**PHONE NUMBERS: hw0pr1**

For Problem 1 this week, your challenge is to read and analyze a large set of data files (almost 10,000). The files are available from this link: you'll want to download and unzip those. Your task is to compose several functions -- perhaps using and extending the functions from lab -- in order to answer several questions about the phone numbers and names in this set of files.

First, look through the folder, the subfolders, and a few of the files inside them to get a sense of their format. Each file has a phone number (in a variety of formats) on its first line and a name (in a couple of formats) in its second line. Your task is, first, to write functions that find the answer these questions:

Feel free to use helper functions.

1. How many .txt files are in the entire folder? *9903*
2. What is the maximum depth of directories in the entire folder (in other words, how many times can you dig deeper into a new subdirectory) ***needs rewording***? *4*
3. What is the path to the deepest directory? *phone\_files/86/Hidden/Deeper/Deepest*
4. Across all of the files, how many of the phone numbers contain exactly 10 digits? *3993*
5. Of these exactly-ten-digit phone numbers, how many are in the area code 909 (the area code will be the first three digits of a ten-digit number). *17*
6. How many people have the last name Davis?

Hint: Use the comma to determine whether the last name comes first or second. Caution: If you use str.endswith(), consider that each line ends with an ‘Enter’ (‘\n’) *224*

1. How many people have the first name Davis? *3*
2. How many people have the initials J.S.? *106*
3. How many different first names are there? *224*