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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()
{
    list<int> coll;

    INSERT_ELEMENTS(coll, 2, 6);
    INSERT_ELEMENTS(coll, 4, 9);
    PRINT_ELEMENTS(coll);

    // print all elements with value 5 replaced with 55
    replace_copy(coll.begin(), coll.end(),           // source
                 ostream_iterator<int>(cout, " "),   // destination
                 5,                                   // old value
                 55);                                 // new value
    cout << endl;

    // print all elements with a value less than 5 replaced with 42
    replace_copy_if(coll.begin(), coll.end(),         // source
                    ostream_iterator<int>(cout, " "), // destination
                    bind2nd(less<int>(), 5),          // replacement criterion
                    42);                               // new value
    cout << endl;

    // print each element while each odd element is replaced with 0
    replace_copy_if(coll.begin(), coll.end(),         // source
                    ostream_iterator<int>(cout, " "), // destination
                    bind2nd(modulus<int>(), 2),        // replacement criterion
                    0);                               // new value
    cout << endl;
}

```