**Program Code**

**Main Form Module:**

import java.awt.Component;

import java.awt.Cursor;

import javax.swing.JOptionPane;

public class MainForm extends javax.swing.JFrame {

int x,y,w,h;

public MainForm() {

initComponents();

x=jPanel3.getX();

y=jPanel3.getY();

h=jPanel3.getHeight();

w=jPanel3.getWidth(); }

@SuppressWarnings("unchecked")

private void initComponents() {

jPanel5 = new javax.swing.JPanel();

jLabel5 = new javax.swing.JLabel();

jLabel6 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jTextField2 = new javax.swing.JTextField();

jLabel7 = new javax.swing.JLabel();

jPanel1 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jPanel2 = new javax.swing.JPanel();

jPanel3 = new javax.swing.JPanel();

jLabel4 = new javax.swing.JLabel();

jLabel5.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel5.setText("User Name");

jLabel6.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel6.setText("Password");

jTextField1.addActionListener(new java.awt.event.ActionListener() {

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

jTextField1ActionPerformed(evt); } });

javax.swing.GroupLayout jPanel5Layout = new javax.swing.GroupLayout(jPanel5);

jPanel5.setLayout(jPanel5Layout);

jPanel5Layout.setHorizontalGroup(

jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel5Layout.createSequentialGroup()

.addGap(112, 112, 112)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING) .addGroup(jPanel5Layout.createSequentialGroup()

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 154, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 265, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(jPanel5Layout.createSequentialGroup()

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 154, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 265, javax.swing.GroupLayout.PREFERRED\_SIZE)))

.addContainerGap(154, Short.MAX\_VALUE)) );

jPanel5Layout.setVerticalGroup(

jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING) .addGroup(jPanel5Layout.createSequentialGroup().addGap(52, 52, 52)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(18, 18, 18) .addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)) .addContainerGap(249, Short.MAX\_VALUE)) );

jLabel7.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel7.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Untitled1.png"))); jLabel7.setText(" ");

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setTitle("Book Keeping");

setForeground(new java.awt.Color(255, 0, 51));

setResizable(false);

jPanel1.setBorder(javax.swing.BorderFactory.createEtchedBorder(new java.awt.Color(204, 204, 255), null));

jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/BookShop.png")));

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 12));

jLabel2.setForeground(new java.awt.Color(0, 0, 204));

jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel2.setText("login");

jLabel2.addMouseListener(new java.awt.event.MouseAdapter() {

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

jLabel2MouseClicked(evt); }

public void mouseEntered(java.awt.event.MouseEvent evt) {

jLabel2MouseEntered(evt); }

public void mouseExited(java.awt.event.MouseEvent evt) {

jLabel2MouseExited(evt); } });

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 12));

jLabel3.setForeground(new java.awt.Color(0, 0, 204));

jLabel3.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel3.setText("Exit");

jLabel3.addMouseListener(new java.awt.event.MouseAdapter() {

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

jLabel3MouseClicked(evt); }

public void mouseEntered(java.awt.event.MouseEvent evt) {

jLabel3MouseEntered(evt); }

public void mouseExited(java.awt.event.MouseEvent evt{jLabel3MouseExited(evt); }});

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

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

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

.addGroup(jPanel1Layout.createSequentialGroup().addContainerGap()

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 236, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 408, Short.MAX\_VALUE)

.addComponent(jLabel2).addGap(20, 20, 20)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 36, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap()) );

jPanel1Layout.setVerticalGroup(

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

.addGroup(jPanel1Layout.createSequentialGroup()

.addContainerGap()

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

.addComponent(jLabel1, javax.swing.GroupLayout.DEFAULT\_SIZE, 80, Short.MAX\_VALUE)

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup() .addGap(0, 0, Short.MAX\_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 22, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 22, javax.swing.GroupLayout.PREFERRED\_SIZE)))) .addContainerGap()) );

jPanel2.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jPanel3.setLayout(null);

jLabel4.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel4.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Untitled1.png")));

jLabel4.setAlignmentX(0.5F);

jPanel3.add(jLabel4);

jLabel4.setBounds(0, 0, 730, 350);

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);

jPanel2.setLayout(jPanel2Layout);

jPanel2Layout.setHorizontalGroup(

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

.addGap(0, 754, Short.MAX\_VALUE)

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

.addGroup(jPanel2Layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE) .addContainerGap())) );

jPanel2Layout.setVerticalGroup(

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

.addGap(0, 377, Short.MAX\_VALUE)

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

.addGroup(jPanel2Layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE) .addContainerGap())) );

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

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE) .addContainerGap())

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

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addContainerGap())) );

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap())

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

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup() .addContainerGap(116, Short.MAX\_VALUE)

.addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap())) );

pack(); }

private void jLabel2MouseClicked(java.awt.event.MouseEvent evt) {

Component c=jPanel2.getComponentAt(x, y);

jPanel2.remove(c);

LoginForm lf=new LoginForm(this);

lf.setBounds(x, y, w, h);

jLabel2.setEnabled(false);

jPanel2.add(lf);

jPanel2.repaint();

jPanel2.updateUI(); }

private void jLabel3MouseClicked(java.awt.event.MouseEvent evt) {

int opt=JOptionPane.showOptionDialog(this, "Really Exit?", "Question", JOptionPane.YES\_NO\_OPTION, JOptionPane.QUESTION\_MESSAGE, null,null,null);

if(opt==0) System.exit(0); }

private void jLabel2MouseEntered(java.awt.event.MouseEvent evt) {

jLabel2.setCursor(Cursor.getPredefinedCursor(Cursor.HAND\_CURSOR)); }

private void jLabel2MouseExited(java.awt.event.MouseEvent evt) {

jLabel2.setCursor(Cursor.getPredefinedCursor(Cursor.DEFAULT\_CURSOR)); }

private void jLabel3MouseEntered(java.awt.event.MouseEvent evt) {

jLabel3.setCursor(Cursor.getPredefinedCursor(Cursor.HAND\_CURSOR)); }

private void jLabel3MouseExited(java.awt.event.MouseEvent evt) {

jLabel2.setCursor(Cursor.getPredefinedCursor(Cursor.DEFAULT\_CURSOR}

public static void main(String args[]) {

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

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

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

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

java.awt.EventQueue.invokeLater(new Runnable() {public void run() {

new MainForm().setVisible(true); } }); }

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

private javax.swing.JLabel jLabel7;

private javax.swing.JPanel jPanel1;

public javax.swing.JPanel jPanel2;

public javax.swing.JPanel jPanel3;

private javax.swing.JPanel jPanel5;

private javax.swing.JTextField jTextField1;

private javax.swing.JTextField jTextField2;

