Lab assignment

1. https://github.com/mikolasstradej/Digital-Electronics-2
2. Logické operátory :
   - `|` - logický součet (OR)
   - `&` - logický součin (AND)
   - `^` - exkluzivní součet (EX-OR)
   - `~` - jednotkový doplněk (negace)
   - `<<` - bitový posun doleva

A	B	|	&	^
0	0	0	0	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	0

A	~
0	1
1	0

Bitový posun doleva – posune všechny bity o x pozic doleva

A = 11100110

A << 2 = 10011000

3. C code

```
#define LED_GREEN   PB5
#define SHORT_DELAY 350
#ifndef F_CPU
#define F_CPU 16000000
#endif

#include <util/delay.h>
int main(void)
{
    DDRB = DDRB | (1<<LED_GREEN);
    PORTB = PORTB & ~(1<<PB5);
    while (1)
    {
        _delay_ms(SHORT_DELAY);

        PORTB = PORTB ^ (1<<LED_GREEN); // (^ je fce XOR)
              _delay_ms(SHORT_DELAY*3);
              PORTB = PORTB ^ (1<<LED_GREEN);
              _delay_ms(SHORT_DELAY);
```

```
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*5); // D

                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*5); // E

                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*3);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*3);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*3);
                PORTB = PORTB ^ (1<<LED_GREEN);
                _delay_ms(SHORT_DELAY*5);
    }

    return 0;
}
```