

DSA-Assignment -7
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The code:

```
1 include<stdio.h>
2 #define size 15
3 #include<stdlib.h>
4 #include<string.h>
5
6 struct Node {
7     int PRN;
8     char Name[size];
9     struct Node* next;
10 };
11
12 void add_member(struct Node* prev_member , int new_PRN , char new_Name[]){
13     if (prev_member == NULL){
14         printf("The Previous node can not be null\n");
15         return;
16     }
17
18     struct Node* new_member = (struct Node*) malloc(sizeof(struct Node));
19     new_member->PRN = new_PRN;
20     strcpy(new_member->Name, new_Name);
21
22     new_member->next = prev_member->next;
23     prev_member->next = new_member;
24 }
25
26
27 void total_member(struct Node* pres_ref){
28     int n = 0 ;
29     while(pres_ref != NULL){
30         n++;
31         pres_ref = pres_ref->next;
32     }
33     printf("The total number of member are %d\n", n);
34 }
```

```
35
36 void show_members(struct Node* pres_ref){
37     int n = 0 ;
38     while(pres_ref != NULL){
39         printf("%s \t %d \n", pres_ref->Name, pres_ref->PRN);
40         pres_ref = pres_ref->next;
41     }
42 }
43
44
45
46 void remove_member(struct Node** pres_ref, int position)
47 {
48     struct Node* temp;
49     struct Node* prev;
50     temp = *pres_ref;
51     prev = *pres_ref;
52
53     for (int i = 0; i < position; i++) {
54         if (i == 0 && position == 1) {
55             *pres_ref = (*pres_ref)->next;
56             free(temp);
57         }
58         else {
59             if (i == position - 1 && temp) {
60                 prev->next = temp->next;
61                 free(temp);
62             }
63             else {
64                 prev = temp;
65
66                 // Position was greater than
67                 // number of nodes in the list
68                 if (prev == NULL)
```

```

60     prev->next = temp->next;
61     free(temp);
62 }
63 else {
64     prev = temp;
65
66     // Position was greater than
67     // number of nodes in the list
68     if (prev == NULL)
69         break;
70     temp = temp->next;
71 }
72 }
73 }
74 }
75
76
77 int main()
78 {
79     struct Node* president = NULL;
80     president = (struct Node*)malloc(sizeof(struct Node));
81     president->PRN = 112103008;
82     strcpy(president->Name, "Amaan Jamadar");
83     add_member(president, 112103084, "Arsh Maknojia");
84     add_member(president, 112103129, "Bhushan Shah");
85     add_member(president, 112103127, "Aman Sayyad");
86
87     total_member(president);
88     show_members(president);
89
90     printf("Removing the president printing the total members.\n ");
91     remove_member(&president, 1);
92     total_member(president);
93     show_members(president);
94 }

```

Output:

```

amaan@ubunx:~/Documents/DSA_Assign
(base) amaan@ubunx ~/Documents/DSA_Assign master ± gcc Assign7.c
(base) amaan@ubunx ~/Documents/DSA_Assign master ± ./a.out
The total number of member are 4
Amaan Jamadar    112103008
Aman Sayyad      112103127
Bhushan Shah     112103129
Arsh Maknojia    112103084
Removing the president printing the total members.
The total number of member are 3
Aman Sayyad      112103127
Bhushan Shah     112103129
Arsh Maknojia    112103084
(base) amaan@ubunx ~/Documents/DSA_Assign master ±

```

Assignment 7

Department of Computer Engineering has student's club named

one can be granted men

one may cancel the membership of club. First node is reserved

node is reserved for secretary of club. Write a code to mainta