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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()
{
    deque<int> coll;

    coll = { 1, 2, 7, 7, 6, 3, 9, 5, 7, 7, 7, 3, 6 };
    PRINT_ELEMENTS(coll);

    // find three consecutive elements with value 7
    deque<int>::iterator pos;
    pos = search_n (coll.begin(), coll.end(),      // range
                   3,                               // count
                   7);                               // value

    // print result
    if (pos != coll.end()) {
        cout << "three consecutive elements with value 7 "
              << "start with " << distance(coll.begin(), pos) + 1
              << ". element" << endl;
    }
    else {
        cout << "no four consecutive elements with value 7 found"
              << endl;
    }

    // find four consecutive odd elements
    pos = search_n (coll.begin(), coll.end(),      // range
                   4,                               // count
                   0,                               // value
                   [](int elem, int value) {       // criterion
                       return elem%2==1;
                   });

    // print result
    if (pos != coll.end()) {
        cout << "first four consecutive odd elements are: ";
        for (int i=0; i<4; ++i, ++pos) {
            cout << *pos << ', ';
        }
    }
    else {
        cout << "no four consecutive elements with value > 3 found";
    }
    cout << endl;
}

```

