

FAHAHEEL AL WATANIEH INDIAN
PRIVATE SCHOOL
AL- AHMADI
KUWAIT

PROJECT ON:
STUDENT REPORT MANAGEMENT

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#include<fstream.h>
#include<iomanip.h>
#include<stdio.h>
#include<conio.h>
class student
{
    int roll;
    char name[20];
    int em, mm, pm, cm, csm;
    char eg[3], mg[3], pg[3], cg[3], csg[3];
    int tot;
    void calc(int marks, char grade[])
    {
        if(marks>=90)
            strcpy(grade, "A1");
        else
            if(marks>=80)
                strcpy(grade, "A2");
            else
                if(marks>=70)
                    strcpy(grade, "B1");
                else
                    if(marks>=60)
                        strcpy(grade, "B2");
                    else
                        if(marks>=50)
                            strcpy(grade, "C1");
                        else
                            if(marks>=45)
                                strcpy(grade, "C2");
                            else
                                if(marks>=40)
                                    strcpy(grade, "D1");
                                else
                                    if(marks>=33)
                                        strcpy(grade, "D2");
                                    else
                                        strcpy(grade, "F");
    }
public:
    void input()
    {
        cout<<"Roll?";cin>>roll;
        cout<<"Name?"; gets(name);
        strupr(name);
        cout<<"English Marks [0-100]?";cin>>em;
        cout<<"Mathematics Marks [0-100]?";cin>>mm;
        cout<<"Physics Marks [0-100]?";cin>>pm;
        cout<<"Chemistry Marks [0-100]?";cin>>cm;
        cout<<"Comp Sc Marks [0-100]?";cin>>csm;
        tot=em+mm+pm+cm+csm;
        calc(em, eg);
    }
};

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    calc(mm, mg);
    calc(pm, pg);
    calc(cm, cg);
    calc(csm, csg);
}
void show()
{
    cout<<"Roll ="<<roll<<endl;
    cout<<"Name ="<<name<<endl;
    cout<<"English Marks ="<<em<<"
Grade="<<mg<<endl;
    cout<<"Mathematics Marks="<<mm<<"
Grade="<<mg<<endl;
    cout<<"Physics Marks ="<<pm<<"
Grade="<<pg<<endl;
    cout<<"Chemistry Marks ="<<cm<<"
Grade="<<cg<<endl;
    cout<<"Computer Sc Marks="<<csm<<"
Grade="<<mg<<endl;
    cout<<"Total Marks ="<<tot<<endl;
}
void showtab()
{
    printf("%4i %-20s %3i %2s  %3i %2s  %3i %2s  %3i %2s
%3i %2s %6i\n",roll, name, em, eg, mm, mg, pm, pg,
cm, cg, csm, csg, tot);
}
int retroll(){return roll;}
char *retname(){return name;}
int retem(){return em;}
int retmm(){return mm;}
int retpm(){return pm;}
int retcm(){return cm;}
int retcsm(){return csm;}
int rettot(){return tot;}
void upem(int eng)
{
    em=eng;
    calc(em, eg);
}
void upmm(int mat)
{
    mm=mat;
    calc(mm, mg);
}
void uppm(int ph)
{
    pm=ph;
    calc(pm, pg);
}
void upcm (int ch)
{

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        cm=ch;
        calc(cm, cg);
    }
    void upcsm(int cs)
    {
        csm=cs;
        calc(csm, csg);
    }
};
void addrec()
{
    ofstream fout("STUDENT.DAT",ios::binary|ios::app);
    student s ; int n;
    clrscr();
    cout<<"No. of records ?";cin>>n;
    for(int k=0;k<n;k++)
    {
        s.input();
        fout.write((char *)&s, sizeof(s));
        cout<<endl<<endl;
    }
    fout.close();
    cout<<"Student record added in the file!";
    cout<<"\n\nStrike any key to return...";
    getch();
}
void disall()
{
    student s;
    ifstream fin("STUDENT.DAT",ios::binary);
    int x=1;
    clrscr();
    while(fin.read((char *)&s, sizeof(s)))
    {
        s.show();
        cout<<"\n-----
\n\n\n";
        if (x%2==0)
        {
            cout<<"Strike any key to return...";
            getch();
            clrscr();
        }
        x++;
    }
    fin.close();
    if (x%2==0)
    {
        cout<<"\n\nStrike any key to return...";
        getch();
    }
}

