Lab #2: Basic Assembly Programming

Due date: Thursday, 9/26/24

Coding Assignment (20 points in total)

We will use Venus RISC-V simulator for the lab. To get started with Venus, here is the web interface: http://venus.cs61c.org

Two sample assembly code files (**fib.s, fact.s**) are attached on the Canvas. Run the **fib.s** to start for the Venus interface. Read through the **fib.s** and make sure you understand every single line of code.

Task 1: Print fibonacci sequence (8 points)
Based on **fib.s**, please rewrite the code to print the sum of the full Fibonacci sequence from fib(0) to fib(n) when n is given.
For example, if n = 5, print out 12. (you print out 12 because 12=fib(0)+fib(1)+...+fib(5))

Test your program by giving n different values. Please save the screenshot of the two following test cases:
1) n = 6
2) n = 14
Save your code as **task1.s,** and submit it to the Canvas. (to help understand your code, please annotate when necessary)

Task 2: Sum up an array (8 points)
Code with risc-v to implement the sum of an array ***A*** as **task2.s. *A*** should have 30 elements while each is in the range of $[-2^{26},2^{26}-1]$.

(You can refer to the example on slide 61 of the handout of CS350 L7-12 Instruction Set.pptx.pdf)

Test your program with different values of A[i]. Please save the screenshot of the two test cases.

Save your code as **task2.s,** and submit it to the Canvas. (to help understand your code, please annotate when necessary)

What to submit:

1. Your source code files **task1.s, task2.s**.
2. A **report** (4 points) with your name, and two screenshots and your observations of the lab.