CS2113, Fall 2008, Homework 6

Due November 5, 2008 (before start of class)

Problem 7

By modifying the Sub procedure in `GCD.xlsm`, write a VBA Sub procedure to compute the GCD of any two given positive integers, as well as the number of iterations that the Euclid algorithm requires to compute the GCD. Name this Sub procedure `GCDSub`. Make sure that `GCDSub` has at least one call-by-value argument and one call-by-reference argument.

Write another Sub procedure to ask the user to input two arbitrary positive integers and then calls the Sub procedure `GCDSub` to compute the GCD and the iteration count. Display in a message box the original two integers, the computed GCD, and the number of iterations. This Sub procedure should have no arguments and should function as the main program. You can assume that the user always enters two positive integers (no data validation is needed).

Problem 8

Repeat the above problem except that this time instead of using a Sub procedure with arguments, you must define and use a Function procedure having at least one call-by-value argument and one call-by-reference argument. Name this function procedure `GCDFcn`.

Write a Sub procedure as the main program to call `GCDFcn` to accomplish the same task as in the above problem.