

PROGRAM :

```
#include<iostream>
#include<fstream>
#include<cstdio>
using namespace std;
```

```
class Student {
    int roll_no;
    char name[50];
    char addr[50];
```

```
public:
```

```
    void setData()
```

```
{
    cout << "\nEnter Roll No. : ";
    cin >> roll_no;
    cout << "Enter name of student : ";
    cin >> name;
    cout << "Enter the address of the student : ";
    cin >> addr;
}
```

```
    void showData()
```

```
{
    cout << endl;
    cout << "\n\tRoll No.   : " << roll_no;
    cout << "\n\tStudent Name : " << name;
    cout << "\n\tAddress    : " << addr;
    cout << endl;
}
```

```
    int retroll_no()
```

```
{
    return roll_no;
}
};
```

```
void write_record() {
```

```
    ofstream outFile;
    outFile.open("student.dat", ios::binary | ios::app);
    Student obj;
```

```

        obj.setData();
        outFile.write((char*) &obj, sizeof(obj));
        outFile.close();
    }

    void display() {
        ifstream inFile;
        inFile.open("student.dat", ios::binary);
        Student obj;
        while (inFile.read((char*) &obj, sizeof(obj))) {
            obj.showData();
        }
        inFile.close();
    }

    void search(int n) {
        ifstream inFile;
        inFile.open("student.dat", ios::binary);
        Student obj;
        while (inFile.read((char*) &obj, sizeof(obj))) {
            if (obj.retroll_no() == n) {
                obj.showData();
                break;
            }
        }
        inFile.close();
    }

    void delete_record(int n) {
        Student obj;
        ifstream inFile;
        inFile.open("student.dat", ios::binary);
        ofstream outFile;
        outFile.open("temp.dat", ios::out | ios::binary);
        while (inFile.read((char*) &obj, sizeof(obj))) {
            if (obj.retroll_no() != n) {
                outFile.write((char*) &obj, sizeof(obj));
            }
        }

        inFile.close();
        outFile.close();
        remove("student.dat");
    }

```

```
rename("temp.dat", "student.dat");  
}
```

```
void modify_record(int n) {
```

```
    fstream file;
```

```
    file.open("student.dat", ios::in | ios::out);
```

```
    Student obj;
```

```
    while (file.read((char*) &obj, sizeof(obj))) {
```

```
        if (obj.retroll_no() == n) {
```

```
            cout << "\nEnter the new details of student :";
```

```
            obj.setData();
```

```
            long int pos = -1 * sizeof(obj);
```

```
            file.seekp(pos, ios::cur);
```

```
            file.write((char*) &obj, sizeof(obj));
```

```
        }
```

```
    }
```

```
    file.close();
```

```
}
```

```
int main()
```

```
{
```

```
    int ch;
```

```
    do
```

```
    {
```

```
        cout << "\n**** Menu ****";
```

```
        cout << "\n 1. Write";
```

```
        cout << "\n 2. Display";
```

```
        cout << "\n 3. Search";
```

```
        cout << "\n 4. Delete";
```

```
        cout << "\n 5. Modify";
```

```
        cout << "\n\nEnter your choice : ";
```

```
        cin >> ch;
```

```
        switch (ch)
```

```
        {
```

```
            case 1:
```

```
                cout << "\nEnter number of records : "; //Store 4 records  
in file
```

```
                int n;
```

```
                cin >> n;
```

```
                for (int i = 0; i < n; i++)
```

```
                    write_record();
```



```
break;
```

```
case 2:
```

```
    cout << "\nList of records : ";  
    display();  
    break;
```

```
case 3: //Search record
```

```
    cout << "\nEnter Roll No. to be searched : ";  
    int s;  
    cin >> s;  
    search(s);  
    break;
```

```
case 4:
```

```
    cout << "\nEnter Roll No to be deleted : ";  
    int d;  
    cin >> d;  
    delete_record(d);  
    cout << "\nRecord Deleted !!";  
    break;
```

```
case 5: //Modify record
```

```
    cout << "\nEnter Roll No. to be modified : ";  
    int m;  
    cin >> m;  
    modify_record(m);  
    break;
```

```
case 6:
```

```
    cout<<"\nThanks for using this Program !!";  
    return 0;
```

```
    }
```

```
    } while (ch != 6);
```

```
}
```