Practical No. :12

Program:

#include<iostream>

#include<fstream>

#include<string.h>

using namespace std;

class student

{

typedef struct stud

{

int roll;

char name[10];

char div;

char add[10];

} stud;

stud rec;

public:

void create();

void display();

int search(int);

void Delete();

};

void student::create()

{

char ans;

ofstream fout("stud.dat", ios::out | ios::binary);

do {

cout << "\n\tEnter Roll No of Student : ";

cin >> rec.roll;

cout << "\n\tEnter Name of Student : ";

cin >> rec.name;

cout << "\n\tEnter Division of Student : ";

cin >> rec.div;

cout << "\n\tEnter Address of Student : ";

cin >> rec.add;

fout.write((char\*)&rec, sizeof(stud));

cout << "\n\tDo You Want to Add More Records (y/n)? ";

cin >> ans;

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

fout.close();

}

void student::display()

{

ifstream fin("stud.dat", ios::in | ios::binary);

cout << "\n\tThe Content of File are:\n";

cout << "\n\tRoll\tName\tDiv\tAddress";

while (fin.read((char\*)&rec, sizeof(stud)))

{

if (rec.roll != -1)

{

cout << "\n\t" << rec.roll << "\t" << rec.name << "\t" << rec.div << "\t" << rec.add;

}

}

fin.close();

}

int student::search(int r)

{

ifstream fin("stud.dat", ios::in | ios::binary);

int i = 0;

while (fin.read((char\*)&rec, sizeof(stud)))

{

if (rec.roll == r)

{

cout << "\n\tRecord Found...\n";

cout << "\n\tRoll\tName\tDiv\tAddress";

cout << "\n\t" << rec.roll << "\t" << rec.name << "\t" << rec.div << "\t" << rec.add;

fin.close();

return i;

}

i++;

}

fin.close();

return -1;

}

void student::Delete()

{

int r;

cout << "\n\tEnter Roll No to Delete: ";

cin >> r;

int pos = search(r);

if (pos == -1)

{

cout << "\n\tRecord Not Found";

return;

}

fstream f("stud.dat", ios::in | ios::out | ios::binary);

int offset = pos \* sizeof(stud);

f.seekp(offset, ios::beg);

rec.roll = -1;

strcpy(rec.name, "NULL");

rec.div = 'N';

strcpy(rec.add, "NULL");

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

f.close();

cout << "\n\tRecord Deleted";

}

int main()

{

student obj;

int ch, key;

char ans;

do {

cout << "\n\t\*\*\*\*\* Student Information \*\*\*\*\*";

cout << "\n\t1. Create\n\t2. Display\n\t3. Search\n\t4. Delete\n\t5. Exit";

cout << "\n\t..... Enter Your Choice: ";

cin >> ch;

switch (ch) {

case 1:

obj.create();

break;

case 2:

obj.display();

break;

case 3:

obj.Delete();

break;

case 4:

cout << "\n\tEnter Roll No to Search: ";

cin >> key;

if (obj.search(key) == -1)

cout << "\n\tRecord Not Found...\n";

break;

case 5:

return 0;

default:

cout << "\n\tInvalid Choice!";

}

cout << "\n\t..... Do You Want to Continue in Main Menu (y/n)? ";

cin >> ans;

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

return 0;

}

OUTPUT:

\*\*\*\*\* Student Information \*\*\*\*\*

1. Create

2. Display

3. Delete

4. Search

5. Exit

..... Enter Your Choice: 1

Enter Roll No of Student : 1

Enter Name of Student : ABC

Enter Division of Student : A

Enter Address of Student : AA

Do You Want to Add More Records (y/n)? y

Enter Roll No of Student : 2

Enter Name of Student : DEF

Enter Division of Student : B

Enter Address of Student : BB

Do You Want to Add More Records (y/n)? n

..... Do You Want to Continue in Main Menu (y/n)? y

\*\*\*\*\* Student Information \*\*\*\*\*

1. Create

2. Display

3. Delete

4. Search

5. Exit

..... Enter Your Choice: 2

The Content of File are:

Roll Name Div Address

1 ABC A AA

2 DEF B BB

..... Do You Want to Continue in Main Menu (y/n)? y

\*\*\*\*\* Student Information \*\*\*\*\*

1. Create

2. Display

3. Delete

4. Search

5. Exit

..... Enter Your Choice: 3

Enter Roll No to Delete: 1

Record Found...

Roll Name Div Address

1 ABC A AA

Record Deleted

..... Do You Want to Continue in Main Menu (y/n)? y

\*\*\*\*\* Student Information \*\*\*\*\*

1. Create

2. Display

3. Delete

4. Search

5. Exit

..... Enter Your Choice: 4

Enter Roll No to Search: 2

Record Found...

Roll Name Div Address

2 DEF B BB

..... Do You Want to Continue in Main Menu (y/n)? y

\*\*\*\*\* Student Information \*\*\*\*\*

1. Create

2. Display

3. Delete

4. Search

5. Exit

..... Enter Your Choice:5