

Problems based on Recursion – 3

Assignment Questions



Q1 - Given a number n, print the following pattern without using any loop.

(Easy)

n, n-5, n-10, ..., 0, 5, 10, ..., n-5, n

Input1: n = 16

Output1: 16, 11, 6, 1, -4, 1, 6, 11, 16

Input2: n = 10

Output2: 10, 5, 0, 5, 10

Q2 - Find m-th summation of first n natural numbers where m-th summation of first n natural numbers is defined as following:

(Medium)

If $m > 1$: $SUM(n, m) = SUM(SUM(n, m - 1), 1)$

Else : $SUM(n, 1) = \text{Sum of first n natural numbers.}$

Input1: n = 3, m = 2

Output1: $SUM(3, 2) = 21$

Explanation : $SUM(3, 2)$

$= SUM(SUM(3, 1), 1)$

$= SUM(6, 1)$

$= 21$

Input2 : n = 4, m = 1

Output2 : $SUM(4, 1) = 10$