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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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 * warranty, and with no claim as to its suitability for any purpose.
 */
#include "alghostuff.hpp"
using namespace std;

bool differenceOne (int elem1, int elem2)
{
    return elem1 + 1 == elem2 || elem1 - 1 == elem2;
}

int main()
{
    // source data
    int source[] = { 1, 4, 4, 6, 1, 2, 2, 3, 1, 6, 6, 6, 5, 7,
                    5, 4, 4 };

    // initialize coll with elements from source
    list<int> coll;
    copy(begin(source), end(source),          // source
        back_inserter(coll));                 // destination
    PRINT_ELEMENTS(coll);

    // print elements with consecutive duplicates removed
    unique_copy(coll.cbegin(), coll.cend(),    // source
        ostream_iterator<int>(cout, " "),    // destination
        cout << endl;

    // print elements without consecutive entries that differ by one
    unique_copy(coll.cbegin(), coll.cend(),    // source
        ostream_iterator<int>(cout, " "),    // destination
        differenceOne);                       // duplicates criterion
    cout << endl;
}

```