

```
1: // "Copyright 2020 <Greg Kaplowitz>"
2:
3: #ifndef MARKOV_H
4: #define MARKOV_H
5:
6: #include <map>
7: #include <iostream>
8: #include <stdexcept>
9: #include <algorithm>
10: #include <string>
11:
12: class MarkovModel {
13: public:
14:     MarkovModel(std::string text, int k);
15:     int k_order();
16:     int freq(std::string _kgram);
17:     int freq(std::string _kgram, char c);
18:     char kRand(std::string _kgram);
19:     std::string generate(std::string _kgram, int L);
20:
21:     friend std::ostream& operator<< (std::ostream &out, MarkovModel &mm);
22:
23: private:
24:     std::string txt;
25:     int order;
26:     std::map <std::string, int> kgram;
27:     std::string symtab;
28: };
29:
30: int countFreq(std::string &pat, std::string &txt); //NOLINT
31: int count_following_freq(std::string &pat, std::string &txt, char c); //NOL
INT
32:
33: #endif
34:
```