**DANH SÁCH LIÊN KẾT ĐƠN**

#include <stdio.h>

#include <conio.h>

#include <malloc.h>

typedef int ElementType;

typedef struct Node {

ElementType Element;

struct Node \*Next;

};

typedef struct Node\* Position;

typedef Position List;

void MakeNull\_List(List \*Header){

(\*Header) = (struct Node\*)malloc(sizeof(struct Node));

(\*Header)->Next = NULL;

}

int Empty\_List(List L){

return (L->Next==NULL);

}

void Insert\_List(ElementType X,Position P,List \*L){

Position T;

T = (struct Node\*)malloc(sizeof(struct Node));

T->Element = X;

T->Next = P->Next;

P->Next = T;

}

void Delete\_List(Position P,List \*L){

Position T;

if(P->Next != NULL){

T->Next = P->Next;

P->Next = T->Next;

free(T);

}

else{

printf("\nLoi! Danh sach rong khong the xoa!");

}

}

Position Locate(ElementType X, List L){

Position P;

while(P->Next!=NULL){

if(P->Next->Element==X){

return P;

}

else{

P=P->Next;

}

}

return P;

}

ElementType Retrieve(Position P, List L){

if(P->Next!=NULL){

return P->Next->Element;

}

}

Position First(List L){

return L;

}

Position EndList(List l){

Position p;

p=First(l);

while(p->Next!=NULL){

p=p->Next;

}

return p;

}

void Read\_List(List \*L){

int i,n,t;

ElementType x;

Position p;

p=First(\*L);

printf("So phan tu trong danh sach: ");

scanf("%d",&n);

for(i=1;i<=n;i++){

printf("Nhap phan tu thu %d: ",i);

scanf("%d",&x);

Insert\_List(x,EndList(\*L),L);

}

}

void Print\_List(List L){

Position p;

p=First(L);

while(p!=EndList(L)){

printf("%d ",Retrieve(p,L));

p=p->Next;

}

}

int main(){

List L;

ElementType X;

Position P;

int i,dem;

MakeNull\_List(&L);

printf("\n\nDanh sach sau khi khoi tao rong la ");

if(Empty\_List(L)) printf("\n\nDanh sach rong!\n\n");

else printf("\n\nDanh sach khong rong!\n\n");

Read\_List(&L);

Print\_List(L);

printf("\nNhap phan tu muon chen vao danh sach = ");

scanf("%d",&X);

printf("\nNhap vi tri muon chen \"%d\" vao danh sach = ",X);

scanf("%d",&dem);

P=First(L);

for(i=1;i<dem;i++){

P=P->Next;

}

Insert\_List(X,P,&L);

printf("Danh sach sau khi chen \"%d\" vao vi tri \"%d\" la: \n",X,dem);

Print\_List(L);

}