**Code:**

#include <iostream>

#include <fstream>

#include <string.h>

using namespace std;

class Employee

{

public:

int EmpID;

char EmpName[20];

char EmpDesg[20];

int EmpSal;

void gInfo();

void pInfo();

void mod();

void modindex(int,int);

void apnd();

void display();

void search();

void del();

int getindex(int);

void displayindex();

void setindex(int);

int delindex(int);

void disp();

};

class index{

public:

int EmpInd;

};

int Employee::getindex(int srroll)

{

fstream indexfile;

index ind;

char ch;

int pos=0;

int flag = 0;

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

while (indexfile.read((char \*)&ind, sizeof(ind)))

{

if (ind.EmpInd == srroll)

{

flag = 1;

break;

}

pos=pos+48;

}

if (flag == 0)

{

cout << "Employee Not Found !!" << endl;

}

else{

return pos;

}

indexfile.close();

cout<<pos;

cout << endl;

}

int Employee::delindex(int srroll)

{

fstream mainfile;

fstream tempfile("tempind.dat");

index stud;

string str;

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

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

while (!mainfile.eof())

{

mainfile.read((char \*)&stud, sizeof(stud));

if (mainfile)

{

if (stud.EmpInd!= srroll)

{

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

}

}

}

mainfile.close();

tempfile.close();

remove("index.dat");

rename("tempind.dat", "index.dat");

return 0;

}

void Employee::modindex(int srroll,int modroll)

{

fstream mainfile;

fstream tempfile("tempind.dat");

index stud;

string str;

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

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

while (!mainfile.eof())

{

mainfile.read((char \*)&stud, sizeof(stud));

if (mainfile)

{

if (stud.EmpInd == srroll)

{

stud.EmpInd=modroll;

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

}

else

{

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

}

}

}

mainfile.close();

tempfile.close();

remove("index.dat");

rename("tempind.dat", "index.dat");

}

void Employee::setindex(int EmpID){

ofstream setfile;

Employee stud;

index ind;

ind.EmpInd=EmpID;

setfile.open("index.dat", ios::app | ios::binary);

setfile.write((char \*)&ind, sizeof(ind));

setfile.close();

}

void Employee::gInfo()

{

index ind;

cout << "Employee ID->";

cin >> EmpID;

setindex(EmpID);

cout << "Salary->";

cin >> EmpSal;

cout << "Name->";

cin >> EmpName;

cout << "Designation->";

cin >> EmpDesg;

}

void Employee::displayindex(){

ifstream infile;

index stud;

char ch;

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

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

{

cout<<stud.EmpInd<<"\n";

}

infile.close();

cout << endl;

}

void Employee::pInfo()

{

cout <<"\n "<< EmpID << "\t\t|\t\t" << EmpName << "\t\t|\t\t" << EmpDesg << "\t\t|\t\t\t" << EmpSal<<"\n";

}

void Employee::apnd()

{

ofstream outfile;

Employee stud;

outfile.open("main.dat", ios::app | ios::binary);

stud.gInfo();

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

outfile.close();

}

void Employee::display()

{

ifstream infile;

Employee stud;

char ch;

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

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

{

stud.pInfo();

}

infile.close();

cout << endl;

}

void Employee::search()

{

ifstream infile;

Employee stud;

index ind;

int pos;

char ch;

int srroll, flag = 0;

cout << "Enter Employee ID To Be Searched: ";

cin >> srroll;

pos=getindex(srroll);

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

infile.seekg(pos,ios::beg);

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

{

stud.pInfo();

flag = 1;

break;

}

if (flag == 0)

{

cout << "Error Occured !!" << endl;

}

infile.close();

}

void Employee::del()

{

fstream mainfile;

fstream tempfile("temp.dat");

Employee stud;

string str;

int srroll;

cout << "Enter Employee ID To Be Deleted: ";

cin >> srroll;

int indstat=delindex(srroll);

if (indstat!=0){

cout << "Indexing Error Occured";

exit;

