

DS TEST - 2

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IBMACS 193

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```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

struct node
{
    char usr[30];
    char name[30];
    struct node * next;
    struct node * prev;
};

struct node * head = NULL;

void insert_end()
{
    struct node * new_node;
    new_node = (struct node *) malloc(
        (sizeof(struct node)));
    printf("Enter the usr\n");
    scanf("%s", new_node->usr);
    printf("Enter the name\n");
    scanf("%s", new_node->name);
    new_node->next = NULL;
    new_node->prev = NULL;
    if (head == NULL)
    {
        head = new_node;
    }
}
```



```

else
{
    temp = head;
    while (temp != NULL)
    {
        temp = temp -> next;
    }
    temp -> next = new_node;
    new_node -> prev = temp;
}
}

void del()
{
    struct node * temp;
    char ele[30];
    if (head == NULL)
    {
        printf("Empty list\n");
        return;
    }
    printf("Enter USN to be deleted\n");
    scanf("%s", ele);
    temp = head;
    while (strcmp(temp -> usn, ele)
            != 0)

```



```
{
```

```
temp = temp -> next;
```

```
if (temp == NULL
```

```
    print ("Element is not in  
the list \n");  
    break;
```

```
}
```

```
}
```

```
if (temp == head)
```

```
{
```

```
    head = head -> next = NULL
```

```
{
```

```
temp = temp -> prev
```

```
temp -> next = NULL;
```

```
}
```

```
else
```

```
temp -> prev -> next = temp -> next;
```

```
temp -> next -> prev = temp -> prev;
```

```
}
```

```
}
```

```
void display ()
```

```
{
```

```
    Struct node *temp;
```

```
    temp = head;
```

```
    while (temp != NULL)
```



```

    printf("usr : %s\n", temp->usr);
    printf("name : %s\n", temp->name);
    printf("temp = temp->next\n");

```

```

}
printf("\n");
}

```

```

int main()
{
    int choice;

```

```

    while(1)
    {
        printf("1. Insert\n");
        printf("2. Delete\n");
        printf("3. Display\n");
        printf("4. Exit\n");
        scanf("%d", &choice);
        switch(choice)

```

```

        {
            case 1 : insert_end(); break;
            case 2 : del(); break;
            case 3 : display(); break;
            case 4 : exit(0);

```

```

        }
    }
}

```