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#include <stdio.h>
#include <stdlib.h>
void create();
void display();
void insert_before();
void insertAfter();
struct node
{
    int data;
    struct node *next;
};
struct node *head=NULL;
int main(int argc, char **argv)
{
    int choice;
    do
    {
        printf("\n1. Create \n2. Display \n3. Insert at beginning \n4.Insert at
certain position \n5.Insert at End");
        printf("\nEnter your choice : ");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1: create(); break;
            case 2: display();break;
            case 3: insert_before();
                    break;
            case 4: insertAfter();
                    break;
            case 5:create();break;
            default:exit(0);
        }
    }while(choice<=5);
}

void create()
{
    struct node *newnode,*temp;
    int item;
    newnode =(struct node *) malloc (sizeof(struct node));
    printf("Enter the data : ");
    scanf("%d",&item);

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newnode->data=item;
if (head==NULL)
{
    newnode->next=NULL;
    head=newnode;
    printf("Node created\n");
}
else
{
    temp=head;
    while(temp->next!=NULL)
    {
        temp=temp->next;
    }
    temp->next=newnode;
    newnode->next=NULL;
    printf("Node created\n");
}
}

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void display()
{
    struct node *ptr=NULL;
    ptr=head;

    if(ptr==NULL)
    {
        printf("Nothing to print\n");
    }
    else
    {
        while(ptr!=NULL)
        {
            printf("%d ",ptr->data);
            ptr=ptr->next;
        }
    }
}

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}
void insert_before()
{
    struct node *newnode;

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int ele;
printf("Enter the element : ");
scanf("%d",&ele);

newnode=(struct node*)malloc(sizeof(struct node));

newnode->data =ele;
newnode->next=head;
head=newnode;
}
void insertAfter()
{
    int ele,n;
    printf("Enter the data to be entered and the position at which you
want to enter specifically:");
    scanf("%d%d",&ele,&n);
    struct node* newnode=(struct node*)malloc(sizeof(struct node));
    newnode->data=ele;
    newnode->next=NULL;
    if(n==1)
    {
        newnode->next=head;
        head=newnode;
    }
    struct node* temp=head;
    for(int i=0;i<n-2;i++)
    {
        temp=temp->next;
    }
    newnode->next=temp->next;
    temp->next=newnode;
}

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