

CS 1400 Lab 21: Fixing the Swap Method

Introduction

In this exercise, you have been provided with a program that contains a method where the parameters are passed by value. You will modify this program so that the parameters are passed by reference.

The problem

In this program we have a method that is supposed to interchange the values contained in two different variables. As written, the program does not work. Your task will be to fix the program so that it works correctly.

The Code

Download the code located [here](#).

```
// File Prologue
// Name: your name
// CS 1400 - your section
// Project: Passing Parameters by value and by reference
// Date: Today

using System;

class Program
{
    static void Main()
    {
        int number1 = 10;
        int number2 = 15;

        // call the Swap method and output the result
        Swap(number1, number2);
        Console.WriteLine("number1 = {0}", number1);
        Console.WriteLine("number2 = {0}", number2);

        Console.ReadLine();
    }

    // The Swap method
    // Purpose: To interchange the value of two variables
    // Parameters: two integers
```

```

// Returns: None
// Pre-conditions: None
// Post-conditions: None
// Side Effect: the values of the 2 integers are
swapped

static void Swap(int n1, int n2)
{
    int temp = n1;
    n1 = n2;
    n2 = temp;
}
}

```

Download the program above and save it in your lab22 folder. Create a new C# project and copy this file into the project. Compile and execute the program. You will notice that the program does not work. The values of the two integers are not changed.

Change this code so that the values are passed by reference. Compile and execute the program.

Add comments at the end of your program that explain why passing the parameters by reference make the program work correctly.

File(s) to Submit:

Place the your complete project folder into a zip file and name the zip file lab_21_your-initials_V1.0.zip. For example, I would name my file lab_21_RKD_V1.0.zip. Submit this assignment as Lab #21 on Canvas.

Grading Guidelines

Description	Points possible
Assignment meets grading guidelines: <ul style="list-style-type: none"> 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 o Code contains a Console.ReadLine() statement at the end 	2
Comments added that explain why the program now works correctly.	2
Program executes correctly	1
Total	5

