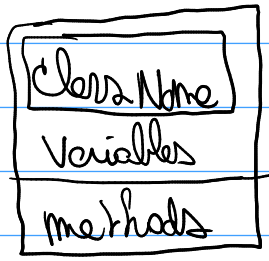
Tomaschenko Maxime

Exercice 1 :

Notation:

Class Name
Variables
methods

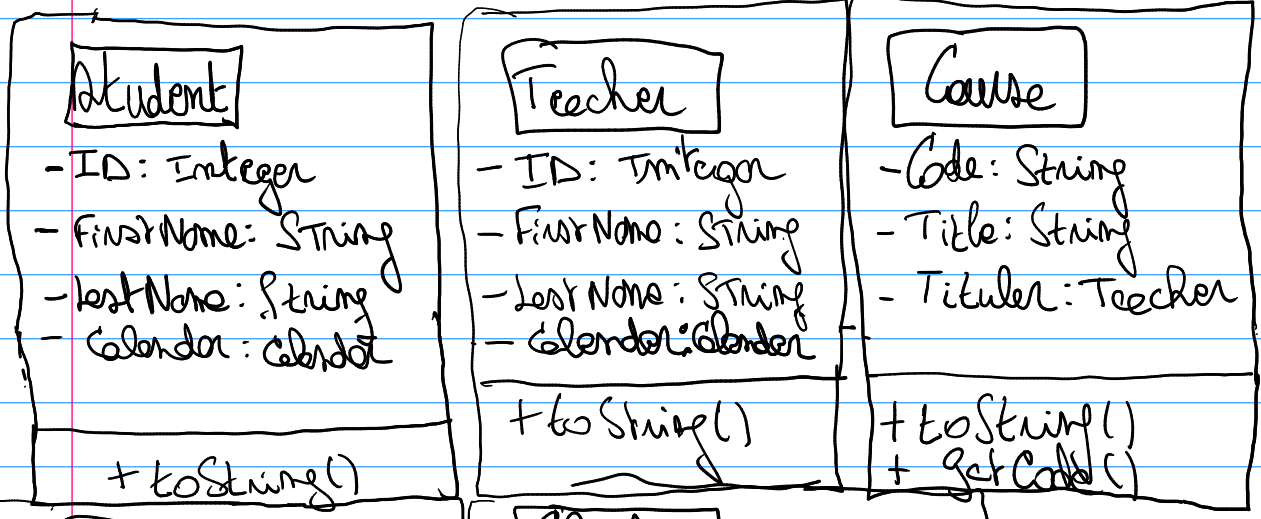


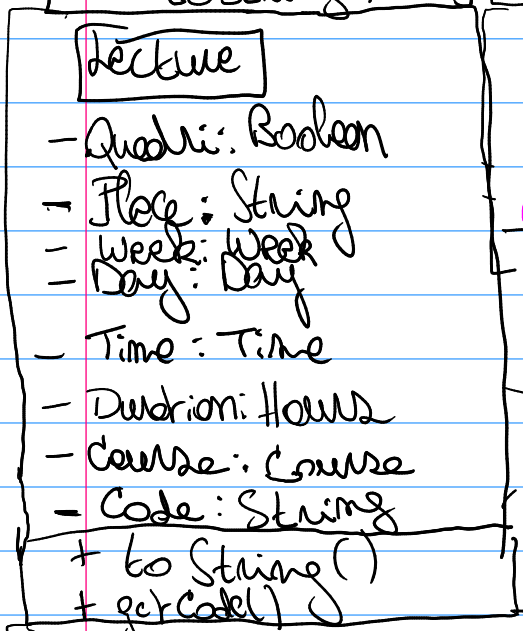
+ : public element : access from every class

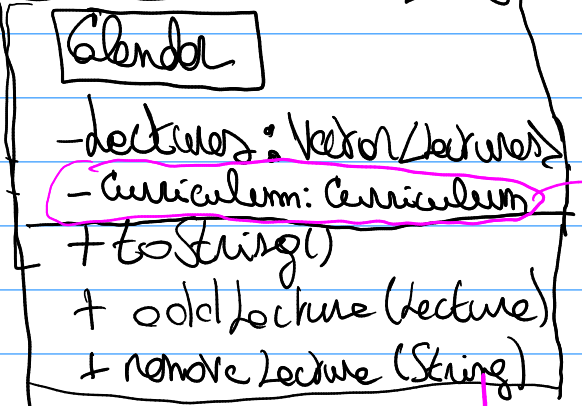
− : private element : access from its own class

instance variable : individual to each instance

Class variable : shared between all instances







Student

- ID : Integer
- FirstName : String
- LastName : String
- Calendar : Calendar

+ toString()

