'Do' is Red

김인호, 박영현, 전보국

𝄞 Target Users

People interested in music
and art

𝄢 Visual Concept

It visually expresses the
notes of a song or a song you
sing, giving it a feeling of
smearing.

Manual

Music On/ Off : Double Click
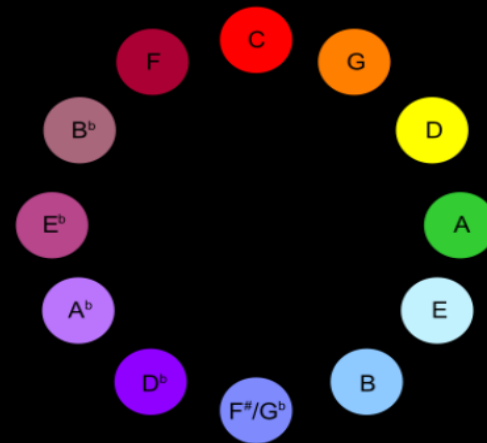
Mic On/ Off: Press m/M

Name of Note On/ Off: Press n/N

Clear Screen: Press c/C

Features

The notes were classified by frequency.

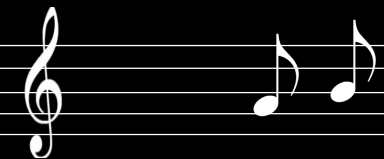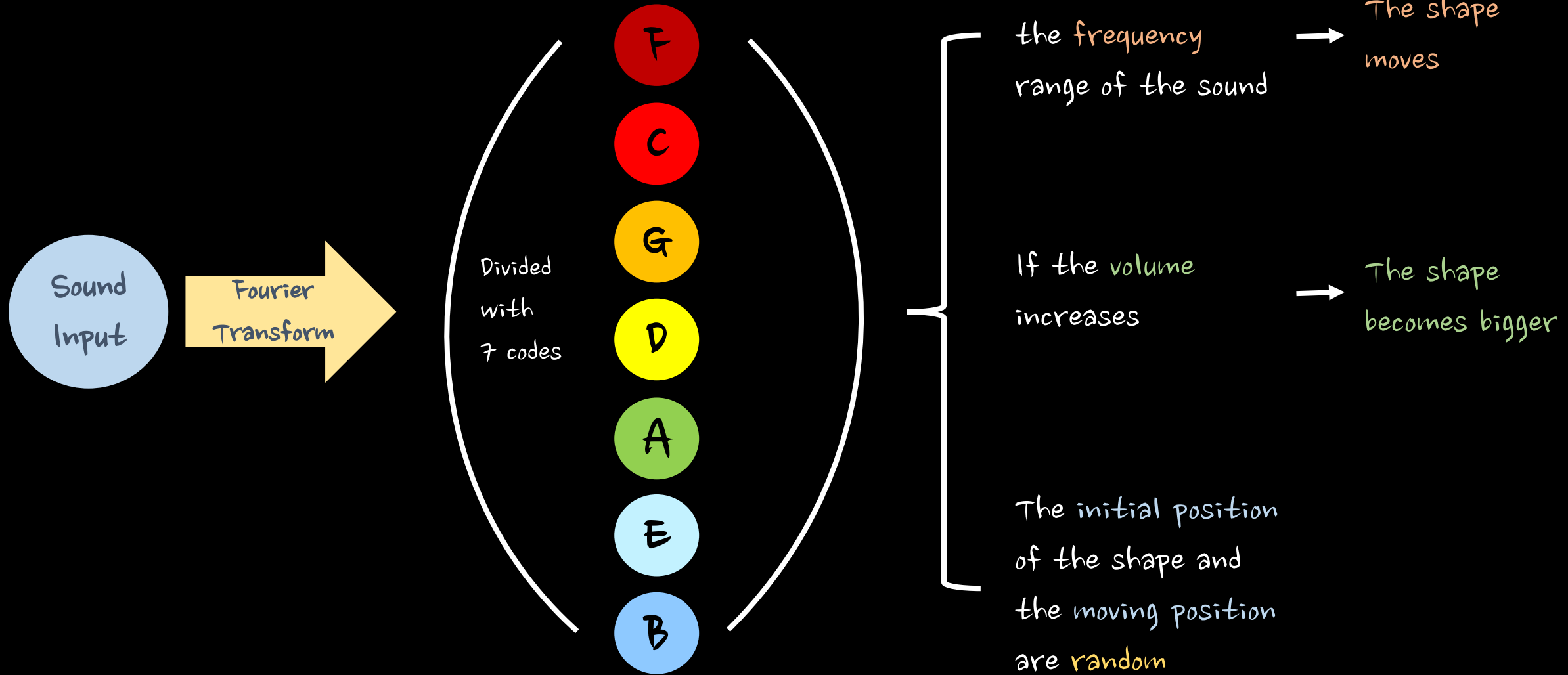Each tone has a different color, which is shown in the following graph.
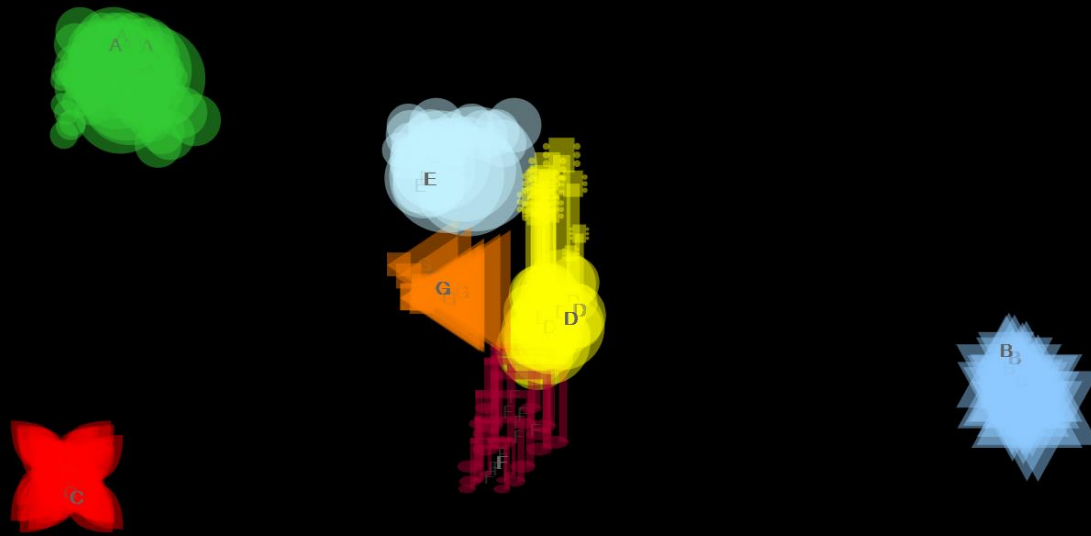
How to convert voice to picture

1. **Fourier transform** the song or microphone input

2. **Calculate the average amplitude** around the frequency for each 7 notes of Do,re,mi,fa,sol,la,si between 7 octaves (average calculation for a total of 7x7 = 49 intervals)

3. If there is a color corresponding to each note and the average amplitude of a note is above a certain value, the shape of the color corresponding to the **note changes and moves.**

4. The larger the average amplitude, the larger the size change of the figure and the more it can move. The initial position of the figure and the direction of movement are random.

♪ **Sound Mapping Diagram**

Sound Input

Fourier Transform

Divided with 7 codes

F
C
G
D
A
E
B

If It falls within the frequency range of the sound → The shape moves

If the volume increases → The shape becomes bigger

The initial position of the shape and the moving position are random

♪ Example & URL

https://editor.p5js.org/kimih12/full/7CwiLj4En

Thank you