.toedter.calendar.JDateChooser jDateChooser1;
private javax.swing.JLabel jLabel1;
private javax.swing.JPopupMenu jPopupMenu1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;

```



```

private javax.swing.JScrollPane jScrollPane3;
private javax.swing.JScrollPane jScrollPane4;
private javax.swing.JTable jTable1;
private javax.swing.JTable jTable2;
private javax.swing.JTable jTable3;
private javax.swing.JTextField jTextField3;
private javax.swing.JButton overduebook_button;
private javax.swing.JLabel title_1;
// End of variables declaration
}

```

Chart.Java

```

package My_Forms;

import java.util.Iterator;
import java.util.Map;
import java.util.Set;

import javax.swing.JFrame;

import org.jfree.chart.ChartFactory;
import org.jfree.chart.ChartPanel;
import org.jfree.chart.JFreeChart;
import org.jfree.chart.plot.PlotOrientation;
import org.jfree.data.category.CategoryDataset;
import org.jfree.data.category.DefaultCategoryDataset;

public class Chart extends JFrame{
    private static final long serialVersionUID = 1L;

```

```

public Chart(Map<Integer, String> graph) {

    CategoryDataset dataset = createDataset(graph);

    JFreeChart chart=ChartFactory.createBarChart(
        "Books read Chart",
        "Month",
        "Total Books read",
        dataset,
        PlotOrientation.VERTICAL,
        true,true,false
    );

    ChartPanel panel=new ChartPanel(chart);
    setContentPane(panel);

}

private CategoryDataset createDataset(Map<Integer, String> graph) {
    Set set = graph.entrySet();
    Iterator i = set.iterator();
    DefaultCategoryDataset dataset = new DefaultCategoryDataset();

    while (i.hasNext()) {
        Map.Entry<Integer,String> me = (Map.Entry) i.next();
        dataset.addValue(me.getKey(), "Total books read", me.getValue());
    }
    return dataset;
}

```

```

    }

    public static void main(String[] args) throws Exception {
    }

}

```

ConnectDB.Java

```

package My_Forms;

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

public class ConnectDb {
    public Connection librarycon;    a
    {
        try{
            Class.forName("org.postgresql.Driver");

            librarycon =
DriverManager.getConnection("jdbc:postgresql://localhost:5432/postgres","postgres","root");

        }
        catch(Exception e){
            System.out.println(e);
        }
    }

}

```

DashboardForm.Java

```
package My_Forms;

public class Dashboardform extends javax.swing.JFrame {

    /**
     * Creates new form Dashboardform
     */

    public Dashboardform() {
        initComponents();
        this.setLocationRelativeTo(null);
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        dashboard_jpanel_0 = new javax.swing.JPanel();
        title = new javax.swing.JLabel();
        title_1 = new javax.swing.JLabel();
        logout = new javax.swing.JButton();
        Books_button = new javax.swing.JButton();
        issue_return_button = new javax.swing.JButton();
        avalibility_button = new javax.swing.JButton();
        student_button = new javax.swing.JButton();
    }
}
```

```

report_button = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

dashboard_jpanel_0.setBackground(new java.awt.Color(255, 255, 255));

title.setFont(new java.awt.Font("Arial", 0, 30)); // NOI18N
title.setText("Welcome to digital library managment");

title_1.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
title_1.setText("Main Menu");
title_1.setToolTipText("");

logout.setBackground(new java.awt.Color(0, 0, 0));
logout.setForeground(java.awt.Color.white);
logout.setText("Logout");
logout.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        logoutActionPerformed(evt);
    }
});

Books_button.setBackground(java.awt.Color.black);
Books_button.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
Books_button.setForeground(java.awt.Color.white);
Books_button.setText("Books");
Books_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Books_buttonActionPerformed(evt);
    }
}

```

```
});
```

```
issue_return_button.setBackground(java.awt.Color.black);
issue_return_button.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
issue_return_button.setForeground(java.awt.Color.white);
issue_return_button.setText("Books Issue/Return");
issue_return_button.setActionCommand("Books issue/ return");
issue_return_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        issue_return_buttonActionPerformed(evt);
    }
});
```

```
avalibility_button.setBackground(java.awt.Color.black);
avalibility_button.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
avalibility_button.setForeground(java.awt.Color.white);
avalibility_button.setText("Books Availability");
avalibility_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        avalibility_buttonActionPerformed(evt);
    }
});
```

```
student_button.setBackground(java.awt.Color.black);
student_button.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
student_button.setForeground(java.awt.Color.white);
student_button.setText("Student Records");
student_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        student_buttonActionPerformed(evt);
    }
});
```

$$\} \\ \}));$$

```
report_button.setBackground(java.awt.Color.black);

report_button.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
report_button.setForeground(java.awt.Color.white);

report_button.setText("Progress Report");

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

```
    javax.swing.GroupLayout dashboard_jpanel_0Layout = new  
javax.swing.GroupLayout(dashboard_jpanel_0);  
  
    dashboard_jpanel_0.setLayout(dashboard_jpanel_0Layout);  
  
    dashboard_jpanel_0Layout.setHorizontalGroup(  
  
dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
  
        .addGroup(dashboard_jpanel_0Layout.createSequentialGroup()  
  
            .addGap(150, Short.MAX_VALUE)  
  
            .addGroup(dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.  
Alignment.LEADING)  
  
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,  
dashboard_jpanel_0Layout.createSequentialGroup()  
  
                    .addComponent(title_1, javax.swing.GroupLayout.PREFERRED_SIZE, 285,  
javax.swing.GroupLayout.PREFERRED_SIZE)  
  
                    .addPreferredGap(LayoutStyle.ComponentPlacement.RELATED)  
  
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,  
dashboard_jpanel_0Layout.createSequentialGroup()  

