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## Write an assembly language program of fibonacci series in 8085 microprocessor

LXI H,3050
MVI $\mathrm{D}, 10$; D is counter ( $\mathrm{D}=10$ )
MVI B,00 ; B=00
MVIC,01 ; C=01
MOV M, $B$; Copy the content of $B$ at memory location $\mathbf{3 0 5 0}$ that is $\mathbf{0 0}$
INX H ; increment the HL pair that is 3051
MOV M, C ; Copy the content of $C$ at memory location $\mathbf{3 0 5 1}$ that is $\mathbf{0 1}$
LOOP: MOV A,B ; now $A=B=00$
ADD C ; $A=A+C=>A=0+1=1$
MOV B,C ; B=C=> 1
MOV C,A ; C=A=>1
INX H ; increment the HL pair that is 3052
MOV M,A ; Copy the content of A at memory location 3052 that is $\mathbf{0 1}$
DCR D ; Decrement counter that become 9
JNZ LOOP ; go to the LOOP if value of counter is not zero
HLT ; terminate the program execution if counter become 0
Result:

| Memory Location | Data value |
| :--- | :--- |
| 3050 | 0 |
| 3051 | 1 |
| 3052 | 1 |
| 3053 | 2 |
| 3054 | 3 |
| 3055 | 5 |
| 3056 | 8 |
| 3057 | 13 |
| 3058 | 21 |
| 3059 | 34 |

