



david3891 Update README.md



 1 contributor

 66 lines (48 sloc) | 1.77 KB



Lab 1: David Sladkowski

Link to your Digital-electronics-2 GitHub repository:

(<https://github.com/david3891/Digital-electronic-2>)

Blink example

1. What is the meaning of the following binary operators in C?
- |

logický součet OR

○

&

logický součin AND

○

^

exkluzivní součet XOR

○

~

negace

○

<<

bitový posuv doleva

○

>>

bitový posuv doprava

2. Complete truth table with operators: | , & , ^ , ~

b	a	b or a	b and a	b xor a	not b
0	0	0	0	0	1
0	1	1	0	1	1
1	0	1	0	1	0

b	a	b or a	b and a	b xor a	not b
1	1	1	1	0	0

Morse code

1. Listing of C code with syntax highlighting which repeats one "dot" and one "comma" (BTW, in Morse code it is letter A) on a LED:

```
int main(void)
{
    // Set pin as output in Data Direction Register
    // DDRB = DDRB or 0010 0000
    DDRB = DDRB | (1<<LED_GREEN);

    // Set pin LOW in Data Register (LED off)
    // PORTB = PORTB and 1101 1111
    PORTB = PORTB & ~(1<<LED_GREEN);

    // Infinite loop
    while (1)
    {
        // Pause several milliseconds
        _delay_ms(SHORT_DELAY);
        PORTB |= (1<<LED_GREEN);    // LED on
        _delay_ms(SHORT_DELAY);

        PORTB &= ~(1<<LED_GREEN);    // LED off
        _delay_ms(SHORT_DELAY);
        PORTB |= (1<<LED_GREEN);
        _delay_ms(1000);
        PORTB &= ~(1<<LED_GREEN);
    }

    // Will never reach this
    return 0;
}
```

2. Scheme of Morse code application, i.e. connection of AVR device, LED, resistor, and supply voltage. The image can be drawn on a computer or by hand. Always name all components and their values!

