

Ex. Consider the following two classes and their descriptions and then write the code for **Section** class only.

Student
<pre>-studentName:String -studentId:int -studentAge:int -studentGender:String ----- +Student(n:String,id:int,age:int,gen:String) +getStudentId():int +getStudentName():String +getStudentAge():int +getStudentGender():String +display()</pre>

Student class:

Attributes:

- studentName: Name of the student
- studentId: school id of the student
- studentAge: Age of the student
- studentGender: Gender(Male or Female) of the student

Methods:

- Student(n: String, id: int, age:int, gen:String): constructor
- getStudentId(): this method returns the id of the student
- getStudentName(): this method returns the name of the student
- getStudentAge(): this method returns the age of the student
- getStudentGender(): this method returns the gender of the student
- display(): this method displays the attributes of the class.

Section
<pre>-arrStu[]:Student -nbStu:int</pre>
<pre>+Section(size:int) +addStudent(Student st) +searchMax(): Student +searchMax(gender:String): Student +splitStudents(male:Student[], female:Student[]):int</pre>

Section class:

Attributes:

- arrStu: array the students
- nbStu: current number of students in the section

Methods:

- Section(size:int): constructor
- addStudent(*st:Student*): this method adds a student *st* in the section. This method will display a message “Student Added” if student is successfully added in the section otherwise it will display a message “Section is full”.
- searchMax(): this method returns the student object having maximum age in the section.
- searchMax(*gender:String*): this method returns the student object having maximum age in the section with the gender *gender*.
- splitStudents(*male:Student[], female:Student[]*): This method will store all male students of the section in *male array* and all female students of the section in *female array*. This method will also return the number of male students in the section.