package com.pancm.utils;

import java.awt.Color;

import java.awt.Graphics2D;

import java.awt.image.BufferedImage;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.InputStream;

import java.io.OutputStream;

import java.util.Hashtable;

import javax.imageio.ImageIO;

import com.google.zxing.BarcodeFormat;

import com.google.zxing.BinaryBitmap;

import com.google.zxing.EncodeHintType;

import com.google.zxing.LuminanceSource;

import com.google.zxing.ReaderException;

import com.google.zxing.Result;

import com.google.zxing.WriterException;

import com.google.zxing.client.j2se.BufferedImageLuminanceSource;

import com.google.zxing.common.BitMatrix;

import com.google.zxing.common.HybridBinarizer;

import com.google.zxing.qrcode.QRCodeReader;

import com.google.zxing.qrcode.QRCodeWriter;

import com.google.zxing.qrcode.decoder.ErrorCorrectionLevel;

*/\*\**

*\* 二维码生成和读的工具类*

*\*/*

public class QrCodeCreateUtil {

*/\*\**

*\* 生成包含字符串信息的二维码图片*

*\**

*\** ***@param*** *outputStream 文件输出流路径*

*\** ***@param*** *content 二维码携带信息*

*\** ***@param*** *qrCodeSize 二维码图片大小*

*\** ***@param*** *imageFormat 二维码的格式*

*\** ***@throws*** *WriterException*

*\** ***@throws*** *IOException*

*\*/*

public static boolean createQrCode(OutputStream outputStream, String content, int qrCodeSize, String imageFormat) throws WriterException, IOException {

//设置二维码纠错级别ＭＡＰ

Hashtable<EncodeHintType, ErrorCorrectionLevel> hintMap = new Hashtable<EncodeHintType, ErrorCorrectionLevel>();

hintMap.put(EncodeHintType.*ERROR\_CORRECTION*, ErrorCorrectionLevel.*L*); // 矫错级别

QRCodeWriter qrCodeWriter = new QRCodeWriter();

//创建比特矩阵(位矩阵)的QR码编码的字符串

BitMatrix byteMatrix = qrCodeWriter.encode(content, BarcodeFormat.*QR\_CODE*, qrCodeSize, qrCodeSize, hintMap);

// 使BufferedImage勾画QRCode (matrixWidth 是行二维码像素点)

int matrixWidth = byteMatrix.getWidth();

BufferedImage image = new BufferedImage(matrixWidth - 200, matrixWidth - 200, BufferedImage.*TYPE\_INT\_RGB*);

image.createGraphics();

Graphics2D graphics = (Graphics2D) image.getGraphics();

graphics.setColor(Color.*WHITE*);

graphics.fillRect(0, 0, matrixWidth, matrixWidth);

// 使用比特矩阵画并保存图像

graphics.setColor(Color.*BLACK*);

for (int i = 0; i < matrixWidth; i++) {

for (int j = 0; j < matrixWidth; j++) {

if (byteMatrix.get(i, j)) {

graphics.fillRect(i - 100, j - 100, 1, 1);

}

}

}

return ImageIO.*write*(image, imageFormat, outputStream);

}

*/\*\**

*\* 读二维码并输出携带的信息*

*\*/*

public static void readQrCode(InputStream inputStream) throws IOException {

//从输入流中获取字符串信息

BufferedImage image = ImageIO.*read*(inputStream);

//将图像转换为二进制位图源

LuminanceSource source = new BufferedImageLuminanceSource(image);

BinaryBitmap bitmap = new BinaryBitmap(new HybridBinarizer(source));

QRCodeReader reader = new QRCodeReader();

Result result = null;

try {

result = reader.decode(bitmap);

} catch (ReaderException e) {

e.printStackTrace();

}

System.*out*.println(result.getText());

}

*/\*\**

*\* 测试代码*

*\**

*\** ***@throws*** *WriterException*

*\*/*

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

*createQrCode*(new FileOutputStream(new File("d:\\pancm.jpg")), "http://www.panchengming.com", 900, "JPEG");

*readQrCode*(new FileInputStream(new File("d:\\pancm.jpg")));

}

}