// COSC 1320 Summer 2015

// Name: Adrian

// Programming Assignment 2

// This is my own work; I will not post

package programmingassignment2;

import javax.swing.JPanel;

import java.awt.BorderLayout;

import java.awt.Graphics;

import java.awt.Graphics2D;

import java.awt.Color;

public class ElectricalCircuit extends JPanel{

private boolean state = false;

private int top = 159;

private int bottom = top + 150;

private int left = 25;

private int right = 375;

private int midX = (right + left)/2+16;

private int midY = (top + bottom)/2;

private Graphics wires;

private String inputFile = "Programming Assignment 2 Data.txt";

ElectricalCircuit(){

setLayout(new BorderLayout());

setVisible(true);

}

@Override

public void paintComponent(Graphics g) {

System.out.println("paintComponent");

Graphics2D g2d = (Graphics2D) g;

wires = g2d;

drawSocket(g2d);

g2d.drawLine(left, top, right, top);

g2d.drawLine(right, top, right, bottom);

g2d.drawLine(right, bottom, midX+10, bottom);

g2d.drawLine(midX+10, bottom-20, midX+10, bottom+20);

g2d.drawLine(midX-10, bottom-10, midX-10, bottom+10);

g2d.drawLine(midX-10, bottom, left, bottom);

g2d.drawLine(left, bottom, left, midY+20);

g2d.drawLine(left, midY-20 , left, top);

if(state){

// System.out.println("onPaint: close");

closeGate();

} else {

// System.out.println("onPaint: open");

openGate();

}

// System.out.println("Finished painting.");

}

public void drawSocket(Graphics2D g){

int var = 15;

g.drawLine(midX-var, top-var, midX+var, top-var);

g.drawLine(midX+var, top-var, midX+var, top+var);

g.drawLine(midX+var, top+var, midX-var, top+var);

g.drawLine(midX-var, top+var, midX-var, top-var);

g.setBackground(Color.LIGHT\_GRAY);

g.fillRect(midX-var, top-var, 30, 30);

}

public void openGate(){

try{

state = false;

wires.drawLine(left, midY+20, left+30, midY-15);

// System.out.println("Open success: " + state);

} catch(Exception e){

// System.out.println("Open exception");

}

}

public void closeGate(){

try{

state = true;

// wires.dispose();

// System.out.println("Close success: " + state);

wires.drawLine(left, midY+20, left, midY-20);

} catch (Exception e){

// System.out.println("Close exception");

}

}

}