

Code:

```
#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("numbers 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: \n");
scanf("%d", &data);
```

```
newNode->data = data;
newNode->next = NULL;
```

```
if (head == NULL)
```

```
{
    head = newNode;
```

```
return;
```

```
}
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;
}
```

```
}
```

```

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");
else
    prev->next = temp->next;
printf("deleted value is %d\n", temp->data);
free(temp);
}

```

```

void display()
{
    struct Node * temp = head;
    if (head == NULL)
    {
        printf("list is empty\n");
        return;
    }
    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, 4. delete at specific, 5. display\n");
        printf("enter choice: ");
        scanf("%d", &ch);
        switch(ch) {
            case 1: {
                printf("enter number of nodes: ");
                scanf("%d", &n);
                createList(n);
                break;
            }

```

```

            case 2: {
                deleteFirst();
                break;
            }
            case 3: {
                deleteEnd();
                break;
            }
            case 4: {
                printf("enter specific value: ");
                scanf("%d", &val);
                deleteSpecific(val);
                break;
            }
            case 5: {
                display();
                break;
            }
            default:
                printf("invalid choice\n");

```

```

        }
        while(ch != 0);
        return 0;
}

```

Output:

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

enter choice:

1  
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->