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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include <map>
#include <string>
#include <iostream>
#include <iomanip>
using namespace std;

int main()
{
    // create multimap as string/string dictionary
    multimap<string, string> dict;

    // insert some elements in random order
    dict.insert ( { {"day", "Tag"}, {"strange", "fremd"},
                    {"car", "Auto"}, {"smart", "elegant"},
                    {"trait", "Merkmal"}, {"strange", "seltsam"},
                    {"smart", "raffiniert"}, {"smart", "klug"},
                    {"clever", "raffiniert"} } );

    // print all elements
    cout.setf (ios::left, ios::adjustfield);
    cout << ' ' << setw(10) << "english "
          << "german " << endl;
    cout << setfill(' ') << setw(20) << ""
          << setfill(' ') << endl;
    for ( const auto& elem : dict ) {
        cout << ' ' << setw(10) << elem.first
              << elem.second << endl;
    }
    cout << endl;

    // print all values for key "smart"
    string word("smart");
    cout << word << ": " << endl;
    for (auto pos = dict.lower_bound(word);
         pos != dict.upper_bound(word);
         ++pos) {
        cout << "      " << pos->second << endl;
    }

    // print all keys for value "raffiniert"
    word = ("raffiniert");
    cout << word << ": " << endl;
    for (const auto& elem : dict) {
        if (elem.second == word) {
            cout << "      " << elem.first << endl;
        }
    }
}

```

