**Take Home Program #2 – Due on or before February 26, 2019 –**

**Objectives:** Apply if / else statement, modulus (%) and relational operators

|  |
| --- |
| **Important instructions:**   * *All programs must include comments at the top of your program: your name,* the class name (CSIT 575)*, program name and* ***the program description (purpose of the program).*** * *Copy and paste your* ***program code*** *and* ***output*** *in Part B of each program. Note: Use snipping tool to snip the output.* * *Once it is done, save and submit this word file via Canvas.* |

1. **SumOfDigits.cpp program**

Write a program that prompts the user to enter an integer between 1 and 999.

The program first validates the number is not negative.

If the number is negative, the program displays a message asking to re-enter another number otherwise calculate the sum of digits and display on the screen.

**Sample run 1**

Enter a number between 1 and 999: -859  
Number must be positive, try again!

**Sample run 1**

Enter a number between 1 and 999: 859  
The sum of the digits is 22

**Part A: Pseudocode**

**Purpose of the program:**

**Input or given data:**

**Processing:**

**Output:**

**Part B: Copy and paste your program (source) code and the outputs after this line  
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++**

1. **SumOfRandom.cpp**

Write a program that asks a student to calculate the sum of three random numbers generated by the computer in a range of 15 - 40. After the student has entered an answer and pressed the [Enter] key, the program should display the feedback messages as in the sample runs below

**Sample run 1**

What is the sum of the following three random numbers?

Total: 37 + 15 + 40 =? 55

Your answer is wrong.

Total should be: 92

**Sample run 2**

What is the sum of the following three random numbers?

Total: 22 + 19 + 32 =? 73

Congratulations! You are correct!

**Part A: Pseudocode**

**Purpose of the program:**

**Input or given data:**

**Processing:**

**Output:**

**Part B: Copy and paste your program (source) code and the outputs after this line  
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++**