#define NOTE\_GS4 415

#define NOTE\_F4 349

#define NOTE\_AS5 466

#define NOTE\_C5 523

#define NOTE\_B4 494

#define NOTE\_C4 262

#define NOTE\_DS4 311

#define NOTE\_D4 294

#define NOTE\_CS4 277

#define NOTE\_CS5 554

#define NOTE\_G4 392

#define MSG(a,b,c,d,e,f) Serial.print("Nota total: ");Serial.print(a);Serial.print(" Figura: ");Serial.print(b);Serial.print(" Duracion: ");Serial.print(c);Serial.print(" Silencio: ");Serial.print(d);Serial.print(" Tone duracion:");Serial.print(e);Serial.print(" Delay: ");Serial.println(f);

#define length(vec,tipo) sizeof(vec)/sizeof(tipo)

//int notes[] = {415, 349, 349, 466, 523, 494, 466, 415, 349, 262, 311, 349, 415, 294, 294, 466, 523, 494, 466, 415, 349, 262, 311, 349, 415, 277, 277, 466, 523, 494, 466, 415, 349, 262, 311, 349, 415, 349, 415, 466, 523, 554, 523, 466, 415, 392, 349, 262, 311, 349};

int nota[] = {NOTE\_GS4, NOTE\_F4, NOTE\_F4, NOTE\_AS5, NOTE\_C5, NOTE\_B4, NOTE\_AS5, NOTE\_GS4, NOTE\_F4, NOTE\_C4, NOTE\_DS4, NOTE\_F4, NOTE\_GS4, NOTE\_D4, NOTE\_D4, NOTE\_AS5, NOTE\_C5, NOTE\_B4, NOTE\_AS5, NOTE\_GS4, NOTE\_F4, NOTE\_C4, NOTE\_DS4, NOTE\_F4, NOTE\_GS4, NOTE\_CS4, NOTE\_CS4, NOTE\_AS5, NOTE\_C5, NOTE\_B4, NOTE\_AS5, NOTE\_GS4, NOTE\_F4, NOTE\_C4, NOTE\_DS4, NOTE\_F4, NOTE\_GS4, NOTE\_F4, NOTE\_GS4, NOTE\_AS5, NOTE\_C5, NOTE\_CS5, NOTE\_C5, NOTE\_AS5, NOTE\_GS4, NOTE\_G4, NOTE\_F4, NOTE\_C4, NOTE\_DS4, NOTE\_F4};

int figura[] = {16, 4, 4, 16, 16, 8, 8, 8, 16, 8, 8, 8, 16, 4, 4, 16, 16, 8, 8, 8, 16, 8, 8, 8, 16, 4, 4, 16, 16, 8, 8, 8, 16, 8, 8, 8, 8, 8, 8, 16, 16, 8, 8, 8, 8, 8, 8, 8, 8, 8};

//{16, 32, 32, 16, 16, 32, 32, 32, 16, 32, 32, 32, 16, 32, 32, 16, 16, 32, 32, 32, 16, 32, 32, 32, 16, 32, 32, 16, 16, 32, 32, 32, 16, 32, 32, 32, 32, 32, 32, 16, 16, 32, 32, 32, 32, 32, 32, 32, 32, 32};

//{273, 102, 102, 273, 273, 136, 136, 136, 273, 136, 136, 136, 273, 102, 102, 273, 273, 136, 136, 136, 273, 136, 136, 136, 273, 102, 102, 273, 273, 136, 136, 136, 273, 136, 136, 136, 136, 136, 136, 273, 273, 136, 136, 136, 136, 136, 136, 136, 136, 136};

/\*

2 redonda

4 blanca

8 negra

16 corchea

32 semi-corchea

\*/

int BPM = 110;

float tiempoSilencio = 1.0;

int duracionTotalNota = (60000 \* 4) / BPM;

void setup() {

pinMode( 6 , OUTPUT);

Serial.begin(9600);

}

// tone( pin , nota , duracion) -> toca una nota durante X tiempo

// delay( duracion ) -> duracion entre notas

// noTone( pin ) -> deje de sonar la nota

void loop() {

//CICLO FOR

for( int i = 0 ; i < length(nota,int)-1 ; i++ )

{

if( figura[i] >= 0 )

{

//figura es POSITIVA

int duracionNota = ( duracionTotalNota / figura[i] ) ;

tone( 6 , nota[i] , duracionNota \* 0.9 ); //el 0.8 no son obligatorio

delay( duracionNota ); //el 1.3 no son obligatorio

noTone(6);

//MSG( duracionTotalNota, figura[i] , duracionNota, tiempoSilencio, duracionNota\*0.8 , duracionNota\*1.3 );

}else{

//figura es NEGATIVA

int duracionNota = ( duracionTotalNota / (figura[i]\*(-1)) ) ;

tone( 6 , nota[i] , duracionNota \* 0.9 );

delay( duracionNota );

noTone(6);

//MSG( duracionTotalNota, figura[i] , duracionNota, tiempoSilencio, duracionNota\*0.8 , duracionNota );

}

}

}