**Practical No: 7(C)**

**Practical Title:** Write C++ program to maintain club member‘s information using singly linked list.

**Aim**: Department of Computer Engineering has student's 1/8 club named 'Pinnacle Club'. Students of Second, third and final year of department can be granted membership on request. Similarly one may cancel the membership of club. First node is reserved for president of club and last node is reserved for secretary of club. Write C++ program to maintain club member‘s information using singly linked list. Store student PRN and Name. Write functions to

a) Add and delete the members as well as president or even secretary

b) Compute total number of members of club

c) Display members

d) Display list in reverse order using recursion

e) Two linked lists exists for two divisions. Concatenate two list

**Pre-requisite:**

* + Basics of Singly Linked List
  + Different Operations that can be performed on Singly linked list

**Objective:**

To maintain club member's information by performing different operations like add, delete, reverse, concatenate on singly linked list.

**Input:**  Individual details

Outcome:

Maintain information of the Club member's

**Theory:**

Linked List : (write linked list definition and sinly linked list theory) Definition :

- Types of linked list

- Singly linked list (definition, concepts, advantages, disadvantages)

- Singly linked list as an ADT (Write pseudo code for each ADT)

-Algorithms :(Write your own algorithms for your program)

-Flowchart :(draw flowchart for above algorithms)

**Conclusion:**

By this way, we can maintain club member‘s information using singly linked list.

**Question Bank:**

1. What is a Linked list?

2. Can you represent a Linked list graphically?

3. How many pointers are required to implement a simple Linked list?

4. How many types of Linked lists are there?

5. How to represent a linked list node?

6. Describe the steps to insert data at the starting of a singly linked list.

7. How to insert a node at the end of Linked list