Write a MIPS assembly language program to sort an array using bubble sort. Your .data section for the array values should be:

```
.data
array: .word 20, 30, 10, 40, 50, 60, 30, 25, 10, 5
length: .word 10
```

```
.text
.globl main
main: # MIPS Assembly language program here
    li $v0, 10 # system call to exit the program
    syscall
```

The high-level language algorithm for bubble sort is:

```
for lastUnsortedIndex = (length-1) downto 1 do
    for testIndex = 0 to lastUnsortedIndex-1 do
        if array[testIndex] > array[testIndex + 1] then
            temp = array[testIndex]
            array[testIndex] = array[testIndex + 1]
            array[testIndex + 1] = temp
        end if
    end for testIndex
end for lastUnsortedIndex
```

You can download the MIPS simulator at: [http://sourceforge.net/projects/spimsimulator/files/](http://sourceforge.net/projects/spimsimulator/files/)

For Window’s OS, you will want the PCSpim_9.1.9.zip

You should turn in:
- a print-out of the MIPS assembly language program, e.g., hw7.s from any text-editor (e.g., WordPad)
- a window capture of the PCSpim simulator after running your assembly language program with array values above. Make sure the sorted array values are visible in the data section of the screen capture.

- You can capture this window by (1) right-clicking anywhere in the window to make it the "currently active" window, (2) while holding down the <Alt> key, press the <PrtScn> key to capture the window into the Window’s clipboard, and (3) open some word processor (Word, Open Office, etc.) and paste the image into the document. Add your name to this document before printing it.