

Lab 2 - Singly Linked lists

Linked List with arbitrary insert and reverse operations

Write a program to implement a Singly Linked List and perform the following operations

1. Insert at the end of the list
2. Display the list
3. Delete from the front of the list
4. Insert at a specified position
5. Reverse the list

Input Format:

Every new line has one of the following operation codes and any data needed for the operation
(For Ex: The element that needs to be inserted and the position).

0. Exit the program
1. Insert at the end of the list
2. Display the list. Print the elements space-separated. Print "EMPTY" in case of the empty list.
3. Delete from the front of the list. No operation in case of the empty list.
4. Insert at a specified position. Position 0 is before the first element and n is after the nth element. No operation if the position is less than 0 or more than n.
5. Reverse the elements of the linked list. No operation if the list is empty..

Output Format:

Only operation codes 2 may print something based on other operations codes executed.

Constraints:.

0 <= Number of Operations <= 10³

0 <= Number of nodes in the list <= 10³