

## Array-5

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### Pair or Two Sum

Approach-1  $\Rightarrow$  Two Pointers (for Sorted list)

$\{2, 7, 11, 15\}$   $n=4$ , Target = 26

$l=0$ ,  $r=4-1=3$

Pair\_Sum = 0

while ( $l < r$ )  $\rightarrow$  loop starts

PS =  $2+15=17$

PS < Target

$17 < 26 \Rightarrow l++$



PS =  $7+15=22$

PS < Target

$22 < 26 \Rightarrow l++$



PS =  $11+15=26$

PS == Target = 26

Return  $\{l, r\} \rightarrow$  Loop ends  
 $\{2, 3\}$

Approach-2  $\Rightarrow$  Hash maps

unordered\_map  $\rightarrow$  mp

$i=0$   
complement =  $26-2=24$

$\Rightarrow 24$  is not in mp

$\Rightarrow mp[2]=1$

$i=1$   
complement =  $26-7=19$

$\Rightarrow 19$  is not in mp

$\Rightarrow mp[7]=2$

$i=2$   
complement =  $26-11=15$

$\Rightarrow 15$  is not in mp

$\Rightarrow mp[11]=3$

$i=3$   
complement =  $26-15=11$

11 is found in mp

Return  $\{2, 3\}$   
           $\swarrow$          $\searrow$   
          2        15

mp

	key	value
$i=0$	2	1
$i=1$	7	2
$i=2$	11	3
$i=3$		