

```
1  /*
2   * sws_level_bargraph.c
3   *
4   * Created: 2/18/2021 8:10:39 PM
5   * Author : Judah Ben-Eliezer
6   */
7
8  #include <avr/io.h>
9
10
11  int main(void)
12  {
13      uint8_t* ptr = (uint8_t*) &PORTA.PIN2CTRL;
14
15      uint8_t switches, leds;
16
17      PORTD.DIR |= 0xFF;
18      PORTA.DIR &= 0x03;
19      PORTC.DIR &= 0xFC;
20
21      for (uint8_t i = 0; i < 6; ++i) {
22          *(ptr + i) |= PORT_PULLUPEN_bm;
23      }
24
25      PORTC.PIN0CTRL |= PORT_PULLUPEN_bm;
26      PORTC.PIN1CTRL |= PORT_PULLUPEN_bm;
27
28      while (1)
29      {
30          switches = (PORTA.IN & 0xFC) | (PORTC.IN & 0x03);
31          leds = 0x00;
32
33          for (uint8_t i = 0; i < 8; ++i, switches >>= 1) {
34              if (switches & 0x01) {
35                  leds <<= 1;
36                  leds |= 1;
37              }
38          }
39          PORTB.OUT = ~leds;
40      }
41  }
42
43
```