}

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

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

while (!mainfile.eof())

{

mainfile.read((char \*)&stud, sizeof(stud));

if (mainfile)

{

if (stud.EmpID == srroll)

{

cout << "The deleted record is \n";

stud.pInfo();

}

else

{

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

}

}

}

mainfile.close();

tempfile.close();

remove("main.dat");

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

}

void Employee::mod(){

fstream mainfile;

fstream tempfile("temp.dat");

Employee stud;

string str;

int srroll;

cout << "Enter Employee To Be Modified: ";

cin >> srroll;

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

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

while (!mainfile.eof())

{

mainfile.read((char \*)&stud, sizeof(stud));

if (mainfile)

{

if (stud.EmpID == srroll)

{

cout<<"Updated Employee ID-> ";

cin>>stud.EmpID;

cout<<"Updated Salary-> ";

cin>>stud.EmpSal;

cout<<"Updated Name-> ";

cin>>stud.EmpName;

cout<<"Updated Designation-> ";

cin>>stud.EmpDesg;

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

modindex(srroll,stud.EmpID);

}

else

{

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

}

}

}

mainfile.close();

tempfile.close();

remove("main.dat");

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

}

int main()

{

char choice;

do

{

int ch;

Employee stud;

cout << "\n---Employee Management (Indexed Sequntial File Org.) ---\n1.Append Data\n2.Display \n3.Search Data\n4.Delete Data\n5.Modify Data\n\n Enter your choice: ";

cin >> ch;

switch (ch)

{

case 1:

stud.apnd();

break;

case 2:

cout<<"<------Index File Contents------>\nEmployee ID\n";

stud.displayindex();

cout<<"<------Main File Contents------>\n| Employee ID\t|\t\tEmployee Name\t|\t\tEmployee Desingation\t|\t\tEmployee Salary |";

cout<<"\n``````````````````";

stud.display();

break;

case 3:

stud.search();

break;

case 4:

stud.del();

break;

case 5:

stud.mod();

break;

default:

break;

}

cout << "Do you want to continue!? ";

cin >> choice;

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

return 0;

}

**Output:**

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 1

Employee ID->1234

Salary->10000

Name->ABC

Designation->Manager

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 2

<------Index File Contents------>

Employee ID

1234

<------Main File Contents------>

| Employee ID | Employee Name | Employee Desingation | Employee Salary |

``````````````````

1234 | ABC | Manager | 10000

Do you want to continue!? Y

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 1

Employee ID->5678

Salary->20000

Name->DEF

Designation->Developer

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 2

<------Index File Contents------>

Employee ID

1234

5678

<------Main File Contents------>

| Employee ID | Employee Name | Employee Desingation | Employee Salary |

``````````````````

1234 | ABC | Manager | 10000

5678 | DEF | Developer | 20000

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 3

Enter Employee ID To Be Searched: 1234

1234 | ABC | Manager | 10000

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 4

Enter Employee ID To Be Deleted: 1234

The deleted record is

1234 | ABC | Manager | 10000

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 2

<------Index File Contents------>

Employee ID

5678

<------Main File Contents------>

| Employee ID | Employee Name | Employee Desingation | Employee Salary |

``````````````````

5678 | DEF | Developer | 20000

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 5

Enter Employee To Be Modified: 5678

Updated Employee ID-> 7890

Updated Salary-> 50000

Updated Name-> XYZ

Updated Designation-> SeniorDeveloper

Do you want to continue!? N

---Employee Management (Indexed Sequntial File Org.) ---

1.Append Data

2.Display

3.Search Data

4.Delete Data

5.Modify Data

Enter your choice: 2

<------Index File Contents------>

Employee ID

7890

<------Main File Contents------>

| Employee ID | Employee Name | Employee Desingation | Employee Salary |

``````````````````

7890 | XYZ | SeniorDeveloper | 50000

Do you want to continue!? N