

Programming Assignment 4-3

Copy your code from Lab 4-2 as a starting point.

Create an interface `Polygon`, and place it in the `good` package. Make the `Square`, `Triangle`, and `Rectangle` classes implement `Polygon`. `Polygon` should have two methods:

```
public int getNumberOfSides();  
public double computePerimeter();
```

(Recall that the perimeter of a polygon is the sum of the lengths of its sides.)

Note: Each of these figures can still inherit from `ClosedCurve` *and* implement the interface. The `implements` statement simply follows the `extends` statement in the declaration:

```
class A extends B implements C
```

Create a `Test2` class that works like `Test`, with `Polygon` in place of `ClosedCurve`, with these changes:

Start with an array of `Polygons` – one `Rectangle`, one `Triangle`, one `Square`. Use these dimensions:

Rectangle: width = 3, length = 4

Triangle: sides are 4,5,6

Square: side = 3

The output message in the `Test2` main class should contain the number of sides and the perimeter of each of the objects in the given array. Here is expected output:

```
For this Square  
  Number of sides = 4  
  Perimeter = 12.0  
For this Triangle  
  Number of sides = 3  
  Perimeter = 15.0  
For this Rectangle  
  Number of sides = 4  
  Perimeter = 14.0
```