/\*

\* To change this license header, choose License Headers in Project Properties.

\* To change this template file, choose Tools | Templates

\* and open the template in the editor.

\*/

package home;

import java.awt.image.BufferedImage;

import java.io.File;

import java.io.IOException;

import java.util.logging.Level;

import java.util.logging.Logger;

import javax.imageio.ImageIO;

import javax.swing.ImageIcon;

import javax.swing.JFileChooser;

import javax.swing.JOptionPane;

import javax.swing.WindowConstants;

import steganography.Steganography;

/\*\*

\*

\* @author Aditi

\*/

public class Main extends javax.swing.JFrame {

/\*\*

\* Creates new form Main

\*/

Steganography steganography = null;

BufferedImage bufferedImage = null;

int key;

public Main() {

initComponents();

key = 1;

secretMessageTextField.setVisible(false);

secretMessageLabel.setVisible(false);

keyLabel.setVisible(false);

keyTextField.setVisible(false);

steganography = new Steganography();

firstSectionImage.setSize(200, 200);

secondImageSection.setSize(200, 200);

setDefaultCloseOperation(WindowConstants.DISPOSE\_ON\_CLOSE);

}

/\*\*

\* This method is called from within the constructor to initialize the form.

\* WARNING: Do NOT modify this code. The content of this method is always

\* regenerated by the Form Editor.

\*/

@SuppressWarnings("unchecked")

// <editor-fold defaultstate="collapsed" desc="Generated Code">//GEN-BEGIN:initComponents

private void initComponents() {

secondImageSection = new javax.swing.JLabel();

firstSectionImage = new javax.swing.JLabel();

keyLabel = new javax.swing.JLabel();

keyTextField = new javax.swing.JTextField();

secretMessageLabel = new javax.swing.JLabel();

secretMessageTextField = new javax.swing.JTextField();

jMenuBar2 = new javax.swing.JMenuBar();

jMenu10 = new javax.swing.JMenu();

jMenuItem1 = new javax.swing.JMenuItem();

jMenuItem2 = new javax.swing.JMenuItem();

jMenu11 = new javax.swing.JMenu();

jMenuItem3 = new javax.swing.JMenuItem();

jMenuItem4 = new javax.swing.JMenuItem();

jMenuItem5 = new javax.swing.JMenuItem();

jMenuItem6 = new javax.swing.JMenuItem();

jMenuItem7 = new javax.swing.JMenuItem();

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

secondImageSection.setMaximumSize(new java.awt.Dimension(200, 200));

secondImageSection.setMinimumSize(new java.awt.Dimension(200, 200));

firstSectionImage.setMaximumSize(new java.awt.Dimension(200, 200));

firstSectionImage.setMinimumSize(new java.awt.Dimension(200, 200));

keyLabel.setText("Key");

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

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

keyTextFieldActionPerformed(evt);

}

});

secretMessageLabel.setText("Data");

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

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

secretMessageTextFieldActionPerformed(evt);

}

});

jMenu10.setText("File");

jMenuItem1.setText("Open Image");

jMenuItem1.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem1ActionPerformed(evt);

}

});

jMenu10.add(jMenuItem1);

jMenuItem2.setText("Exit");

jMenuItem2.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem2ActionPerformed(evt);

}

});

jMenu10.add(jMenuItem2);

jMenuBar2.add(jMenu10);

jMenu11.setText("Edit");

jMenuItem3.setText("Gray scale");

jMenuItem3.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem3ActionPerformed(evt);

}

});

jMenu11.add(jMenuItem3);

jMenuItem4.setText("Binary");

jMenuItem4.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem4ActionPerformed(evt);

}

});

jMenu11.add(jMenuItem4);

jMenuItem5.setText("Encrypt");

jMenuItem5.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem5ActionPerformed(evt);

}

});

jMenu11.add(jMenuItem5);

jMenuItem6.setText("Embed");

jMenuItem6.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem6ActionPerformed(evt);

}

});

jMenu11.add(jMenuItem6);

jMenuItem7.setText("Decrypt");

jMenuItem7.addActionListener(new java.awt.event.ActionListener() {

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

jMenuItem7ActionPerformed(evt);

}

});

jMenu11.add(jMenuItem7);

jMenuBar2.add(jMenu11);

setJMenuBar(jMenuBar2);

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(269, Short.MAX\_VALUE)

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

.addComponent(secretMessageLabel)

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

.addComponent(keyLabel)

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

.addGap(191, 191, 191)

.addComponent(secondImageSection, javax.swing.GroupLayout.PREFERRED\_SIZE, 159, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap())

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

.addGroup(layout.createSequentialGroup()

.addComponent(firstSectionImage, javax.swing.GroupLayout.PREFERRED\_SIZE, 176, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 537, Short.MAX\_VALUE)))

);

layout.setVerticalGroup(

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

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

.addContainerGap(99, Short.MAX\_VALUE)

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

.addComponent(secondImageSection, javax.swing.GroupLayout.PREFERRED\_SIZE, 131, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGroup(layout.createSequentialGroup()

.addComponent(keyLabel, javax.swing.GroupLayout.PREFERRED\_SIZE, 14, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addGap(32, 32, 32)

.addComponent(secretMessageLabel, javax.swing.GroupLayout.PREFERRED\_SIZE, 14, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addGap(49, 49, 49))

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

.addGroup(layout.createSequentialGroup()

.addGap(101, 101, 101)

.addComponent(firstSectionImage, javax.swing.GroupLayout.PREFERRED\_SIZE, 130, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(48, Short.MAX\_VALUE)))

);

pack();

