Name: Sumit Kalshetty

Sub: DSA(Lab). Roll no: 2125

Div: A

PRACTICAL NO:10

Problem Statement:

Department maintains student„s database. The file contains roll number, name, division and

address. Write a program to create a sequential file to store and maintain student data. It should

allow the user to add, delete information of student. Display information of particular student. If

record of student does not exist an appropriate message is displayed. If student record is found it

should display the student detail

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*PROGRAM\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#include<iostream>

#include<fstream>

#include<stdlib.h>

#include<string.h>

using namespace std;

class file

{

int roll;

float age;

char name[100];

public:

void input();

void show();

char \*getn()

{

return name;

}

};

file fileobj;

fstream fil;

void file::input()

{

cout<<"Enter the roll, Age and name :";

cin>>roll>>age;

cin>>name;

}

void file::show()

{

cout<<"Roll==> "<<roll<<endl;

cout<<"Age ==> "<<age<<endl;

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

}

void Create() //Function to Create Data File

{

char ch='y';

fil.open("binary.dat",ios::out| ios::binary);

while(ch=='y' || ch =='Y')

{

fileobj.input();

fil.write((char\*)&fileobj, sizeof(fileobj));

cout<<"Want to Continue.....";

cin>>ch;

}

fil.close();

}

void Add() //Function to Add New Record in Data File

{

char ch='y';

fil.open("binary.dat",ios::out|ios::app| ios::binary);

while(ch=='y' || ch =='Y')

{

fileobj.input();

fil.write((char\*)&fileobj, sizeof(fileobj));

cout<<"Want to Continue.....";

cin>>ch;

}

fil.close();

}

void Display() //Function to Display All Record from Data File

{

fil.open("binary.dat",ios::in| ios::binary);

if(!fil)

{

cout<<"File not Found";

exit(0);

}

else

{

fil.read((char\*)&fileobj, sizeof(fileobj));

while(!fil.eof())

{

fileobj.show();

fil.read((char\*)&fileobj, sizeof(fileobj));

}

}

fil.close();

}

void DisplayP() //Function to Display particular Record from Data File

{

char n[100];

cout<<"Enter Name that should be searched:";

cin>>n;

fil.open("binary.dat",ios::in| ios::binary);

if(!fil)

{

cout<<"File not Found";

exit(0);

}

else

{

fil.read((char\*)&fileobj, sizeof(fileobj));

while(!fil.eof())

{

if(strcmp(n,fileobj.getn())==0)

{

fileobj.show();

fil.close();

return;

}

fil.read((char\*)&fileobj, sizeof(fileobj));

}

cout<<"Record not found\n";

}

fil.close();

}

void Modify() //Function to Modify Particular Record from Data File

{

char n[100];

cout<<"Enter Name that should be searched:";

cin>>n;

fil.open("binary.dat",ios::in| ios::out|ios::binary);

if(!fil)

{

cout<<"File not Found";

exit(0);

}

else

{

fil.read((char\*)&fileobj, sizeof(fileobj));

while(!fil.eof())

{

if(strcmp(n,fileobj.getn())==0)

{

fil.seekg(0,ios::cur);

cout<<"Enter New Record.."<<endl;

fileobj.input();

int p=fil.tellg();

int q=sizeof(fileobj);

fil.seekp(p-q);

fil.write((char\*)&fileobj, sizeof(fileobj));

fil.close();

return;

}

fil.read((char\*)&fileobj, sizeof(fileobj));

}

cout<<"Record not found\n";

}

fil.close();

}

void Delete() //Function to Delete Particular Record from Data File

{

int flag=0;

char n[100];

cout<<"Enter Name that should be Deleted :";

cin>>n;

ofstream o;

o.open("new.dat",ios::out|ios::binary);

fil.open("binary.dat",ios::in| ios::binary);

if(!fil)

{

cout<<"File not Found";

exit(0);

}

else

{

fil.read((char\*)&fileobj, sizeof(fileobj));

while(!fil.eof())

{

if(strcmp(n,fileobj.getn())!=0)

o.write((char\*)&fileobj, sizeof(fileobj));

else

flag=1;

fil.read((char\*)&fileobj, sizeof(fileobj));

}

if(flag==0)

cout<<"Record not found\n";

}

o.close();

fil.close();

remove("binary.dat");

rename("new.dat", "binary.dat");

}

int main()

{

int opt;

while(1)

{

cout<<"1.Create Data File"<<endl;

cout<<"2.Add New Record in Data File"<<endl;

cout<<"3.Display Record From Data File"<<endl;

cout<<"4.Display Particular Record From Data File"<<endl;

cout<<"5.Modify Paricular Record From Data File"<<endl;

cout<<"6.Delete Particular Record From Data File"<<endl;

cout<<"7.Exit From the Program"<<endl;

cout<<"Enter your Option : "<<endl;

cin>>opt;

switch(opt)

{

case 1:

Create();

cout<<"Display Main Menu"<<endl;

break;

case 2:

Add();

cout<<"Display Main Menu"<<endl;

break;

case 3:

Display();

cout<<"Display Main Menu"<<endl;

break;

case 4:

DisplayP();

cout<<"Display Main Menu"<<endl;

break;

case 5:

Modify();

cout<<"Display Main Menu"<<endl;

break;

case 6:

Delete();

cout<<"Display Main Menu"<<endl;

break;

case 7:

exit(0);

default:

cout<<"Wrong Choice....Press Key For View the Main Menu";

}

}

}