```c
/*Name:- Muzzammil Shaikj
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Aim: Write a program to maintain a simple employee
database using a file handling */



#include <stdio.h>
#include <stdlib.h>
#include <string.h>


struct Employee {
    int id;
    char name[100];
    float salary;
};


void addEmployee(FILE *file) {
    struct Employee emp;

    // Take employee details as input
    printf("Enter Employee ID: ");
    scanf("%d", &emp.id);
    getchar();
    printf("Enter Employee Name: ");
    fgets(emp.name, sizeof(emp.name), stdin);
    emp.name[strcspn(emp.name, "\n")] = 0;
    printf("Enter Employee Salary: ");
    scanf("%f", &emp.salary);


    fwrite(&emp, sizeof(struct Employee), 1, file);
    printf("Employee added successfully!\n");
}


void displayEmployees(FILE *file) {
    struct Employee emp;
    rewind(file);

    printf("\nEmployee List:\n");
    while (fread(&emp, sizeof(struct Employee), 1, file)) {
        printf("ID: %d\n", emp.id);
        printf("Name: %s\n", emp.name);
        printf("Salary: %.2f\n", emp.salary);
        printf("---------------------------\n");
    }
}


void searchEmployee(FILE *file, int searchID) {
    struct Employee emp;
    rewind(file);
    int found = 0;

    while (fread(&emp, sizeof(struct Employee), 1, file)) {
        if (emp.id == searchID) {
            printf("\nEmployee Found:\n");
            printf("ID: %d\n", emp.id);
            printf("Name: %s\n", emp.name);
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                printf("Salary: %.2f\n", emp.salary);
                found = 1;
                break;
            }
        }

        if (!found) {
            printf("Employee with ID %d not found!\n", searchID);
        }
    }

    // Main function
    int main() {
        FILE *file;
        int choice, searchID;


        file = fopen("employee_db.dat", "ab+");
        if (file == NULL) {
            printf("Error opening file!\n");
            return 1;
        }

        while (1) {
            printf("\nEmployee Database Management\n");
            printf("1. Add Employee\n");
            printf("2. Display All Employees\n");
            printf("3. Search Employee by ID\n");
            printf("4. Exit\n");
            printf("Enter your choice: ");
            scanf("%d", &choice);

            switch (choice) {
                case 1:
                    addEmployee(file);
                    break;
                case 2:
                    displayEmployees(file);
                    break;
                case 3:
                    printf("Enter Employee ID to search: ");
                    scanf("%d", &searchID);
                    searchEmployee(file, searchID);
                    break;
                case 4:
                    fclose(file);
                    printf("Exiting the program...\n");
                    return 0;
                default:
                    printf("Invalid choice! Please try again.\n");
            }
        }

        fclose(file);
        return 0;
    }

    /*output
    Employee Database Management
    1. Add Employee
    2. Display All Employees
    3. Search Employee by ID
    4. Exit
    Enter your choice: 1
```

Enter Employee ID: 1702
Enter Employee Name: Jacob Arabo
Enter Employee Salary: $25,0000
Employee added successfully!

Employee Database Management
1. Add Employee
2. Display All Employees
3. Search Employee by ID
4. Exit
Enter your choice: Enter Employee ID:
 Enter Employee Name: Enter Employee Salary*/