**FIBONACCI SERIES CODE FOR CORTEX M4**

AREA myseccode, CODE, READONLY

EXPORT \_\_main

ENTRY

\_\_main FUNCTION

MOV R0, #00 ;INITIALIZE f[0]=0

MOV R1, #0x01 ;initialize f[1]=1

MOV R3, #0x05 ;number=5 (n=5) i.e. the Fibonacci series is extended till 5 numbers

MOV R5,R3

ADD R4,R0,#0x02 ;INITIALIZE i=2

CMP R4,R3

BGT endw ;FOR i>number ends program

LOOP

ADD R2,R0,R1

MOV R0,R1

MOV R1,R2

SUB R5,R5,#01

CMP R5,#01

BGT LOOP ;R2 stores the nth number in Fibonacci series

endw

STOP B STOP

ENDFUNC

END