Run Debug Stop Share Save { } Beautify

Language C

main.c

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

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

struct Node* linkedListTraversal(struct Node*ptr)
{
    while(ptr!=NULL)
    {
        printf("%d\t",ptr->data);
        ptr=ptr->next;
    }
}

struct Node* deleteFirst(struct Node*head)
{
    struct Node*ptr=head;
    head=head->next;
    free(ptr);
    return head;
}

struct Node* deleteAtIndex(struct Node*head,int index){
    struct Node*p=head;
    int i=0;
    while(i<index-1)
    {
        p=p->next;
        i++;
    }
    struct Node*q=p->next;
    p->next=q->next;
    free(q);
    return head;
}

struct Node* deleteLast(struct Node*head)
{
    struct Node*p=head;;
    struct Node*q=head->next;
    while(q->next!=NULL)
    {
        p=p->next;
        q=q->next;
    }
```

```c
    }
    free(q);
    p->next=NULL;
    return head;
}


void main()
{
    struct Node*head;
    struct Node*first;
    struct Node*second;
    struct Node*third;
    struct Node*fourth;

    head=(struct Node*)malloc(sizeof(struct Node));
    first=(struct Node*)malloc(sizeof(struct Node));
    second=(struct Node*)malloc(sizeof(struct Node));
    third=(struct Node*)malloc(sizeof(struct Node));
    fourth=(struct Node*)malloc(sizeof(struct Node));

    head->data=100;
    head->next=first;

    first->data=99;
    first->next=second;

    second->data=98;
    second->next=third;

    third->data=97;
    third->next=fourth;

    fourth->data=96;
    fourth->next=NULL;

    printf("Original linked list:\n");
    linkedListTraversal(head);

    printf("\nAfter deleting first element\n");
    head=deleteFirst(head);
    linkedListTraversal(head);

    printf("\nAfter deleting third element\n");
    head=deleteAtIndex(head,2);
    linkedListTraversal(head);

    printf("\nAfter deleting last element\n");
```

```
    printf("\nAfter deleting last element\n");
    head=deleteLast(head);
    linkedListTraversal(head);
}

```

input

```
Original linked list:
100     99      98      97      96
After deleting first element
99      98      97      96
After deleting third element
99      98      96
After deleting last element
99      98

...Program finished with exit code 0
Press ENTER to exit console.
```