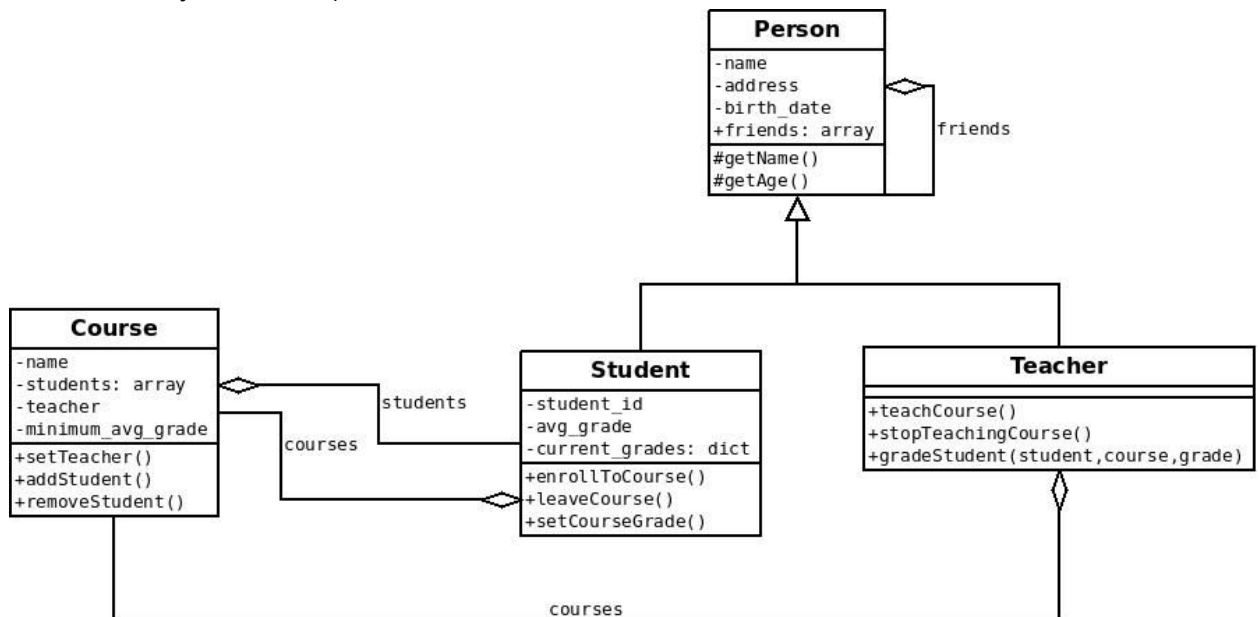


Ejercicios Día 1:

OOP + Módulos + Nodejs:

- Define the *times* method for the String objects, which receives a number and returns the string repeated that number of times:
 - i.e: `"*".times(5) //prints "*****"`
- Implement the following architecture in JS, with the following restrictions:
 - Students can only enroll on a course if they have the required average grade
 - When a teacher grades a student, the student's `avg_grade` attribute is recalculated (implement this using an observer pattern, feel free to re-work the uml if you need to)



- Write a command line program that does the following:
 - Presents a menu with the following options:
 - 1- Create a new student
 - 2- Create a new teacher
 - 3- Enroll student to a course
 - 4- Get teacher to teach a course
 - 5- Exit

Pick one> __

- 1) Option #1 will ask for the basic attributes of a student and then return to the main menu
- 2) Option #2 will ask for the basic attributes of a teacher and return to the main menu
- 3) Option #3 will list all students, all courses and will ask the user to choose which student to enroll to which course:

i.e:

Students:

- (12314) John Doe
- (12523) Jane Doe
- (12389) Christian Doe

Courses

- (8823) Maths with chop sticks
- (2195) Advanced computer programming in Brain F*ck
- (9283) How to build your own genetically modified killer puppy

Your input (student id, course id)>

4) Option #4 will list all teachers and all courses and ask the user to pick one of each (see option #3)

Hoisting

- What is the output of each piece of code below and why?

```
(function () {  
  test = 5;  
  
  if (false) {  
    var test;  
  } else {  
    console.log(test + 2);  
  }  
})();
```

```
(function () {  
  test = 5;  
  
  if (false) {  
    var test = 3;  
  } else {  
    console.log(one(test));  
  }  
}
```

```
function one(value) {  
    return value + 1;  
}  
})();
```

```
(function () {  
    var test = 5,  
        one = (function one(value) {  
            if (value > 2) {  
                return one(value - 1);  
            }  
            return value - 1;  
        })(test));
```

```
    console.log(one);  
})();
```

```
(function () {  
    console.log(one(3));
```

```
    var test = 5,  
        one = (function one(value) {  
            if (value > 2) {  
                return one(value - 1);  
            }  
            return value - 1;  
        });
```

```
    console.log(one(test));
```

```
    var identity = function one(value) {  
        return value;  
    }(4);  
})();
```