#include<iostream>

#include<fstream>

#include<cstdio>

using namespace std;

class Student

{

int admno;

char name[50];

char addr[50];

public:

void setData()

{

cout << "\nEnter Roll no. ";

cin >> admno;

cout << "Enter name of student ";

//cin.getline(name,50);

cin>>name;

cout<<"enter the address of the student";

cin>>addr;

}

void showData()

{

cout << "\nAdmission no. : " << admno;

cout << "\nStudent Name : " << name;

cout<<"\nAddress:"<<addr;

}

int retAdmno()

{

return admno;

}

};

/\*

\* function to write in a binary file.

\*/

void write\_record()

{

ofstream outFile;

outFile.open("student.odt", ios::binary | ios::app);

Student obj;

obj.setData();

outFile.write((char\*)&obj, sizeof(obj));

outFile.close();

}

/\*

\* function to display records of file

\*/

void display()

{

ifstream inFile;

inFile.open("student.odt", ios::binary);

Student obj;

while(inFile.read((char\*)&obj, sizeof(obj)))

{

obj.showData();

}

inFile.close();

}

/\*

\* function to search and display from binary file

\*/

void search(int n)

{

ifstream inFile;

inFile.open("student.odt", ios::binary);

Student obj;

while(inFile.read((char\*)&obj, sizeof(obj)))

{

if(obj.retAdmno() == n)

{

obj.showData();

break;

}

}

inFile.close();

}

/\*

\* function to delete a record

\*/

void delete\_record(int n)

{

Student obj;

ifstream inFile;

inFile.open("student.odt", ios::binary);

ofstream outFile;

outFile.open("temp.odt", ios::out | ios::binary);

while(inFile.read((char\*)&obj, sizeof(obj)))

{

if(obj.retAdmno() != n)

{

outFile.write((char\*)&obj, sizeof(obj));

}

}

inFile.close();

outFile.close();

remove("student.dat");

rename("temp.dat", "student.dat");

}

/\*

\* function to modify a record

\*/

void modify\_record(int n)

{

fstream file;

file.open("student.odt",ios::in | ios::out);

Student obj;

while(file.read((char\*)&obj, sizeof(obj)))

{

if(obj.retAdmno() == n)

{

cout << "\nEnter the new details of student";

obj.setData();

int pos = -1 \* sizeof(obj);

file.seekp(pos, ios::cur);

file.write((char\*)&obj, sizeof(obj));

}

}

file.close();

}

int main()

{

int ch;

do{

cout<<"\nMenu\n\t1.write\n2.display\n3.search\n4.delete\n5.modify";

cout<<"\nEnter your choice";

cin>>ch;

switch(ch){

case 1: cout<<"Enter number of records";//Store 4 records in file

int n;

cin>>n;

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

write\_record();

break;

case 2:

//Display all records

cout << "\nList of records";

display();

break;

case 3://Search record

cout<<"Enter admission no. to be searched";

int s;

cin>>s;

search(s);

break;

case 4:

cout<<"enter no to be deleted";

int d;

cin>>d;

//Delete record

delete\_record(d);

cout << "\nRecord Deleted";

break;

case 5:

//Modify record

cout<<"enter rno to be modified";

int m;

cin>>m;

modify\_record(m);

break;

case 6:

return 0;

}

}while(ch!=6);

}

/\*output

Menu

1.write

2.display

3.search

4.delete

5.modify

Enter your choice1

Enter number of records1

Enter Roll no. 2175044

Enter name of student abc pune

enter the address of the student

Menu

1.write

2.display

3.search

4.delete

5.modify

Enter your choice2

List of records

Admission no. : 2175044

Student Name : abc

Address:pune

Menu

1.write

2.display

3.search

4.delete

5.modify

Enter your choice3

Enter admission no. to be searched2175044

Admission no. : 2175044

Student Name : abc

Address:pune

Menu

1.write

2.display

3.search

4.delete

5.modify

Enter your choice5

enter rno to be modified2175044

Enter the new details of student

Enter Roll no. 2175044

Enter name of student abc

enter the address of the studentloni

Menu

1.write

2.display

3.search

4.delete

5.modify

Enter your choice

\*/