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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;

int main()
{
    vector<int> coll;

    INSERT_ELEMENTS(coll, 2, 6);
    INSERT_ELEMENTS(coll, 4, 9);
    INSERT_ELEMENTS(coll, 1, 7);
    PRINT_ELEMENTS(coll, "coll:          ");

    // remove all elements with value 5
    vector<int>::iterator pos;
    pos = remove(coll.begin(), coll.end(),          // range
                 5);                                // value to remove

    PRINT_ELEMENTS(coll, "size not changed:  ");

    // erase the "removed" elements in the container
    coll.erase(pos, coll.end());
    PRINT_ELEMENTS(coll, "size changed:      ");

    // remove all elements less than 4
    coll.erase(remove_if(coll.begin(), coll.end(), // range
                        [](int elem) {             // remove criterion
                            return elem < 4;
                        }),
               coll.end());
    PRINT_ELEMENTS(coll, "<4 removed:        ");
}

```