

```
1 using System;
2
3 namespace OO_Tasks_Interface {
4     public interface IShapeProps {
5         double GetArea();
6         double GetPerimeter();
7     }
8
9     public interface ICircleProps {
10         double GetArea();
11         double GetCircumference();
12     }
13
14     public class Shape {
15         private string _name;
16         private string _colour;
17
18         public Shape(string name, string colour)
19         {
20             _name = name;
21             _colour = colour;
22         }
23     }
24
25     public class Quadrilateral : Shape {
26         public const int _NumSides = 4;
27
28         public Quadrilateral(string name, string colour) : base(name, colour)
29         {
30
31         }
32     }
33
34     public class Square : Quadrilateral, IShapeProps{
35         private double _sideLength;
36
37         public double GetArea()
38         {
39             double area = Math.Round((_sideLength * _sideLength), 2);
40             return area;
41         }
42
43         public double GetPerimeter()
44         {
45             double perimeter = Math.Round((_sideLength * _NumSides), 2);
46             return perimeter;
47         }
48         public Square(string name, string colour, double sidelength) : base
49             (name, colour)
50         {
51             _sideLength = sidelength;
52         }
53     }
54
55     public class Rectangle : Shape, IShapeProps {
56         private double _length;
```

```
56     private double _width;
57
58     public double GetArea()
59     {
60         double area = Math.Round((_length * _width), 2);
61         return area;
62     }
63
64     public double GetPerimeter()
65     {
66         double perimeter = Math.Round((( _length * 2) + (_width * 2)), 2);
67         return perimeter;
68     }
69
70     public Rectangle(string name, string colour, double length, double width) : base(name, colour)
71     {
72         _length = length;
73         _width = width;
74     }
75 }
76
77 public class Circle : Shape, ICircleProps {
78     public const double PI = 3.142;
79     private double _radius;
80
81     public double GetArea()
82     {
83         double area = Math.Round((PI * (_radius * _radius)), 2);
84         return area;
85     }
86
87     public double GetCircumference()
88     {
89         double circumference = Math.Round((2 * PI * _radius), 2);
90         return circumference;
91     }
92
93     public double GetPerimeter()
94     {
95         double perimeter = Math.Round((2 * PI * _radius), 2);
96         return perimeter;
97     }
98
99     public Circle(string name, string colour, double radius) : base(name, colour)
100     {
101         _radius = radius;
102     }
103 }
104 }
```