

```

/* 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
 *
 * (C) Copyright Nicolai M. Josuttis 2012.
 * Permission to copy, use, modify, sell and distribute this software
 * is granted provided this copyright notice appears in all copies.
 * This software is provided "as is" without express or implied
 * warranty, and with no claim as to its suitability for any purpose.
 */
#include "alghostuff.hpp"
using namespace std;

int main()
{
    vector<int> coll1 = { 1, 2, 3, 4, 5, 6 };
    list<int> coll2 = { 1, 2, 4, 8, 16, 3 };

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

    // find first mismatch
    auto values = mismatch (coll1.cbegin(), coll1.cend(), // first range
                           coll2.cbegin());              // 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.cbegin(), coll1.cend(), // first range
                      coll2.cbegin(),                // 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;
    }
}

```