#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 ser\_init();

void adc\_init();

void tx(unsigned char);

void txstr(unsigned char\*);

unsigned char rx();

unsigned int adc();

void main(){

ser\_init();

adc\_init();

while(1){

unsigned int adcvalue = adc();

unsigned char buffer[20];

sprintf(buffer, "ADC VALUE: %u", adcvalue);

txstr(buffer);

txstr("\r\n");

\_\_delay\_ms(1000);

}

}

void ser\_init(){

TXSTA = 0x20;

RCSTA = 0x90;

SPBRG = 31;

}

void adc\_init(){

TRISAbits.TRISA0 = 1;

ADCON0 = 0x41;

ADCON1 = 0x80;

}

void tx(unsigned char a){

while(!TXIF);

TXREG = a;

}

unsigned char rx(){

while(!RCIF);

return RCREG;

}

void txstr(unsigned char\* a){

while(\*a){

tx(\*a++);

}

}

unsigned int adc(){

unsigned int adcvalue;

ADCON0bits.GO\_nDONE = 1;

while(ADCON0bits.GO\_nDONE);

adcvalue = (ADRESH<<8)|(ADRESL);

return adcvalue;

}