```

```
.addGroup(dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
```

```
    .addGroup(dashboard_jpanel_0Layout.createSequentialGroup()
```

```
        .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 529, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
        .addGap(28, 28, 28))
```

```
    .addGroup(dashboard_jpanel_0Layout.createSequentialGroup()
```

```
.addGroup(dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)
```

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

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

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

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

```
    .addComponent(report_button, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.PREFERRED_SIZE, 506, javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
    .addGap(38, 38, 38)))
```

```
    .addComponent(logout, javax.swing.GroupLayout.PREFERRED_SIZE, 90, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
    .addContainerGap()))
```

```
);
```

```
dashboard_jpanel_0Layout.setVerticalGroup(
```

```
dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
    .addGroup(dashboard_jpanel_0Layout.createSequentialGroup()
```



```

        .addContainerGap()

        .addGroup(dashboard_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.BASELINE)

            .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 71,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(login))

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

        .addComponent(title_1, javax.swing.GroupLayout.PREFERRED_SIZE, 56,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

        .addComponent(Books_button, javax.swing.GroupLayout.PREFERRED_SIZE, 63,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(29, 29, 29)

        .addComponent(issue_return_button,
javax.swing.GroupLayout.PREFERRED_SIZE, 63,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(26, 26, 26)

        .addComponent(availability_button, javax.swing.GroupLayout.PREFERRED_SIZE,
63, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(27, 27, 27)

        .addComponent(student_button, javax.swing.GroupLayout.PREFERRED_SIZE,
63, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(27, 27, 27)

        .addComponent(report_button, javax.swing.GroupLayout.DEFAULT_SIZE, 63,
Short.MAX_VALUE)

        .addGap(51, 51, 51))
    );

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```

```

        .addComponent(dashboard_jpanel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

    );

    layout.setVerticalGroup(

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

        .addComponent(dashboard_jpanel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

    );

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

```

```

private void Books_buttonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Booksform bookform = new Booksform();
    bookform.setVisible(true);
    this.setVisible(false);
}

```

```

private void issue_return_buttonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here
    Booksinventory bookinventoryform = new Booksinventory();
    bookinventoryform.setVisible(true);
    this.setVisible(false);
}

```

```

private void avalibility_buttonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    BooksAvalibilityForm bookavalibilityform = new BooksAvalibilityForm();
    bookavalibilityform.setVisible(true);
    this.setVisible(false);
}

```

```
}
```

```
private void student_buttonActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    Studentform studentform = new Studentform();  
    studentform.setVisible(true);  
    this.setVisible(false);  
}
```

```
private void report_buttonActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    Progressreport progressreportform = new Progressreport();  
    progressreportform.setVisible(true);  
    this.setVisible(false);  
}
```

```
private void logoutActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    Loginform loginform = new Loginform();  
    loginform.setVisible(true);  
    this.setVisible(false);  
}
```

```
/**
```

```
 * @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 ("Nimbus".equals(info.getName())) {

                    javax.swing.UIManager.setLookAndFeel(info.getClassName());

                    break;

                }

            }

        } catch (ClassNotFoundException ex) {

            java.util.logging.Logger.getLogger(Dashboardform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (InstantiationException ex) {

            java.util.logging.Logger.getLogger(Dashboardform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (IllegalAccessException ex) {

            java.util.logging.Logger.getLogger(Dashboardform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

            java.util.logging.Logger.getLogger(Dashboardform.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 Dashboardform().setVisible(true);

```

```

        }
    });
}

// Variables declaration - do not modify
private javax.swing.JButton Books_button;
private javax.swing.JButton avalibility_button;
private javax.swing.JPanel dashboard_jpanel_0;
private javax.swing.JButton issue_return_button;
private javax.swing.JButton logout;
private javax.swing.JButton report_button;
private javax.swing.JButton student_button;
private javax.swing.JLabel title;
private javax.swing.JLabel title_1;
// End of variables declaration
}

```

Loginform.Java

```

package My_Forms;

import javax.swing.JButton;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;

public class Loginform extends javax.swing.JFrame {

    private static final long serialVersionUID = 1L;

```

```
private JButton loginButton;
```

```
private JTextField username;
```

```
private JLabel userLabel;
```

```
public Loginform() {
```

```
    initComponents();
```

```
    this.setLocationRelativeTo(null);
```

```
}
```

```
@SuppressWarnings("unchecked")
```

```
// <editor-fold defaultstate="collapsed" desc="Generated Code">
```

```
private void initComponents() {
```

```
    jComboBox1 = new javax.swing.JComboBox<>();
```

```
    inventory_jpanel_0 = new javax.swing.JPanel();
```

```
    title = new javax.swing.JLabel();
```

```
    login_username_field = new javax.swing.JLabel();
```

```
    login_username_fieldtext = new javax.swing.JTextField();
```

```
    login_password_field = new javax.swing.JLabel();
```

```
    inventory_login_button = new javax.swing.JButton();
```

```
    login_password_fieldtext = new javax.swing.JTextField();
```

```
    jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {  
    "Item 1", "Item 2", "Item 3", "Item 4" }));
```

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

```

setBackground(new java.awt.Color(255, 255, 255));
setForeground(java.awt.Color.white);

inventory_jpanel_0.setBackground(new java.awt.Color(255, 255, 255));

title.setFont(new java.awt.Font("Arial", 0, 30)); // NOI18N
title.setText("Digital Library managment ");

login_username_field.setFont(new java.awt.Font("Arial", 0, 14)); // NOI18N
login_username_field.setText("Enter username");

login_username_fieldtext.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        login_username_fieldtextActionPerformed(evt);
    }
});

login_password_field.setFont(new java.awt.Font("Arial", 0, 14)); // NOI18N
login_password_field.setText("Enter password");

inventory_login_button.setBackground(new java.awt.Color(0, 0, 0));
inventory_login_button.setForeground(java.awt.Color.white);
inventory_login_button.setText("Login");
inventory_login_button.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND_CURSOR));
inventory_login_button.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        inventory_login_buttonActionPerformed(evt);
    }
});

```

