جامعة اليمامة
Al Yamamah University

COLLEGE OF ENGINEERING AND ARCHITECTURE

ACADEMIC YEAR 2022-2023
SPRING SEMESTER

COURSE: CIS 104

Lab 3
Object / Class

Student
- name: String - id: String - arrMarks []: int - nbm : int
+ Student(name: String, id:String, size: int) + addMark(mark: int): boolean + deleteMark(pos: int): boolean + searchMark(mark: int): int + averageMarks( ): double + maxMark() : int + display(): void

A class called ***Student*** is designed as shown in the following class diagram. It contains:

- A private instance variable: ***name*** of the type String.
- A private instance variable: ***id*** of the type String.
- A private instance variable: ***arrMarks***: an array of the type int containing the marks of the student
- A private instance variable: ***nbm*** of the type int. It is a counter specifying the number of marks in the array.
- A constructor, which takes as arguments: ***name***, ***id*** and ***size*** of the array.
- A public method ***addMark(mark: int)*** which receives mark as argument and returns true if the mark is added successfully otherwise it returns false.
- A public method ***deleteMark(pos: int)*** which receives the position of the mark to be deleted as argument and returns true if the mark is deleted successfully otherwise it returns false.
- A public method ***searchMark(mark: int)*** which receives mark as argument, searches for it and returns its position.
- A public method ***averageMarks()*** which computes and returns the average of marks.
- A public method ***maxMark()*** which computes and returns the maximum mark.
- A public method ***display()*** which displays the details of the object student.

1. Write in Java the class ***Student***
2. Write in Java a Test Driver to test your ***Student*** class.