

DSC 430: Python Programming
Assignment 0102: Coprime

In number theory, two integers a and b are said to be coprime if the only positive integer that divides both of them is 1.

Write a function `coprime_test_loop()` that asks the user for two numbers. This function will pass those two numbers onto a second function `coprime(a,b)` which will return true or false depending on whether or not the numbers are coprime. The function `coprime_test_loop()` will print out a message indicating the result. It will then ask the user for another pair of numbers and query `coprime(a,b)` again. It will continue this loop until the user indicates that they wish to exit the program.

Record a three minute video in which you run the code. Then, present your code. Specifically, answer the following questions:

- How efficient is `coprime(a,b)`? How did you ensure it was not making any needless computations?
- What assumptions does your code make? How easy is it for the user to crash your code?

Submission: Submit a single .py file containing all the code to the D2L. Do not zip or archive the file. Your code must include comments at the top including your name, date, video link, and the honor statement, "I have not given or received any unauthorized assistance on this assignment." Each function must include a docstring and be commented appropriately.

Note: Occasionally, students want to use the gcd function in the math package. You should not. The spirit of the assignment is not that you get the function to work, but that you practice your coding. You may implement you own gcd algorithm. And there are other (perhaps clearer) ways to solve the problem too.