## **Transform Ranges**

Now we will study std::transform which is used to perform transformations on a range.

The std::transform algorithm applies a unary or binary callable to a range and copies the modified elements to the destination range.

std::transform applies the unary callable fun to the elements of the input range and copies the result to result.

```
OutIt transform(InpIt first1, InpIt last1, OutIt result, UnFun fun)
FwdIt2 transform(ExePol pol, FwdIt first1, FwdIt last1, FwdIt2 result, UnFun fun)
```

In the following snippet std::transform applies the binary callable fun to both input ranges and copies the result to result.

```
OutIt transform(InpIt1 first1, InpIt1 last1, InpIt2 first2, OutIt result, BiFun fun)
FwdIt3 transform(ExePol pol, FwdIt1 first1, FwdIt1 last1, FwdIt2 first2, FwdIt3 result, BiFun
```

The difference between the two versions is that the first version applies the callable to each element of the range; the second version applies the callable to pairs of both ranges in parallel. The returned iterator points to one position after the last transformed element in both cases.

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

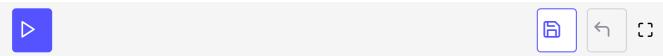
int main(){

   std::cout << std::endl;

   std::string str{"abcdefghijklmnopqrstuvwxyz"};

   std::cout << str << std::endl;

   std::cout << str << std::endl;
</pre>
```



Transform algorithms

In the next lesson, we'll learn a function used for reversing ranges.