```
 1: /************************************************************************
***********/
 2: /* MarkovModel.hpp
       */
 3: /* Yoo Min Cha
       */
 4: /* Markov's Model
       */
 5: /* Professor Martin
       */
 6: /* 07 April 2014
       */
 7: /************************************************************************
***********/
 8:
 9: #ifndef _MARKOVS_HPP
10: #define _MARKOVS_HPP
11:
12: #include <cstring>
13: #include <stdexcept>
14: #include <exception>
15: #include <map>
16: #include <set>
17:
18: class MarkovModel {
19:
20: public:
21:   MarkovModel(std::string text, int k);
22:   int order();
23:   int freq(std::string kgram);
24:   int freq(std::string kgram, char c);
25:   char randk(std::string kgram);
26:   std::string gen(std::string kgram, int T);
27:
28:   friend std::ostream& operator<< (std::ostream& out, MarkovModel& mm);
29:
30: private:
31:   std::set<std::string> kgramList;
32:   int _order;
33:   std::map<std::string, int> _kgrams[128];
34:   std::string _alphabet;
35: };
36:
37: #endif
```