



Solution Review: Left Rotate Array

Let's go over the solution review of the challenge given in the previous lesson.

We'll cover the following ^

- Solution
- Explanation
 - left_rotate function

Solution#

Press the **RUN** button and see the output!

```
1  #include <iostream>
2
3  using namespace std;
4
5  // left_rotate function
6  void left_rotate(int arr[], int size) {
7      // Declares a loop counter variable
8      int j;
9      // Store the element at index 0
10     int temp = arr[0];
11     // Traverse array
12     for (j = 0; j < size - 1; j++) {
13         // Left Shift element
14         arr[j] = arr[j + 1];
15     }
16     // Store the value of temp at the last index of an array
17     arr[j] = temp;
18
19 }
20
```

```

21 // Function to print values of an array
22 void print_array(int arr[], int size) {
23     // Traverse array
24     for (int i = 0; i < size; i++) {
25         // Print value at index i
26         cout << arr[i] << " ";
27     }
28     cout << endl;

```



Output

0.92s

```

Array before left rotation
1 2 3 4 5
Array after left rotation:
2 3 4 5 1

```

Explanation#

To left rotate the elements of an array by one index, we move the element of the array at index $j+1$ to index j , and the first element of the array goes to the end of the array.

left_rotate function

The `left_rotate` function takes the array `arr[]` of type `int` and its size of type `int` in its input parameters.

As we move index $j+1$ to j , the element at index 2 moves to index 1, and 1 moves to 0. The first element at index 0 goes to the end of the array. If we iterate over the whole array and replace each element with the next element, the first element is lost. We need to store the first element in a variable, iterate over the array(except for the last element as we replace it with the



first element), replace each element j with its next element $j+1$ (**Line No. 14**), and then replace the last element with the first element stored in a temp variable.

Let's solve a difficult challenge related to arrays in the upcoming lesson.

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Challenge 2: Left Rotate Array

Challenge 3: Sort Elements of an Arra...



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