

Lab 14: GCD Recursion

Instructions: Recursion can have a very simple solution to many problems. In this exercise design and implement a program that implements Euclid's algorithm for finding the greatest common divisor (GCD) of two positive integers. (The GCD is the largest integer that divides both values without producing a remainder.) Create a class DivisorCalc with a static method gcd(int num1, int num2) and returns the GCD of the two numbers. As a refresher, here is Euclid's GCD:

- 1) gcd(num1, num2) is num2 if num2 ≤ num1 and num2 divides num1
- 2) gcd(num1, num2) is gcd(num2, num1) if num1 < num2
- 3) gcd(num1, num2) is gcd(num2, num1%num2) otherwise.

```
1 public class DivisorCalc {
2     public static int gcd(int num1, int num2) {
3         int ret = 0;
4         /* Student fills in. */
5         return ret;
6     }
7 }
```

Write some test cases:

Create some test cases that you believe would cover all aspects of your code. You may write manual tests or use JUnit.

How to turn in:

Turn in via GitHub. Ensure the file(s) are in your lab15 directory and push via IntelliJ (VCS ↑)
OR use the command line:

- \$ git add <files>
- \$ git commit
- \$ git push

Due Date: November 12, 2015 2359

Teamwork: No teamwork, your work must be your own.