Programming Project 2

CS 219

Due: 30th of April 2020 at 23:59 (11:59 pm)

Step 1

Write a C language program to accomplish the following: Look through a list of type unsigned char, find the largest value, and print it to the screen. Use normal C variables.

Step 2

Compile your program, and output an assembly file. I recommend method 2.

Method 1 – GCC

On your Pi run the following command:

gcc -S your_file.c

This will output your assembly file with the extension .s

Method 2 – Godbolt.org

Go to https://www.godbolt.org, and input your C source in the left panel. **Remember to set your compiler to ARM gcc 8.3.1 (none)**

Step 3

Make some observations and pick apart the assembly code. Try to understand at least a few lines of the assembly code and compare and contrast it to the original C source. This is not an essay class so your observations and thoughts can be formatted any way. I recommend looking at the ARM references found on the Webcampus to try and help you understand what is going on.

What to turn in.

- Original C source
- Generated Assembly
- Your observations