```
 1: #ifndef LFSR_HPP
 2: #define LFSR_HPP
 3:
 4: #include <iostream>
 5: #include <string>
 6:
 7: class LFSR
 8: {
 9:
10: public:
11:    LFSR(std::string user_seed, int user_tap);
12:    ~LFSR();
13:    int step();
14:    int generate(int k);
15:
16:    friend std::ostream& operator<< (std::ostream &out, LFSR &lfsr);
17:
18: private:
19:    std::string seed;
20:    int tap;
21:
22: };
23:
24:
25: #endif
```