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#include <avr/io.h>
#include <util/delay.h>
#include <avr/interrupt.h>
#include "uart.h"
#include <stdio.h>
#define MAX 100
#define UART_BAUD_RATE 38400

void uart_sendint(unsigned int data){
    while (!(UCSR0A & (1<<UDRE0)) );
    UDR0 = data;
}

unsigned int x=0;
unsigned int y=0;
unsigned int z=0;
unsigned int temp1=0;
unsigned int temp2=0;
char buffer[MAX];

int main(void){
    ADMUX |= (1<<REFS0); // 10bits and AVCC ref
    ADCSRA |= ((1<<ADEN)|(1<<ADPS2)|(1<<ADPS1)); // Enable converter and 125KHz
    DDRA |= ((0<<PA0)|(0<<PA1)|(0<<PA2));
    sei();
    uart_init( UART_BAUD_SELECT(UART_BAUD_RATE,F_CPU) );
    // 3sec delay for OpenLog power up
    _delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);
    _delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);
    _delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);_delay_ms(200);
    uart_puts("Data aquisition test.");
    TIMSK1 |= (1<<OCIE1A); // Output compare interrupt enable
    OCR1A = 7811;
    ADCSRA |= (1<<ADIE); // ADC interrupt enable
    TCCR1B |= ((1<<WGM12)|(1<<CS11)|(1<<CS10)); // CTC and PS 64
    while(1){

}

ISR(TIMER1_COMPA_vect){

    ADMUX = 0b01000000;
    ADCSRA |= (1<<ADSC);
    while(!(ADCSRA&(1<<ADIF)));
    x=ADC;
    ADCSRA |= (1<<ADIF);

    ADMUX = 0b01000001;
    ADCSRA |= (1<<ADSC);
    while(!(ADCSRA&(1<<ADIF)));
    y=ADC;
    ADCSRA |= (1<<ADIF);

    ADMUX = 0b01000010;
    ADCSRA |= (1<<ADSC);
    while(!(ADCSRA&(1<<ADIF)));
    z=ADC;
    ADCSRA |= (1<<ADIF);

    ADMUX = 0b01000011;
    ADCSRA |= (1<<ADSC);
    while(!(ADCSRA&(1<<ADIF)));
    temp1=ADC;
    ADCSRA |= (1<<ADIF);

    ADMUX = 0b01000100;
    ADCSRA |= (1<<ADSC);
    while(!(ADCSRA&(1<<ADIF)));
    temp2=ADC;
    ADCSRA |= (1<<ADIF);

    sprintf(buffer,"X:%d Y:%d Z:%d T1:%d T2:%",x,y,z,temp1, temp2); // Compose the text with
the G's and Temp's

    uart_puts(buffer);
    uart_sendint(13); // Sends an ENTER

}

```