#include<iostream>

#include<fstream>

using namespace std;

class Job

{

int ApplNo,post,points,total;

char name[30];

public:

void intro()

{

cout<<"\n\t\t JOB APPLICATION MANAGEMENT SYSTEM"<<endl;

cout<<"\t\tBy Team DEJ (1914014, 1914015, 1914018)"<<endl;

cout<<"\n\t\t Press Enter key to continue."<<endl;

cin.get();

}

int getApplNo()

{

return ApplNo;

}

void modName(int a,char \*n)

{

ApplNo=a;

strcpy(name,n);

}

void modAppNum(int a,int n)

{

ApplNo=a;

ApplNo=n;

}

void read();

void write();

void modify();

void Delete(int);

};

void Job::read()

{

total=0;

cout<<endl<<"READING THE DETAILS OF THE APPLICANT... "<<endl<<endl;

cout<<"Enter the Applicant Number. ";

cin>>ApplNo;

cin.ignore();

cout<<endl<<"Enter the name of the applicant. ";

cin.getline(name,30);

cout<<endl<<"Criteria Number 1: Academic Score"<<endl;

cout<<"Criteria Number 2: Communication Skills"<<endl;

cout<<"Criteria Number 3: Presentation Skills"<<endl;

for(int i=0;i<3;i++)

{

cout<<"Enter the points (out of 100) of the applicant for Criteria No."<<i+1<<": ";

cin>>points;

total=total+points;

}

cout<<endl<<"Post Number 1: Mechanical Engineer"<<endl;

cout<<"Post Number 2: Computer Engineer"<<endl;

cout<<"Post Number 3: Electronics Engineer"<<endl;

cout<<"Post Number 4: Civil Engineer"<<endl;

cout<<"Enter the number of the post (1-4) the applicant is applying for. ";

cin>>post;

}

void Job::write()

{

cout<<"Applicant Number = "<<ApplNo<<endl;

cout<<"Name = "<<name<<endl;

cout<<"Total Points = "<<total<<endl;

cout<<"Post Number = "<<post<<endl<<endl;

}

void Job::modify()

{

int toMod,counter=0,found=0,newAN;

char opt,newN[30];

fstream f;

Job j;

f.open("JobApplicants.dat",ios::in|ios::out|ios::binary|ios::ate);

cout<<endl<<"Enter the Applicant Number of the Applicant whose details you want to modify. ";

cin>>toMod;

cout<<endl;

f.seekg(0,ios::beg);

while(f.read((char\*)&j,sizeof(j)))

{

counter++;

if(j.getApplNo()==toMod)

{

found=1;

cout<<"Data before updation: "<<endl;

j.write();

break;

}

}

if(f.eof())

f.clear();

if(found==0)

{

cout<<"Invalid Applicant Number. "<<endl;

f.close();

}

else

{

cout<<endl<<"To modify the Applicant Number of the Applicant, press 'A' or 'a'."<<endl;

cout<<"To modify the name of the Applicant, press 'N' or 'n'."<<endl;

cin>>opt;

if(opt=='N'||opt=='n')

{

cout<<"Applicant Number found at location "<<counter<<endl;

cout<<endl<<"Enter the name you would like to update with. ";

cin.ignore();

cin.getline(newN,30);

j.modName(toMod,newN);

f.seekp((counter-1)\*sizeof(j),ios::beg);

f.write((char\*)&j,sizeof(j));

cout<<endl<<"Viewing the updated data:";

j.write();

f.close();

}

else if(opt=='A'||opt=='a')

{

cout<<endl<<"Applicant Number found at location "<<counter<<endl;

cout<<endl<<"Enter the Applicant Number you would like to update with. ";

cin>>newAN;

j.modAppNum(toMod,newAN);

f.seekp((counter-1)\*sizeof(j),ios::beg);

f.write((char\*)&j,sizeof(j));

cout<<endl<<"Viewing the updated data:";

j.write();

f.close();

}

else

{

cout<<"Invalid key pressed. "<<endl;

f.close();

}

}

}

void Job::Delete(int del)

{

int found=0;

Job j;

ifstream iF;

ofstream oF;

iF.open("JobApplicants.dat",ios::in|ios::out|ios::binary|ios::ate);

iF.seekg(0,ios::beg);

while(iF.read((char\*)&j,sizeof(j)))

{

if(j.getApplNo()==del)

{

found=1;

break;

}

}

if(iF.eof())

iF.clear();

if(found==0)

{

cout<<"Invalid Applicant Number. "<<endl;

iF.close();

}

else

{

oF.open("Temp.dat",ios::in|ios::out|ios::binary|ios::app);

iF.seekg(0,ios::beg);

while(iF.read((char\*)&j,sizeof(j)))

{

if(j.getApplNo()!=del)

{

oF.write((char\*)&j,sizeof(j));

}

}

iF.close();

oF.close();

remove("JobApplicants.dat");

rename("Temp.dat","JobApplicants.dat");

cout<<endl<<"Application Deleted."<<endl;

}

}

int main()

{

Job j;

fstream f;

int ch,del;

char cont;

j.intro();

do

{

cout<<endl<<"Select your Option (1-4): "<<endl;;

cout<<"1: Reading an Applicant."<<endl;

cout<<"2: Displaying the List of Applicants."<<endl;

cout<<"3: Modifying the details."<<endl;

cout<<"4: Deleting an Application."<<endl;

cin>>ch;

switch(ch)

{

case 1:f.open("JobApplicants.dat",ios::out|ios::binary|ios::app);

f.clear();

j.read();

f.write((char\*)&j,sizeof(j));

f.close();

break;

case 2:f.open("JobApplicants.dat",ios::in|ios::binary|ios::ate);

cout<<endl<<"PRINTING THE DETAILS OF ALL THE APPLICANTS... "<<endl<<endl;

f.clear();

f.seekg(0,ios::beg);

while(f.read((char\*)&j,sizeof(j)))

{

j.write();

}

if(f.eof())

f.clear();

f.close();

break;

case 3:cout<<endl<<"MODIFYING THE DETAILS OF AN APPLICANT..."<<endl<<endl;

j.modify();

break;

case 4:cout<<endl<<"DELETING AN APPLICATION..."<<endl<<endl;

cout<<"Enter the Applicant Number of the application you want to delete. "<<endl;

cin>>del;

j.Delete(del);

break;

default:cout<<endl<<"Invalid Input."<<endl;

break;

}

cout<<endl<<"Do you want to continue? \nIf yes, press 'Y' or 'y'. \nIf no, press 'N' or 'n'."<<endl;

cin>>cont;

}while(cont=='Y'||cont=='y');

cout<<endl<<"Thanks for using JOB APPLICATION MANAGEMENT SYSTEM..."<<endl;

}