CS 1400 Lab #10: The Hypotenuse method

Introduction

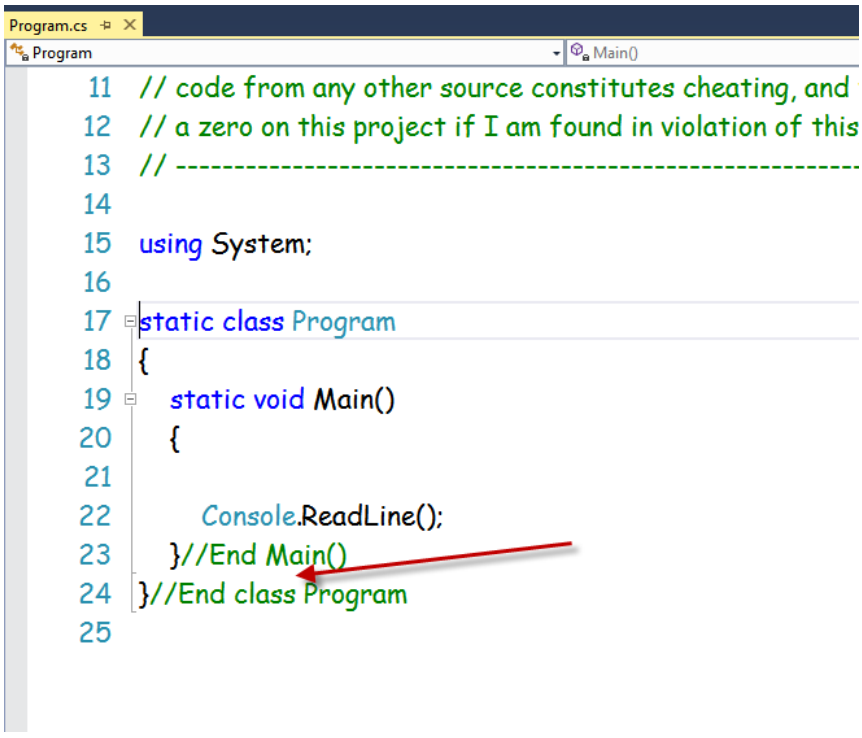
In this exercise, you will design a method using the pseudo-code programming process and then create a Console program that uses that method.

The problem

For this assignment you will create a method that takes the length of two sides of a triangle as its parameters. The method will then calculate and return the length of the hypotenuse of the triangle. The formula for calculating the hypotenuse of a triangle is $c = \sqrt{a^2 + b^2}$

Writing the Pseudo-code

Open Visual Studio and start a new Console application. The Visual Studio code window should now contain code that looks something like this:



You will put the code for your Hypotenuse function where the red arrow points, just after the closing curly brace for Main( ), but before the

closing curly brace for the class Program. Start the method by writing a method prologue for your Hypotenuse method. Following the method prologue write this code:

```
static double CalcHypotenuse(double side1, double side2)
{

}
```

Now, between these curly braces write the pseudo-code that takes the two parameters and uses them to calculate and return the hypotenuse of the triangle. Avoid the temptation to just write a single line of pseudo-code. Break the formula down into several small steps. The Math class has a method called Math.Sqrt( ) that will find the square root of the number passed in as its parameter.

Writing the Code

Add the C# statements to your CalcHyptenuse method that implement each step of your pseudo-code. Then in main write a program that does the following (You could use these steps as the pseudo-code for your Main).

1. Ask the user to enter the length of one side of a triangle.
2. Get the user's input and saves it in an appropriate variable.
3. Ask the user to enter the length of the other side of the triangle.
4. Get the user's input and saves it in an appropriate variable.
5. Call your CalcHypotenuse method and pass in the lengths of the two sides of the triangle as parameters.
6. Save the value returned by the method in an appropriate variable.
7. Properly label and display the value returned by the method.

When you are satisfied that your program works correctly, submit it to Canvas.

File(s) to Submit:

Place your complete project folder in a zip file and name the zip file lab_10_your-initials_V1.0.zip. For example, I would name my file lab_10_RKD_V1.0.zip. Submit this assignment as Lab #10 on Canvas.

Grading Guidelines

Description	**Points possible**
Assignment meets grading guidelines: o Source code files contain a declaration that you did not copy any code, except that provided.	

o Assignment has been properly submitted to Canvas o Code meets style guidelines	2
Your program works correctly and meets the above specifications.	3
Total	5