Reflection & Test Plan - Assignment 1 Question 11

Commentary

- significant types of errors/warnings you faced
  - Errors I potentially faced were infinite loops turning into memory issues. I also faced issues around edge cases. I wasn't sure how negative numbers played into greatest common denominator, but a quick google search revealed they play nicely.
- whether you were able to correct them as soon as you encountered them
  - Ran into an infinite loop, I had to shut down the Java program running from my task bar.
- what debugging strategy you used
  - My debugging strategy was to use a standard case where I knew the answer. I picked some even numbers, so I could check for 2.

Normal Data

Test Run 1

Program Input

GreatestCommonDenominator(24,48,128)

Expected Program Output

Counter 24
Counter 23
Counter 22
Counter 21
Counter 20
Counter 19
Counter 18
Counter 17
Counter 16
Counter 15
Counter 14
Counter 13
Counter 12
Counter 11
Counter 10
Counter 9
Lowest common denominator is 8

Actual Output

as expected

Test Run 2

Program Input

GreatestCommonDenominator(1,48,128)

Expected Program Output

Lowest common denominator is 1

Actual Output

as expected

Test Run 3

Program Input

GreatestCommonDenominator(0,48,128)

Expected Program Output

Error

Actual Output

java.lang.ArithmeticException: / by zero
    at GreatestCommonDenominator.recursiveGCD(GreatestCommonDenominator.java:37)
    at GreatestCommonDenominator.findGCD(GreatestCommonDenominator.java:49)
    at answers.main(answers.java:46)

Abnormal Data

Test Run 4

Program Input

GreatestCommonDenominator(“abc”,48,128)

Expected Program Output

Will not compile

Actual Output

as expected

Boundary Data

Test Run 5

Program Input

GreatestCommonDenominator(-1,48,128)

Expected Program Output

Lowest common denominator is -1

Actual Output

as expected