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#include<stdio.h>
#include<stdlib.h>
struct node
{
    int data;
    struct node *next;
    struct node *prev;
};
struct node *head=NULL;
void insert_beg()
{
    struct node *new_node;
    new_node=(struct node*)malloc(sizeof(struct node));
    printf("Enter the item\n");
    scanf("%d",&new_node->data);
    new_node->next=NULL;
    new_node->prev=NULL;

    if(head==NULL)
    {
        head=new_node;
    }
    else
    {
        new_node->next=head;
        head->prev=new_node;
        head=new_node;
    }
}

void insert_end()
{
    struct node *new_node,*temp;
    new_node=(struct node*)malloc(sizeof(struct node));
    printf("Enter the item\n");
    scanf("%d",&new_node->data);
    new_node->next=NULL;
    new_node->prev=NULL;
    if(head==NULL)
    {
        head=new_node;
    }
    else
    {
        temp=head;
        while(temp->next!=NULL)
        temp=temp->next;
        temp->next=new_node;
        new_node->prev=temp;
    }
}

void del()
{
    struct node *temp;
    int ele;
    if(head==NULL)

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{
    printf("Empty List \n");
    return;
}

    printf("Enter the element to be deleted\n");
    scanf("%d",&ele);
    temp=head;
    while(temp->data!=ele)
    {
        temp=temp->next;
        if(temp==NULL)
        {
            printf("Element is not in the list\n");
            break;
        }
    }
    if(temp==head)
    {
        head=head->next;
    }
    else if(temp->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("%d\t",temp->data);
        temp=temp->next;
    }
    printf("\n");
}

int main()
{
    int choice;

    while(1)
    {
        printf(" 1. Create a double linked list \n");
        printf(" 2. Insert at the beginning(Left of node)\n");
        printf(" 3. Delete \n");
        printf(" 4. Display\n");
        printf(" 5. Exit\n");
        printf("Enter your choice\n");
        scanf("%d",&choice);
        switch(choice)
        {

```

```
        case 1: insert_end();break;
case 2: insert_beg(); break;
        case 3: del(); break;
        case 4: display(); break;
        case 5: exit(0);
    }
}
```