```

        javax.swing.GroupLayout inventory_jpanel_0Layout = new
javax.swing.GroupLayout(inventory_jpanel_0);

        inventory_jpanel_0.setLayout(inventory_jpanel_0Layout);
        inventory_jpanel_0Layout.setHorizontalGroup(

inventory_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
inventory_jpanel_0Layout.createSequentialGroup())

            .addContainerGap(89, Short.MAX_VALUE)

            .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 363,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(82, 82, 82))

        .addGroup(inventory_jpanel_0Layout.createSequentialGroup())

.addGroup(inventory_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(inventory_jpanel_0Layout.createSequentialGroup())

            .addGap(169, 169, 169)

            .addComponent(inventory_login_button,
javax.swing.GroupLayout.PREFERRED_SIZE, 156,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGroup(inventory_jpanel_0Layout.createSequentialGroup())

            .addGap(51, 51, 51)

.addGroup(inventory_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

        .addComponent(login_password_field,
javax.swing.GroupLayout.PREFERRED_SIZE, 122,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(login_username_field,
javax.swing.GroupLayout.PREFERRED_SIZE, 157,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(login_username_fieldtext,
javax.swing.GroupLayout.DEFAULT_SIZE, 392, Short.MAX_VALUE)

        .addComponent(login_password_fieldtext))))

```



```

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

    );

    inventory_jpanel_0Layout.setVerticalGroup(

inventory_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(inventory_jpanel_0Layout.createSequentialGroup())

            .addGap(21, 21, 21)

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

                    .addGap(53, 53, 53)

                        .addComponent(login_username_field,
javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

                                .addComponent(login_username_fieldtext,
javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE)

                                    .addGap(18, 18, 18)

                                        .addComponent(login_password_field,
javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

                                                .addComponent(login_password_fieldtext,
javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE)

                                                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 51,
Short.MAX_VALUE)

                                                        .addComponent(inventory_login_button,
javax.swing.GroupLayout.PREFERRED_SIZE, 41,
javax.swing.GroupLayout.PREFERRED_SIZE)

                                                            .addGap(21, 21, 21))

        );

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());

```

```

getContentPane().setLayout(layout);

layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(inventory_jpanel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
);

layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(inventory_jpanel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
);

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

```

```

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

```

```

private void inventory_login_buttonActionPerformed(java.awt.event.ActionEvent evt) {
    if (login_username_fieldtext.getText().equals("kamna") &&
login_password_fieldtext.getText().equals("hello")){
        Dashboardform frm = new Dashboardform();
        frm.setVisible(true);
        this.setVisible(false);
    }
    else if(login_username_fieldtext.getText().equals("") &&
login_password_fieldtext.getText().equals(""))
    {
        JOptionPane.showMessageDialog(null,"Enter username and password");
    }
    else{

```

```

        JOptionPane.showMessageDialog(null,"Incorrect username and password");
    }

}

/**
 * @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 ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {

        java.util.logging.Logger.getLogger(Loginform.class.getName()).log(java.util.logging.Level.S
        EVERE, null, ex);

    } catch (InstantiationException ex) {

        java.util.logging.Logger.getLogger(Loginform.class.getName()).log(java.util.logging.Level.S
        EVERE, null, ex);

    } catch (IllegalAccessException ex) {

```

```
java.util.logging.Logger.getLogger(Loginform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

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

```
java.util.logging.Logger.getLogger(Loginform.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 Loginform().setVisible(true);
```

```
    }
```

```
});
```

```
}
```

```
// Variables declaration - do not modify
```

```
private javax.swing.JPanel inventory_jpanel_0;
```

```
private javax.swing.JButton inventory_login_button;
```

```
private javax.swing.JComboBox<String> jComboBox1;
```

```
private javax.swing.JLabel login_password_field;
```

```
private javax.swing.JTextField login_password_fieldtext;
```

```
private javax.swing.JLabel login_username_field;
```

```
private javax.swing.JTextField login_username_fieldtext;
```

```
private javax.swing.JLabel title;
```

```
// End of variables declaration
```

```
}
```

Progressreport.java

```

package My_Forms;


import java.awt.event.ActionEvent;
import java.lang.reflect.InvocationTargetException;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.text.SimpleDateFormat;
import java.util.HashMap;
import net.sf.jasperreports.engine.*;
import net.sf.jasperreports.view.JasperViewer;
import java.util.Map;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.JScrollPane;
import javax.swing.WindowConstants;
import javax.swing.table.DefaultTableModel;


public class Progressreport extends javax.swing.JFrame {

    /**
     * Creates new form
     */
    Statement st = null;

    ResultSet rs = null;

    Map<Integer, String> graph = new HashMap<Integer, String>();

```

```

public ConnectDb dbconnect = new ConnectDb();

JScrollPane jScrollPane1 = new JScrollPane();

private static final String ISO_8601_DATE_FORMAT_WITH_MILLIS = "yyyy-
MM-dd";

static final Logger logger = Logger.getLogger(Progressreport.class.getName());

public Progressreport() {
    initComponents();
    this.setLocationRelativeTo(null);
    try {
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select id from student";
        rs = st.executeQuery(firstSql);
        while (rs.next()) {
            report_id_dropdown.addItem(rs.getString(1));

        }
        rs.close();
    } catch (Exception e) {
    }

}

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

