

```
1  #include "stm32l476xx.h"
2  #include "SysClock.h"
3  #include "LED.h"
4  #include "Keypad.h"
5  #include "Beeper.h"
6
7  #define DELAY for(int i = 0; i < 10000000; i ++);
8
9  int toneFrequencies[16] = {131, 523, 494, 440, 392, 349, 330, 294, 262, 247, 220, 193, 175, 165, 147,
10 587};
11
12 int main(void){
13     int running = 1;
14
15     System_Clock_Init(); // Switch System Clock = 80 MHz
16
17     GPIOInitRow();
18     GPIOInitCol();
19
20     InitBeeper();
21
22     enum Keys keyPressed;
23
24     while(running == 1){
25         keyPressed = scan();
26         if(keyPressed == Key_None){
27             StopBeep();
28         }else{
29             Beep(toneFrequencies[keyPressed]);
30         }
31         DELAY;
32     }
33
34 }
35
36
```