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* Assignment No. 7 *

Aim:-

Department of Computer Engineering has Student club named 'pinnade club', Students of second, third and final year of department can be granted membership on request. Similarly one may cande the memba of club. first node is reversed for president of club and last node is reserved for secreatary of club. write a c++ program to maintainl club members information using singly linked list - store Student PRN & Name. write function to:

1. Add & delete the membes as well as president or even secretary.
2. Computer total number of member of club.
3. Display members
4. two linked list exists for two division Concatenate two lists

Hardware / software Required:-

lab computer, c++ compiler, Eclipse for c++

Prerequisites:-

knowledge of c++ programming language and linked list -

Theory:-

linked list is a linear data structure that contain sequence of element such that each elements links to its next element in the sequence. Each element in a linked list is called as "Node" Each node list is own data and the address of the next node.

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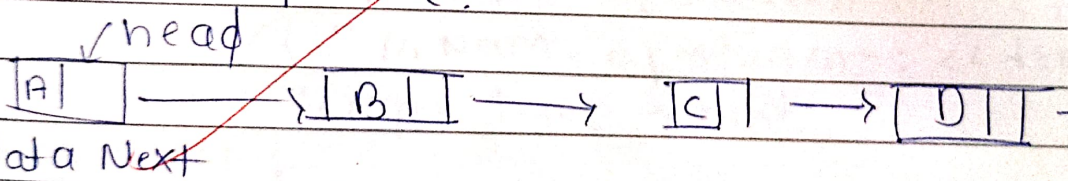
hence forming a chain like structure. linked lists are used to create tree & graphs.

Type of linked-lists:-
1. Singly linked list
2. Doubly linked list
3. Circular linked list

Singly linked list:-
It contain nodes which have a data part as well as an address-part i.e next, which points to the next node in the sequence of nodes. Single linked list is a sequence elements in which every elements has link to its next element in the sequence.



In a single linked list, the address of the first node is always stored in reference node known as front or head.

Always next part of the last node must be NULL.

Algorithm -
Step 1: Start
Step 2: Declare a variable as head temp.
Step 3: Define a function to create a node & accept name & Roll No. in node.

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Step 4: Define a function for the president & numbe.
step 5: Declare & initalize a variable to allocate memory & store data & address of the president.

```
let node * N = new node ();
    if (head == NULL);
        head = N;
Cout << "Enter Roll No" << N -> roll;
Cout << "Enter Name" << N -> name;
```

Step 6:- Display the president member & Secretary at last.

```
while (temp1 = NULL) {
Cout << "Roll No. of Student : " << temp -> Roll No.
    << " In Name of Student : << temp -> name;
     temp = temp -> next;
```

Step 7: Stop.

Conclusion:

We have studied & implement the concept of singly linked list & performed various operation

(C)

(B)