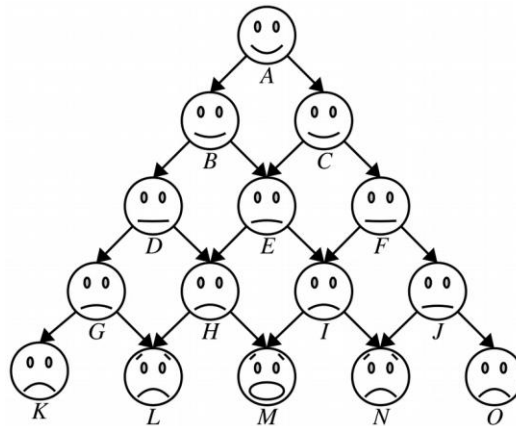


DSC 430: Python Programming
Assignment 0402: Human Pyramid



A human pyramid is a way of stacking people vertically in a triangle. With the exception of the people in the bottom row, each person splits their weight evenly on the two people below them in the pyramid. For example, in the pyramid above, person A splits her weight across people B and C, and person H splits his weight – plus the accumulated weight of the people he is supporting – onto people L and M. It can be mighty uncomfortable to be in the bottom row, since you'll have a lot of weight on your back! In this assignment, you will explore just how much weight that is. Let us assume that everyone in the pyramid weighs exactly 128 pounds.

Write a recursive function – `def humanPyramid(row, column):` – that takes as input the row and column number of a person in a human pyramid, then returns the total weight on that person's back. The row and column are each zero-indexed, so the person at row 0, column 0 is on top of the pyramid, and person M in the above picture is at row 4, column 2.

Your implementation of `humanPyramid` must be implemented recursively and must not use any loops. You may be surprised how little code is required!

Record a three minute video in which you run the code. Then, present your code. Specifically, answer the following questions:

- What is the base case of your recursive function?
- Does everyone in the bottom row carry the same weight?

Submission: Submit a single `.py` file containing all the code to the D2L. Do not zip or archive the file. Your code must include comments at the top including your name, date, video link, and the honor statement, “I have not given or received any unauthorized assistance on this assignment.” Each function must include a docstring and be commented appropriately.