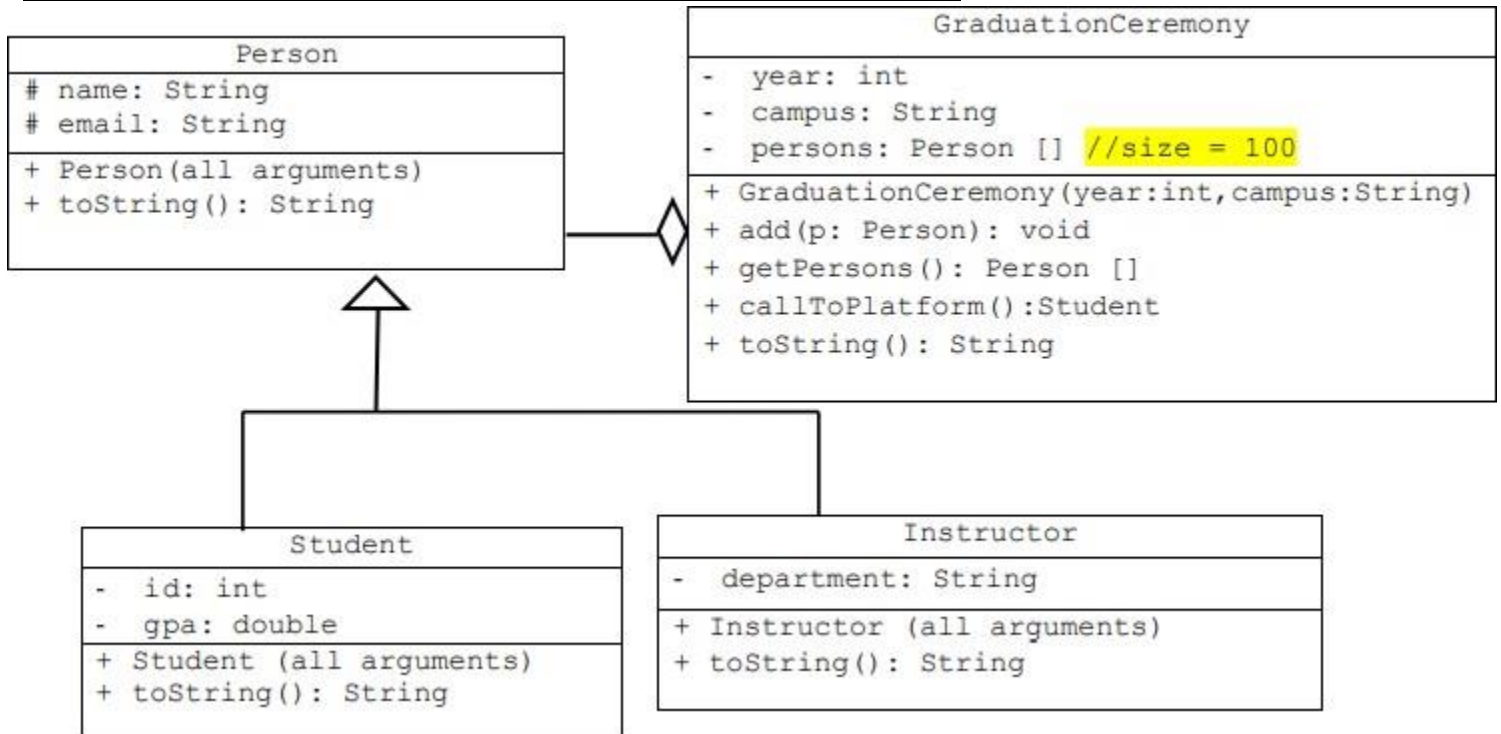


Assignment 3

Consider the following UML diagram of the classes Person, Student, Instructor, and GraduationCeremony.

Important note: For each of the four classes add the getters and setters.



2. Implement the class **Person**.
 - Implement a constructor to initialize the data fields.
 - Implement the getters and setters.
 - Implement the `toString()` method that returns a string including the name and email of the person.
3. Implement the class **Student**.
 - Implement a constructor to initialize the data fields.
 - Implement the getters and setters.
 - Override the `toString()` method that returns a string including the id, name, and email of the student followed by the string "Under Probation" if the gpa is < 2 or the string "Good Standing" if the gpa > 2 .
For example, the returned string could be:
11904532, Mohamad, 11904532@liu.edu.lb, Good standing
4. Implement the class **Instructor**.
 - Implement a constructor to initialize the data fields.
 - Implement the getter and setter.
 - Override the `toString()` method that returns a string including the name, email, and the department. For example the returned string could be: Samer, samer@liu.edu.lb, CSCI
5. Implement the class **GraduationCeremony**.
 - Implement a constructor to initialize the data year and campus, and create an array of persons of length 100. Do not use an `ArrayList`.
 - Implement the getters and setters.

- Implement the method `add(p: Person)` to add a person `p` to the ceremony in the first empty cell (containing null) in the array `persons`. The method will search for the first empty cell in the array.
- Implement the method `callToPlatform()` which returns the student `s` with the higher gpa in the `persons` array. The method assigns null to the array cell that contains `s` (i.e. it will remove it from the array). If there are no students in the array, the method returns null.
- Implement the `toString()` method that returns a string including the year of the ceremony, the total number of invited students, the detailed information for each student, the total number of invited instructors, and the detailed information for each instructor. Use only one loop only. For example, the returned string could be:

Graduation Ceremony Of 201B

The total number Of invited students is: 3

The total number Of invited instructors is : 2

11904522, Mohamad, 11904532@Iiu.edu.lb, Good Standing

11904534, Sami, 11904524@Iiu.edu.lb, Under Probation

11904537, Paul, 11904537@Iiu.edu.lb, Good standing

Ali, ali@Iiu.edu.lb, CENG

Yara, yara@Iiu.edu.lb, MATH

6. Create an application (driver class) in which you do the following:

- Create an Object named `gc` Of type `GraduationCeremony`. The year is 2018. Store in `gc` some students and some instructors. The user will decide whether he or she will store a student or an instructor in each cell. The data of these objects are to be read from the user. Keep reading values from the user until a sentinel such as `'n'` is entered. In Other words, the user will decide how many persons will be added to `gc`.

ii-Display

- The information of `gc_`
- The number of students in the `gc` having `gpa > 3.5`.
- The name and department only of all instructors in the object `gc`.

iV-Call the students to the platform, one by one, until no more students are available