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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 <deque>
#include <algorithm>
#include "print.hpp"
using namespace std;

int main()
{
    set<int, greater<int> > coll1;
    deque<int> coll2;

    // insert elements from 1 to 9
    for (int i=1; i<=9; ++i) {
        coll1.insert(i);
    }

    PRINT_ELEMENTS(coll1, "initialized: ");

    // transform all elements into coll2 by multiplying 10
    transform (coll1.begin(), coll1.end(),           // source
               back_inserter(coll2),                 // destination
               bind2nd(multiplies<int>(), 10));        // operation

    PRINT_ELEMENTS(coll2, "transformed: ");

    // replace value equal to 70 with 42
    replace_if (coll2.begin(), coll2.end(),           // range
               bind2nd(equal_to<int>(), 70),          // replace criterion
               42);                                    // new value

    PRINT_ELEMENTS(coll2, "replaced:   ");

    // remove all elements with values less than 50
    coll2.erase(remove_if(coll2.begin(), coll2.end(), // range
                          bind2nd(less<int>(), 50)), // remove criterion
                coll2.end());

    PRINT_ELEMENTS(coll2, "removed:    ");
}

```