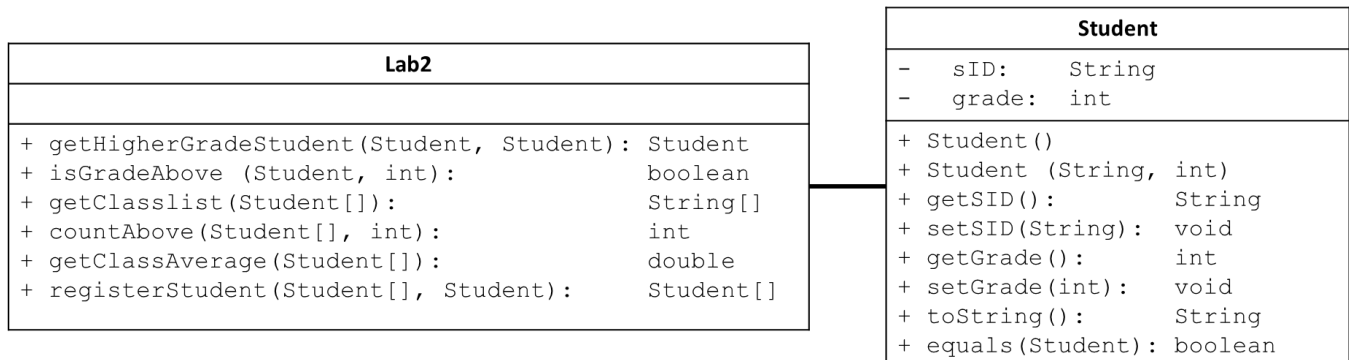# Lab 2

Objectives
- Exposure to testing
- Practice writing static methods that take Objects and arrays of Objects as parameters

Getting Started
Work through the Lab 2 introduction activity presented by the TA. We strongly recommend you get out a pen and paper to get some practice tracing objects and memory. We will be doing a lot of paper traces throughout the next few weeks (and it is something you will need to do on paper on the midterm exams).

Lab Activity
1. Download `Lab2Tester.java`, `Lab2.java`, and `Student.java` to your Lab2 working directory.
2. Compile and run `Lab2Tester.java`. There should be no errors.
3. Complete the methods in `Lab2.java` and overviewed in the following UML diagram.
   a. The documentation for each method is in `Lab2.java`. Read the documentation provided before each method to understand what we are asking you to implement.
   b. There are some initial tests written in `Lab2Tester.java` for some of the more difficult methods found in Lab2.java. The tests provided provide additional insight on how we expect each method to be implemented
   c. Write and test each method **one at a time**.

Lab2
+ getHigherGradeStudent(Student, Student): Student
+ isGradeAbove (Student, int):   boolean
+ getClasslist(Student[]):   String[]
+ countAbove(Student[], int):   int
+ getClassAverage(Student[]):   double
+ registerStudent(Student[], Student):   Student[]

Student
− sID: String
− grade: int
+ Student()
+ Student (String, int)
+ getSID():   String
+ setSID(String): void
+ getGrade():   int
+ setGrade(int): void
+ toString():   String
+ equals(Student): boolean

CHECKPOINTs (Ungraded) – if after reading through the documentation and tests for any of the methods you are required to implement you are still unsure what the method is supposed to do, don't hesitate to ask a TA for an explanation of what is expected.

CHECK POINT 1: getHigherGradeStudent and isGradeAbove
CHECK POINT 2: getClasslist and countAbove
CHECK POINT 3: getClassAverage and registerStudent

SUBMISSION – Before leaving the lab, demonstrate your progress to the TA.