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1led_blk.txt
// *****
// Project: Decorative LEDS
// Author: This project turn on three leds connected at portb
//          every second Using CTC Mode.

// Module description:
// *****

#include <avr\io.h>           // Most basic include files
#include <avr\interrupt.h>    // Add the necessary ones
#include <avr\signal.h>       // here

void init(void);
// Global static variable
int seconds;
seconds=0;

/*-----Initialization Function-----*/
void init(void)
{
    // The microcontroller is operated at 1MHz frequency using internal RC
    oscillator.
    DDRB = 0b11111111; // Setup PORTB as Output
    TCCR1B|=(1<<WGM12); // Selects prescaler as 64
    TCCR1B |= (1<<CS11) | (1<<CS10); // Timer1 selected in CTC Mode
    OCR1A=15625;           //
    asm("nop");           // Inline assembly example
}

// *****
// Main program

int main(void)
{
    init();
    while(1)
    {
        // Infinite loop;

        if(TIFR & (1<<OCF1A)) //Checks whether a second has //elapsed
        {
            {PORTB=0x01;}

            if(seconds==1)
            {
                PORTB=0x03;
            }
            if(seconds==2)
            {
                PORTB=0x07;
            }
            TIFR=(1<<OCF1A); //Sets the OCF1A bit to reset the Timer1
            seconds++; //second variable is incremented every second

            if(seconds==4)
            {
                PORTB=0x00; //PORTB^=(0<<0) | (0<<1) | (0<<2);
                seconds=0;
            }
        }
    }
}

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