

C++ 1 - Assignment4

Goal

The goal of this assignment is to get to know function overloading, reference type parameters, the call stack and to keep working with classes.

Note: All answers requiring written answers:

- Just write the answers using comments in the main.cpp file.

Steps

1. Explain in as much detail as possible, how this variable stored in memory?
 - `int number = 10;`
2. What is the difference between passing a variable into a function by reference vs. passing it by value?
3. Write 3 overloaded **Swap** functions (The functions should share the name **Swap** [hence being overloaded]):
 - Integer Swap - Takes two integer reference parameters. Returns nothing.
 - Boolean Swap - Takes two boolean reference parameters. Returns nothing.
 - String Swap - Takes two standard string reference parameters. Returns nothing.

Note: The parameters to these functions should be **reference** parameters. Meaning, the variables should be **passed by reference**.

In the Swap functions, swap the **values** of the two parameters.

4. These functions should be contained within a class.
 - This class should have 1 public method(function) called **Run**.
 - This Run method will call the 3 private Swap methods.
 - Create an instance(object) of this class in main and call the Run method.
5. Explain in words how the **Call Stack** behaves for this entire program.
 - Explain what is happening every time a function is called and what the overall stack looks like in each function.
 - Use the key words: **Stack Frame**, **Push** and **Pop**

Due Date

This assignment has a **HARD DUE DATE** of: **October 18th, 2017** at **11:59:59 PM!**

Please, do your homework! If you need help feel free to email me anytime!