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

int main()
{
    vector<int> coll;

    // insert elements from -3 to 9
    for (int i=-3; i<=9; ++i) {
        coll.push_back (i);
    }

    // print number of elements by processing the distance between beginning and
end    cout << "number/distance: " << coll.end()-coll.begin() << endl;

    // print all elements
    // - NOTE: uses operator - for iterators
    vector<int>::iterator pos;
    for (pos=coll.begin(); pos<coll.end(); ++pos) {
        cout << *pos << ' ';
    }
    cout << endl;

    // print all elements
    // - NOTE: uses operator [] instead of operator *
    for (int i=0; i<coll.size(); ++i) {
        cout << coll.begin()[i] << ' ';
    }
    cout << endl;

    // print every second element
    // - NOTE: uses operator +=
    for (pos = coll.begin(); pos < coll.end()-1; pos += 2) {
        cout << *pos << ' ';
    }
    cout << endl;
}

```