```

```

report_panel_0 = new javax.swing.JPanel();
goback = new javax.swing.JButton();
title = new javax.swing.JLabel();
report_id_fieldname = new javax.swing.JLabel();
report_id_dropdown = new javax.swing.JComboBox<>();
report_start_date_fieldname = new javax.swing.JLabel();
report_end_date_fieldname = new javax.swing.JLabel();
report_search = new javax.swing.JButton();
report_panel_1 = new javax.swing.JPanel();
title_1 = new javax.swing.JLabel();
Reportmainbutton = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
report_outputtable = new javax.swing.JTable();
report_graph = new javax.swing.JButton();
report_start_date_datechooser = new com.toedter.calendar.JDateChooser();
report_end_date_datechooser = new com.toedter.calendar.JDateChooser();
report_name_fieldtext = new javax.swing.JTextField();
report_name_fieldname = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

report_panel_0.setBackground(java.awt.Color.white);

goback.setBackground(java.awt.Color.black);
goback.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
goback.setForeground(java.awt.Color.white);
goback.setText("Go Back");
goback.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {

```

```

        gobackActionPerformed(evt);
    }
});

title.setFont(new java.awt.Font("Arial", 0, 25)); // NOI18N
title.setText("Progress Report");

report_id_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
report_id_fieldname.setText("Choose the student ID");

report_id_dropdown.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
report_id_dropdown.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        report_id_dropdownActionPerformed(evt);
    }
});

report_start_date_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
report_start_date_fieldname.setText("Start Date");

report_end_date_fieldname.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
report_end_date_fieldname.setText("End Date");

report_search.setBackground(java.awt.Color.black);
report_search.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
report_search.setForeground(java.awt.Color.white);
report_search.setText("Search");
report_search.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        report_searchActionPerformed(evt);
    }
});

```



```

    }
});

report_panel_1.setBackground(java.awt.Color.white);

report_panel_1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

title_1.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
title_1.setText("Books Read Table and Graph");

Reportmainbutton.setBackground(java.awt.Color.black);
Reportmainbutton.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Reportmainbutton.setForeground(java.awt.Color.white);
Reportmainbutton.setText("Download Report");
Reportmainbutton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        ReportmainbuttonActionPerformed(evt);
    }
});

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

    },
    new String [] {
        "Book name", "Date of issue", "Date of return"
    }
));

jScrollPane1.setViewportViewView(report_outputtable);

report_graph.setBackground(java.awt.Color.black);

```

```

report_graph.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
report_graph.setForeground(java.awt.Color.white);
report_graph.setText("Graph");
report_graph.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        report_graphActionPerformed(evt);
    }
});

javax.swing.GroupLayout report_panel_1Layout = new
javax.swing.GroupLayout(report_panel_1);
report_panel_1.setLayout(report_panel_1Layout);
report_panel_1Layout.setHorizontalGroup(

report_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(report_panel_1Layout.createSequentialGroup()
        .addGap(19, 19, 19)
        .addComponent(jScrollPane1)
        .addGap(165, 165, 165)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
report_panel_1Layout.createSequentialGroup()
            .addGap(19, 19, 19)
            .addComponent(title_1, javax.swing.GroupLayout.PREFERRED_SIZE, 326,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(71, 71, 71)
            .addComponent(report_graph, javax.swing.GroupLayout.PREFERRED_SIZE,
117, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(25, 25, 25))
    )
);

```

```

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
report_panel_1Layout.createSequentialGroup()

        .addComponent(Reportmainbutton)

        .addGap(42, 42, 42))))

);

report_panel_1Layout.setVerticalGroup(

report_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(report_panel_1Layout.createSequentialGroup()

        .addContainerGap()

        .addGroup(report_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

            .addComponent(title_1, javax.swing.GroupLayout.PREFERRED_SIZE, 41,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(report_graph))

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

            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 243,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(18, 18, 18)

            .addComponent(Reportmainbutton)

            .addGap(201, 201, 201))

        );

report_name_fieldname.setText("Student Name");

javax.swing.GroupLayout report_panel_0Layout = new
javax.swing.GroupLayout(report_panel_0);

report_panel_0.setLayout(report_panel_0Layout);

report_panel_0Layout.setHorizontalGroup(

report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(report_panel_0Layout.createSequentialGroup()

```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING, false)
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addGap(69, 69, 69)
```

```
        .addComponent(report_id_fieldname))
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addGap(38, 38, 38)
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addComponent(report_name_fieldtext,  
javax.swing.GroupLayout.PREFERRED_SIZE, 259,  
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
    .addComponent(report_id_dropdown,  
javax.swing.GroupLayout.PREFERRED_SIZE, 259,  
javax.swing.GroupLayout.PREFERRED_SIZE))))
```

```
    .addGap(123, 123, 123)
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addComponent(report_start_date_fieldname)
```

```
    .addComponent(report_end_date_fieldname))
```

```
    .addGap(41, 41, 41)
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING, false)
```

```
    .addComponent(report_start_date_datechooser,  
javax.swing.GroupLayout.DEFAULT_SIZE, 145, Short.MAX_VALUE)
```

```

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

        .addGroup(report_panel_0Layout.createSequentialGroup())

        .addGap(27, 27, 27)

    .addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)

        .addComponent(report_panel_1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGroup(report_panel_0Layout.createSequentialGroup())

        .addComponent(goback,
javax.swing.GroupLayout.PREFERRED_SIZE, 117,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(145, 145, 145)

        .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE,
202, javax.swing.GroupLayout.PREFERRED_SIZE)))

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
report_panel_0Layout.createSequentialGroup())

    .addContainerGap()

    .addComponent(report_search,
javax.swing.GroupLayout.PREFERRED_SIZE, 117,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addGap(19, 19, 19)))

    .addGroup(report_panel_0Layout.createSequentialGroup())

    .addGap(115, 115, 115)

    .addComponent(report_name_fieldname)))

    .addContainerGap(30, Short.MAX_VALUE))

);

report_panel_0Layout.setVerticalGroup(

report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(report_panel_0Layout.createSequentialGroup())

```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addGap(47, 47, 47)
```

```
        .addComponent(goback))
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addContainerGap()
```

```
        .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 59,  
javax.swing.GroupLayout.PREFERRED_SIZE)))
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addGap(40, 40, 40)
```

```
        .addComponent(report_id_fieldname))
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
        .addGap(21, 21, 21)
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

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

