

```

1 //Doubly linked list
2 //insert front,delete function and display
3 #include<stdio.h>
4 #include<stdlib.h>
5
6 struct node
7 {
8     int data;
9     struct node *next,*prev;
10 };
11
12 void insertFront(struct node **headptr,int value)
13 {
14     struct node *newnode;
15     newnode = (struct node*)malloc(sizeof(struct node));
16     newnode->data = value;
17     newnode->next = NULL;
18     newnode->prev = NULL;
19     if(*headptr == NULL)
20         *headptr = newnode;
21     else
22     {
23         newnode->next = *headptr;
24         (*headptr)->prev = newnode;
25         *headptr = newnode;
26     }
27 }
28 void delFunc(struct node **headptr,int value)
29 {
30     struct node *temp,*del;
31     temp = *headptr;
32     if(temp == NULL)
33     {
34         printf("The list is empty!!!\n");
35         return;
36     }
37     else if(temp->next == NULL)
38     {
39         *headptr = NULL;
40     }
41     else
42     {
43         if((*headptr)->data == value)
44         {

```

```

45     (*headptr) = (*headptr)->next;
46     (*headptr)->prev = NULL;
47     printf("The value has been deleted!!!\n");
48     return;
49 }
50 while(temp->next != NULL)
51 {
52     if((temp->next)->data == value)
53     {
54         del = temp->next;
55         temp->next = del->next;
56         (temp->next)->prev = temp;
57         printf("The value has been deleted!!!\n");
58         return;
59     }
60     temp = temp->next;
61 }
62 printf("The element was not found!!!\n");
63 }
64 }
65 void display(struct node *temp)
66 {
67     if(temp == NULL)
68     {
69         printf("List is Empty!!!\n");
70         return;
71     }
72     else
73     {
74         while(temp != NULL)
75         {
76             printf("%d\t",temp->data);
77             temp = temp->next;
78         }
79         printf("\n");
80     }
81 }
82 int main(int argc, char **argv)
83 {
84     struct node *head = NULL;
85     int choice,ele;
86     while(choice != 4)
87     {
88         printf("Enter choice 1)Insert Front 2)Delete Element 3)Display 4)Exit: ");
89
90         scanf("%d",&choice);
91         switch(choice)
92         {
93             case 1:printf("Enter value to be inserted:");scanf("%d",&ele);insertFront(&head,ele);break;
94             case 2:printf("Enter value to be deleted:");scanf("%d",&ele);delFunc(&head,ele);break;
95             case 3:display(head);break;
96             case 4:exit(0);
97             default:exit(0);
98         }
99     }
100     return 0;

```