VISUAL SOUND GRAPH

CODE WRITTEN IN JAVA

```
1.    import ddf.minim.*;
2.
3.    float maxAmp = 0.7; //[0 - 1]
4.    int bars = 8; //Use 8 for best result
5.    int barHeight = 20; //Use 20 for best result
6.    int h, w, stroke;
7.    int frames, sampleRate;
8.    boolean map[][];
9.
10.   Minim minim;
11.   AudioPlayer player;
12.
13.   void setup() {
14.     //fullScreen(P2D);
15.     size(1280, 720, P2D);
16.
17.     frames = 0;
18.     sampleRate = 1; //Number of frames skipped
19.     map = new boolean[bars][barHeight];
20.     h = height / barHeight;
21.     w = width / bars;
22.     stroke = min((int) (-0.42 * barHeight + 25),
                    (int) (-6.059 * log(bars) + 28.2));
23.
24.     minim = new Minim(this);
25.     player = minim.loadFile(
                  "/data/Coding Track -  02.mp3");
26.     player.play();
27.   }
28.
29.   void draw() {
30.     if(frames%sampleRate == 0) {
31.       background(0);
32.       map[bars - 1] = new boolean[barHeight];
33.       map[bars - 2] = new boolean[barHeight];
34.       float amp = (player.left.level() +
                       player.right.level()) / 2;
35.       for(int w = barHeight - 1; w >=
             (((barHeight - (amp / (maxAmp /
             barHeight))) < 0) ? 0 : (barHeight -
             (amp   / (maxAmp / barHeight)))); w--)
36.         map[bars - 1][w] =
            map[bars - 2][w] = true;
37.
38.       for(int z = 0; z < bars - 2; z++) {
39.         for(int y = 0; y < barHeight; y++) {
40.           map[z][y] = map[z+1][y];
41.         }
42.       }
43.
44.       stroke(0);
45.       strokeWeight(stroke);
46.       for(int i = 0; i < bars; ++i) {
47.         for(int j = 0; j < barHeight; ++j) {
48.           fill((barHeight - j) *
                    (255/barHeight), j *
                    (255/barHeight), 0);
49.           if(map[i][j] && i != bars - 3)
50.             rect((w * i), (h * j), w, h,
                    stroke);
51.         }
52.       }}
53.     frames++;
54.   }
```