

```
1: #include <stdint.h>
2: #include <iostream>
3: #include <vector>
4: #include <stdexcept>
5:
6: #define DECAY 0.996
7:
8: using namespace std;
9:
10: class RingBuffer {
11: public:
12:     RingBuffer(int capacity);
13:
14:     int ringSize();
15:     bool isEmpty();
16:     bool isFull();
17:     void enqueue(int16_t x);
18:     int16_t dequeue();
19:     int16_t peek();
20:     int get(int x);
21:     //void print();
22:
23:     void empty();
24:
25: private:
26:     int capacity, size, first, last;
27:     int16_t temp_first;
28:     std::vector<int16_t> vector;
29:
30: };
```