Assignment # 01

CSE225L: Data Structures and Algorithm Lab

Please read each of the following instructions carefully before proceeding to the questions:
- After performing each task take a **whole window** screenshot of the output of each task.
- Put only the **relevant** project files (main.cpp/screenshot/header files) in a folder.
- Rename the folder as **ID_Name_AssignmentNumber** (eg. 1620000042_Bob Alice_A2)
- Upload the folder in your own google drive and create a link (sharing option should not be Restricted)
- Copy and Paste the link then press the Turn In button.
- Once you submit the assignment, do not delete the folder from google drive or Unsubmit.
- Failure to meet any of these requirements will incur a **100% penalty**.
- Late Submission will incur a 25% penalty per day.
- If you plagiarize in any way, your submission will be rejected and you will get straight 0.
- This assignment contains 10 points in total.

Tasks:

Create the following classes.

1. Triangle:

    a. Properties: side1, side2 and side3. Properties should be private and should be of double datatype.
    b. Functions:
        i. Constructor function with parameters to assign values to the properties.
        ii. Constructor function to overload default constructor (a constructor with no parameter). Set zeros to all properties.
        iii. Getter and setter functions for all properties.
        iv. getArea() function that returns the area of the Triangle.
        v. getPerimeter() function that returns the perimeter of the triangle.

2. Fraction:
    a. Properties: numerator and denominator. Properties should be private and of int datatype.
        i. Constructor function with parameters to assign values to the properties. You need to check if the value of the denominator is set as 0 by the user. If done so, you should change it to 1.
        ii. Constructor function to overload the default constructor (a constructor with no parameter). You should assign 0 to the numerator and 1 to the denominator.
        iii. Getter and setter functions for all properties.

Finally create two objects of each class (two Triangle objects and two Fraction objects). One of the two objects should be created using the normal constructor and the other should be created with the parameter-less constructor. You need to do this in the driver (main.cpp) file.