```
    .addComponent(report_start_date_fieldname)))
```

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

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
LEADING)
```

```
    .addGroup(report_panel_0Layout.createSequentialGroup())
```

```
.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.  
BASELINE)
```

```
    .addComponent(report_end_date_fieldname)
```

```

        .addComponent(report_id_dropdown,
javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(18, 18, 18)

        .addComponent(report_name_fieldname)

        .addGap(1, 1, 1)

.addGroup(report_panel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)

        .addComponent(report_search)

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

        .addGap(31, 31, 31)

        .addComponent(report_panel_1,
javax.swing.GroupLayout.PREFERRED_SIZE, 378,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

        .addContainerGap(49, Short.MAX_VALUE))

);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

        .addComponent(report_panel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

);

layout.setVerticalGroup(

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

```

```

        .addComponent(report_panel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

    );

```

```

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

```

```

private void gobackActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Dashboardform Dashform = new Dashboardform();
    Dashform.setVisible(true);
    this.setVisible(false);
}

```

```

private void report_id_dropdownActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try{
        Statement st = dbconnect.librarycon.createStatement();

        String firstSql = "Select name from student where id =
"+report_id_dropdown.getSelectedItem().toString()+"";

        ResultSet rs = st.executeQuery(firstSql);
        while(rs.next()){
            report_name_fieldtext.setText(rs.getString("name"));

        }

    }

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

        JOptionPane.showMessageDialog(null, e);
    }
}

```



```

    }

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

        DefaultTableModel model = (DefaultTableModel) report_outputtable.getModel();

        model.setRowCount(0);

        java.sql.Date sqldate = new
        java.sql.Date(report_start_date_datechooser.getDate().getTime());

        java.sql.Date sqldate1 = new
        java.sql.Date(report_end_date_datechooser.getDate().getTime());

        SimpleDateFormat format = new SimpleDateFormat("dd/MM/yyyy");

        try{

            st = dbconnect.librarycon.createStatement();

            String sql = "select title,datei,dater from inventory " + "where datei " +
            "between " + sqldate

                                + " and " + sqldate1 + " and ids =" +
            report_id_dropdown.getModel().getSelectedItem() + """;

            ResultSet rs = st.executeQuery(sql);

            while (rs.next()) {

                String title = rs.getString("title");
                String datei = rs.getString("datei");
                System.out.println(datei);
                String dater = rs.getString("dater");

                String tbData[] = {title,datei,dater};

                DefaultTableModel tblmodle =
                (DefaultTableModel)report_outputtable.getModel();

                tblmodle.addRow(tbData);
            }
        }
    }

```

```

    }

    }

    catch (SQLException e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }

}

private void ReportmainbuttonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    SimpleDateFormat format = new SimpleDateFormat("dd/MM/yyyy");

    try{
        String sql = "Delete from report";
        PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
        ps.execute();
    }

    catch (SQLException e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }
}

```

```

    }

DefaultTableModel tblModel = (DefaultTableModel) report_outputtable.getModel();

try{
    for(int i=0;i<tblModel.getRowCount();i++){
        String title = tblModel.getValueAt(i, 0).toString();
        String datei = String.valueOf(tblModel.getValueAt(i, 1));
        String dater = String.valueOf(tblModel.getValueAt(i, 2));

        String sql = "Insert into report (title,datei,dater) values(?,?,?) ";
        PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
        ps.setString(1, title);
        ps.setString(2, datei);
        ps.setString(3, dater);
        ps.execute();
    }
} catch (SQLException e) {
    e.printStackTrace();
    JOptionPane.showMessageDialog(null, e);
}

try{

    String Report =
"C:\\Users\\VAIBHAV\\Documents\\NetBeansProjects\\library_mangament_software\\src\\main\\java\\My_Forms\\ProgressReport.jrxml";

    JasperReport jr = JasperCompileManager.compileReport(Report);
    JasperPrint jp = JasperFillManager.fillReport(jr, null,dbconnect.librarycon);
    JasperViewer.viewReport(jp);
}
catch(Exception e){
    e.printStackTrace();
    JOptionPane.showMessageDialog(null, e);
}

