```cpp
/* 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 "algostuff.hpp"
using namespace std;

int main()
{
    vector<int> coll = { 5, 3, 9, 1, 3, 4, 8, 2, 6 };
    PRINT_ELEMENTS(coll,"coll: ");

    // define predicate: check whether element is odd:
    auto isOdd = [](int elem) {
                    return elem%2==1;
                 };

    // check whether coll is partitioned in odd and even elements
    if (is_partitioned (coll.cbegin(), coll.cend(),  // range
                        isOdd)) {                    // predicate
        cout << "coll is partitioned" << endl;

        // find first even element:
        auto pos = partition_point (coll.cbegin(),coll.cend(),
                                    isOdd);
        cout << "first even element: " << *pos << endl;
    }
    else {
        cout << "coll is not partitioned" << endl;
    }
}
```