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/* The following code example is taken from the book
 * "The C++ Standard Library - A Tutorial and Reference"
 * by Nicolai M. Josuttis, Addison-Wesley, 1999
 *
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 */
#include "alghostuff.hpp"
using namespace std;

int main()
{
    vector<int> coll1;
    list<int> coll2;

    INSERT_ELEMENTS(coll1, 1, 6);

    for (int i=1; i<=16; i*=2) {
        coll2.push_back(i);
    }
    coll2.push_back(3);

    PRINT_ELEMENTS(coll1, "coll1: ");
    PRINT_ELEMENTS(coll2, "coll2: ");

    // find first mismatch
    pair<vector<int>::iterator, list<int>::iterator> values;
    values = mismatch (coll1.begin(), coll1.end(), // first range
                      coll2.begin());           // second range
    if (values.first == coll1.end()) {
        cout << "no mismatch" << endl;
    }
    else {
        cout << "first mismatch: "
              << *values.first << " and "
              << *values.second << endl;
    }

    /* find first position where the element of coll1 is not
     * less than the corresponding element of coll2
     */
    values = mismatch (coll1.begin(), coll1.end(), // first range
                      coll2.begin(),              // second range
                      less_equal<int>());          // criterion
    if (values.first == coll1.end()) {
        cout << "always less-or-equal" << endl;
    }
    else {
        cout << "not less-or-equal: "
              << *values.first << " and "
              << *values.second << endl;
    }
}

```