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#include<stdio.h>
#include<conio.h>
void create();
void insert();
void delet();
void traverse();
struct node
{
int data;
struct node *link;
}*header,*neww,*ptr,*ptr1;
void main()
{
int n;
system("cls");
header->data=NULL;
header = NULL;
header=(struct node *)malloc(sizeof(struct node));
while(1)
{
printf("\nEnter choice 1.Create, 2.Insert, 3.Delete, 4.Traversal");
scanf("%d",&n);
switch(n)
{
case 1:create(); break;
case 2:insert(); break;
case 3:delet(); break;
case 4:traverse(); break;
default:exit(0);
}
}
//getch();
}
void create()
{
int x;
neww=(struct node *)malloc(sizeof(struct node));
printf("Enter data:");
scanf("%d",&x);
if(header->link==NULL)
{
header->link=neww;
neww->data=x;
neww->link=NULL;
}
else
{
ptr=header;

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        while(ptr->link!=NULL)
        {
            ptr=ptr->link;
        }
neww->link=ptr->link;
neww->data=x;
ptr->link=neww;
}
}
void insert()
{
int pos,x,key;
printf("Enter position 1.Begin,2.End,3.Any");
scanf("%d",&pos);
printf("Enter data to insert:");
scanf("%d",&x);
neww=(struct node *)malloc(sizeof(struct node));
ptr=header;
if(pos==1)
{
    neww->link=header->link;
    neww->data=x;
    header->link=neww;
}
else if(pos==2)
{
    while(ptr->link!=NULL)
    {
        ptr=ptr->link;
    }
    neww->link=ptr->link;
    neww->data=x;
    ptr->link=neww;
}
else if(pos==3)
{
printf("Enter key");
scanf("%d",&key);
while(ptr->link!=NULL && ptr->data!=key)
{
    ptr=ptr->link;
}
if(ptr->link==NULL)
{
    printf("key not found");
}
else
{

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        neww->link=ptr->link;
        neww->data=x;
        ptr->link=neww;
    }
}
void delet()
{
    int x,pos;
    printf("Enter position 1.Begin, 2.End, 3.Any");
    scanf("%d",&pos);
    if(header->link==NULL)
    {
        printf("Linked List is Empty");
    }
    else if(pos==1)
    {
        ptr=header->link;
        header->link=ptr->link;
        printf("Deleted node is %d",ptr->data);
    }
    else if(pos==2)
    {
        ptr=header;
        while(ptr->link!=NULL)
        {
            ptr1=ptr;
            ptr=ptr->link;
        }
        ptr1->link=NULL;
        printf("Deleted node is %d",ptr->data);
    }
    else if(pos==3)
    {
        printf("Enter data to delete:");
        scanf("%d",&x);
        while(ptr->link!=NULL && ptr->data!=x)
        {
            ptr1=ptr;
            ptr=ptr->link;
        }
        if(ptr->link==NULL)
        {
            printf("Key not found in list");
        }
        else
        {
            ptr1->link=ptr->link;

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        printf("Deleted node is %d",ptr->data);
    }
}
else
{
    printf("Invalid position");
}
}
void traverse()
{
    printf("Elements in the list are:");
    ptr=header;
    while(ptr->link!=NULL)
    {
        ptr=ptr->link;
        printf("%d ",ptr->data);
    }
}
```