- **Source Code**

```
/*
Practical - 2
Develop a program in C++ to create a database of student's information
system containing the following information:
Name, Roll number, Class, Division, Date of Birth, Blood group,
Contactaddress, Telephone number, Driving license no. and other.
Constructthe database withsuitable member functions. Make use of
constructor, default constructor, copy constructor,
destructor, static member functions, friend class, this pointer,
inline code and dynamic memory allocation operators-new and delete as
well as exception handling.
*/

#include<iostream>
#include<string>
#include<cstring>
using namespace std;

class PersonClass{
    private:
        char name[40], clas[10], div[5], dob[15], bloodgrp[5];
        int roll;
    public:
        static int count;
        friend class PersonalClass;
        PersonClass(){
            char *name = new char[40];
            char *clas = new char[10];
            char *div = new char[5];
            char *dob = new char[15];
            char *bloodgrp = new char[5];
            roll = 0;
        }
        static void totalRecordCount(){
            cout << "\n\nTotal no. of records created : " << count;
        }
};

int PersonClass :: count = 0;
```

```cpp
class PersonalClass{
    private:
        char address[30], telephone[15], license[10];
    public:
        PersonalClass(){
            strcpy(address,"");
            strcpy(telephone,"");
            strcpy(license,"");
        }
        void inputData(PersonClass *obj);
        void displayData(PersonClass *obj);
        friend class PersonClass;
};

void PersonalClass :: inputData(PersonClass *obj){
    cout << "\nROLL NO : ";
    cin >> obj->roll;
    cout << "\nNAME : ";
    cin >> obj->name;
    cout << "\nCLASS : ";
    cin >> obj->clas;
    cout << "\nDIVISION : ";
    cin >> (char*)(obj->div);
    cout << "\nDATE OF BIRTH (DD-MM-YYYY) : ";
    cin >> obj->dob;
    cout << "\nBLOOD GROUP : ";
    cin >> obj->bloodgrp;
    cout << "\nADDRESS : ";
    cin >> this->address;
    cout << "\nTELEPHONE NUMBER : ";
    cin >> this->telephone;
    cout << "\nDRIVING LICENSE NO. : ";
    cin >> this->license;
    obj->count++;
}

void PersonalClass :: displayData(PersonClass *obj){
    cout << endl;
    cout << obj->roll << "    ";
    cout << obj->name << "   ";
    cout << obj->clas << "      ";
    cout << obj->div << "    ";
```

```
    cout << obj->dob << "     ";
    cout << obj->bloodgrp << "     ";
    cout << this->address << "    ";
    cout << this->telephone << "    ";
    cout << this->license << "    ";
}

int main(){
    PersonClass *c[10];
    PersonalClass *a[10];
    int n = 0, i, choice;
    char ans;
    do{
        cout << "\n\n-: MENU :-";
        cout << "\n\t1.Input Data\n\t2.Display Data\n";
        cout << "\nEnter your choice : ";
        cin >> choice;
        switch(choice){
            case 1:
                cout << "\n\nENTER THE DETAILS :";
                cout << "\n---------------------";
                do{
                    a[n] = new PersonalClass;
                    c[n] = new PersonClass;
                    a[n]->inputData(c[n]);
                    n++;
                    PersonClass::totalRecordCount();
                    cout << "\n\nDo you want to add more records (y/n)? : ";
                    cin >> ans;
                }while(ans == 'y' || ans == 'Y');
                break;

            case 2:
                cout << "\n--------------------------------------------------
                ----------------------------------------------------------";
                cout << "\nRoll_No  Name          Class   Div    BirthDate
                BloodGrp     Address         Telephone    License ";
                cout << "\n--------------------------------------------------
                ---------------------------------------------------------\n";
                for(i = 0; i<n; i++){
                    a[i]->displayData(c[i]);
                }
```

```
                PersonClass :: totalRecordCount();
                break;
        }
        cout << "\nDo you want to go back to main menu (y/n) ? : ";
        cin >> ans;
        cin.ignore(1,'\n');
    }while(ans == 'y' || ans == 'Y');

    return 0;
}
```

- **Output**

```
-: MENU :-
        1.Input Data
        2.Display Data

Enter your choice : 1


ENTER THE DETAILS :
----------------------
ROLL NO : 10101

NAME : RAM_SHARMA

CLASS : SE

DIVISION : B

DATE OF BIRTH (DD-MM-YYYY) : 04-02-2005

BLOOD GROUP : AB+ve

ADDRESS : Dhankawadi,Pune-43

TELEPHONE NUMBER : 992493020

DRIVING LICENSE NO. : MH-4932
```

Total no. of records created : 1

Do you want to add more records (y/n)? : n

Do you want to go back to main menu (y/n) ? : y

-: MENU :-
        1.Input Data
        2.Display Data

Enter your choice : 2

```
------------------------------------------------------------------------------------------
Roll_No  Name          Class  Div   BirthDate   BloodGrp  Address            Telephone   License
------------------------------------------------------------------------------------------

10101    RAM_SHARMA    SE     B     04-02-2005  AB+ve     Dhankawadi,Pune-43 992493020   MH-4932
```

Total no. of records created : 1
Do you want to go back to main menu (y/n) ? : n