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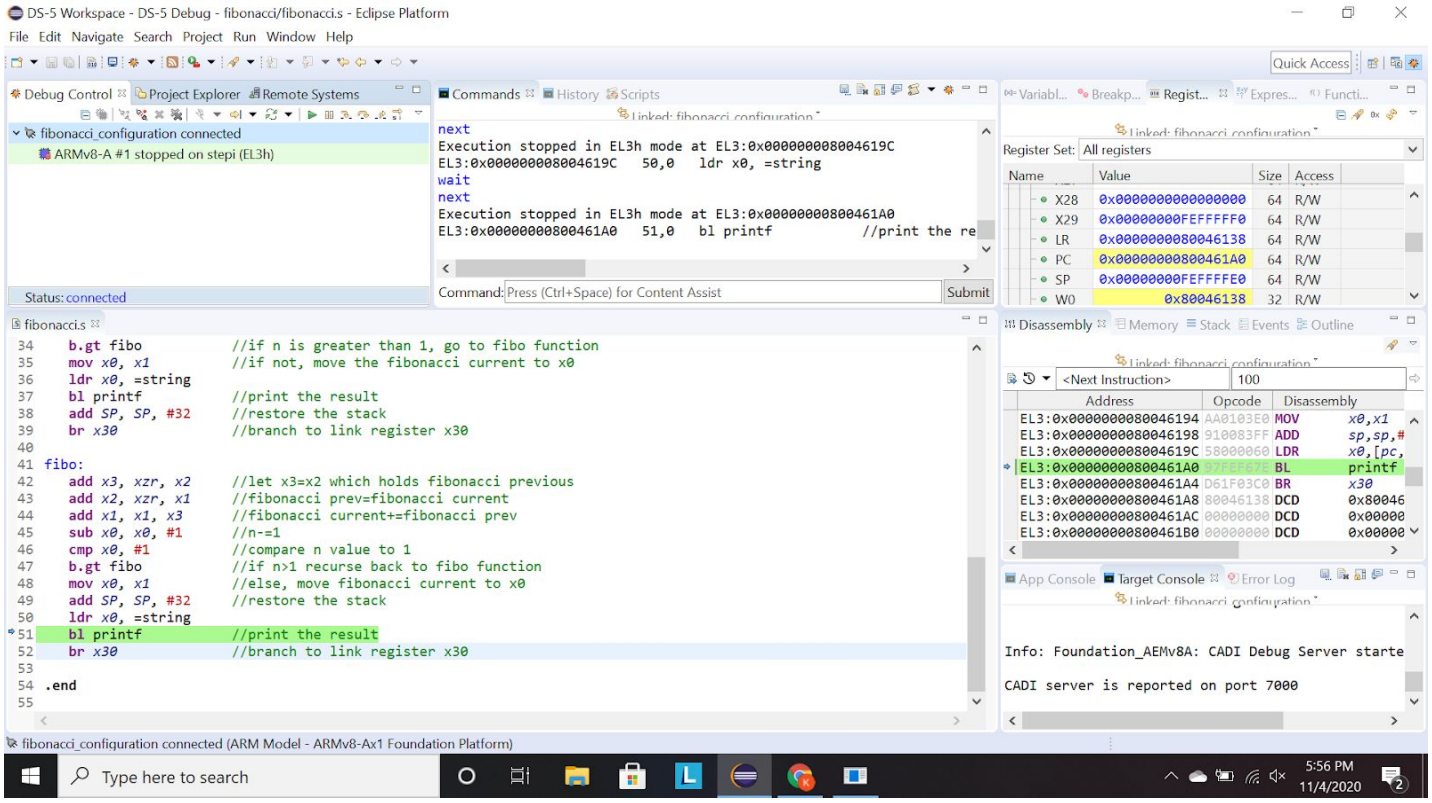
I pledge my honor that I have abided by the Stevens Honor System.

Project 1: Fibonacci

1. I started by using .equ to take in the n value
2. After this I made space for 4 variables on the stack:
    a. The n value is held in x0
    b. Fibonacci current is held in x1
    c. Fibonacci previous is held in x2
    d. Temporary value is held in x3
3. Then I used mov to store the n value in register x0, so x0 = n
4. Then I set the initial values of all the registers:
    a. x1 = 1
    b. x2 = 0
    c. x3 = 0
5. After this I compared the value in x0 with 1 using cmp, and if the value is greater than 1, branch to the fibonacci function called "fibo", if not move the Fibonacci current value from x1 to x0, print the result, restore the stack pointers, and branch to the link register x30
6. When "fibo" is called, it executes the recursive O(n) fibonacci algorithm:
    a. Set the temporary variable in x3 to fibonacci previous from x2
    b. Set fibonacci previous in x2 to fibonacci current from x1
    c. Set fibonacci current in x1 to the sum of fibonacci current from x1 + temporary variable from x3, (x1 = x1+x3)
    d. Decrease n by 1 and check if n > 1:
        i. if n > 1, branch to "fibo" again
        ii. if n ≤ 1, move the Fibonacci current value from x1 to x0, print the result, restore the stack pointers, and branch to the link register x30

Before Link Register Changes Value (for n = 2):



After Link Register Changes Value (for n = 2):