











Code

#include <iostream>

using namespace std;

class StudentData{

private:

string name,cls,blood\_group,address;

int roll\_no,div,dob,tele\_no,license\_no;

static int count;

public:

StudentData(){

cout<<"Default constructor used...."<<endl;

name = "XYZ";

roll\_no = -4;

cls = "Second Year";

div = 1;

dob=000;

blood\_group = " ";

address = " ";

tele\_no = 0000;

license\_no = 0;

count++;

}

StudentData(string name , int roll\_no,string cls,int div,int dob,string blood\_grp,string address,int tele\_no,int dr\_no){

cout<<"Parameterized constructor called...."<<endl;

this->name = name;

this->roll\_no = roll\_no;

this->cls = cls;

this->div = div;

this->dob=dob;

this->blood\_group =blood\_group;

this->address = address;

this->tele\_no = tele\_no;

this->license\_no = license\_no;

count++;

}

StudentData(StudentData &stud){

name = stud.name;

roll\_no = stud.roll\_no;

cls = stud.cls;

div = stud.div;

dob = stud.dob;

blood\_group = stud.blood\_group;

address = stud.address;

tele\_no = stud.tele\_no;

license\_no = stud.license\_no;

count++;

}

~StudentData(){

cout<<"Destroyer has been called"<<endl;

count--;

}

inline void InputData(){

cout<<"Enter student name:";

getline(cin,name);

cout<<"Enter roll no:";

cin>>roll\_no;

cout<<"Enter class:";

cin>>cls;

cout<<"Enter division:";

cin>>div;

cout<<"Enter date of birth:";

cin>>dob;

cout<<"Enter blood group:";

cin>>blood\_group;

cin.ignore();

cout<<"Enter address:";

getline(cin,address);

cout<<"Enter telephone number:";

cin>>tele\_no;

cout<<"Enter driving license number:";

cin>>license\_no;

}

static int Student\_Count(){

return count;

}

friend class Student;

};

class Student{

public:

void PrintData(StudentData &s){

cout<<"Student's name: "<<s.name<<endl;

cout<<"Student's roll no: "<<s.roll\_no<<endl;

cout<<"Student's class: "<<s.cls<<endl;

cout<<"Student's division: "<<s.div<<endl;

cout<<"Student's date of birth: "<<s.dob<<endl;

cout<<"Student's blood group: "<<s.blood\_group<<endl;

cout<<"Student's address: "<<s.address<<endl;

cout<<"Student's telephone no: "<<s.tele\_no<<endl;

cout<<"Student's driving license no: "<<s.license\_no<<endl;

}

};

int StudentData::count = 0;

int main()

{

StudentData \*stu1 = new StudentData;

StudentData \*stu2 = new StudentData;

StudentData \*stu3 = new StudentData("Shashwat",21174,"SE",1,300901,"O+","Vayusena Nagar ,Nagpur",98989898,4444444);

StudentData \*stu4 = new StudentData;

Student stu;

stu1->InputData();

stu2 = stu1;

stu4->InputData();

stu.PrintData(\*stu1);

stu.PrintData(\*stu2);

stu.PrintData(\*stu3);

stu.PrintData(\*stu3);

cout<<"No. of Students:"<<stu1->Student\_Count()<<endl;

delete stu1,stu2,stu3,stu4;

return 0;

}

Output

Constructor called

Constructor called

Parameterized constructor called

enter name Sassy

enter roll no 74

enter class SE

enter div 1

enter date of birth 300901

enter address 100/4 HQ MC Nagpur

enter telephone number 123456789

Copy constructor called

Student's name: Sassy

Student's roll no: 74

Student's class: SE

Student's division: 1

Student's date of birth: 300901

Student's address: 100/4 HQ MC Nagpur

Student's telephone no: 123456789

Destructor called

Copy constructor called

Student's name: XYZ

Student's roll no: 01

Student's class: SE

Student's division: 1

Student's date of birth: 280401

Student's address: Dharampeth Nagpur

Student's telephone no: 123456789

Destructor called

Copy constructor called

Student's name: XYZ

Student's roll no: 01

Student's class: SE

Student's division: 1

Student's date of birth: 280401

Student's address: Dharampeth, Nagpur

Student's telephone no: 123456789

Destructor called

No of student: 3

Destructor called

Destructor called

Destructor called