#include<string.h>  
#include<ctype.h>  
#include<malloc.h> /\* malloc()等 \*/  
#include<limits.h> /\* INT\_MAX等 \*/  
#include<stdio.h> /\* EOF(=^Z或F6),NULL \*/  
#include<stdlib.h> /\* atoi() \*/  
#include<io.h> /\* eof() \*/  
#include<math.h> /\* floor(),ceil(),abs() \*/  
#include<process.h> /\* exit() \*/  
#define TRUE 1  
#define FALSE 0  
#define OK 1  
#define ERROR 0  
#define INFEASIBLE -1  
typedef int ElemType;  
typedef int Status;   
typedef int Boolean;  
  
typedef struct myNode  
{  
ElemType data;  
struct myNode\* next;  
  
} Node;  
typedef Node\* LinkList;  
  
Status InitList(LinkList \*L)  
{  
\*L = (LinkList)malloc(sizeof(Node));  
if(!(\*L))  
exit(OVERFLOW);  
(\*L)->next = NULL;  
return OK;  
}  
  
Status ClearList(LinkList \*L) {  
LinkList pre, p;  
if(!(\*L))  
{  
return ERROR;  
}  
pre = (\*L)->next;  
  
while (pre)  
{  
p=pre->next;  
free(pre);  
pre=p;  
}  
return OK;  
}  
  
Status DestroyList(LinkList \*L)  
{  
LinkList p = \*L;  
while (p)  
{  
p=(\*L)->next;  
free(\*L);  
(\*L) = p;  
}  
return OK;  
}  
  
Status ListEmpty(LinkList L)  
{  
if(L!=NULL && L->next==NULL)  
return OK;  
else  
return ERROR;  
}  
  
Status ListLength(LinkList L)  
{  
LinkList p;  
int i;  
  
if(L)  
{  
i=0;  
p = L->next;  
while (p)  
{  
i++;  
p = p->next;  
}  
}  
return i;  
}  
  
Status GetEle(LinkList L,int i,ElemType \*e)   
{  
int j;  
LinkList p = L->next;  
  
j=1;  
p=L->next;  
  
while (p && j<i)  
{  
j++;  
p=p->next;  
}  
if(!p || j>i)  
return ERROR;  
\*e = p->data;  
return OK;  
}  
Status LocateElem(LinkList L,ElemType e)   
{  
int i = 0;  
LinkList p = L->next;  
while(p)  
{  
i++;  
if(p->data == e)  
p = p->next;  
else  
break;  
}  
return i;  
}  
  
Status PriorElem(LinkList L, ElemType cur\_e, ElemType \*prior\_e)   
{  
LinkList p, p1;  
if(L)  
{  
p = L->next;  
while(p)  
{  
p1 = p->next;  
if(p1->data == cur\_e)  
{  
\*prior\_e = p1->data;  
return OK;  
}  
p = p->next;  
}  
return ERROR;  
}  
else  
return ERROR;  
}  
  
Status NextElem(LinkList L, ElemType cur\_e, ElemType \*next\_e)  
{  
LinkList p, p1;  
if(L)  
{  
p = L->next;  
while(p && p->next)  
{  
p1 = p->next;  
if(p->data == cur\_e)  
{  
\*next\_e = p1->data;  
return OK;  
}  
p = p->next;  
}  
return ERROR;  
}  
else  
return ERROR;  
}  
  
Status ListInsert(LinkList L,int i, int e)  
{  
LinkList p,p1;  
int j=1;  
  
p = L->next;  
while (p && j<i-1)  
{  
p=p->next;  
++j;  
}  
  
p1 = (LinkList)malloc(sizeof(Node));  
if(!p1)  
exit(OVERFLOW);  
p1->data = e;  
p1->next = p->next;  
p->next = p1;  
return OK;  
}  
  
Status ListDelete(LinkList L,int i,int \*e)  
{  
LinkList p,p1;  
int j=1;  
p = L->next;  
while(p && j<i-1)  
{  
j++;  
p = p->next;  
}  
if(!(p->next) || j>i-1)  
return ERROR;  
p1 = p->next;  
p->next = p1->next;  
\*e = p1->data;  
free(p1);  
return OK;  
  
}  
  
Status ListTraverse(LinkList L)  
{  
LinkList p;  
p = L->next;  
while(p)  
{  
printf("%d ",p->data);  
p = p->next;  
}   
return OK;  
}  
  
void CreatList(LinkList \*L, int n)  
{  
  
InitList(L);  
LinkList p1;  
int i;  
  
for(i=n, p1=\*L; i>0; i--)  
{  
LinkList p;  
int a;  
scanf("%d", &a);  
//ListInsert(\*L, i, a);  
p = (LinkList)malloc(sizeof(Node));  
p->data = a;  
  
p1->next= p;  
p1 = p1->next;  
//\*L = p1  
//p->next = (\*L)->next;  
//(\*L)->next = p;  
  
}  
p1->next = NULL;  
}  
  
void Print(LinkList L)   
{   
 LinkList p = L;   
 LinkList s = L;   
 LinkList temp;   
 if (p == NULL)   
 printf("NULL");   
 else   
 printf("\n");   
 while (p!=NULL) {   
 printf("%d ", p->data);   
 p = p->next;   
 }   
}   
  
Status MergeList(LinkList La, LinkList \*Lb ,LinkList \*Lc)  
{  
LinkList p1, p2, p3;  
p1 = La->next;  
p2 = (\*Lb)->next;  
p3 = (\*Lc)->next;  
  
while(p1 && p2)  
{  
if(p1->data<=p2->data)  
{  
p3->next = p1;  
p3 = p1;  
p1 = p1->next;  
}  
else  
{  
p3->next = p2;  
p3 = p2;  
p2=p2->next;  
  
}  
  
}  
p3->next = p1?p1:p2;  
free(\*Lb);  
\*Lb=NULL;  
return OK;  
}  
  
void Reverse(LinkList L )   
{   
 LinkList Temp, Prev;   
 Prev = NULL;   
 while(L)   
 {   
 Temp = L->next;   
 L->next = Prev;   
 Prev = L;   
 L = Temp;   
 }   
}   
  
  
int main()  
{  
LinkList L,L2;  
CreatList(&L, 6);  
  
 LinkList Temp, Prev;   
 Prev = NULL;   
 while(L)   
 {   
 Temp = L->next;   
 L->next = Prev;   
 Prev = L;   
 L = Temp;   
 }   
  
Print(Prev);  
}