

# COMP 210 - Lab 1 - Procedural Java

Spring 2015

For your first assignment you'll use Java to write the kind of procedural code you wrote in C++. This is not how we plan to use Java ever again. The point of this exercise is to get your basic tools up and running<sup>1</sup> and to get used to some differences between key statements in Java and C++.

<sup>1</sup> Eclipse and JUnit

## The Program

Between lab 1 and homework 1 you'll design, implement, and test the following procedures:

- A function named *sumTo* that computes the sum off all the integers from 0 to  $n - 1$  when given  $n$ . In mathematical terms it computes this:

$$\sum_{i=0}^{n-1} i$$

- An output procedure named *fizzbuzz* that carries out the classic fizzbuzz problem. This procedure takes the `PrintWriter` and a positive integer  $n$  and for each number  $i$  from 1 until  $n$  it will print:
  - *Fizz* if the number is divisible by 3 but not 5
  - *Buzz* if the number is divisible by 5 but not 3
  - *FizzBuzz* if the number is divisible by 3 and 5
  - $i$  otherwise

Output should be comma separated and on one line. There should be no comma after the final output.

- A mutator named *rmvAll* which takes a `StringBuilder`<sup>2</sup> and a character and remove all occurrences of the character form the string.
- An input procedure named *readUntil* which takes a `Scanner`, a string and a `StringBuilder` and reads all the strings from the `Scanner` until the string argument is encountered or until there are no more string, whichever comes first. These strings read are appended to the `StringBuilder` without any separation.

<sup>2</sup> mutable string

## Lab 1

Your goal in lab is to get your project setup, main stubbed, the procedures declared, documented, and stubbed, and the JUnit tests

stubbed<sup>3</sup>. Once this is done, be sure you can run your stubbed out code. From there move on to writing tests and completing *main*. When that's done, and only then, start on the implementation of the functions<sup>4</sup>.

At the end of lab or when you finish the lab work, which ever comes first, submit the source code and only the source code using *handin*. The assignment is *lab1* and the course is *comp210*. Handin lets you submit multiple directories, so just handin the src and tests folders directly. If I get anything other than source code, you'll have to resubmit or get a zero.

<sup>3</sup> letting Eclipse do the work

<sup>4</sup> If I see function implementation and not tests or main, you get a 1

### *Homework 1*

Complete the lab work if necessary then implement the procedures. Debug as needed. Submit the completed source code as assignment *hwk1* using handin. Once again, submission containing anything other than the java source code will not be accepted.