// Purpose : Demonstrate (16-bit) Timer/Counter1 in Normal Mode

// See : ATmega328P Datasheet, Chapter 16

// Consult AVR Timer Calculator:

// https://www.easycalculation.com/engineering/electrical/avr-timer-calculator.php

// prescale constants

uint8\_t clkDivNone = 1 << CS10;

uint8\_t clkDiv8 = 1 << CS11;

uint8\_t clkDiv64 = 1 << CS11 | 1 << CS10;

uint8\_t clkDiv256 = 1 << CS12;

uint8\_t clkDiv1024 = 1 << CS12 | 1 << CS10;

volatile uint8\_t ovfCount;

// Timer 1 Interrupt Service Routine

ISR(TIMER1\_OVF\_vect) {

//  ovfCount++;

//  if (!ovfCount)

 PORTB ^= (1 << PB5);

}

int main() {

 DDRB |= (1 << PB5);

**Serial**.begin(9600);

 ovfCount = 0;

 cli();

 // Normal Mode

 TCCR1A = 0;

 // set up timer with (no) prescaler

 TCCR1B = clkDivNone;

 // initialize counter

 TCNT1 = 0;

 // Enable Timer1 interrupt ability

 TIMSK1 = 1 << TOIE1;

 // Enable global interrupt ability...

 sei();

 // stand down and let ISR respond to interrupts

 while (1);

}