North South University
Department of Electrical and Computer Engineering
CSE 215L: Programming Language II Lab
Lab – 10 Topic(s): Abstract Class

Lab Task:
1. Triangle class can extend an abstract class named GeometricShape. Convert the following UML diagrams into Codes.

GeometricShape
- color: String

// constructors
// setters
// getters
+ getArea(): double
+ getPerimeter(): double
+ toString(): String

Triangle
- a: double - b: double - c: double

// constructors
// setters
// getters
+ getArea(): double
+ getPerimeter(): double
+ toString(): String

Now write a test program that performs the following steps:

- Create an array of 2 Triangle instances by user input values
- Print their properties, area, and perimeter using the given methods

[Hint: We know that, for a triangle with 3 sides: a, b, and c
The semi-perimeter of triangle, $s = (a + b + c)/2$ and
The area of triangle, $A = \sqrt{[s \times (s - a) \times (s - b) \times (s - c)]}$