

```

1  #include "mbed.h"
2  #include "pinout.h"
3  #include "to_7seg.h"
4
5  // seven segment display anodes
6  // when in a int8_t, they are 0b-GFEDCBA
7  BusOut      g_seven_seg(SGA_PIN, SGB_PIN, SGC_PIN, SGD_PIN,
8                        SGE_PIN, SGF_PIN, SGG_PIN);
9
10 // display cathodes
11 DigitalOut   g_dsr(DSR_PIN);
12 DigitalOut   g_dsl(DSL_PIN);
13
14 // leds
15 BusOut       g_leds(LDR_PIN, LDM_PIN, LDL_PIN);
16
17 //Interrupcion
18 static InterruptIn swm(SWM_PIN);
19 static bool volatile swm_fall_evnt;
20 static void swm_fall_isr (void){
21     swm_fall_evnt = true;
22 }
23
24 //rebotes SWM
25 static Timeout tout_swm;
26 static bool volatile tout_swm_evnt;
27 static void tout_swm_isr (void){
28     tout_swm_evnt = true;
29 }
30
31 //LUZ DEL LED
32 static Ticker tick_ls;
33 static bool volatile tick_ls_evnt;
34 static void tick_ls_isr (void){
35     tick_ls_evnt = true;
36 }
37
38 //Tiempo de apagar el led
39 static Timeout tout_ls;
40 static bool volatile tout_ls_evnt;
41 static void tout_ls_isr (void){
42     tout_ls_evnt = true;
43 }
44
45 static int16_t cnt_led = 0;
46
47
48 int main (void) {
49
50     int8_t cnt_display = 4;
51     g_dsl = 1;
52     g_dsr = 0;
53
54     g_seven_seg = to_7seg(cnt_display);
55
56     tick_ls.attach_us(tick_ls_isr, 200000);
57
58     swm.mode(PullUp);
59     swm.fall(swm_fall_isr);
60
61     for (;;) {
62
63         //PULSO DE SWM
64         if(swm_fall_evnt){
65             swm_fall_evnt = false;
66             tout_swm.attach_us(tout_swm_isr, 4000);
67         }
68
69         if(tout_swm_evnt){
70             tout_swm_evnt = false;
71
72             if(swm == 0){
73                 cnt_display = (cnt_display == 0) ? 8 : (cnt_display-2);
74                 g_seven_seg = to_7seg(cnt_display);
75             }
76         }
77
78         //BRILLO LEDS
79         if(tick_ls_evnt){
80             tick_ls_evnt = false;
81             g_leds = 2;
82             tout_ls.attach_us(tout_ls_isr, 100000);
83             cnt_led++;
84         }

```

```
85
86     if(tout_ls_evnt){
87         tout_ls_evnt = false;
88         g_leds = 0;
89     }
90
91     __disable_irq();
92     if(!swm_fall_evnt && !tout_swm_evnt && !tick_ls_evnt && !tout_ls_evnt){
93         __WFI();
94     }
95     __enable_irq();
96
97 } // for (;;)
98 } // main()
99
```