Week 9- Day 5 : Coding Challenge

(Maximum marks -15)
Try to solve problems using two pointers:

Q-1) Squares of a Sorted Array:(5 marks) (easy)
https://leetcode.com/problems/squares-of-a-sorted-array/

Given an integer array nums sorted in non-decreasing order, return *an array of the*
squares of each number sorted in non-decreasing order.

Example 1:

Input: nums = [-4,-1,0,3,10]
Output: [0,1,9,16,100]
Explanation: After squaring, the array becomes [16,1,0,9,100].
After sorting, it becomes [0,1,9,16,100].

Q-2) Reverse String:(5 marks) (easy)
Write a function that reverses a string. The input string is given as an array of characters
s.

https://leetcode.com/problems/reverse-string/

Example 1:

Input: s = ["h","e","l","l","o"]
Output: ["o","l","l","e","h"]

Q-3)Maximum Ascending Subarray Sum: (5 marks) (easy)
https://leetcode.com/problems/maximum-ascending-subarray-sum/
Given an array of positive integers nums, return the *maximum possible sum of an ascending subarray in* nums.

A subarray is defined as a contiguous sequence of numbers in an array.

A subarray [numsl, numsl+1, ..., numsr-1, numsr] is ascending if for all i where l <= i < r, numsi < numsi+1. Note that a subarray of size 1 is ascending.

Example 1:

> Input: nums = [10,20,30,5,10,50]
> Output: 65
> Explanation: [5,10,50] is the ascending subarray with the maximum sum of 65.

Q-4) [Bonus Question] Move Zeroes: (5 extra marks) (Medium)
https://leetcode.com/problems/move-zeroes/

Given an integer array nums, move all 0's to the end of it while maintaining the relative order of the non-zero elements.

Note that you must do this in-place without making a copy of the array.

Example 1:

Input: nums = [0,1,0,3,12]
Output: [1,3,12,0,0]

Marks distribution:
Question 1,2 and 3 carry 5 marks each.

Question 4 is a bonus question, that means if you leave that question you dont lose a mark, but if you solve it, you can extra 5 marks.

Remark: maximum marks you can get is 15, bonus question helps only of you are not able to solve another question.