```

```
}
```

```
}
```

```
private void report_graphActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
        try {  
            reportGraph(evt);  
        } catch (InvocationTargetException | InterruptedException e) {  
        }  
}
```

```
protected void reportGraph(ActionEvent evt) throws InvocationTargetException,  
InterruptedException {  
    java.sql.Date sqldate = new  
java.sql.Date(report_start_date_datechooser.getDate().getTime());  
    java.sql.Date sqldate1 = new  
java.sql.Date(report_end_date_datechooser.getDate().getTime());  
    String sql = "SELECT Count(datei), EXTRACT(month FROM datei) FROM  
inventory " + "where datei " + "between " + sqldate  
                + " and " + sqldate1 + " and ids =" +  
report_id_dropdown.getModel().getSelectedItem() + " Group by EXTRACT(month FROM  
datei)";  
    System.out.println(sql);  
    try {  
        rs = st.executeQuery(sql);  
        while (rs.next()) {
```

```
switch (rs.getString(2)) {  
case "1":  
    graph.put(rs.getInt(1), "JAN");  
    break;  
case "2":  
    graph.put(rs.getInt(1), "FEB");  
    break;  
case "3":  
    graph.put(rs.getInt(1), "MAR");  
    break;  
case "4":  
    graph.put(rs.getInt(1), "APR");  
    break;  
case "5":  
    graph.put(rs.getInt(1), "MAY");  
    break;  
case "6":  
    graph.put(rs.getInt(1), "JUNE");  
    break;  
case "7":  
    graph.put(rs.getInt(1), "JULY");  
    break;  
case "8":  
    graph.put(rs.getInt(1), "AUG");  
    break;  
case "9":  
    graph.put(rs.getInt(1), "SEP");  
    break;  
case "10":  
    graph.put(rs.getInt(1), "OCT");
```

```

        break;
    case "11":
        graph.put(rs.getInt(1), "NOV");
        break;
    case "12":
        graph.put(rs.getInt(1), "DEC");
        break;
    }

    }

    } catch (SQLException e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null, e);
    }

    Chart example = new Chart(graph);
    example.setSize(900, 600);
    example.setLocationRelativeTo(null);

    example.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    example.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 ("Nimbus".equals(info.getName())) {

                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;

            }

        }

    } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(Progressreport.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Progressreport.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

    } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Progressreport.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Progressreport.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 Progressreport().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton Reportmainbutton;
    private javax.swing.JButton goback;
    private javax.swing.JScrollPane jScrollPane1;
    private com.toedter.calendar.JDateChooser report_end_date_datechooser;
    private javax.swing.JLabel report_end_date_fieldname;
    private javax.swing.JButton report_graph;
    private javax.swing.JComboBox<String> report_id_dropdown;
    private javax.swing.JLabel report_id_fieldname;
    private javax.swing.JLabel report_name_fieldname;
    private javax.swing.JTextField report_name_fieldtext;
    private javax.swing.JTable report_outputtable;
    private javax.swing.JPanel report_panel_0;
    private javax.swing.JPanel report_panel_1;
    private javax.swing.JButton report_search;
    private com.toedter.calendar.JDateChooser report_start_date_datechooser;
    private javax.swing.JLabel report_start_date_fieldname;
    private javax.swing.JLabel title;
    private javax.swing.JLabel title_1;
    // End of variables declaration
}

```

Studentform.Java

```
package My_Forms;
```



```

import javax.swing.JOptionPane;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing.JFrame;
import javax.swing.table.DefaultTableModel;

public class Studentform extends javax.swing.JFrame {

    /**
     * Creates new form Studentform
     */

    public ConnectDb dbconnect = new ConnectDb();

    public Studentform() {
        initComponents();
        this.setLocationRelativeTo(null);
        try {
            Statement st = dbconnect.librarycon.createStatement();
            String firstSql = "Select * from student order by id";
            ResultSet rs = st.executeQuery(firstSql);
            while (rs.next()) {
                String id = String.valueOf(rs.getInt("id"));
                String name = rs.getString("name");
                String grade = String.valueOf(rs.getInt("grade"));

                String tbData[] = {id,name,grade};
            }
        }
    }

```

```

DefaultTableModel tblmodle = (DefaultTableModel)Output_table.getModel();

tblmodle.addRow(tbData);
    }
    rs.close();
    } catch (Exception e) {
    }

}

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jLabel7 = new javax.swing.JLabel();
    jScrollPane1 = new javax.swing.JScrollPane();
    jTable1 = new javax.swing.JTable();
    jScrollPane2 = new javax.swing.JScrollPane();
    jTable2 = new javax.swing.JTable();
    student_jpanel_0 = new javax.swing.JPanel();
    Goback = new javax.swing.JButton();
    title = new javax.swing.JLabel();
    student_panel_1 = new javax.swing.JPanel();
    Student_add = new javax.swing.JButton();
    student_id_feildname = new javax.swing.JLabel();
    student_name_feildname = new javax.swing.JLabel();
    student_class_feildname = new javax.swing.JLabel();
    student_name_feildtext = new javax.swing.JTextField();
    student_class_feildtext = new javax.swing.JTextField();

```

```

student_id_feildtext = new javax.swing.JTextField();
Student_update = new javax.swing.JButton();
Student_delete = new javax.swing.JButton();
student_panel_2 = new javax.swing.JPanel();
jScrollPane3 = new javax.swing.JScrollPane();
Output_table = new javax.swing.JTable();
refresh = new javax.swing.JButton();

jLabel7.setText("jLabel7");

jTable1.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane1.setViewportView(jTable1);

jTable2.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },

```

```

        new String [] {
            "Title 1", "Title 2", "Title 3", "Title 4"
        }
    ));
    jScrollPane2.setViewportView(jTable2);

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    student_jpanel_0.setBackground(java.awt.Color.white);

    Goback.setBackground(java.awt.Color.black);
    Goback.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
    Goback.setForeground(java.awt.Color.white);
    Goback.setText("Go Back");
    Goback.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            GobackActionPerformed(evt);
        }
    });

    title.setFont(new java.awt.Font("Arial", 0, 30)); // NOI18N
    title.setText("        Student Records");

    student_panel_1.setBackground(java.awt.Color.white);
    student_panel_1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

    Student_add.setBackground(java.awt.Color.black);
    Student_add.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
    Student_add.setForeground(java.awt.Color.white);
    Student_add.setText("Add");

```

```

Student_add.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Student_addActionPerformed(evt);
    }
});

student_id_feildname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
student_id_feildname.setText("Student ID");

student_name_feildname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
student_name_feildname.setText("Student Name");

student_class_feildname.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
student_class_feildname.setText("Student Class");

student_name_feildtext.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        student_name_feildtextActionPerformed(evt);
    }
});

student_id_feildtext.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        student_id_feildtextActionPerformed(evt);
    }
});

Student_update.setBackground(java.awt.Color.black);
Student_update.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Student_update.setForeground(java.awt.Color.white);

```

```

Student_update.setText("Update");

Student_update.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Student_updateActionPerformed(evt);
    }
});

```

```

Student_delete.setBackground(java.awt.Color.black);

Student_delete.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
Student_delete.setForeground(java.awt.Color.white);

Student_delete.setText("Delete");

Student_delete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        Student_deleteActionPerformed(evt);
    }
});

