

```
1: #ifndef _MarkovModel_
2: #define _MarkovModel_
3:
4: // Copyright 2015 Z'heondre Calcano
5: // PS6
6: /*
7:  * MarkovModel.hpp
8:  * Copyright Fred Martin, fredm@cs.uml.edu
9:  * Tue Apr 7 21:54:53 2015
10: */
11: #include <exception>
12: #include <stdexcept>
13: #include <string>
14: #include <iostream>
15: #include <vector>
16: #include <algorithm>
17: #include <map>
18:
19: class MarkovModel {
20:     int _order;
21:     std::map< std::string, int> _kgrams;
22:     std::string _alphabet;
23:     std::vector< std::string > _s;
24: public:
25:     MarkovModel(std::string text, int k);
26:     ~MarkovModel() {
27:         _kgrams.clear();
28:     }
29:     int order();
30:     int freq(std::string kgram);
31:     int freq(std::string kgram, char c);
32:     char randk(std::string kgram);
33:     std::string gen(std::string kgram, int T);
34:     void sets();
35:     void findAmount(std::string x);
36:     void printmap(std::ostream &out);
37:     friend std::ostream& operator<< (std::ostream &out, MarkovModel &mm){
38:         out << mm._order << "\n" << mm._alphabet << "\n";
39:         mm.printmap(out);
40:         return out;
41:     }
42: };
43: #endif
```