

**Unit Nine Assignment Two:**

Write a superclass, `Point`, that has two instance fields, one for the `x` coordinate and one for the `y` coordinate. The header statement for the constructor must look like this...

```
public Point(int x, int y)
```

This class should contain a method that will plot an "\*" at the given coordinates, on a JApplet. The "\*" should be green. Because this method will also be called upon to assist in drawing Lines and Rectangles, you may need mutator methods to readjust both the `x` & `y` coordinates.

Write a subclass of `Point` called `Line`. It has only one instance field for the length of the line. The header statement for the constructor must look like this...

```
public Line(int x, int y, int len)
```

This class should contain a method that will call the `draw` method of the `Point` class `len` times. This same method will probably have to call the mutator methods of the `Point` class. For example, if the code that declares an object of type `Line` looks like this...

```
Line lin1 = new Line(2,3,5);
```

The output on the JApplet should look like this...

```
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-*****-----  
-----  
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```

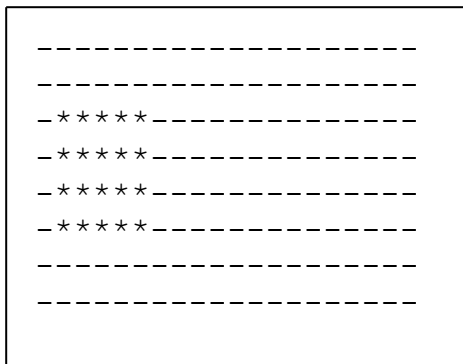
Write a subclass of Line called Rectangle. Do not allow this class to be extended! It has only one instance field for the width of the Rectangle. The header statement for the constructor must look like this...

```
public Rectangle(int x, int y, int len, int wid)
```

This class should contain a method that will call the draw method of the Line class *wid* times. For example, if the code that declares an object of type Rectangle looks like this...

```
Rectangle rec1 = new Rectangle(2,3,5,4);
```

The output on the JApplet should look like this...



Write a driver class that will set the background color of the JApplet to yellow and plot the 3 objects of type Rectangle declared below.

```
Rectangle r1 = new Rectangle(25, 30, 10, 5);  
Rectangle r2 = new Rectangle(75, 100, 15, 3);  
Rectangle r3 = new Rectangle(50, 200, 8, 12);
```

Your JApplet should look like the one attached to this assignment.

To complete this assignment, paste your JApplet into a Word document and turn it in with Point.java, Line.java, Rectangle.java, and u9a2.java.