#include<stdio.h>

#include<stdlib.h>

typedef struct node{

int info;

struct node \*next;

}node;

typedef struct{

struct node\*first;

}list;

list \*makelist(){

list \*l;

l=(list\*)malloc(sizeof(list));

l->first=NULL;

return(l);

}

void creatlist(list\* l,int v){

node \*n,\*p;

n=(node\*)malloc(sizeof(node));

n->info=v;

if(l->first==NULL){

n->next=NULL;

l->first=n;

}else{

p=l->first;

while(p->next!=NULL){

p=p->next;

}

p->next=n;

n->next=NULL;

}

}

void firstnode(list \*l, int v){

node \*n;

n=(node\*)malloc(sizeof(node));

n->info=v;

n->next=l->first;

l->first=n;

}

void maddnode(list \*l,int p , int v){

node \*n , \*t;

n=(node\*)malloc(sizeof(node));

n->info=v;

t=l->first;

while(t->info!=p){

t=t->next;

}

n->next=t->next;

t->next=n;

}

void laddnode(list \*l, int v){

node \*n, \*p;

n=(node\*)malloc(sizeof(node));

n->info=v;

p=l->first;

while(p->next!=NULL){

p=p->next;

}

n->next=NULL;

p->next=n;

}

void printlist(list \*l){

node \*t;

t=l->first;

while(t!=NULL){

printf("%d->",t->info);

t=t->next;

}

}

void dellist(list \*l , int v){

node \*t,\*s;

t=l->first;

while(t->info!=v){

s=t;

t=t->next;

}

s->next=t->next;

free(t);

}

int main(){

list \*ls;

int a , i , v , p;

ls=makelist();

printf("Enter elements in list:");

for(i=0;i<5;i++){

scanf("%d",&a);

creatlist(ls,a);

}

printlist(ls);

printf("\n Enter first node in list:");

scanf("%d",&v);

firstnode(ls,v);

printlist(ls);

printf("\n Enter node in middle:");

printf("\n Enter previous node:");

scanf("%d",&p);

printf("\n Enter new node:");

scanf("%d",&v);

maddnode(ls,p,v);

printlist(ls);

printf("\n Enter last node:");

scanf("%d",&v);

laddnode(ls,v);

printlist(ls);

printf("\n");

printf("Enter value you want to delete :");

scanf("%d",&v);

dellist(ls,v);

printlist(ls);

return 0;

}