}

**Login Form Module:**

import java.sql.ResultSet;

import java.sql.Statement;

import static my.reuse.Connections.closeConnection;

import static my.reuse.Connections.makeConnection;

public class LoginForm extends javax.swing.JPanel {

public LoginForm() {

initComponents();

x = this.getX();

y = this.getY();

h = this.getHeight();

w = this.getWidth();

jTextField1.requestFocus(); }

MainForm mf;

public LoginForm(MainForm mf) {

initComponents();

this.mf=mf;

x = this.getX();

y = this.getY();

h = this.getHeight();

w = this.getWidth();

jTextField1.requestFocus(); }

int x, y, w, h;

@SuppressWarnings("unchecked")

private void initComponents() {

jLabel1 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jButton1 = new javax.swing.JButton();

jPasswordField1 = new javax.swing.JPasswordField();

jButton2 = new javax.swing.JButton();

jSeparator1 = new javax.swing.JSeparator();

jLabel4 = new javax.swing.JLabel();

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel1.setText("User Name");

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel2.setText("Password");

jLabel3.setFont(new java.awt.Font("Tahoma", 3, 12));

jLabel3.setForeground(new java.awt.Color(255, 51, 51));

jLabel3.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel3.setText(" ");

jButton1.setFont(new java.awt.Font("Tahoma", 1, 11));

jButton1.setText("Login");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt); } });

jButton2.setFont(new java.awt.Font("Tahoma", 1, 11));

jButton2.setText("Change");

jButton2.addActionListener(new java.awt.event.ActionListener() {

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

jButton2ActionPerformed(evt); } });

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 18));

jLabel4.setForeground(new java.awt.Color(0, 110, 234));

jLabel4.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel4.setText(" LOGIN TO GET ACCESS");

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

this.setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

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

.addGroup(layout.createSequentialGroup() .addGap(72, 72, 72)

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

.addGroup(layout.createSequentialGroup() .addGap(97, 97, 97)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 173, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 147, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 290, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 147, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addGroup(layout.createSequentialGroup().addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 97, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(58, 58, 58)

.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED\_SIZE, 97, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addComponent(jPasswordField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 290, javax.swing.GroupLayout.PREFERRED\_SIZE))))) .addGroup(layout.createSequentialGroup() .addGap(152, 152, 152)

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

.addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED\_SIZE, 422, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 389, javax.swing.GroupLayout.PREFERRED\_SIZE)))) .addContainerGap(172, Short.MAX\_VALUE)) );

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup().addContainerGap(36, Short.MAX\_VALUE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE) .addGap(18, 18, 18)

.addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED\_SIZE, 10, javax.swing.GroupLayout.PREFERRED\_SIZE) .addGap(36, 36, 36)

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

.addComponent(jLabel1) .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 30, javax.swing.GroupLayout.PREFERRED\_SIZE)) .addGap(60, 60, 60)

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

.addComponent(jLabel2)

.addComponent(jPasswordField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 30, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(57, 57, 57)

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

.addComponent(jButton1).addComponent(jButton2)).addGap(18, 18, 18)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 22, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap()) );

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

Statement st;

ResultSet rs=null;

String username = null,password = null;

try{

st=makeConnection();

rs=st.executeQuery("select \* from shopkeeper");

rs.next();

username=rs.getString(1);

password=rs.getString(2);

rs.close();

closeConnection(); }catch(Exception e){

System.out.println(e);}

if(jTextField1.getText().equals(username)&& jPasswordField1.getText().equals(password)){

new MainMenu().setVisible(true);

mf.dispose();

}else if(jTextField1.getText().equals("")&& jPasswordField1.getText().equals("")){

jLabel3.setText("Illegal Username & Password!!!!!!");

}else if(jTextField1.getText().equals("") || jPasswordField1.getText().equals("")){

jLabel3.setText("Illegal Username or Password!!!!!!");

} else {jLabel3.setText("Invalid Login Credentials!!!");} }

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

Statement st;

ResultSet rs;

String username = null,password = null;

try{

st=makeConnection();

rs=st.executeQuery("select \* from shopkeeper");

rs.next();

username=rs.getString(1);

password=rs.getString(2);

rs.close();

closeConnection();

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

if(jTextField1.getText().equals(username)&& jPasswordField1.getText().equals(password)){

new ChangeAuth1(mf).setVisible(true);

mf.dispose();

}else if(jTextField1.getText().equals("")&& jPasswordField1.getText().equals("")){

jLabel3.setText("Illegal Username & Password!!!");

}else if(jTextField1.getText().equals("") || jPasswordField1.getText().equals("")){

jLabel3.setText("Illegal Username Or Password!!!");

}else {jLabel3.setText("Invalid Login Credentials!!!"); } }

private javax.swing.JButton jButton1;

private javax.swing.JButton jButton2;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JPasswordField jPasswordField1;

private javax.swing.JSeparator jSeparator1;

private javax.swing.JTextField jTextField1;

}

**Change Auth Module**:

import java.sql.ResultSet;

import java.sql.Statement;

import javax.swing.JOptionPane;

import static my.reuse.Connections.closeConnection;

import static my.reuse.Connections.makeConnection;

public class ChangeAuth1 extends javax.swing.JFrame {

public ChangeAuth1() {

initComponents();}

int x,y,w,h;

MainForm mf;

public ChangeAuth1(MainForm mf) {

initComponents();

this.mf=mf;

x = this.getX();

y = this.getY();

h = this.getHeight();

w = this.getWidth();}

@SuppressWarnings("unchecked")

private void initComponents() {

jPasswordField2 = new javax.swing.JPasswordField();

jButton1 = new javax.swing.JButton();

jLabel5 = new javax.swing.JLabel();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jPasswordField1 = new javax.swing.JPasswordField();

jLabel4 = new javax.swing.JLabel();

jLabel6 = new javax.swing.JLabel();

jSeparator1 = new javax.swing.JSeparator();

jLabel7 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setTitle("Change Protection ");

jButton1.setFont(new java.awt.Font("Tahoma", 1, 11));

jButton1.setText("Done");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt); }});

jLabel5.setForeground(java.awt.Color.red);

jLabel5.setText(" ");

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel1.setText("New Username");

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel2.setText("Confirm New Password");

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel3.setText("New Password");

jTextField1.addFocusListener(new java.awt.event.FocusAdapter() {

public void focusGained(java.awt.event.FocusEvent evt) {

jTextField1FocusGained(evt);

}

public void focusLost(java.awt.event.FocusEvent evt) {

jTextField1FocusLost(evt); }});

jLabel4.setForeground(new java.awt.Color(255, 0, 0));

jLabel4.setText(" ");

jLabel4.setVerticalAlignment(javax.swing.SwingConstants.TOP);

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel6.setForeground(new java.awt.Color(0, 0, 204));

jLabel6.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/back.png")));

jLabel6.setText(" ");

jLabel6.addMouseListener(new java.awt.event.MouseAdapter() {

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

jLabel6MouseClicked(evt); }

public void mouseEntered(java.awt.event.MouseEvent evt) {

jLabel6MouseEntered(evt);

