// fanta adamou hamidou

#include<stdio.h>

#include<cs50.h>

#include<string.h>

#include <math.h>

#include <helpers.h>

int duration(string fraction)

{

int n = strlen(fraction);

int numerador = atoi(&fraction[0]);

int denominador = atoi(&fraction[n–1]);

return ((8 / denominador) \* numerador);

}

int frequency(string note)

{

int octave = note[strlen(note)–1]–‘0’;

int dif = octave – 4;

int f;

if(dif < 0)

{

f = 440 / 2 ^ (dif);

}

else

{

f = 440 \* 2 ^ (dif);

}

double freq = 440.0;

if (note[0] == 'B')

{

freq \*= (pow(2.0, (2.0 / 12.0)));

}

else if (note[0] == 'C')

{

freq /= (pow(2.0, (9.0 / 12.0)));

}

else if (note[0] == 'D')

{

freq /= (pow(2.0, (7.0 / 12.0)));

}

else if (note[0] == 'E')

{

freq /= (pow(2.0, (5.0 / 12.0)));

}

else if (note[0] == 'F')

{

freq /= (pow(2.0, (4.0 / 12.0)));

}

else if (note[0] == 'G')

{

freq /= (pow(2.0, (2.0 / 12.0)));

}

if (note[1] == '#')

{

freq \*= (pow(2.0, (1 / 12)));

}

else if (note[1] == 'b')

{

freq /= (pow(2.0, (1 / 12)));

return round(freq) + f;

}

bool is\_rest(string s)

if (s == NULL)

{

return 0;

}

else

{

return 1;

}