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#include <stdio.h>
#include <malloc.h>
#include <stdlib.h>
struct node
{
    int vertex;
    struct node *next;
};
void create(struct node *close[],int num);
void display(struct node *close[], int val);
void delete_g(struct node *close[], int val);
int main()
{
    struct node *close[10];
    int num,i;
    printf("Enter the number of nodes in Graph : ");
    scanf("%d",&num);
    for(i=0;i<num;i++)
        close[i]=NULL;
    create(close,num);
    display(close,num);
    delete_g(close,num);
}

void create(struct node *close[],int num)
{
    struct node *new_node, *ptr;
    int i,n,j,val;

    for(i=0;i<num;i++)
    {
        ptr=NULL;
        printf("Enter the number of neighbours of %d: ",i);
        scanf("%d",&n);
        for(j=1;j<=n;j++)
        {
            printf("Enter the neighbour of %d of %d: ",j,i);
            scanf("%d",&val);
            new_node=(struct node*)malloc(sizeof(struct node));
            new_node->vertex=val;
            new_node->next=NULL;
            if(close[i]==NULL)
                close[i]=new_node;

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        else
            ptr->next=new_node;
        ptr=new_node;
    }
}

void display(struct node *close[], int val)
{
    struct node *ptr;
    int i;
    for(i=0;i<val;i++)
    {
        ptr=close[i];
        printf("The neighbours of node %d= ",i);
        while(ptr!=NULL)
        {
            printf("%d",ptr->vertex);
            ptr=ptr->next;
        }
        printf("\n");
    }
}

void delete_g(struct node *close[], int val)
{
    int i;
    struct node *temp, *ptr;
    for(i=0;i<=val;i++)
    {
        ptr=close[i];
        while(ptr!=NULL)
        {
            temp=ptr;
            ptr=ptr->next;
            free(temp);
        }
        close[i]=NULL;
    }
}

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Enter the number of nodes in Graph : 3
Enter the number of neighbours of 0: 1
Enter the neighbour of 1 of 0: 2
Enter the number of neighbours of 1: 2
Enter the neighbour of 1 of 1: 0
Enter the neighbour of 2 of 1: 2
Enter the number of neighbours of 2: 1
Enter the neighbour of 1 of 2: 1
The neighbours of node 0= 2
The neighbours of node 1= 02
The neighbours of node 2= 1
계속하려면 아무 키나 누르십시오 . . .
```