```

```

javax.swing.GroupLayout student_panel_1Layout = new
javax.swing.GroupLayout(student_panel_1);

student_panel_1.setLayout(student_panel_1Layout);

student_panel_1Layout.setHorizontalGroup(

student_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
student_panel_1Layout.createSequentialGroup()

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

        .addGroup(student_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

            .addComponent(student_name_feildtext)

            .addComponent(student_class_feildtext)

```

```

        .addComponent(student_id_feildtext,
javax.swing.GroupLayout.PREFERRED_SIZE, 243,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGroup(student_panel_1Layout.createSequentialGroup()

            .addGap(58, 58, 58)

            .addComponent(student_class_feildname))

        .addGroup(student_panel_1Layout.createSequentialGroup()

            .addGap(64, 64, 64)

            .addComponent(student_id_feildname)))

        .addGap(229, 229, 229))

        .addGroup(student_panel_1Layout.createSequentialGroup()

            .addGroup(student_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
            .LEADING)

                .addGroup(student_panel_1Layout.createSequentialGroup()

                    .addGap(107, 107, 107)

                    .addComponent(Student_add, javax.swing.GroupLayout.PREFERRED_SIZE,
85, javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addGap(96, 96, 96)

                    .addComponent(Student_update,
javax.swing.GroupLayout.PREFERRED_SIZE, 113,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addGap(81, 81, 81)

                    .addComponent(Student_delete,
javax.swing.GroupLayout.PREFERRED_SIZE, 111,
javax.swing.GroupLayout.PREFERRED_SIZE))

                .addGroup(student_panel_1Layout.createSequentialGroup()

                    .addGap(314, 314, 314)

                    .addComponent(student_name_feildname)))

            .addContainerGap(139, Short.MAX_VALUE))

    );

    student_panel_1Layout.setVerticalGroup(

```

```

student_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
student_panel_1Layout.createSequentialGroup()

    .addGap(21, 21, 21)

    .addComponent(student_id_feildname)

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

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

    .addGap(18, 18, 18)

    .addComponent(student_name_feildname,
javax.swing.GroupLayout.PREFERRED_SIZE, 17,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addGap(7, 7, 7)

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

    .addGap(14, 14, 14)

    .addComponent(student_class_feildname)

    .addGap(18, 18, 18)

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

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 43,
Short.MAX_VALUE)

.addGroup(student_panel_1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)

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

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

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

```



```

        .addContainerGap())
    );

    student_panel_2.setBackground(java.awt.Color.white);
    student_panel_2.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

    Output_table.setFont(new java.awt.Font("Arial", 0, 16)); // NOI18N
    Output_table.setModel(new javax.swing.table.DefaultTableModel(
        new Object [][] {

            },
        new String [] {
            "Student ID", "Student Name", "Student Class"
        }
    ));
    Output_table.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            Output_tableMouseClicked(evt);
        }
    });
    JScrollPane3.setViewportViewView(Output_table);

    refresh.setBackground(java.awt.Color.black);
    refresh.setFont(new java.awt.Font("Arial", 0, 20)); // NOI18N
    refresh.setForeground(java.awt.Color.white);
    refresh.setText("Refresh");
    refresh.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            refreshActionPerformed(evt);
        }
    });

```

```

});

    javax.swing.GroupLayout student_panel_2Layout = new
    javax.swing.GroupLayout(student_panel_2);

    student_panel_2.setLayout(student_panel_2Layout);

    student_panel_2Layout.setHorizontalGroup(

student_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(student_panel_2Layout.createSequentialGroup()

            .addGap(45, Short.MAX_VALUE)

            .addGroup(student_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
student_panel_2Layout.createSequentialGroup()

                    .addComponent(jScrollPane3, javax.swing.GroupLayout.PREFERRED_SIZE,
656, javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addGap(33, 33, 33))

                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
student_panel_2Layout.createSequentialGroup()

                    .addComponent(refresh)

                    .addGap(41, 41, 41))))

        );

    student_panel_2Layout.setVerticalGroup(

student_panel_2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(student_panel_2Layout.createSequentialGroup()

            .addGap(10, 10, 10)

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

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

```

```

        .addComponent(jScrollPane3, javax.swing.GroupLayout.PREFERRED_SIZE, 164,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addContainerGap(22, Short.MAX_VALUE))

    );

    javax.swing.GroupLayout student_jpanel_0Layout = new
javax.swing.GroupLayout(student_jpanel_0);

    student_jpanel_0.setLayout(student_jpanel_0Layout);

    student_jpanel_0Layout.setHorizontalGroup(

student_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(student_jpanel_0Layout.createSequentialGroup()

            .addGap(31, 31, 31)

            .addGroup(student_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addComponent(student_panel_1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGroup(student_jpanel_0Layout.createSequentialGroup()

                    .addComponent(Goback)

                    .addGap(78, 78, 78)

                    .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 403,
javax.swing.GroupLayout.PREFERRED_SIZE))

                .addComponent(student_panel_2,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addContainerGap(33, Short.MAX_VALUE))

        );

    student_jpanel_0Layout.setVerticalGroup(

student_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(student_jpanel_0Layout.createSequentialGroup()

            .addGroup(student_jpanel_0Layout.createSequentialGroup()

```

```

.addGroup(student_jpanel_0Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.BASELINE)

        .addComponent(title, javax.swing.GroupLayout.PREFERRED_SIZE, 63,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(Goback))

.addGap(18, 18, 18)

.addComponent(student_panel_1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGap(18, 18, 18)

.addComponent(student_panel_2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addContainerGap())

);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

        .addComponent(student_jpanel_0, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

);

layout.setVerticalGroup(

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

        .addComponent(student_jpanel_0, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

);

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

