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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 "algotuff.hpp"
using namespace std;

int main()
{
    vector<int> coll;

    INSERT_ELEMENTS(coll,1,9);
    PRINT_ELEMENTS(coll);

    // process sum of elements
    cout << "sum: "
         << accumulate (coll.cbegin(), coll.cend(), // range
                        0) // initial value
         << endl;

    // process sum of elements less 100
    cout << "sum: "
         << accumulate (coll.cbegin(), coll.cend(), // range
                        -100) // initial value
         << endl;

    // process product of elements
    cout << "product: "
         << accumulate (coll.cbegin(), coll.cend(), // range
                        1, // initial value
                        multiplies<int>()) // operation
         << endl;

    // process product of elements (use 0 as initial value)
    cout << "product: "
         << accumulate (coll.cbegin(), coll.cend(), // range
                        0, // initial value
                        multiplies<int>()) // operation
         << endl;
}

```