



Introduction to Basic Data Structures

Module 6: Practice Problems

(Practice Questions)

Topics:

1. Singly Linked List

Practice Problem 1

Question: Take two singly linked lists as input and check if their sizes are same or not.

Sample Input	Sample Output
2 1 5 3 4 9 -1 1 2 3 4 5 6 -1	YES
5 1 4 5 -1 5 1 4 -1	NO

Practice Problem 2

Question: Take a singly linked list as input and print the reverse of the linked list.

Sample Input	Sample Output
5 4 8 6 2 1 -1	1 2 6 8 4 5
1 2 3 4 -1	4 3 2 1

Practice Problem 3

Question: Take a singly linked list as input, then print the maximum value of them.

Sample Input	Sample Output
2 4 1 3 5 4 2 5 -1	5
5 4 1 2 5 6 8 4 1 3 -1	8

Practice Problem 4

Question: Take a singly linked list as input, then take q queries. In each query you will be given an index and value. You need to insert those values in the given index and print the linked list. If the index is invalid print “Invalid”.

Sample Input	Sample Output
10 20 30 -1	10 40 20 30
7	Invalid
1 40	10 40 20 30 50
5 50	100 10 40 20 30 50
4 50	Invalid
0 100	100 110 10 40 20 30 50
7 40	100 110 10 40 20 30 50 40
1 110	
7 40	

Practice Problem 5

Question: Take a singly linked list as input and sort it in descending order. Then print the list.

Sample Input	Sample Output
1 4 5 2 7 -1	7 5 4 2 1
20 40 30 10 50 60 -1	60 50 40 30 20 10