# **Functions in <algorithm>**

### Non-modifying sequence operations:

for\_eachApply function to rangefindFind value in rangefind\_ifFind element in rangefind endFind last subsequence in

find\_end Find last subsequence in range Find element from set in range

adjacent\_find count Find equal adjacent elements in range Count appearances of value in range Number of elements in range satisfying condition

mismatchReturn first position where two ranges differequalTest whether the elements in two ranges are equal

**search** Find subsequence in range

**search\_n** Find succession of equal values in range

### **Modifying sequence operations:**

**copy** Copy range of elements

copy\_backwardcopy range of elements backwardsswapswap\_rangesExchange values of two ranges

**iter\_swap** Exchange values of objects pointed by two iterators

transform Apply function to range
replace Replace value in range
replace\_if Replace values in range
replace\_copy Copy range replacing value
replace\_copy\_if Copy range replacing value
fill Fill range with value

fill Fill range with value fill\_n Fill sequence with value

generate Generate values for range with function
Generate values for sequence with function

removeRemove value from rangeremove\_ifRemove elements from rangeremove\_copyCopy range removing valueremove\_copy\_ifCopy range removing values

**unique** Remove consecutive duplicates in range

**unique copy** Copy range removing duplicates

reverseReverse rangereverse\_copyCopy range reversedrotateRotate elements in rangerotate\_copyCopy rotated range

random\_shuffle Rearrange elements in range randomly

**partition** Partition range in two

stable\_partition Partition range in two - stable ordering

### **Sorting:**

**sort** Sort elements in range

**stable sort** Sort elements preserving order of equivalents

**nth element** Sort element in range

## Binary search (operating on sorted ranges):

lower\_boundReturn iterator to lower boundupper\_boundReturn iterator to upper boundequal\_rangeGet subrange of equal elementsbinary\_searchTest if value exists in sorted array

### Merge (operating on sorted ranges):

merge Merge sorted ranges

inplace merge Merge consecutive sorted ranges

**includes** Test whether sorted range includes another

sorted range

set\_unionUnion of two sorted rangesset\_intersectionIntersection of two sorted rangesset\_differenceDifference of two sorted rangesset\_symmetricdifference Symmetric difference of two

sorted ranges

#### Heap:

push\_heapPush element into heap rangepop\_heapPop element from heap rangemake\_heapMake heap from rangesort heapSort elements of heap

### Min/max:

min Return the lesser of two arguments
max Return the greater of two arguments
min\_element Return smallest element in range
max\_element Return largest element in range
lexicographical compare Lexicographical less-than

comparison

**next permutation** Transform range to next permutation

**prev permutation** Transform range to previous

permutation