Lab Assignment 2: CS2233

August 20, 2025

Instructions:

- You need to write the implementation of `Linked List` and their functionality - `insert` on your own.

- Each question is worth 5 marks.

Question

1. You are required to implement a singly linked list from scratch and then write a function to merge two sorted linked lists into a single sorted linked list. Then traverse merged list to print all elements.

   Input format

   - The first line contains an integer n_1, the number of elements in the first linked list.
   - The second line contains n_1 integers representing the elements of the first linked list, given in nondecreasing order.
   - The third line contains an integer n_2, the number of elements in the second linked list.
   - The fourth line contains n_2 integers representing the elements of the second linked list, also given in nondecreasing order.

   Output format

   - Print the elements of the merged sorted linked list in a single line, separated by spaces.

Example:
Input
3
1 3 5
3
2 4 6
Output
1 2 3 4 5 6

Input
3
1 2 3
0
Output
1 2 3

2. You are required to implement a singly linked list from scratch and then write a function to reverse the linked list. Then traverse reversed list to print all elements.

Input format

- The first line contains an integer n, the number of elements in the linked list.

- The second line contains n integers representing the elements of the linked list.

Output format

- Print the elements of the reversed linked list in a single line, separated by spaces.

Example:
Input
5
10 20 30 40 50
Output
50 40 30 20 10

Input
3
1 2 3
Output
3 2 1

Input
1
7
Output
7