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Class: CS3337

Homework: Example 2 Basics

Due Date: 01/25/2022

# Sum of Integers Problem

* 1. What was your test plan for this function that you used to determine it worked correctly?

To test the function, I inputted positive integers where n1=2 < n2=6 and manually computed the sum of integers between 2 and 6 inclusively to be 20. The program got a result of 20 also. Then, using n1=-5 > n2=-8, I manually computed the sum of the integers between -8 and -5 to be -26. The program got a result of -26 also.

# Leap Year Problem

1. What was your test plan for this function that you used to determine it worked correctly?

To test the function, I inputted 1996 since it was given to be a leap year and the program returned a 1, indicating it was a leap year. I also input 1900 as it is not a leap year and the program returned a 0, indicating it is not a leap year. The year 2000 was input and the program returned a 1.

# ASCII Value Problem

The ascii value for 45 is – while the ascii value for 97 is a. If you remove the static\_cast from the return statement, GCC 11 handles and interprets the input to be a casting event for n to a character due to the return type being a character and so despite not explicitly being cast, the compiler casts the value.

# Pointer Problem

The code will output the value of n which is 5 because the pointer’s value to the reference is incrementing, not n.

# a,b While Loop Problem

If we take n=5; a=5; b=10; sum=15; sum wil stay the same throughout while a increases to 8 and b decreases to 7. The sum does not change if the two numbers increment and de-increment equally. Therefore, the return in a general case will be sum=3n.