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void dispec()
{
    ifstream fin("STUDENT.DAT",ios::binary);
    student s; int found=0; int roll;
    clrscr();
    cout<<"Roll number to Search? "; cin>>roll;
    while(fin.read((char *)&s, sizeof(s)))
        if(s.retroll()==roll)
        {
            s.show();
            found=1;
        }
    fin.close();
    if(found==0)
        cout<<"\n\nRecord does not exist\n";
    cout<<"\n\nStrike any key to return...";
    getch();
}

void modifyr()
{
    fstream fio("STUDENT.DAT",ios::binary|ios::in|ios::out);
    student a;
    int r, found=0;
    clrscr();
    cout<<"Input roll number to be updated?";
    cin>>r;
    while(fio.read((char*)&a,sizeof(a)))
    {
        if(a.retroll()==r)
        {
            a.show();
            cout<<"\nEnter new details of student"<<endl;
            a.input();
            fio.seekp(-sizeof(a),ios::cur);
            fio.write((char*)&a,sizeof(a));
            cout<<"Record updated"<<endl;
            found=1;
        }
    }
    fio.close();
    if(found==0)
        cout<<"Roll number not found\n";
    cout<<"\n\nStrike any key to return...";
    getch();
}

void editpm()
{
    fstream f("STUDENT.DAT", ios::binary|ios::out|ios::in);
    student a;
    int found=0,m;
    clrscr();
    cout<<"roll no. to edit? "; cin>>m;

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while (f.read((char*)&a, sizeof(a)))
if (m==a.retroll())
{
    a.show();
    int p;
    cout<<"Input new physics marks? "; cin>>p;
    a.uppm(p);
    f.seekg(-sizeof(a), ios::cur);
    f.write((char*)&a, sizeof(a));
    cout<<"Record updated ...\n";
    found=1;
}
if (found==0)
    cout<<" not found in the file\n";
f.close();
cout<<"\n\nStrike any key to return ...";
getch();
}
void editcm()
{
    fstream f("STUDENT.DAT", ios::binary|ios::out|ios::in);
    student a;
    int found=0,m;
    clrscr();
    cout<<"roll no. to edit? "; cin>>m;
    while (f.read((char*)&a, sizeof(a)))
    if (m==a.retroll())
    {
        a.show();
        int p;
        cout<<"Input new chemistry marks? "; cin>>p;
        a.upcm(p);
        f.seekg(-sizeof(a), ios::cur);
        f.write((char*)&a, sizeof(a));
        cout<<"Record updated ...\n";
        found=1;
    }
    if (found==0)
        cout<<" not found in the file\n";
    f.close();
    cout<<"\n\nStrike any key to return ...";
    getch();
}
void editmm()
{
    fstream f("STUDENT.DAT", ios::binary|ios::out|ios::in);
    student a;
    int found=0,m;
    clrscr();
    cout<<"roll no. to edit? "; cin>>m;
    while (f.read((char*)&a, sizeof(a)))
    if (m==a.retroll())

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    {
        a.show();
        int p;
        cout<<"Input new math marks? "; cin>>p;
        a.upmm(p);
        f.seekg(-sizeof(a), ios::cur);
        f.write((char*)&a, sizeof(a));
        cout<<"Record updated ...\n";
        found=1;
    }
    if (found==0)
        cout<<" not found in the file\n";
    f.close();
    cout<<"\n\nStrike any key to return ...";
    getch();
}

void editem()
{
    fstream f("STUDENT.DAT", ios::binary|ios::out|ios::in);
    student a;
    int found=0,m;
    clrscr();
    cout<<"roll no. to edit? "; cin>>m;
    while (f.read((char*)&a, sizeof(a)))
        if (m==a.retroll())
        {
            a.show();
            int p;
            cout<<"Input new english marks? "; cin>>p;
            a.upem(p);
            f.seekg(-sizeof(a), ios::cur);
            f.write((char*)&a, sizeof(a));
            cout<<"Record updated ...\n";
            found=1;
        }
    if (found==0)
        cout<<" not found in the file\n";
    f.close();
    cout<<"\n\nStrike any key to return ...";
    getch();
}

void editcsm()
{
    fstream f("STUDENT.DAT", ios::binary|ios::out|ios::in);
    student a;
    int found=0,m;
    clrscr();
    cout<<"roll no. to edit? "; cin>>m;
    while (f.read((char*)&a, sizeof(a)))
        if (m==a.retroll())
        {
            a.show();

