



# C++ STLs

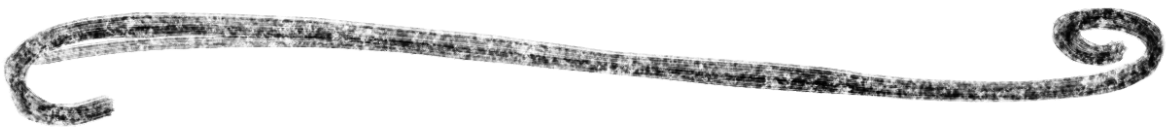
“Like a  
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video - 6 ✓✓

Leetcode - 179  
(GFG P.O.T.D)

## Comparators Application



179. Largest Number

Medium

Topics

Companies

Given a list of non-negative integers `nums`, arrange them such that they form the largest number and return it

Since the result may be very large, so you need to return a string instead of an integer.

## Largest Number formed from an Array



Medium

Accuracy: 37.82%

Submissions: 132K+

Points: 4

Given an array of strings `arr[]` of length `n` representing non-negative integers, arrange them in a manner, such that, after concatenating them in order, it results in the **largest possible number**. Since the result may be very large, return it as a string.

Example :-  $nums = \{ "3", "30", "34", "5", "9" \}$

Output = "9534330"

Why Greedy Fails

???



nums = { "3", "30", "34", "5", "9" }

↑   ↑   ↑↑   ↑↑   ↑

"3430953"

## Brute Force :-

nums = { "3", "30", "34", "5", "9" }      $O(n!)$

{ 3, 30, 34, 9, 5 }     { 3, 30, 5, 9, 34 }

↓     ↓

"3303495"     "3305934"

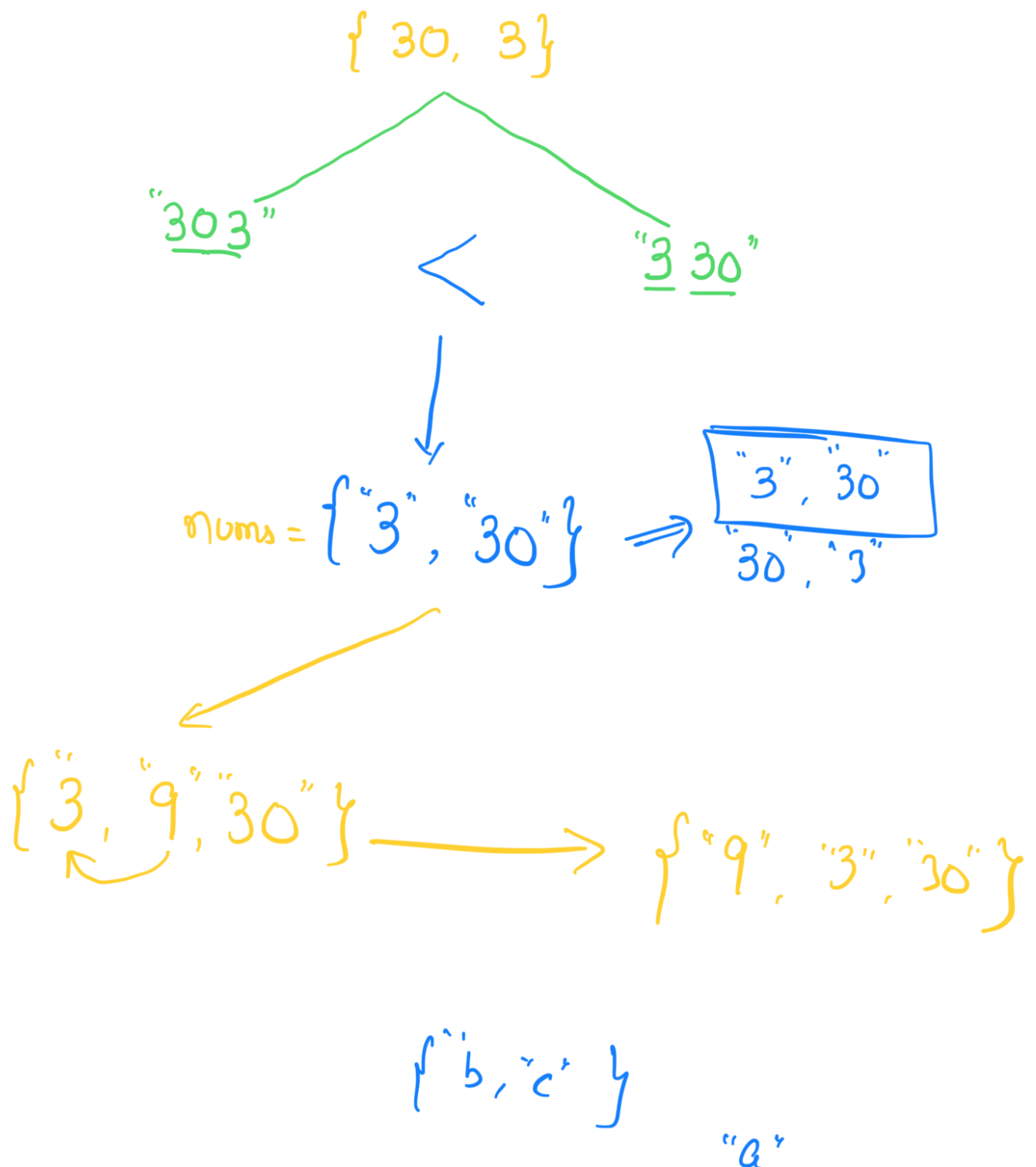
{ 9, 5, 34, 3, 30 }

"9534330" → An

$O(n!)$

# Let's Break it down

What if you only had 2 elements?



"ca" | "ac"

# Sorting.

↳ Custom Sort

Sort (begin(nums), end(nums), myComparator);

Func<sup>n</sup>  
Pointer

Function

lambda

myComparator = [ ] (string&s1, string&s2) {

```
// return (s1+s2) > (s2+s1); {  
    if (s1+s2 > s2+s1) {  
        return True;  
    }  
    return false;  
}
```

} ;

