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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 <iostream>
#include <set>
#include <list>
#include <algorithm>
#include "print.hpp"
using namespace std;

int main()
{
    set<int> coll;

    // create insert iterator for coll
    // - inconvenient way
    insert_iterator<set<int> > iter(coll, coll.begin());

    // insert elements with the usual iterator interface
    *iter = 1;
    iter++;
    *iter = 2;
    iter++;
    *iter = 3;

    PRINT_ELEMENTS(coll, "set: ");

    // create inserter and insert elements
    // - convenient way
    inserter(coll, coll.end()) = 44;
    inserter(coll, coll.end()) = 55;

    PRINT_ELEMENTS(coll, "set: ");

    // use inserter to insert all elements into a list
    list<int> coll2;
    copy (coll.begin(), coll.end(),           // source
          inserter(coll2, coll2.begin()));    // destination

    PRINT_ELEMENTS(coll2, "list: ");

    // use inserter to reinsert all elements into the list before the second
    element
    copy (coll.begin(), coll.end(),           // source
          inserter(coll2, ++coll2.begin()));  // destination

    PRINT_ELEMENTS(coll2, "list: ");
}

```