```java
1  /**
2   * Abstract class AbstractShape - a skeleton for all of the shapes.
3   *
4   * @author (Kurt Mueller & Dennis Pavlyuk)
5   * @version (9/12/2019)
6  /**
7   * Rectangle is a child of AbstractShape and Shape.
8   *
9   * @author (Kurt Mueller & Dennis Pavlyuk)
10   * @version (9/12/2019)
11   */
12  public class Rectangle extends AbstractShape
13  {
14      private double length;
15      private double width;
16      protected static int numRectanglesCreated = 0;
17
18      public Rectangle(double len, double wid) //constructor
19      {
20          length = len;
21          width  = wid;
22          incrementNumRectanglesCreated();
23          incrementNumShapesCreated();
24      }
25
26      public double area()
27      {
28          double area = length * width;
29          return area;
30      }
31
32      public double perimeter()
33      {
34          double perimeter = 2 * (length + width);
35          return perimeter;
36      }
37
38      public double volume()
39      {
40          return 0.0;
41      }
42
43      public void incrementNumRectanglesCreated()
44      {
45          numRectanglesCreated++;
46      }
47
48      public void incrementNumShapesCreated()
49      {
50          numShapesCreated++;
```

```
51        }
52  }
```