#include<iostream>

#include<string>

using namespace std;

typedef struct Student {

struct Student \*next;

string name;//姓名

int number;//学号

string banji;//班级

}Student;

void menu()

{

cout << "欢迎来到学生信息管理系统" << endl;

cout << "1.添加学生信息" << endl;

cout << "2.查询学生信息" << endl;

cout << "3.删除学生信息" << endl;

cout << "4.修改学生信息" << endl;

cout << "0.退出管理系统" << endl;

cout << endl;

}

//初始化节点

void creat(Student\*& L) {

L = new Student;

L->next = NULL;

}

//添加节点

void addstudent(Student\* &L) {

Student \*head,\*temp;

head = L;

string name;

int number;

string banji;

while (head->next)

{

head = head->next;

}

cout << "请输入姓名" << endl;

cin >> name;

cout << "请输入学号" << endl;

cin >> number;

cout << "请输入班级" << endl;

cin >> banji;

temp = new Student;

temp->name = name;

temp->number = number;

temp->banji = banji;

head->next = temp;

temp->next = NULL;

head = temp;

}

//根据学号查询学生信息

void serchstudent(Student\*& L) {

Student\* head, \* temp;

head = L;

int number;

cout << "请输入学号" << endl;

cin >> number;

while (head)

{

if (head->number==number)

{

cout << "学生的姓名是：" << head->name << endl;

cout << "学生的学号是：" << head->number << endl;

cout << "学生的班级是：" << head->banji << endl;

return;

}

head = head->next;

}

cout << "查无此人" << endl;

}

//根据学号删除学生信息

void delatestudent(Student\*& L) {

Student\* head, \* temp;

head = L;

int number;

cout << "请输入学号" << endl;

cin >> number;

while (head)

{

if (head->next!=NULL&&head->next->number == number)

{

temp = head->next;

head->next = temp->next;

delete temp;

cout << "删除成功" << endl;

return;

}

head = head->next;

}

}

//根据学号修改学生信息

void changestudent(Student\*& L) {

Student\* head, \* temp;

head = L;

int number;

int choice;

cout << "请输入学号" << endl;

cin >> number;

while (head)

{

if (head!= NULL&&head->number == number)

{

cout << "请输入修改的选项\n1---姓名\n2---学号\n3---班级" << endl;

cin >> choice;

switch (choice)

{

case 1:

cout << "请输入姓名" << endl;

cin >> head->name;

break;

case 2:

cout << "请输入学号" << endl;

cin >> head->number;

break;

case 3:

cout << "请输入班级" << endl;

cin >> head->banji;

break;

default:

cout << "请重新输入" << endl;

break;

}

}

head = head->next;

}

}

int main() {

int choice;

Student\* L;

creat(L);

menu();

while (1)

{

cout << "请输入操作序号" << endl;

cin >> choice;

switch (choice)

{

case 0:

cout << "欢迎下次使用" << endl;

exit(0);

break;

case 1://1.添加学生信息

addstudent(L);

break;

case 2:////2.查询学生信息

serchstudent(L);

break;

case 3://3.删除学生信息

delatestudent(L);

break;

case 4://4.修改学生信息

changestudent(L);

break;

}

}

system("pause");

return 0;

}

