CMPS 351: Spring 2014 Program #2
Date assigned: Thursday, March 6, 2014 Due: Thursday, March 20, 2014

For this project, you will write a MIPS assembly language program to calculate the maximum value of a substring of a set of integers. Your program should request and read integers from the console and print a running result after each integer is entered. In C++, this could be written as:

```
int data = substring = result = ints = 0;
cout << "Enter the number of integers in the list:  "
cin  >> ints;
for (int i = 0; i < ints; i++) {
      cout << "Enter an integer:  ";
      cin  >> data;
      result = max( result, substring=(substring > 0) ? substring + data :
data);
      cout << "The largest sum of a substring is " << result << ".\n";
}
```

Your program should include appropriate comments indicating what the code should be doing and what registers are being used for. After displaying the results, your program should exit cleanly. Please include your name and CLID in the program headers and include your CLID in the file names. Your programs should be turned in through Moodle before class starts on the due date. You should test your programs using the SPIM simulator to ensure their functionality before submitting them.

Example output:

```
Enter the number of integers in the list:  5
Enter an integer:  2
The largest sum of a substring is 2.
Enter an integer:  -3
The largest sum of a substring is 2.
Enter an integer:  6
The largest sum of a substring is 6.
Enter an integer:  -1
The largest sum of a substring is 6.
Enter an integer:  3
The largest sum of a substring is 8.
```

Objectives:

1. To introduce the SPIM simulator for the MIPS assembly language.
2. To introduce and practice writing MIPS assembly language programs.