}

public void mouseExited(java.awt.event.MouseEvent evt) {

jLabel6MouseExited(evt); }});

jLabel7.setFont(new java.awt.Font("Tahoma", 1, 18));

jLabel7.setForeground(new java.awt.Color(0, 110, 234));

jLabel7.setText("Change Your Username & Password");

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

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

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

.addGroup(layout.createSequentialGroup().addGap(52, 52, 52)

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

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 147, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addGroup(layout.createSequentialGroup()

.addComponent(jPasswordField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 290, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 244, Short.MAX\_VALUE))

.addGroup(layout.createSequentialGroup()

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(66, 66, 66)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 289, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))))

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 147, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jPasswordField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 290, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 147, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 290, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jLabel4,javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))))

.addGroup(layout.createSequentialGroup()

.addGap(28, 28, 28)

.addComponent(jLabel6,javax.swing.GroupLayout.PREFERRED\_SIZE,44, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(80, 80, 80)

.addComponent(jLabel7,javax.swing.GroupLayout.PREFERRED\_SIZE, 389, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))).addContainerGap())

.addComponent(jSeparator1));

layout.setVerticalGroup(

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

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

.addGap(28, 28, 28)

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

.addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(18, 18, 18)

.addComponent(jSeparator1, javax.swing.GroupLayout.PREFERRED\_SIZE, 10, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 22, Short.MAX\_VALUE)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 30, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 16, javax.swing.GroupLayout.PREFERRED\_SIZE)))

.addGap(44, 44, 44)

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

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jPasswordField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 30, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(45, 45, 45)

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

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jPasswordField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 30, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(41, 41, 41)

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

.addComponent(jButton1)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 26, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(26, 26, 26)));

pack();

setLocationRelativeTo(null);

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

jLabel5.setText("");

String un=jTextField1.getText();

String p1=jPasswordField1.getText();

String p2=jPasswordField2.getText();

ResultSet rs=null;

Statement st=null;

if(p1.equals(p2)){

String olduser;

try{

st=makeConnection();

rs=st.executeQuery("select \* from shopkeeper");

rs.next();

olduser=rs.getString(1);

if(un.equals("")){

st.executeUpdate("update shopkeeper set password = '"+p2+"' where username= '"+olduser+"'");

try{

rs.close();

}catch(Exception e){

}

closeConnection();

JOptionPane.showMessageDialog(this, "Password Changed");

jPasswordField1.setText("");

jPasswordField2.setText("");

}else{

st.executeUpdate("delete from shopkeeper where username ='"+olduser+"'");

st.executeUpdate("insert into shopkeeper( username, password) values ('"+un+"','"+p2+"' )");

try{

rs.close();}

catch(Exception e){}

closeConnection();

JOptionPane.showMessageDialog(this, "Username & Password Changed");

jTextField1.setText("");

jPasswordField1.setText("");

jPasswordField2.setText("");

}

}catch(Exception e) {

System.out.println(e);

}

}else{

jLabel5.setText("\*Confirm Password didn't match with New Password");

jPasswordField2.setText("");

jPasswordField2.requestFocus();}

}

private void jTextField1FocusGained(java.awt.event.FocusEvent evt) {

jLabel4.setText("\*left the field empty if don't want to change");

}

private void jTextField1FocusLost(java.awt.event.FocusEvent evt) {

jLabel4.setText("");

}

private void jLabel6MouseClicked(java.awt.event.MouseEvent evt) {

MainForm mf2= new MainForm();

int nx=mf2.jPanel3.getX();

int ny=mf2.jPanel3.getY();

mf2.jPanel2.remove(mf2.jPanel2.getComponentAt(nx,ny));

mf2.jPanel2.add(new LoginForm(mf2)).setBounds(nx,ny,mf2.jPanel3.getWidth(),mf2.jPanel3.getHeight());

mf2.jPanel2.repaint();

mf2.jPanel2.updateUI();

mf2.setVisible(true);

this.dispose();

}

private void jLabel6MouseEntered(java.awt.event.MouseEvent evt) {

jLabel6.setCursor(java.awt.Cursor.getPredefinedCursor(java.awt.Cursor.HAND\_CURSOR));

}

private void jLabel6MouseExited(java.awt.event.MouseEvent evt) {

jLabel6.setCursor(java.awt.Cursor.getPredefinedCursor(java.awt.Cursor.DEFAULT\_CURSOR)); }

public static void main(String args[]) {

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(ChangeAuth1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(ChangeAuth1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(ChangeAuth1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(ChangeAuth1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

}

java.awt.EventQueue.invokeLater(new Runnable() {

public void run() {

new ChangeAuth1().setVisible(true); }});

}

private javax.swing.JButton jButton1;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

private javax.swing.JLabel jLabel7;

private javax.swing.JPasswordField jPasswordField1;

private javax.swing.JPasswordField jPasswordField2;

private javax.swing.JSeparator jSeparator1;

private javax.swing.JTextField jTextField1;

}

**Main Menu Module**:

import java.awt.Component;

import java.awt.Toolkit;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

import javax.swing.JOptionPane;

import static my.reuse.Connections.closeConnection;

import static my.reuse.Connections.makeConnection;

public class MainMenu extends javax.swing.JFrame {

public MainMenu() {

initComponents();

x = jPanel3.getX();

y = jPanel3.getY();

h = jPanel3.getHeight();

w = jPanel3.getWidth(); }

int x,y,w,h;

@SuppressWarnings("unchecked")

private void initComponents() {

jScrollPane1 = new javax.swing.JScrollPane();

jList1 = new javax.swing.JList<>();

jProgressBar1 = new javax.swing.JProgressBar();

jPanel1 = new javax.swing.JPanel();

jButton1 = new javax.swing.JButton();

jButton2 = new javax.swing.JButton();

jButton3 = new javax.swing.JButton();

jButton4 = new javax.swing.JButton();

jPanel2 = new javax.swing.JPanel();

jPanel3 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jTextField2 = new javax.swing.JTextField();

jTextField3 = new javax.swing.JTextField();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

jTextField4 = new javax.swing.JTextField();

jTextField5 = new javax.swing.JTextField();

jLabel5 = new javax.swing.JLabel();

jButton5 = new javax.swing.JButton();

jTextField6 = new javax.swing.JTextField();

jLabel6 = new javax.swing.JLabel();

jLabel8 = new javax.swing.JLabel();

jLabel7 = new javax.swing.JLabel();

jList1.setModel(new javax.swing.AbstractListModel<String>() {

String[] strings = { "Item 1", "Item 2", "Item 3", "Item 4", "Item 5" };

public int getSize() { return strings.length; }

public String getElementAt(int i) { return strings[i]; } });

jScrollPane1.setViewportView(jList1);

