# CS264 Spring 18 Project 3
# Total points: 100

Submission Instruction: You must run the assembly program using the SPIM simulator. Please zip the following files:

> The assembly program(s) (using file extension .asm) and log files showing the state of SPIM at program completion and the console.
>
> Readme.txt (you should explain how to run your program.)
>
> You need to provide log files. After your program terminates, click on [File->Save log File] and select all of the checkboxes. This will save your console output, registers, and memory on one log file.

Submit your zip file via Blackboard

**Project Specifications:**

Write a program that accepts integer values from user input. You must first prompt the user for the quantity of integers to be read. These integers must be stored in the stack.

You must write a subroutine that will handle the insertion of the integer onto the stack. The subroutine will take as its arguments the integer to be added then it will make room for it by decrementing $sp. This means that the stack should grow only when an integer is added. The subroutine will then insert the integer into the stack so that the contents of the stack are sorted. The subroutine must control the stack pointer.

After all n integers have been added the main method should print the sorted stack.

The pseudo code:

```
main:
        int i = 0
        n = readUserInput("qty of ints to store")
        while(i < n)
                val = readUserInput("enter integer: ")
                priorityArray.insert(val)
                i++
        wend

        print "your sorted ints"
        i = 0
        while(i < n)
                print priorityQueue[i]
        wend
```