

Department maintains student's database. The file contains roll number, name, division and address.

Write a program to create a sequential file to store and maintain student data. It should allow the user to add, delete information about students. Display information of a particular student. If record of student does not exist an appropriate message is displayed. If student record is found it should display the student details

Code

```
#include <iostream>
#include <fstream>
#include <string>
```

```
using namespace std;
```

```
struct Student {
    int rollNumber;
    string name;
    string division;
    string address;
};
```

```
// Function to add student record
```

```
void addStudent() {
    Student s;
    ofstream outFile("student.txt", ios::app);
```

```
    cout << "Enter Roll Number: ";
    cin >> s.rollNumber;
    cout << "Enter Name: ";
    cin.ignore();
    getline(cin, s.name);
    cout << "Enter Division: ";
    getline(cin, s.division);
    cout << "Enter Address: ";
```

```
getline(cin, s.address);

outFile << s.rollNumber << "\n";
outFile << s.name << "\n";
outFile << s.division << "\n";
outFile << s.address << "\n\n";

outFile.close();
cout << "Record Added Successfully!" << endl;
}
```

// Function to delete student record

```
void deleteStudent() {
    ifstream inFile("student.txt");
    ofstream outFile("temp.txt");
    int roll, flag = 0;
    Student s;

    cout << "Enter Roll Number to delete: ";
    cin >> roll;

    while (inFile >> s.rollNumber) {
        getline(inFile, s.name);
        getline(inFile, s.division);
        getline(inFile, s.address);

        if (s.rollNumber != roll) {
            outFile << s.rollNumber << "\n";
            outFile << s.name << "\n";
            outFile << s.division << "\n";
            outFile << s.address << "\n\n";
        } else {
            flag = 1;
        }
    }
}

inFile.close();
```

```

outFile.close();

remove("student.txt");
rename("temp.txt", "student.txt");

if (flag)
    cout << "Record Deleted Successfully!" << endl;
else
    cout << "Record Not Found!" << endl;
}

// Function to display student record
void displayStudent() {
    ifstream inFile("student.txt");
    int roll, flag = 0;
    Student s;

    cout << "Enter Roll Number to display: ";
    cin >> roll;

    while (inFile >> s.rollNumber) {
        getline(inFile, s.name);
        getline(inFile, s.division);
        getline(inFile, s.address);

        if (s.rollNumber == roll) {
            flag = 1;
            cout << "Roll Number: " << s.rollNumber << endl;
            cout << "Name: " << s.name << endl;
            cout << "Division: " << s.division << endl;
            cout << "Address: " << s.address << endl;
        }
    }
}

inFile.close();

if (!flag)

```

```

        cout << "Record Not Found!" << endl;
    }

int main() {
    int choice;

    while (1) {
        cout << "\nStudent Database Menu" << endl;
        cout << "1. Add Student Record" << endl;
        cout << "2. Delete Student Record" << endl;
        cout << "3. Display Student Record" << endl;
        cout << "4. Exit" << endl;
        cout << "Enter your choice: ";
        cin >> choice;

        switch (choice) {
            case 1:
                addStudent();
                break;
            case 2:
                deleteStudent();
                break;
            case 3:
                displayStudent();
                break;
            case 4:
                exit(0);
            default:
                cout << "Invalid Choice!" << endl;
        }
    }

    return 0;
}

```

C:\Users\Gauri\Documents\index.txt

Student Database Menu

1. Add Student Record
2. Delete Student Record
3. Display Student Record
4. Exit

Enter your choice: 1

Enter Roll Number: 50

Enter Name: Harsh

Enter Division: A

Enter Address: XYZ

Record Added Successfully!

Student Database Menu

1. Add Student Record
2. Delete Student Record
3. Display Student Record
4. Exit

Enter your choice: 1

Enter Roll Number: 51

Enter Name: Gauri

Enter Division: A

Enter Address: ABC

Record Added Successfully!