

```
1: /*Copyright [2016] <Albara Mehene> */
2: #ifndef GUITARSTRING_H
3: #define GUITARSTRING_H
4:
5: #include <iostream>
6: #include <string>
7: #include <exception>
8: #include <stdexcept>
9: #include <vector>
10: #include <cmath>
11:
12: #include "RingBuffer.hpp"
13:
14: const double DECAY = 0.996;
15: const double SAMPLING_RATE = 44100;
16:
17: class GuitarString{
18: public:
19:     explicit GuitarString(double frequency);
20:     explicit GuitarString(std::vector <sf::Int16> init);
21:     GuitarString();
22:     void pluck();
23:     void tic();
24:     sf::Int16 sample();
25:     int time();
26:     ~GuitarString();
27: private:
28:     RingBuffer *_rb;
29:     int _ticNum;
30:     int G_cap;
31: };
32:
33: #endif
```