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        int p;
        cout<<"Input new computer science marks? "; cin>>p;
        a.upcsm(p);
        f.seekg(-sizeof(a), ios::cur);
        f.write((char*)&a, sizeof(a));
        cout<<"Record updated ...\n";
        found=1;
    }
    if (found==0)
        cout<<" not found in the file\n";
    f.close();
    cout<<"\n\nStrike any key to return ...";
    getch();
}
void delr()
{
    ifstream fin("STUDENT.DAT",ios::binary);
    ofstream fout("TEMP.DAT",ios::binary);
    student a;int r,found=0;
    clrscr();
    cout<<"roll no. to be deleted"<<endl;cin>>r;
    while (fin.read((char*)&a,sizeof(a)))
        if(r==a.retroll())
        {
            cout<<"record deleted\n";
            found=1;
        }
        else
            fout.write((char*)&a,sizeof(a));
    if(found==0)
        cout<<" Roll no. not found"<<endl;
    fin.close();
    fout.close();
    remove("STUDENT.DAT");
    rename("TEMP.DAT","STUDENT.DAT");
    cout<<"\n\n strike any key to return ....."<<endl;
    getch();
}
void allresult()
{
    ifstream fin("STUDENT.DAT",ios::binary);
    student a;
    cout<<"CLASS RESULT\n";
    cout<<"=====
=====\\n";
    cout<<"ROLL NAME          ENG      MATH      PHYS      CHEM
CSC    TOTAL\\n";
    cout<<"=====
=====\\n";
    while(fin.read((char*)&a,sizeof(a)))
        a.showtab();
    fin.close();
}

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        cout<<"\n\nstrike any key to return ....." ;
        getch();
    }
void resultmenu()
{
    int ch;
    clrscr();
    cout<<"RESULT MENU \n\n";
    cout<<"1. CLASS RESULT\n\n";
    cout<<"2. STUDENT REPORT CARD\n\n";
    cout<<"3. BACK TO MAIN MENU\n\n";
    cout<<"0. EXIT\n\n";
    cout<<"Enter a choice[0-3]?";cin>>ch;
    clrscr();
    switch(ch)
    {
        case 1:allresult();break;
        case 2:dispec();break;
    }
}
void entrymenu()
{
    int ch;
    clrscr();
    do
    {
        clrscr();
        cout<<"ENTRY MENU"<<endl;
        cout<<"1. CREATE STUDENT RECORD\n\n";
        cout<<"2. DISPLAY ALL STUDENT RECORDS\n\n";
        cout<<"3. SEARCH STUDENT RECORD\n\n";
        cout<<"4. DELETE STUDENT RECORD \n\n";
        cout<<"0. BACK TO THE MAIN MENU \n\n";
        cout<<"INPUT A CHOICE[0-4] ?";cin>>ch;
        switch(ch)
        {
            case 1:addrec();break;
            case 2:disall();break;
            case 3:dispec();break;
            case 4:delr();break;
        }
    }
    while(ch);
}
void editmenu()
{
    int ch;
    do
    {
        clrscr();
        cout<<"EDIT MENU"<<endl;
        cout<<"1. MODIFY PHYSICS MARKS\n\n";
    }
}

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        cout<<"2. MODIFY CHEMISTRY MARKS\n\n";
cout<<"3. MODIFY MATHS MARKS\n\n";
cout<<"4. MODIFY ENGLISH MARKS\n\n";
cout<<"5. MODIFY COMPUTER SCIENCE MARKS\n\n";
cout<<"6. TO MODIFY ALL\n\n";
        cout<<"0. BACK TO THE MAIN MENU \n\n";
        cout<<"INPUT A CHOICE[0-6] ?";cin>>ch;
        switch(ch)
        {
                case 1:editpm();break;
                case 2:editcm();break;
                case 3:editmm();break;
                case 4:editem();break;
                case 5:editcsm();break;
                case 6:modifyr();break;
        }
    }
    while(ch);
}
void main()
{
    int ch;
    do
    {
        clrscr();
        cout<<"MAIN MENU \n\n";
        cout<<"1. RESULT MENU\n\n";
        cout<<"2. ENTRY MENU\n\n";
        cout<<"3. EDIT MENU\n\n";
        cout<<"0. EXIT\n\n";
        cout<<"SELECT CHOICE[0-3]?";cin>>ch;
        switch(ch)
        {
                case 1:resultmenu();break;
                case 2:entrymenu();break;
                case 3:editmenu();break;
        }
    }
    while(ch);
}

```