Week 14 - Recursion

Welcome to Week 14. The previous week wrapped up our 4 weeks looking into web technologies and how to build simple web-based backend. Your project will be based on this portion of the course, which you should have started working on already. In the next few weeks, we will round out some more programming and Python knowledge that will be useful for you in your following courses and career. This week we will go over what are known as *recursive functions.*

Recursive functions are functions which do their computation in a way such that the function calls itself, repeatedly. In other words, the definition of the function is in terms of that function itself. Intuitively, this may sound very strange. How exactly can a function call itself without doing so forever? How does the recursion ever stop? While certainly, recursion can be a difficult concept to grasp, but in some cases, the only simple solution to a problem is a recursive one. As a programmer, you need to know when to use and be comfortable implementing recursive solutions.

This week's two readings from "Learning Python" and "Problem Solving with Algorithms and Data Structures", should help clarify how recursive functions work, and the necessary properties they must have in order for them to work.

This week's assignment will have you implement a few of these recursive functions. This assignment will be on the lighter side, as you should be spending your time on your projects. Remember, if you are having any difficulties with your project, speak up, either through email or the discussion boards.