

Code:

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

Struct Node
{
    int data;
    Struct Node *next;
};

Struct Node *head = NULL;
void CreateList (int n)
{
    Struct Node *newNode, *temp;
    int data;
    if (n <= 0)
    {
        printf ("number of nodes should be greater than 0\n");
        return;
    }
    for (int i = 1; i <= n; i++)
    {
        newNode = (Struct Node *) malloc (sizeof (Struct Node));
        if (newNode == NULL)
        {
            printf ("memory allocation failed\n");
            return;
        }
        printf ("Enter data: ");
        scanf ("%d", &data);
        newNode->data = data;
        newNode->next = NULL;
        if (head == NULL)
        {
            head = newNode;
        }
        else
        {
            temp->next = newNode;
        }
        temp = newNode;
    }
    printf ("Created linked list\n");
}
```

void deleteFirst()

```
{ Struct Node *temp;
if (head == NULL)
{
    printf ("linked list not present\n");
    return;
}
temp = head;
head = head->next;
printf ("deleted value is %d\n", temp->data);
free(temp);
}

void deleteEnd()
{
    Struct Node *temp, *prev;
    if (head == NULL)
    {
        printf ("linked list not present\n");
        return;
    }
    if (head->next == NULL)
    {
        printf ("deleted value is %d\n", head->data);
        free(head);
        head = NULL;
        return;
    }
    temp = head;
    while (temp->next != NULL)
    {
        prev = temp;
        temp = temp->next;
    }
    prev->next = NULL;
    printf ("deleted value is %d\n", temp->data);
    free(temp);
}

void deleteSpecific (int val)
{
    Struct Node *temp = head;
    Struct Node *prev = NULL;
    if (head == NULL)
    {
        printf ("linked list not present\n");
        return;
    }
    while (temp != NULL && temp->data != val)
    {
        prev = temp;
        temp = temp->next;
    }
    if (temp == NULL)
    {
        printf ("value not found\n");
    }
    else
    {
        if (prev == NULL)
        {
            head = temp->next;
        }
        else
        {
            prev->next = temp->next;
        }
        printf ("deleted value is %d\n", temp->data);
        free(temp);
    }
}
```

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if (head->data == val)
{
    head = head->next;
    printf("deleted value is %d\n", temp->data);
    free(temp);
    return;
}

while (temp != NULL && temp->data != val)
{
    prev = temp;
    temp = temp->next;
}

if (temp == NULL)
    printf("specified value not present in linked list\n");
prev->next = temp->next;
printf("deleted value is %d\n", temp->data);
free(temp);
}

```

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void display()
{
    struct Node *temp = head;
    if (head == NULL)
        printf("list is empty\n");
    else
        while (temp != NULL)
            printf("%d ", temp->data);
    temp = temp->next;
}

```

```

int main()
{
    int ch, n, val;
    do
    {
        printf("1.Create linked list, 2.delete First, 3.delete End,\n"
               "4. delete at specific, 5.display\n");
        printf("enter choice: \n");
        scanf("%d", &ch);
        switch(ch)
        {
            case 1: { printf("enter number of nodes: ");
                        scanf("%d", &n);
                        createlist(n);
                        break; }

```

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case 2: { deleteFirst(); }
break; }

case 3: { deleteEnd(); }
break; }

case 4: { printf("enter specific value: \n");
            scanf("%d", &val);
            deleteSpecific(val);
            break; }

case 5: { display(); }
break; }

default: printf("invalid choice\n");
}

```

~~exit
while (ch != 0);
return 0;~~

Output:

1. Create linked list, 2.delete First, 3.delete End, 4.delete at specific, 5.display.

enter choice:

enter number of nodes: 4

enter data:
10
enter data:
20
enter data:
30
enter data:
40

Created linked list

1. Create linked list, 2.delete First, 3.delete End, 4.delete at specific, 5.display

enter choice: 2

deleted value is 10

1.create linked list 2.delete First, 3.delete End, 4.delete at specific, 5.display

enter choice: 3

deleted value is 40

1. Create linked list

enter choice: 4

enter specific value: 20

deleted value is 20

1. Create

enter choice: 5

30 →