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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 map / associative array
    // - keys are strings
    // - values are floats
    typedef map<string,float> StringFloatMap;

    StringFloatMap stocks;          // create empty container

    // insert some elements
    stocks["BASF"] = 369.50;
    stocks["VW"] = 413.50;
    stocks["Daimler"] = 819.00;
    stocks["BMW"] = 834.00;
    stocks["Siemens"] = 842.20;

    // print all elements
    StringFloatMap::iterator pos;
    cout << left; // left-adjust values
    for (pos = stocks.begin(); pos != stocks.end(); ++pos) {
        cout << "stock: " << setw(12) << pos->first
            << "price: " << pos->second << endl;
    }
    cout << endl;

    // boom (all prices doubled)
    for (pos = stocks.begin(); pos != stocks.end(); ++pos) {
        pos->second *= 2;
    }

    // print all elements
    for (pos = stocks.begin(); pos != stocks.end(); ++pos) {
        cout << "stock: " << setw(12) << pos->first
            << "price: " << pos->second << endl;
    }
    cout << endl;

    // rename key from "VW" to "Volkswagen"
    // - provided only by exchanging element
    stocks["Volkswagen"] = stocks["VW"];
}

```

```
stocks.erase("VW");

// print all elements
for (pos = stocks.begin(); pos != stocks.end(); ++pos) {
    cout << "stock: " << setw(12) << pos->first
         << "price: " << pos->second << endl;
}
}
```