**Algorithm explanation**

My program is LC-3 Executor and my main method to implement this program is mimicking the LC-3 state machine. First, I construct memory and various registers. Then I initialized the memory and registers, read the machine code and store it in memory. After I finish that, I begin to read instructions form the starting address. When an instruction is read, the program will enter a instruction cycle—— ‘FETCH’, ’DECODE’, ‘EVALUATE ADDRESS’, ‘FETCH OPERANDS’, ‘EXECUTE’, ‘STORE RESULT’. For each instruction, I design a function so that after the program halts, it will output the right result.

**Essential parts of your code with sufficient comments**























