```
1: // $Id: mapitor.cpp, v 1.10 2014-06-20 22:36:12-07 - - $
 2:
 3: //
 4: // mapitor - put argv values into a map and iterate over them
 6:
 7: #include <cstdlib>
 8: #include <iostream>
9: #include <map>
10: #include <string>
11:
12: using namespace std;
13:
14: using string_int_map = map<string,int>;
15:
16: void load_map (string_int_map &map, const char *const *const begin,
17:
                                         const char *const *const end) {
       for (const char *const *itor = begin; itor != end; ++itor) {
18:
19:
          map.insert ({*itor, itor - begin});
20:
       }
21: }
22:
23: void print_map (const string_int_map &map) {
24:
25:
       cout << endl << "Forward iterator:" << endl;</pre>
26:
       for (const auto& entry: map) {
          cout << " " << entry.first << " " << entry.second << endl;</pre>
27:
28:
29:
30:
       cout << endl << "Reverse iterator:" << endl;</pre>
31:
       for (auto ritor = map.crbegin(); ritor != map.crend(); ++ritor) {
32:
          cout << " " << ritor->first << " " << ritor->second << endl;</pre>
33:
       }
34: }
35:
36: int main (int argc, char **argv) {
37:
       string_int_map map;
38:
       load_map (map, argv, argv + argc);
39:
       print_map (map);
40:
       return EXIT_SUCCESS;
41: }
42:
43: //TEST// ./mapitor foo bar baz qux quux >mapitor.lis
44: //TEST// mkpspdf mapitor.ps mapitor.cpp* mapitor.lis
45:
```

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## \$cmps109-wm/Examples/wk02a-using-stl/mapitor.cpp.log

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## \$cmps109-wm/Examples/wk02a-using-stl/mapitor.lis

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```
1:
 2: Forward iterator:
       ./mapitor 0
 3:
 4:
       bar 2
       baz 3
 5:
 6:
       foo 1
       quux 5
 7:
 8:
       qux 4
9:
10: Reverse iterator:
11:
       qux 4
       quux 5
12:
13:
       foo 1
14:
       baz 3
       bar 2
15:
      ./mapitor 0
16:
```