CS371 Assignment3 Analysis, Design, and Plateau Schedule

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Plateau Schedule:

1. Be able to read in from a hard-coded array
2. Be able to read in from user-input array
3. Be able to iterate through array indeces and print out(for testing purposes)
4. Multiply respective array indeces and store in register
5. Add register to register holding sum and print
6. Clean-up code, procs etc.

Analysis & Design

For this assignment the biggest hurdle was going to be properly reading user input to populate an array and finding an efficient way to multiply values and summate them in a manner that would allow the program to work without compromising registers. I had originally implemented a different version of my code but I found when I was reading in from user input to create arrays, somewhere along the lines, registers needed were being destroyed that were used to get my sum. After resolving that issue, the only thing that required a lot of attention was the format of my loops so that I could read in properly and perform the arithmetic. Printing out to the user was not an issue entirely, although it took some fiddling around with to get the desired output formatted correctly.

Test Cases:

A = {1,1,1,1,1} B = {1,1,1,1,1} output = 5 12 + 12 + 12 + 12 + 12 = 5

A = {1,3,5,7,9} B = {2,4,6,8,10} output = 190 (1\*2)+(3\*4)+(5\*6)+(7\*8)+(9\*10) = 190

A = {1,2,3,4,5} B = {6,7,8,9,10} output = 130 (1\*6)+(2\*7)+(3\*8)+(4\*9)+(5\*10) = 130

A = {0,0,0,0,0} B = {0,0,0,0,0} output = 0 0 + 0 + 0 + 0 + 0 = 0