function piano(freq, seconds) { //Fonction qui crée le son

var rate = 22050; //Echantillon de référence (qui correspond au la)

var k;

var sample = Tableau(rate \* seconds);

var sinArg = freq \* 2 \* Math.PI / rate;

for (k = 0; k < Taille(sample); k++) {

sample[k] = 128 + Math.floor(128 \* Math.sin(k \* sinArg));

}

var sound = CreerSon(sample, rate);

sound.play(); //la fonction ressort le son en le jouant

}

var tempo = Saisie('Rentrer le tempo du morceaux en battement par minute(écrire 0 si aucune idée)'); //on détermine le vitesse de la mélodie

if (tempo == 0) {

tempo = 100; //la vitesse de la mélodie est de 100 par défaut sil'utilisateurs rentre 0

}

var Melodie = Tableau(45, 2); //Tableau qui stocke la mélodie

Melodie[0][0] = 1318; //mi

Melodie[0][1] = 30 / tempo;

Melodie[1][0] = 1244.5; //re#

Melodie[1][1] = 30 / tempo;

Melodie[2][0] = 1318; //mi

Melodie[2][1] = 30 / tempo;

Melodie[3][0] = 1244.5; //re#

Melodie[3][1] = 30 / tempo;

Melodie[4][0] = 1318; //mi

Melodie[4][1] = 30 / tempo;

Melodie[5][0] = 988; //si

Melodie[5][1] = 30 / tempo;

Melodie[6][0] = 1175; //re

Melodie[6][1] = 30 / tempo;

Melodie[7][0] = 1046.5; //do

Melodie[7][1] = 30 / tempo;

Melodie[8][0] = 880; //la

Melodie[8][1] = 60 / tempo;

Melodie[9][0] = 330; //mi

Melodie[9][1] = 30 / tempo;

Melodie[10][0] = 440; //la

Melodie[10][1] = 30 / tempo;

Melodie[11][0] = 523; //do

Melodie[11][1] = 30 / tempo;

Melodie[12][0] = 659; //mi

Melodie[12][1] = 30 / tempo;

Melodie[13][0] = 880; //la

Melodie[13][1] = 30 / tempo;

Melodie[14][0] = 988; //si

Melodie[14][1] = 60 / tempo;

Melodie[15][0] = 330; //mi

Melodie[15][1] = 30 / tempo;

Melodie[16][0] = 415;//sol#

Melodie[16][1] = 30 / tempo;

Melodie[17][0] = 659; //mi

Melodie[17][1] = 30 / tempo;

Melodie[18][0] = 831; //sol#

Melodie[18][1] = 30 / tempo;

Melodie[19][0] = 988; //si

Melodie[19][1] = 30 / tempo;

Melodie[20][0] = 1046.5; //do

Melodie[20][1] = 30 / tempo;

Melodie[21][0] = 330; //mi

Melodie[21][1] = 30 / tempo;

Melodie[22][0] = 440; //la

Melodie[22][1] = 30 / tempo;

Melodie[23][0] = 659; //mi

Melodie[23][1] = 30 / tempo;

Melodie[24][0] = 1318; //mi

Melodie[24][1] = 30 / tempo;

Melodie[25][0] = 1244.5; //re#

Melodie[25][1] = 30 / tempo;

Melodie[26][0] = 1318; //mi

Melodie[26][1] = 30 / tempo;

Melodie[27][0] = 1244.5; //re#

Melodie[27][1] = 30 / tempo;

Melodie[28][0] = 1318; //mi

Melodie[28][1] = 30 / tempo;

Melodie[29][0] = 988; //si

Melodie[29][1] = 30 / tempo;

Melodie[30][0] = 1175; //re

Melodie[30][1] = 30 / tempo;

Melodie[31][0] = 1046.5; //do

Melodie[31][1] = 30 / tempo;

Melodie[32][0] = 880; //la

Melodie[32][1] = 30 / tempo;

Melodie[33][0] = 330; //mi

Melodie[33][1] = 30 / tempo;

Melodie[34][0] = 440; //la

Melodie[34][1] = 30 / tempo;

Melodie[35][0] = 523; //do

Melodie[35][1] = 30 / tempo;

Melodie[36][0] = 659; //mi

Melodie[36][1] = 30 / tempo;

Melodie[37][0] = 880; //la

Melodie[37][1] = 30 / tempo;

Melodie[38][0] = 988; //si

Melodie[38][1] = 60 / tempo;

Melodie[39][0] = 330; //mi

Melodie[39][1] = 30 / tempo;

Melodie[40][0] = 415; //sol#

Melodie[40][1] = 30 / tempo;

Melodie[41][0] = 659; //mi

Melodie[41][1] = 30 / tempo;

Melodie[42][0] = 1046.5; //mi

Melodie[42][1] = 30 / tempo;

