

```

1 package com.andb.csa.notes.graphics;
2
3 import com.andb.csa.library.StdDraw;
4 import javafx.util.Pair;
5
6 import java.awt.*;
7 import java.util.ArrayList;
8
9 /**
10  * Draws IntelliJ IDEA Logo
11  * @author Andy Burris
12  * @version 1 December 2019
13  */
14 public class StdDrawAssignment {
15     public static void main(String[] args) {
16         drawBackground();
17         drawBase();
18         drawText();
19         drawBar();
20     }
21
22     public static void drawBase(){
23         StdDraw.setPenColor(Color.BLACK);
24         StdDraw.filledRectangle(.5, .5, .325, .325);
25     }
26
27     public static void drawText(){
28         StdDraw.setPenColor(Color.WHITE);
29         StdDraw.setFont(getFont());
30         StdDraw.text(.3395, .525, "I");
31         StdDraw.text(.55, .525, "J");
32
33         //Draw "I" bars since Gotham-Medium is sans-serif (modified brand font?)
34         StdDraw.filledRectangle(.34, .7, .06, .0225);
35         StdDraw.filledRectangle(.34, .465, .06, .0225);
36     }
37
38     public static void drawBar(){
39         StdDraw.setPenColor(Color.WHITE);
40         StdDraw.filledRectangle(.25+.125, .26+.015, .125, .015);
41     }
42
43     public static void drawBackground(){
44         drawShape2();
45         drawShape3();
46         drawShape1();
47         drawShape4();
48     }
49
50     public static void drawShape1(){
51         ArrayList<Pair<Double, Double>> shape1 = new ArrayList<>();
52         shape1.add(new Pair<>(0.0, 0.6));
53         shape1.add(new Pair<>(.15, 1.0));
54         shape1.add(new Pair<>(.45, .96));
55         shape1.add(new Pair<>(.8, .61));
56         shape1.add(new Pair<>(.6, .5));
57         drawPolygon(new Color(254,49,93), shape1);
58     }
59
60     public static void drawShape2(){
61         ArrayList<Pair<Double, Double>> shape2 = new ArrayList<>();
62         shape2.add(new Pair<>(0.01, 0.4));
63         shape2.add(new Pair<>(0.175, 0.25));
64         shape2.add(new Pair<>(0.5, 0.5));
65         shape2.add(new Pair<>(0.175, 0.7));
66         drawPolygon(new Color(249,122,18), shape2);
67     }
68
69     public static void drawShape3(){
70         ArrayList<Pair<Double, Double>> shape3 = new ArrayList<>();
71         shape3.add(new Pair<>(0.65, 0.98));
72         shape3.add(new Pair<>(1.0, 0.7));
73         shape3.add(new Pair<>(0.98, 0.17));
74         shape3.add(new Pair<>(0.575, 0.0));
75         shape3.add(new Pair<>(0.25, 0.175));
76         shape3.add(new Pair<>(0.55, 0.825));
77         drawPolygon(new Color(10,123,249), shape3);
78     }
79

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80     public static void drawShape4(){
81         ArrayList<Pair<Double, Double>> shape4 = new ArrayList<>();
82         shape4.add(new Pair<>(0.1, 0.04));
83         shape4.add(new Pair<>(0.175, 0.4));
84         shape4.add(new Pair<>(0.5, 0.175));
85         drawPolygon(new Color(150,81,159), shape4);
86     }
87
88     public static Font getFont() {
89         Font font = null;
90
91         GraphicsEnvironment e = GraphicsEnvironment.getLocalGraphicsEnvironment();
92         Font[] fonts = e.getAllFonts(); // Get the fonts
93         for (Font f : fonts) {
94             if(f.getFontName().equals("Gotham-Medium")){
95                 font = f;
96             }
97         }
98         System.out.println(font.getSize());
99
100        return Font.getFont("Gotham-Medium", font.deriveFont(200f));
101    }
102
103    public static <K, V> Pair<ArrayList<K>, ArrayList<V>> split(ArrayList<Pair<K, V>> arrayList){
104        ArrayList<K> k = new ArrayList<>();
105        ArrayList<V> v = new ArrayList<>();
106        for (Pair<K, V> pair : arrayList){
107            k.add(pair.getKey());
108            v.add(pair.getValue());
109        }
110        return new Pair<>(k, v);
111    }
112
113    public static void drawPolygon(Color color, ArrayList<Pair<Double, Double>> coordinates){
114        StdDraw.setPenColor(color);
115        Pair<ArrayList<Double>, ArrayList<Double>> split = split(coordinates);
116        StdDraw.filledPolygon(split.getKey().stream().mapToDouble(d -> d).toArray(), split.getValue().
stream().mapToDouble(d -> d).toArray());
117    }
118 }
119

```