#include <iostream>

using namespace std;

typedef struct

{

int num;

} SElemType;

typedef struct StackNode

{

SElemType data;

struct StackNode \*next;

} StackNode, \*LinkStack;

void mue()

{

cout << "1.插入元素" << endl;

cout << "2.输出栈顶元素" << endl;

cout << "3.取栈顶元素" << endl;

cout << "4.遍历顺序栈" << endl;

cout << "5.置空顺序栈" << endl;

cout << "6.数制转换" << endl;

cout << "0.退出" << endl;

}

void L\_charfuck(LinkStack &L) // 插入链栈

{

StackNode \*q, \*p = L;

q = new StackNode;

cin >> q->data.num;

L = q;

q->next = p;

}

void L\_printonr(LinkStack L) // 输出栈顶

{

cout << "栈顶元素是：" << L->data.num << endl;

}

void L\_returnty(LinkStack &L, SElemType &nm) // 取栈顶元素

{

nm.num = L->data.num;

L = L->next;

}

void L\_getbuan(LinkStack L) // 遍历链栈

{

while (L->next != NULL)

{

cout << L->data.num << " ";

L = L->next;

}

cout << endl;

}

void L\_Deletry(LinkStack &L) // 置空链栈

{

StackNode \*p;

while (L->next != NULL)

{

p = L;

L = L->next;

delete p;

}

}

void L\_exchangedy(LinkStack &L, int k)//数制转换

{

while (k >= 8)

{

StackNode \*q, \*p = L;

q = new StackNode;

q->data.num = k % 8;

L = q;

q->next = p;

k /= 8;

}

StackNode \*q, \*p = L;

q = new StackNode;

q->data.num = k;

L = q;

q->next = p;

while (L->next != NULL)

{

cout << L->data.num;

L = L->next;

}

cout << endl;

}

int main()

{

StackNode \*L;

L = new StackNode;

L->data.num = 0;

L->next = NULL;

mue();

while (1)

{

char opr;

cout << "请选择：";

cin >> opr;

fflush(stdin);

switch (opr)

{

case '1':

int m;

cout << "请输入您要插入元素个数：";

cin >> m;

cout << "请输入您要插入的元素" << endl;

for (int i = 0; i < m; i++)

{

L\_charfuck(L);

}

cout << "插入成功" << endl;

break;

case '2':

L\_printonr(L);

break;

case '3':

SElemType s;

L\_returnty(L, s);

cout << "栈顶元素是：" << s.num << endl;

break;

case '4':

cout << "栈里的元素有：";

L\_getbuan(L);

break;

case '5':

L\_Deletry(L);

cout << "链栈置空完成" << endl;

break;

case '6':

int k;

cout << "请输入您要转换的数：";

cin >> k;

cout << "转换后的八进制是：";

L\_Deletry(L);

L\_exchangedy(L, k);

break;

case '0':

cout<<"程序结束，谢谢使用"<<endl;

return 0;

break;

default:

cout << "您输入的内容不合法" << endl;

break;

cout << endl;

}

mue();

}

}