}// </editor-fold>//GEN-END:initComponents

String filepath = "";

private void jMenuItem1ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem1ActionPerformed

// TODO add your handling code here:

JFileChooser chooser = new JFileChooser();

int i = chooser.showOpenDialog(this);

if (i == JFileChooser.APPROVE\_OPTION) {

File f = chooser.getSelectedFile();

filepath = f.getPath();

try {

firstSectionImage.setIcon(new ImageIcon(ImageIO.read(new File(filepath))));

steganography.loadImage(filepath);

key = 1;

} catch (Exception e) {

e.printStackTrace();

}

}

}//GEN-LAST:event\_jMenuItem1ActionPerformed

private void keyTextFieldActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_keyTextFieldActionPerformed

// TODO add your handling code here:

}//GEN-LAST:event\_keyTextFieldActionPerformed

private void secretMessageTextFieldActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_secretMessageTextFieldActionPerformed

// TODO add your handling code here:

}//GEN-LAST:event\_secretMessageTextFieldActionPerformed

private void jMenuItem3ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem3ActionPerformed

// TODO add your handling code here:

if (key == 1) {

key = 2;

steganography.convertTogray();

JOptionPane.showMessageDialog(this, "Gray conersion successful");

try {

secondImageSection.setIcon(new ImageIcon(ImageIO.read(new File(filepath))));

} catch (IOException ex) {

Logger.getLogger(MainScreen.class.getName()).log(Level.SEVERE, null, ex);

}

} else {

JOptionPane.showMessageDialog(this, "Error");

}

}//GEN-LAST:event\_jMenuItem3ActionPerformed

private void jMenuItem4ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem4ActionPerformed

// TODO add your handling code here:

if (key == 2) {

key = 3;

keyLabel.setVisible(true);

keyTextField.setVisible(true);

secretMessageLabel.setVisible(true);

secretMessageTextField.setVisible(true);

int status = steganography.convertToBinary();

if (status == 1) {

JOptionPane.showMessageDialog(this, "Binary conversion done");

} else {

JOptionPane.showMessageDialog(this, "Error");

}

} else {

JOptionPane.showMessageDialog(this, "Error");

}

}//GEN-LAST:event\_jMenuItem4ActionPerformed

String msg = "";

String encrypted = "";

private void jMenuItem5ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem5ActionPerformed

// TODO add your handling code here:

if (key == 3) {

String keyData = keyTextField.getText().toString();

msg = secretMessageTextField.getText().toString();

if (keyData.equals("") || keyData == null || msg.equals("") || msg == null) {

JOptionPane.showMessageDialog(this, "Please fill data first");

} else {

key = 4;

keyTextField.setText("");

secretMessageTextField.setText("");

encrypted = steganography.encrypt(msg, keyData);

keyLabel.setVisible(false);

keyTextField.setVisible(false);

secretMessageLabel.setVisible(false);

secretMessageTextField.setVisible(false);

if (encrypted.equals("") || encrypted == null) {

JOptionPane.showMessageDialog(this, "Error in encrypting");

} else {

JOptionPane.showMessageDialog(this, "Encrypted");

}

}

}

}//GEN-LAST:event\_jMenuItem5ActionPerformed

private void jMenuItem6ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem6ActionPerformed

// TODO add your handling code here:

if (key == 4) {

key = 5;

steganography.encode(encrypted, steganography.H1, steganography.H2);

bufferedImage = steganography.encodeMessage(msg,filepath);

keyLabel.setVisible(true);

keyTextField.setVisible(true);

if (bufferedImage == null) {

JOptionPane.showMessageDialog(this, "Error");

} else {

secondImageSection.setIcon(new ImageIcon(bufferedImage));

JOptionPane.showMessageDialog(this, "Data Embedded");

}

}

}//GEN-LAST:event\_jMenuItem6ActionPerformed

private void jMenuItem7ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem7ActionPerformed

// TODO add your handling code here:

if (key == 5) {

key = 6;

String keyData = keyTextField.getText().toString();

if (keyData.equals("") || keyData == null) {

JOptionPane.showMessageDialog(this, "Please fill data first");

} else {

String decryptedData = steganography.decryptMessage(bufferedImage);

if (decryptedData.equals("") || decryptedData == null) {

JOptionPane.showMessageDialog(this, "Error in encrypting");

} else {

JOptionPane.showMessageDialog(this, decryptedData);

}

}

}

}//GEN-LAST:event\_jMenuItem7ActionPerformed

private void jMenuItem2ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event\_jMenuItem2ActionPerformed

// TODO add your handling code here:

System.exit(0);

}//GEN-LAST:event\_jMenuItem2ActionPerformed

/\*\*

\* @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(Main.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

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

} catch (IllegalAccessException ex) {

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

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

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

}

});

}

// Variables declaration - do not modify//GEN-BEGIN:variables

private javax.swing.JLabel firstSectionImage;

private javax.swing.JMenu jMenu10;

private javax.swing.JMenu jMenu11;

private javax.swing.JMenuBar jMenuBar2;

private javax.swing.JMenuItem jMenuItem1;

private javax.swing.JMenuItem jMenuItem2;

private javax.swing.JMenuItem jMenuItem3;

private javax.swing.JMenuItem jMenuItem4;

private javax.swing.JMenuItem jMenuItem5;

private javax.swing.JMenuItem jMenuItem6;

private javax.swing.JMenuItem jMenuItem7;

private javax.swing.JLabel keyLabel;

private javax.swing.JTextField keyTextField;

private javax.swing.JLabel secondImageSection;

private javax.swing.JLabel secretMessageLabel;

private javax.swing.JTextField secretMessageTextField;

// End of variables declaration//GEN-END:variables

}