Lab Assignment: Fun with Function

In this assignment, we are going to solve two programs. This is an excellent opportunity to understand function. We will design functions and send parameters to them. Please study the following two questions and prepare a program for each question. Please submit the two programs on the Blackboard website by Wednesday, 8 April 2020.

Question 1: Write a value returning function that receives three integers and returns the largest of the three. Assume the integers are not equal to one another.

Function name: findMaximum
Parameters: firstVal, secondVal, thirdVal (all integers, all passed by value)
Return value: the function will return the maximum value out of firstVal, secondVal, and thirdVal variables. The return value would be integer type.

Example: If you send 10, 5, and 100 as parameters to the function findMaximum then the function will return the maximum value, 100.

Lastly, show how this function will be used in the main function. Send three literal values to this function and store the returned value into an integer variable named, max. Display the variable max by using cout in your program

Question 2: Write a void function that receives two double type parameters. The first parameter named, radius is passed by value. The second parameter named, areaVal is passed by reference. In the function body, we need to calculate the area of a circle and store it in the variable areaVal. Please note, you can use the equation, (PI * radius * radius) to calculate the area of the circle. You can assume that the value of PI is 3.142

Function name: calculateCircleArea
Parameters: radius (double, passed by value), areaVal (double, passed by reference)
Return value: void, it does not return anything

Example: If we send 10 as radius and circleArea variable as the second parameter to this function, as calculateCircleArea(10, circleArea), then, after the function call, in the circleArea variable we will have the calculated area value, 314.2

Finally, in the main program show how we can call the calculateCircleArea function. You can use a literal value as the radius. Display the circleArea variable by using cout in your program.