National Sun Yat-Sen University
ASSEMBLY LANGUAGE AND MICROCOMPUTER
Program #3
Due 11:59 PM Dec 29 2025

<**Programming Problem III**> Write an x86 assembly program that implements an arithmetic utility capable of computing four specific functions and displaying the result on the screen. You only need to implement the four arithmetic operations shown in the following table.

op	Operation	function
1	Maximum	***max(intA,intB)***
2	greatest common divisor	***gcd(intA,intB)***
3	least common multiply	***lcm(intA,intB)***
4	exponent	$intA^{intB}$

Your program will receive three input arguments **intA**, ***intB*** and ***op*** from the console. These arguments will be provided as strings, and your program must convert them to ***positive integers***. For example, if you enter

4 5 3

Then the screen should display the following results:

Function 3: least common multiply of 4 and 5 is 20.

If you execute

4 3 1

Then the screen should display the following results

Function 1: maximum of 4 and 3 is 4.

You can develop your code in the following website:

onecompiler/assembly/

The following site also provides on-line emulation x86 program, which may help you debug your program.

https://carlosrafaelgn.com.br/Asm86/

You don't have to consider the invalid inputs such as

4.2 -3 1

The input arguments can be received using the relevant ***int 80h*** instructions. The display of the results on the screen should also use ***int 80h*** instructions.

You need to turn in your assembly code by the deadline.