DAT-119 – Python 1

**Homework 7**

As always, you need to write these programs *without searching online*. You can use the textbook, the Jupyter notebooks, conversations with your colleagues and me, and the approved resources; that’s all. If you get code from anywhere besides your own brain (*especially* if it comes from any approved outside resource or from reading ahead in the book), you need to cite the source in a comment.

Also, as always, **be sure to follow the style guide**, including turning in a plan with your code. Seriously, **don’t forget to plan before you code!**

**Problem 1:**

For the first problem of this homework, we’re going to try something a little different. I’ve created the start of a file, which you’ll edit to finish the assignment: count\_words\_in\_the\_raven.py

The program has three functions in it.

1. I’ve written all of break\_into\_list\_of\_words()--**DO NOT CHANGE THIS ONE**. All it does is break the very long poem into a list of individual words. Some of what it's doing will not make much sense to you until we get to the strings chapter, and that's fine--that's part of why I wrote it for you. :)
2. There’s a main() which you’ll add a little bit to, but it should stay pretty small -- some print statements and some function calls
3. There’s a definition of a function called count\_how\_many\_words(), which takes *two arguments*. (Don’t change the arguments.) You’ll write the entire block for this.
   1. Note: My return statement is definitely not what you want; it’s just there so that the program runs when I give it to you. You will want to change what the function returns!

I want you to **complete the count\_how\_many\_words() function, and then call it (multiple times) inside main()** to find out *how many times Poe used the word “Raven” (or “raven”)* and *how many times he used “Nevermore” (or “nevermore”)* inside the poem “The Raven.” **You may not use list.count()**.

Don’t add any global variables or constants (besides the one I’ve declared, which could be moved into main() but would be even uglier there).

**Example output (with *incorrect numbers*):**

The word "Raven" (or "raven") appears 42 times in Edgar Allen Poe's "The Raven."

The word "Nevermore" (or "nevermore") appears 48 times in Edgar Allen Poe's "The Raven."

**Problem 2:**

Design a program that generates a 7-digit lottery number. Each digit should be random, in the range from 0 to 9. Assign each digit to a list element. Then display the lottery number as if it were a single number. Use at least two functions and no global variables.

**Example output:**

“Today’s lottery number is 9075361.”