



# Introduction to Basic Data Structures

## Module 5: Practice Problems (Practice Questions)

Practice 0: Implement the following Operations for **Singly Linked List**

1. Create a Singly Linked List (Take input manually, not from the user)
2. Count the Size of the list
3. Display List
4. Insertion at Head
5. Insertion at Tail
6. Insertion at Specific Position

## Practice Problem 1

**Question:** Create a singly linked list and print the size of the linked list.

Sample Linked List	Sample Output
2 1 5 3 4 8 9	7
5 1 4 5	4

## Practice Problem 2

**Question:** Create a singly linked list and check if the linked list contains any duplicate value. You can assume that the maximum value will be 100.

Sample Linked List	Sample Output
5 4 8 6 2 1	NO
2 4 5 6 7 4	YES

## Practice Problem 3

**Question:** Create a singly linked list and print the middle element. If there are multiple values in the middle print both.

Sample Linked List	Sample Output
2 4 6 8 10	6
1 2 3 4 5 6	3 4

## Practice Problem 4

**Question:** Create a singly linked list and check if the linked list is sorted in ascending order.

Sample Linked List	Sample Output
1 5 6 8 9	YES
2 4 6 5 8 4	NO