import javax.swing.\*;

import java.awt.\*;

import java.text.SimpleDateFormat;

import java.util.Date;

public class Upsidedown {

private static JLabel timeLabel;

private static JLabel flippedTimeLabel;

public static void main(String[] args) {

SwingUtilities.invokeLater(() -> createAndShowGUI());

}

private static void createAndShowGUI() {

// Create the main frame

JFrame frame = new JFrame("Upsidedown Time Display");

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

frame.setSize(300, 400); // Increased height to accommodate both labels

frame.setLayout(new GridLayout(2, 1)); // GridLayout with 2 rows and 1 column

// Create the time label

timeLabel = new JLabel();

timeLabel.setFont(new Font("Arial", Font.PLAIN, 24));

timeLabel.setHorizontalAlignment(JLabel.CENTER);

frame.add(timeLabel);

// Create the flipped time label

flippedTimeLabel = new JLabel();

flippedTimeLabel.setFont(new Font("Arial", Font.PLAIN, 24));

flippedTimeLabel.setHorizontalAlignment(JLabel.CENTER);

frame.add(flippedTimeLabel);

// Create a timer to update the time labels every second

Timer timer = new Timer(1000, e -> updateTime());

timer.start();

// Display the frame

frame.setVisible(true);

}

private static void updateTime() {

SimpleDateFormat sdf = new SimpleDateFormat("HH:mm:ss");

String currentTime = sdf.format(new Date());

timeLabel.setText(currentTime);

// Calculate the flipped (upside-down) time

String flippedTime = flipTime(currentTime);

flippedTimeLabel.setText(flippedTime);

}

private static String flipTime(String time) {

StringBuilder originalTime = new StringBuilder();

StringBuilder flippedTime = new StringBuilder();

for (char digit : time.toCharArray()) {

originalTime.append(digit);

flippedTime.append(flipDigit(digit));

}

return flippedTime.toString();

}

private static char flipDigit(char digit) {

switch (digit) {

case '0': return '0';

case '1': return '1';

case '4': return 'ㄣ';

case '2': return '5';

case '5': return '2';

case '6': return '9';

case '7': return 'L';

case '8': return '8';

case '9': return '6';

default: return digit;

}

}

}