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#include<stdio.h>
#include<stdlib.h>
struct node
{
    int data;
    struct node*next;
};
struct node*createnode()
{
    //node creation
    int x;
    struct node*newnode = NULL;
    newnode = (struct node*)malloc(sizeof(struct node));
    if(newnode == NULL)
    {
        printf("Memory not allocated\n");
    }
    else
    {
        printf("Enter thr data\n");
        scanf("%d",&x);
        newnode->data = x;
        newnode->next = NULL;
    }
    return newnode;
}
void create_linklist(struct node**head)    //linklist creation
{
    struct node*newnode = NULL;
    struct node*travnode = *head;
    newnode = createnode();
    if(*head == NULL)
    {
        *head = newnode;
    }
    else
    {
        while(travnode->next!=NULL)
        {
            travnode = travnode->next;
        }
        travnode->next = newnode;
    }
}
void display_linklist(struct node*head)    //display linklist
{
    struct node*travnode = NULL;
    travnode = head;
    printf("Your linklist is\n");
    while(travnode)
    {
        printf("%d\t",travnode->data);
        travnode = travnode->next;
    }
    printf("\n");
}
void add_firstpos(struct node**head)    //insert node at first position
{
    struct node*newnode = NULL;
    newnode = createnode();
    newnode->next = *head;
    *head = newnode;
}
void add_interpos(struct node*head)    //insert node at intermediate position
{
    int choice;
    struct node*newnode = NULL;
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printf("Enter the data after which u want to insrt a node\n");
scanf("%d",&choice);
newnode = createnode();
while(head->data!=choice)
{
    head = head->next;
}

newnode->next = head->next ;
head->next = newnode;
}
void delete_first(struct node**head)           //delete first node
{
    struct node*newnode = *head;
    struct node*p = *head;
    *head = newnode->next;
    free(p);
}
void delete_inter(struct node*head)           //delete intermediate position
{
    int choice;
    printf("Enter node u want to delete\n");
    scanf("%d",&choice);
    while(head->next->data!=choice)
    {
        head = head->next;
    }
    struct node*ptr1 = head->next;
    head->next = head->next->next;
    free(ptr1);
}
void delete_last(struct node*head)           //delete last node
{
    while(head->next->next!=NULL)
    {
        head = head->next;
    }
    head->next = NULL;
}
void main()
{
    struct node*first = NULL;
    int choice;
    do
    {
        printf("1 . Create linklist\n");
        printf("2 . Display linklist\n");
        printf("3 . Insert at first\n");
        printf("4 . Insert node at intermediate position\n");
        printf("5 . Delete first node\n");
        printf("6 . Delete intermediate node\n");
        printf("7 . Delete last node\n");
        printf("8 . Exit\n");
        printf("Enter your choice\n");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1: create_linklist(&first);
                    break;
            case 2: display_linklist(first);
                    break;
            case 3: add_firstpos(&first);
                    break;
            case 4: add_interpos(first);
                    break;
        }
    }
}
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    case 5: delete_first(&first);
             break;
    case 6: delete_inter(first);
             break;
    case 7: delete_last(first);
             break;
    }
} while(choice!=8);
}
```