Melodie[43][0] = 988; //sol#

Melodie[43][1] = 30 / tempo;

Melodie[44][0] = 880; //mi

Melodie[44][1] = 60 / tempo;

AfficherTableau(Melodie);

function graphique(frequence) {

Rectangle(1,200,75,200,'black');//FA

Rectangle(76,200,75,200,'black');//FA

Rectangle(151,200,75,200,'black');//SOL

Rectangle(226,200,75,200,'black');//LA

Rectangle(301,200,75,200,'black');//SI

Rectangle(376,200,75,200,'black');//DO

Rectangle(451,200,75,200,'black');//RE

Rectangle(526,200,75,200,'black');//MI

Rectangle(601,200,75,200,'black');//FA

Rectangle(676,200,75,200,'black');

Rectangle(751,200,75,200,'black');

Rectangle(826,200,75,200,'black');

Rectangle(901,200,75,200,'black');

Rectangle(976,200,75,200,'black');

Rectangle(1051,200,75,200,'black');

RectanglePlein(1,200,75,200,'white');//MI

RectanglePlein(76,200,75,200,'white');//FA

RectanglePlein(151,200,75,200,'white');//SOL

RectanglePlein(226,200,75,200,'white');//LA

RectanglePlein(301,200,75,200,'white');//SI

RectanglePlein(376,200,75,200,'white');//DO

RectanglePlein(451,200,75,200,'white');//RE

RectanglePlein(526,200,75,200,'white');//MI

RectanglePlein(601,200,75,200,'white');//FA

RectanglePlein(676,200,75,200,'white');

RectanglePlein(751,200,75,200,'white');

RectanglePlein(826,200,75,200,'white');

RectanglePlein(901,200,75,200,'white');

RectanglePlein(976,200,75,200,'white');

RectanglePlein(1051,200,75,200,'white');

RectanglePlein(122.5,200,50,100,'black');

RectanglePlein(197.5,200,50,100,'black');

RectanglePlein(347.5,200,50,100,'black');

RectanglePlein(422.5,200,50,100,'black');

RectanglePlein(497.5,200,50,100,'black');

RectanglePlein(647.5,200,50,100,'black');

RectanglePlein(722.5,200,50,100,'black');

RectanglePlein(872.5,200,50,100,'black');

RectanglePlein(947.5,200,50,100,'black');

RectanglePlein(1022.5,200,50,100,'black');

if ((frequence == 330)){

MI = RectanglePlein(1,200,75,200,'blue');

}

if (frequence == 349) {

FA =RectanglePlein(76,200,75,200,'blue');//FA

}

if (frequence == 392) {

SOL =RectanglePlein(151,200,75,200,'blue');//FA

}

if (frequence == 440) {

LA =RectanglePlein(226,200,75,200,'blue');//FA

}

if (frequence == 494) {

SI =RectanglePlein(301,200,75,200,'blue');//FA

}

if (frequence == 523) {

DO =RectanglePlein(376,200,75,200,'blue');//FA

}

if (frequence == 587) {

RE =RectanglePlein(451,200,75,200,'blue');//FA

}

if (frequence == 659) {

MI =RectanglePlein(526,200,75,200,'blue');//FA

}

if (frequence == 698.5) {

FA =RectanglePlein(601,200,75,200,'blue');//FA

}

if (frequence == 784) {

SOL =RectanglePlein(676,200,75,200,'blue');//FA

}

if (frequence == 880) {

LA=RectanglePlein(751,200,75,200,'blue');//FA

}

if (frequence == 988) {

SI =RectanglePlein(826,200,75,200,'blue');//FA

}

if (frequence == 1046.5) {

DO =RectanglePlein(901,200,75,200,'blue');//FA

}

if (frequence == 1175) {

RE =RectanglePlein(976,200,75,200,'blue');//FA

}

if ((frequence == 1318)){

MI = RectanglePlein(1051,200,75,200,'blue');

}

if (frequence == 1244.5) {

RED =RectanglePlein(1022.5,200,75,200,'blue');

}

if ((frequence == 831)){

SOLD = RectanglePlein(647.5,200,75,200,'blue');

}

if ((frequence == 932)){

LAD = RectanglePlein(197.5,200,75,200,'blue');

}

}

var t = 0;

var n = 0;

for (n = 0; n < Taille(Melodie); n++) { //Cette boucle pour passe par les lignes du tableau une par une pour relever les caractéristiques de la note et donc les paramètres d'appels pour la fontion piano

setTimeout(piano, t, Melodie[n][0], Melodie[n][1]); //ce setTimeout joue la mélodie

setTimeout(graphique, t, Melodie[n][0]); //celui-ci fait ressortir la partie graphique de l'algorithme

t = t + (Melodie[n][1]) \* 1000 + 25; // le +25 sert à délier les notes pour donner un effet quand 2 mêmes notes sont jouer l'une après l'autre

}