Assignment 11

The department maintains student information. The file contains roll number, name, division, and address. Allow the user to add or delete student information. Display the information of a particular student. If the student record does not exist, display an appropriate message. If it exists, display the student details. Use a sequential file to maintain the data.

```cpp
#include<iostream>

#include<fstream>

#include<string.h>

using namespace std;

class student

 {

        typedef struct stud

        {

                int roll;

                char name[10];

                char div;

                char add[10];

        }stud;

        stud rec;

        public:

          void create();

          void display();

          int search();

          void Delete();

 };

void student::create()

 {

        char ans;

        ofstream fout;

        fout.open("stud.dat",ios::out|ios::binary);

        do

         {
```

```cpp
                        cout<<"\n\tEnter Roll No of Student   : ";

                        cin>>rec.roll;

                        cout<<"\n\tEnter a Name of Student    : ";

                        cin>>rec.name;

                        cout<<"\n\tEnter a Division of Student : ";

                        cin>>rec.div;

                        cout<<"\n\tEnter a Address of Student  : ";

                        cin>>rec.add;

                        fout.write((char *)&rec,sizeof(stud))<<flush;

                        cout<<"\n\tDo You Want to Add More Records (y / n): ";

                        cin>>ans;

                }while(ans=='y'||ans=='Y');

            fout.close();

    }
void student::display()
    {

            ifstream fin;

            fin.open("stud.dat",ios::in|ios::binary);

            fin.seekg(0,ios::beg);

            cout<<"\n\tThe Content of File are:\n";

            cout<<"\n\tRoll\tName\tDiv\tAddress";

            while(fin.read((char *)&rec,sizeof(stud)))

             {

                    if(rec.roll!=-1)

                      cout<<"\n\t"<<rec.roll<<"\t"<<rec.name<<"\t"<<rec.div<<"\t"<<rec.add;

             }

            fin.close();

    }
int student::search()
    {

            int r,i=0;
```

```cpp
        ifstream fin;

        fin.open("stud.dat",ios::in|ios::binary);

        fin.seekg(0,ios::beg);

        cout<<"\n\tEnter a Roll No: ";

        cin>>r;

        while(fin.read((char *)&rec,sizeof(stud)))

         {

                if(rec.roll==r)

                 {

                        cout<<"\n\tRecord Found...\n";

                        cout<<"\n\tRoll\tName\tDiv\tAddress";

                        cout<<"\n\t"<<rec.roll<<"\t"<<rec.name<<"\t"<<rec.div<<"\t"<<rec.add;

                        return i;

                 }

                i++;

         }

        fin.close();

        return 0;

  }

void student::Delete()

 {

        int pos;

        pos=search();

        fstream f;

        f.open("stud.dat",ios::in|ios::out|ios::binary);

        f.seekg(0,ios::beg);

        if(pos==0)

         {

                cout<<"\n\tRecord Not Found";

                return;

         }
```

```cpp
        int offset=pos*sizeof(stud);

        f.seekp(offset);

        rec.roll=-1;

        strcpy(rec.name,"NULL");

        rec.div='N';

        strcpy(rec.add,"NULL");

        f.write((char *)&rec,sizeof(stud));

        f.seekg(0);

        f.close();

        cout<<"\n\tRecord Deleted";

 }


int main()
 {
        student obj;

        int ch,key;

        char ans;

        do
         {
                cout<<"\n\t***** Student Information *****";

                cout<<"\n\t1. Create\n\t2. Display\n\t3. Delete\n\t4. Search\n\t5. Exit";

                cout<<"\n\t..... Enter Your Choice: ";

                cin>>ch;

                switch(ch)
                 {
                        case 1: obj.create();

                                break;

                        case 2:  obj.display();

                                break;

                        case 3: obj.Delete();

                                break;
```

```cpp
            case 4: key=obj.search();

                    if(key==0)

                      cout<<"\n\tRecord Not Found...\n";

                    break;

            case 5:

                    break;

      }

      cout<<"\n\t..... Do You Want to Continue in Main Menu (y / n): ";

      cin>>ans;

    }while(ans=='y'||ans=='Y');

return 1;

 }
```

// OUTPUT