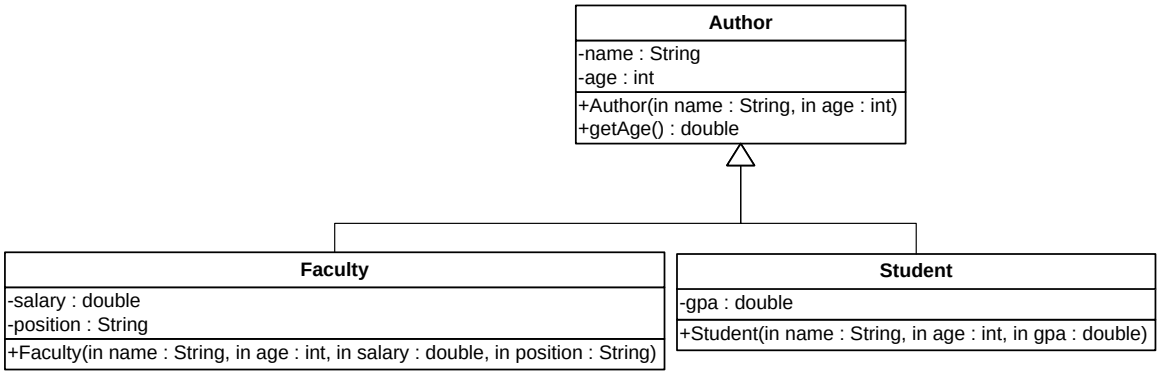
King Saud University
College of Computer and Information Sciences
Department of Computer Science
CSC113 – Computer Programming II – Midterm 1 Exam – Fall 2014

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:

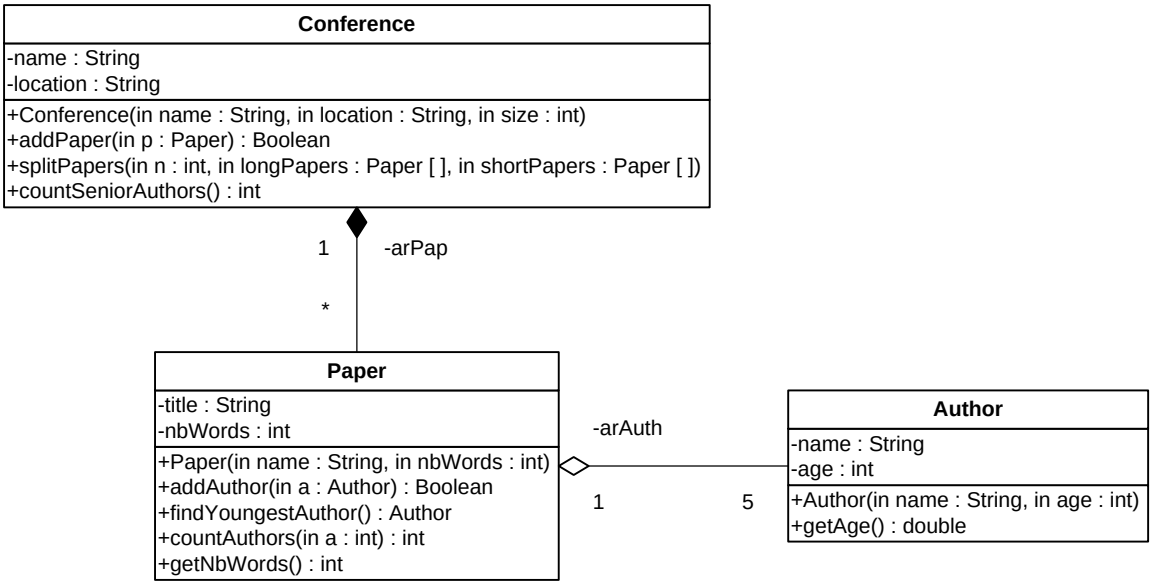
- Attributes:
  - ***gpa***: the gpa of the student.
- Methods:
  - ***Student (name: String, age: int, gpa: double):*** constructor.

QUESTION: Translate into Java code the following classes:

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

Exercise 2:

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



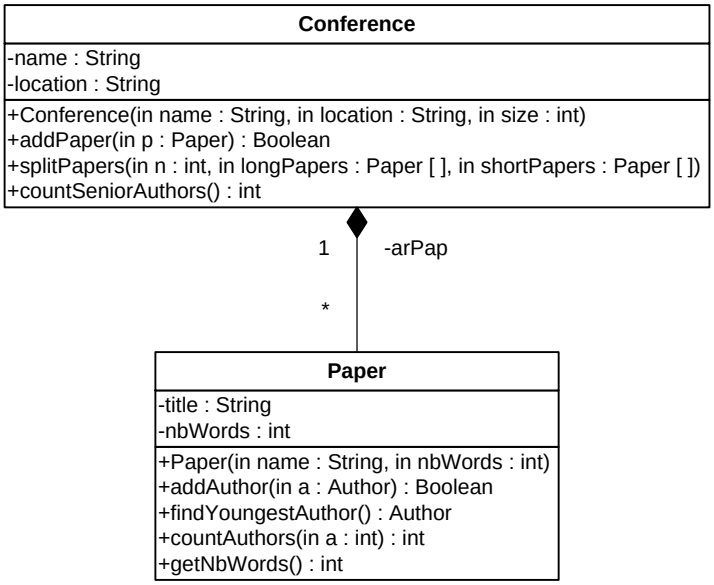
Paper class***:***

- 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.***