Teacher

- ID : Integer
- FirstName : String
- LastName : String
- Calendar : Calendar

+ toString()

Course

- Code : String
- Title : String
- Tituler : Teacher

+ toString()
+ getCode()

Lecture

- Quadri : Boolean
- Place : String
- Week : Week
- Day : Day
- Time : Time
- Duration : Hours
- Course : Course
- Code : String

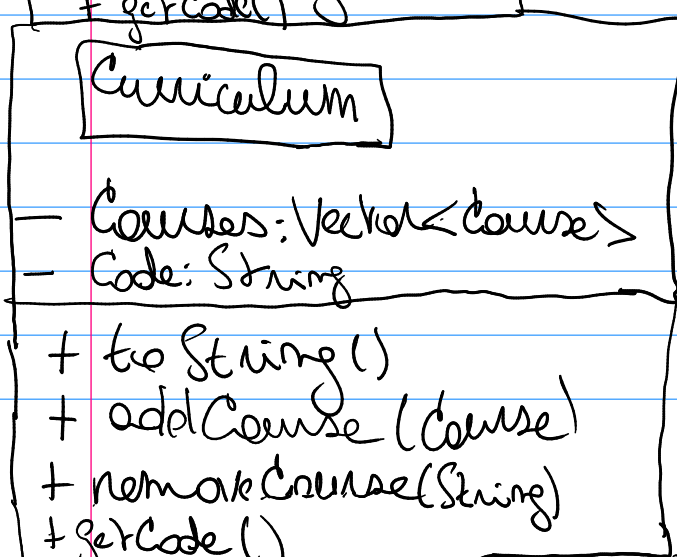
+ toString()
+ getCode()

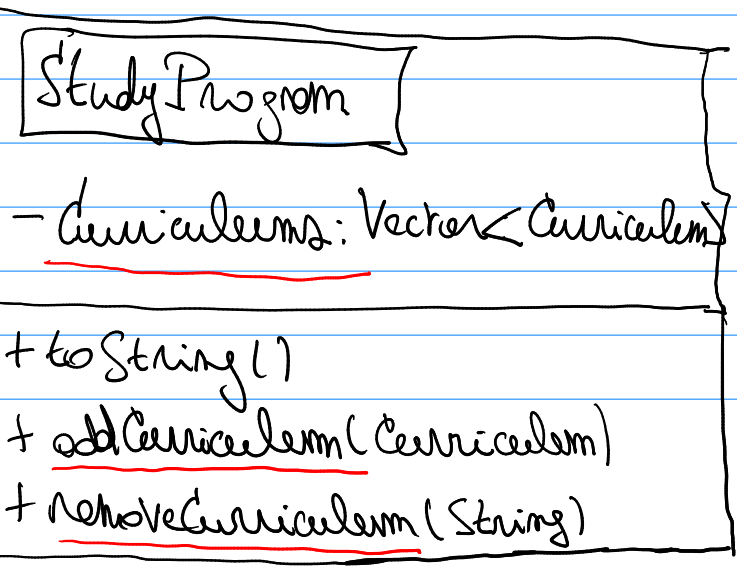
Calendar

- Lectures : Vector<Lectures>
- Curriculum : Curriculum → check Note (*)

+ toString()
+ addLecture(Lecture)
+ removeLecture(String)

↳ corresponds to Code Variable





Curriculum

- Courses : Vector<Course>
- Code : String

+ toString()
+ addCourse(Course)
+ removeCourse(String)
+ getCode()

StudyProgram

- Curriculums : Vector<Curriculum>

+ toString()
+ addCurriculum(Curriculum)
+ removeCurriculum(String)

Note: There are several ways to describe the situations. In particular, I've supposed that it was possible that lectures of a given lecture can have different durations, places from one week to another one
* The program Study is supposed to be unique (one for ULiège)

(*): The Curriculum Variable is there to check whether a lecture can be added with respect to the curriculum: i.e: The lecture's course is in the Curriculum.

Typical Scenario: Number of instances of class:

Student: # Students
Teachers: # Teachers
Course: # Courses
Lectures: $\sum_{i}^{N} P_i$ $N = \#\text{Courses}$ $P_i = \#\text{Lectures of Course } i$

Calendar:
Curriculum:
Study Program: 1
} # Calendars = # Curriculum