ECE 241 // TERRAN BLAKE // PreLab 10

#include <TimerOne.h>

int ledPin = 13; //pin for the led

unsigned long Timer2 = 0;

const long Timer2Interval = 10; //values for the timer

unsigned long currentMillis = millis();

const long DutyCycle = 551; //value for the PWM, has been edited for parts of lab

void setup() {

pinMode (9,OUTPUT);

pinMode (12,OUTPUT); //pin modes for the reading

Timer1.pwm(9, DutyCycle, 100); //setup for the sampling

Timer1.initialize(5);

// Serial.begin(9600); //was used as a test to check timer

// Serial.available();

}

void loop() {

if( millis() - Timer2 >= Timer2Interval) //keeps the program in a 10ms interval

{

Timer2 = Timer2 + Timer2Interval;

digitalWrite(ledPin, HIGH); //Turn on LED

analogRead(A0);

bitSet(PORTB,5); //saves the frequency

Timer1.pwm(9, analogRead(A0)); //reads the frequency

digitalWrite(ledPin, LOW); //Turns off LED

bitClear(PORTD,5);

// Serial.print("hello"); // test for the timer

}

}