How to find all elements NOT meet the condition?

[intro]

any\_of

any\_of returns true iff any of elements in the array meets the condition.

How can we use this func to find all elements NOT meet the condtion?

Although we can write our own function, we can use this function with a trick.

The statement is true

any of elements meets the condition

is equivalent to the following statement is false

all element are NOT meet this condition.

Using the math representation as follows.

[code]

// any\_of example

#include <iostream> // std::cout

#include <algorithm> // std::any\_of

#include <array> // std::array

int main ()

{

std::array<int,7> foo = {0,1,-1,3,-3,5,-5};

if ( std::any\_of(foo.begin(), foo.end(), [](int i){return i<0;}) )

{

std::cout << "There are at least one negative element in the range.\n";

}

else

{

std::cout << "There are NO negative elements in the range.\n";

}

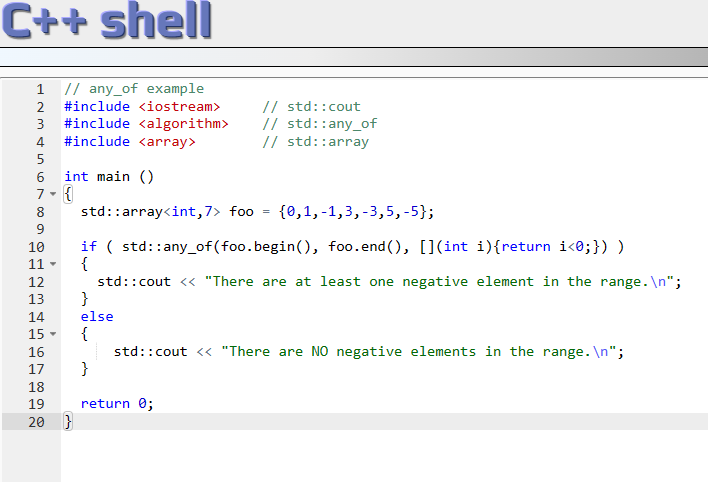
return 0;

}

[result]

There are at least one negative element in the range.

[screenshot]



[ref]

<https://cplusplus.com/reference/algorithm/any_of/>