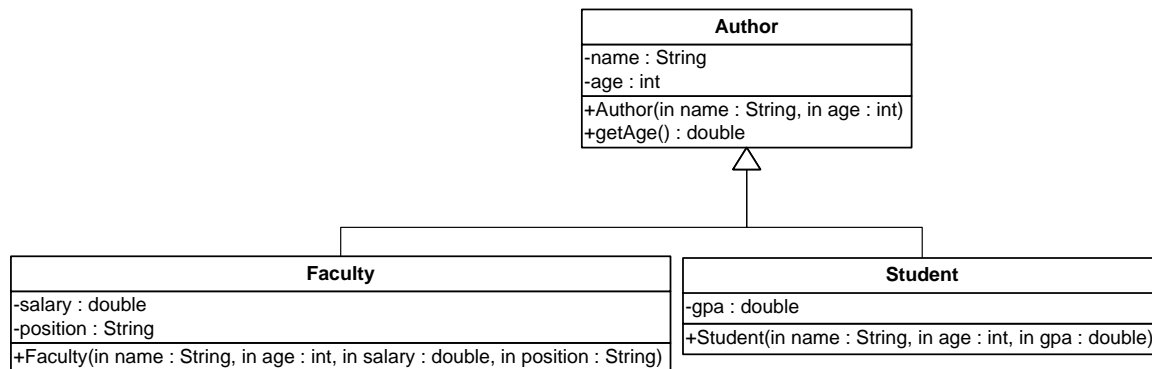


**King Saud University**  
**College of Computer and Information Sciences**  
**Department of Computer Science**  
**CSC113 – Computer Programming II – Midterm 1 Exam – Fall 2014**

**Exercise1:**



**Author** class:

- Attributes:
  - **name**: the name of the author.
  - **age**: the age of the author.
- Methods:
  - **Author (name: String, age: int)**: constructor
  - **getName()**: this method returns the name of the author.
  - **getAge()**: this method returns the age of the author.

**Faculty** class

- Attributes:
  - **salary**: the salary of the faculty.
  - **position**: the position of the faculty.
- Methods:
  - **Faculty (name: String, age: int, salary: double, position: String)**: constructor.

**Student** class:

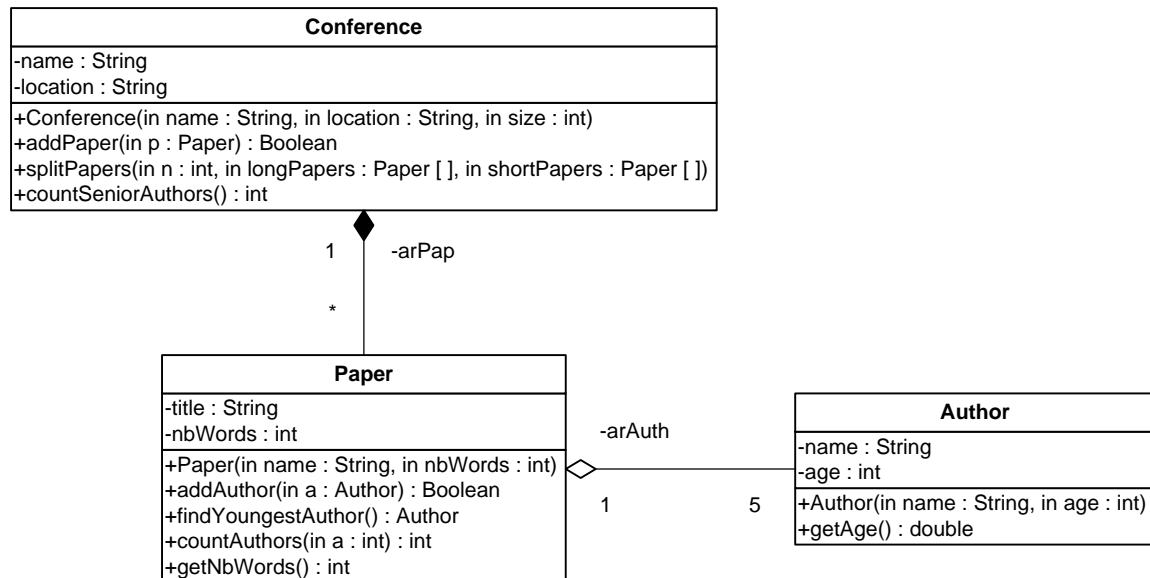
- Attributes:
  - **gpa**: the gpa of the student.
- Methods:
  - **Student (name: String, age: int, gpa: double)**: constructor.

**QUESTION:** Translate into Java code the following classes:

- **Author.**
- **Faculty.**

## Exercise 2:

Let's consider the same Author class described in exercise 1.



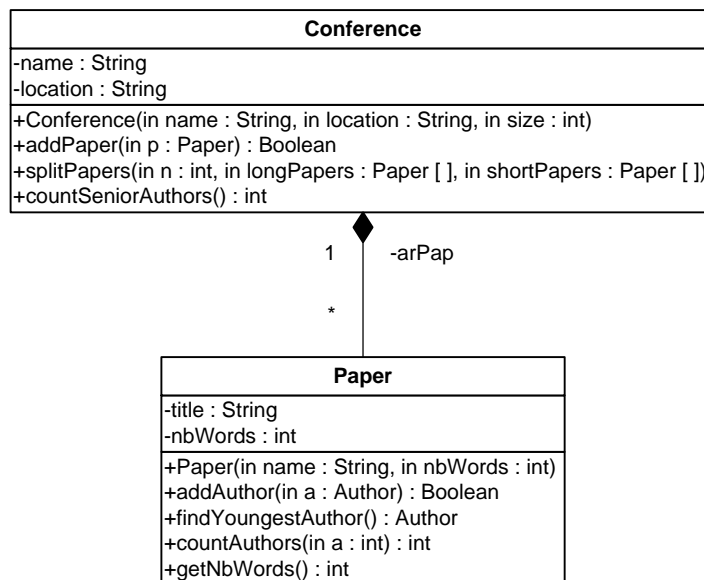
### **Paper** class:

- Attributes:
  - **title**: the title of the paper.
  - **nbWords**: the number of words of the paper.
- Methods:
  - **Paper(title: String, nbWords: int)**: constructor
  - **addAuthor (a: Author)**: this method adds the author *a* to the paper . It returns *true* if the author *a* is successfully added. Otherwise, it returns *false*.
  - **findYoungestAuthor()**: this method returns the youngest author of the paper.
  - **countAuthors (a: int)**: this method returns the number of authors having the age greater or equal to *a*.
  - **getNbWords ()**: this method returns the number of words of the paper.

**QUESTION:** Translate into Java code the class **Paper**.

### Exercise 3:

Let's consider the same Paper class described in exercise 2.



**Conference** class:

- Attributes:
  - **name**: the name of the conference.
  - **location**: the name of the city where the conference is held.
- Methods:
  - **Conference(name: String, location:String)**: constructor
  - **addPaper (p: Paper)**:this method adds the paper *p* to the conference . It returns *true* if the *paper p* is successfully added. Otherwise, it returns *false*.
  - **splitPapers(n: int, longPapers: Paper[], shortPapers: Paper[])**:this method receives two arrays. It inserts the papers having the number of words greater than *n* into the array *longPapers*. It inserts the papers having the number of words less than *n* into the array *shortPapers*.
  - **countSeniorAuthors ()**:this method returns the number of authors having the age greater or equal to *50*.

**QUESTION:** Translate into Java code the class **Conference**.