

Exercise 1:

The Tool Command Language (TCL)

Please hand in by: 15/11/2016

1 Exercise Description

The Greatest Common Divisor, or GCD is the largest number that divides two numbers without a remainder. The conventional method for finding the GCD is the Euclidean Algorithm; however, Israeli physicist, Joseph Stein, described a binary algorithm for extracting the GCD of positive numbers, known as [Stein's Algorithm](#).

In this exercise, you will implement Stein's Algorithm in TCL. To do this, you should write a procedure that receives two integers and returns the GCD. You will then implement a test bench that will randomly choose two integers, calculate the GCD (through a procedure call) and write the answer to an output file. The output file should be formatted, as follows:

First Number	Second Number	GCD
-----	-----	---
8	4	2
27	9	9

Note that you will be using the output file in a future exercise. Make sure that it is accurately formatted!

2 Submission Instructions

To submit your homework, please upload:

- 1) A file called `username-gcd.tcl` (where username should be replaced by, well, your username) that implements the exercise.
- 2) An output file called `username-gcd.txt` that includes 100 random integer pairs and their GCDs. The **first line** of the file should include **your full name and TZ**.