```c
/*
 * 16bit pwm.c
 *
 * Created: 21/09/2022 11.26.50
 * Author : Abdan Subekti
 */
#define F_CPU 16000000L
#include <avr/io.h>
#include <util/delay.h>
#include <avr/interrupt.h>

double duty = 75;

int main(void){

    DDRD = (1 << PORTD4); // PORT D4 sebagai output

    // PWM, phase correct, pembagian pengaturan wgm, com, cs A & B sendiri sendiri
    TCCR1A |= (1 << COM1B0)|( 1<<COM1B1) | (1<<WGM11) | (1 << WGM10);

    //Set OC on compare, no prescaler alias x1
    TCCR1B |= ( 1<<WGM13 )|  (1<<CS10);

    // interrupt enable, kenapa ndak ada timsk1? karena dari sononya (datasheet)
    TIMSK = (1 << OCIE1A);
    sei();


    OCR1A = 20000;  //20ms at 1MHz prescale, frekuensi 50Hz dari F=1/T = 1/0,02    ↵
      detik = 50Hz

    while(1){
        _delay_ms(2000);
        duty++;

        if(duty>100)
        {
            duty=50;
        }

    }

}

ISR(TIMER1_COMPA_vect) // Interrupt servis rutin timer 0
{
        OCR1B = OCR1A - (duty*400); //20ms waktu off - %duty
}
```