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Problem Set 2
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Exercise: gcd recur

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Exercise: gcd recur

5.0 points possible (graded)

ESTIMATED TIME TO COMPLETE: 6 minutes

The greatest common divisor of two positive integers is the largest integer that divides each of them without remainder. For example,

- gcd(2, 12) = 2
- gcd(6, 12) = 6
- gcd(9, 12) = 3
- gcd(17, 12) = 1

A clever mathematical trick (due to Euclid) makes it easy to find greatest common divisors. Suppose that `a` and `b` are two positive integers:

- If b = 0, then the answer is a
- Otherwise, gcd(a, b) is the same as gcd(b, a % b)

See this website for an example of Euclid's algorithm being used to find the gcd.

Write a function `gcdRecur(a, b)` that implements this idea recursively. This function takes in two positive integers and returns one integer.

```
def gcdRecur(a, b):
    '''
    a, b: positive integers

    returns: a positive integer, the greatest common divisor
    '''
    # Your code here
```

Types

- Week 4: Good Programming Practices
- Midterm Exam
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Press ESC then TAB or click outside of the code editor to exit

Unanswered

Note: In programming there are many ways to solve a problem. For your code to check correctly here, though, you must write your recursive function such that you make a recursive call directly to the function `gcdRecur`. Thank you for understanding.

If you are getting the error stating that "Your code should be recursive" when you already make a call to `gcdRecur`: check your indention -- specifically, a common mistake is that your function and docstring do not start at the same indentation level.

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Exercise: gcd recur

Topic: Lecture 4 / Exercise: gcd recur

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