

HS2016_Course - Java - oop_why/src/oopwhy/WithoutOOP.java - Eclipse

```
1 package oopwhy;
2
3 import processing.core.PApplet;
4
5 public class WithoutOOP extends PApplet {
6
7     float a;
8
9     public void setup() {
10        stroke(0);
11        a = width;
12    }
13
14    public void draw() {
15        background(255);
16        rect(width-a, width/4, height/2, height/2);
17        ellipse(a, height/2, width/2, height/3);
18        line(a,0,a,height);
19        a = (float) (a - 1);
20        if (a < 0) {
21            a = width;
22        }
23    }
24
25    public void settings(){
26        size(360,360);
27    }
28
29    public static void main(String args[]){
30        PApplet.main(new String[]{oopwhy.WithoutOOP.class.getName()});
31    }
32 }
33
```

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```
3 import processing.core.PApplet;
4
5 public class WithOOP extends PApplet {
6
7     // public class Shape {
8     //     public void draw(){}
9     //
10    //}
11
12    public interface Shape {
13        public void draw();
14        public void step();
15    }
16
17    public class Triangle implements Shape{
18        int a = 0;
19        public void draw(){
20            triangle(a, a, a+10, a+20, a+20, a);
21        }
22        public void step(){
23            a++;
24            if (a > width) {
25                a = 0;
26            }
27        }
28    }
29
30    public class Ellipse implements Shape{
31        int a = width;
32        public void draw(){
33            ellipse(a, 200, 30, 50);
34        }
35        public void step(){
36            a = a -2;
37            if (a < 0){
38                a = width;
39            }
40        }
41    }
42
43    public class Rectangle implements Shape {
44        int a = height;
45        public void draw(){
46            rect(30, a, 40, 40);
47        }
48        public void step(){
49            a--;
50            if (a < 0) {
51                a = height;
52            }
53        }
54    }
55
56    Shape[] shapes;
57
58    public void setup() {
59        stroke(0);
60        shapes = new Shape[]{new Triangle(), new Ellipse(), new Rectangle()};
61    }
62
63    public void draw() {
64        background(0);
65        for (Shape shape: shapes){
66            shape.step();
67            shape.draw();
68        }
69    }
70
71}
```

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