package project;  
import java.awt.BasicStroke;  
import java.awt.Color;  
import java.io.BufferedInputStream;  
import java.io.FileInputStream;  
import java.io.IOException;  
import java.text.NumberFormat;  
import java.util.ArrayList;  
import org.apache.poi.xssf.usermodel.XSSFRow;  
import org.apache.poi.xssf.usermodel.XSSFSheet;  
import org.apache.poi.xssf.usermodel.XSSFWorkbook;  
import org.jfree.chart.ChartFactory;  
import org.jfree.chart.ChartFrame;  
import org.jfree.chart.JFreeChart;  
import org.jfree.chart.axis.NumberAxis;  
import org.jfree.chart.axis.ValueAxis;  
import org.jfree.chart.plot.PlotOrientation;  
import org.jfree.chart.plot.XYPlot;  
import org.jfree.chart.renderer.xy.XYLineAndShapeRenderer;  
import org.jfree.data.xy.DefaultXYDataset;  
  
public class experiment2 {  
 private double[][] data;  
  
 public experiment2() throws Exception {  
 this.showScatterDiagram();  
 }  
  
 public double[][] getData() throws IOException {  
 *// 指定excel文件，创建缓存输入流* BufferedInputStream inputStream = new BufferedInputStream(new FileInputStream("D:\\Java\\JavaProject\\Homework\\final\_data.xlsx"));  
  
 *// 直接传入输入流即可，此时excel就已经解析了* XSSFWorkbook workbook = new XSSFWorkbook(inputStream);  
  
 *// 选择要处理的sheet名称* XSSFSheet sheet = workbook.getSheetAt(0);  
  
 ArrayList<Integer> c1GradeAl = new ArrayList();  
 ArrayList<Integer> c10GradeAl = new ArrayList();  
  
 *// 迭代遍历sheet剩余的每一行,除了第一行* for (int rowNum = 1; rowNum < sheet.getPhysicalNumberOfRows(); rowNum++) {  
 XSSFRow row = sheet.getRow(rowNum);  
 c1GradeAl.add(Integer.*parseInt*(row.getCell(5).toString()));  
 *//将“bad”,“general”,“good”,“excellent”的值分别定为：25,50,75,100* switch (row.getCell(14).toString()) {  
 case "bad":  
 c10GradeAl.add(25);  
 break;  
 case "general":  
 c10GradeAl.add(50);  
 break;  
 case "good":  
 c10GradeAl.add(75);  
 break;  
 case "excellent":  
 c10GradeAl.add(100);  
 break;  
 default:  
 c10GradeAl.add(50);  
 }  
 }  
 workbook.close();  
 inputStream.close();  
 double [][] arr=new double[2][c1GradeAl.size()];  
 for(int i=0;i<c1GradeAl.size();i++){  
 arr[0][i]=c1GradeAl.get(i);  
 }  
 for(int j=0;j<c10GradeAl.size();j++){  
 arr[1][j]=c10GradeAl.get(j);  
 }  
 return arr;  
 }  
  
 public void showScatterDiagram() throws Exception {  
  
 DefaultXYDataset xydataset = new DefaultXYDataset();  
  
 *//根据类别建立数据集* data = this.getData();  
  
 xydataset.addSeries("", data);  
  
 JFreeChart chart = ChartFactory.*createScatterPlot*("scatter diagram", "C1-Grade", "physical-Grade",  
 xydataset,  
 PlotOrientation.*VERTICAL*,  
 true,  
 false,  
 false);  
 ChartFrame frame = new ChartFrame("散点图", chart, true);  
 chart.setBackgroundPaint(Color.*white*);  
 chart.setBorderPaint(Color.*GREEN*);  
 chart.setBorderStroke(new BasicStroke(1.5f));  
 XYPlot xyplot = (XYPlot) chart.getPlot();  
  
 xyplot.setBackgroundPaint(new Color(255, 253, 246));  
 ValueAxis vaaxis = xyplot.getDomainAxis();  
 vaaxis.setAxisLineStroke(new BasicStroke(1.5f));  
  
 ValueAxis va = xyplot.getDomainAxis(0);  
 va.setAxisLineStroke(new BasicStroke(1.5f));  
  
 va.setAxisLineStroke(new BasicStroke(1.5f)); *// 坐标轴粗细* va.setAxisLinePaint(new Color(215, 215, 215)); *// 坐标轴颜色* xyplot.setOutlineStroke(new BasicStroke(1.5f)); *// 边框粗细* va.setLabelPaint(new Color(10, 10, 10)); *// 坐标轴标题颜色* va.setTickLabelPaint(new Color(102, 102, 102)); *// 坐标轴标尺值颜色* ValueAxis axis = xyplot.getRangeAxis();  
 axis.setAxisLineStroke(new BasicStroke(1.5f));  
  
 XYLineAndShapeRenderer xylineandshaperenderer = (XYLineAndShapeRenderer) xyplot  
 .getRenderer();  
 xylineandshaperenderer.setSeriesOutlinePaint(0, Color.*WHITE*);  
 xylineandshaperenderer.setUseOutlinePaint(true);  
 NumberAxis numberaxis = (NumberAxis) xyplot.getDomainAxis();  
 numberaxis.setAutoRangeIncludesZero(false);  
 numberaxis.setTickMarkInsideLength(2.0F);  
 numberaxis.setTickMarkOutsideLength(0.0F);  
 numberaxis.setAxisLineStroke(new BasicStroke(1.5f));  
  
 frame.pack();  
 frame.setVisible(true);  
 }  
 public static void main(String[] args) throws Exception {  
 experiment2 my = new experiment2();  
 }  
}