#include<iostream>

#include"conio.h"

#include<iomanip>

#include"stdio.h"

#include"string.h"

#include"stdlib.h"

#include<fstream>

using namespace std;

class student

{

private:

char name[20];

char sex[6];

int number;

int score[7];

int total;

int average;

int last;

public:

student();

void input();

void output();

void find();

void xg();

void sc();

void baocun();

void read();

student & operator=(student & T);

friend istream & operator >> (istream & scin,student &s1);

friend ostream & operator << (ostream & scout,student &s2);

};

student stu[200];

int n=0;

void student::input()

{

char flag='Y';

while(toupper(flag)=='Y')

{

cin>>stu[n];

n++;

cout<<"请问需要继续录入吗？(请输入 y or n )";

cin>>flag;

if(toupper(flag)!='Y')

{

if(toupper(flag)=='N')

{

break;

}

else

{

cout<<"输入错误，请重输：";

cin>>flag;

}

}

}

}

void student::output()

{

if(n!=0)

{

cout<<"------------------------------------------------------------------------------------\n";

cout<<"| 学号 | 姓名 | 性别 | 语文 | 英语 | 数学 | 物理 | 化学 | 生物 | 平时成绩 | 总评 |\n";

cout<<"------------------------------------------------------------------------------------\n";

for(int t=0;t<n;t++)

{

cout<<stu[t];

}

}

getch();

}

void student::find()

{

int f3=0;

char n1[20];

student temp;

cout<<'\n';

cout<<"请输入您要查找的学生姓名：";

cin>>n1;

for(int j=0;j<n;j++)

{

if(strcmp(stu[j].name,n1)==0)

{

temp=stu[j];

f3=1;

}

}

if(f3==0)

cout<<"对不起，没有您要查找的学生"<<endl;

else

{

cout<<"------------------------------------------------------------------------------------\n";

cout<<"| 学号 | 姓名 | 性别 | 语文 | 英语 | 数学 | 物理 | 化学 | 生物 | 平时成绩 | 总评 |\n";

cout<<"------------------------------------------------------------------------------------\n";

cout<<setw(5)<<temp.number<<setw(6)<<temp.name<<setw(6)<<temp.sex<<setw(7)<<temp.score[0]

<<setw(7)<<temp.score[1]<<setw(7)<<temp.score[2]<<setw(7)<<temp.score[3]<<setw(7)<<temp.score[4]

<<setw(7)<<temp.score[5]<<setw(9)<<temp.score[6]<<setw(9)<<temp.last<<endl;

}

getch();

}

void student::xg()

{

int f4=0;

int t;

char n2[50];

cout<<'\n';

cout<<"请输入你要修改的学生姓名：";

cin>>n2;

for(int j=0;j<n;j++)

{

if(strcmp(stu[j].name,n2)==0)

{

t=j;

f4=1;

}

}

if(f4==0)

cout<<"对不起，没有您要修改的学生"<<endl;

else

{

cout<<"请输入修改后的学生学号:";

cin>>stu[t].number;

cout<<"请输入修改后的学生姓名:";

cin>>stu[t].name;

cout<<"请输入修改后的学生性别:";

cin>>stu[t].sex;

cout<<"请输入修改后的语文成绩:";

cin>>stu[t].score[0];

cout<<"请输入修改后的英语成绩:";

cin>>stu[t].score[1];

cout<<"请输入修改后的数学成绩:";

cin>>stu[t].score[2];

cout<<"请输入修改后的物理成绩:";

cin>>stu[t].score[3];

cout<<"请输入修改后的化学成绩:";

cin>>stu[t].score[4];

cout<<"请输入修改后的生物成绩:";

cin>>stu[t].score[5];

cout<<"请输入修改后的平时成绩:";

cin>>stu[t].score[6];

stu[t].total=stu[t].score[0]+stu[t].score[1]+stu[t].score[2]+stu[t].score[3]+stu[t].score[4]+stu[t].score[5];

stu[t].average=stu[t].total/6;

stu[t].last=(int)(stu[t].score[6]\*0.3+stu[t].average\*0.7);

cout<<"修改成功 !"<<endl;

}

getch();

}

void student::sc()

{

char n3[20];

bool f5=0;

char c;

do{

cout<<'\n';

cout<<"请输入你要删除的学生姓名：";

cin>>n3;

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

{

if(strcmp(n3,stu[i].name)==0)

{

f5=1;

n--;

do{

stu[i]=stu[i+1];

i++;

}while(i<=n);

}

}

if(f5==0)

cout<<"您要删除的学生不存在"<<endl;

cout<<"请问要继续删除吗？（请输入y或n）"<<endl;

cin>>c;

if(toupper(c)!='Y'&&toupper(c)!='N')

{

cout<<"输入错误！您只能输入Y或N"<<endl;

cin>>c;

