

## Homework #4

In this homework, you need to write an ARM assembly program to compute the GCD (greatest common divisor) of two positive integers. The program is expected to execute on GDB ARM emulator for the verification.

Assume that the two positive integers  $a$  and  $b$  are held in registers r0 and r1, respectively. Write an ARM assembly program to compute the GCD of  $(a, b)$ .

- $a$  and  $b$  are 32-bit unsigned integers
- The integer values of  $a$  and  $b$  are assigned by yourself
- After the computation, register r0 will hold the GCD of  $(a, b)$ .
- 請勿繳交【利用編譯器所自動產生的組合語言程式】
- 請勿抄襲

You need to turn in the following files to **Ecourse system**:

1. “README.txt” file describes the features in your program and how to compile and run your program.
2. Your ARM assembly program, named **hw4.s**, with suitable comments.
3. Executable file: hw4.exe.
4. Makefile
5. Any file needed in your implementation

**Due Data: December 3 (Monday), 24:00, 2018**