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AREA    AsmTemplate, CODE, READONLY
        IMPORT  main

        EXPORT  start
start

//Labels & Values
IODIR0  EQU     0xE0028008
IOSET0  EQU     0xE0028004
IOCLR0  EQU     0xE002800C
IOPIN0  EQU 0xE0028000
PINSEL0 EQU 0xE002C000

        LDR R0,=PINSEL0                                 //R0 = P0 Selection P0-PX

        LDR R1,=0x00000000
        STR R1,[R0]                                     //Select port 0 as GPIO mode

        LDR R0,=IODIR0                                  //Outputs
        LDR R1,=0X0000FF00                              //PinMask to select P.08 as start pin of output
        STR R1, [R0]                                    //Outputs = PinMask

        LDR R4, =array                                  //Hex codes array
        LDR R5, =arrayN                                 //Hex codes array size
        LDR R5, [R5]

reset
        LDR R6, =0                                      //Counter

while
        CMP R6, R5                                      //while(counter<=arraySize)
        BGE reset

        LDR R2,=IOCLR0                                  //R2 = LED ON
        LDR R3, [R4, R6, LSL #2]                        //value = valAt(array.startAddress+offset)
        STR R3,[R2]                                     //Display Value

delay
        LDR R4,=2000000                                 //Delay for about 1/2s
dloop
        SUBS R8, R8 ,#1
        BNE  dloop

        LDR R2,=IOSET0
        STR R3, [R2]                                    //Turn off LEDs
        ADD R6, R6, #1                                  //counter++
        B while


stop    B       stop

        END
```