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setTitle(" Book Shop");

setResizable(false);

jPanel1.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jButton1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/insert.png")));

jButton1.setText("Insert Book");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt); } });

jButton2.setIcon(new javax.swing.ImageIcon(getClass().getResource("/delete.png")));

jButton2.setText("Delete Book");

jButton2.addActionListener(new java.awt.event.ActionListener() {

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

jButton2ActionPerformed(evt); } });

jButton3.setIcon(new javax.swing.ImageIcon(getClass().getResource("/search.png")));

jButton3.setText("Search Book");

jButton3.addActionListener(new java.awt.event.ActionListener() {

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

jButton3ActionPerformed(evt); } });

jButton4.setIcon(new javax.swing.ImageIcon(getClass().getResource("/refresh.png")));

jButton4.setText("Update Book");

jButton4.addActionListener(new java.awt.event.ActionListener() {

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

jButton4ActionPerformed(evt); } });

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

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

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

.addGroup(jPanel1Layout.createSequentialGroup()

.addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING) .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED\_SIZE, 164, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false) .addComponent(jButton2, javax.swing.GroupLayout.DEFAULT\_SIZE, 164, Short.MAX\_VALUE)

.addComponent(jButton4, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jButton1, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)))

.addContainerGap(20, Short.MAX\_VALUE)) );

jPanel1Layout.setVerticalGroup(

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

.addGroup(jPanel1Layout.createSequentialGroup() .addGap(58, 58, 58)

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 38, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(62, 62, 62)

.addComponent(jButton4, javax.swing.GroupLayout.PREFERRED\_SIZE, 38, javax.swing.GroupLayout.PREFERRED\_SIZE) .addGap(65, 65, 65)

.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED\_SIZE, 38, javax.swing.GroupLayout.PREFERRED\_SIZE) .addGap(65, 65, 65)

.addComponent(jButton3, javax.swing.GroupLayout.PREFERRED\_SIZE, 38, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)) );

jPanel2.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED));

jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder("Add a new book"));

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel1.setText("Book Title");

jLabel1.setPreferredSize(new java.awt.Dimension(75, 14));

jTextField1.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField2.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField2.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField2KeyTyped(evt); } });

jTextField3.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField3.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField3KeyTyped(evt); } });

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel2.setText("Author");

jLabel2.setPreferredSize(new java.awt.Dimension(75, 14));

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel3.setText("Publisher");

jLabel3.setPreferredSize(new java.awt.Dimension(75, 14));

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel4.setText("Price");

jLabel4.setPreferredSize(new java.awt.Dimension(75, 14));

jTextField4.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField4.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField4KeyTyped(evt); } });

jTextField5.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField5.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField5KeyTyped(evt); } });

jLabel5.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel5.setText("Stock Position");

jLabel5.setPreferredSize(new java.awt.Dimension(75, 14));

jButton5.setText("Submit");

jButton5.addActionListener(new java.awt.event.ActionListener() {

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

jButton5ActionPerformed(evt); } });

jTextField6.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0))); jTextField6.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField6KeyTyped(evt); } });

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel6.setText("Book ISBN");

jLabel6.setPreferredSize(new java.awt.Dimension(75, 14));

jLabel7.setForeground(java.awt.Color.red);

jLabel7.setText(" ");

javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);

jPanel3.setLayout(jPanel3Layout);

jPanel3Layout.setHorizontalGroup(

jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel3Layout.createSequentialGroup()

.addGap(23, 23, 23)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING) .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel3Layout.createSequentialGroup() .addGap(5, 5, 5)

.addComponent(jButton5, javax.swing.GroupLayout.PREFERRED\_SIZE, 125, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel3Layout.createSequentialGroup().addGap(0, 25, Short.MAX\_VALUE)

.addComponent(jLabel8, javax.swing.GroupLayout.PREFERRED\_SIZE, 205, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addComponent(jLabel7, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)).addGap(21, 21, 21))

.addGroup(jPanel3Layout.createSequentialGroup()

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

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jTextField2, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField1,javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField6, javax.swing.GroupLayout.PREFERRED\_SIZE, 138, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false) .addComponent(jTextField5, javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jTextField4,javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, 120, Short.MAX\_VALUE)))

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)))) );

jPanel3Layout.setVerticalGroup(

jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

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

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField6, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)) .addGap(29, 29, 29)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)) .addGap(29, 29, 29)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE) .addComponent(jTextField5, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 29, Short.MAX\_VALUE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel3Layout.createSequentialGroup() .addComponent(jLabel8)

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

.addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED\_SIZE, 16, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel3Layout.createSequentialGroup()

.addComponent(jButton5, javax.swing.GroupLayout.PREFERRED\_SIZE, 33, javax.swing.GroupLayout.PREFERRED\_SIZE) .addContainerGap()))) );

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);

jPanel2.setLayout(jPanel2Layout);

jPanel2Layout.setHorizontalGroup(

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

.addGroup(jPanel2Layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addContainerGap()) );

jPanel2Layout.setVerticalGroup(

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

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

.addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addContainerGap()) );

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

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup() .addContainerGap()

.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addContainerGap()) );

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup() .addContainerGap()

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

.addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addContainerGap()) );

pack();

setLocationRelativeTo(null);

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

Component c=jPanel2.getComponentAt(x, y);

jPanel2.remove(c);

jPanel3.setBounds(x, y, w, h);

MainMenu.jLabel7.setText("");

jPanel2.add(jPanel3);

jPanel2.repaint();

jPanel2.updateUI();

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

Component c=jPanel2.getComponentAt(x, y);

jPanel2.remove(c);

DeleteForm uf=new DeleteForm();

uf.setBounds(x, y, w, h);

jPanel2.add(uf);

jPanel2.repaint();

jPanel2.updateUI();

}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

Component c=jPanel2.getComponentAt(x, y);

jPanel2.remove(c);

SearchForm sf=new SearchForm();

sf.setBounds(x, y, w, h);

jPanel2.add(sf);

jPanel2.repaint();

jPanel2.updateUI();

}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {

Component c=jPanel2.getComponentAt(x, y);

jPanel2.remove(c);

UpdateForm uf=new UpdateForm();

uf.setBounds(x, y, w, h);

jPanel2.add(uf);

jPanel2.repaint();

jPanel2.updateUI();

}

private void jTextField2KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z')||ch=='.'||(ch==8)||(ch==32)))

{

Toolkit.getDefaultToolkit().beep();

evt.consume();

}

}

private void jTextField3KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z')||(ch==8)||(ch==32)||(ch=='.')))

