

Status	Finished
Started	Sunday, 12 January 2025, 9:08 PM
Completed	Sunday, 12 January 2025, 9:24 PM
Duration	15 mins 33 secs

Question 1

Correct

Marked out of 1.00

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Given an array of integers, reverse the given array in place using an index and loop rather than a built-in function.

Example

arr = [1, 3, 2, 4, 5]

Return the array [5, 4, 2, 3, 1] which is the reverse of the input array.

Function Description

Complete the function *reverseArray* in the editor below.

*reverseArray* has the following parameter(s):

*int arr[n]*: an array of integers

Return

*int[n]*: the array in reverse order

```
35 int* reverseArray(int arr_count, int *arr, int *result_count) {
36     *result_count= arr_count;
37     int *a = (int*)malloc(arr_count * sizeof(int));
38     for(int i =0; i<arr_count; i++){
39         *(a+i)= arr[arr_count-1-i];
40     }
41     return a;}
42
43
44
45
```

	Test	Expected	Got	
✓	int arr[] = {1, 3, 2, 4, 5}; int result_count; int* result = reverseArray(5, arr, &result_count); for (int i = 0; i < result_count; i++) printf("%d\n", *(result + i));	5 4 2 3 1	5 4 2 3 1	✓

Passed all tests! ✓

## Question 2

Correct

Marked out of 1.00

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An automated cutting machine is used to cut rods into segments. The cutting machine can only hold a rod of *minLength* or more, and it can only make one cut at a time. Given the array *lengths[]* representing the desired lengths of each segment, determine if it is possible to make the necessary cuts using this machine. The rod is marked into lengths already, in the order given.

**Example** $n = 3$  $lengths = [4, 3, 2]$  $minLength = 7$ 

The rod is initially  $sum(lengths) = 4 + 3 + 2 = 9$  units long. First cut off the segment of length  $4 + 3 = 7$  leaving a rod  $9 - 7 = 2$ . Then check that the length 7 rod can be cut into segments of lengths 4 and 3. Since 7 is greater than or equal to  $minLength = 7$ , the final cut can be made. Return "Possible".

```
29 char* cutThemAll(int lengths_count, long *lengths, long minLength) {
30     long t=0, i=1;
31     for(int i=0; i<=lengths_count-1;i++){
32         t+= lengths[i];
33     }
34     do{
35         if(t-lengths[lengths_count-1]<minLength){
36             return "Impossible";
37         }
38         i++;
39     }while(i<lengths_count-1);
40     return "Possible";
41 }
42
43
44
```

	Test	Expected	Got	
✓	long lengths[] = {3, 5, 4, 3}; printf("%s", cutThemAll(4, lengths, 9))	Possible	Possible	✓
✓	long lengths[] = {5, 6, 2}; printf("%s", cutThemAll(3, lengths, 12))	Impossible	Impossible	✓

Passed all tests! ✓