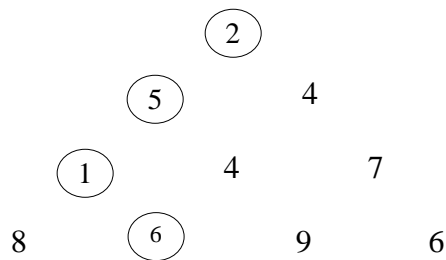

CTIS264 COMPUTER ALGORITHMS

PYTHON LABSTUDY 5

Given Date: May 9, 2019

Submission Date: May 13, 2019 – Latest 24:00 pm.

Design a **dynamic programming algorithm** and implement it with Python to find the smallest sum in a descent from the triangle apex to its base through a sequence of adjacent numbers in an equilateral triangle with n numbers in its base. In the below example, n is 4 and smallest sum path is shown in circles.



Note: Please define at least 3 equilateral triangle in your program and do not ask to enter any values.

Sample Execution:

For tree :

[2]

[5, 4]

[1, 4, 7]

[8, 6, 9, 6]

Smallest sum : 14

For tree:

[2]

[5, 4]

[7, 4, 1]

[8, 2, 9, 6]

[11, 3, 8, 8, 6]

Smallest sum : 15