**Prctical No:13(1)**

**PROGRAM:**#include <iostream>

#include <fstream>

#include <cstdio>

using namespace std;

class Employee {

private:

int code;

char name[20];

float salary;

public:

void read();

void display();

int getEmpCode() { return code; }

float getSalary() { return salary; }

void updateSalary(float s) { salary = s; }

};

void Employee::read() {

cout << "Enter employee code: ";

cin >> code;

cout << "Enter name: ";

cin.ignore();

cin.getline(name, 20);

cout << "Enter salary: ";

cin >> salary;

}

void Employee::display() {

cout << code << " " << name << "\t" << salary << endl;

}

fstream file;

void deleteExistingFile() {

remove("EMPLOYEE.DAT");

}

void appendToFile() {

Employee x;

x.read();

file.open("EMPLOYEE.DAT", ios::binary | ios::app);

if (!file) {

cout << "ERROR IN CREATING FILE\n";

return;

}

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

file.close();

cout << "Record added successfully.\n";

}

void displayAll() {

Employee x;

file.open("EMPLOYEE.DAT", ios::binary | ios::in);

if (!file) {

cout << "ERROR IN OPENING FILE \n";

return;

}

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

x.display();

}

file.close();

}

void searchForRecord() {

Employee x;

int c;

int isFound = 0;

cout << "Enter employee code: ";

cin >> c;

file.open("EMPLOYEE.DAT", ios::binary | ios::in);

if (!file) {

cout << "ERROR IN OPENING FILE \n";

return;

}

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

if (x.getEmpCode() == c) {

cout << "RECORD FOUND\n";

x.display();

isFound = 1;

break;

}

}

if (!isFound) {

cout << "Record not found!!!\n";

}

file.close();

}

void increaseSalary() {

Employee x;

int c;

float sal;

int isFound = 0;

cout << "Enter employee code: ";

cin >> c;

fstream temp("TEMP.DAT", ios::binary | ios::out);

file.open("EMPLOYEE.DAT", ios::binary | ios::in);

if (!file || !temp) {

cout << "Error in opening file.\n";

return;

}

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

if (x.getEmpCode() == c) {

cout << "Salary hike? ";

cin >> sal;

x.updateSalary(x.getSalary() + sal);

isFound = 1;

}

temp.write((char\*)&x, sizeof(x));

}

file.close();

temp.close();

remove("EMPLOYEE.DAT");

rename("TEMP.DAT", "EMPLOYEE.DAT");

if (isFound)

cout << "Salary updated successfully.\n";

else

cout << "Record not found!!!\n";

}

void insertRecord() {

Employee x, newEmp;

newEmp.read();

fstream fin("TEMP.DAT", ios::binary | ios::out);

file.open("EMPLOYEE.DAT", ios::binary | ios::in);

if (!file || !fin) {

cout << "Error in opening file.\n";

return;

}

bool inserted = false;

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

if (!inserted && x.getEmpCode() > newEmp.getEmpCode()) {

fin.write((char\*)&newEmp, sizeof(newEmp));

inserted = true;

}

fin.write((char\*)&x, sizeof(x));

}

if (!inserted) {

fin.write((char\*)&newEmp, sizeof(newEmp));

}

file.close();

fin.close();

remove("EMPLOYEE.DAT");

rename("TEMP.DAT", "EMPLOYEE.DAT");

cout << "Record inserted successfully.\n";

}

int main() {

char ch;

deleteExistingFile();

do {

int n;

cout << "\nENTER CHOICE\n"

<< "1. ADD AN EMPLOYEE\n"

<< "2. DISPLAY\n"

<< "3. SEARCH\n"

<< "4. INCREASE SALARY\n"

<< "5. INSERT RECORD\n";

cout << "Make a choice: ";

cin >> n;

switch (n) {

case 1:

appendToFile();

break;

case 2:

displayAll();

break;

case 3:

searchForRecord();

break;

case 4:

increaseSalary();

break;

case 5:

insertRecord();

break;

default:

cout << "Invalid Choice\n";

}

cout << "Do you want to continue? (Y/N): ";

cin >> ch;

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

return 0;

}

**OUTPUT:**

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 1

Enter employee code: 123

Enter name: qwe

Enter salary: 10

Record added successfully.

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 1

Enter employee code: 456

Enter name: rqe

Enter salary: 20

Record added successfully.

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 2

123 qwe 10

456 rqe 20

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 3

Enter employee code: 123

RECORD FOUND

123 qwe 10

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 4

Enter employee code: 123

Salary hike? 100

Salary updated successfully.

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 2

123 qwe 110

456 rqe 20

Do you want to continue? (Y/N): y

ENTER CHOICE

1. ADD AN EMPLOYEE

2. DISPLAY

3. SEARCH

4. INCREASE SALARY

5. INSERT RECORD

Make a choice: 5

Enter employee code: 678

Enter name: kfh

Enter salary: 30

Record inserted successfully.