#include <iostream>

#include <fstream>

#include <cstring>

using namespace std;

class Employee {

public:

int id;

char name[50];

char department[30];

char address[100];

void input() {

cout << "Enter Employee ID: ";

cin >> id;

cin.ignore();

cout << "Enter Name: ";

cin.getline(name, 50);

cout << "Enter Department: ";

cin.getline(department, 30);

cout << "Enter Address: ";

cin.getline(address, 100);

}

void display() const {

cout << "ID: " << id << ", Name: " << name

<< ", Department: " << department

<< ", Address: " << address << endl;

}

};

class EmployeeDatabase {

private:

const string filename = "employees.dat";

public:

void addEmployee() {

Employee employee;

employee.input();

ofstream file(filename, ios::binary | ios::app);

file.write(reinterpret\_cast<char\*>(&employee), sizeof(Employee));

file.close();

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

}

void deleteEmployee(int id) {

ifstream file(filename, ios::binary);

ofstream tempFile("temp.dat", ios::binary);

Employee employee;

bool found = false;

while (file.read(reinterpret\_cast<char\*>(&employee), sizeof(Employee))) {

if (employee.id == id) {

found = true;

continue;

}

tempFile.write(reinterpret\_cast<char\*>(&employee), sizeof(Employee));

}

file.close();

tempFile.close();

remove(filename.c\_str());

rename("temp.dat", filename.c\_str());

if (found) {

cout << "Employee ID " << id << " deleted.\n";

} else {

cout << "Employee ID not found!\n";

}

}

void displayEmployee(int id) {

ifstream file(filename, ios::binary);

Employee employee;

bool found = false;

while (file.read(reinterpret\_cast<char\*>(&employee), sizeof(Employee))) {

if (employee.id == id) {

employee.display();

found = true;

break;

}

}

file.close();

if (!found) {

cout << "Employee ID not found!\n";

}

}

void displayAllEmployees() {

ifstream file(filename, ios::binary);

Employee employee;

bool hasRecords = false;

while (file.read(reinterpret\_cast<char\*>(&employee), sizeof(Employee))) {

employee.display();

hasRecords = true;

}

if (!hasRecords) {

cout << "No employee records found!\n";

}

file.close();

}

};

int main() {

EmployeeDatabase db;

int choice, id;

do {

cout << "\nEmployee Management System Menu:\n";

cout << "1. Add Employee\n";

cout << "2. Delete Employee\n";

cout << "3. Display Employee\n";

cout << "4. Display All Employees\n";

cout << "5. Exit\n";

cout << "Enter your choice: ";

cin >> choice;

switch (choice) {

case 1:

db.addEmployee();

break;

case 2:

cout << "Enter Employee ID to delete: ";

cin >> id;

db.deleteEmployee(id);

break;

case 3:

cout << "Enter Employee ID to display: ";

cin >> id;

db.displayEmployee(id);

break;

case 4:

db.displayAllEmployees();

break;

case 5:

cout << "Exiting...\n";

break;

default:

cout << "Invalid choice! Please try again.\n";

}

} while (choice != 5);

return 0;

}

**Output:**

