

Lab Assignment 5

Single Linked List

1. Develop a menu driven program for the following operations of on a Singly Linked List.
 - (a) Insertion at the beginning.
 - (b) Insertion at the end.
 - (c) Insertion in between (before or after a node having a specific value, say 'Insert a new Node 35 before/after the Node 30').
 - (d) Deletion from the beginning.
 - (e) Deletion from the end.
 - (f) Deletion of a specific node, say 'Delete Node 60').
 - (g) Search for a node and display its position from head.
 - (h) Display all the node values.
2. Write a program to count the number of occurrences of a given key in a singly linked list and then delete all the occurrences. For example, if given linked list is 1->2->1->2->1->3->1 and given key is 1, then output should be 4. After deletion of all the occurrences of 1, the linked list is 2->2->3.
3. Write a program to find the middle of a linked list.

Input: 1->2->3->4->5
Output- 3
4. Write a program to reverse a linked list.

Input: 1->2->3->4->NULL
Output: 4->3->2->1->NULL

Additional Questions:

- <https://www.interviewbit.com/problems/reverse-link-list-ii/>
- <https://www.interviewbit.com/problems/rotate-list/>
- <https://www.geeksforgeeks.org/adding-two-polynomials-using-linked-list/>
- <https://www.geeksforgeeks.org/write-a-function-to-get-the-intersection-point-of-two-linked-lists/>