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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> coll1;
    vector<int> coll6(6);      // initialize with 6 elements
    vector<int> coll30(30);    // initialize with 30 elements

    INSERT_ELEMENTS(coll1, 3, 7);
    INSERT_ELEMENTS(coll1, 2, 6);
    INSERT_ELEMENTS(coll1, 1, 5);
    PRINT_ELEMENTS(coll1);

    // copy elements of coll1 sorted into coll6
    vector<int>::const_iterator pos6;
    pos6 = partial_sort_copy (coll1.cbegin(), coll1.cend(),
                              coll6.begin(), coll6.end());

    // print all copied elements
    copy (coll6.cbegin(), pos6,
          ostream_iterator<int>(cout, " "));
    cout << endl;

    // copy elements of coll1 sorted into coll30
    vector<int>::const_iterator pos30;
    pos30 = partial_sort_copy (coll1.cbegin(), coll1.cend(),
                              coll30.begin(), coll30.end(),
                              greater<int>());

    // print all copied elements
    copy (coll30.cbegin(), pos30,
          ostream_iterator<int>(cout, " "));
    cout << endl;
}

```