{

Toolkit.getDefaultToolkit().beep();

evt.consume();

}

}

private void jTextField4KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='0'&&ch<='9')||ch=='.'||(ch==8)))

{

Toolkit.getDefaultToolkit().beep();

evt.consume();

}

}

private void jTextField5KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!(ch>='0'&&ch<='9'||(ch==8)))

{

Toolkit.getDefaultToolkit().beep();

evt.consume();

}

}

public boolean validateAlpha(String text){

for(int i=0;i<text.length();i++){

char c=text.charAt(i);

if(!((c>='a'&&c<='z')||(c>='A'&&c<='Z')||(c==32))){

return true;

}

}

return false;

}

public boolean validateAlphaD(String text){

for(int i=0;i<text.length();i++){

char c=text.charAt(i);

if(!((c>='a'&&c<='z')||(c>='A'&&c<='Z')||c=='.'||c==32)){

return true;

}

}

return false;

}

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {

long bisbn;

int sp;

String bt="",an="",pn="";

float p;

boolean b;

try{

bisbn=Long.parseLong(jTextField6.getText());

Statement st=makeConnection();

ResultSet rs=null;

rs=st.executeQuery("select \* from book where book\_isbn="+jTextField6.getText());

if(rs.next()){

jLabel7.setText("\*This book already exists");

jTextField6.setText("");

b=false;

}else{

b=true;

}

closeConnection();

}catch(Exception e){

System.out.println(e);

jLabel7.setText("\*Invalid Book ISBN");

jTextField6.requestFocus();

return;

}

bt=jTextField1.getText();

if(bt.equals("")){

jLabel7.setText("\*Invalid Book Title");

jTextField1.requestFocus();

return;

}

an=jTextField2.getText();

if(an.equals("")||validateAlphaD(an)){

jLabel7.setText("\*Invalid Author Name");

jTextField2.requestFocus();

return; }

pn=jTextField3.getText();

if(pn.equals("")||validateAlphaD(pn)){

jLabel7.setText("\*Invalid Publisher Name");

jTextField3.requestFocus();

return;

}

try{

p=Float.parseFloat(jTextField4.getText());

}catch(Exception e){

jLabel7.setText("\*Invalid Price");

jTextField4.requestFocus();

return;

}

try{

sp=Integer.parseInt(jTextField5.getText());

}catch(Exception e){

jLabel7.setText("\*Invalid Stock Position");

jTextField5.requestFocus();

return;}

Statement st=null;

try{

if(b){

st=makeConnection();

ResultSet rs=st.executeQuery("select \* from author where author\_name='"+an+"'");

if(!rs.next()){

st.executeUpdate("insert into author values('"+an+"','-')");

}

st.executeUpdate(

"insert into Book values("+bisbn+",'"+bt+"','"+an+"','"+pn+"',"+p+","+sp+")");

closeConnection();

JOptionPane.showMessageDialog(this, "Values Saved");

jTextField6.setText("");

jTextField1.setText("");

jTextField2.setText("");

jTextField3.setText("");

jTextField4.setText("");

jTextField5.setText("");

}

}catch(Exception e)

{

System.out.println(e);

}

}

private void jTextField6KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if((!((ch>='0'&&ch<='9')||(ch==8)))||jTextField6.getText().length()==9)

{

Toolkit.getDefaultToolkit().beep();

evt.consume();

}

}

public static void main(String args[]) {

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(MainMenu.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

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

} catch (IllegalAccessException ex) {

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

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

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

java.awt.EventQueue.invokeLater(new Runnable() {

public void run() {

new MainMenu().setVisible(true); } });

}

private javax.swing.JButton jButton1;

private javax.swing.JButton jButton2;

private javax.swing.JButton jButton3;

private javax.swing.JButton jButton4;

private javax.swing.JButton jButton5;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

public static javax.swing.JLabel jLabel7;

private javax.swing.JLabel jLabel8;

private javax.swing.JList<String> jList1;

private javax.swing.JPanel jPanel1;

private javax.swing.JPanel jPanel2;

private javax.swing.JPanel jPanel3;

private javax.swing.JProgressBar jProgressBar1;

private javax.swing.JScrollPane jScrollPane1;

private javax.swing.JTextField jTextField1;

private javax.swing.JTextField jTextField2;

private javax.swing.JTextField jTextField3;

private javax.swing.JTextField jTextField4;

private javax.swing.JTextField jTextField5;

private javax.swing.JTextField jTextField6;

}

**Update Form Module**:

import java.awt.Toolkit;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.swing.JOptionPane;

import static my.reuse.Connections.closeConnection;

import static my.reuse.Connections.makeConnection;

public class UpdateForm extends javax.swing.JPanel {

public UpdateForm() {

initComponents();

try{

Statement st=makeConnection();

ResultSet rs=null;

rs=st.executeQuery("select book\_isbn from Book");

jComboBox1.addItem("Select Book ISBN");

while(rs.next()){

long c=rs.getInt(1);

jComboBox1.addItem(c+"");}

closeConnection();

}catch(Exception e){

System.out.println(e); }

}

@SuppressWarnings("unchecked")

private void initComponents() {

jTextField5 = new javax.swing.JTextField();

jLabel5 = new javax.swing.JLabel();

jButton1 = new javax.swing.JButton();

jLabel1 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jLabel6 = new javax.swing.JLabel();

jTextField2 = new javax.swing.JTextField();

jTextField3 = new javax.swing.JTextField();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

jTextField4 = new javax.swing.JTextField();

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

jLabel8 = new javax.swing.JLabel();

setBorder(javax.swing.BorderFactory.createTitledBorder("Update the book"));

setPreferredSize(new java.awt.Dimension(512, 454));

jTextField5.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField5.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {jTextField5KeyTyped(evt); }});

jLabel5.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel5.setText("Stock Position");

jLabel5.setPreferredSize(new java.awt.Dimension(75, 14));

jButton1.setText("Update");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt); } });

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel1.setText("Book Title");

jLabel1.setPreferredSize(new java.awt.Dimension(75, 14));

jTextField1.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel6.setText("Book ISBN");

jLabel6.setPreferredSize(new java.awt.Dimension(75, 14));

jTextField2.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField2.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField2KeyTyped(evt); } });

jTextField3.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField3.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {jTextField3KeyTyped(evt); }});

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel2.setText("Author");

jLabel2.setPreferredSize(new java.awt.Dimension(75, 14));

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel3.setText("Publisher");

jLabel3.setPreferredSize(new java.awt.Dimension(75, 14));

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel4.setText("Price");

jLabel4.setPreferredSize(new java.awt.Dimension(75, 14));

jTextField4.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField4.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {jTextField4KeyTyped(evt); }});

jComboBox1.addItemListener(new java.awt.event.ItemListener() {

public void itemStateChanged(java.awt.event.ItemEvent evt) {

jComboBox1ItemStateChanged(evt); }});

jLabel8.setForeground(java.awt.Color.red);

jLabel8.setText(" ");

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

this.setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup().addGap(23, 23, 23)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING) .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE) .addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE,84, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

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

.addComponent(jTextField5, javax.swing.GroupLayout.PREFERRED\_SIZE, 120, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGroup(layout.createSequentialGroup()

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 125, javax.swing.GroupLayout.PREFERRED\_SIZE) .addGap(18, 18, 18)

.addComponent(jLabel8, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED\_SIZE, 120, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED\_SIZE, 136, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 348, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addContainerGap(40, Short.MAX\_VALUE)) );

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup() .addContainerGap()

