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//1.cpp
#include<iostream>
using namespace std;
class node{
public:
int v;
node *nxt;
};
class list{
public:
node *head;
node *tail;
list(){
head=NULL;
tail=NULL;
}
void push(node *pnn){
if(tail!=NULL){
tail->nxt = pnn;
}
tail = pnn;
if(head == NULL){
head=pnn;
}
}
int calcTot1(int v){
int i=0,tot=0,j=0;
node *trav = this->head;
while(trav != NULL){
if(trav->v == v)
break;
i++;
trav = trav->nxt;
}
trav = this->head;
while(trav != NULL){
if(j >= i-3 && j <= i+3 && j != i)
tot+=trav->v;
j++;
trav = trav->nxt;
}
return tot;
}
int calcTot2(int v){
int tot=0;
node *tmp[3]={NULL,NULL,NULL},*trav=head;
while(trav!=NULL){
if(trav->v==v){
tot += tmp[0]->v+tmp[1]->v+tmp[2]->v;
for(int i=0;i<3 && trav!=NULL;i++){

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        trav=trav->nxt;
        tot+=trav->v;
    }
    break;
}
else{
    tmp[2]=tmp[1];
    tmp[1]=tmp[0];
    tmp[0]=trav;
}
trav=trav->nxt;
}
return tot;
}
int calcTot3(int v){
    int tot=0;
    node *tmp,*trav=head;
    while(trav!=NULL){
        tmp=trav;
        for(int i=0;i<3;i++){
            tmp=tmp->nxt;
        }
        if(tmp->v==v){
            for(int i=0;i<3;i++){
                tot+=trav->v;
                trav=trav->nxt;
            }
            trav=trav->nxt;
            for(int i=0;i<3;i++){
                tot+=trav->v;
                trav=trav->nxt;
            }
            break;
        }
        trav=trav->nxt;
    }
    return tot;
}
~list(){
    node *tmp;
    while(head!=NULL){
        tmp = head->nxt;
        delete head;
        head = tmp;
    }
}
};
int main(){
    list *l = new list();
    char a='y';
    node *pnn;
    while(a=='y'){

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        pnn = new node;
        cin >> pnn->v;
        pnn->nxt = NULL;
        l->push(pnn);
        cout << "enter another cell ? y/n ";
        cin >> a;
    }
    int v;
    cout << "enter value: ";
    cin >> v;
    cout << l->calcTot1(v) << endl;
    cout << l->calcTot2(v) << endl;
    cout << l->calcTot3(v) << endl;
    return 0;
}

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//2.cpp
#include<iostream>
using namespace std;
class node{
public:
    int v;
    node *nxt;
};
class list{
public:
    node *head;
    node *tail;
    list(){
        head=NULL;
        tail=NULL;
    }
    void push(node *pnn){
        if(tail!=NULL){
            tail->nxt = pnn;
        }
        tail = pnn;
        if(head == NULL){
            head=pnn;
        }
    }
    ~list(){
        node *tmp;
        while(head!=NULL){
            tmp = head->nxt;
            delete head;
            head = tmp;
        }
    }
}

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    }
};

void find(list *l1, list *l2){
    node *t1 = l1->head;
    node *t2 = l2->head;
    int i=0;
    while (t1 != NULL && t2 != NULL){
        if(t1->v == t2->v)
            cout << i << " , " << t1->v << endl;
        i++;
        t1 = t1->nxt;
        t2 = t2->nxt;
    }
}

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int main(){
    list *l1 = new list();
    char a='y';
    node *pnn;
    cout << "list 1" << endl;
    while(a=='y'){
        pnn = new node;
        cin >> pnn->v;
        pnn->nxt = NULL;
        l1->push(pnn);
        cout << "another ? y/n ";
        cin >> a;
    }
    list *l2 = new list();
    a = 'y';
    cout << "list 2" << endl;
    while(a=='y'){
        pnn = new node;
        cin >> pnn->v;
        pnn->nxt = NULL;
        l2->push(pnn);
        cout << "another? y/n ";
        cin >> a;
    }
    find(l1, l2);
    return 0;
}

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