Lab : Recursion

MyMath
+ Power(base : int, exp : int) : int + Sum(n : int) : int + DisplayDesc(n : int) : void + Mod (val : int, divisor : int) : int

Implement the class MyMath as follows:

Power(base : int, exp : int) : int

- Recursively calculate the value of base to the power of exp, base^exp. Example: Power(2,3) = 2*2*2 = 8.

Sum(n : int) : int

- Recursively calculate the sum of all numbers between 0 and n. Example: Sum(5) = 0+1+2+3+4+5 = 15.

DisplayDesc(n : int) : void

- Recursively displays the numbers in descending order starting from n to 1. Example: DisplayDesc(5) . Output is
  5
  4
  3
  2
  1

Mod (val : int, divisor : int) : int

- Recursively calculate the remainder of dividing val by the divisor. Example: Mod(8,3) = 2. Do not use %.