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

.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

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

.addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

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

.addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

.addGroup(layout.createSequentialGroup() .addGap(29, 29, 29)

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

.addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

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

.addComponent(jTextField5, javax.swing.GroupLayout.PREFERRED\_SIZE, 32, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(29, 29, 29)

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 33, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

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

.addComponent(jLabel8))) .addContainerGap())

); }

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

jLabel8.setText("");

long bisbn;

int sp;

String bn,an,pn;

float p;

bisbn=Long.parseLong(jComboBox1.getSelectedItem().toString());

bn=jTextField1.getText();

if(bn.equals("")){

jLabel8.setText("\*Invalid Book Title");

jTextField1.requestFocus();

return;

}

an=jTextField2.getText();

if(an.equals("")||validateAlpha(an)){

jLabel8.setText("\*Invalid Author Name");

jTextField1.requestFocus();

return;}

pn=jTextField3.getText();

if(pn.equals("")||validateAlphaD(pn)){

jLabel8.setText("\*Invalid Publisher Name");

jTextField2.requestFocus();

return;}

try{

p=Float.parseFloat(jTextField4.getText());

}catch(Exception e){

jLabel8.setText("\*Invalid Price");

jTextField4.requestFocus();

return;}

try{

sp=Integer.parseInt(jTextField5.getText());

}catch(Exception e){

jLabel8.setText("\*Invalid Stock Position");

jTextField5.requestFocus();

return;}

Statement st=null;

try{

st=makeConnection();

ResultSet rs=st.executeQuery("select \* from author where author\_name='"+an+"'");

if(!rs.next()){

st.executeUpdate("insert into author values('"+an+"','-')");

}

st.executeUpdate(

"update Book set book\_isbn= "+bisbn+", book\_title= '"+bn+"', author='"+an+"', publisher='"+pn+"', price="+p+", stock\_position="+sp+" where book\_isbn="+bisbn);

closeConnection();

JOptionPane.showMessageDialog(this, "Values Updated");

jComboBox1.setSelectedIndex(0);

jTextField1.setText("");jTextField2.setText(""); jTextField3.setText("");

jTextField4.setText(""); jTextField5.setText("");}

catch(Exception e){

System.out.println(e);}

}

public boolean validateAlpha(String text){

for(int i=0;i<text.length();i++){

char c=text.charAt(i);

if(!((c>='a'&&c<='z')||(c>='A'&&c<='Z')||c==32)){

return true;

} }

return false;

}

public boolean validateAlphaD(String text){

for(int i=0;i<text.length();i++){

char c=text.charAt(i);

if(!((c>='a'&&c<='z')||(c>='A'&&c<='Z')||c=='.'||c==32)){

return true; }

} return false;

}

private void jComboBox1ItemStateChanged(java.awt.event.ItemEvent evt) {

try{

String item=jComboBox1.getSelectedItem().toString();

if(item.equals("Select Book ISBN")){}

else{

long bisbn=Integer.parseInt(item);

Statement st=makeConnection();

ResultSet rs=st.executeQuery("select \* from Book where book\_isbn= "+bisbn);

if(rs.next()){

jTextField1.setText(rs.getString(2));

jTextField2.setText(rs.getString(3));

jTextField3.setText(rs.getString(4));

jTextField4.setText(rs.getFloat(5)+"");

jTextField5.setText(rs.getInt(6)+"");

closeConnection(); }

}

}catch(Exception e) {

System.out.println(e);

jTextField1.setText("");

jTextField2.setText("");

jTextField3.setText("");

jTextField4.setText("");

jTextField5.setText("");}

}

private void jTextField2KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z')||ch=='.'||(ch==8)||(ch==32))) {

Toolkit.getDefaultToolkit().beep();

evt.consume(); }

}

private void jTextField3KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z')||(ch=='.')||(ch==8)||(ch==32))) {

Toolkit.getDefaultToolkit().beep();

evt.consume(); }

}

private void jTextField4KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='0'&&ch<='9')||ch=='.'||(ch==8))) {

Toolkit.getDefaultToolkit().beep();

evt.consume(); }

}

private void jTextField5KeyTyped(java.awt.event.KeyEvent evt) {

char ch=evt.getKeyChar();

if(!((ch>='0'&&ch<='9')||(ch==8))) {

Toolkit.getDefaultToolkit().beep();

evt.consume(); }

}

private javax.swing.JButton jButton1;

private javax.swing.JComboBox<String> jComboBox1;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

private javax.swing.JLabel jLabel8;

private javax.swing.JTextField jTextField1;

private javax.swing.JTextField jTextField2;

private javax.swing.JTextField jTextField3;

private javax.swing.JTextField jTextField4;

private javax.swing.JTextField jTextField5;

}

**Delete Form Module**:

import java.awt.Cursor;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.swing.table.DefaultTableModel;

import static my.reuse.Connections.closeConnection;

import static my.reuse.Connections.makeConnection;

public class DeleteForm extends javax.swing.JPanel {

public DeleteForm() {

initComponents();

initComponents();

try{

Statement st=makeConnection();

ResultSet rs=st.executeQuery("select \* from Book");

while(rs.next()){

String data[]=new String[6];

data[0]=rs.getLong(1)+"";

data[1]=rs.getString(2);

data[2]=rs.getString(3);

data[3]=rs.getString(4);

data[4]=rs.getFloat(5)+"";

data[5]=rs.getInt(6)+"";

((DefaultTableModel)(jTable1.getModel())).addRow(data);

}

ResultSet rs1=st.executeQuery("select count(book\_isbn) as Total from Book");

rs1.next();

jLabel4.setText(rs1.getInt("Total")+" Books Available");

try{

rs1.close();

}catch(Exception e){}

try{

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

closeConnection();

}catch(Exception e) {

System.out.println(e); }

}

@SuppressWarnings("unchecked")

private void initComponents() {

jScrollPane1 = new javax.swing.JScrollPane();

jTable1 = new javax.swing.JTable();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

jTable1.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED));

jTable1.setModel(new javax.swing.table.DefaultTableModel(

new Object [][] {

},

new String [] {

"Book ISBN", "Book Title", "Author Name", "Publisher Name", "Price", "Stock Position "})

{

boolean[] canEdit = new boolean [] {

false, false, false, false, false, false};

public boolean isCellEditable(int rowIndex, int columnIndex) {

return canEdit [columnIndex]; }

});

jScrollPane1.setViewportView(jTable1);

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel1.setText("Book Details");

jLabel2.setFont(new java.awt.Font("Tahoma”,1, 13)); jLabel2.setForeground(java.awt.Color.blue);

jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel2.setText("<html><a href=''>Delete</a></html>");

jLabel2.addMouseListener(new java.awt.event.MouseAdapter() {

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

jLabel2MouseClicked(evt); }

public void mouseEntered(java.awt.event.MouseEvent evt) {

jLabel2MouseEntered(evt);