```

```

private void GobackActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Dashboardform Dashform = new Dashboardform();
    Dashform.setVisible(true);
    this.setVisible(false);
}

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

private void Student_addActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    if ( student_name_feildtext.getText().isEmpty() ||
student_class_feildtext.getText().isEmpty() || student_id_feildtext.getText().isEmpty() ){
        JOptionPane.showMessageDialog(new JFrame(), "Enter value in the feilds ",
"Message" , JOptionPane.INFORMATION_MESSAGE);
    }else{
        try{
            String sql = "Insert into student" + "(id,name,grade)" + "values(?,?,?)";
            PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
            ps.setInt(1, Integer.parseInt(student_id_feildtext.getText()));
            ps.setString(2, student_name_feildtext.getText());
            ps.setInt(3, Integer.parseInt(student_class_feildtext.getText()));
            ps.execute();

            JOptionPane.showMessageDialog(null, "Student added Sucessful!! Click refersh to
see the changes");
            student_name_feildtext.setText("");
            student_class_feildtext.setText("");
            student_id_feildtext.setText("");

```

```

    }

    catch(Exception e) {
        e.printStackTrace();
        JOptionPane.showMessageDialog(null,"Student not added sucessfully");
    }
}
}
}

```

```

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

    if ( student_name_feildtext.getText().isEmpty() ||
student_class_feildtext.getText().isEmpty() || student_id_feildtext.getText().isEmpty() ){

        JOptionPane.showMessageDialog(new JFrame(), "Choose a record from table to
update", "Message" , JOptionPane.INFORMATION_MESSAGE);
    }else{
        try{
            String sql = "Update student set name = ?, grade = ? where id = ?";
            PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);
            ps.setString(1, student_name_feildtext.getText());
            ps.setInt(2, Integer.parseInt(student_class_feildtext.getText()));
            ps.setInt(3, Integer.parseInt(student_id_feildtext.getText()));
            ps.execute();

            JOptionPane.showMessageDialog(null, "Update Sucessful!! Click refersh to see the
changes");

            student_name_feildtext.setText("");
            student_class_feildtext.setText("");
            student_id_feildtext.setText("");
        }
        catch(Exception e) {
            e.printStackTrace();
            JOptionPane.showMessageDialog(null, "Update not successfull!!!");
        }
    }
}

```

```

    }
}

}

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

    if ( student_name_feildtext.getText().isEmpty() ||
        student_class_feildtext.getText().isEmpty() || student_id_feildtext.getText().isEmpty() ){

        JOptionPane.showMessageDialog(new JFrame(), "Choose a record from table to
        delete", "Message" , JOptionPane.INFORMATION_MESSAGE);

    }else{

        int result = JOptionPane.showConfirmDialog(student_jpanel_0,"Are you
        Sure? You want to Delete?", "Student record",

        JOptionPane.YES_NO_OPTION,

        JOptionPane.QUESTION_MESSAGE);

        if(result == JOptionPane.YES_OPTION){

            try{

                String sql = "Delete from student where id = ? ";

                PreparedStatement ps = dbconnect.librarycon.prepareStatement(sql);

                ps.setInt(1, Integer.parseInt(student_id_feildtext.getText()));

                ps.execute();

                JOptionPane.showMessageDialog(null, "Delete successfully!! Click refersh to see
                the changes");

                student_name_feildtext.setText("");

                student_class_feildtext.setText("");

                student_id_feildtext.setText("");

            }

            catch(Exception e) {

                e.printStackTrace();

                JOptionPane.showMessageDialog(null, "Delete not sucessful!!!");

            }

        }

    }
}

```

```

    }

    }

}

private void refreshActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        DefaultTableModel model = (DefaultTableModel) Output_table.getModel();
        model.setRowCount(0);
        Statement st = dbconnect.librarycon.createStatement();
        String firstSql = "Select * from student order by id";
        ResultSet rs = st.executeQuery(firstSql);
        while (rs.next()) {
            String id = String.valueOf(rs.getInt("id"));
            String name = rs.getString("name");
            String grade = String.valueOf(rs.getInt("grade"));

            String tbData[] = {id,name,grade};
            DefaultTableModel tblmodle = (DefaultTableModel)Output_table.getModel();

            tblmodle.addRow(tbData);
        }
        rs.close();
    } catch (Exception e) {
    }
}

private void Output_tableMouseClicked(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:

```



```

DefaultTableModel tb = (DefaultTableModel)Output_table.getModel();

String tbid = tb.getValueAt(Output_table.getSelectedRow(), 0).toString();
String tbname = tb.getValueAt(Output_table.getSelectedRow(), 1).toString();
String tbgrade = tb.getValueAt(Output_table.getSelectedRow(), 2).toString();

student_id_feildtext.setText(tbid);
student_name_feildtext.setText(tbname);
student_class_feildtext.setText(tbgrade);

}

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

/**
 * @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 ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());

```

```

        break;
    }
}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(Studentform.class.getName()).log(java.util.logging.Level
.SEVERE, null, ex);

    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Studentform.class.getName()).log(java.util.logging.Level
.SEVERE, null, ex);

    } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Studentform.class.getName()).log(java.util.logging.Level
.SEVERE, null, ex);

    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Studentform.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 Studentform().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JButton Goback;
private javax.swing.JTable Output_table;

```

```
private javax.swing.JButton Student_add;
private javax.swing.JButton Student_delete;
private javax.swing.JButton Student_update;
private javax.swing.JLabel jLabel7;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JScrollPane jScrollPane3;
private javax.swing.JTable jTable1;
private javax.swing.JTable jTable2;
private javax.swing.JButton refresh;
private javax.swing.JLabel student_class_feildname;
private javax.swing.JTextField student_class_feildtext;
private javax.swing.JLabel student_id_feildname;
private javax.swing.JTextField student_id_feildtext;
private javax.swing.JPanel student_jpanel_0;
private javax.swing.JLabel student_name_feildname;
private javax.swing.JTextField student_name_feildtext;
private javax.swing.JPanel student_panel_1;
private javax.swing.JPanel student_panel_2;
private javax.swing.JLabel title;
// End of variables declaration
}
```