

Count Elements

Count algorithms assist us in counting the number of elements in a range which satisfy a certain predicate.

You can count elements with the STL with and without a predicate.

Returns the number of elements:

```
Num count(InpIt first, InpIt last, const T& val)
Num count(ExePol pol, FwdIt first, FwdIt last, const T& val)

Num count_if(InpIt first, InpIt last, UnPred pre)
Num count_if(ExePol pol, FwdIt first, FwdIt last, UnPred pre)
```



Count algorithms take input iterators as arguments and return the number of elements matching `val` or the predicate.

```
#include <algorithm>
#include <cctype>
#include <iostream>
#include <string>

int main(){

    std::cout << std::endl;

    std::string str{"abcdabAAAaefaBqeaBCQEaadsfdewAAQAaafbd"};
    std::cout << "count: " << std::count(str.begin(), str.end(), 'a') << std::endl;
    std::cout << "count_if: " << std::count_if(str.begin(), str.end(), [](char a){ return std::isalpha(a); }) << std::endl;

    std::cout << std::endl;
}
```



``std::count`, and `std::count_if``