

src\main.c

```
1 // Practice assignment 6b
2
3 #include <stdio.h>
4 #include <avr/io.h>
5 #include <avr/interrupt.h>
6
7 volatile unsigned int time_tick_counter=0;
8
9 void set_light(unsigned int time)
10 {
11     TCCR0A |= (1 << WGM01);
12     OCR0A = 0xF9;
13     TIMSK0 |= (1 << OCIE0A);
14     sei();
15     TCCR0B |= (1 << CS01) | (1 << CS00);
16     time_tick_counter=time;
17     PORTD |= (1 << PIND4);
18 }
19
20 int main(void) {
21
22     DDRC = 0xF0; // set data direction for port C pins, 0-3 as input (i.e. the buttons)
23     PORTC = 0x3F; // set pull-up resistor for port C
24     DDRD = 0xFF; // set data direction for port D, all output
25     PORTD= 0x00; // set output for port D (none)
26
27     while(1) {
28         if(!(PINC & 1))
29             set_light(2000);
30     }
31
32     return 0;
33 }
34
35 ISR (TIMER0_COMPA_vect)
36 {
37     if(time_tick_counter)
38         time_tick_counter--;
39     else {
40         PORTD &= ~(1 << PIND4);
41         cli();
42     }
43 }
```