CS 2410 – Spring 2018
Assignment #2 - FizzBuzz

Introduction
The purpose of this assignment is to get you familiarized with:

- Compiling and running Java programs from the command line and in IntelliJ.
- How some of your C++ knowledge can be transferred to Java.

Description
This program is a popular interview question for programmers. Job interviews often include live code writing, which lets the interviewer assess the programming (and stress management) skills of the interviewee. It is called "FizzBuzz," but is also referred to as "BizzBuzz." There's a good chance you've programmed this before.

The purpose of this program is to show you that much of your C++ knowledge can carry over to Java.

Create a program that prints the numbers 1 to 100, one on each line. If the number is a multiple of 3, print "Fizz" instead of the number. If it is a multiple of 5, print "Buzz". If the number is a multiple of both 3 and 5, print "FizzBuzz".

Your output should look like this:
1
2
Fizz
4
Buzz
Fizz
7
…
14
FizzBuzz
16
…
And so on, up to and including 100.

Requirements
1. Follow class conventions for naming, comments, and file submission
2. Create a public class called Fizzy
3. Create an appropriate main method
4. Create methods with the following signatures (don't forget static)
    a. private static boolean isFizz (int val) //check if a multiple of 3
    b. private static boolean isBuzz(int val) //check if a multiple of 5
5. Create a class member variable (this means it's not inside a method, but is inside a class)
    a. private static int counter
    b. Note: you can initialize this when you declare it, or inside the main method
6. In the main method
    a. Use the counter to iterate from 1 to 100
    b. Use the two other methods you define to determine what to print.
        i. Note that the methods should not print anything, they just return a boolean value
7. Your program should include at least one of each of the following
    a. branch control statement (like "if")
    b. loop

8. In the "readme" folder, include four screenshots that show you can compile and run from the console/terminal window
    a. A screenshot of the contents of your folder after compiling
        i. Your compile command should save the output in a folder called "cmd-out" to show it was generated from the commandline.
    b. A screenshot showing the command to run your program
        i. You must run this from your project folder
        ii. Make sure you use package/path names appropriately
    c. A screenshot of your program having just run
    d. A screenshot of your command to generate Javadocs.
        i. These should be stored in a directory "cmd-out/docs"
9. Your program should also run inside your IDE

Notes/Help

Once you have defined main(), the code inside the method is very similar to what you would do in C++. The only real difference is using System.out.println() instead of cout. Here are some tips.

- Use curly braces to define blocks of code, like C++.
- For-loops in Java are written like they are in C++.
- If statements, if/else statements, and if/else if/else statements are exactly the same as in C++.
- Java has support for the `int` data type which is used like it is in C++.
- Variables need to be declared with a type as in C++, that is:

```
int value;
```

- Same math operators in Java and C++. For example, modulus is %.

```
value = 100 % 7;
```

- Comparison for equality is done with == like C++.

```
if (value == 2) {
    // do something
}
```

- `System.out.println()` can print both strings and numbers.

```
System.out.println("Bizz");
System.out.println(value);
```

Use your C++ skills to help your write this code. See me if you need some help refreshing your memory. It'll come back quickly.

Other Things to Try

This is not required as part of your assignment, but try them out. We'll cover this a bunch, but it seems like some students run into problems still for a bit. So I just want you to get an idea of the issue so it'll make sense when we discuss.

1. Remove the keyword "static" from your method signatures. Does your program run anymore?
2. Do you think that "static" is needed for everything you do then?

What/How To Turn In (READ THIS)

Submit your files on Canvas.

Make sure to submit with appropriate folders, including Javadoc!

Due: January 22, 2018 (That's a Monday)