

```
1  /* * * * * * * * * * * * * * * * * * * * * * * * * * * */
2  // hashtable_game.cpp
3  // A game using my hash table and linked list implementations in C++.
4  // Author: Lauren E. Scott
5  // June 30, 2014
6  //
7  /* * * * * * * * * * * * * * * * * * * * * * * * * * * */
8
9  #include <vector>
10 #include "hashtablecpp.h"
11 #include <iostream>
12 #include <string>
13
14
15 // Borrowed string tokenizer function.
16
17 void Tokenize(string str,
18               vector<string>& tokens,
19               const string& delimiters = " ")
20 {
21     // Skip delimiters at beginning.
22     string::size_type lastPos = str.find_first_not_of(delimiters, 0);
23     // Find first "non-delimiter".
24     string::size_type pos      = str.find_first_of(delimiters, lastPos);
25     cout << "String: " << str << endl;
26
27     while (string::npos != pos || string::npos != lastPos)
28     {
29         // Found a token, add it to the vector.
30         tokens.push_back(str.substr(lastPos, pos - lastPos));
31         // Skip delimiters. Note the "not_of"
32         lastPos = str.find_first_not_of(delimiters, pos);
33         // Find next "non-delimiter"
34         pos = str.find_first_of(delimiters, lastPos);
35     }
36 }
37
38 int main() {
39     string input;
40     int size, guess;
41     vector<string> words;
42     cout << "Input size of hash table. " << endl;
43     cin >> size;
44     HashTable ht(size);
45     cin.clear();
```

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46     cin.ignore(10000, '\n');
47
48     cout << "Input a sentence. It will be broken up into words that will be
49     getline(cin, input);
50     cout << "Input: " << input << endl;
51     Tokenize(input, words);
52     for(int i = 0; i < words.size(); i++) {
53         ht.insert(words[i]);
54     }
55
56     ht.get_used_buckets();          // Check how many buckets in the hash table
57
58     cout << "Guess the size of the hash table!" << endl;
59     cin >> guess;
60
61     ht.print_table();
62
63     if (guess == ht.get_used_buckets()) {
64         cout << "Correct! " << endl;
65     } else {
66         cout << "Incorrect! " << endl;
67     }
68     cout << "Correct answer is: " << ht.get_used_buckets() << endl;
69
70
71 }
```