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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference"
 * by Nicolai M. Josuttis, Addison-Wesley, 1999
 *
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 */
#include "alghostuff.hpp"
using namespace std;

bool isEven (int elem)
{
    return elem % 2 == 0;
}

int main()
{
    vector<int> coll;
    int num;
    INSERT_ELEMENTS(coll,1,9);
    PRINT_ELEMENTS(coll,"coll: ");

    // count and print elements with value 4
    num = count (coll.begin(), coll.end(),    // range
                 4);                          // value
    cout << "number of elements equal to 4: " << num << endl;

    // count elements with even value
    num = count_if (coll.begin(), coll.end(),  // range
                   isEven);                   // criterion
    cout << "number of elements with even value: " << num << endl;

    // count elements that are greater than value 4
    num = count_if (coll.begin(), coll.end(),  // range
                   bind2nd(greater<int>(),4)); // criterion
    cout << "number of elements greater than 4: " << num << endl;
}

```