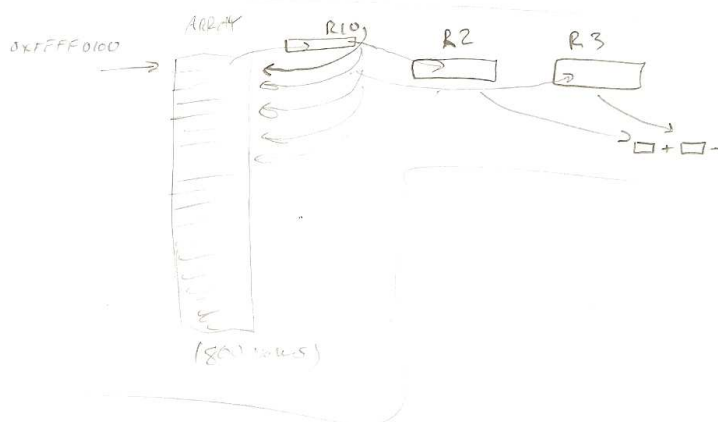


5. Data structure question. Consider the situation where a user has an array of words. The operation that is to be performed on this array of data is to sum all of the elements. The array starts at address 0xFFFF0100 (and progresses to higher addresses). Create code that will calculate the sum of the first 800 values of this array.

STACK TIME with counter

- ① So First I will assign a register to become the pointer (R10)
- ② set the register to point at 0xFFFF0100 how
- ③ The pointer will take the value of that location in memory and put it in the register (R2)
 $R2 \leftarrow R3$
- ④ assign 2 registers to hold values one will hold the value the pointer gives it and the other will hold the result of the sum of the values
- ⑤ the offset of R10 will be incremented to move through the array
- ⑥ Add two $R2 \leftarrow R3$ and put result into R3



- ⑦ repeat 800 times so there will be a counter as well