```
1   GPIOB_ODR EQU 0x40010C0C
2   LEDDELAY EQU 0x09FFFF
3   MAXVAL EQU 8192
4           AREA ARMex, CODE, READONLY
5           ENTRY
6   __main PROC
7           EXPORT __main
8           IMPORT initports
9       bl initports
10  top mov r2, #31 ; Load R2 with count starting value
11      ldr r6, =GPIOB_ODR ; load r6 with Port B output data register address
12  loop
13      str r2, [r6] ; send current value of counter out Port B
14      ldr r1, =LEDDELAY ; delay so we can see the count
15  delay1
16      subs r1, #1 ; subtract 1 from delay value
17      nop ; do nothing
18      bne delay1 ; loop until you reach zero
19
20      add r2,#128 ; increment count
21      cmp r2,#MAXVAL ; compare counter to maximum count
22      bgt top ; if it's greater than MAXVAL, you're done, start over
23      b loop ; else display next value
24      ENDP
25      END
```