

- (1) The last digit of my student ID is 9, and the data at memory at x3015 is x0015.
- (2) The function of the code is to calculate the i-th position of the Fibonacci sequence(if the input is 0, 1 or 2, the output is 0). Below is a simple table which shows some input and its output(decimal):

Input	3	4	5	6	7	8	9
output	1	2	3	5	8	13	21

(3) x300C: ADD R4, R2, R3. If the numbers in R2 and R3 are too large, the number in R4 may overflow, which means that the input value in x3014 has an upper bound since the output value is much larger than the input value. So in order to avoid overflow, the input should not be too large.

Before: Clearing register is missing. It may affect the result.

Possible solution: Add an BRN after adding R2 and R3 to R4(x300C). If the value in R4 is negative, the overflow takes place, which means the output is too large. Once the value in R4 is negative, the program halts and reports the occurrence of the error in the meantime.

Adding AND Ri Ri #0 for all i that is used in the program.