Lab 2

In this lab please write a simple character, word, and line count function and test it on a couple of files

Some useful background material:

The Purdue Data Mine Examples Book (https://the-examples-book.com/book/introduction) contains many useful chapters on data science. While they have not been directly designed for this class, they may be useful. You will not need to use scholar to perform the exercises of this class so don't worry about that part. Here is a direct link to the Python chapter. (https://the-examples-book.com/book/python/introduction)

Additional useful links for Python include:

Python 3.9.4 documentation (https://docs.python.org/3/)

The Python Package Index (https://pypi.org/) (This contains many of the useful Python "add-on" packages such as the math package)

The Numpy Package (https://numpy.org/) (This contains specialized array (vector and matrix) routines. Numpy stands for "Numerical Python")

United States Department of Agriculture: Quick Stats (https://quickstats.nass.usda.gov/) (The USDA's National Ag Statistics Service -- go here and familiarize yourself with the available data)

```python
In [6]:    # Import packages ...
           import numpy as np
           import matplotlib as mpl
           import matplotlib.pyplot as plt
```

```python
In [13]:   def PoorMansWordCount(file_name):

               fin = open(file_name,'r')

               # initialize three variables to zero for holding the numbers of chara

               Nchar = 0
```

```python
In [13]:  def PoorMansWordCount(file_name):

              fin = open(file_name,'r')

              # initialize three variables to zero for holding the numbers of chara

              Nchar = 0
              Nword = 0
              Nlines = 0

              for line in fin:
                  Nlines += 1   #Everytime we read a line, we count it ...
                  Nchar +=  len(line.replace('\n',''))
                  Nword +=  len(line.replace('\n','').split())

              print(f'Number of lines in {file_name} is {Nlines}.')
              print(f'Number of words in {file_name} is {Nword}.')
              print(f'Number of characters in {file_name} is {Nchar}.')

              fin.close()

              return None
```

A Python Function to count characters, words, and lines in a file

Takes a file located in the current working directory. Reads it. And counts these items printing the numbers to standard output ...

```
In [ ]:
```

```python
In [14]:  # Test your solution on the PLimerick file ...

          PoorMansWordCount('/Users/durgapd10/Desktop/untitled folder/PLimerick.tx
```

```
Number of lines in /Users/durgapd10/Desktop/untitled folder/PLimerick.t
xt is 8.
Number of words in /Users/durgapd10/Desktop/untitled folder/PLimerick.t
xt is 42.
Number of characters in /Users/durgapd10/Desktop/untitled folder/PLimer
ick.txt is 184.
```

```python
In [16]:  # Test your solution on the ObamaFirstInagural.tex file ...
          PoorMansWordCount('/Users/durgapd10/Desktop/untitled folder/ObamaFirstIna
```

```
Number of lines in /Users/durgapd10/Desktop/untitled folder/ObamaFirstI
nagural.tex is 183.
Number of words in /Users/durgapd10/Desktop/untitled folder/ObamaFirstI
nagural.tex is 2423.
Number of characters in /Users/durgapd10/Desktop/untitled folder/ObamaF
irstInagural.tex is 13366.
```

```
In [ ]:
```

irstinagurat.tex is 13366.

In [ ]: