**Project Title:- File Encryption Decryption using symmetric key cryptography**

Group Members:

1. Shaikh Sujan Karim (2020BCS505)
2. Shinde Akshata Karabhari (2019BCS134)
3. Nilewar Pratiksha Datta (2020BCS508)

**Project Code:**

import java.awt.FlowLayout;

import java.awt.Font;

import java.awt.Label;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileOutputStream;

import java.io.IOException;

import javax.imageio.ImageIO;

import javax.swing.ImageIcon;

import javax.swing.JButton;

import javax.swing.JFileChooser;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JTextField;

public class ImageOperation {

public static void operate(int key) {

// to select the file

JFileChooser fileChooser = new JFileChooser();

fileChooser.showOpenDialog(null);

File file = fileChooser.getSelectedFile();

// file FileInputStream to convert file into bytes of data

try {

FileInputStream fis = new FileInputStream(file);

byte[] data = new byte[fis.available()];

fis.read(data);

int i = 0;

for (byte b : data) {

System.out.println(b);

// perform XOR operation to encrypt the file

data[i] = (byte) (b ^ key);

i++;

}

FileOutputStream fos = new FileOutputStream(file);

fos.write(data);

fos.close();

fis.close();

JOptionPane.showMessageDialog(null, "Done! Go and Check your selected image path!");

} catch (Exception e) {

e.printStackTrace();

}

}

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

JFrame f = new JFrame();

f.setTitle("File Encryption/Decryption Tool");

f.setSize(400, 500);

f.setLocationRelativeTo(null);

f.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

f.setContentPane(new JLabel(new ImageIcon(ImageIO.read(new File("back.png")))));

Font fonts = new Font("Bembo", Font.BOLD, 18);

JLabel label = new JLabel();

label.setText("Enter Key To Encrypt/ Decrypt File");

label.setFont(fonts);

label.setBounds(100, 200, 100, 50);

JTextField textField = new JTextField(20);

textField.setBounds(100, 150, 20, 30);

textField.setFont(fonts);

Font font = new Font("Roboto", Font.BOLD, 18);

JButton button = new JButton();

button.setText("Select File");

button.setFont(font);

Label l1, l2;

l1 = new Label("To Decrypt file give the same key as given on Encryption time!");

l1.setBounds(50, 250, 100, 30);

l2 = new Label("And select the same file!");

l2.setBounds(50, 150, 100, 30);

button.addActionListener(e -> {

System.out.println("button clicked");

String text = textField.getText();

int temp = Integer.parseInt(text);

operate(temp);

});

f.setLayout(new FlowLayout());

f.add(label);

f.add(textField);

f.add(button);

f.add(l1);

f.add(l2);

f.setVisible(true);

}

}