

Lab 3

- Iterative factorial program named as ex6.s
- Recursive Fibonacci program named as ex7.s
- Two more problems in the following pages: named as lab3_1.s and lab3_2.s
- Compress the files ex6.s, ex7.s, lab3_1.s and lab3_2.s into a single groupXX.zip file and submit the .zip file

Lab 3.1

- Write your own, simple ARM assembly function for `int mypow(int x, int n)` in `lab3_1.s` to compute x^n , where n is a non-negative integer.

Lab 3.2

- The recurrence relation for Greatest Common Divisor (GCD) of two non-negative integers a and b (**not** both of them zero), is given below:

$$\text{GCD}(a, b) = \begin{cases} a, & b = 0 \\ \text{GCD}(b, a \% b), & \text{otherwise} \end{cases}$$

- Write an ARM assembly function for `int gcd(int a, int b)` in `lab3_2.s` to compute the GCD of a and b .