# COSC 2425 - Project 2

## Part 1

Implement the following C++ code fragment in assembly language. Use the block structured **.IF** and **.WHILE** directives. Assume that all variables are 32-bit integers.

int array[] = {3,1,4,1,5,9,2,6,5,3,5,8,9,7,9,3,2,3,8,4,6,2,6,4};

int lower = 4;

int upper = 9;

int ArraySize = sizeof array / sizeof lower;

int index = 0;

int sum = 0;

while( index < ArraySize )

{

if( array[index] >= lower && array[index] <= upper )

{

sum += array[index];

}

index++;

}

Your assembly language program must also display as output the number of times a member of 'array' qualified for inclusion into the 'sum' and what the final value of the variable 'sum' was. (Hint: you may have to add another variable.) Feel free to use the author's procedures in the book's link library. Use only the procedures that were introduced in chapter 5.

## Part 2

Write an assembly language program that asks the user to enter an integer dollar amount between 1 and 3,000. Your program should display the corresponding class description using the following table. Write the program so that it executes until the user inputs some value that you determine to be the "sentinel value". Your program must guard against and provide user messages for input values that are outside the valid range.

| **Donation Amount (dollars)** | **Class of Donation** |
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| $1,500 to $1,999 | Gold |
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