

CS 157 Lab 5 October 8, 2009 Return and Scanner

1. Create a new class called `Lab5`. Place all of your work for this lab in that class. Write a method named `average3` that accepts three integers as parameters and returns the average of the three values. For example, the call `average3(15, 22, -1)` should return `12.0`. Test this method thoroughly from `main`.
2. Write a method named `grade` that accepts an integer parameter representing a student's course score from 0 to 100, and returns the student's course grade on the 4.0 scale. Use the following mapping: (Note: This mapping is fictional and does not represent how actual grades are assigned in this course!) Do NOT use any `if` statements. You should be able to come up with a formula that computes the grade given the score. Remember to make any score less than 60 become zero (again, no `if` is needed if you use the right method from the `Math` class). Be sure to test this thoroughly from your main method. Ask for help if you need it.

Score	≤ 60	61	62	63	...	98	99	100
Grade	0.0	0.1	0.2	0.3	...	3.8	3.9	4.0

3. Read in the textbook about interactive programs on pages 152-154. Create a `Scanner` object called `console` in your main method as shown on page 153. Write code to prompt a student for his/her score using the `console` object, and use the `grade` method from the previous question to report the student's grade:

```
What percent did you earn? 84      (You type in 84)
Your grade is 2.4                    (Note: your result will not be rounded since we're not using printf)
```

4. Add code to your main method that will prompt the user for many integers and print the total sum and maximum of the numbers.

```
How many integers? 5
Next integer? 2
Next integer? 9
Next integer? 17
Next integer? 4
Next integer? 6
```

```
Sum = 38
Max = 17
```

You may assume that the user types at least one integer and that at least one integer will be non-negative.

When you finish, call one of us over to sign off on your work.