

For today's program, open the file "day26\_article\_starter.txt" on my web site, select all, copy, and paste into a new Python file. Save to your Z: drive named "day26\_article". Put your name and the date in a comment at the top. It looks like the code to the right.

```
#your name goes here in the comment
#Article base program
text="""Analy always answers the call!"""
letters='abcdefghijklmnopqrstuvwxy'
tally=[]

for x in letters:
    num=text.count(x)
    tally.append(num)
print(tally)
```

This program is a modified version of the pi frequency calculator from last week that counted numbers in text. This program counts how many of each letter shows up. When you run today's version to this is the output:

```
[5, 0, 1, 0, 2, 0, 0, 1, 0, 0, 0, 4, 0, 2, 0, 0, 0, 1, 3, 1, 0, 0, 2, 0, 2, 0]
```

This represents 5 letter As, no letter Bs, 1 C, etc.

You will modify this program to improve it.

- Put your name and the date in a comment at the top.
- Modify the program so that it considers capital and lower case letters the same using a `.lower()` method before the for loop. Run the modified code and you should get this (the A count is now 6, meaning it included the capital A from Analy where before it did not.)

```
[6, 0, 1, 0, 2, 0, 0, 1, 0, 0, 0, 4, 0, 2, 0, 0, 0, 1, 3, 1, 0, 0, 2, 0, 2, 0]
```

- Add a for loop to the end of the program that prints the results nicely in 3 columns like we did with the pi digits program. Make it look like this:

```
a      6    24.0%
b      0     0.0%
c      1     4.0%
(I cut out d through y to save space here.)
z      0     0.0%
25 letters analyzed in article
```

- When you have it working for the starter phrase, find an article (at least 1000 characters long) from the New York Times (you choose the article) via the web, and run your report on that. You'll need to copy the article out of the web page and paste it into your program between the triple quotes.
- At the top of your program in a comment paste the URL for where you got the article you used. You can copy the URL by clicking in the address bar and doing a Control-C. A URL looks like this: <https://www.nytimes.com/2018/08/31/science/cats-behavior.html>
- Write a few lines in a comment below the URL at the top of your program comparing your letter frequency results with those reported on Wikipedia [https://en.wikipedia.org/wiki/Letter\\_frequency](https://en.wikipedia.org/wiki/Letter_frequency). Look at your results and look at the Wikipedia results for English in general, then write a few lines comparing them. Are your results pretty close to what they have? Do you think the differences matter? You can do this between two sets of "" triple quotes if you want.

Before you consider yourself done with this assignment, go through the bullet list above and make sure you have done each item. If you don't know how to do something, please ask.