

**INPUT:**

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

class seq_file{
    struct stud{
        int roll;
        string name;
    };
    int i; //count var
public:
    void create();
    void display();
    void search();
    void modify();
    void del();
};

void seq_file::create()
{
    ofstream out;
    out.open("student.data", ios::out|ios::binary);
    char ans='y';
    i=0;
    do{
        cout<<"\nEnter Details of Student Record "<<i+1<<" below: ";
        cout<<"\nEnter roll number: ";
        cin>>s.roll;
        cout<<"Enter Name: ";
        cin>>s.name;
        out.write((char *)&s,sizeof(s));
        i++;
        cout<<"\nDo you want to continue(Y/N): ";
        cin>>ans;
    }while(ans=='y' || ans=='Y');
    out.close();
    cout<<"\n\tSuccessfully Entered "<<i<<" records in file.";
}

void seq_file::display()
{
    ifstream in;
    in.open("student.data", ios::in|ios::binary);
    i=0;
    while(in.read((char *)&s,sizeof(s))){
        cout<<"\nDetails of Student Record "<<i+1<<" are:";
        cout<<"\nName: "<<s.name;
        cout<<"\nRoll number: "<<s.roll<<endl;
        i++;
    }
    in.close();
}
```

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        cout<<"\n\tSuccessfully Displayed "<<i<<" Records from File.";
    }
void seq_file::search()
{
    int key, flag=0;
    cout<<"\nEnter roll number to search: ";
    cin>>key;
    ifstream in;
    in.open("student.data", ios::binary);
    while(in.read((char *)&s, sizeof(s)))
    {
        if(s.roll==key)
        {
            flag=1;
            break;
        }
    }
    if(flag==1)
        cout<<"\nRecord found in File with name: "<<s.name;
    else
        cout<<"\nRecord not found!";
}
void seq_file::del()
{
    int key;
    cout<<"\nEnter roll number to delete respective record: ";
    cin>>key;
    ifstream in;
    ofstream out;
    in.open("student.data",ios::binary);
    out.open("temp.data",ios::binary);
    while(in.read((char*)&s, sizeof(s)))
        if(s.roll!=key)
            out.write((char*)&s, sizeof(s));
    in.close();
    out.close();
    remove("student.data");
    if(!rename("temp.data","student.data"))
        cout<<"\nDeletion successful";
    else
        cout<<"\nDeletion failed while renaming new file.";
}
void seq_file::modify()
{
    int key, flag=0;
    string nm;
    cout<<"\nEnter roll number to be modified: ";
    cin>>key;
    cout<<"\nEnter new name to be recorded: ";
    cin>>nm;
    fstream x;

```

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x.open("student.data",ios::in|ios::out|ios::binary);
while(x.read((char*)&s, sizeof(s)))
{
    if(s.roll==key)
    {
        flag=1;
        x.seekp(x.tellg()-sizeof(s));
        s.name=nm;
        x.write((char*)&s, sizeof(s));
        break;
    }
}
if(flag==1)
    cout<<"\nChange was successful!";
else
    cout<<"\nRecord not found!";
}
int main()
{
    int ch;
    seq_file obj;
    while(true)
    {
        cout<<"\n*****MENU*****";
        cout<<"\n\t1.Create File";
        cout<<"\n\t2.Display File";
        cout<<"\n\t3.Search in File";
        cout<<"\n\t4.Modify File Entry";
        cout<<"\n\t5.Delete File record";
        cout<<"\n\t6.Exit";
        cout<<"\nEnter your choice: ";
        cin>>ch;
        switch(ch)
        {
            case 1: obj.create();
                    break;
            case 2: obj.display();
                    break;
            case 4: obj.modify();
                    break;
            case 3: obj.search();
                    break;
            case 5: obj.del();
                    break;
            case 6: cout<<"\nProgram ends!";
                    return 0;
            default: cout<<"\nEnterred invalid choice number, try again... ";
                     break;
        }
    }
}

```

**OUTPUT:**

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 1

Enter Details of Student Record 1 below:

Enter roll number: 40

Enter Name: Monik

Do you want to continue(Y/N): Y

Enter Details of Student Record 2 below:

Enter roll number: 48

Enter Name: Sanjhari

Do you want to continue(Y/N): y

Enter Details of Student Record 3 below:

Enter roll number: 62

Enter Name: Atharva

Do you want to continue(Y/N): Y

Enter Details of Student Record 4 below:

Enter roll number: 56

Enter Name: Divyam

Do you want to continue(Y/N): n

Successfully Entered 4 records in file.

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 2

Details of Student Record 1 are:

Name: Monik

Roll number: 40

Details of Student Record 2 are:

Name: Sanjhari

Roll number: 48

Details of Student Record 3 are:

Name: Atharva

Roll number: 62

Details of Student Record 4 are:

Name: Divyam

Roll number: 56

Successfully Displayed 4 Records from File.

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 3

Enter roll number to search: 48

Record found in File with name: Sanjhari

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 4

Enter roll number to be modified: 62

Enter new name to be recorded: Todkary

Change was successful!

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 2

Details of Student Record 1 are:

Name: Monik

Roll number: 40

Details of Student Record 2 are:

Name: Sanjhari

Roll number: 48

Details of Student Record 3 are:

Name: Todkary

Roll number: 62

Details of Student Record 4 are:

Name: Divyam

Roll number: 56

Successfully Displayed 4 Records from File.

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 5

Enter roll number to delete respective record: 56

Deletion successful

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record
- 6.Exit

Enter your choice: 2

Details of Student Record 1 are:

Name: Monik

Roll number: 40

Details of Student Record 2 are:

Name: Sanjhari

Roll number: 48

Details of Student Record 3 are:

Name: Todkary

Roll number: 62

Successfully Displayed 3 Records from File.

\*\*\*\*\*MENU\*\*\*\*\*

- 1.Create File
- 2.Display File
- 3.Search in File
- 4.Modify File Entry
- 5.Delete File record

6.Exit

Enter your choice: 6

Program ends!