}

public void mouseExited(java.awt.event.MouseEvent evt) {

jLabel2MouseExited(evt); }});

jLabel3.setForeground(java.awt.Color.red);

jLabel3.setText(" ");

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel4.setText(" ");

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

this.setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

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

.addGroup(layout.createSequentialGroup()

.addGap(23, 23, 23)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 86, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 63, javax.swing.GroupLayout.PREFERRED\_SIZE))

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

.addContainerGap()

.addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT\_SIZE, 488, Short.MAX\_VALUE))

.addGroup(layout.createSequentialGroup().addContainerGap()

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 222, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(42, 42, 42)

.addComponent(jLabel3, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addGap(10, 10, 10))).addContainerGap()));

layout.setVerticalGroup(

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

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

.addContainerGap()

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

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 16, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2, javax.swing.GroupLayout.DEFAULT\_SIZE, 22, Short.MAX\_VALUE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 376, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addComponent(jLabel3).addComponent(jLabel4)).addContainerGap()));

}

private void jLabel2MouseClicked(java.awt.event.MouseEvent evt) {

jLabel3.setText("");

int row=-1;

try{

row=jTable1.getSelectedRow();

if(row == -1){

jLabel3.setText("\*please select any row first");

}else{

long bisbn=Long.parseLong(jTable1.getValueAt(row, 0).toString());

Statement st=makeConnection();

st.executeUpdate("delete from Book where book\_isbn="+bisbn);

((DefaultTableModel)(jTable1.getModel())).removeRow(row);

ResultSet rs=st.executeQuery("select count(book\_isbn) as Total from Book");

rs.next();

jLabel4.setText(rs.getInt("total")+" Books Available");

rs.close();

closeConnection();

}

}catch(Exception e) {

System.out.println(e);

}

}

private void jLabel2MouseEntered(java.awt.event.MouseEvent evt) {

jLabel2.setCursor(Cursor.getPredefinedCursor(Cursor.HAND\_CURSOR));

}

private void jLabel2MouseExited(java.awt.event.MouseEvent evt) {

jLabel2.setCursor(Cursor.getPredefinedCursor(Cursor.DEFAULT\_CURSOR));

}

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JScrollPane jScrollPane1;

private javax.swing.JTable jTable1;

}

**Search Form Module**:

import java.awt.Color;

import java.awt.Toolkit;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.swing.ImageIcon;

import static my.reuse.Connections.makeConnection;

public class SearchForm extends javax.swing.JPanel {

public SearchForm() {

initComponents();

jComboBox1.addItem("Linear Search");

jComboBox1.addItem("Binary Search");

jComboBox1.addItem("Complexity comparison");

}

@SuppressWarnings("unchecked")

private void initComponents() {

jTextField1 = new javax.swing.JTextField();

jLabel1 = new javax.swing.JLabel();

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

jButton1 = new javax.swing.JButton();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

jLabel5 = new javax.swing.JLabel();

jLabel6 = new javax.swing.JLabel();

jLabel7 = new javax.swing.JLabel();

jLabel8 = new javax.swing.JLabel();

jLabel9 = new javax.swing.JLabel();

jLabel10 = new javax.swing.JLabel();

jLabel11 = new javax.swing.JLabel();

setBorder(javax.swing.BorderFactory.createTitledBorder("Search book"));

jTextField1.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

jTextField1.addKeyListener(new java.awt.event.KeyAdapter() {

public void keyTyped(java.awt.event.KeyEvent evt) {

jTextField1KeyTyped(evt); }});

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel1.setText("Book\_ISBN");

jLabel1.setAlignmentX(0.5F);

jComboBox1.addItemListener(new java.awt.event.ItemListener() {

public void itemStateChanged(java.awt.event.ItemEvent evt) {

jComboBox1ItemStateChanged(evt); }});

jButton1.setText("Search");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt); }});

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel2.setText("Book\_Title");

jLabel2.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel3.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel3.setText("Author");

jLabel3.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel4.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel4.setText("Publisher");

jLabel4.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jLabel5.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel5.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel5.setText("Price");

jLabel5.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 11));

jLabel6.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel6.setText("Stock");

jLabel6.setBorder(javax.swing.BorderFactory.createEtchedBorder());

jLabel7.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel7.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel7.setText(" ");

jLabel8.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel8.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel8.setText(" ");

jLabel9.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel9.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel9.setText("Time Taken :");

jLabel10.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel10.setForeground(java.awt.Color.red);

jLabel10.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel10.setText(" ");

jLabel11.setFont(new java.awt.Font("Tahoma", 1, 13));

jLabel11.setForeground(java.awt.Color.red);

jLabel11.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabel11.setText(" ");

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

this.setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

.addContainerGap()

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

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 84, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(30, 30, 30)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 217, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 35, Short.MAX\_VALUE)

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 90, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(32, 32, 32))

.addGroup(layout.createSequentialGroup()

.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED\_SIZE, 143, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))

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

.addGap(0, 0, Short.MAX\_VALUE)

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

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

.addComponent(jLabel5, javax.swing.GroupLayout.DEFAULT\_SIZE, 159, Short.MAX\_VALUE)

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

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 158, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addComponent(jLabel3, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jLabel2, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jLabel4, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addGap(97, 97, 97)).addGroup(layout.createSequentialGroup().addGap(336, 336, 336)

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

.addComponent(jLabel8, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

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

.addGap(0, 0, Short.MAX\_VALUE)

.addComponent(jLabel11, javax.swing.GroupLayout.PREFERRED\_SIZE, 146, javax.swing.GroupLayout.PREFERRED\_SIZE))))

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

.addComponent(jLabel9, javax.swing.GroupLayout.DEFAULT\_SIZE, 178, Short.MAX\_VALUE).addGap(18, 18, 18)

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

.addComponent(jLabel10, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED\_SIZE, 159, javax.swing.GroupLayout.PREFERRED\_SIZE)).addContainerGap(133, Short.MAX\_VALUE)))));

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup().addGap(18, 18, 18)

.addComponent(jComboBox1,javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(35, 35, 35)

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

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 34, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel1).addComponent(jButton1))

.addGap(55, 55, 55)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(18, 18, 18)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(18, 18, 18)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE).addGap(18, 18, 18)

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

.addComponent(jLabel6, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED\_SIZE, 24, javax.swing.GroupLayout.PREFERRED\_SIZE)).addGap(34, 34, 34)

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

.addComponent(jLabel7).addComponent(jLabel8))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 32, Short.MAX\_VALUE)

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

.addComponent(jLabel9).addComponent(jLabel10)

.addComponent(jLabel11)).addGap(22, 22, 22)));

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

jLabel7.setForeground(Color.BLACK);

jLabel7.setIcon(null);

jLabel8.setIcon(null);

long stt = System.nanoTime();

jLabel10.setText("");

jLabel11.setText("");

jLabel7.setText("");

jLabel8.setText("");

int index = jComboBox1.getSelectedIndex();

try {

long isbn = Long.parseLong(jTextField1.getText());

