#include<16f877a.h>

#device adc=10

#include <math.h>

#FUSES XT,NOWDT

#use delay(clock=2MHz)

#use fast\_io(b)

#use fast\_io(c)

int1 cont=0;

int16 tiempo=43451; //Valor del Timer

int8 low,hign;

signed int16 Yz;

int16 a1, Ys;

float f,w,y,y1,y2,u,u1,B,A,Ts;

#Int\_Timer1

void templs(void){

if (cont==1)

set\_adc\_channel(0);

a1=read\_adc();

f=10.0\*a1/1023.0,

w=2\*pi\*f;

//Función

B=sin(w\*Ts);

A=2\*cos(w\*Ts);

//Variable

y=B\*u1+A\*y1-y2;

u1=u;

y2=y1;

y1=y;

U=0;

Yz=1023\*y/5.0;

low = make8 ( Yz,0);

hign = make8 ( Yz,1);

output\_b(low);

output\_c(hign);

set\_timer1 (tiempo);

Cont++;

}

void main()

{

set\_tris\_b(0x10);

set\_tris\_b(0x00);

set\_tris\_c(0x00);

setup\_port\_a(AN0);

setup\_adc(ADC\_CLOCK\_DIV\_2);

Ts=0.1; //0.015

y=0;

y1=0;

y1=0;

y2=0;

u=1;

u1=0;

setup\_timer\_1(T1\_INTERNAL|T1\_DIV\_BY\_4);

set\_timer1 (tiempo);

enable\_interrupts(INT\_TIMER1);

enable\_interrupts(global);

while(1);

}