

Lab #5

This lab will use your code from Lab #3, but now you will be required to handle two special cases:

$\text{gcd}(0, 0) = 0$

$\text{gcd}(a,b) = \text{gcd}(\text{abs}(a), \text{abs}(b))$, where a and b are possibly negative.

I'll supply the main program, the output that your output must match, and stubs for `gcd`, `gcd_wrapped`, and `Abs`. Do not modify the main program or fool around with the stubs (e.g. inline a function or decide you're not going to use a different wrapper), just fill in the code for the subroutines as per below. Here is C pseudocode for the three functions you have to write (recall that “int” is equivalent in C to “signed int”):

```
int gcd(int a, int b)
{
    if ((a==0) && (b==0)) return 0;
    else return gcd_wrapped(abs(a), abs(b));
}
```

```
int abs(int a)
// return the absolute value
{
    if (a < 0) return -a; else return a;
}
```

```
int gcd_wrapped(int a, int b)
{
    // returns the gcd assuming a and b are positive, you should be able to just copy and paste
    // your lab 3 code here
}
```