

## P00

### Assignement 4: Introduction to class

```
public class Student {
    private static long nbStudents;
    public static long NbStudents { get { return nbStudents; }}
    // attributs d'instance
    private string _Fname;
    private string _Lname;
    private int _age;
    private int _grade;
    private string _dep;

    // constructeur
    public Student(string P, string N, int age, int grade, string D) {
        this._Fname = P;
        this._Lname = N;
        this._age = age;
        this._grade = grade;
        this._dep = D;
        nbStudents++;
    }
    public Student(Student P){
        this._Fname=P._Fname;
        this._Lname=P._Lname;
        this._age=P._age;
        this._grade=P._grade;
        this._dep=P._dep;
        nbStudents++;
    }
    // method that displays Student informations
    public void DisplayStudent() {
        Console.WriteLine("{0} \t {1} \t {2} \t {3} \t {4}", _Fname, _Lname, _age, _grade, _dep);
    }
    // propriétés
    public string Fname {
        get { return _Fname; }
        set {
            if (value == null || value.Trim().Length == 0)
            {
                throw new Exception("First name (" + value + ") is not correct");
            }
        }
    }
}
```

```

        else
        {
            _Fname = value;
        }
    }
}

```

Exercise 1 :

Write all properties.

Insert the following instructions in the function Main:

```

Student P; //
Student P1 = new Student("name", "Fname", 19, 12, "GC"); // creation of an object
P=P1;
P.DisplayStudent();
P1.displayStudent();
try { // detection of exception
    P.Fname="";
} catch (Exception ex) {
    Console.WriteLine(ex.Message);
}
P1.displayStudent ();
Console.WriteLine(P1.Fname);
Console.WriteLine("nb of student is "+ Student.NbStudents);

```

Discuss about the instructions in the function Main.

Exercise 2 :

Write a program that:

- Asks the user to give the number **n** of students that should be inserted.
- Creates an array that will contain **n** students.
- Asks the user to enter student information's and creates the corresponding student in each element of the array.
- Displays the information of all students in the array.
- Displays average of student grades.