```c
1  #include<stdio.h>
2  #include<string.h>
3  #include<stdlib.h>
4  struct node
5  {
6      char USN[30];
7      char name[30];
8      struct node *next;
9      struct node *prev;
10 };
11 struct node *head=NULL;
12
13
14 void insert_end()
15 {
16     struct node *new_node,*temp;
17     new_node=(struct node*)malloc(sizeof(struct node));
18     printf("Enter USN:\n");
19      scanf("%s",new_node->USN);
20      printf("Enter name:\n");
21      scanf("%s",new_node->name);
22     new_node->next=NULL;
23     new_node->prev=NULL;
24     if(head==NULL)
25     {
26         head=new_node;
27     }
28     else
29     {
30         temp=head;
31         while(temp->next!=NULL)
32         temp=temp->next;
33         temp->next=new_node;
34         new_node->prev=temp;
35
36     }
37
```

```c
38  }
39
40  void del()
41 - {
42      struct node *temp;
43      char ele[30];
44      if(head==NULL)
45 -     {
46          printf("Empty List. \n");
47          return;
48      }
49      printf("Enter USN to be deleted:\n");
50      scanf("%s",ele);
51      temp=head;
52      while(strcmp(temp->USN,ele)!=0)
53 -     {
54          temp=temp->next;
55          if(temp==NULL)
56 -         {
57              printf("Element is not in the list.\n");
58              break;
59          }
60      }
61      if(temp==head)
62 -     {
63          head=head->next;
64      }
65      else if(temp->next==NULL)
66 -     {
67              temp=temp->prev;
68              temp->next=NULL;
69      }
70
71      else
72 -     {
73          temp->prev->next=temp->next;
74          temp->next->prev=temp->prev;
```

Run Debug Share Save Beautify Language C

main.c

```c
73              temp->prev->next=temp->next;
74              temp->next->prev=temp->prev;
75          }
76      }
77      void display()
78      {
79          struct node *temp;
80          temp=head;
81          while(temp!=NULL)
82          {
83              printf("--------------------\n");
84              printf("USN:%s\n",temp->USN);
85              printf("Name:%s\n",temp->name);
86              printf("--------------------\n");
87              temp=temp->next;
88          }
89          printf("\n");
90      }
91
92
93      int main()
94      {
95          int choice;
96
97          while(1)
98          {
99              printf(" 1.Insert  \n");
100             printf(" 2.Delete \n");
101             printf(" 3.Display\n");
102             printf(" 4.Exit\n");
103             printf("Enter choice: \n");
104             scanf("%d",&choice);
105             switch(choice)
106             {
107
108                 case 1: insert_end();break;
109
```

Language C

```c
79      struct node *temp;
80      temp=head;
81      while(temp!=NULL)
82  -   {
83          printf("---------------------\n");
84          printf("USN:%s\n",temp->USN);
85          printf("Name:%s\n",temp->name);
86          printf("---------------------\n");
87          temp=temp->next;
88      }
89      printf("\n");
90  }
91
92
93  int main()
94  - {
95      int choice;
96
97      while(1)
98  -   {
99          printf(" 1.Insert  \n");
100         printf(" 2.Delete \n");
101         printf(" 3.Display\n");
102         printf(" 4.Exit\n");
103         printf("Enter choice: \n");
104         scanf("%d",&choice);
105         switch(choice)
106  -      {
107
108             case 1: insert_end();break;
109
110             case 2: del(); break;
111             case 3: display(); break;
112             case 4: exit(0);
113         }
114     }
115 }
```