

## Longest Consecutive Sequence

Step 1:

arr = [100, 4, 200, 1, 3, 2]

index = 0

we need to find sequences first  $arr[i] = 100 \Rightarrow$  have no prefixes  
to find longest as possible. also not have suffixes

First element of sequence doesn't have its pre-element in the set. length = 1 longest = 1

Step 2:

So iterate through the array and find elements which doesn't have

index = 1

$arr[i] = 4 \Rightarrow$  have prefixes

any prefixes and then try to find

Step 3:

index = 2

are we having any consecutive elements next to it. To find

$arr[i] = 200 \Rightarrow$  No prefixes  
No suffixes

all lengths of consecutive sequences length = 1 longest = 1  
and return maximum of those

Step 4:

index = 3

$arr[i] = 1 \Rightarrow$  No prefixes

2, 3, 4 present in arr

length = 4 longest = 4

Longest Consecutive Sequence  
of length = 4

Time Complexity:  $O(n)$

Space Complexity:  $O(n)$