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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 <algorithm>
#include <vector>
#include <iostream>
using namespace std;

int main()
{
    // create vector with elements from 1 to 6 in arbitrary order
    vector<int> coll = { 2, 5, 4, 1, 6, 3 };

    // find and print minimum and maximum elements
    auto minpos = min_element(coll.cbegin(), coll.cend());
    cout << "min: " << *minpos << endl;
    auto maxpos = max_element(coll.cbegin(), coll.cend());
    cout << "max: " << *maxpos << endl;

    // sort all elements
    sort (coll.begin(), coll.end());

    // find the first element with value 3
    // - no cbegin()/cend() because later we modify the elements pos3 refers to
    auto pos3 = find (coll.begin(), coll.end(), // range
                     3);                       // value

    // reverse the order of the found element with value 3 and all following
    elements
    reverse (pos3, coll.end());

    // print all elements
    for (auto elem : coll) {
        cout << elem << ' ';
    }
    cout << endl;
}

```