Program :-

```
#include <iostream>
#include <fstream>
#include <vector>
#include <algorithm>
#include <sstream>
using namespace std;

struct Employee {
   string id, name, designation;
   float salary;
};

vector<Employee> employees;

void loadEmployees() {
   ifstream file("employee_data.txt");
   string line;
   employees.clear();
   while (getline(file, line)) {
      stringstream ss(line);
      Employee e;
      getline(ss, e.id, ',');
      getline(ss, e.name, ',');
      getline(ss, e.designation, ',');
      ss >> e.salary;
      employees.push_back(e);
   }
```

```
    file.close();
}

void saveEmployees() {
    ofstream file("employee_data.txt");
    for (const auto& e : employees) {
        file << e.id << "," << e.name << "," << e.designation << "," << e.salary << endl;
    }
    file.close();
}

void addEmployee() {
    Employee e;
    cout << "Enter Employee ID: ";
    cin >> e.id;
    cout << "Enter Name: ";
    cin >> e.name;
    cout << "Enter Designation: ";
    cin >> e.designation;
    cout << "Enter Salary: ";
    cin >> e.salary;
    employees.push_back(e);
    sort(employees.begin(), employees.end(), [](Employee a, Employee b) { return a.id < b.id;
});
    saveEmployees();
    cout << "Employee information added successfully.\n";
}

void deleteEmployee() {
    string empId;
```

```
    bool found = false;
    cout << "Enter Employee ID to delete: ";
    cin >> empId;
    auto it = remove_if(employees.begin(), employees.end(), [&](Employee e) { return e.id == empId; });
    if (it != employees.end()) {
        employees.erase(it, employees.end());
        found = true;
    }
    saveEmployees();
    if (found)
        cout << "Employee information deleted successfully.\n";
    else
        cout << "Employee record not found.\n";
}

void displayEmployee() {
    string empId;
    bool found = false;
    cout << "Enter Employee ID to search: ";
    cin >> empId;
    for (const auto& e : employees) {
        if (e.id == empId) {
            cout << "ID: " << e.id << ", Name: " << e.name << ", Designation: " << e.designation << ", Salary: " << e.salary << endl;
            found = true;
            break;
        }
    }
    if (!found)
```

```
        cout << "Employee record not found.\n";
}

int main() {
    loadEmployees();
    int choice;
    do {
        cout << "\n1. Add Employee\n2. Delete Employee\n3. Display Employee\n4. Exit\nEnter your choice: ";
        cin >> choice;
        switch (choice) {
            case 1: addEmployee(); break;
            case 2: deleteEmployee(); break;
            case 3: displayEmployee(); break;
            case 4: break;
            default: cout << "Invalid choice!\n";
        }
    } while (choice != 4);
    return 0;
}
```

Output :-

```
1. Add Employee
2. Delete Employee
3. Display Employee
4. Exit
Enter your choice: 1
Enter Employee ID: 4
Enter Name: Parth
Enter Designation: Manager
Enter Salary: 50000
Employee information added successfully.

1. Add Employee
2. Delete Employee
3. Display Employee
4. Exit
Enter your choice: 3
Enter Employee ID to search: 4
ID: 4, Name: Parth, Designation: Software, Salary: 0

1. Add Employee
2. Delete Employee
3. Display Employee
4. Exit
Enter your choice: 2
Enter Employee ID to delete: 4
Employee information deleted successfully.

1. Add Employee
2. Delete Employee
3. Display Employee
4. Exit
Enter your choice: 4
PS C:\Users\athar\OneDrive\Desktop\Parth\Coding\C++>
```