1. 主函数

using namespace std;//可以理解为固定格式

string vi\_na();//函数声明；

int snum();//函数声明；

class student{//一个类,类似于结构体但于结构体不同

protected://保护性成员,只允许被类里面函数或带有friend的函数访问

int sum;

private://私有成员只允许被类里面的函数或者带有friend函数访问

string name;

string snum;

public://公有成员,相当于struct里面的变量

char sex;

int YR,M,D;

int score[5];

const string vi\_snum(){return snum;}//用来访问私有成员的接口函数

const string vi\_na(){return name;}//用来访问私有成员的接口函数

SetBa(string x,string s){

name=x;

snum=s;

}//私有成员初始化函数

Soe\_Sum(int N){sum=N;}//访问保护成员Sum的接口函数

Soe\_Sum(){int n=0;for(int i=0;i<5;i++) n+=score[i];sum=n;}//接口函数,算出总分并赋值给sum

const int vi\_sum(){return sum;}

friend bool operator <(const student &T,const student &V);

friend bool operator <=(const student &T,const student &V);

};

void Print(int cnt,int S=1,string x="loading")//参数为string类(类似动态字符数组),int类

{

cout<<x;

for(int i=0;i<cnt;i++){

Sleep(S\*sec);

cout<<".";

if(i==cnt-1) cout<<endl;

}

}

bool operator <(const student &T,const student &V)//重载运算符 < ,使运算符 < 具有更多功能

{

if(T.name<V.name) return true;//重载内容;

else return false;

}

bool operator <=(const student &T,const student &V)//同上

{

if(T.name<=V.name) return true;

else return false;

}

/\*C++中cin>>类似scanf,cout<<类似于printf，endl类似于回车换行\*/

#include<iostream>//c++头文件

#include<vector>

#include<string>

#include<windows.h>

#define sec 1000

enum{CN,Math,Eng,Sci,PE};//枚举类型

#include"main.h"

#include"create\_info.h"

#include"add\_info.h"

#include"Print\_all.h"

#include"modify\_info.h"

#include"search\_info.h"

#include"delete\_info.h"

#include"Na\_Sort\_Print.h"

#include"Sum\_Sort\_Print.h"

#include"save\_eixt.h"

using namespace std;//相当于c++固定格式

void main\_page(vector<student> &T);

int main()

{

vector<student> per;//兼有链表与数组的特性的容器；

cout<<"Welcome to the Student management system"<<endl;

Sleep(1.2\*sec);

main\_page(per);

cout<<"input number :";

string filename;//string相当于动态字符串数组

long int N;

cin>>N;

do{

switch(N){

case 1:

filename=create\_info(per);

if(filename=="null") filename.clear();//清空filename里面内容

break;

case 2:add\_info(per,filename);break;

case 3:Print\_all(per);break;

case 4:modify\_info(per);break;

case 5:search\_info(per);break;

case 6:delete\_info(per);break;

case 7:Na\_Sort\_Print(per);break;

case 8:Sum\_Sort\_Print(per);break;

case 9:save\_eixt(per,filename);break;

default :cout<<"Input is incorrect,please reenter"<<endl;

}

Sleep(0.1\*sec);//window.h头文件里面的停顿函数

main\_page(per);

cout<<"input number :";

}while(cin>>N);

return 0;

}

void main\_page(vector<student> &T)//c++中带&为引用,相当于传入首地址

{

cout<<"========================================"<<endl

<<" Student management system "<<endl

<<"========================================"<<endl;

cout<<" 1---create\_info 2---add\_stu\_info"<<endl

<<" 3---Browse\_info 4---modify\_info"<<endl

<<" 5---search\_info 6---delete\_info"<<endl

<<" 7---Na\_Sort\_Print 8---Sum\_Sort\_Print"<<endl

<<" 9---save\_and\_exit Student Total :"<<T.size()<<endl

<<"========================================"<<endl;

}

1. 保存并退出

void save\_eixt(vector<student> &T,string filename)

{

fstream infile(filename.c\_str(),ios::out);//以写和清空filename方式打开filename

if(!infile){//若没有打开文件,输出错误信息

cerr<<"Open file error"<<endl;

return;

}

for(int i=0;i<T.size();i++){//在这个for中,infile类似fprintf

infile<<T[i].vi\_na()<<endl<<T[i].sex<<" "<<T[i].vi\_snum()<<" ";

infile<<T[i].YR<<" "<<T[i].M<<" "<<T[i].D<<" ";

for(int j=0;j<5;j++){

infile<<T[i].score[j];

if(j!=4) infile<<" ";

}

}

infile.close();//关闭文件

Print(8,0.7);

cout<<"Withdraw from success"<<endl;

Sleep(1.5\*sec);

exit(0);//退出系统

}