

01 Step

To apply two pointer technique, we make sure that array is sorted.

Unsorted array =

1	4	45	6	10	-8
0	1	2	3	4	5

Sorted array =

-8	1	4	6	10	45
0	1	2	3	4	5

Two Pointer Technique

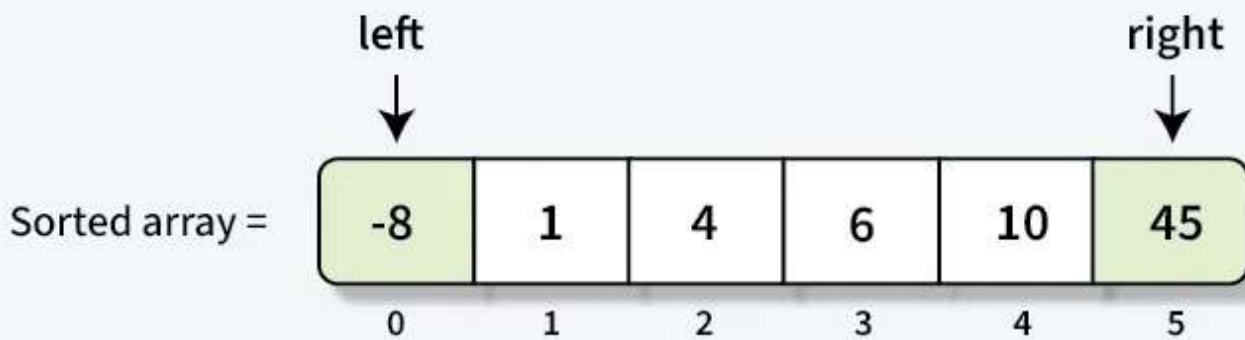
02

Step

Place the left pointer at the start of the array and right pointer at the end.

Calculate Sum: $\text{arr}[\text{left}] + \text{arr}[\text{right}] = 37$

Since, sum is greater than target ($37 > 16$), decrement the right pointer by 1



$$\text{Sum} = -8 + 45 = 37$$

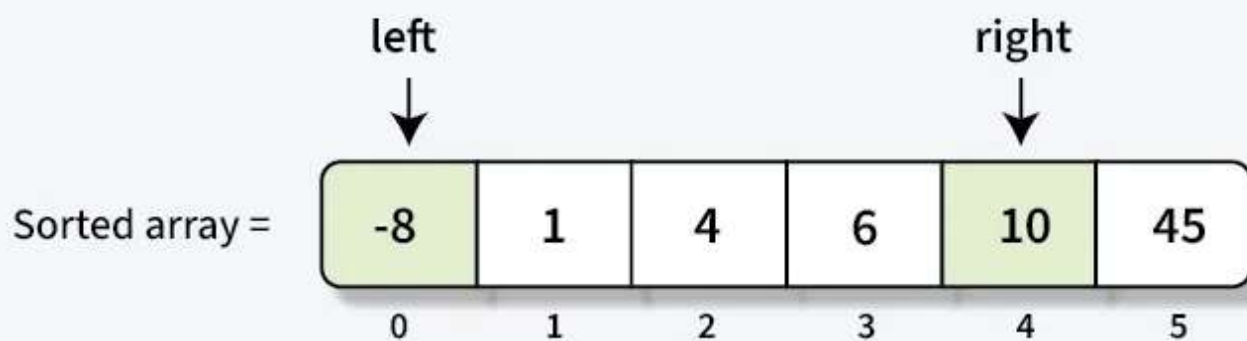
target = 16

Two Pointer Technique

03
Step

Calculate Sum: $\text{arr}[\text{left}] + \text{arr}[\text{right}] = 2$

Since sum is smaller than target ($2 < 16$), increment left pointer by 1



$$\text{Sum} = -8 + 10 = 2$$

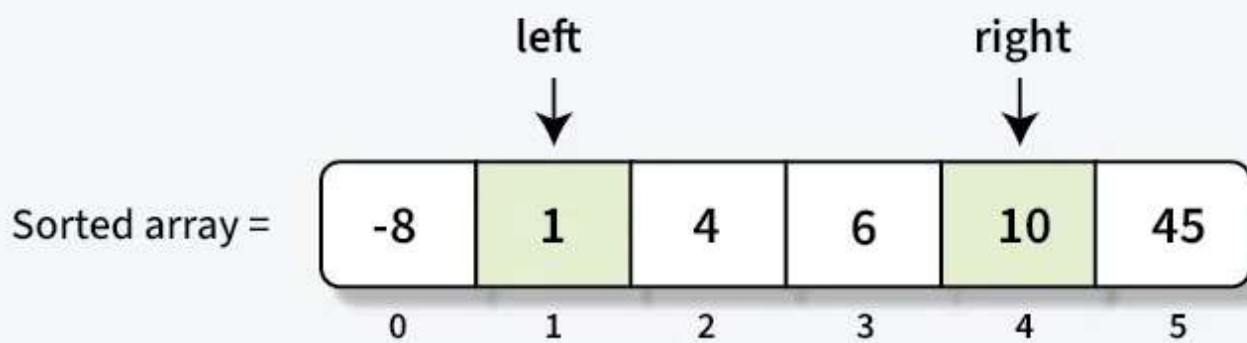
target = 16

Two Pointer Technique

04 Step

Calculate Sum: $\text{arr}[\text{left}] + \text{arr}[\text{right}] = 11$

Since sum is smaller than target ($11 < 16$), increment left pointer by 1



Sum = 1 + 10 = 11

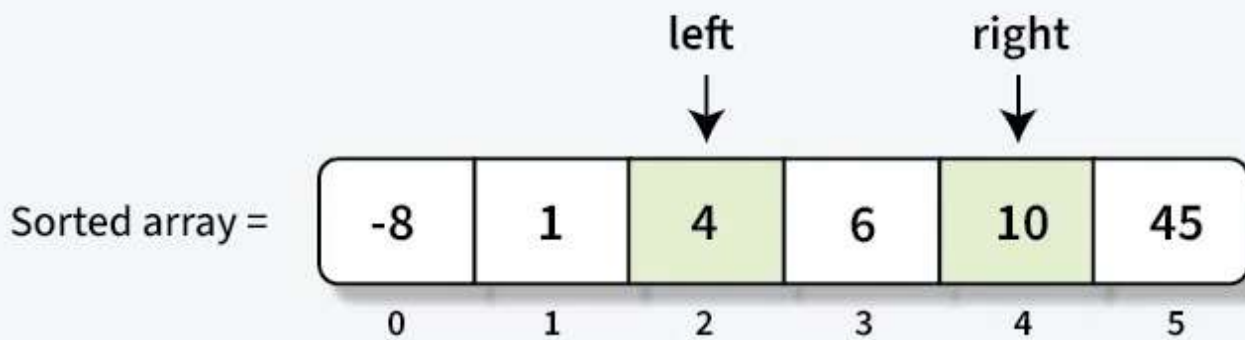
target = 16

Two Pointer Technique

05
Step

Calculate Sum: $\text{arr}[\text{left}] + \text{arr}[\text{right}] = 14$

Since sum is smaller than target ($14 < 16$), increment left pointer by 1



Sum = $4 + 10 = 14$

target = 16

Two Pointer Technique

06

Step

Calculate Sum: $\text{arr}[\text{left}] + \text{arr}[\text{right}] = 16$ Sum is equals to the target ($16 == 16$).

We've found our pair.

left

right

Sorted array =

-8	1	4	6	10	45
0	1	2	3	4	5

Sum = $6 + 10 = 16$

target = 16

Two Pointer Technique