}

}while(toupper(c)=='Y');

getch();

}

void student::baocun()

{

char filename1[20];

cout<<"请输入文件名：";

cin>>filename1;

ofstream fout(filename1,ios::app);

if(!fout)cout<<"文件打不开！"<<endl;

else

{

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

fout<<' '<<stu[i].number<<' '<<stu[i].name<<' '<<stu[i].sex

<<' '<<stu[i].score[0]<<' '<<stu[i].score[1]<<' '<<stu[i].score[2]<<' '<<stu[i].score[3]<<' '<<stu[i].score[4]

<<' '<<stu[i].score[5]<<' '<<stu[i].score[6]<<' '<<stu[i].total<<' '<<stu[i].average<<' '<<stu[i].last;

cout<<"保存成功"<<endl;

}

fout.close();

getch();

}

void student::read()

{

char filename2[20];

cout<<"请输入您要读取的文件名：";

cin>>filename2;

ifstream fin(filename2,ios::in);

if(!fin)cout<<"文件打不开！"<<endl;

else

{

for(int i=0;;i++,n=i-1)

{

if(fin.eof())break;

fin>>stu[i].number>>stu[i].name>>stu[i].sex

>>stu[i].score[0]>>stu[i].score[1]>>stu[i].score[2]>>stu[i].score[3]>>stu[i].score[4]>>stu[i].score[5]

>>stu[i].score[6]>>stu[i].total>>stu[i].average>>stu[i].last;

}

cout<<"文件读取成功！"<<endl;

}

fin.close();

getch();

}

student & student::operator=(student & T)

{

strcpy(name,T.name);

strcpy(sex,T.sex);

number=T.number;

for(int i=0;i<7;i++)

score[i]=T.score[i];

total=T.total;

average=T.average;

last=T.last;

return(\*this);

}

ostream & operator << (ostream & scout,student &s2)

{

cout<<setw(5)<<s2.number<<setw(6)<<s2.name<<setw(6)<<s2.sex<<setw(7)<<s2.score[0]

<<setw(7)<<s2.score[1]<<setw(7)<<s2.score[2]<<setw(7)<<s2.score[3]<<setw(7)<<s2.score[4]

<<setw(7)<<s2.score[5]<<setw(9)<<s2.score[6]<<setw(9)<<s2.last<<'\n';

return scout;

}

istream & operator >> (istream & scin,student &s1)

{

cout<<'\n';

cout<<"学号:";

scin>>s1.number;

cout<<"姓名:";

scin>>s1.name;

cout<<"性别:";

scin>>s1.sex;

cout<<"语文:";

scin>>s1.score[0];

cout<<"英语:";

scin>>s1.score[1];

cout<<"数学:";

scin>>s1.score[2];

cout<<"物理:";

scin>>s1.score[3];

cout<<"化学:";

scin>>s1.score[4];

cout<<"生物:";

scin>>s1.score[5];

cout<<"平时成绩:";

scin>>s1.score[6];

s1.total=s1.score[0]+s1.score[1]+s1.score[2]+s1.score[3]+s1.score[4]+s1.score[5];

s1.average=s1.total/6;

s1.last=(int)(s1.score[6]\*0.3+s1.average\*0.7);

return cin;

}

student::student()

{

strcpy(name," ");

strcpy(sex," ");

number=0;

for(int i=0;i<7;i++)

score[i]=0;

total=0;

average=0;

last=0;

}

void menu()

{

cout<<" "<<endl;

cout<<" "<<endl;

cout<<" "<<endl;

cout<<" "<<endl;

cout<<" 欢迎进入【学生成绩管理系统】"<<endl;

cout<<" "<<endl;

cout<<" ………………………………………………………"<<endl;

cout<<" \*\*\*\* 学生成绩管理系统 \*\*\*\*"<<endl;

cout<<" ………………………………………………………"<<endl;

cout<<" "<<endl;

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<" "<<endl;

cout<<" >>……1.学生成绩录入……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……2.浏览学生成绩……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……3.查询学生成绩……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……4.修改学生成绩……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……5.删除学生成绩……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……6.数据存入文件……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……7.文件读出数据……<<"<<endl;

cout<<" "<<endl;

cout<<" >>……0.退出管理系统……<<"<<endl;

cout<<" "<<endl;

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"\n\n\t请输入一位数字（1-7）选择您所需的功能，并按回车键确认【退出请输0】:";

}

int main()

{

int choose;

student s;

do{

menu();

cin>>choose;

system("cls");

switch(choose)

{

case 1:s.input();break;

case 2:s.output();break;

case 3:s.find();break;

case 4:s.xg();break;

case 5:s.sc();break;

case 6:s.baocun();break;

case 7:s.read();break;

default : break;

}

}

while(choose!=0);

return 0;

}