Exercise 06 - OOP: Inheritance & Polymorphism

Create the header file named `Shape.h`, define each problem in it. Afterward, test each concrete class.

1. In the namespace *dsw*, define Interface *Shape2D* that contains
   - a public pure virtual double constant method named `area()` that takes no parameters.
   - a public pure virtual double constant method named `perimeter()` that takes no parameters.
   - a public pure virtual string constant method named `toString()` that takes no parameters.
   - a friend overloaded ostream operator that displays the invocation of the `toString()` method.
2. In the namespace *dsw*, define abstract class *RegularPolygon* that publicly inherits *Shape2D* and contains
   - a private double field named *lth*.
   - a public default constructor that assigns 1 to *lth*, respectively.
   - a public copy constructor.
   - a public overloaded assignment operator.
   - a public empty destructor.
   - a public double constant method named `length()` that takes no parameters and returns *lth*.
   - a public pure virtual integer constant method named `sides()` that takes no parameters.
   - a public void method named `length()` that takes a double parameter. It assigns the parameter to *lth* only if the parameter is positive.
   - a public overridden `perimeter()` that returns the product of *lth* and the invocation of `sides()`.
3. In the namespace *dsw*, define class *Square* that publicly inherits *RegularPolygon* and contains
   - a public overridden `sides()` method take returns 4.
   - a public default constructor that assigns 1 to *lth*.
   - a public overloaded constructor that takes a double parameter and assigns it to *lth* only if the parameter is positive; otherwise, it assigns 1 to *lth*.
   - a public copy constructor.
   - a public overloaded assignment operator.
   - a public empty destructor.
   - a public overridden `area()` that returns the square of *lth*.
   - a public overridden `toString()` that returns a string in the format

     `[[`x`]]`

     where x is the value of *lth* with 2 decimal points.