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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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 */
#include "alghostuff.hpp"
using namespace std;
using namespace std::placeholders;

int main()
{
    vector<int> coll1;
    list<int> coll2;

    INSERT_ELEMENTS(coll1,1,9);
    PRINT_ELEMENTS(coll1,"coll1:  ");

    // negate all elements in coll1
    transform (coll1.cbegin(), coll1.cend(),          // source range
               coll1.begin(),                          // destination range
               negate<int>());                          // operation
    PRINT_ELEMENTS(coll1,"negated: ");

    // transform elements of coll1 into coll2 with ten times their value
    transform (coll1.cbegin(), coll1.cend(),          // source range
               back_inserter(coll2),                  // destination range
               bind(multiplies<int>(),_1,10));         // operation
    PRINT_ELEMENTS(coll2,"coll2:  ");

    // print coll2 negatively and in reverse order
    transform (coll2.crbegin(), coll2.crend(),        // source range
               ostream_iterator<int>(cout," "),      // destination range
               [](int elem){                          // operation
                   return -elem;
               });
    cout << endl;
}

```