

Rajalakshmi Engineering College

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NeoColab_REC_CS23231_DATA STRUCTURES

REC_DS using C_Week 2_CY

Attempt : 1
Total Mark : 30
Marks Obtained : 0

Section 1 : Coding

1. Problem Statement

You are required to implement a program that deals with a doubly linked list.

The program should allow users to perform the following operations:

Insertion at the End: Insert a node with a given integer data at the end of the doubly linked list. Insertion at a given Position: Insert a node with a given integer data at a specified position within the doubly linked list. Display the List: Display the elements of the doubly linked list.

Input Format

The first line of input consists of an integer n, representing the number of elements to be initially inserted into the doubly linked list.

The second line consists of n space-separated integers, denoting the elements to be inserted at the end.

The third line consists of integer m , representing the new element to be inserted.

The fourth line consists of an integer p , representing the position at which the new element should be inserted (1-based indexing).

Output Format

If p is valid, display the elements of the doubly linked list after performing the insertion at the specified position.

If p is invalid, display "Invalid position" in the first line and the second line prints the original list.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 5

10 25 34 48 57

35

4

Output: 10 25 34 35 48 57

Answer

-

Status : Skipped

Marks : 0/10

2. Problem Statement

Imagine you're managing a store's inventory list, and some products were accidentally entered multiple times. You need to remove the duplicate products from the list to ensure each product appears only once.

You have an unsorted doubly linked list of product IDs. Some of these product IDs may appear more than once, and your goal is to remove any

duplicates.

Input Format

The first line of input consists of an integer n, representing the number of elements in the list.

The second line of input consists of n space-separated integers representing the list elements.

Output Format

The output prints the final after removing duplicate nodes, separated by a space.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10

12 12 10 4 8 4 6 4 4 8

Output: 8 4 6 10 12

Answer

-

Status : -

Marks : 0/10

3. Problem Statement

Ashiq is developing a ticketing system for a small amusement park. The park issues tickets to visitors in the order they arrive. However, due to a system change, the oldest ticket (first inserted) must be revoked instead of the last one.

To manage this, Ashiq decided to use a doubly linked list-based stack, where:

Pushing adds a new ticket to the top of the stack. Removing the first inserted ticket (removing from the bottom of the stack). Printing the remaining tickets from bottom to top.

Input Format

The first line consists of an integer n, representing the number of tickets issued.

The second line consists of n space-separated integers, each representing a ticket number in the order they were issued.

Output Format

The output prints space-separated integers, representing the remaining ticket numbers in the order from bottom to top.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 7

24 96 41 85 97 91 13

Output: 96 41 85 97 91 13

Answer

-

Status : -

Marks : 0/10