

CDAC Mumbai
PG-DAC Sep22 Batch (Juhu & Kharghar)
Module 3: Algorithms & Data Structures

Time : 2hrs

Marks: 40

Q1: Given a string S, remove consecutive duplicates from it recursively.

Sample Test case 1 : aabccba Sample Output 1 : abcba	Sample Test case 2 : xxxxyyyzwwzzz Sample Output 2 : xyzwz
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[Marks: 10]

Q2: For a given string expression containing only round brackets or parentheses, check if they are balanced or not. Brackets are said to be balanced if the bracket which opens last, closes first.

Example: Expression: (())

Since all the opening brackets have their corresponding closing brackets, we say it is balanced and hence the output will be, 'true'. You need to return a boolean value indicating whether the expression is balanced or not.

Note: The input expression will not contain spaces in between.

Sample Test case 1 : (())() Sample Output 1 : true	Sample Test case 2 : ()()() Sample Output 2 : false
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[Marks: 10]

Q3: Q3. Write a menu driven java program to design the linked list functionality as follows:

- 1. Create a linked list.**
- 2. Reverse the linked list.**
- 3. Eliminate duplicates from the list.**
- 4. Check whether the given list is a palindrome or not.**

[Marks: 20]