#pragma config FOSC = HS

#pragma config PWRTE = OFF

#pragma config WDTE = OFF

#pragma config CP = OFF

#pragma config BOREN = ON

#pragma config LVP = OFF

#pragma config CPD = OFF

#pragma config WRT = OFF

#pragma config DEBUG = OFF

#include <xc.h>

#include <stdio.h>

#define \_XTAL\_FREQ 20000000

void t\_init();

void uart\_init();

void t2delay();

void t1delay();

void tx(unsigned char);

void txstr(unsigned char\*);

unsigned int adc();

void adc\_init();

void main(){

adc\_init();

t\_init();

uart\_init();

while(1){

char buffer[10];

t1delay();

unsigned int adcvalue = adc();

sprintf(buffer,"%d",adcvalue);

txstr(buffer);

txstr('\r\n');

t2delay();

}

}

void adc\_init(){

TRISA |= (1<<0);

ADCON0 = 0x41;

ADCON1 = 0x80;

}

void t\_init(){

T1CON = 0x31;

T2CON = 0x78;

}

void uart\_init(){

TRISC |= (1<<7);

TRISC &= ~(1<<6);

TXSTA = 0x20;

RCSTA = 0x90;

SPBRG = 31;

}

void tx(unsigned char a){

while(!TXIF);

TXREG = a;

}

void txstr(unsigned char \*b){

while(\*b){

tx(\*b++);

}

}

void t1delay(){

for(int i = 0;i<(9\*5);i++){

TMR1H=TMR1L=0;

while(!TMR1IF);

TMR1IF=0;

}

}

void t2delay(){

T2CON |= (1<<2);

for(unsigned int i = 0; i<(1220\*5); i++){

while(!TMR2IF);

TMR2IF = 0;

}

}

unsigned int adc(){

unsigned int adcvalue;

\_\_delay\_ms(2);

ADCON0bits.GO\_nDONE = 1;

while(ADCON0bits.GO\_nDONE);

adcvalue = (ADRESH << 8) | ADRESL;

return adcvalue;

}