# Skill Assignment 3

This is an individual skill assignment. You may receive help from other class mates, but you may NOT copy their work. Copied work will be considered plagiarism and dealt with according to the syllabus and university policy.

**Objective:** For this skill assignment, you will demonstrate that you can properly create an immutable Java class containing multiple instance members. Your class must be properly encapsulated and follow all expectations regarding member visibility and mutability. This class will include several instance data members and must also include appropriate getter methods for all data members. The class must also provide a properly constructed constructor that defines multiple parameters for provided values for the instance members. The constructor will additionally invoke a class member that performs data collection for user entered values. This will include following proper naming, formatting and style conventions as well as using necessary functions and classes in the Java standard library.

**Description:** Creating proper class definitions is an essential task in object-oriented programming. Proper location and definition of all class members is necessary to correctly solve any business problem. This class will provide all necessary members to define a student including data members for student's first and last names as well as a data member that is capable of holding an arbitrary amount of grade elements. This class must also provide a method that collects 5 grades from the end user and stores these grades as individual elements in an appropriate data type. This class will also provide a self-descriptive method that outputs a single String sentence that includes the student's names and their calculated grade average based upon the grades input by the end user. The average calculation must use the static utility function you created for skill assignment 2.

**Assignment:**
- Create a command-line Java class that performs the following:
  - As a properly encapsulated and immutable Java class, match these defined expectations
    - Define 3 data members (first name, last name, grades)
    - Define 3 getter methods (1 for each of the data members)
    - Defines a constructor that accepts 2 String value arguments (1 for first name, 1 for last name)
      - The constructor will then invoke a data collection method existing within the Student class that prompts the end user to enter 5 grades and stores those values into the grades data member
    - Define a method named describeMe() that returns a String value sentence that includes the student's first and last names as well as the correct calculated grade average for the 5 grade values entered by the end user
    - This class must operate with the provided test harness Driver class
  - See Table 1 below for the expected output using the test harness Driver class with your SkillAssignment3 class

- Upload your .JAVA code file(s) to the appropriate Blackboard assignment

```
Please enter Grace Hopper's grade as a decimal value (e.g. 79.5):
97.5
Please enter Grace Hopper's grade as a decimal value (e.g. 79.5):
```

```
98.6
Please enter Grace Hopper's grade as a decimal value (e.g. 79.5):
94.3
Please enter Grace Hopper's grade as a decimal value (e.g. 79.5):
92.8
Please enter Grace Hopper's grade as a decimal value (e.g. 79.5):
103.5
Grace Hopper's grade average is: 97.34
```

Table 1 – Example Input/Output