Statement st;

String bt = "", an = "", pn = "";

float p = 0;

int sp = 0, flag = 0;

if (jTextField1.getText().equals("")) {

jLabel7.setText("\*\*Please enter ISBN no. first");

} else if (index == 0) {

try {

st = makeConnection();

ResultSet rs = st.executeQuery("select \* from book");

while (rs.next()) {

long bisbn = rs.getLong("book\_isbn");

if (bisbn == isbn) {

flag = 1;

bt = rs.getString("book\_title");

an = rs.getString("author");

pn = rs.getString("publisher");

p = rs.getFloat("price");

sp = rs.getInt("stock\_position");

long edt = System.nanoTime();

jLabel10.setText((edt-stt)/1000000+" ms");

break; }

}

if (flag == 1) {

jLabel2.setText(bt);

jLabel3.setText(an);

jLabel4.setText(pn);

jLabel5.setText(p + "");

jLabel6.setText(sp + "");

} else {

long tt = System.nanoTime();

jLabel2.setText("N/F");

jLabel3.setText("N/F");

jLabel4.setText("N/F");

jLabel5.setText("N/F");

jLabel6.setText("N/F");

jLabel10.setText((tt-stt)/1000000+" ms");}

} catch (Exception e) {

System.out.println(e); }

} else if (index == 1) {

try {

int min = 0, max = 0;

boolean b = false;

int size = 0;

st = makeConnection();

ResultSet rs = st.executeQuery("select \* from book order by book\_isbn");

while (rs.next()) {

size++; }

max = size;

if (size != 0) {

rs.beforeFirst();

while (min <= max) {

int mid = (min + max) / 2;

if (mid == 0) {

mid = 1;

}

rs.absolute(mid);

if (isbn == rs.getLong("book\_isbn")) {

b = true;

jLabel2.setText(rs.getString("book\_title"));

jLabel3.setText(rs.getString("author"));

jLabel4.setText(rs.getString("publisher"));

jLabel5.setText(rs.getFloat("price") + "");

jLabel6.setText(rs.getInt("stock\_position") + "");

long edt = System.nanoTime();

jLabel10.setText((edt-stt)/1000000+" ms");

break;

} else if (isbn < rs.getLong("book\_isbn")) {

max = mid - 1;

if (max == 0) {

break; }

} else {

min = mid + 1; }

}

if (b == false) {

long ttb = System.nanoTime();

jLabel2.setText("N/F");

jLabel3.setText("N/F");

jLabel4.setText("N/F");

jLabel5.setText("N/F");

jLabel6.setText("N/F");

jLabel10.setText((ttb-stt)/1000000+" ms");

}

} else {

jLabel2.setText("Book\_Title");

jLabel3.setText("Author");

jLabel4.setText("Publisher");

jLabel5.setText("Price");

jLabel6.setText("Position");

jLabel7.setText("\*There is no book in Database!!!"); }

} catch (Exception e) {

System.out.println(e);

}

} else {

jLabel7.setText("Linear");

jLabel8.setText("Binary");

long lt = System.nanoTime();

long tbl = 0, tbb = 0, lnf = 0;

try {

st = makeConnection();

ResultSet rs = st.executeQuery("select \* from book");

while (rs.next()) {

long bisbn = rs.getLong("book\_isbn");

if (bisbn == isbn) {

flag = 1;

bt = rs.getString("book\_title");

an = rs.getString("author");

pn = rs.getString("publisher");

p = rs.getFloat("price");

sp = rs.getInt("stock\_position");

break;} }

if (flag != 1) {

lnf = System.nanoTime();

tbl = (lnf - stt) / 1000000;

jLabel2.setText("N/F");

jLabel3.setText("N/F");

jLabel4.setText("N/F");

jLabel5.setText("N/F");

jLabel6.setText("N/F");

} else {

lnf = System.nanoTime();

tbl = (lnf - stt) / 1000000;

jLabel2.setText(bt);

jLabel3.setText(an);

jLabel4.setText(pn);

jLabel5.setText(p + "");

jLabel6.setText(sp + "");}

} catch (Exception e) {

System.out.println(e);

}

long bset, bst = System.nanoTime();

try {

int min = 0, max = 0;

boolean b = false;

st = makeConnection();

ResultSet rs = st.executeQuery("select \* from book order by book\_isbn");

int size = 0;

while (rs.next()) {

size++;

}

System.out.println(size);

max = size;

if (size != 0) {

rs.beforeFirst();

while (min <= max) {

int mid = (min + max) / 2;

if (mid == 0) {

mid = 1; }

rs.absolute(mid);

if (isbn == rs.getLong("book\_isbn")) {

b = true;

bset = System.nanoTime();

tbb =(bset - stt - lnf + lt)/1000000;

break;

} else if (isbn < rs.getLong("book\_isbn")) {

max = mid - 1;

if (max == 0) {

break;

}

} else {

min = mid + 1;

}

}

if (b == false) {

bset = System.nanoTime();

tbb = (bset - stt - lnf + lt)/1000000; }

} else {

jLabel7.setText("Empty Database");

}

} catch (Exception e) {

System.out.println(e);

}

long s=tbb-tbl;

if(s<0){

jLabel8.setIcon(new ImageIcon(getClass().getResource("/green-check-mark-hi.png")));

}

else if(s>0){

jLabel7.setIcon(new ImageIcon(getClass().getResource("/green-check-mark-hi.png")));

}else{

jLabel7.setIcon(new ImageIcon(getClass().getResource("/green-check-mark-hi.png")));

jLabel8.setIcon(new ImageIcon(getClass().getResource("/green-check-mark-hi.png")));

}

jLabel10.setText(tbl+" ms");

jLabel11.setText(tbb+" ms");

}

} catch (Exception e) {

jLabel7.setForeground(Color.red);

jLabel7.setText("\*Invalid Book Isbn!!!"); }

}

private void jTextField1KeyTyped(java.awt.event.KeyEvent evt) {

char ch = evt.getKeyChar();

if (!((ch >= '0' && ch <= '9') || (ch == 8))) {

Toolkit.getDefaultToolkit().beep();

evt.consume();}

}

private void jComboBox1ItemStateChanged(java.awt.event.ItemEvent evt) {

if(jComboBox1.getSelectedIndex()==2)

{

jLabel7.setText("Linear");

jLabel8.setText("Binary");

}else{

jLabel7.setText("");

jLabel8.setText("");}

jLabel7.setIcon(null);

jLabel8.setIcon(null);

jTextField1.requestFocus();

jLabel10.setText("");

jLabel11.setText("");}

private javax.swing.JButton jButton1;

private javax.swing.JComboBox<String> jComboBox1;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel10;

private javax.swing.JLabel jLabel11;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

private javax.swing.JLabel jLabel7;

private javax.swing.JLabel jLabel8;

private javax.swing.JLabel jLabel9;

private javax.swing.JTextField jTextField1;

}