1789-Washington.txt
word count: 1537 words

the	115	of	71	and	48	to	47	which	36	in	28
I	23	be	23	my	22	by	19	that	18	with	17
a	14	as	14	on	13	have	12	for	12	an	10
this	10	will	10								

Average sentence length: 66.83

2009-Obama.txt
word count: 2700 words

the	126	and	105	of	82	to	66	our	58	we	50
that	48	a	47	is	36	us	23	not	22	in	22
are	22	this	20	will	19	can	19	but	17	have	16
for	15	on	15								

Average sentence length: 24.55

2017-Trump.txt
word count: 1664 words

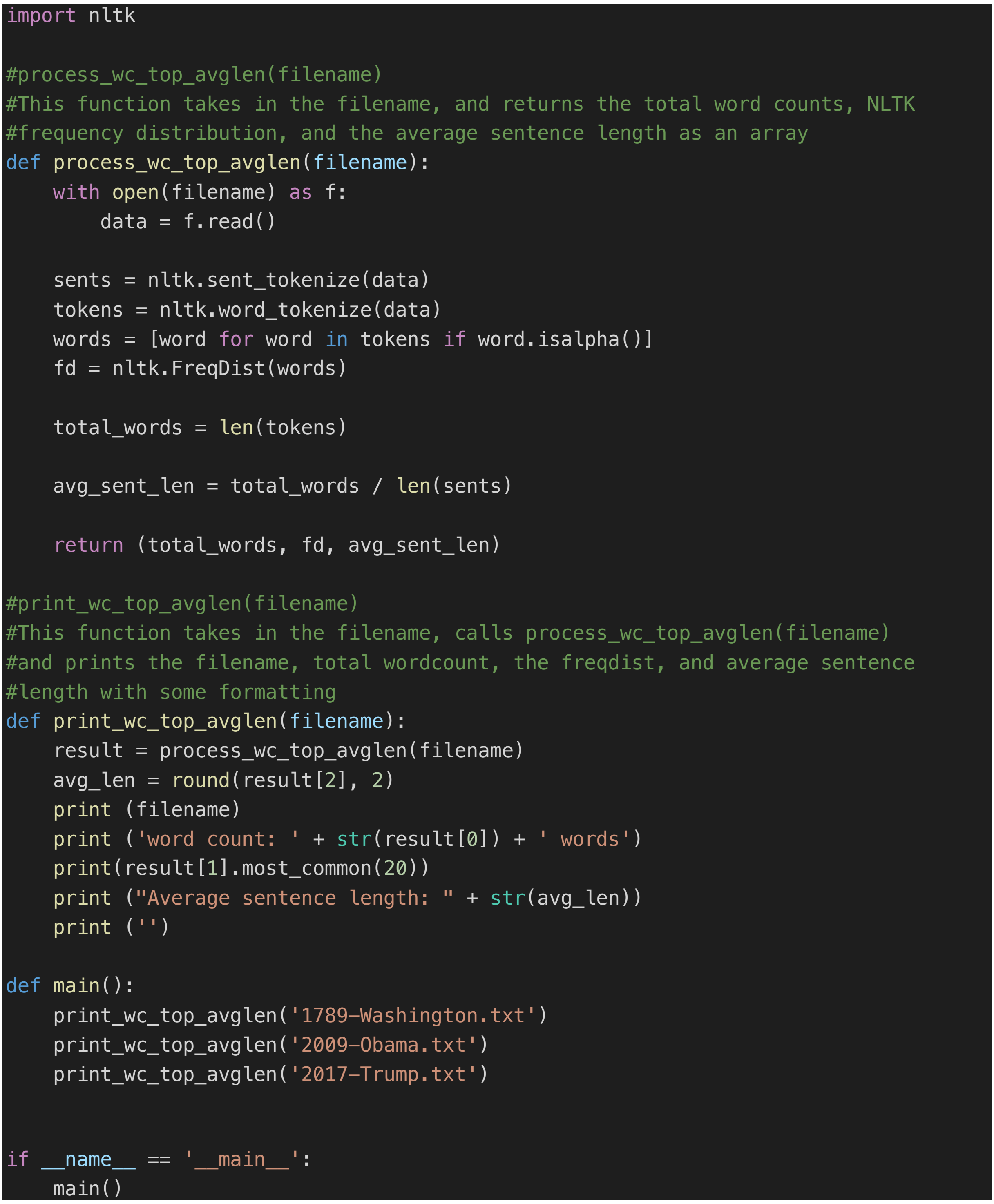
and	66	the	64	of	48	our	47	to	37	will	35
We	28	we	21	is	21	America		18	are	14	
a	14	in	13	for	13	all	12	American		12	
be	12	not	11	but	10	your	10				

Average sentence length: 19.35

Word count: President Obama's inaugural address in 2009 has 2700 words (including words, punctuation, numbers, etc.), which is 1000 more words than president Washington's and president Trump's inaugural address.

Twenty most frequent words: Across all three texts, the majority of 20 most frequent words consist of words of function classes. 'the', 'and', 'of' all are the top three common words. One interesting thing to point out, is that only president Trump's inaugural address has 'America' and 'American' in the 20 most frequent words, which could be an indicator of the situation or the audience the president was addressing as.

Average sentence length: the average sentence length has steadily declined. Especially, there is a huge gap between the 1789's and 2009's inaugural address. This could be an indicator of how English evolved over 2 centuries, such that modern English's average sentence length is much shorter than when US was just founded.



```
import nltk

#process_wc_top_avglen(filename)
#This function takes in the filename, and returns the total word counts, NLTK
#frequency distribution, and the average sentence length as an array
def process_wc_top_avglen(filename):
    with open(filename) as f:
        data = f.read()

    sents = nltk.sent_tokenize(data)
    tokens = nltk.word_tokenize(data)
    words = [word for word in tokens if word.isalpha()]
    fd = nltk.FreqDist(words)

    total_words = len(tokens)

    avg_sent_len = total_words / len(sents)

    return (total_words, fd, avg_sent_len)

#print_wc_top_avglen(filename)
#This function takes in the filename, calls process_wc_top_avglen(filename)
#and prints the filename, total wordcount, the freqdist, and average sentence
#length with some formatting
def print_wc_top_avglen(filename):
    result = process_wc_top_avglen(filename)
    avg_len = round(result[2], 2)
    print (filename)
    print ('word count: ' + str(result[0]) + ' words')
    print(result[1].most_common(20))
    print ("Average sentence length: " + str(avg_len))
    print ('')

def main():
    print_wc_top_avglen('1789-Washington.txt')
    print_wc_top_avglen('2009-Obama.txt')
    print_wc_top_avglen('2017-Trump.txt')


if __name__ == '__main__':
    main()
```