Souce code:

#include<conio.h>

* **không có lưu đồ -1d**
* **không đúng yêu cầu câu 4 -4d**

#include<stdio.h>

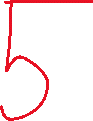
#include <iostream>

#include <string.h>

#define MAX 100

using namespace std;

struct SinhVien {



int id;

char ten[30];

char gioiTinh[5];

int KV;

int Nhom;

float diemToan;

float diemLy;

float diemHoa;

float diemTong;

char Ketqua[10] = "-";

};

typedef SinhVien SV;

void printLine(int n);

void nhapThongTinSV(SV &sv, int id);

void nhapSV(SV a[], int id, int n);

void Xetloai(SV &sv);

void tinhTD(SV &sv);

int idLonNhat(SV a[], int n);

void xuatThongtin(SV a[], int n);

void sapxepTheoTD(SV a[], int n);

int docFile(SV a[], char fileName[]);

void ghiFile(SV a[], int n, char fileName[]);

void pressAnyKey();

int main() {

int key;

char fileName[] = "sinhvien.txt";

SV arraySV[MAX];

int soluongSV = 0;

int idCount = 0;

soluongSV = docFile(arraySV, fileName);

idCount = idLonNhat (arraySV, soluongSV);

while(true) {

printf( "Chuong trinh quan ly danh sach dau dai hoc\n");

printf( "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*MENU\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf( "\*\* 1. Them sinh vien. \*\*\n");

printf( "\*\* 2. Sap xep sinh vien theo tong diem. \*\*\n");

printf( "\*\* 3. Hien thi danh sach sinh vien. \*\*\n");

printf( "\*\* 4. Ghi danh sach sinh vien vao file. \*\*\n");

printf( "\*\* 0. Thoat \*\*\n");

printf( "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

cout << "Nhap tuy chon: ";

cin >> key;

switch(key){

case 1:

printf("\n1. Them sinh vien.");

idCount++;

nhapSV(arraySV, idCount, soluongSV);

printf("\nThem sinh vien thanh cong!");

soluongSV++;

pressAnyKey();

break;

case 2:

if(soluongSV > 0) {

printf("\n2. Sap xep sinh vien theo tong diem.");

sapxepTheoTD(arraySV, soluongSV);

xuatThongtin(arraySV, soluongSV);

}else{

printf("\nSanh sach sinh vien trong!");

}

pressAnyKey();

break;

case 3:

if(soluongSV > 0){

printf("\n3. Hien thi danh sach sinh vien.");

xuatThongtin(arraySV, soluongSV);

}else{

printf("\nSanh sach sinh vien trong!");

}

pressAnyKey();

break;

case 4:

if(soluongSV > 0){

printf("\n4. Ghi danh sach sinh vien vao file.");

ghiFile(arraySV, soluongSV, fileName);

}else{

printf("\nSanh sach sinh vien trong!");

}

printf("\nGhi danh sach sinh vien vao file %s thanh cong!", fileName);

pressAnyKey();

break;

case 0:

printf("\nBan da chon thoat chuong trinh!");

getch();

return 0;

default:

printf("\nKhong co chuc nang nay!");

printf("\nHay chon chuc nang trong hop menu.");

pressAnyKey();

break;

}

}

}

void tinhTD(SV &sv) {

sv.diemTong = sv.diemToan + sv.diemLy + sv.diemHoa;

}

void nhapThongTinSV(SV &sv, int id) {

printf("\n Nhap ho va ten: " ); fflush(stdin); gets(sv.ten);

printf(" Nhap gioi tinh: "); gets(sv.gioiTinh);

cout << " Nhap khu vuc: "; cin >> sv.KV;

cout << " Nhap khu nhom: "; cin >> sv.Nhom;

cout << " Nhap diem Toan: "; cin >> sv.diemToan;

cout << " Nhap diem Ly: "; cin >> sv.diemLy;

cout << " Nhap diem Hoa: "; cin >> sv.diemHoa;

sv.id = id;

tinhTD(sv);

Xetloai(sv);

}

void Xetloai(SV &sv) {

switch (sv.KV){

case 1:

switch(sv.Nhom){

case 1:

if (sv.diemTong >= 18) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 2:

if (sv.diemTong >= 17) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 3:

if (sv.diemTong >= 16) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

}

break;

case 2:

switch(sv.Nhom){

case 1:

if (sv.diemTong >= 17.5) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 2:

if (sv.diemTong >= 16.5) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 3:

if (sv.diemTong >= 15.5) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

}

break;

case 3:

switch(sv.Nhom){

case 1:

if (sv.diemTong >= 17) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 2:

if (sv.diemTong >= 16) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

case 3:

if (sv.diemTong >= 15) strcpy(sv.Ketqua, "Dau");

else strcpy(sv.Ketqua, "Rot");

break;

}

break;

}

}

void nhapSV(SV a[], int id, int n) {

printLine(40);

printf("\n Nhap sinh vien thu %d:", n + 1);

nhapThongTinSV(a[n], id);

printLine(40);

}

void xuatThongtin(SV a[], int n) {

printLine(100);

printf("\n\STT\tID\tHo va ten\tGioi tinh\tKhu vuc\tNhom\tTong diem\tKet qua");

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

printf("\n %d", i + 1);

printf("\t%d", a[i].id);

printf("\t%s", a[i].ten);

printf("\t\t%s", a[i].gioiTinh);

printf("\t%d", a[i].KV);

printf("\t%d", a[i].Nhom);

printf("\t%.2f", a[i].diemTong);

printf("\t\t%s", a[i].Ketqua);

}

printLine(100);

}

void sapxepTheoTD(SV a[], int n) {

SV tmp;

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

for(int j = i+1; j < n;j++) {

if(a[i].diemTong < a[j].diemTong) {

tmp = a[i];

a[i] = a[j];

a[j] = tmp;

}

}

}

}

int idLonNhat (SV a[], int n) {

int idMax = 0;

if (n > 0) {

idMax = a[0].id;

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

if (a[i].id > idMax) {

idMax = a[i].id;

}

}

}

return idMax;

}

int docFile(SV a[], char fileName[]) {

FILE \* fp;

int i = 0;

fp = fopen (fileName, "r");

cout << "Chuan bi doc file: "; puts(fileName);

while (fscanf(fp, "%5d%30s%5s%5d%5d%10f%10s\n", &a[i].id, &a[i].ten,

&a[i].gioiTinh, &a[i].KV, &a[i].Nhom, &a[i].diemTong,

&a[i].Ketqua) != EOF) {

i++;

cout << " Doc ban ghi thu: " << i << endl;

}

cout << " So luong sinh vien co san trong file la: " << i << endl;

cout << endl;

fclose (fp);

return i;

}

void ghiFile(SV a[], int n, char fileName[]) {

FILE \* fp;

fp = fopen (fileName,"w");

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

fprintf(fp, "%5d%30s%5s%5d%5d%10f%10s\n", a[i].id, a[i].ten,a[i].gioiTinh,

a[i].KV, a[i].Nhom, a[i].diemTong, a[i].Ketqua);

}

fclose (fp);

}

void printLine(int n) {

cout << endl;

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

printf("\_");

}

}

void pressAnyKey() {

printf("\n\nBam phim bat ky de tiep tuc...");

getch();

system("cls");

}



A screenshot of a computer

Description automatically generated with medium confidence

Text

Description automatically generated with low confidence