

Data Structure and Algorithms

Assignment 4: Arrays and Strings

Date of issue: 21-04-2020

Due Date: 23-04-2020

Q 7) Write a program to print all the LEADERS in the array. An element is leader if it is greater than all the elements to its right side. And the rightmost element is always a leader.

Input: - 16, 17, 4, 3, 5, 2

Output: - leaders are 17, 5, 2

Q 8) Given an array of positive numbers, find the maximum sum of a subsequence with the constraint that no 2 numbers in the sequence should not be adjacent in the array.

Sr. No.	Input	Output
1	3 2 7 10	13 (sum of 3 and 10)
2	3 2 5 10 7	15 (sum of 3, 5 and 7)

Q 9) Given an array `arr[]` of `n` integers, construct a Product Array `prod[]` (of same size) such that `prod[i]` is equal to the product of all the elements of `arr[]` except `arr[i]`. Solve it **without division operator and in $O(n)$**

Input: - `arr[] = {10, 3, 5, 6, 2}`

Output: - `prod[] = {180, 600, 360, 300, 900}`